

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: JZGTm2101
Date of Report: 2021-Jan-06
Filed By: Jacksonville Zoo

FWC Case # 0191 **FWC Region:** NE

Sex: Male **Length:** 316 cm **Weight:** 467.0 kg

DATE REPORTED: 2021-Jan-06 **By:** Jacksonville Zoo to FWC-NJG

DATE COLLECTED: 2021-Jan-06 **By:** Jacksonville Zoo

DATE NECROPSIED: **By:** Jacksonville Zoo

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Atlantic Ocean

Locality description: New Smyrna Beach, approximately 110 m E of 4201 S Atlantic Avenue.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN:

PHOTOGRAPHS TAKEN:

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: Jacksonville Zoo pending distribution.

ADDITIONAL DATA:

Rescue report. Jacksonville Zoo necropsy report addendum.

REMARKS:

PIT tag scan negative. Died on 06 Jan 2021. Died in facility. See rescue report REC2102, rescued on 04 January 2021 due to cold stress.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	316 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. JZGTm2101

RECOVERY DATE 06 January 2021

GENDER Male **TL** 316 **cm** **WT** 467 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Fresh

HISTORY See Rescue Report REC2102. 06 January 2021, at

EXTERNAL

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

Natural; Cold Stress

NECROPSY CONDUCTED BY

REPORT FILED BY

PRELIMINARY DATA.

FINDINGS MAY BE ADDED OR

DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Northwest ZooPath

654 W. Main St. • Monroe, WA 98272 • Phone (360) 794-0630 • Fax (360) 794-4312 • E-mail: mikeg@zoopath.com



Case No.: G21-0590

Obtained: 01/06, rec'd 02/10/21
Reported: 03/02/21

Dr. Yousuf Jafarey
Jacksonville Zoo & Gardens
370 Zoo Parkway
Jacksonville, FL 32218-5799

Patient ID: Manatee #JZGTM2101
Account #: FL 200G, ATT
Telephone: (904) 757-4463x119
FAX #: 757-4315
E-mail: on file

HISTORY: This 15.5-year-old male manatee had a history of hypoglycemia, inanition, apnea, inappetence, bradycardia, near comatose mental status, ileus, and malodorous respiratory and gastric secretions. Supportive care was administered, but the animal died. Necropsy revealed atrophy of fat, petechiae in the subdermal and muscular layers, mucopurulent discharge in the trachea and cranial left pulmonary lobe, hemorrhage and edema in all pulmonary lobes, dilated left renal pelvis, sloughed gastric mucosa, edema in the liver, and a pericardial effusion.

CLINICAL DIAGNOSIS: Pneumonia, sepsis, DIC.

GROSS: Received in formalin are 15 tissues to 7 cm. in greatest dimension that are processed in 13 blocks.

MICROSCOPIC: **Heart:** Scattered low numbers of myofibers are necrotic. **Lung:** Several sections have suppurative inflammation within the bronchioles and surrounding alveoli. In one section, this process is also associated with some microgranulomas oriented around degenerative granulocytes or eosinophilic debris. Arteriosclerosis is moderate to marked in the large pulmonary vessels. Interstitial fibrosis is moderate to marked in some of the sections and associated with some areas of emphysema. Blood vessels are congested, and foci of acute and chronic hemorrhage are noted. **Liver:** The liver has marked atrophy of the hepatic cords, marked diffuse hepatocellular hemosiderosis, and some scattered Kupffer cell, pigment-laden microgranulomas. **Kidney:** Mild to moderate sclerotic change is noted primarily in the medulla and to a lesser extent in the interstitium of the cortex and within the glomeruli. **Lymph node:** One lymph node has marked fibrosis. **Pylorus:** Mild superficial erosion is noted in the pylorus. The following tissues are histologically within normal limits: aorta, two lymph nodes, skin, and unidentified gland.

HISTOPATHOLOGIC DIAGNOSIS:

1. Marked bronchopneumonia with few microgranulomas.
2. Marked chronic interstitial fibrosis, arteriosclerosis, and emphysema.
3. Marked atrophy and hemosiderosis, liver.
4. Mild to moderate nephrosclerosis.
5. Mild acute myocardial necrosis.
6. Focal erosions, pylorus.

COMMENT: Death was attributed to cardiopulmonary shock associated with bronchopneumonia, the latter lesion likely due to episodes of aspiration. There is some granuloma formation associated with this process, and some special stains are pending regarding the granulomas with an addendum to follow. This animal had marked age-related change in the lung, relatively severe fibrosis, and arteriosclerosis that were associated with areas of emphysema. Some aging changes were also noted in the kidney and

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G21-0590, Manatee #JZGTM2101
Jacksonville Zoo & Gardens

one lymph node. The myocardial necrosis is attributed to shock associated with the pulmonary lesion. The erosion in the pylorus is attributed to stress. As noted clinically, this animal was in suboptimal to emaciated nutritional status based on findings in the liver.

Michael M. Garner, DVM, Dipl. ACVP
MMG/hc

E-mail: mikeg@zoopath.com

NZP Code: M, 2, 11, 9a, 3f; aspiration pneumonia, pulmonary fibrosis and arteriosclerosis, inanition, hemosiderosis.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21001
Date of Report: 2021-Jan-10
Filed By: FWC EC Field Station

FWC Case # 0541 **FWC Region:** NE

Sex: Male **Length:** 298 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-10 **By:** FWC-SMW

DATE NECROPSIED: 2021-Jan-10 **By:** FWC-SMW

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, grounded approximately 695 m E of 1750 Sea Ray Drive.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Serous fat(s); Depleted fat(s); Pneumothorax; Relatively empty GI tract; Crumbly feces; Wet lung(s); Dry feces; Thick algal mat; Fluid in pleural cavities; Bloody kidney, liver.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Watercraft wound(s).

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	298 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21001
RECOVERY DATE 10 January 2021
GENDER Male **TL** 298 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 10 January 2021
CONDITION Fresh

HISTORY 10 January 2021, at 0852 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a live manatee that had not moved in 20 minutes in the Banana River, Merritt Island, Brevard County. FWC case number 0541 was assigned. The complainant, Merritt Mord (814-244-8559), stated that he had not seen a breath in 20 minutes either. At 0900 hrs, SMW received a photo that was inconclusive. SMW arrived at the manatee's location at 1000 hrs, verified that it was a carcass at 1022 hrs, and secured it to the 528 causeway by 1050 hrs. SMW drove to the EC Field Station for necropsy tools and returned to the causeway at 1255 hrs with FWC volunteers-Brittiny Bennett and Carly Decesare. The carcass was walked to a more remote location. A field necropsy was completed by 1540 hrs. The remains were left onsite.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. There was a superficial watercraft-related wound series on the head which consisted of a slightly curved wound (#1) to the left of and approximately 30-degrees to three parallel wounds (#2 - 4). There was a second superficial watercraft-related wound series which consisted of a long linear wound (#5) on the left mid dorsum and numerous parallel wounds across the peduncle that were perpendicular to wound #1. There was a thick brown algal mat on the dorsal and lateral aspects. A minimum of three well-healed watercraft-related scar patterns were observed. PIT tag scan was negative. A genetics sample was collected.

Commented [BB1]: Need renumbering

ABDOMINAL There was moderate, serous abdominal fat and a small amount of serous omental and mesenteric fat.

STOMACH The stomach contained 250 mL of watery, gray to pink fluid (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 150 mL of watery, gray fluid (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained watery, tan fluid. The distal small intestine contained watery, yellow fluid. The mucosa was unremarkable. There was a mild infection of dead nematodes.

CECUM The cecum contained approximately 10 mL of moist, well-digested, slightly fibrous, yellow-orange to brown digesta (see photo). There was a mild infection of dead nematodes.

COLON The proximal colon contained a small amount of slightly moist, slightly hard, moderately digested, well-formed, fibrous, stringy, green to brown feces. The distal colon contained dry, crumbly, well-digested, poorly formed, brown feces. The colon wall was thickened. The mucosa was sloughing throughout. No parasites were observed.

PANCREAS The pancreas was white to light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were sharp. The liver was firm. Serosal surfaces were gray to blue and cut surfaces were red and bloody.

GALLBLADDER The gallbladder contained 25 mL of slightly viscous, yellow to orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The seminal vesicles were large and contained a moderate amount of watery, tan fluid. The testes were large. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was a small amount of serous perirenal fat. The left kidney was pink to brown on serosal surfaces. On cut surfaces, the cortices were pink to brown and the medullae were pink to red. The right kidney was dark red to brown on serosal surfaces. On cut surfaces, the cortices were dark red to brown and the medullae were red (see photo). Cut surfaces of the right kidney were bloody. The corticomedullary boundaries for both kidneys were slightly distinct.

URINARY BLADDER The urinary bladder contained 50 mL of watery, pink-tinged urine. The mucosa was unremarkable.

HEART There was moderate, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left hemidiaphragm was distended due to gas in the pleural cavity (see photo). There was 4.2 L of watery, red fluid in the right pleural cavity and 800 mL of watery, red fluid in the left pleural cavity. The left lung was light pink on serosal surfaces and dark pink and wet on cut surfaces. The right lung was pink on serosal surfaces and dark pink to red and wet on cut surfaces. The primary airways of both lungs contained a small amount of watery, red fluid.

HEAD & NECK REGIONS There was a small thatch of seagrass in the mouth (see photo).

SKELETON Left ribs 8 and 9 were remodeled at the mid one-third.

OTHER The outer and inner layer of fats were serous.

COMMENTS

SIGNIFICANT FINDINGS

- Depleted, serous fat
 - Fluid in pleural cavities
 - Wet lungs
 - Pneumothorax
 - Relatively empty GI tract
 - Dry, crumbly feces
 - Bloody kidney, liver
 - Watercraft wounds
 - Thick algal mat
-

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY

Sara M. Wappes
Brittany Bennett (FWC Volunteer)
Carly Decesare (FWC Volunteer)

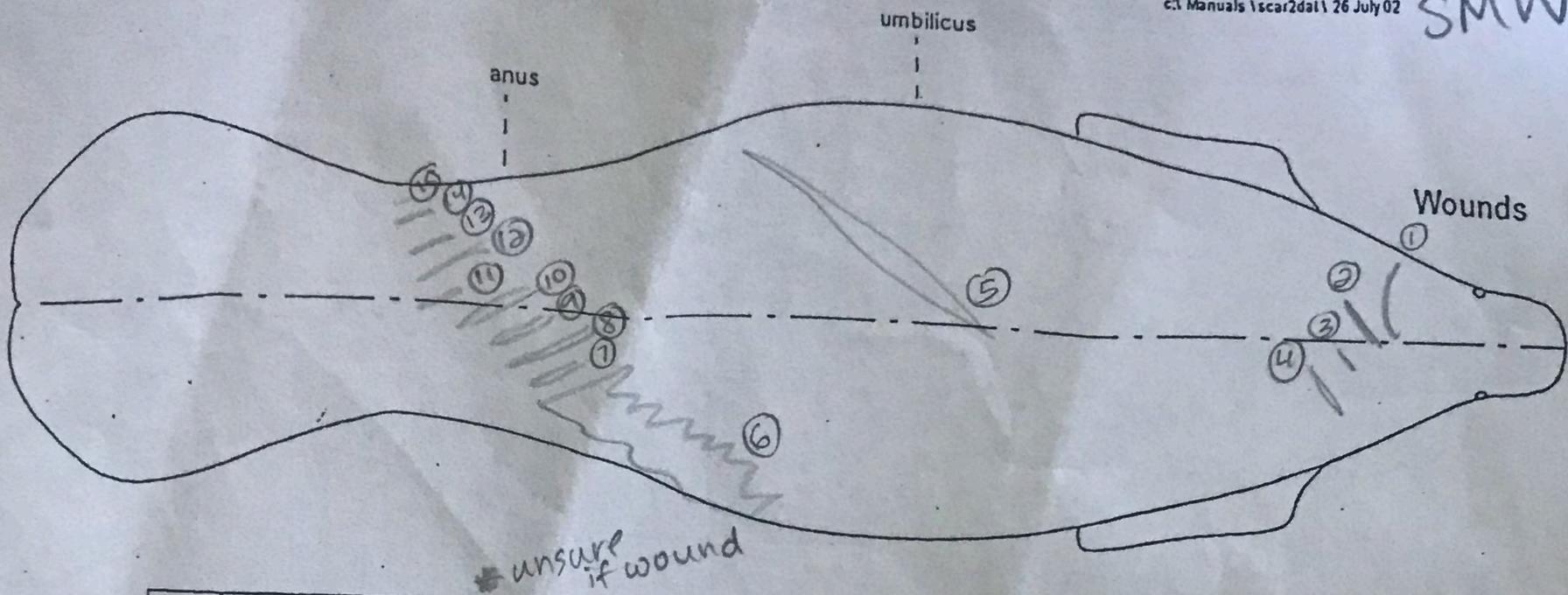
REPORT FILED BY Wappes

Date 10 JAN 2021

Field I.D. MEC21001

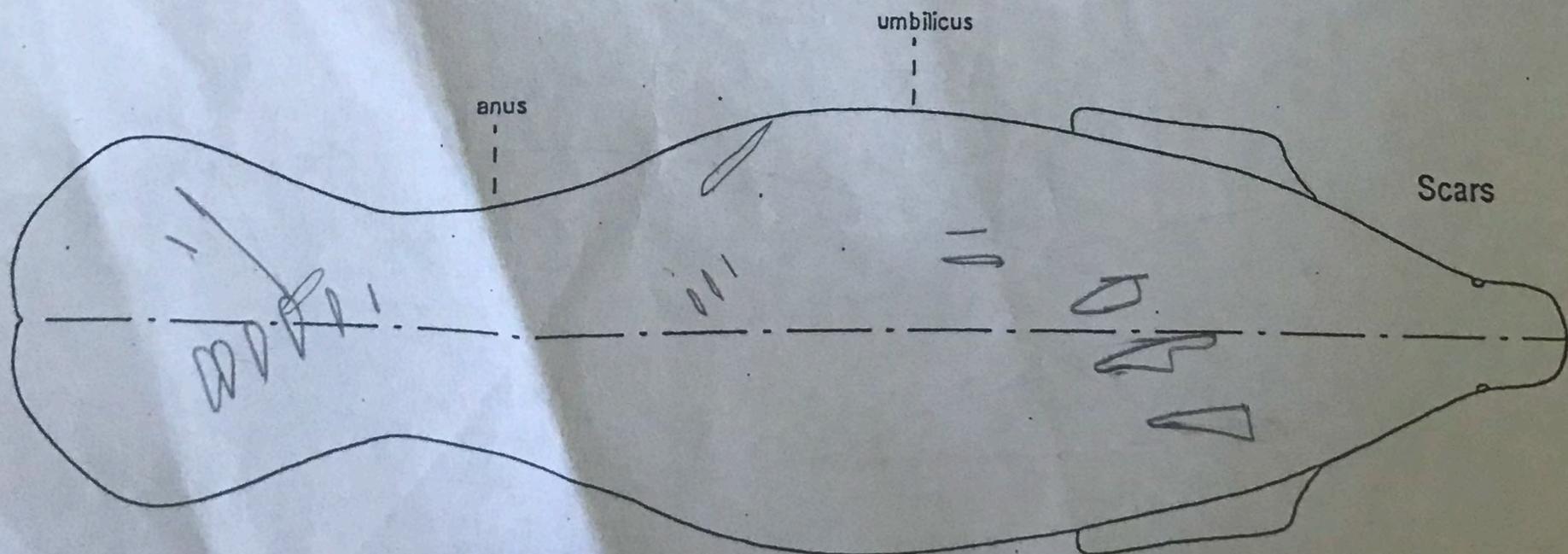
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SMW



* unsure if wound

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	12.5	10	3.9	4.6	30	36	13.5	14.6	13.0	17.2	14	15	14.6	12	7					
Width	1.0	1.0	0.6	1.0	1.7	1.9	3.3	3.0	1.7	2.6	1.6	2.5	2.0	1.5	0.8					
Depth	-	0.1	0.1	0.1	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-					
Distance		8.3	8.5																	

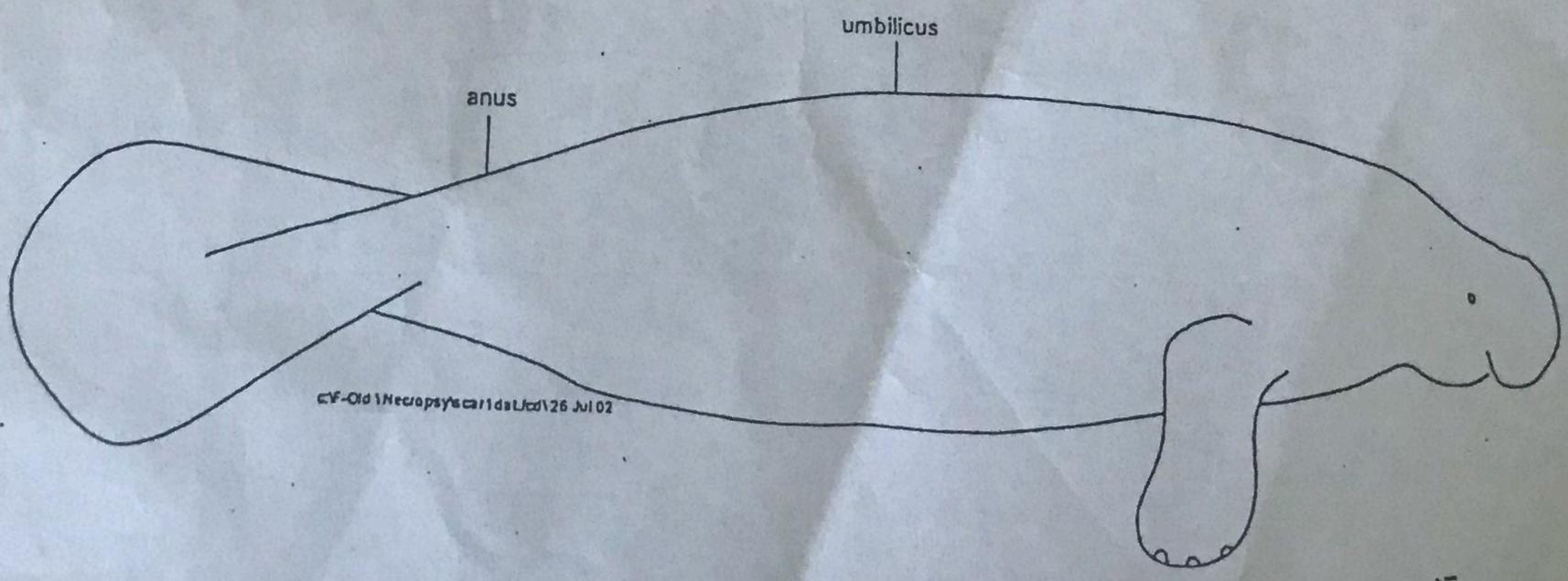
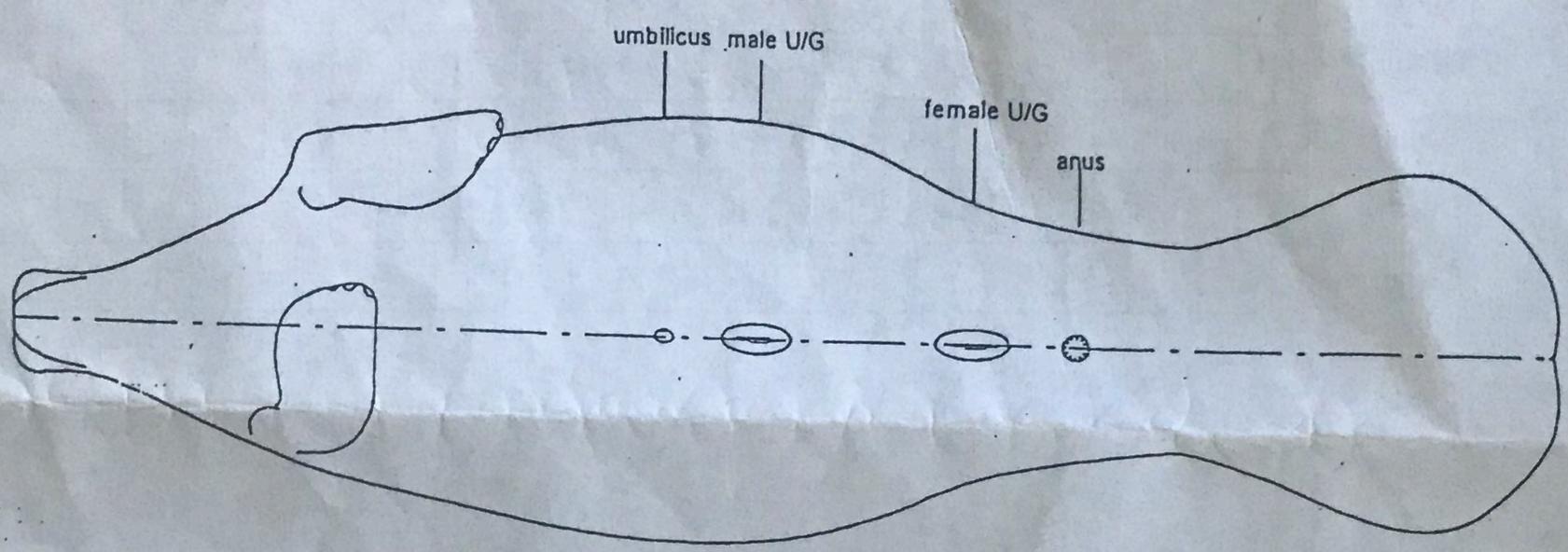
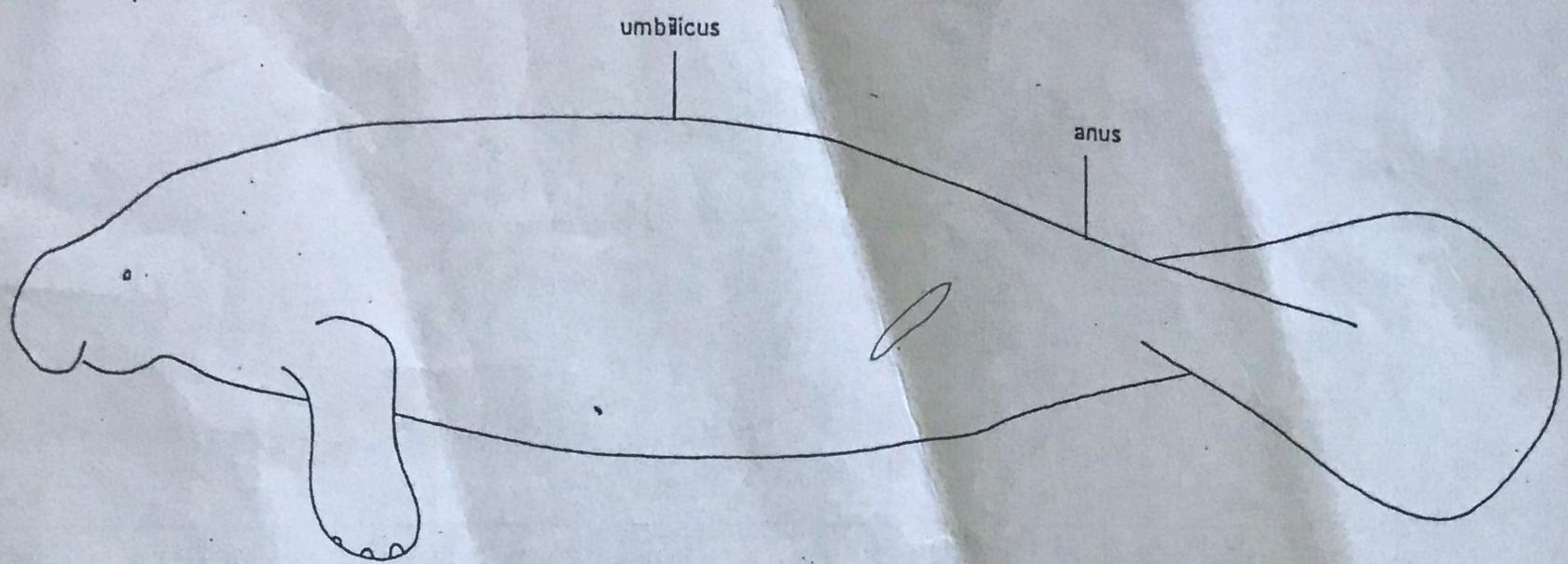


FW1025-24

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FIELD I.D.

MEC21001



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21002
Date of Report: 2021-Jan-02
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 195 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-02 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-08 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 245 m NE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of the remains was 188 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	195 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21002

RECOVERY DATE 08 January 2021

GENDER Female **TL** 195 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **02 January 2021**, at 0747 hrs, FWC biologist-William D. Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding a dead manatee in Cocoa, Brevard County. Jennifer reported a bloated, 6-foot-long carcass in the FPL-Cape Canaveral Energy Center discharge canal and sent verification photos. EC Field Station staff were conducting a manatee rescue (REC2101) and could not respond. **08 January**, at 0900 hrs, WDG and FWC Officer Maslo launched the officer's boat at the Reliant Power Plant boat ramp to recover known carcasses. The carcass was secured to the boat for towing at 1010 hrs along with MEC21008. At 1115 hrs, both carcasses were loaded via Ezy-lift and transported to the Brevard County landfill. An external work-up was completed by 1245 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. There were decompositional rents on ventral axillae, urogenital opening, anus, and dorsal head. Most of the fluke was missing due to decomposition. No watercraft-related scars or wounds were grossly observed. Actual length of the remains was 188 cm. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21003
Date of Report: 2021-Jan-02
Filed By: FWC EC Field Station

FWC Case # 0098 FWC Region: NE

Sex: Male Length: 313 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-02 By: Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-02 By: FWC-SMW

DATE NECROPSIED: 2021-Jan-03 By: FWC-SMW

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 160 m E of 660 West Avenue.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Cobblestone-like epidermis; Serous fat(s); Relatively empty GI tract; Dry, hard feces; Crumbly feces; Wet lung (s); Sandy feces; Firm right lung section; Fluid in airways; Bloody kidneys.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Also FWC case number 0078.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	313 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fluid in epididymides (Small amount of white to tan fluid). Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21003
RECOVERY DATE 02 January 2021
GENDER Male **TL** 313 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 03 January 2021
CONDITION Moderately Decomposed

HISTORY **02 January 2021**, at 0806 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee near the Port St. John boat ramp in Indian River, Cocoa, Brevard County. FWC case number 0078 was assigned. The complainant, Randy (321-210-4312), stated that the carcass was back-up, all gray, and hadn't breathed since he'd been watching it. CMM received photos that were inconclusive. Due to the rescue of REC2101, no response was available at that time. At 1246 hrs, CMM received another report of a dead manatee from Dispatch near the Port St. John boat ramp. FWC case number 0098 was assigned. The complainant, Jason Rapisorda (321-289-6081), stated that the carcass was full grown, and he had watched people approach it and confirmed that it was dead. Again, CMM received photos that were inconclusive. At 1449 hrs, FWC biologist-Sara M. Wappes (SMW) arrived at the Port St. John boat ramp, verified the carcass at 1500 hrs, towed it by hand to the boat ramp where it was loaded into the U-trailer by 1517 hrs. SMW checked on another potential manatee for rescue then transported the carcass to the EC Field Station at 1745 hrs. **03 January**, at 1021 hrs, SMW and FWC volunteers-Emily Hoshaw and Chantal Larose completed a field necropsy. The remains were disposed of at the Brevard County landfill.

EXTERNAL Almost all of the epidermis was present. Watery, red fluid exuded from the nares. The carcass was dorsoventrally flattened. There was cobblestone-like epidermis on the dorsal and lateral aspects. A minimum of six well-healed watercraft-related scar patterns was observed on the dorsal aspect and fluke. There were well-healed scars on the right flipper. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was abundant, serous abdominal fat and moderate, serous mesenteric, and omental fat.

STOMACH The stomach contained 50 mL of watery, gray fluid (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 500 mL of watery, gray to pink fluid (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained watery, light pink fluid. The distal small intestine contained watery, yellow fluid. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained 75 mL of moist, poorly digested, stringy, yellow to light brown digesta (see photo). The mucosa was unremarkable. No parasites were observed.

COLON The proximal colon contained moist, moderately formed, moderately digested, stringy, yellow to brown feces. The mid colon contained slightly moist, hard and crumbly, well-formed, poorly digested, stringy, sandy, tan to brown feces. The distal colon contained dry, hard, well-formed, moderately digested, stringy, brown feces. There was a 12 cm long x 2 cm wide piece of white to yellow plastic wrapper, a 13 cm long x 0.5 cm wide piece of green plastic wrapper, a 52 cm long piece of green string, and a 36 cm long piece of green braided line in the distal colon contents (see photos). The mid and distal colon wall was thickened and the feces were thin diameter. The mucosa was sloughing throughout.

PANCREAS The pancreas was soft. Serosal and cut surfaces were light pink.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red on cut surfaces.

Commented [BB1]: She is "very confident" in this

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to black and cut surfaces were red to brown.

GALLBLADDER The gallbladder contained 20 mL of yellow to orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The seminal vesicles were large and contained a moderate amount of watery, tan fluid. The testes were large. There was a small amount of white to tan fluid on cut surfaces of the epididymides.

KIDNEYS There was moderate, serous perirenal fat. The kidneys were brown to pink on serosal surfaces. On cut surfaces, the cortices were brown to pink and the medullae were dark red. Cut surfaces were bloody. The corticomedullary boundaries were slightly distinct.

URINARY BLADDER The urinary bladder contained 300 mL of watery, pale yellow urine. The mucosa was unremarkable.

HEART There was moderate epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were light pink to black on serosal surfaces. The left lung was dark pink and very wet on cut surfaces. The primary airway contained a moderate amount of watery, red fluid. The cranial half of the right lung was firm. Cut surfaces of the cranial half were red (see photo) and cut surfaces of the caudal half were dark pink and wet. The primary airway contained a small amount of watery, red fluid.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER The parietal pleura was dimpled and pink (see photo).

COMMENTS

SIGNIFICANT FINDINGS

- Cobblestone-like epidermis
- Serous fat
- Relatively empty GI tract
- Dry, hard, crumbly, sandy feces
- Firm right lung section
- Wet lungs
- Fluid in airways
- Bloody kidneys
- Braided line, string, and plastic wrappers in distal colon

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY

Sara M. Wappes
Emily Hoshaw (FWC volunteer)
Chantal Larose (FWC volunteer)

REPORT FILED BY Wappes

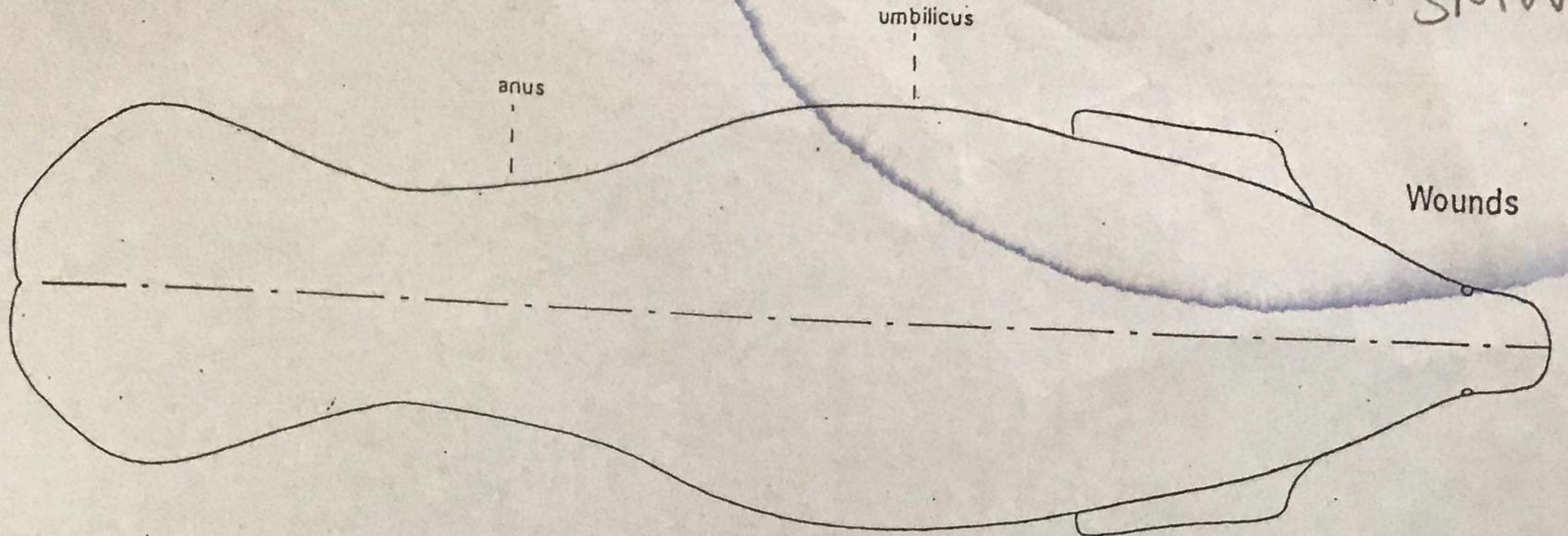
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 03 JAN 2021

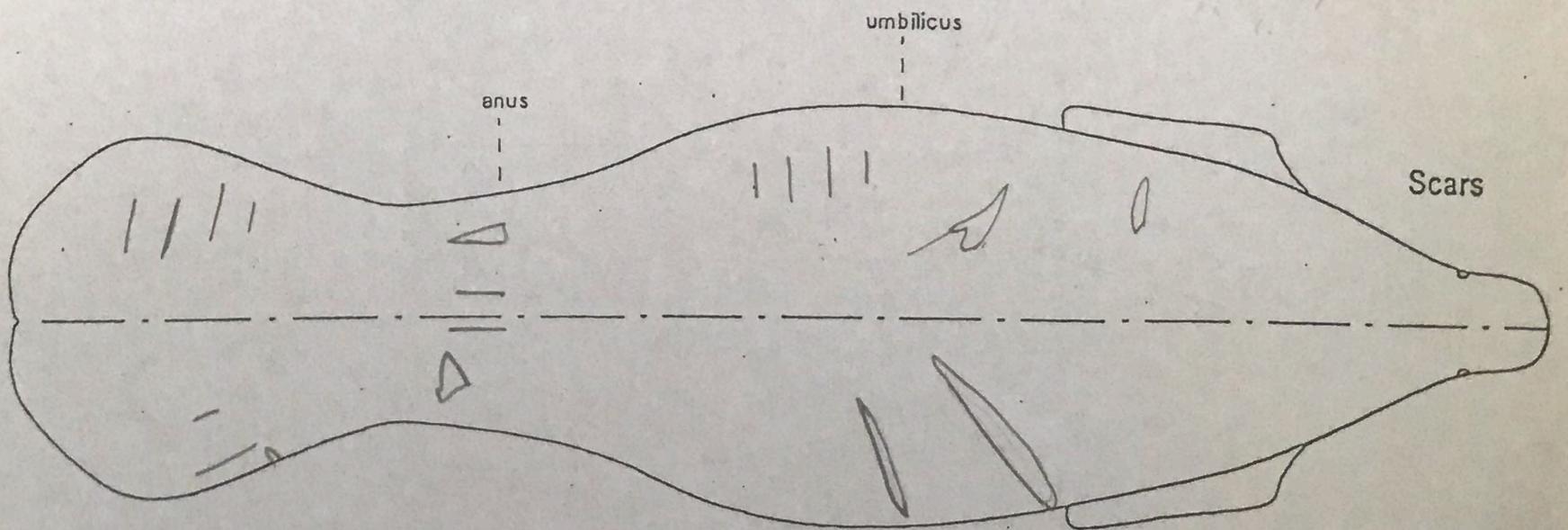
Field I.D. MEC21003

c:\Manuals\scar2dat\ 26 July 02

SMW

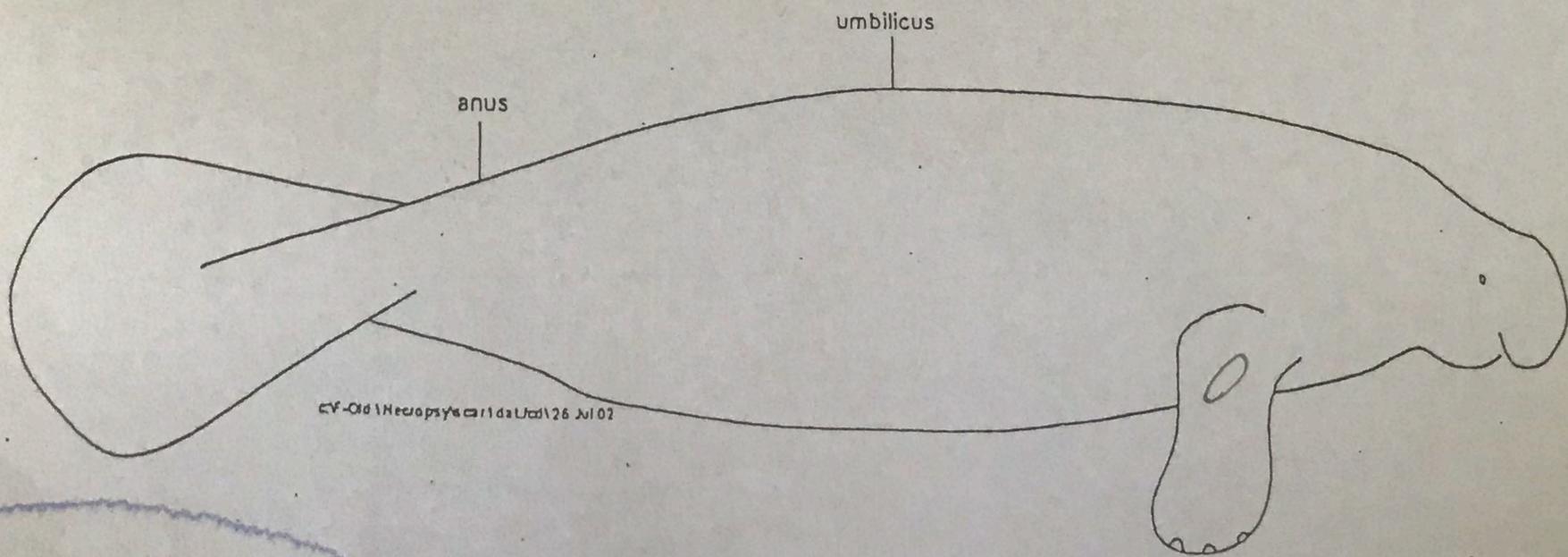
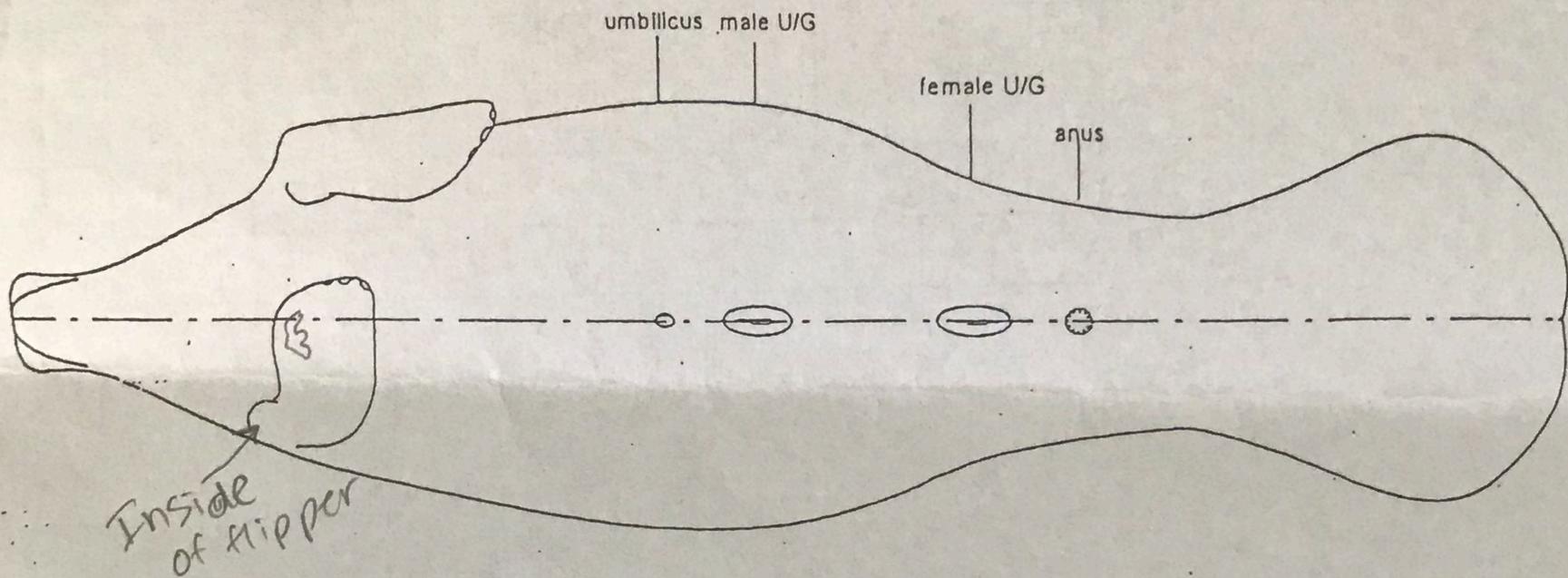
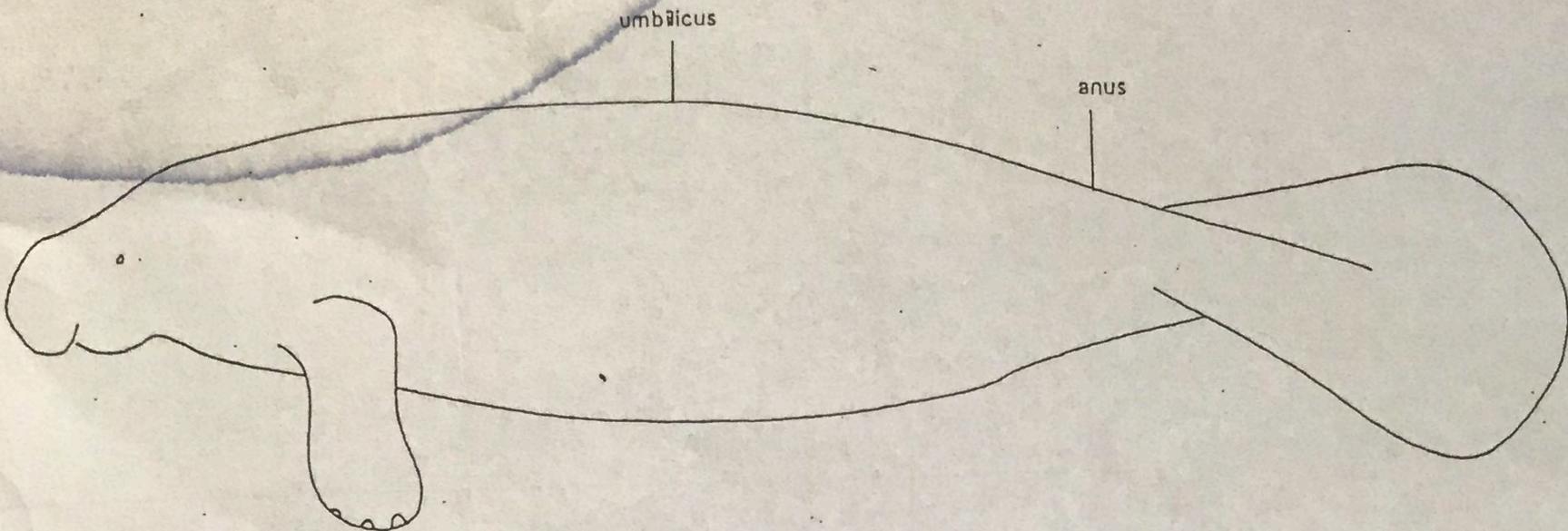


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC21003



CV-001 Necropsy of Carida Urd 26 Jul 02

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21004
Date of Report: 2021-Jan-03
Filed By: FWC EC Field Station

FWC Case # 0222 **FWC Region:** NE

Sex: Female **Length:** 200 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 620 m NE of Parrish Park boat ramp.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	200 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21004
RECOVERY DATE N/A
GENDER Female **TL** 200 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 03 January 2021, at 0840 hrs, FWC biologist-Sara Wappes received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Titusville, Brevard County. FWC case number 0222 was assigned. The complainant, Michael Huges (347-955-6176), had found the 6-7-foot manatee belly-up at the Max Brewer Causeway. He stated that the manatee was white and sent photographs. Due to an elevated carcass load and the advanced stage of decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs – Almost all of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21005
Date of Report: 2021-Jan-04
Filed By: FWC EC Field Station

FWC Case # 0296 **FWC Region:** NE

Sex: Male **Length:** 230 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 115 m NE of the easternmost building at 102 Riverside Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 0210.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	230 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21005
RECOVERY DATE N/A
GENDER Male **TL** 230 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **04 January 2021**, at 1152 hrs, FWC biologist-William Greer received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Cocoa, Brevard County. FWC case number 0210 was assigned. The complainant, Shirley Young (321-639-9091), reported a 7-foot-long carcass floating in the marina at the Oleander Point Condominiums and sent verification photos. EC Field Station staff were transporting a rescued manatee (REC2102) and could not respond. **05 January**, at 1645 hrs, FWC biologist-Carley Metcalf received a text alert from Dispatch regarding a dead manatee in Cocoa. FWC case number 0296 was assigned. The complainant, Russell Robinson (334-464-0252), reported a 6-foot-long carcass against the rocks at Lee Wenner Park. No verification photos were available. Based on the carcass description and location, it is believed to be another report of MEC21005. The carcass was not recovered or necropsied.

EXTERNAL From photographs – Most of the epidermis was present but sloughing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21006
Date of Report: 2021-Jan-03
Filed By: FWC EC Field Station

FWC Case # 0224 **FWC Region:** NE

Sex: Unknown **Length:** 125 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: St. Sebastian River

Locality description: Micco, floating approximately 2.25 km WSW of 9582 Tortoise Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 0168.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	125 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21006

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 125 cm (est) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY **03 January 2021**, at 1158 hrs, SMW received a text alert from FWC NE Dispatch-Orlando regarding a small dead manatee in the Sebastian River, Micco, Brevard County. FWC case number 0168 was assigned. The complainant, Maggie Perry (772-913-0786), reported a small grey manatee carcass. Verification photos were received at 1224 hrs. **04 January**, at 1350 hrs, FWC biologist-William Greer received a text alert from Dispatch regarding a dead manatee in Sebastian. FWC case number 0224 was assigned. The complainant, Robin Guice (772-480-8898), reported a small dead manatee in the C-54 canal and sent verification photos. EC Field Station staff were transporting a rescued manatee (REC2102) and could not respond. Due to the small size and advanced stage of decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs – Most of the dorsal epidermis was present but sloughing. The carcass was distended with gas. There was a thin light brown algal mat on the remaining epidermis.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Barbeau

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21007
Date of Report: 2021-Jan-04
Filed By: FWC EC Field Station

FWC Case # 0320 **FWC Region:** NE

Sex: Female **Length:** 180 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Indialantic, grounded approximately 40 m SSW of 7 Shore View Circle.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through complainant photograph and FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 0216.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21007

RECOVERY DATE N/A

GENDER Female **TL** 180 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **04 January 2021**, at 1300 hrs, FWC biologist-William Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Indiatlantic, Brevard County. FWC case number 0216 was assigned. The complainant, Joseph, reported a bloated, 5-foot-long dead manatee behind his residence at 1753 Shoreview Drive. WDG received verification photos at 1348 hrs. EC Field Station staff were transporting a rescued manatee (REC2102) and could not respond. The carcass was not recovered or necropsied. **06 January**, at 0959 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from Dispatch regarding a dead manatee in the Indian River in Indialantic, Brevard County. FWC case number 000320 was assigned. The complainant, Heather Thalwitzer (407-756-2916), described a belly-up manatee against the rocks behind her residence. At 1001 hrs, CMM received photo verification. Based on photos and location it was determined to be the same carcass as case number 000216. Due to a heavy case load, the carcass was not collected or necropsied. **07 January**, at 0740 hrs, CMM received a text from the complainant, Heather, that the carcass was still behind her house. At 0840 hrs, CMM arrived at the reported residence, towed and secured the carcass to trees at an abandoned lot further down the shoreline. The remains were left on site.

EXTERNAL From 04 January photographs – Approximately 80% of the ventral epidermis was present but sloughing. The carcass was distended with gas. From 06 January photographs - There was bleached epidermis at the axilla. There was a decompositional rent cranial to the axilla due to decomposition and/or scavenging.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Recovered

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21008
Date of Report: 2021-Jan-08
Filed By: FWC EC Field Station

FWC Case # FWC Region: NE
Sex: Male Length: 182 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-08 By: FWC-WDG
DATE COLLECTED: 2021-Jan-08 By: FWC-WDG
DATE NECROPSIED: 2021-Jan-08 By: FWC-WDG

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded approximately 275 m NE of 132 Cottrell Avenue.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Dry, hard feces; Crumbly feces; Bloody lung(s); Fluid, froth in airways; bloody nares; Congested mesenteries, urinary bladder mucosa, colon wall; Fluid-filled upper GI tract.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Healing skin lesions).

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Cobblestone-like epidermis; Bleached epidermis; Healing skin lesions.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	182 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21008

RECOVERY DATE 08 January 2021

GENDER Male **TL** 182 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 08 January 2021

CONDITION Moderately Decomposed

HISTORY 08 January 2021, at 0900 hrs, FWC biologist-William D. Greer and FWC Officer Maslo launched Officer Maslo's boat at the Reliant Power Plant boat ramp to recover known carcasses. MEC21008 was found to be a new carcass based on condition and epibiota growth. The carcass was secured to the boat at 1010 hrs along with MEC21002. At 1115 hrs, both carcasses were loaded by Ezy-lift and transported to the Brevard County landfill. A field necropsy was completed by 1245 hrs.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. Watery, bloody fluid exuded from the nares. The carcass was markedly thin with a peanut-shaped head and longitudinal ventral folds. Cobblestone-like epidermis was present on all aspects. The epidermis was bleached on the flippers, head, ventrum, and fluke margin. There was a thin brown algal mat and a moderate green algal mat on the dorsal aspect. Multiple healing linear lesions were present on dorsal and lateral aspects. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, omental, and mesenteric fat.

STOMACH The stomach contained 200 mL of viscous, white fluid (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 200 mL of watery, brown fluid. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was severely congested. The proximal small intestine was empty of contents. The mid small intestine contained watery, yellow fluid mixed with a scant amount of fibrous pieces of ingesta. The distal small intestine contained watery, brown fluid. The mucosa was unremarkable. No parasites were grossly observed through.

CECUM The cecum contained 100 mL of moist, poorly digested, fibrous, stringy, yellow digesta. The mucosa was unremarkable. No parasites were observed.

COLON The mesentery was severely congested (see photo). The colon contained dry, hard, fibrous, stringy feces throughout (see photo). The mid colon contents were also crumbly. The mucosa was unremarkable. The colon wall had areas of mild congestion.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled red and black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to purple and cut surfaces were dark red.

GALLBLADDER The gallbladder contained 25 mL of watery, yellow to orange bile. The mucosa was bile-stained.

REPRODUCTIVE No reproductive fat was observed. The testes were small. No fluid was present on cut

surfaces of the epididymides.

KIDNEYS No perirenal fat was observed. The kidneys were dark red on serosal surfaces. On cut surfaces, the medullae were dark red and cortices were pink. The corticomedullary boundaries were distinct.

URINARY BLADDER The urinary bladder contained 150 mL of flocculent, red-tinged urine. The mucosa was mildly congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were blue to red on serosal surfaces and dark red and bloody on cut surfaces. The primary airways contained a moderate amount of frothy, clear fluid.

HEAD & NECK REGIONS The trachea contained a small amount of watery, red fluid.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Bloody nares
- Depleted, serous fat
- Froth, fluid in airways
- Fluid-filled upper GI tract
- Dry, hard, crumbly feces
- Bloody lungs
- Congested mesenteries, urinary bladder mucosa, colon wall
- Cobblestone-like, bleached epidermis
- Healing skin lesions

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY William D. Greer

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21009
Date of Report: 2021-Jan-05
Filed By: FWC EC Field Station

FWC Case # 0332 **FWC Region:** NE

Sex: Unknown **Length:** 275 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-05 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 220 m NW of Lynwood Place.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 0265.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	275 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21009

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 275 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **05 January 2021**, at 1038 hrs, FWC biologist-Nadia Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Merritt Island, Brevard County. FWC case number 0265 was assigned. The complainant, US Coast Guard-Ryan, reported an 8-foot-long carcass washed up on the north side of the SR 528 bridge. NJG received verification photos. EC Field Station staff were attempting a rescue of an entrapped manatee and could not respond. **06 January**, at 1205 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from Dispatch regarding a dead manatee in Merritt Island. FWC case number 0332 was assigned. The complainant, Officer Quinn, reported a 10-foot-long carcass on the south side of the barge canal and sent verification photos. Due to an elevated carcass load, the carcass was not recovered or necropsied.

EXTERNAL From photographs – All of the right ventro-lateral epidermis was present.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21010
Date of Report: 2021-Jan-05
Filed By: FWC EC Field Station

FWC Case # 0294 FWC Region: NE

Sex: Female Length: 176 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-05 By: Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-07 By: FWC-WDG

DATE NECROPSIED: By:

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Grand Canal

Locality description: Satellite Beach, grounded approximately 30 m ENE of Turtle Circle.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Skin lesions; Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	176 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21010

RECOVERY DATE 07 January 2021

GENDER Female **TL** 176 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **05 January 2021**, at 1639 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Grand Canal, Satellite Beach, Brevard County. FWC case number 0294 was assigned. The complainant, Kevin (218-428-1632), stated that the carcass was five feet long and too big for two people to lift. At 1650 hrs, SMW received a verification photo. **06 January**, at 1130 hrs, SMW requested FWC LE assistance to tow the carcass to a secluded area. No officers were available that day. **07 January**, at 1035 hrs, FWC biologist-William D. Greer met FWC Officer Maslo at the Patrick Air Force Base boat ramp and launched the ECFL Key West boat. At 1055 hrs, the carcass was secured then towed to a secluded location where an external work up was completed. The remains were left on site.

EXTERNAL Approximately 30% of the epidermis was present and sloughing. The carcass was distended with gas. The epidermis of the flippers and ventral axillae were bleached. There were linear lesions present on the dorsal and lateral aspects. No watercraft-related wound or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS Due to overtime restraints for the officer a full slate of photos was not possible and only dorsal and ventral photos were obtained. External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologist
- Bleached epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21011
Date of Report: 2021-Jan-06
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-06 **By:** FWC Officer to FWC-SMW

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, grounded approximately 380 m E of 8285 Shoreside Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photograph and FWC officer.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21011

RECOVERY DATE 06 January 2021

GENDER Male **TL** 215 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 06 January 2021, at 1317 hrs, FWC biologist-Sara M. Wappes (SMW) received a text from FWC Officer-Morgan Maslo regarding a dead manatee at Pineda Causeway in the Banana River, Merritt Island, Brevard County. An FWC case number was not assigned. Officer Maslo had found the belly-up, seven-foot-long carcass which she secured to the mangroves. At 1317 hrs, SMW received photo verification. Due to an elevated carcass load and advanced stage of decomposition, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - Approximately 40% of the ventral epidermis was present but sloughing. The carcass was dorsoventrally flattened.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs and FWC officer

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21012
Date of Report: 2021-Jan-06
Filed By: FWC EC Field Station

FWC Case # 0347 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-06 **By:** FWC Officer to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne, grounded approximately 95 m N of 991 Thomas Barbour Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through photographs and FWC officer.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21012

SPECIES *T. manatus latirostris*

RECOVERY DATE 06 January 2021

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **06 January 2021**, at 1506 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee at Ballard Park in the Indian River, Melbourne, Brevard County. FWC case number 0347 was assigned. The complainant, FWC Officer Snyder, described a six-foot-long dead manatee that he had secured to the rocks south of the park at 1506 hrs. At 1523 hrs, WDG received photo verification. Due to an elevated carcass load, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs – Almost all of the dorsal epidermis was present but sloughing. No watercraft-related wounds or scars were observed. The face was slightly bleached.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs and FWC officer
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21013
Date of Report: 2021-Jan-07
Filed By: FWC EC Field Station

FWC Case # 0408 **FWC Region:** NE

Sex: Male **Length:** 200 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-07 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, floating approximately 75 m SW of 5225 St. Andrews Island Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	200 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21013

RECOVERY DATE N/A

GENDER Male **TL** 200 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 07 January 2021, at 1658 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Vero Beach, Indian River County. FWC case number 0408 was assigned. The complainant, John (612-709-3739), described a six to seven-foot-long manatee with white to pink skin and vultures actively scavenging on the it. At 1715 hrs, ALP received photo verification and forwarded the information to the EC Field Station. Based on the advanced stage of decomposition and elevated carcass load, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - All of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents at the axilla, urogenital region, and anus due to decomposition and/or scavenging. There are bird droppings on the ventral aspect.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21014
Date of Report: 2021-Jan-04
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-04 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 275 m NE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Grey spots epidermis. Verified through photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21014

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **04 January 2021**, at 1543 hrs, FWC biologist-William Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding a dead manatee in Cocoa, Brevard County. Jennifer reported a bloated, 6-foot-long manatee in the FPL-Cape Canaveral Energy Center discharge and sent verification photos. Due to an elevated carcass load and the transport of rescued manatee REC2102, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs – Almost all of the dorsal epidermis was present but sloughing. There were light grey spots on the lateral aspects.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs
- Grey spots epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21015
Date of Report: 2021-Jan-13
Filed By: FWC EC Field Station

FWC Case # 0722 **FWC Region:** NE

Sex: Female **Length:** 165 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-13 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-13 **By:** FWC-CMM MMPL-SMT

DATE NECROPSIED: 2021-Jan-13 **By:** FWC-CMM MMPL-SMT

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 55 m ESE of 3895 N Indian River Drive.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Emaciated; Bleached epidermis; Depleted fat(s); Serous fat(s); Wet lung(s); Relatively empty GI tract; Dry, hard feces; Crumbly feces; Swollen lungs; Froth, fluid from nares, -in airways; Congested urinary bladder mucosa; Vegetation in mouth.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Hemorrhagic muscle; Linear lesion on head.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	165 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21015

RECOVERY DATE 13 January 2021

GENDER Female **TL** 165 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE 13 January 2021

CONDITION Moderately Decomposed

HISTORY 13 January 2021, at 0748 hrs, FWC on-call biologist-Molly R. Schubert (MRS) received a text alert from FWC NE Dispatch-Orlando regarding a live manatee in the Indian River, Cocoa, Brevard County. FWC case number 0722 was assigned. The complainant, Mike Knight (321-271-0063), described a manatee calf breathing every one to two minutes in about eighteen inches of water. At 0805 hrs, MRS received a grainy video of a small manatee and forwarded the information to the EC Field Station. At 0925 hrs, FWC biologist-Carley M. Metcalf (CMM) located the manatee and monitored it from the dock. The manatee did not surface or take a breath in the first ten minutes CMM observed it. FWC rescue coordinator-Andy Garrett instructed CMM to approach slowly and determine if it was still alive. CMM approached and determined it was dead. At approximately 1150 hrs, FWC biologist-Sean M. Tennant (SMT) arrived and he and CMM lifted the carcass out of the water and onto land. The carcass was loaded via Ezy-lift by 1225 hrs and transported to the Brevard County Landfill. CMM and SMT completed a field necropsy by 1418 hrs.

EXTERNAL All of the epidermis was present. Copious white froth and clear, colorless fluid exuded from the mouth and nares. There was a thin layer of algae on the dorsum and lateral aspects. Patches of bleached epidermis was observed on the face, ventrum, flippers and fluke margin. There was a small (5.0 x 1.0 x 0.2 cm) linear wound that penetrated the dermis on the dorsal aspect of the head. The manatee was thin with a peanut-shaped head and a longitudinal ventral fold. The flippers were swollen. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal fat and scant, serous mesenteric and omental fat.

STOMACH The stomach contained 650 mL of moist, well-chewed, slightly leafy, slightly stringy, green and brown ingesta mixed with a few well-chewed pieces of red mangrove propagule. No parasites were observed. The mucosa was unremarkable.

DUODENUM The duodenum contained 200 mL of wet, well-chewed, slightly leafy, slightly stringy, green and brown ingesta. No parasites were observed. The mucosa was mottled brown and pink.

JEJUNUM & ILEUM The proximal and mid small intestine were empty of contents. The distal small intestine contained a small amount of moist, well-chewed, tacky, pasty, brown ingesta. The wall was rugose due to contraction. No parasites were grossly observed. The mucosa was unremarkable.

CECUM The cecum contained 100 mL of moist, well-digested, pasty, mud-like, brown digesta. No parasites were observed. The mucosa was unremarkable.

COLON The proximal colon contained a small amount of moist, moderately digested, slightly fibrous, moderately formed, brown feces. The mid colon contained a small amount of dry, hard, moderately digested, slightly fibrous, brown feces. The distal colon contained a small amount of dry, hard, crumbly, well-digested, slightly fibrous, brown feces. No parasites were observed. The mucosa was unremarkable. The wall was rugose due to contraction.

PANCREAS The pancreas was tan on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and purple on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were round. The liver was firm. Serosal surfaces were mottled gray and black, and cut surfaces were dark red.

GALLBLADDER The gallbladder contained approximately 50 mL of dark yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The diameter of the uterus was small. No scars were present. There were no follicles on the ovaries.

KIDNEYS There was scant, serous perirenal fat. The kidneys were firm. The kidneys were tan on serosal surfaces. On cut surfaces, the cortices were tan and the medullae were dark red. The corticomedullary boundaries were distinct.

URINARY BLADDER The urinary bladder contained 100 mL of clear, colorless urine. The mucosa was severely congested.

HEART There was scant epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were swollen and firm. Serosal surfaces were mottled tan and light pink, and cut surfaces were tan to red and wet. The right lung also had regions of purple discoloration at the cranial and caudal one-thirds. The airways contained an abundant amount of white froth and clear, colorless fluid. The mucosa was unremarkable. No parasites were observed.

HEAD & NECK REGIONS There was a very small (less than 0.5 x 0.5 x 0.5 cm) area of red, hemorrhagic tissue deep to the wound. No skull damage was observed. There was a small thatch of moderately chewed seagrass in the mouth. There was an abundant amount of white froth and clear, colorless fluid in the trachea.

SKELETON NVL.

OTHER

PHOTOGRAPHS Photographs were inadvertently deleted from camera.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Bleached epidermis
- Fluid, froth from nares
- Depleted, serous fat
- Wet, swollen lungs
- Fluid, froth in airways
- Relatively empty GI tract
- Dry, hard, crumbly feces
- Congested urinary bladder mucosa
- Small linear wound on head
- Hemorrhagic tissue
- Vegetation in mouth

PROBABLE CAUSE OF DEATH

Natural; Cold Stress

NECROPSY CONDUCTED BY

Carley M. Metcalf

Sean M. Tennant

REPORT FILED BY Tennant

PRELIMINARY DATA.

FINDINGS MAY BE ADDED OR

DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21016
Date of Report: 2021-Jan-13
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 183 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-13 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-15 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 295 m NNE of 101 Cottrell Avenue .

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares. Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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MORPHOMETRICS:

Total length:	183 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21016

RECOVERY DATE 15 January 2021

GENDER Female **TL** 183 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **13 January 2021**, at 1436 hrs, FWC biologist-William D. Greer (WDG) received a text and photo from FPL-Jennifer Pickett (321-634-4505) regarding a dead manatee at the FPL-CCEC discharge area. Due to other carcasses, no ECFL staff were available for response. **15 January**, at 0900 hrs, WDG met FWC Officer Maslo at the Orlando Utility Commission boat ramp in Cocoa. At 1100 hrs, MEC21016 and MEC21018 were loaded by Ezy-lift and transported to the Brevard County landfill where an external work up was completed by 1400 hrs.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. Watery, bloody fluid exuded from the nares. The carcass was dorsoventrally flattened due to decomposition. No watercraft-related wounds or scars were observed. There were decompositional rents present at the axilla. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologist
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21017
Date of Report: 2021-Jan-14
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 250 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-14 **By:** USFWS-Stan to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Allenhurst, beached approximately 1.6 m W of the intersection of Biolab Rd and Courtenay Pkwy N.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

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MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21017

RECOVERY DATE N/A

GENDER Male **TL** 250 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 14 January 2021, at 1236 hrs, FWC biologist-William D. Greer (WDG) received a text from USFWS-Stan at the Merritt Island Wildlife Refuge regarding a dead manatee in Dummit Creek in the Indian River, Allenhurst, Brevard County. Stan described a badly decomposed, eight-foot-long manatee beached on shore. At 1236 hrs, WDG received photo verification. Due to an elevated carcass load and advanced stage of decomposition, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photograph – Almost all of the ventral epidermis was missing. The carcass was slightly distended with gas. Loose GI contents and bird droppings were present on the ventral aspect due to scavenging at the mid ventrum. The epidermis of the axilla and ventral neck was bleached.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph
- Bleached epidermis
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21018
Date of Report: 2021-Jan-14
Filed By: FWC EC Field Station

FWC Case # 0780 FWC Region: NE

Sex: Male Length: 161 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-14 By: Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-15 By: FWC-WDG

DATE NECROPSIED: 2021-Jan-15 By: FWC-WDG

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Turkey Creek

Locality description: Palm Bay, grounded approximately 40 m W of 1570 Anglers Drive NE.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Emaciated; Bleached epidermis; Cold stress lesions; Depleted fat(s); Serous fat(s); Wet lung(s); Bloody lung (s); Fluid from nares; Frothy fluid in airways; Lesions cecum wall; Congested mesenteries, urinary bladder mucosa, parietal pleura, colon wall; Bloody liver; Vegetation in mouth; Black specks parietal pleura. Grounded dorsum-up.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

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Lat/Long	

PRELIMINARY DATA: FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	161 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21018

RECOVERY DATE 15 January 2021

GENDER Male **TL** 161 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 15 January 2021

CONDITION Moderately Decomposed

HISTORY **14 January 2021**, at 1355 hrs, FWC biologist-Carley M. Metcalf received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek, Palm Bay, Brevard County. FWC case number 0780 was assigned. The complainant, Daniel Barile (321-693-3260), stated that the manatee was five feet long, floating, and could be lifted by two people. At 1400 hrs, CMM received a photo of the carcass from the complainant showing it grounded dorsum-up. All staff were traveling back from a rescue (REC2104), so no response was available at the time. **15 January**, FWC biologist-William D. Greer (WDG) located the manatee at 0845 hrs and loaded it via Ezy-lift at 0905 hrs. WDG then collected MEC21020 and transported both carcasses to the Brevard landfill. A field necropsy was completed by 1305 hrs.

EXTERNAL Almost all epidermis was present but sloughing. Clear, viscous fluid exuded from the nares. The carcass had a peanut-shaped head. The ventrum was flat. Slightly bleached epidermis was observed on the face, flippers, and ventrum. Copepods were present on the head and the dorsal cranial aspect. There was a thin brown algal mat on the dorsal and lateral aspects. A few small, circular, pitted lesions were present on the dorsum. There were transverse folds on the ventrum. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, omental, and mesenteric fat.

STOMACH The stomach contained 450 mL of moist, moderately chewed, leafy, stringy, yellow to green ingesta. The contents were coated in viscous, white mucus (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 75 mL of wet, moderately chewed, stringy, leafy, green to brown ingesta (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was severely congested. The small intestine contained white to yellow paste. The distal most 60 cm of small intestine contained a moderate amount of moist, poorly formed, leafy, stringy, green ingesta. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained 600 mL of moist, poorly digested, leafy, fibrous, stringy, dark green digesta. The mucosa was gray and sloughing. The cecum wall had pitted, red and white lesions (see photo). No parasites were observed.

COLON The mesentery was severely congested. The proximal colon contained moist, poorly formed, poorly digested, leafy, stringy, green to black feces. The mid and distal colon contained slightly moist, well-formed, well-digested, homogeneous, black feces. The proximal and mid colon mucosa was black and sloughing. The distal colon mucosa was moderately congested (see photo).

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to gray and cut surfaces were brown and slightly bloody.

GALLBLADDER The gallbladder contained 25 mL of viscous, orange bile. The mucosa was bile-stained.

REPRODUCTIVE No reproductive fat was observed. The testes were small. No fluid was observed on cut surfaces of the epididymides.

KIDNEYS There was scant perirenal fat. The kidneys were red on serosal surfaces. On cut surfaces, the cortices were gray and the medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained 50 mL of golden yellow urine. The mucosa was slightly congested.

HEART There was small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The parietal pleura was moderately congested and had black specks. The lungs were blue to pink on serosal surfaces and dark red, wet and bloody on cut surfaces. The primary airways contained a moderate amount of frothy, clear fluid. The mucosa was light pink. No parasites were observed.

HEAD & NECK REGIONS There was a small thatch of green vegetation in the mouth. There was a moderate amount of frothy, viscous, clear fluid in the trachea.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
 - Fluid from nares
 - Depleted, serous fat
 - Frothy fluid in airways
 - Wet, bloody lungs
 - Lesions cecum wall
 - Congested mesenteries, urinary bladder mucosa, parietal pleura, colon wall
 - Bloody liver
 - Vegetation in mouth
 - Black specks parietal pleura
 - Bleached epidermis
 - Cold stress lesions
-

PROBABLE CAUSE OF DEATH

Natural; Cold Stress

NECROPSY CONDUCTED BY

William D. Greer

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21019
Date of Report: 2021-Jan-19
Filed By: FWC EC Field Station

FWC Case # 1078 **FWC Region:** NE

Sex: Female **Length:** 229 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-19 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-22 **By:** FWC-WDG,CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, grounded approximately 25 m W of 14155 81st Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	229 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21019

RECOVERY DATE 22 January 2021

GENDER Female **TL** 229 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **19 January 2021**, at 1557 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the St. Sebastian River in Sebastian, Indian River County. FWC case number 1078 was assigned. The complainant, Ann Williamson (240-381-7809), stated that the manatee was white and grounded in front of her residence. At 1610 hrs, CMM received photo verification. Due to time of day, a response was not planned. **21 January**, FWC biologist-William D. Greer (WDG) requested FWC LE assistance to tow the carcass and MEC21042 to a remote location. At approximately 2200 hrs, an officer responded but was unable to tow the carcass. **22 January**, at 1030 hrs, CMM and WDG launched the Key West boat from Dale Wimbrow Park. After securing MEC21052, WDG and CMM towed MEC21042 and MEC21019 to a remote location and completed external work-ups for both carcasses by 1300 hrs. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The dorsal dermis was eroded. The eyes were missing due to scavenging and/or decomposition. There were rents due to decomposition and/or scavenging on the right ventral axilla, urogenital opening, anus, and ventral fluke which exposed bones and the body cavity. No watercraft-related scars or wounds were grossly observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21020
Date of Report: 2021-Jan-15
Filed By: FWC EC Field Station

FWC Case # 0803 **FWC Region:** NE

Sex: Male **Length:** 207 cm (estimated) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-15 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-15 **By:** FWC-WDG

DATE NECROPSIED: 2021-Jan-15 **By:** FWC-WDG

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne, floating approximately 410 m ENE of 400 Young Street.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Bloody lung(s); Crumbly feces; Dry feces; Fluid-filled upper GI tract; Congested mesentery, colon mucosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED: Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Bleached epidermis.

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Necropsy Report	
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MORPHOMETRICS:

Total length:	207 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21020

RECOVERY DATE 15 January 2021

GENDER Male **TL** 207 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 15 January 2021

CONDITION Moderately Decomposed

HISTORY 15 January 2021, at 0738 hrs, FWC on-call biologist-Nadia J. Gordon (NJG) received a text alert regarding a dead manatee in the Indian River in Melbourne, Brevard County. FWC case number 0803 was assigned. The complainant, Fred Ameigh (321-302-1681), stated that the manatee was six feet long, gray and back-up. At 0745 hrs, NJG received a photo verifying the carcass and requested the complainant to tow it to Ballard Park if he was able, and he agreed. At 0857 hrs, the complainant secured the manatee at Ballard Park. After collecting MEC21018, FWC biologist-William D. Greer (WDG) arrived at Ballard Park at 0925 hrs and loaded the carcass by Ezy-lift at 0940 hrs. WDG transported MEC21018 and MEC21020 to the Brevard County landfill. A field necropsy was completed by 1350 hrs.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. There was a thin, light green algal mat on the dorsal aspect. A slight peanut-shaped head was observed. The carcass was dorsoventrally flattened. There was slightly bleached epidermis on the head, flippers and at the axillae. One well-healed scar was observed on the left lateral aspect. There was a mild infestation of barnacle scars. A thin layer of mud covered the head and fluke. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, omental, and mesenteric fat.

STOMACH The stomach contained 400 mL of viscous, clear to pink fluid. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 200 mL of viscous, white fluid. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal and mid small intestine contained viscous, gray fluid. The distal small intestine contained moist, poorly formed, poorly digested, leafy, stringy, green ingesta. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained 1 L moist, poorly digested, leafy, stringy, green digesta. The mucosa was unremarkable. No parasites were observed.

COLON The mesentery was severely congested. The proximal colon contained moist, poorly formed, poorly digested, leafy, stringy, green feces. The mid and distal colon contained dry, crumbly, moderately digested, fibrous, stringy, leafy, green to brown feces (see photo). The mucosa was sloughing in the proximal and mid colon. The distal colon mucosa was moderately congested (see photo). No parasites were observed.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to black and cut surfaces were red to brown.

GALLBLADDER The gallbladder contained 25 mL of watery, orange bile. The mucosa was bile stained.

REPRODUCTIVE No reproductive fat was observed. The testes were small. No fluid was observed on the

cut surfaces of the epididymides.

KIDNEYS There was scant perirenal fat. The kidneys were red on serosal surfaces. On cut surfaces, the cortices were red and the medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained 150 mL of red-tinged fluid. The mucosa was unremarkable.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were pink to blue on serosal surfaces and dark red and bloody on cut surfaces. The primary airways were clear. The mucosa was pink to red. No parasites were observed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Depleted, serous fat
- Fluid-filled upper GI tract
- Dry, crumbly feces
- Congested mesentery, colon mucosa
- Bloody lungs
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer

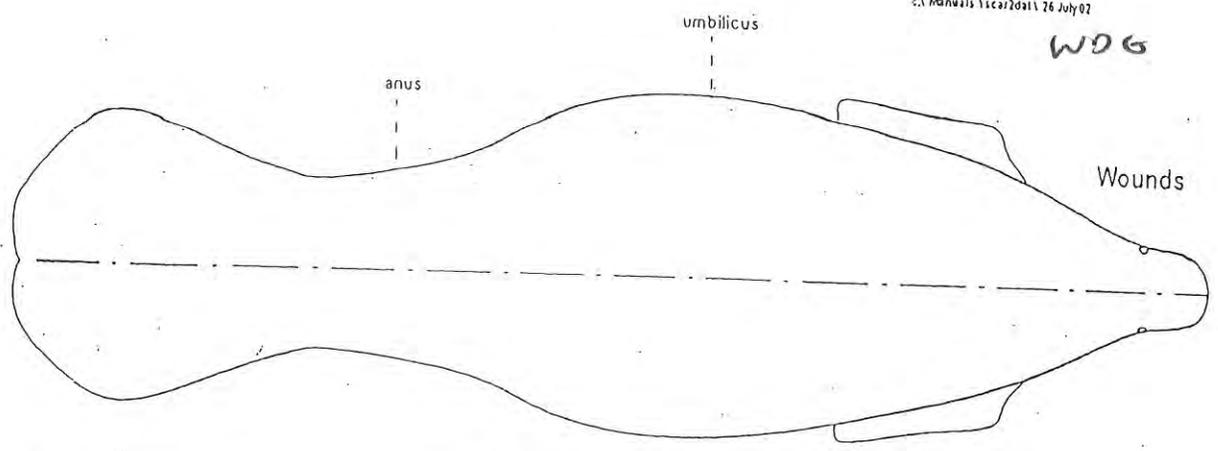
REPORT FILED BY Greer

Date 15 JAN 2020

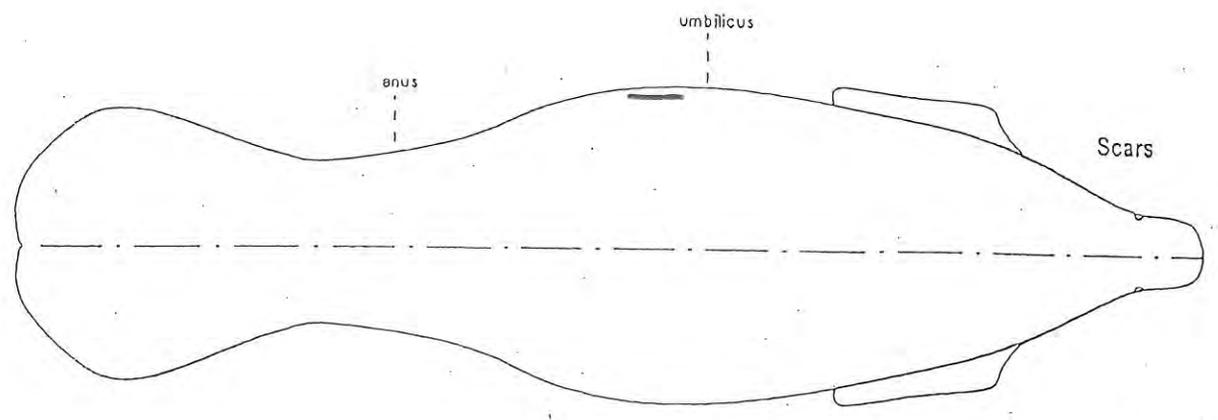
Field I.D. MCC21020

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WDG

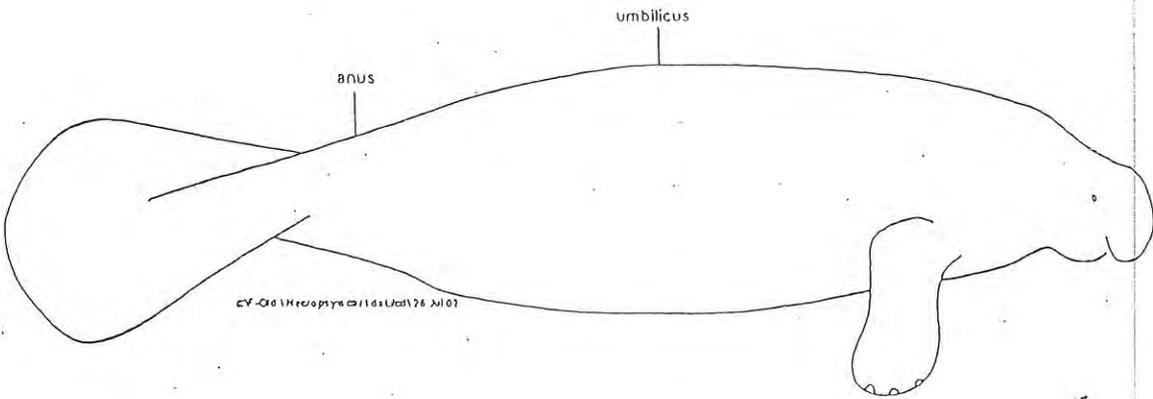
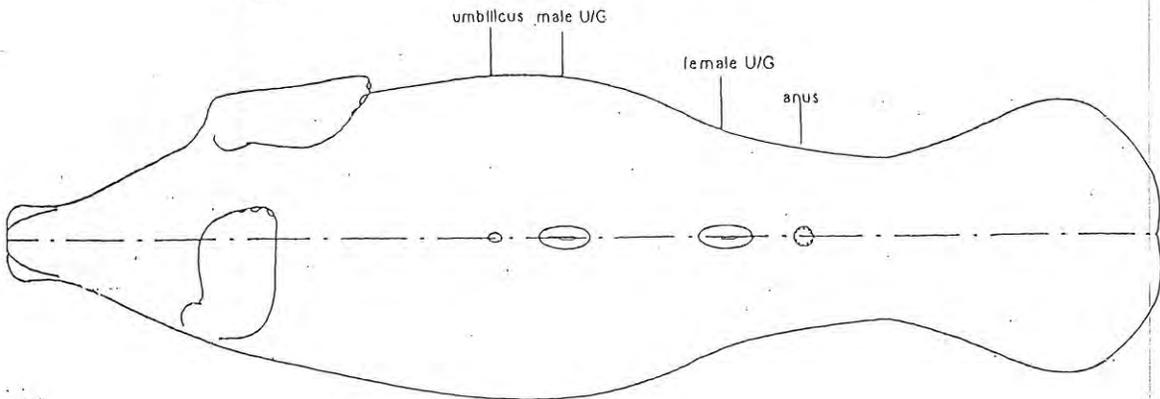
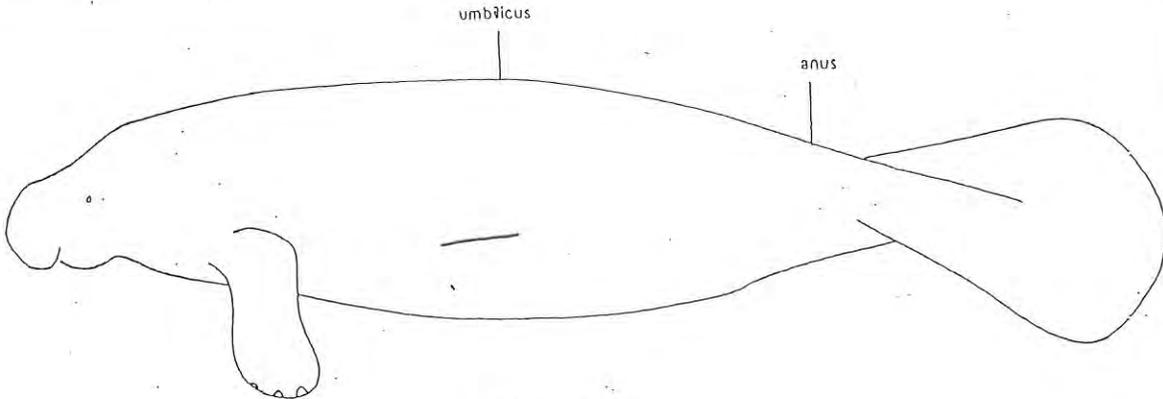


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC21320



CV-010 1/1/1995 09:15:10 176 Jul 07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21021
Date of Report: 2021-Jan-15
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 303 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-15 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-15 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 495 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	303 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21021

RECOVERY DATE 19 January 2021

GENDER Female **TL** 303 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **15 January 2021**, at 0943 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding a dead manatee in the CCEC power plant warm water discharge area. WDG verified the carcass via photograph. WDG located the carcass at 1245 hrs and secured it on site after a partial external work-up. **19 January**, at 1040 hrs, FWC biologists-Brandon Bassett and Sara Wappes met at the Port St. John boat ramp and boarded the FWC Key West boat. They located the carcass and towed it, plus MEC21024, MEC21026, and MEC21031, to a secluded shoreline across the river where they completed the external work-up.

EXTERNAL On 15 January – Approximately 30% of the epidermis was present but sloughing. Patches of dorsal dermis were eroded. Bloody fluid exuded from the nares. There was a well-healed v-shaped mutilation at the 3 o'clock position of the fluke. A genetics sample was collected. On 19 January - All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The dermis was severely eroded on all aspects. The fluke margin was eroded. A minimum of six well-healed watercraft-related scar patterns was grossly observed. PIT tag scan was negative.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Bloody nares

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21022
Date of Report: 2021-Jan-17
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 189 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-17 **By:** FWC-SMW

DATE COLLECTED: 2021-Jan-17 **By:** FWC-SMW

DATE NECROPSIED: 2021-Jan-17 **By:** FWC-SMW

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, grounded approximately 20 m NW of 397 Berkeley Street.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Wet lung(s); Relatively empty GI tract; Dry, hard feces; Crumbly feces; Bloody nares; Fibrin-like material lung serosa; Fluid in pleural cavities; Congested urinary bladder mucosa; Black specks parietal pleura, lung serosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Healing wound).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Monofilament in duodenum. Bleached epidermis; Cold stress lesions; Healing watercraft wound(s); Remodeled ribs. Resolving blood clots.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	189 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21022

RECOVERY DATE 17 January 2021

GENDER Female **TL** 189 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 17 January 2021

CONDITION Moderately Decomposed

HISTORY 17 January 2021, at 1240 hrs, while doing photo ID work, FWC biologist-Sara M. Wappes (SMW) noticed a possibly dead manatee in Berkeley Canal, Satellite Beach, Brevard County. At 1246 hrs, SMW verified that the manatee was dead by walking up to it. At 1247 hrs, SMW received a call regarding another dead manatee (MEC21028) in Berkeley Canal. SMW and FWC intern-Kylie Lawson loaded MEC21022 via Ezy-lift at 1345 hrs and loaded MEC21028 via Ezy-lift at 1400 hrs. Both carcasses were transported to the EC Field Station. A field necropsy was completed on MEC21022 by 1620 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Almost all of the epidermis was present but sloughing. The epidermis of the axillae and ventral head was slightly bleached. The carcass was slightly distended with gas. Watery, red fluid exuded from the nares. There was a healing watercraft-related wound on the caudal dorsum. The wound had well-healed margins and granulated tissue in the center. There were pitted circular lesions on the dorsal and lateral aspects and fluke, and linear cold stress-like lesions on the lateral aspects. No well-healed watercraft-related scars were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was moderate, serous abdominal fat and a small amount of serous mesenteric and omental fat.

STOMACH The stomach contained 25 mL of watery, tan fluid (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 150 mL of wet, moderately chewed, stringy, fibrous, leafy, yellow to brown ingesta mixed with watery, tan fluid (see photo). There was an 80 cm long piece of clear monofilament in the contents (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained a small amount of watery, tan fluid. The distal small intestine was mostly empty with intermittent sections of moist, moderately chewed, moderately formed, fibrous, leafy, tan to brown ingesta. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained 500 mL of moist, moderately digested, stringy, yellow to brown digesta (see photo). The mucosa was black and sloughing. No parasites were observed.

COLON The proximal colon contained a small amount of dry, hard, well-formed, moderately digested, stringy, yellow to brown feces. The mid colon contained dry, crumbly, well-digested, poorly formed, slightly stringy, brown feces. The distal colon contained dry, hard, well-formed, well-digested, slightly stringy, brown to black feces. The colon wall was thickened. The mucosa was sloughing throughout. No parasites were observed.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red to black on cut surfaces.

LIVER The margins of the liver were rounded. The serosa was separating from the parenchyma. The liver was slightly firm. Serosal surfaces were blue to black and cut surfaces were brown.

GALLBLADDER The gallbladder contained 25 mL of slightly viscous, yellow to orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The diameter of the uterus and uterine horns was small. No scars were present. There were no follicles on the ovaries.

KIDNEYS No perirenal fat was observed. The kidneys were brown to black on serosal surfaces. On cut surfaces, the cortices were brown and gray to black, and the medullae were red. The corticomedullary boundaries were distinct.

URINARY BLADDER The urinary bladder contained 250 mL of flocculent, pink-tinged urine. The mucosa was slightly congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. Each pleural cavity contained 1.5 L of watery, red fluid and one medium-sized resolving blood clot (see photo). There were black specks on the parietal pleura. The lungs were white to light pink on serosal surfaces and dark pink and wet on cut surfaces. There were black specks on the lung serosa. The lungs were coated in a thin layer of pale yellow, fibrin-like material (see photo). There was a small amount of watery, red fluid in the primary airways of both lungs.

HEAD & NECK REGIONS NVL.

SKELETON Right ribs 9 and 10 were remodeled at the distal one-third. Right ribs 12 and 13 were remodeled at the rib head. Left rib 7 was remodeled at the proximal one-quarter and mid one-third.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Bloody nares
 - Depleted, serous fat
 - Relatively empty GI tract
 - Dry, hard, crumbly feces
 - Fibrin-like material coating lungs
 - Wet lungs
 - Fluid in pleural cavities
 - Congested urinary bladder mucosa
 - Black specks lung serosa, parietal pleura
 - Cold stress lesions
 - Bleached epidermis
 - Healing watercraft wound
 - Remodeled ribs
 - Resolving blood clots
 - Monofilament in duodenum
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Sara Wappes
Kylie Lawson (FWC intern)

REPORT FILED BY Wappes

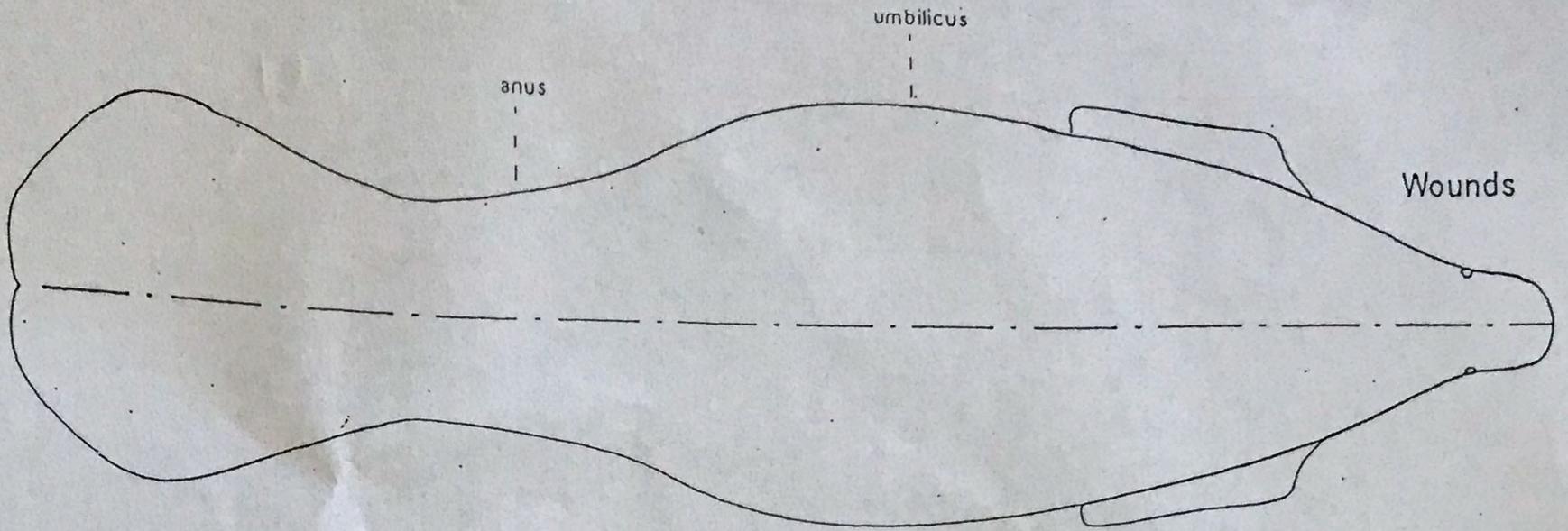
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 17 JAN 2021

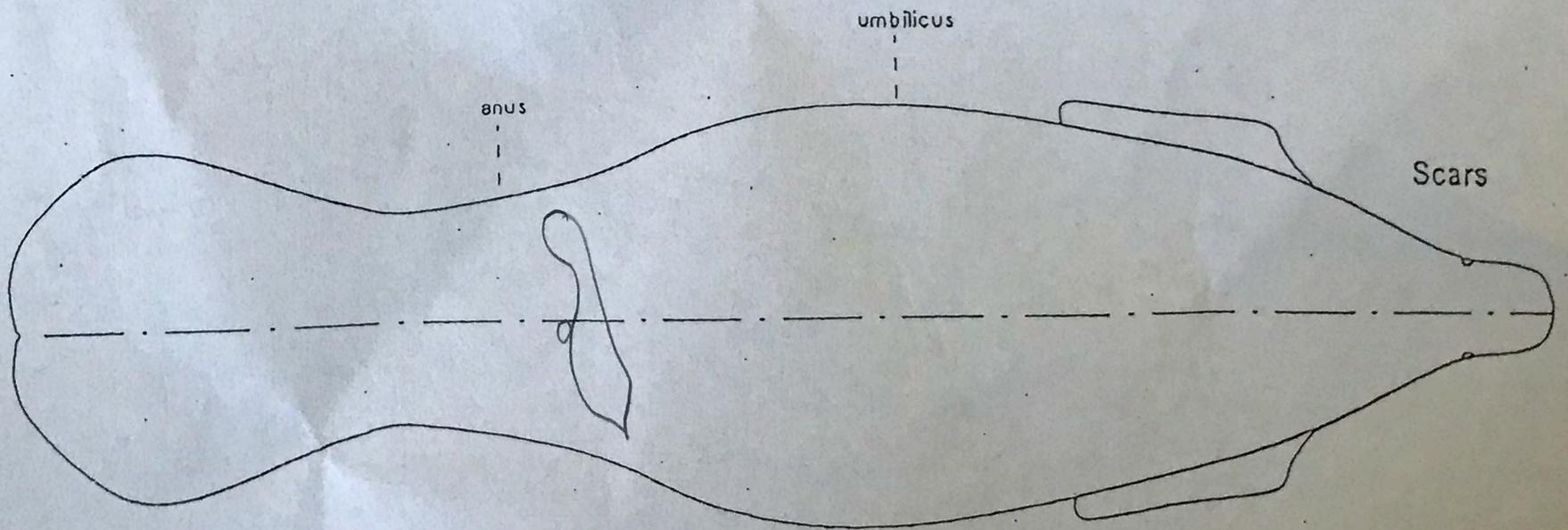
Field I.D. MEC21022

c:\Manuals\ScarData\ 26 July 02

SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21023
Date of Report: 2021-Jan-15
Filed By: FWC EC Field Station

FWC Case # 0844 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-15 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Satellite Beach, floating approximately 35 m SE of 280 Poinciana Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant video and FWC Officer.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21023

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **15 January 2021**, at 1601 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a live manatee in the Indian River in Satellite Beach, Brevard County. FWC case number 0844 was assigned. The complainant, Peter DeLone (386-846-2807), described a manatee floating toward his house that he had not seen submerge for about 20 minutes. He could not make out if the animal was taking breaths because of the glare. CMM asked the complainant to take photos if the manatee got any closer to his residence. At 1610 hrs, CMM received photo verification that the manatee was dead. At 1643 hrs, CMM requested LE assistance to tow the carcass to a remote location. At 1656 hrs, FWC Lieutenant Riley called CMM to clarify details and said he would attempt to tow that evening. **16 January**, at 0900 hrs, CMM checked with Lt. Riley on the status of the tow request, and Lt. Riley advised it would be taken care of that morning. Lt. Riley informed CMM that the carcass was secured in a remote location at 1000 hrs and estimated it was seven feet long. The remains were left on site.

EXTERNAL From video – Almost all the dorsal epidermis was missing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant video and FWC Officer

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21024
Date of Report: 2021-Jan-16
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 305 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-16 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-19 **By:** FWC-SMW MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 300 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	305 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21024

RECOVERY DATE 19 January 2021

GENDER Female **TL** 305 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirm; Not Necropsied

HISTORY **16 January 2021**, at approximately 1048 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding four dead manatees in the CCEC power plant discharge area. Due to a high carcass volume, recovery was planned for another day. **19 January**, at 1040 hrs, FWC biologists-Brandon Bassett and Sara Wappes met at the Port St. John boat ramp and boarded the FWC Key West boat. They located the carcass and towed it, plus MEC21021, MEC21026, and MEC21031, to a secluded shoreline across the river where they completed an external work-up.

EXTERNAL Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. Bloody fluid exuded from the nares. There were patches of eroded dermis on the dorsal and lateral aspects. The fluke margin was severely eroded due to decomposition. There were rents on the caudal ventrum and both flippers. A minimum of nine well-healed watercraft-related scar patterns was grossly observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21025
Date of Report: 2021-Jan-16
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 310 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-16 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-19 **By:** FWC-SMW MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 490 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC biologists.

PHOTOGRAPHS TAKEN: Ventral.

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Actual length of the remains was 244 cm.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	310 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21025

SPECIES *T. manatus latirostris*

RECOVERY DATE 19 January 2021

NECROPSY DATE N/A

GENDER Undetermined **TL** 310 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **16 January 2021**, at approximately 1048 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding four dead manatees in the CCEC power plant discharge area. Due to a high carcass volume, recovery was planned for another day. **19 January**, at 1040 hrs, FWC biologists-Brandon Bassett and Sara Wappes met at the Port St. John boat ramp and boarded the FWC Key West boat. They located the carcass which was mostly bones and a few patches of soft tissue. They performed an external work-up and moved the remains among the rocks above the high-water line to decompose.

EXTERNAL Almost all of the soft tissue was missing. A few of the caudal vertebrae were missing. Actual length of the remains was 244 cm. PIT tag scan was not performed.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Missing most soft tissue

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21026
Date of Report: 2021-Jan-16
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 326 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-16 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-19 **By:** FWC-SMW MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 505 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Known as MIPS ID BC722, first sighted on 04 Feb 2003 at Berkeley Street Canal.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	326 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21026

RECOVERY DATE 19 January 2021

GENDER Female **TL** 326 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **16 January 2021**, at approximately 1048 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding four dead manatees in the CCEC power plant discharge area. Due to a high carcass volume, recovery was planned for another day. **19 January**, at 1040 hrs, FWC biologists-Brandon Bassett and Sara Wappes met at the Port St. John boat ramp and boarded the FWC Key West boat. They located the carcass and towed it, plus MEC21021, MEC21024, and MEC21031, to a secluded shoreline across the river where they completed an external work-up.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. A small amount of red-tinged fluid exuded from the nares. The carcass was distended with gas. There was a moderate brown algal mat on the remaining epidermis. Bleached spots were present in the lateral epidermis. The fluke margin was slightly eroded due to decomposition. There were patches of eroded dermis on the ventrum and flippers. A minimum of fifteen well-healed watercraft-related scar patterns was observed. One scar pattern on the right lateral peduncle was deeply indented. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

Bassett, Brandon

From: Rood, Kari
Sent: Sunday, February 28, 2021 2:20 PM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21026=BC722

MEC21026=BC722

Carcass location: Indian River, Port St. John
Female

First sighted 2/4/03 at Berkeley Street Canal
Last sighted 4/8/15 in Terra Mar Canal (Volusia County)
USGS should be able to provide a complete sighting history if needed.

Verifiers: MARTZ & KAH – 2/28/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21027
Date of Report: 2021-Jan-16
Filed By: FWC EC Field Station

FWC Case # 0880 **FWC Region:** NE

Sex: Male **Length:** 138 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-16 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-16 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Haulover Canal

Locality description: Mims, floating approximately 190 m SW of Bairs Cove Boat Ramp.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Bleached epidermis; Verified through photograph and FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	138 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21027

RECOVERY DATE 16 January 2021

GENDER Male **TL** 138 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 16 January 2021, at 1256 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Haulover Canal in the Indian River in Mims, Brevard County. FWC case number 0880 was assigned. The complainant, FWC Officer-Dustin Link, reported a four-foot-long manatee that he found in Haulover Canal and towed to the Bairs Cove Boat Ramp. At 1259 hrs, CMM received photo verification. CMM arrived at the Bairs Cove Boat Ramp at 1440 hrs, loaded the carcass via Ezy-lift by 1500 hrs, and transported it to the Brevard County Landfill at 1550 hrs. Due to time constraints, only a straight length and genetics sample was collected.

EXTERNAL Almost all epidermis was present but sloughing. The epidermis on the face was slightly bleached. Red, watery fluid exuded from the nares. PIT tag scan was not performed. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photograph and FWC biologist
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21028
Date of Report: 2021-Jan-17
Filed By: FWC EC Field Station

FWC Case # 0950 **FWC Region:** NE

Sex: Male **Length:** 159 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-17 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-17 **By:** FWC-SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, floating approximately 20 m S of 360 West Arlington Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cold stress lesions; Bleached epidermis; Cobblestone-like epidermis; Depleted fat(s); Serous fat(s); Dry, hard feces; Relatively empty duodenum, cecum; Firm, thickened lungs; Congested urinary bladder mucosa; Vegetation in mouth. A partial necropsy was conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Monofilament in from anus..

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	159 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21028

RECOVERY DATE 17 January 2021

GENDER Male **TL** 159 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 17 January 2021, at 1247 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead juvenile manatee in Berkeley Canal, Satellite Beach, Brevard County. FWC case number 0950 was assigned. The complainant, Jessie (360-220-7515), stated that the carcass was small, floating, and belly-up. SMW arrived at the complainant's house at 1252 hrs and verified the carcass at 1254 hrs. The carcass was collected along with MEC21022 and loaded via Ezy-lift by 1400 hrs. Both carcasses were transported to the EC Field Station at 1445 hrs. A necropsy was completed on MEC21022 first and then a necropsy was completed on MEC21028 by 1705 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL All of the epidermis was present. The carcass was slightly distended with gas. The epidermis of the axillae, face, flippers, and dorsal peduncle was bleached. There was cobblestone-like epidermis on the dorsal and lateral aspects and fluke. There were pitted, circular and linear cold stress lesions throughout. There was a bloody lesion on the ventral fluke. No watercraft-related wounds or scars were observed. A 20 cm long piece of black monofilament line protruded from the anus. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was scant, serous abdominal, mesenteric, and omental fat.

STOMACH The stomach contained 800 mL of moist, moderately chewed, stringy, fibrous, leafy, green to brown ingesta (see photo). The ingesta were coated in a thin layer of viscous, white mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 50 mL of moist, well-chewed, stringy, fibrous, yellow to brown ingesta mixed with viscous, yellow mucus (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal-most 0.5 meter of small intestine contained viscous, yellow fluid. The distal-most 0.5 meter of small intestine contained viscous, yellow to pink fluid. The remainder of the small intestine was not examined. The mucosa was unremarkable. No parasites were grossly observed in the portions examined.

CECUM The cecum contained a small amount of moist, moderately digested, stringy, yellow to brown digesta (see photo). The mucosa was sloughing. No parasites were observed.

COLON The proximal-most 0.5 meter of colon contained a small amount of moist, moderately digested, moderately formed, stringy, yellow to brown feces. The distal-most 0.5 meter of colon contained dry, hard, well-formed, well-digested, green to brown feces (see photo). The remainder of the colon was not examined. The mucosa was sloughing. No parasites were observed in the portion examined.

PANCREAS The pancreas was not examined.

SPLEEN The spleen was not examined.

LIVER The margins of the liver were rounded. The serosa was separating from the parenchyma. The liver

was soft. Serosal surfaces were pink to red and purple, and cut surfaces were red to brown.

GALLBLADDER The gallbladder was not examined.

REPRODUCTIVE There was scant, serous reproductive fat. The reproductive organs were not examined.

KIDNEYS No perirenal fat was observed. The kidneys were not examined.

URINARY BLADDER The urinary bladder contained 50 mL of watery, pale yellow urine. The mucosa was congested.

HEART There was scant, serous epicardial fat. Valves and chambers were not examined.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were firm and thickened (see photos). The lungs were light pink to dark pink on serosal surfaces and red and wet on cut surfaces. There was a scant amount of watery, red fluid in the primary airways.

HEAD & NECK REGIONS There was a small thatch of vegetation in the mouth.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Partial necropsy performed
- Bleached, cobblestone-like epidermis
- Cold stress lesions
- Depleted, serous fat
- Dry, had feces
- Relatively empty duodenum, cecum
- Firm, thickened lungs
- Congested urinary bladder mucosa
- Vegetation in mouth
- Monofilament extending out of anus

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

Sara Wappes
Kylie Lawson (FWC intern)

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21030
Date of Report: 2021-Jan-19
Filed By: FWC EC Field Station

FWC Case # 1036 **FWC Region:** NE

Sex: Female **Length:** 295 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-19 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-19 **By:** FWC-WDG

DATE NECROPSIED: 2021-Jan-19 **By:** FWC-WDG,CMM

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Atlantic Ocean

Locality description: Orchid, beached approximately 60 m ENE of the southernmost building at 100 Beachside Drive.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Bleached epidermis; Serous fat(s); Serous muscle; Bloody lung(s); Distended right lung bulla; Hemorrhagic lung parenchyma; Abscesses right lung; Frothy fluid in airways; Fluid-filled upper GI tract; Dry, sandy feces.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Rescue report.

REMARKS:

PIT tag scan negative. Lactating. Uterine Scar. Died on 19 Jan 2021. Died at 0900 hrs. A field necropsy was performed. Cobblestone-like epidermis; See rescue report REC2105.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	295 cm	Fluke base:	91 cm	Girth at axillae:	170 cm
Snout to anus:	193 cm	Fluke width:	69 cm		
Snout to U/G:	173 cm	Girth at fluke base:	124 cm		
Snout to umbilicus:	100 cm	Girth at anus:	143 cm		
Flipper width:	16 cm	Girth at umbilicus:	209 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	1.5 cm	2.4 cm		
Outer Blubber Thickness:	1.3 cm	1.3 cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	1 cm	2.4 cm	Epidermis Thickness:	0.1 cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	5.2	4.6
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21030

RECOVERY DATE 19 January 2021

GENDER Female **TL** 295 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 19 January 2021

CONDITION Fresh

HISTORY See **Rescue Report REC2105**. **19 January 2021**, at 0706 hrs, FWC on-call biologist-Nadia J. Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding a live manatee beached near the Atlantic Ocean in Orchid, Indian River County. FWC case number 1036 was assigned. The complainant, Priscilla Bailey (305-308-8824), stated that the manatee was about six feet long, alive and above the water line, but the tide was coming in. At 0718 hrs, NJG received a photo verifying the manatee's condition and forwarded it to FWC biologist-William D. Greer (WDG). At 0825 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) located the manatee and met Harbor Branch Oceanographic Institute staff. After maneuvering the manatee into a stretcher and starting to walk it off the beach with assistance from Vero Beach Fire Department at 0900 hrs, the manatee was no longer breathing or responding to stimuli. At 0920 hrs, the carcass was loaded in the EC Field Station transport truck and transported to the field station. At 1145 hrs, WDG, KCL, and FWC biologist-Carley M. Metcalf completed a field necropsy. The remains were disposed of at the Brevard County landfill.

EXTERNAL All of the epidermis was present. Watery, bloody fluid exuded from the nares. The carcass was markedly thin with a peanut-shaped head and a slightly concave ventrum. There was cobblestone-like epidermis on all aspects. A thick green algal mat was present on the mid-dorsal aspect and a thin brown algal mat was present on the lateral aspects. There was a moderate infestation of copepods on the head and at the axilla. Slightly bleached epidermis was observed on the head, flippers, and axilla. Both teats were lactating. A minimum of one well-healed watercraft-related scar pattern was observed on the left lateral aspect and peduncle. There were two well-healed circular mutilations at the 3 o'clock position of the fluke. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was abundant serous abdominal, omental and mesenteric fat.

Commented [BB1]: Not sure I believe that. Maybe moderate at most.

STOMACH The stomach contained 1.5 L of watery, well-chewed, moderately digested, leafy, stringy, brown ingesta (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 1.75 L of watery, well-chewed, moderately digested, leafy, stringy, brown ingesta. The mucosa was stained light red. No parasites were observed (see photos).

JEJUNUM & ILEUM The small intestine contained a small amount of moist, well-chewed, poorly formed, stringy, brown ingesta. The mucosa was rugose in the proximal and mid small intestine but was otherwise unremarkable. No parasites were grossly observed.

CECUM The cecum contained 500 mL of moist, moderately digested, stringy, leafy, brown digesta (see photo). The mucosa was unremarkable. No parasites were observed.

COLON The proximal colon contained moist, poorly formed, moderately digested, stringy, leafy, brown feces. The mid colon contained dry, sandy, moderately formed, moderately digested, stringy, leafy, black feces. The distal colon contained extremely dry, very sandy, well-digested, poorly formed, stringy, black feces (see photo). The mucosa was rugose in the proximal colon but was otherwise unremarkable. There was mild infection of dead trematodes in the proximal colon.

PANCREAS The pancreas was tan on serosal and cut surfaces.

SPLEEN The spleen was mottled light gray and purple on serosal surfaces, and red on cut surfaces.

LIVER The margins of the liver were sharp. The liver was firm. Serosal surfaces were blue and cut surfaces were brown.

GALLBLADDER The gallbladder contained 100 mL of watery, golden yellow bile. The mucosa was white.

REPRODUCTIVE There was abundant, serous reproductive fat. The uterus was slightly flaccid and empty of contents. Both uterine horns were distended. The right uterine horn contained a scar (4.6 cm wide x 5.2 cm circumference). Both ovaries contained numerous fluid-filled follicles (maximum diameter 0.8 cm for the right ovary and 1.0 cm for the left ovary).

KIDNEYS There was a small amount of perirenal fat. The kidneys were red to brown on serosal surfaces. On cut surfaces, the cortices were tan and the medullae were red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder was empty of contents. The mucosa was unremarkable.

HEART There was moderate, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right lung was pink to blue on serosal surfaces and red, bloody, and frothy on cut surfaces. The right lung had three approximately 3 cm diameter hard abscesses. The left lung was pink to red on serosal surfaces. Most of the left lung consisted of a large sac filled with bloody fluid and loose, well-formed blood clots. The associated parenchyma appeared hemorrhagic. The primary airways of both lungs contained an abundant amount of frothy, clear fluid. The mucosa was pink to red (see photos). No parasites were observed.

HEAD & NECK REGIONS There was a moderate amount of frothy fluid in the trachea, otherwise NVL.

SKELETON NVL.

OTHER The muscle and fat layers were serous and exuded watery, red-tinged fluid when cut.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
 - Serous fat, tissue
 - Bloody left lung
 - Distended right lung bulla
 - Hemorrhagic lung parenchyma
 - Abscesses right lung
 - Frothy fluid in airways
 - Fluid-filled upper GI tract
 - Dry, sandy feces
 - Cobblestone-like, bleached epidermis
 - Uterine scar
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Carley M. Metcalf
Kylie C. Lawson (FWC intern)

REPORT FILED BY Greer

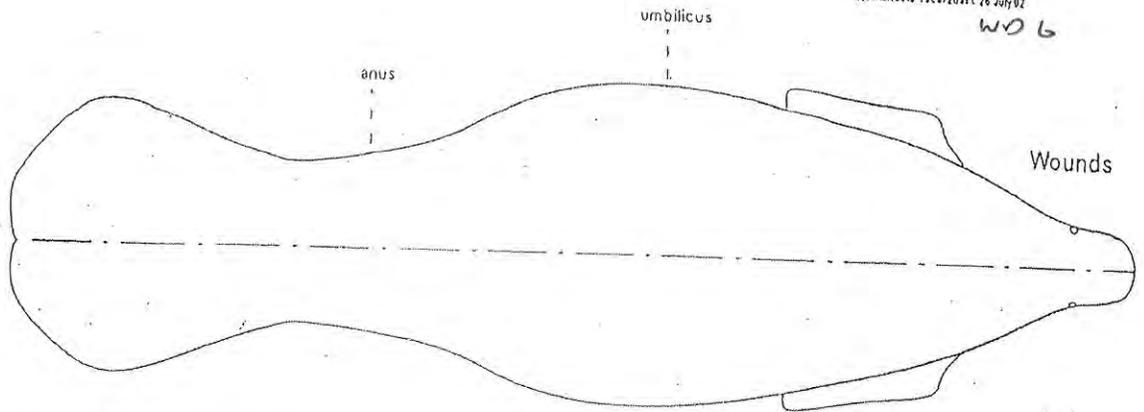
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 19 JAN 2021

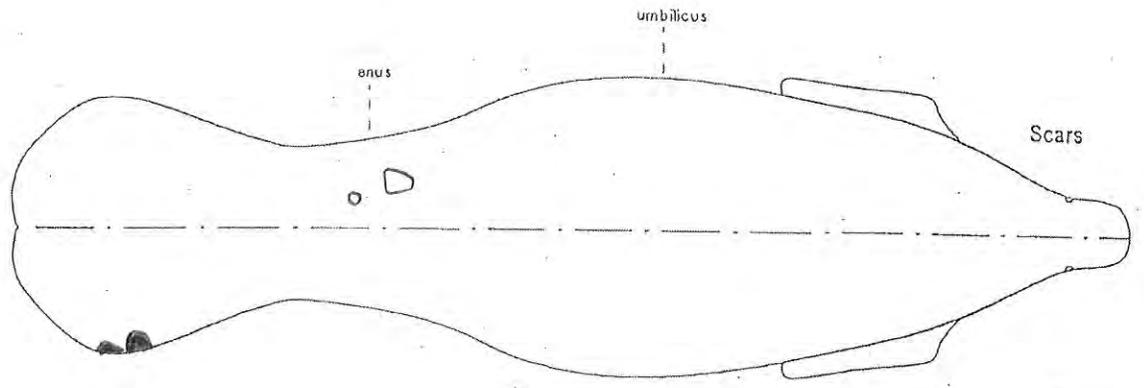
Field I.D. MRC2103a

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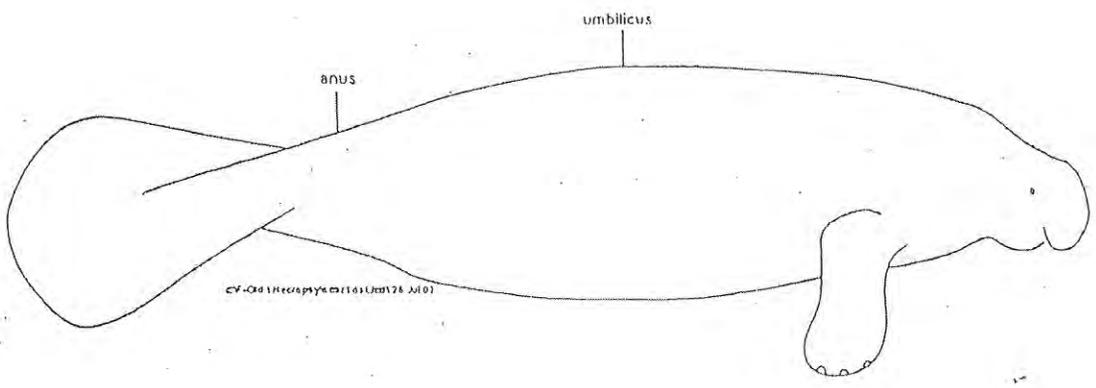
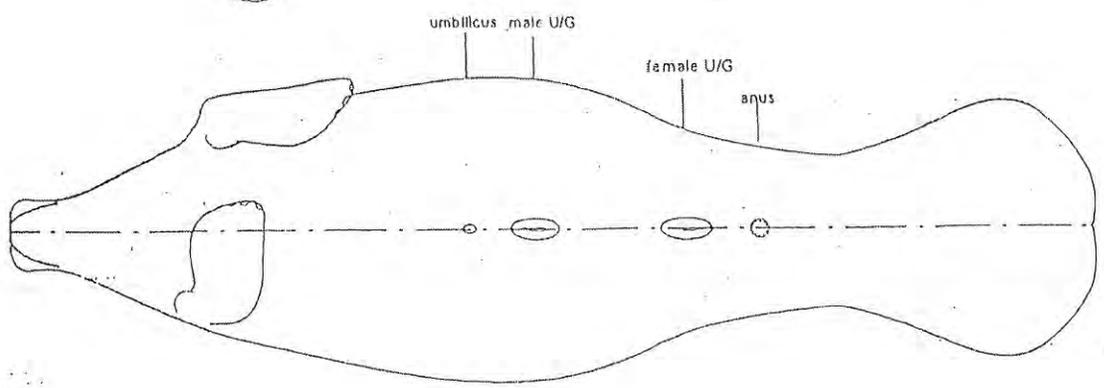
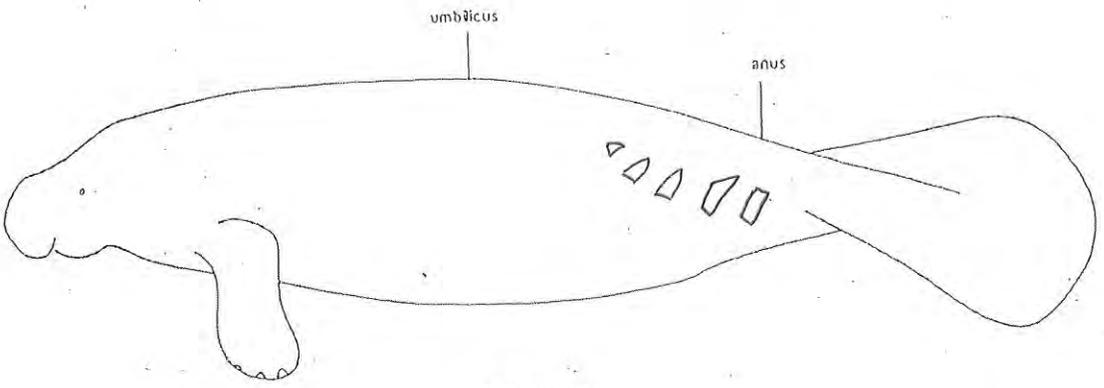
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21030



CV-04 11/10/04 11/10/04 11/10/04

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

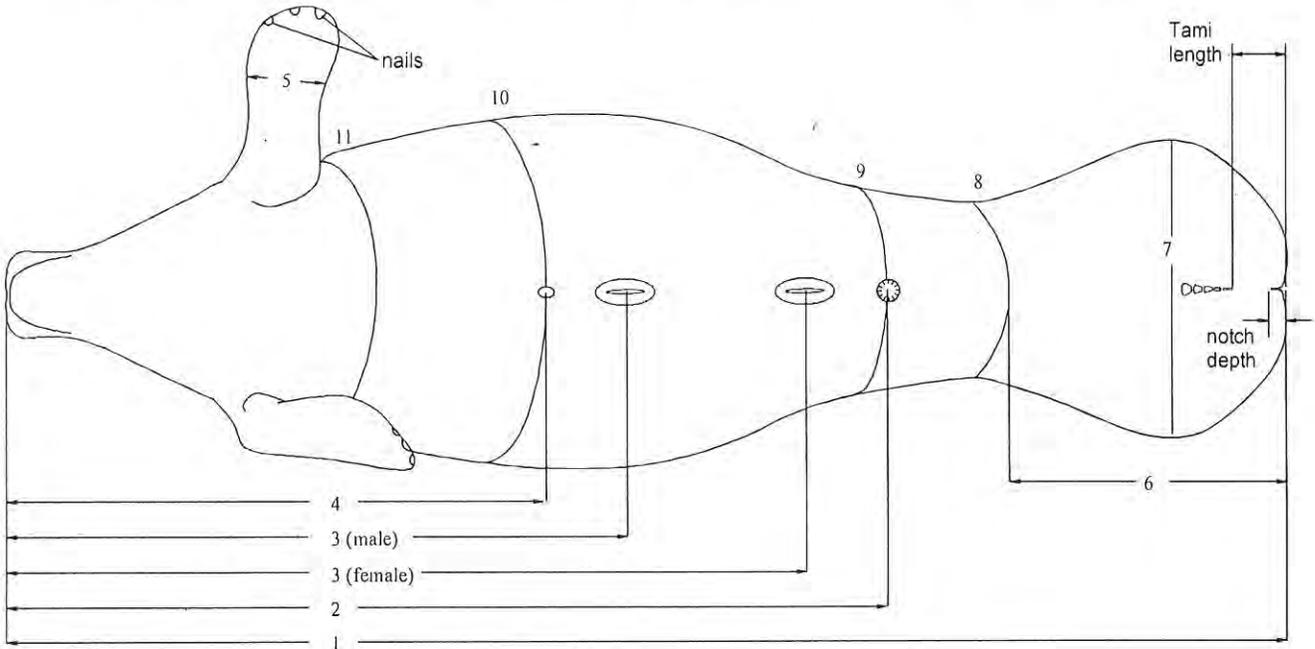
REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

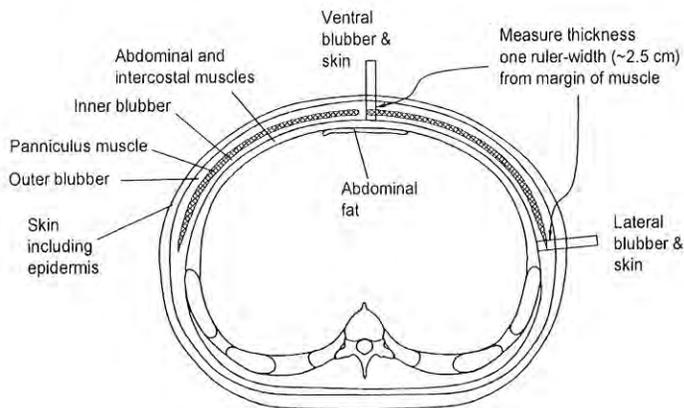
Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only.

USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|--|---------------------------------------|--|
| 1. Total length <u>295</u> cm | 6. Fluke base <u>91</u> cm | 11. *Girth at axillae <u>170</u> cm
(Depth of notch _____ cm) |
| 2. Snout to anus -C <u>193</u> cm | 7. Fluke width <u>69</u> cm | (Tami ln _____ cm) |
| 3. Snout to U/G -C <u>173</u> cm | 8. *Girth at fluke base <u>124</u> cm | |
| 4. Snout to umbilicus -C <u>100</u> cm | 9. * Girth at anus <u>143</u> cm | |
| 5. Flipper width <u>16</u> cm | 10. *Girth at umbilicus <u>209</u> cm | (Nail count: <u>R4 L4</u>) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	<u>1.5</u> cm	<u>2.4</u> cm	(Epidermis <u>0.1</u> cm)
Outer blubber.....	<u>1.3</u> cm	<u>1.3</u> cm	(Abdominal fat _____ cm)
Inner blubber.....	<u>1.0</u> cm	<u>2.4</u> cm	



Mammary dimensions R: ___ x ___ x ___ cm L: ___ x ___ x ___ cm
 Lactating: R: Y/N L: Y/N
 Placental Scaring: R / L: ___ x ___ x ___ cm
 Pregnant: Y/N - Fetus length ___ cm Fetus gender M / F Fetus weight ___ kg
 Gonads: R: ___ x ___ x ___ cm; ___ kg; L: ___ x ___ x ___ cm; ___ kg
 Sperm: in testes Y / N; in epididymes, Y / N Method: visual / microscope slide
 Fluid in seminal vesicles Y / N; if yes, then vesicle dimensions R: ___ x ___ x ___ cm L: ___ x ___ x ___ cm

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21031
Date of Report: 2021-Jan-19
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 315 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-19 **By:** FWC-SMW MMPL-BLB

DATE COLLECTED: 2021-Jan-19 **By:** FWC-SMW MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 410 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Other (Cleft flippers).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Cleft flipper. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	315 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21031

RECOVERY DATE 19 January 2021

GENDER Male **TL** 315 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 19 January, at 1040 hrs, FWC biologists-Brandon Bassett (BLB) and Sara Wappes (SMW) met at the Port St. John boat ramp and boarded the FWC Key West boat. While searching for previously reported carcasses (MEC21021, MEC21024, MEC21025, MEC21026) in the CCEC power plant warm water discharge area, BLB and SMW located an additional carcass (MEC21031). MEC21021, MEC21024, MEC21026, and MEC21031 were towed to a secluded shoreline across the river where an external work-up was completed.

EXTERNAL Approximately 30% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened. The anus and urogenital opening were torn due to scavenging. Both flippers were deeply cleft (see photos). There was cobblestone-like epidermis on all aspects. The fluke margin was slightly eroded due to decomposition. A few barnacles were present on the remaining epidermis. A minimum of seven well-healed watercraft-related scar patterns was observed. There were two well-healed v-shaped mutilation of the fluke margin at the 9 and 10 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Cobblestone-like epidermis
- Cleft flippers
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21032
Date of Report: 2021-Jan-19
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 275 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-19 **By:** Citizen to "Ask FWC" to FWC-ARH

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne Beach, beached approximately 1.2 km SW of 133 Delvalle Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	275 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21032

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 275 cm (est) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY 19 January 2021, at 1119 hrs, FWC biologist-Amber R. Howell (ARH) received a forwarded report from "Ask FWC" regarding a dead manatee in the Indian River in Melbourne Beach, Brevard County. ARH forwarded the information to the EC Field Station. The complainant, Carolyn Pangborn (828-380-1438), described a dead, white, nine-foot-long manatee on shore. At 1459 hrs, WDG received photo verification. Due to advanced level of decomposition and remote location, the carcass was not collected or necropsied. The remains were left on site.

EXTERNAL From photographs - All of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were numerous rents due to scavenging and/or decomposition across the ventrum, head, and fluke.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21033
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # 1103 **FWC Region:** NE

Sex: Male **Length:** 186 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-20 **By:** MMPL-BLB

DATE NECROPSIED: 2021-Jan-20 **By:** MMPL-BLB

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating approximately 20 m from shore behind 4690 Brentwood Driver.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Relatively empty GI tract; Dark line kidney(s); Wet lung(s); Crumbly feces; Dry, sandy feces; Healing skin lesions; Bloody nares; Serous tissue; Fluid in pleural, abdominal cavities; Congested urinary bladder mucosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Cold stress lesions; Cobblestone-like epidermis.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	186 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21033

RECOVERY DATE 20 January 2021

GENDER Male **TL** 186 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 20 January 2021

CONDITION Moderately Decomposed

HISTORY 20 January 2021, at approximately 0858 hrs, FWC biologist-Brandon Bassett (BLB) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Cocoa, Brevard County. FWC case number 1103 was assigned. The complainant, Jim Born (561-436-1655), observed an object that had been floating behind his house at 4690 Brentwood Drive since 0700 hrs. Through binoculars, he believed it was a manatee and sent BLB photos. BLB proceeded to the address arriving at approximately 1020 hrs. BLB was able to back the truck near the shoreline and Ezy-lift the carcass into the truck. BLB transported the carcass to the Brevard County landfill. A field necropsy was completed by approximately 1300 hrs.

EXTERNAL Almost all of the epidermis was present with the top layer sloughing. Bloody fluid exuded from the nares. There were numerous small, pitted lesions on the dorsum which were mostly associated with hair follicles. The dorsal and lateral epidermis was cobblestone-like. There were healing linear lesions on the dorsum. A thin layer of light brown algal was present on the cranial dorsum. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat. The abdominal cavity contained approximately 1.25 L of watery, red fluid.

STOMACH The stomach contained a small amount of viscous, grey mucus. No parasites were observed. The mucosa was unremarkable.

DUODENUM The duodenum was empty of contents. No parasites were observed. The mucosa was unremarkable.

JEJUNUM & ILEUM The small intestine was empty of contents. There were prominent Peyer's patches throughout, some of which were raised and discolored dark grey. There was a mild infection of pinpoint trematodes mostly associated with the discolored Peyer's patches. The mucosa was otherwise unremarkable.

CECUM The cecum contained approximately 250 mL of moist, fibrous, well-digested, brown digesta. No parasites were observed. The mucosa was unremarkable.

COLON The distal colon contained a small amount of dry, crumply, very fibrous, poorly digested, well-formed, brown feces mixed with sand. The proximal colon contained a small amount of moist, very fibrous, poorly digested, well-formed, brown feces. No parasites were observed throughout. The mucosa was sloughing.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled light and dark purple on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were pink, light blue, and dark blue, and cut surfaces were red.

GALLBLADDER The gallbladder contained approximately 25 mL of viscous, flocculent, red-yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The testes were small. The seminal vesicles were small and empty of contents. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant, serous perirenal fat. The kidneys were firm. Serosal surfaces were pink to light purple. On cut surfaces, the cortices were dark pink to grey and the medullae were red. The corticomedullary boundaries were mostly distinct with a dark red line at some.

URINARY BLADDER The bladder contained approximately 75 mL of cloudy, pink urine. The mucosa was severely congested.

HEART There was scant, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right pleural cavity contained 1 L and the left pleural cavity contained 1.25 L of watery, red fluid. The lungs were pink to red on serosal surfaces and red on cut surfaces. The left lung was slightly wet on cut surfaces. The airways were clear. No parasites were observed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER Most fat and muscle layers were severely serous and exuded a large amount of clear, light red-tinged fluid when cut (see photo).

COMMENTS

SIGNIFICANT FINDINGS

- Bloody nares
- Depleted, serous fat
- Serous tissue
- Relatively empty GI tract
- Dry, crumbly, sandy feces
- Wet left lung
- Fluid in pleural cavities, abdominal cavity
- Congested urinary bladder mucosa
- Dark like kidneys
- Pitted cold stress lesions
- Cobblestone-like epidermis
- Healing skin lesions

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Brandon L. Bassett

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21034
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # 1112 **FWC Region:** NE

Sex: Female **Length:** 202 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-20 **By:** FWC-WDG

DATE NECROPSIED: 2021-Jan-21 **By:** FWC-WDG MMPL-BLB

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Palm Bay, floating approximately 165 m NW of 4350 Dixie Highway NE.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Serous muscle; Emaciated; Wet lung(s); Relatively empty GI tract; Crumbly feces; Dry feces; Fluid, gelatinous material in pleural cavities; Sediment, leaf pieces in airways; Congested urinary bladder mucosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Monofilament in colon. Bleached epidermis; Adhered lung. Fused flipper nails.

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Necropsy Report	
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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	202 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21034
RECOVERY DATE 20 January 2021
GENDER Female **TL** 202 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 21 January 2021
CONDITION Badly Decomposed

HISTORY 20 January 2021, at 1214 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek in Palm Bay, Brevard County. FWC case number 1112 was assigned. The complainant, Debbie (321-505-7750), stated that there was a four-foot manatee calf belly-up in the channel west of US1. At 1323 hrs, CMM received a verification photo from the complainant. CMM asked the complainant to secure the carcass for staff to pick up later that day, and the complainant agreed. FWC biologist-William D. Greer (WDG) arrived at 1545 hrs, loaded the carcass via Ant-lift by 1600 hrs, and transported it to the EC Field Station pending necropsy the next day. 21 January, at 1240 hrs, WDG and FWC biologist-Brandon L. Bassett completed a field necropsy at the Brevard Landfill.

EXTERNAL Almost all of the epidermis was present but sloughing. The carcass was dorsoventrally flattened. There was a thick layer of mud on the ventrum. Red-tinged fluid exuded from the nares. A few barnacles and numerous barnacle scars were observed on the dorsal fluke and ventrum. The flippers were bleached. The inner epidermis layer of the dorsal peduncle was also bleached. Two left flipper nails were fused (see photo). A minimum of one well-healed watercraft-related scar pattern was observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat.

STOMACH The stomach contained approximately 500 mL of viscous, cloudy, tan fluid. The mucosa was unremarkable. There was a mild infection of dead nematodes.

DUODENUM The duodenum contained approximately 250 mL of viscous, cloudy, brown fluid mixed with small, well-chewed pieces of leaves. The mucosa was unremarkable. There was a severe infection of dead nematodes.

JEJUNUM & ILEUM The small intestine contained a scant amount of tan to light yellow paste throughout. There were prominent Peyer's patches throughout, some of which were raised and discolored grey to black. There was a mild infection of pinpoint trematodes associated with the discolored Peyer's patches.

CECUM The cecum contained 1 L of moist, poorly digested, fibrous, stringy, green to brown digesta. The mucosa was grey and sloughing. There was a mild infection of dead trematodes.

COLON The proximal colon contained a moderate amount of moist, fibrous, stringy, moderately digested, moderately formed, green feces. The mid colon contained a small amount of moist, fibrous, stringy, well-formed, green feces. There was an 8 cm long piece of >10 lb test diameter tan monofilament line in the contents. The distal colon contained a moderate amount of dry, crumbly, fibrous, well-digested, dark green to brown feces. The mucosa was sloughing throughout. No parasites were observed.

PANCREAS The pancreas was soft. Serosal and cut surfaces were pink.

SPLEEN The spleen was soft. Serosal surfaces were mottled pale purple to dark purple, and cut surfaces were light red.

LIVER The liver was soft and friable. The serosa was separating from the parenchyma. Serosal surfaces were

blue to black and cut surfaces were red to brown.

GALLBLADDER The gallbladder contained approximately 50 mL of viscous, orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The diameter of the uterus was small. No scars were observed. There were no follicles on the ovaries.

KIDNEYS There was a small amount of serous perirenal fat. The kidneys were pink to pale blue on serosal surfaces. On cut surfaces, the cortices were light pink to grey and the medullae were dark red. The corticomedullary boundaries were mostly indistinct.

URINARY BLADDER The bladder contained approximately 25 mL of flocculent, red-tinged fluid. The mucosa was moderately congested.

HEART There was a small amount of serous fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact and slightly distended due to gas in the pleural cavities. Each pleural cavity contained approximately 1.25 L of slightly viscous, dark red fluid mixed with gelatinous, tan material. The ventral cranial tip of the left lung was strongly adhered to the hemidiaphragm (see photos). The lungs were pink to purple on serosal surfaces and pale pink to dark red and wet on cut surfaces. The primary airways contained a small amount of red-tinged fluid mixed with small pieces of vegetation and sediment. There was a mild infection of dead trematodes. The mucosa was pink to pale pink.

HEAD & NECK REGIONS The trachea contained a moderate amount of viscous, red fluid. There was a mild infection of dead trematodes.

SKELETON NVL.

OTHER Some portions of the ventral fat layers were serous.

COMMENTS

SIGNIFICANT FINDINGS

- Depleted, serous fat
 - Serous tissue
 - Emaciated
 - Relatively empty GI tract
 - Dry, crumbly feces
 - Fluid, gelatinous material in pleural cavities
 - Wet lungs
 - Sediment, leaf pieces in airways
 - Congested urinary bladder mucosa
 - Bleached epidermis
 - Monofilament in colon
 - Adhered lung
 - Fused flipper nails
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Brandon L. Bassett

REPORT FILED BY Bassett

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21035
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 303 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-20 **By:** MMPL-BLB

DATE NECROPSIED: 2021-Jan-21 **By:** FWC-WDG MMPL-BLB

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 170 m E of the FPL southern warm water discharge, along the N side of the mole.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Serous muscle; Pneumothorax; Wet lung(s); Dark line kidney(s); Relatively empty GI tract; Sand in colon; Fluid in pleural cavities.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	303 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21035

RECOVERY DATE 20 January 2021

GENDER Male **TL** 303 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 21 January 2021

CONDITION Badly Decomposed

HISTORY **20 January 2021**, at 1346 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding two dead manatees in the CCEC power plant discharge area. WDG relayed the information to FWC biologist-Brandon Bassett (BLB). BLB proceeded to the power plant and, after the necropsy of MEC21036 and rescue of REC2106, located the carcass and four others (MEC21037, MEC21038, MEC21039, MEC21040). All carcasses were loaded into the truck bed via Ezy-lift by 1700 hrs and transported to the EC Field Station where they were stored overnight. **21 January**, the carcasses were transported to the Brevard County landfill where a field necropsy of MEC21035 was completed.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. The carcass was slightly distended with gas. Red-tinged, decompositional fluid exuded from the nares. A few small barnacles were observed on the remaining epidermis. A minimum of eight well-healed watercraft-related scar patterns was observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL The abdominal fat was serous and partially rendered. There was scant, serous mesenteric and omental fat.

STOMACH The stomach contained approximately 500 mL of moist, fibrous, well-chewed, light brown ingesta. The mucosa was slightly congested. No parasites were observed.

DUODENUM The duodenum contained a scant amount of viscous, brown fluid. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained a scant amount of tan to orange paste throughout. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum contained 1 L of dry, fibrous, stringy, well digested, brown to light orange digesta. The mucosa was sloughing. No parasites were observed.

COLON The colon contained a scant amount of slightly moist, slightly fibrous, slightly stringy, slightly sandy, well-formed, brown to dark brown feces throughout. The mucosa was autolyzed. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was soft, friable, and autolyzed.

LIVER The liver was soft, friable, and autolyzed.

GALLBLADDER The gallbladder contained approximately 25 mL of orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The testes were moderate in size. The seminal vesicles were small and empty of contents. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant, serous perirenal fat. The kidneys were tan to red on serosal surfaces. On cut

surfaces, the cortices were brown and the medullae were red. There was a dark grey line and some of the corticomedullary boundaries. The corticomedullary boundaries were otherwise indistinct.

URINARY BLADDER The bladder contained 100 mL of watery, brown urine. The mucosa was unremarkable.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM The left hemidiaphragm was torn due to decomposition. The right hemidiaphragm was distended due to gas in the pleural cavity. The left pleural cavity contained 6 L and the right pleural cavity contained 2 L of watery, dark red fluid. The lungs were soft, friable, and autolyzed, but cut surfaces were wet. The primary airways were clear. No parasites were observed. The mucosa was pink to tan.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER The fat layers of the peduncle were severely serous.

COMMENTS

SIGNIFICANT FINDINGS

- Depleted, serous fat
- Serous tissue
- Pneumothorax
- Wet lungs
- Fluid in pleural cavities
- Dark line kidneys
- Relatively empty GI tract
- Sand in colon

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY
William D. Greet
Brandon L. Bassett

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21036
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 182 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** MMPL-BLB

DATE COLLECTED: 2021-Jan-20 **By:** MMPL-BLB

DATE NECROPSIED: 2021-Jan-20 **By:** MMPL-BLB

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating approximately 740 m E of the FPL southern warm water discharge, on the N side of the mole.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Serous fat(s); Serous muscle; Depleted fat(s); Relatively empty GI tract; Crumbly feces; Dry feces; Sand in GI tract; Fluid in abdominal cavity.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Bleached epidermis; Healing skin lesions.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	182 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21036

RECOVERY DATE 20 January 2021

GENDER Male **TL** 182 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 20 January 2021

CONDITION Badly Decomposed

HISTORY 20 January 2021, at approximately 1420 hrs, while searching for two reported carcasses (MEC21035 and MEC21037) east of the FPL power plant discharge canal, FWC biologist-Brandon Bassett located a dead manatee at the end of the FPL mole. The carcass was originally thought to be one of the reported carcasses but was later discovered to be a new carcass. A field necropsy was completed by 1300 hrs. The carcass was buried under rocks on site.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. The carcass was distended with gas. There was a thick brown algal mat on the remaining dorsal epidermis. A few healing linear lesions were observed. The epidermis of the flippers was bleached. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was scant, serous abdominal, mesenteric, and omental fat. The abdominal cavity contained approximately 1 L of cloudy, dark red fluid.

STOMACH The stomach contained a scant amount of sand. No parasites were observed. The mucosa was unremarkable.

DUODENUM The duodenum was empty of contents. No parasites were observed. The mucosa was unremarkable.

JEJUNUM & ILEUM The small intestine contained a scant amount of tan to red mucus throughout. No parasites were grossly observed. The mucosa was unremarkable.

CECUM The cecum contained approximately 500 mL of slightly fibrous, well-digested, brown digesta mixed with sand. No parasites were observed. The mucosa was autolyzed.

COLON The colon contained a small amount of dry, crumbly, slightly fibrous, well-formed, well-digested, brown feces mixed with a moderate amount of sand. No parasites were observed. The mucosa was autolyzed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was soft. Serosal surfaces were mottled pale pink to dark purple, and cut surfaces were red.

LIVER The liver was soft, friable, and autolyzed.

GALLBLADDER The gallbladder was empty of contents. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The testes were small. The seminal vesicles were small and empty of contents. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant, serous perirenal fat. The kidneys were pink to red on serosal surfaces. On cut surfaces, the cortices were dark pink and the medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 100 mL of dark red urine. The mucosa was autolyzed.

HEART There was scant, serous epicardial fat. The heart was soft. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were pink to purple on serosal surfaces and red on cut surfaces. The airways were clear. No parasites were observed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER All fat and muscle layers were severely serous and exuded watery, light red-tinged fluid when cut (see photo).

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

- Depleted, serous fat
- Serous tissue
- Relatively empty GI tract
- Dry, crumbly feces
- Sand in GI tract
- Fluid in abdominal cavity
- Bleached epidermis
- Healing skin lesions

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Brandon L. Bassett

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21037
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 172 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-20 **By:** MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 140 m E of the FPL southern warm water discharge.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares. Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	172 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21037

RECOVERY DATE 20 January 2021

GENDER Male **TL** 172 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **20 January 2021**, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding two dead manatees (MEC21035 and MEC21037) in the CCEC power plant discharge area. WDG relayed the information to FWC biologist-Brandon Bassett (BLB). After the necropsy of MEC21036 and rescue of REC2106, BLB located the MEC21037 and four others (MEC21035, MEC21038, MEC21039, MEC21040). All carcasses were loaded into the truck bed via Ezy-lift by 1700 hrs and transported to the EC Field Station where they were stored overnight. **21 January**, the carcasses were transported to the Brevard County landfill. WDG and BLB performed an external work-up of MEC21037.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was slightly distended with gas. Red-tinged fluid and mucus exuded from the nares. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21038
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # FWC Region: NE

Sex: Female Length: 190 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-20 By: MMPL-BLB
DATE COLLECTED: 2021-Jan-20 By: MMPL-BLB
DATE NECROPSIED: 2021-Jan-21 By: MMPL-BLB FWC-WDG

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded approximately 85 m E of the FPL warm water discharge, along the N side of the mole.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Flat ventrum; Depleted fat(s); Serous fat(s); Serous muscle; Dark line kidney(s); Wet lung(s); Relatively empty GI tract; Crumbly feces; Dry feces; Swollen, heavy lungs; Mucus, fluid from nares; Congested urinary bladder-, airways-, cecum mucosa, lung serosa, mesenteries, hemidiaphragms, parietal pleura, fat; Petechiae fat layers; Mucus, fluid in airways; Fibrin-like material left lung; Slightly bloody liver.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Cobblestone-like epidermis.

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PRELIMINARY DATA: FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	190 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21038
RECOVERY DATE 20 January 2021
GENDER Female **TL** 190 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 21 January 2021
CONDITION Fresh

HISTORY 20 January 2021, at 1346 hrs, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding two dead manatees (MEC21035 and MEC21037) in the CCEC power plant discharge area. WDG relayed the information to FWC biologist-Brandon Bassett (BLB). BLB proceeded to the power plant and, after the necropsy of MEC21036 and rescue of REC2106, located MEC21038 and four others (MEC21035, MEC21037, MEC21039, MEC21040). All carcasses were loaded into the truck bed via Ezy-lift by 1700 hrs and transported to the EC Field Station where they were stored overnight. 21 January, the carcasses were transported to the Brevard County landfill where a field necropsy of MEC21038 was completed.

EXTERNAL All of the epidermis was present. Red-tinged fluid and tan mucus exuded from the nares. There were thin patches of cobblestone-like epidermis on the dorsal and lateral aspects. A thin light green algal mat was observed. The head and neck region appeared swollen. The ventrum was flat. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat. The abdominal fat was moderately congested.

STOMACH The stomach contained approximately 100 mL of watery, clear fluid mixed with viscous, white mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained approximately 200 mL of viscous, cloudy, yellow fluid. The mucosa was mildly congested. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained a scant amount of tan to yellow paste throughout. There were small bands of moderate congestion in the mucosa. No parasites were grossly observed.

CECUM The cecum contained a small amount of poorly digested leaves and twigs. The mucosa was mildly congested. No parasites were observed.

COLON The proximal and mid colon contained a scant amount of moist, fibrous, poorly digested, brown feces. The distal-most two meters contained dry, crumbly, fibrous, poorly digested, brown feces. The remainder of the distal colon contained a moderate amount of moist, fibrous, stringy, moderately digested, dark brown to light green feces. The mucosa was mildly congested. No parasites were observed.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled light to dark purple on serosal surfaces and dark red on cut surfaces.

LIVER The margins of the liver were sharp. The liver was firm. Serosal surfaces were blue to purple and cut surfaces were brown to red and slightly bloody.

GALLBLADDER The gallbladder contained approximately 25 mL of viscous, yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The diameter of the uterus was

small. No scars were observed. There were no follicles on the ovaries.

KIDNEYS There was a small amount of serous perirenal fat. The kidneys were firm. Serosal surfaces were pink to dark blue. On cut surfaces, the cortices were pink to light purple and the medullae were purple to red. The corticomedullary boundaries were distinct with a dark purple line at some.

URINARY BLADDER The bladder contained approximately 100 mL of clear, light yellow urine. The mucosa was severely congested.

HEART There was a small amount of epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact and severely congested on the pleural aspect. The parietal pleura were severely congested. Each pleural cavity contained approximately 0.25 L of watery, red fluid. The lungs were swollen and heavy, and the lateral margin of the right lung was gassy. There was stringy, tan, fibrin-like material on the left lung serosa (see photos). The lungs were pink, dark purple, dark red, and moderate congested on serosal surfaces, and pink to dark red and wet on cut surfaces. The primary airways were occluded with viscous, tan mucus. No parasites were observed. The mucosa was pink to red and moderately congested.

HEAD & NECK REGIONS The trachea contained a small amount of viscous, white to yellow fluid.

SKELETON NVL.

OTHER Most fat and muscle layers were severely serous and exuded slightly cloudy, red-tinged fluid when cut. Some portions of the fat layers were moderately congested with petechiae.

COMMENTS

SIGNIFICANT FINDINGS

- Swollen head and neck
- Mucus, fluid from nares
- Flat ventrum
- Depleted, serous fat
- Serous tissue
- Congested urinary bladder-, airway-, cecum mucosa, lung serosa, mesenteries, hemidiaphragms, parietal pleura, fat
- Petechiae fat layers
- Swollen, heavy, wet lungs
- Mucus, fluid in airways
- Fibrin-like material left lung
- Dark line kidneys
- Relatively empty GI tract
- Dry, crumbly feces
- Slightly bloody liver
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY William D. Greer

Brandon L. Bassett

REPORT FILED BY Bassett

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21039
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 173 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** MMPL-BLB

DATE COLLECTED: 2021-Jan-20 **By:** MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 55 m E of the FPL southern warm water discharge, along the N side of the mole.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Cobblestone-like epidermis; Bleached epidermis; Cold stress lesions; Bloody nares. Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	173 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21039

RECOVERY DATE 20 January 2021

GENDER Male **TL** 173 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **20 January 2021**, FWC biologist-William Greer (WDG) received a text from FPL-Jennifer Pickett regarding two dead manatees (MEC21035 and MEC21037) in the CCEC power plant discharge area. WDG relayed the information to FWC biologist-Brandon Bassett (BLB). After the necropsy of MEC21036 and rescue of REC2106, BLB located the MEC21039 and four others (MEC21035, MEC21037, MEC21038, MEC21040). All carcasses were loaded into the truck bed via Ezy-lift by 1700 hrs and transported to the EC Field Station where they were stored overnight. **21 January**, the carcasses were transported to the Brevard County landfill. WDG and BLB performed an external work-up of MEC21039.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. The carcass was slightly distended with gas. Red-tinged fluid exuded from the nares. The carcass had a peanut-shaped head. There were patches of cobblestone-like epidermis on the dorsal and lateral aspects. The inner layer of dorsal peduncle epidermis was bleached. Small pitted lesions were observed on the fluke margin. A minimum of one well-healed watercraft-related scar pattern was observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Peanut-shaped head
- Cobblestone-like, bleached epidermis
- Cold stress lesions
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21040
Date of Report: 2021-Jan-29
Filed By: FWC EC Field Station

FWC Case # 2053 **FWC Region:** NE

Sex: Female **Length:** 180 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-29 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-05 **By:** FWC-CMM MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Palm Bay, floating approximately 30 m SE of 1199 Treebark Avenue NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case numbers 1705, 1803, 1889, and 2047. Scavenging. Actual length of the remains was 175 cm.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21040

RECOVERY DATE 05 January 2021

GENDER Female **TL** 180 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **29 January 2021**, at 1745 hrs, FWC on-call biologist-Amber R. Howell (ARH) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek, Palm Bay, Brevard County. FWC case number 1705 was assigned. The complainant, Sandy Finch (321-698-8749), stated that the carcass was 5-6 feet long. At 1821 hrs, ARH received verification photos and forwarded the information to the EC Field Station. **31 January**, at 1007 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from Dispatch regarding a dead manatee in Turkey Creek, Palm Bay. FWC case number 1803 was assigned. The complainant, John Melkun (321-536-9203), stated that the carcass was eight feet long with vultures starting to feed on it. At 1025 hrs, SMW received verification photos and a text that the carcass had drifted past their property already. Due to an elevated carcass load and the advanced stage of decomposition, no additional response was planned. **02 February**, at 1017 hrs, SMW received a text alert from Dispatch regarding a dead manatee in Turkey Creek. FWC case number 1889 was assigned. The complainant, Jessica (856-340-1086), stated that the carcass was 5-6 feet long and vultures had been on it since yesterday. At 1229 hrs, SMW received a verification photo. **05 February**, at 1212 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from Dispatch regarding a dead manatee in Turkey Creek. FWC case number 2047 was assigned. The complainant, Monique Miller (321-243-8449), stated that the carcass was red and floating past her dock. At 1215 hrs, CMM received photo verification. Based on photos and location, it was concluded that this was the same carcass reported on 29 January. At 1300 hrs, CMM received a text alert from Dispatch regarding the carcass. FWC case number 2053 was assigned. The complainant, Zachary (321-693-4401), described a dead manatee underneath his dock. At 1319 hrs, CMM received photo verification this was the same manatee. At 1500 hrs, CMM and FWC biologist-Sean M. Tennant launched the ECFL Key West boat, towed the carcass to secluded shoreline, and completed an external work-up by 1550 hrs. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus and urogenital opening. The nares and face were scavenged. One well-healed watercraft-related scar pattern was observed on the left dorso-lateral aspect. Actual length of the remains was 175 cm. PIT tag scan was negative. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes / Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21041
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # 1125 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Satellite Beach, grounded approximately 840 m WNW of 298 Lanternback Island Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21041

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 cm (est) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY 20 January 2021, at 1624 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Banana River in Satellite beach, Brevard County. FWC case number 1125 was assigned. The complainant, Aaron (321-432-7227), stated that there was a dead manatee in the mangroves on the side of the Pineda Causeway that was approximately nine feet long. At 1534 hrs, CMM received photo verification. Due to an elevated carcass load, this was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - All of the left ventral-lateral epidermis was present. There was a thin green and brown algal mat on the left lateral aspect. The carcass was slightly distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21042
Date of Report: 2021-Jan-20
Filed By: FWC EC Field Station

FWC Case # 1132 **FWC Region:** NE

Sex: Male **Length:** 155 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-20 **By:** Ciitzen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-22 **By:** FWC-WDG,CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, beached approximately 40 m E of 9620 Riverview Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Thickened epidermis; Bleached epidermis; Cobblestone-like epidermis; Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of the remains was 151 cm. Scavenging.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	155 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21042

RECOVERY DATE 22 January 2020

GENDER Male **TL** 155 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **20 January 2021**, at 1624 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the St. Sebastian River in Sebastian, Indian River County. FWC case number 1132 was assigned. The complainant, Mickey Capp (772-473-9710), stated that there was a dead, five-foot calf on shore. At 1645 hrs, CMM received a photo of the carcass. Due to the time of day, a response was not attempted. **21 January**, FWC EC Field Station staff requested FWC LE assistance to tow this carcass and MEC21019 to a secluded location. At approximately 2200 hrs, an officer responded but was unable to tow the carcass. **22 January**, at 1030 hrs, CMM and FWC biologist-William D. Greer (WDG) launched the Key West boat from Dale Wimbrow Park. After securing MEC21052, WDG and CMM towed MEC21042 and MEC21019 to a secluded location and completed external work ups for both carcasses by 1300 hrs. The remains were left on site.

EXTERNAL Less than 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. The remaining epidermis on the caudal ventrum was thickened and cobblestone-like. The remaining flipper epidermis appeared thickened and bleached. The tissue of the face was torn due to scavenging and/or decomposition which exposed the skull. There was a decompositional rent on the right ventrum through which ribs and a portion of the GI tract protruded. No watercraft-related scars or wounds were observed. Actual length of the remains was 151 cm. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Thickened, bleached, cobblestone-like epidermis
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

William D. Greer
Carley M. Metcalf

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21043
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # 1159 **FWC Region:** NE

Sex: Male **Length:** 141 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-21 **By:** FWC-WDG MMPL-BLB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, grounded approximately 15 m SW of 710 Third Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Bleached epidermis; Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Recovery Site.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Found dorsum-up with face in embankment.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	141 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21043

RECOVERY DATE 21 January 2021

GENDER Male **TL** 141 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1021 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee calf in the Berkeley Canal, Satellite Beach, Brevard County. FWC case number 1159 was assigned. The complainant, Kelly (407-810-3970), stated that there was a three-foot manatee calf beached behind her home. At 1027 hrs, SMW received a photo of the carcass. At 1447 hrs, FWC biologists-William D. Greer (WDG) and Brandon L. Bassett (BLB) arrived and found the carcass grounded dorsum-up with the head tucked into a cavity in the embankment. WDG and BLB loaded the carcass by hand at 1458 hrs. The carcass was transported to the EC Field Station where an external work up was completed by 1615 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. Bloody fluid exuded from the nares and mouth. The carcass was distended with gas. A few transverse folds were present on the ventrum. The head, flippers and ventrum were slightly bleached. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS The carcass was found dorsum-up very high on the beach with the face directly into the sandy embankment. External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Fetal folds
- Bleached epidermis
- Found dorsum-up with face in embankment

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21044
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # 1461 **FWC Region:** NE

Sex: Female **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, floating approximately 25 m S of 405 12th Place SE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case numbers 1158, 1309, and 1410.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21044

RECOVERY DATE 25 January 2021

GENDER Female **TL** 215 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **21 January 2021**, at 1015 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Vero Beach, Indian River County. FWC case number 1158 was assigned. The complainant, Bret (772-359-0057), stated that there was a dead manatee in the canal behind his residence. At 1031 hrs, SMW received photo verification. The complainant offered to tow the carcass out of the canal. Due to an elevated carcass load, the carcass was not collected or necropsied. **23 January**, at 1421 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from Dispatch regarding a dead manatee in the Indian River. FWC case number 1309 was assigned. The complainant, Lydia (561-291-2361), stated that there was a belly-up, dead manatee with white patches on it behind her residence. At 1433 hrs, CMM received photo verification. At 1500 hrs, CMM requested FWC LE assistance to tow the carcass to a discrete location. **25 January**, CMM received a text from the complainant stating that the manatee was still behind her residence. At 0900 hrs, FWC biologist-William D. Greer requested LE assistance to tow the carcass to a discrete location. At 1103 hrs, FWC biologist-Allison Burns (ACP) received a text alert from Dispatch regarding the same dead manatee in Vero Beach. FWC case number 1410 was assigned. At 1420 hrs, ACP received a photo verifying that it was the same carcass and forwarded the information to the EC Field Station. At 1853 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from Dispatch regarding the carcass. FWC case number 1461 was assigned. The complainant, Margaret Fly (678-896-7210), stated that she saw two men in a canoe towing a manatee carcass past her house. The men stated they left the carcass a quarter mile north of her address. At 1923 hrs, ALP received photo verification of men in a canoe towing the carcass.

EXTERNAL From photographs - Approximately 60% of the ventral epidermis was present but sloughing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21045
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 150 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** FWC-CMM,FWC Inter-K. Lawson

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 180 m NE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified by FWC biologists.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Actual length of the remains was 135 cm.

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MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21045

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 150 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1100 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the CCEC power plant after the release of REC2027 at the Port St. John boat ramp to scout for possible rescue cases and carcasses due to the large number of manatees utilizing the warm water site. At 1133 hrs, KCL located MEC21045 and continued to scout for more. After MEC21046, MEC21047, and MEC21048 were loaded via Ezy-lift, CMM and KCL returned to the carcass. Due to time constraints, CMM and KCL took a dorsal photo, measured the remains, and secured it with rocks. The remains were left on site.

EXTERNAL Approximately 50% of the dorsal epidermis was present. Bird droppings were present on the dorsal aspect. Most of the fluke was missing due to decomposition and/or scavenging. No watercraft-related wounds or scars were observed. Actual length of the remains was 135 cm. PIT tag scan was not performed.

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologist

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21046
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 166 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE COLLECTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 340 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cold stress lesions; Bleached epidermis; Bloody nares. Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	166 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21046

RECOVERY DATE 21 January 2021

GENDER Male **TL** 166 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1100 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the CCEC power plant after the release of REC2027 at Port St. John boat ramp to scout for possible rescue cases and carcasses due to the large number of manatees utilizing the warm water site. At 1149 hrs, CMM located MEC21046 and continued to scout for more. At 1237 hrs, the carcass was loaded via Ezy-lift along with MEC21047 and MEC21048. The carcasses were transported to the Brevard County Landfill where an external work up was completed at 1512 hrs.

EXTERNAL Almost all of the epidermis was present but sloughing. Watery red fluid exuded from the nares. There was a thin green algal mat on the dorsal aspect. The flippers and face were slightly bleached. A moderate amount of small, pitted white lesions were present on the caudal dorsal and lateral aspects. There was a mild barnacle infestation on the dorsal and ventral fluke. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Cold stress lesions
- Bleached epidermis
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21047
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 172 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE COLLECTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 370 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Bleached epidermis; Bloody nares. Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	172 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21047

RECOVERY DATE 21 January 2021

GENDER Female **TL** 172 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1100 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the CCEC power plant after the release of REC2027 at Port St. John boat ramp to scout for possible rescue cases and carcasses due to the large number of manatees utilizing the warm water site. At 1149 hrs, CMM located MEC21047 and continued to scout for more. At 1245 hrs, the carcass was loaded via Ezy-lift along with MEC21046 and MEC21048. The carcasses were transported to the Brevard County Landfill where an external work up was completed at 1459 hrs.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was slightly distended with gas. There was cobblestone-like epidermis present on all aspects. The face, flippers, and axilla were bleached. There was a thin green algal mat on the dorsal aspect. Watery red fluid exuded from the nares. There was a minimum of one well-healed watercraft-related scar pattern on the right lateral aspect of the face. One well-healed mutilation was present at the 5 o' clock position of the fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Cobblestone-like, bleached epidermis
- Bloody nares

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

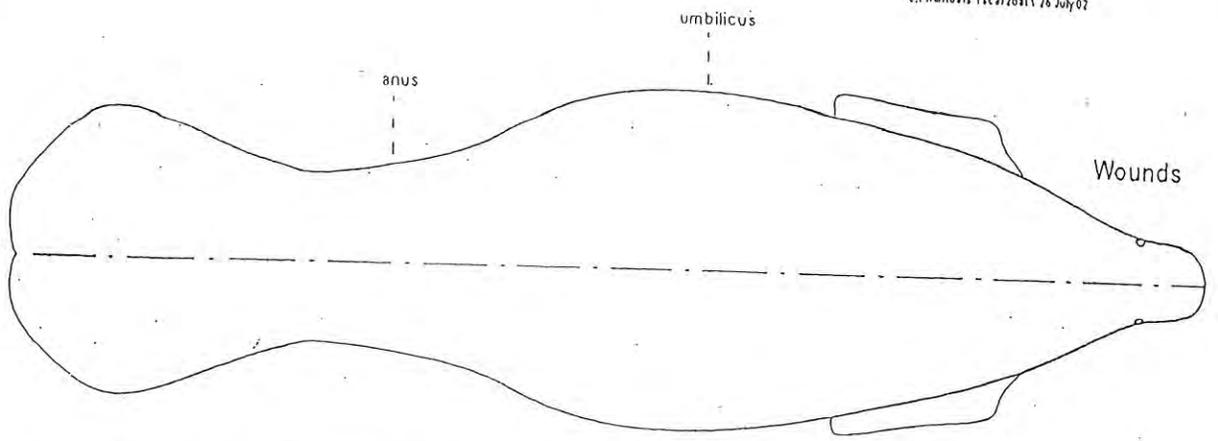
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REPORT FILED BY Metcalf

Date 21 JAN 2021

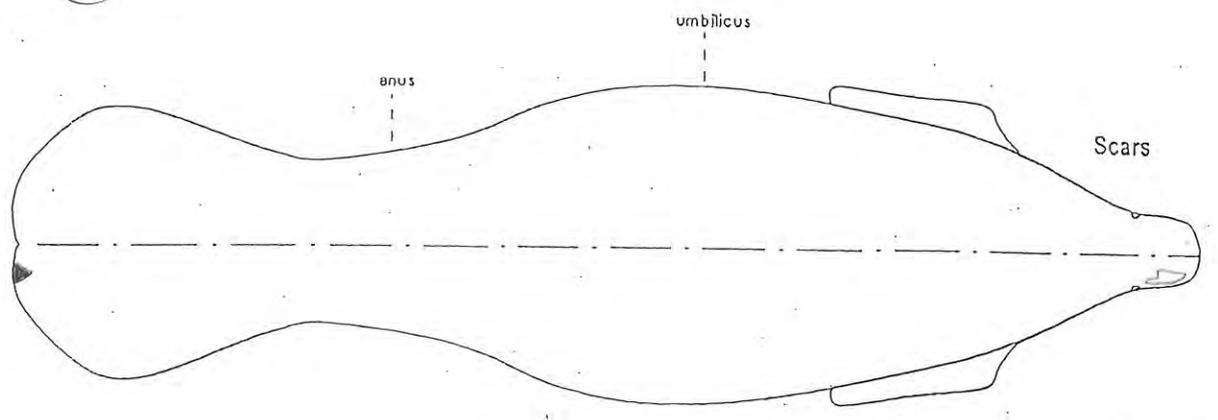
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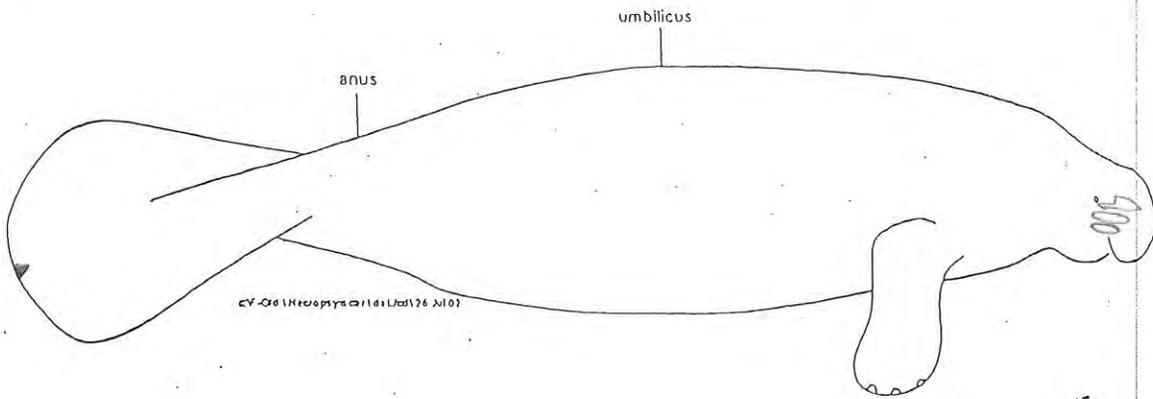
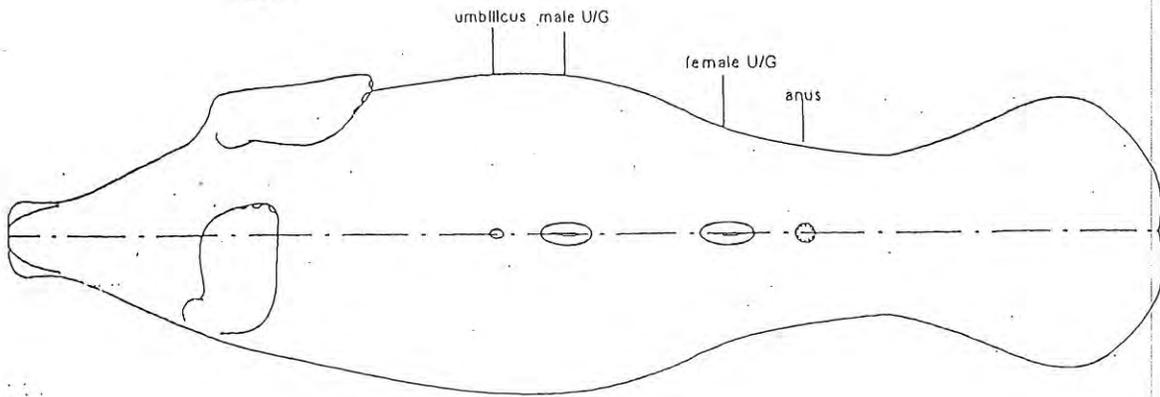
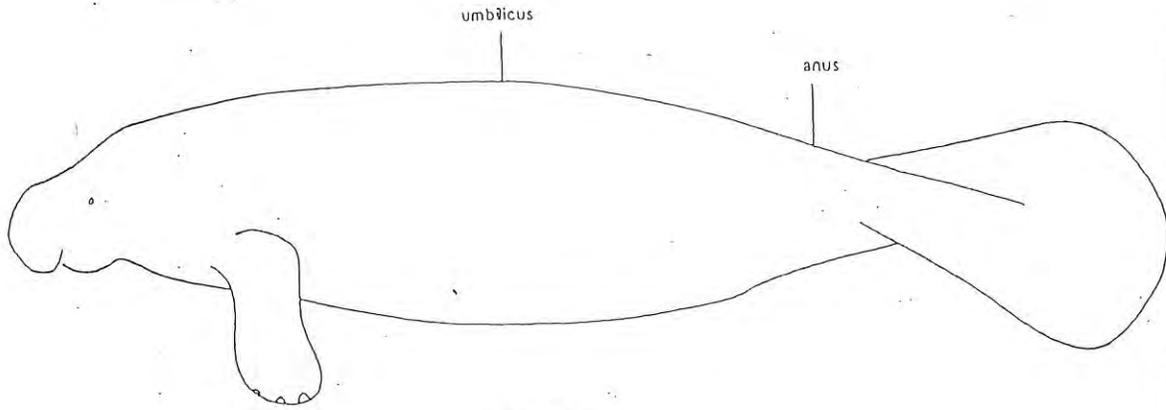


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

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FIELD I.D. MEC 21047
21 JAN 2021



CV-061 Herpys 141 141 141 141 141

CMM

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21048
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 182 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE COLLECTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 490 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Thin carcass; Bloody nares. Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	182 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21048

RECOVERY DATE 21 January 2021

GENDER Female **TL** 182 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1100 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the CCEC power plant after the release of REC2027 at Port St. John boat ramp to scout for possible rescue cases and carcasses due to the large number of manatees utilizing the warm water site. At 1155 hrs, CMM located MEC21048 and continued to scout for more. At 1254 hrs, the carcass was loaded via Ezy-lift along with MEC21047 and MEC21046. The carcasses were transported to the Brevard County Landfill. An external work up was completed at 1437 hrs.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened. There was a thin brown algal mat on the dorsal aspect. The face, flippers, axilla, and fluke margin were bleached. Watery red fluid exuded from the nares. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Thin carcass
- Bleached epidermis
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21049
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 320 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 540 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging. Actual length of the remains was 311 cm.

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MORPHOMETRICS:

Total length:	320 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21049

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 320 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1100 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the CCEC power plant after the release of REC2027 at Port St. John Boat Ramp to scout for possible rescue cases and carcasses due to the large number of manatees utilizing the warm water site. At 1155 hrs, KCL located MEC21049 and continued to scout for more. After MEC21046, MEC21047, and MEC21048 were loaded via Ezy-lift, CMM and KCL returned to the carcass. Due to time constraints, CMM and KCL took a ventral photo, measured the remains, and secured it with rocks. The remains were left on site.

EXTERNAL All of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were multiple large rents on the ventral aspect due to decomposition and/or scavenging which exposed the body cavity. There were bird droppings on the ventrum. The fluke and head were severely eroded due to decomposed. Actual length of the remains was 311 cm. PIT tag scan was not performed.

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21050
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # 1181 **FWC Region:** NE

Sex: Female **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 80 m SSW of the northwesternmost building of 5255 S Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21050

RECOVERY DATE N/A

GENDER Female **TL** 180 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 21 January 2021, at 1451 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Indian River, Merritt Island, Brevard County. FWC case number 1181 was assigned. The complainant, Tom (321-271-5748), stated that the carcass was a juvenile and had lost all of its coloring. At 1558 hrs, SMW received a verification photo. Due to high carcass volume and the advanced state of decomposition, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to scavenging and/or decomposition at the anus, urogenital opening and axillae.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21051
Date of Report: 2021-Jan-21
Filed By: FWC EC Field Station

FWC Case # 1240 **FWC Region:** NE

Sex: Female **Length:** 163 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-21 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-22 **By:** FWC-WDG,CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, grounded approximately 55 m ESE of 400 Port Royal Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Bloody nares. Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case numbers 1199, 1217, 1223, and 1231.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	163 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21051

RECOVERY DATE 22 January 2021

GENDER Female **TL** 163 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **21 January 2021**, at 1856 hrs, FWC on-call biologist-Nadia J. Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Berkeley Canal, Satellite Beach, Brevard County. FWC case number 1199 was assigned. The complainant, Jason Gilstrap (864-354-6134), described a small, dead manatee in the canal behind his residence. At 1911 hrs, NJG received photo verification and forwarded the information to the EC Field Station. **22 January**, at 0657 hrs, NJG received a message from the complainant that the manatee was still behind his residence. FWC biologist-William D. Greer (WDG) and FWC biologist-Carley M. Metcalf (CMM) planned to recover the carcass after performing external work-ups on MEC21042, MEC21019, MEC21052, and MEC21055 in the St. Sebastian River. At 0915 hrs, CMM received a text alert from Dispatch regarding a dead manatee in the Berkeley Canal. FWC case number 1217 was assigned. The complainant, Jennifer Chandler (321-693-3734), described a three to four-foot-long, dead manatee in the section of canal close to the observation bridge. At 0957 hrs, CMM received photo verification. The EC Field Station received three other reports (case numbers 1223, 1231, 1240) regarding this carcass. At 1530 hrs, WDG and CMM arrived at the reported location. The carcass was loaded by 1606 hrs and transported to the EC Field Station for an external work up the following day. **23 January**, at 1035 hrs, CMM completed an external work up. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. The carcass was distended with gas. Watery red fluid exuded from the nares. There was a thick, brown algal mat on the dorsal and lateral aspects. The epidermis of the face and axilla was slightly bleached. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Bloody nares
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21052
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1213 **FWC Region:** NE

Sex: Male **Length:** 218 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-22 **By:** FWC-WDG,CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, grounded approximately 55 m NNW of 46 Sunset Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Cold stress lesions; Bleached epidermis; Healing watercraft wound(s); Bloody nares. Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Cranial, Internal.

MATERIALS COLLECTED: Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	218 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21052

RECOVERY DATE 22 January 2021

GENDER Male **TL** 218 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 22 January 2021, at 0822 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the St. Sebastian River in Sebastian, Indian River County. FWC case number 1213 was assigned. The complainant, Steven Allen, stated that there was a dead manatee floating behind his home. At 0830 hrs, CMM received a photo verifying the carcass. At 1030 hrs, CMM and FWC biologist-William D. Greer (WDG) launched the ECFL Key West boat from Dale Wimbrow Park. After securing MEC21052, WDG and CMM towed MEC21052 and MEC21055 to a remote location and completed external work ups for both carcasses by 1430 hrs. The remains were left on site.

EXTERNAL Almost all of the epidermis was present but sloughing. The carcass had a slight peanut-shaped head. The carcass was slightly distended with gas. Bloody fluid exuded from the nares. There was a thick brown algal mat on the dorsal and lateral aspects. One healing linear watercraft-related wound was observed on the left lateral aspect. The head, flippers and axillae were bleached. There were numerous round and irregular-shaped white cold stress lesions on the dorsal peduncle and fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists
- Peanut-shaped head
- Cold stress lesions
- Bleached epidermis
- Bloody nares
- Healing watercraft wound

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

William D. Greer
Carley M. Metcalf

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21053
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # FWC Region: NE

Sex: Female Length: 195 cm Weight: Not Taken kg

DATE REPORTED: 2021-Jan-22 By: FPL-Jennifer Pickett

DATE COLLECTED: 2021-Jan-25 By: MMPL-TDW

DATE NECROPSIED: 2021-Jan-26 By: MMPL-BLB

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 235 m NNE of 132 Cottrell Avenue.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Serous muscle; Relatively empty GI tract; Wet lung(s); Swollen head and neck; Bloody nares; Abscess right lung; Fluid in pleural cavities, abdominal cavity.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Bleached epidermis; Spongy epidermis.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	195 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21053
RECOVERY DATE 25 January 2021
GENDER Female **TL** 195 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 26 January 2021
CONDITION Badly Decomposed

HISTORY **22 January 2021**, at 1120 hrs, FWC biologist-William D. Greer (WDG) received a text and photo from FPL-Jennifer Pickett (JP) regarding a dead manatee at FPL-Cape Canaveral Energy Center (CCEC) in Indian River, Brevard County. The complainant, JP (321-634-4505), stated that the carcass was 5-6 feet long and was stuck in the currents near the southern discharge, but the photo was inconclusive. At 1145 hrs, CMARI biologist-Monica Ross contacted WDG regarding the same carcass and verified it was dead but that she could not safely tow it. Due to ECFL staff being in Indian River County recovering other carcasses, it was decided to wait for the carcass to ground near land before recovering. **24 January**, at 1445 hrs, FWC biologist-Sara M. Wappes (SMW) and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and secured the carcass for later removal. Due to the REC2107 rescue, the carcass was not collected that day. **25 January**, at 1030 hrs, FWC biologist-Tara Whitcomb met SMW and KCL at the FPL power plant and recovered MEC21064 and MEC21053 by Ezy-lift. Both carcasses were transported to the MMPL.

EXTERNAL Almost all of the epidermis was missing. The remaining epidermis of the flippers was bleached and slightly spongy. The carcass was slightly distended with gas. Red-tinged fluid exuded from the nares. The head and neck tissue appeared swollen. The anus and urogenital opening were torn due to scavenging. A few well-healed linear scars were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat. The abdominal cavity contained approximately 1.5 L of watery, dark red fluid.

STOMACH The stomach contained a scant amount of viscous, green fluid. No parasites were observed. The mucosa was autolyzed.

DUODENUM The duodenum contained approximately 100 mL of viscous, cloudy, dark tan fluid. No parasites were observed. The mucosa was autolyzed.

JEJUNUM & ILEUM The small intestine contained a scant amount of viscous, tan to light green fluid. No parasites were observed. The mucosa was autolyzed.

CECUM The cecum contained a small amount of viscous, slightly fibrous, green fluid. No parasites were observed. The mucosa was autolyzed.

COLON The distal and mid colon contained a small amount of moist, slightly fibrous, stringy, well-digested, well-formed, dark green feces. An ELISA toxicology sample was collected. The proximal colon contained a small amount of viscous, slightly fibrous, dark green fluid. No parasites were observed throughout. The mucosa was autolyzed.

PANCREAS The pancreas was soft and gassy. Serosal and cut surfaces were light pink.

SPLEEN The spleen was soft. Serosal surfaces were mottled light and dark purple, and cut surfaces were dark grey.

LIVER The liver was soft, friable, and autolyzed. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained approximately 20 mL of viscous, cloudy, dark yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The diameter of the uterus was small. No scars were observed. There were no follicles on the ovaries.

KIDNEYS There was scant perirenal fat. The kidneys were soft, friable, and autolyzed. An ELISA toxicology sample was collected.

URINARY BLADDER The bladder was empty of contents. The mucosa was autolyzed.

HEART There was scant, serous epicardial fat. The heart was soft and friable. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were torn due to decomposition. The right pleural cavity contained 2 L and the left pleural cavity contained 0.5 L of slightly viscous, cloudy, dark red fluid. There was a 1.5 cm diameter abscess on the mid ventral aspect of the right lung (see photos). The lungs were soft and friable. Serosal surfaces were pink to light purple and cut surfaces were red and wet. The airways were clear. No parasites were observed. The mucosa was pink to light red. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER Most muscle and fat layers were severely serous and exuded clear, light red fluid when cut (see photo).

COMMENTS

SIGNIFICANT FINDINGS

- Swollen head and neck
 - Bloody nares
 - Depleted, serous fat
 - Serous tissue
 - Relatively empty GI tract
 - Abscess right lung
 - Fluid in pleural cavities, abdominal cavity
 - Wet lungs
 - Bleached, spongy epidermis
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Brandon L. Bassett

REPORT FILED BY Bassett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21054
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 205 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** FWC FIM-Derek Tremaine to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: St. Sebastian River

Locality description: Micco, grounded approximately 220 m W of 9574 Fleming Grant Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC staff.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	205 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21054

RECOVERY DATE N/A

GENDER Undetermined **TL** 205 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **22 January 2021**, at 1250 hrs, FWC biologist-William D. Greer (WDG) received a text from FWC FIM biologist-Derrick Tremain (DT) regarding a dead manatee in the north fork of the St. Sebastian River in Micco, Brevard County. DT stated that they had found a dead manatee while going to a fish survey area. At 1253 hrs, WDG received photos of the carcass. WDG asked DT if they could get a length and tow the carcass to a remote location, and DT agreed. At 1349 hrs, DT sent WDG a text with location, length measured ventrum-up in centimeters, and where the carcass was towed to. Due to EC Field Station staff already responding to five carcasses during that day, it was decided to not recover or necropsy this carcass. The remains were left on site.

EXTERNAL From photographs – All of the right lateral epidermis was present. The carcass was floating right side high and appeared distended with gas. A mild infestation of barnacle scars was observed.

COMMENTS Actual length taken by FIM biologists.

SIGNIFICANT FINDINGS

- Verified by photographs and FWC staff

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21055
Date of Report: 2021-Jan-13
Filed By: FWC EC Field Station

FWC Case # 0773 **FWC Region:** NE

Sex: Male **Length:** 307 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-13 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-22 **By:** FWC-WDG,CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, floating approximately 220 NW of 12425 Roseland Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 0734. Scavenging.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	307 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21055

RECOVERY DATE 22 January 2021

GENDER Male **TL** 307 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **13 January 2021**, at 1252 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 0734 was assigned. The complainant, Marcus (321-747-6044), described a dead manatee, belly-up, flippers flat to the chest, and near the Dale Wimbrow boat ramp. Photos were not available for verification. **14 January**, at 1222 hrs, FWC biologist-William D. Greer (WDG) received a text alert from Dispatch regarding a dead manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 0773 was assigned. The complainant, William Hull (601-323-7108), described the manatee as belly-up, ten feet long, and near the Dale Wimbrow boat ramp. At 1803 hrs, WDG received photo verification. Based on the given location, it was determined this was the same carcass. **22 January**, while collecting MEC21019, MEC21042 and MEC21052, WDG and FWC biologist- Carley M. Metcalf located MEC21055 and towed it the remains to a secluded location where an external work-up was completed. The remains were left on site.

EXTERNAL Almost all of the epidermis was missing. Bloody fluid exuded from the nares, mouth and a decompositional rent. There was a decompositional rent near the urogenital opening which exposed the body cavity. The carcass was dorsoventrally flattened due to decomposition. A minimum of four well-healed watercraft-related scar patterns was observed. The fluke margin was irregular but well-healed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

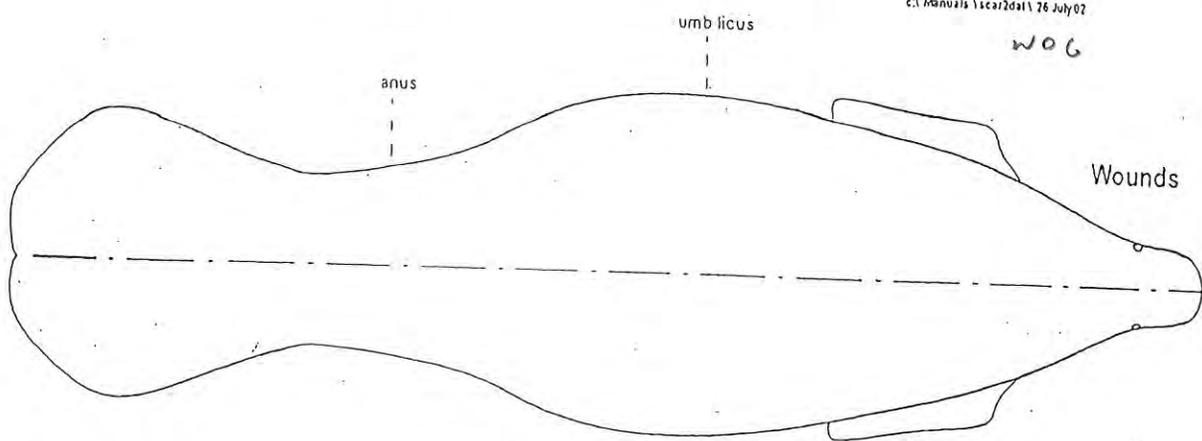
REPORT FILED BY Metcalf / Greer

Date 22 JAN 2020

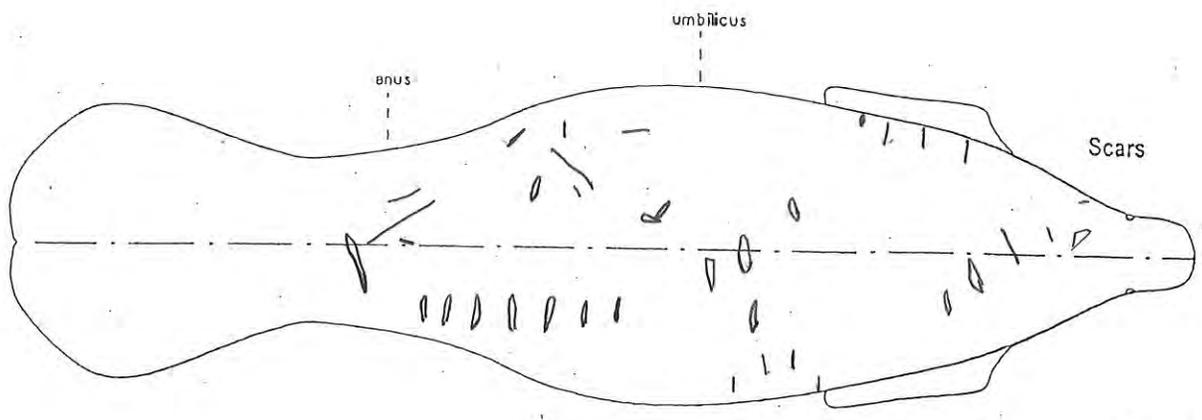
Field I.D. MEL21055

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W06

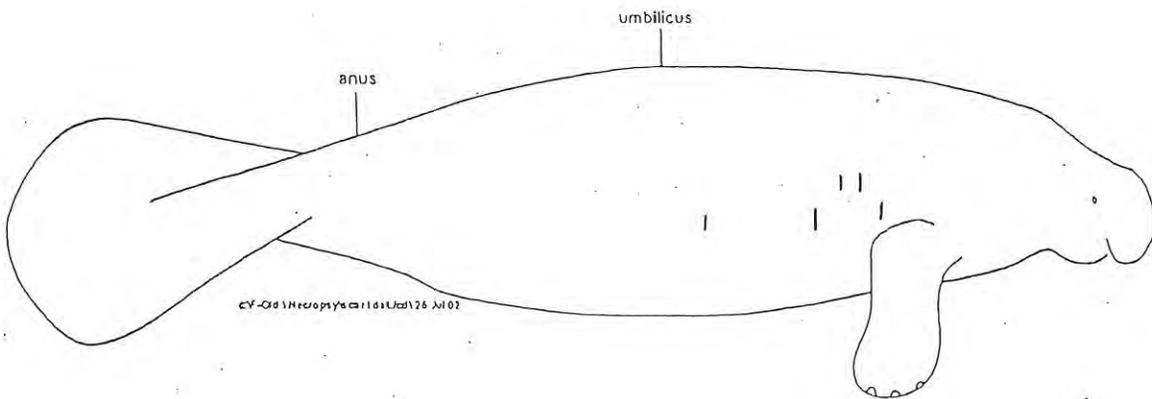
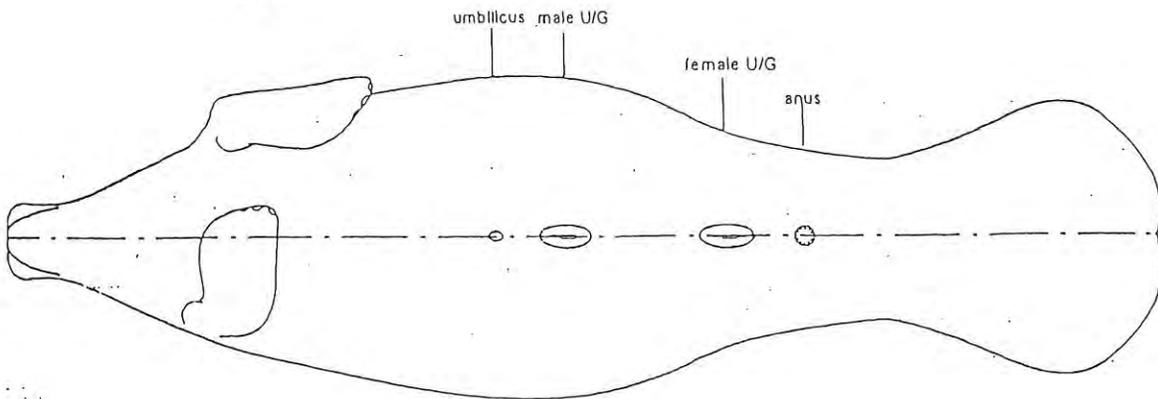
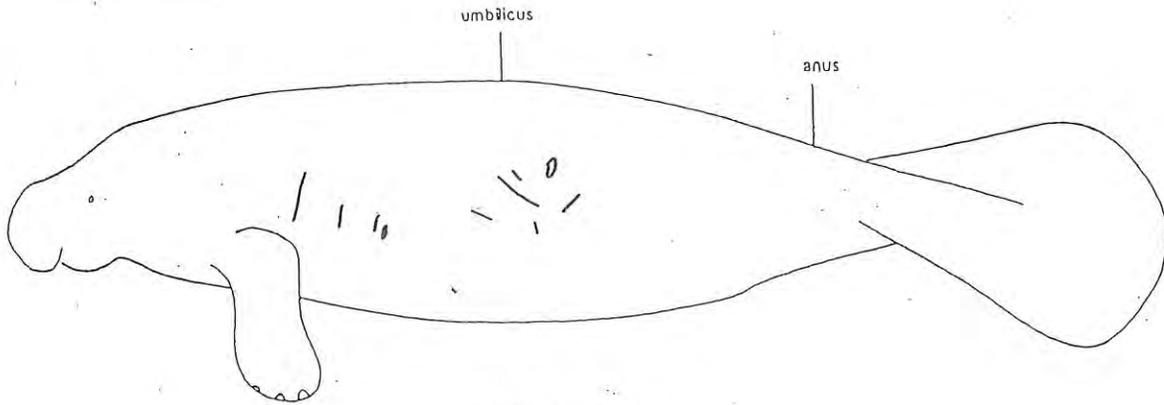


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MBC21055



CV-0011Hicopycar161Ual126 N102

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21056
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1455 **FWC Region:** NE

Sex: Male **Length:** 172 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-26 **By:** FWC-SWM MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 245 m E of 4620 Brentwood Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 1239.

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MORPHOMETRICS:

Total length:	172 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21056

RECOVERY DATE 26 January 2021

GENDER Male **TL** 172 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **22 January 2021**, at 1336 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Cocoa, Brevard County. FWC case number 1239 was assigned. The complainant, Victor Romagz (321-258-4291), stated that the carcass was five feet long and floating in the channel with its skin starting to slough. At 1547 hrs, WDG received a verification photo. No response was available due to the carcass and the recoveries of MEC21042, MEC21019, MEC21052, and MEC21055. **25 January**, at 1758 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from Dispatch regarding a dead manatee in the Indian River. FWC case number 1455 was assigned. The complainant, Karen Lagemann (321-794-3626), stated that a small, dead manatee had washed ashore. At 1813 hrs, ALP received a verification photo and forwarded the information to the EC Field Station. **26 January**, at 1120 hrs, FWC biologists-Sara M. Wappes (SMW) and Sean M. Tennant (SMT) arrived at the FPL-CCEC boat ramp and launched the Key West boat. SMW and SMT located MEC21056 at 1200 hrs and completed an external work-up by 1220 hrs. The remains were left onsite.

EXTERNAL Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, and the axillae. A large portion of the dorsal dermis was eroded due to decomposition. No watercraft-related wounds or scars were grossly observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21057
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1242 **FWC Region:** NE

Sex: Unknown **Length:** 250 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Mosquito Lagoon

Locality description: New Smyrna Beach, sunken approximately 1.75 km WSW of 7060 Turtlemound Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Skin lesions; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21057

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 250 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 22 January 2021, at 1358 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Mosquito Lagoon in Oak Hill, Volusia County. FWC case number 1242 was assigned. The complainant, Nick Brandymart (407-271-7762), described a gray, dorsum-up manatee that he touched and verified was dead. At 1633 hrs, WDG received photo verification. Due to an elevated carcass load, this carcass was not recovered or necropsied. The complainant secured the carcass in mangroves per FWC staff direction.

EXTERNAL From photographs - All of the dorsal epidermis was present. There was a moderate brown to green algal mat on the left lateral aspect and dorsal fluke. A few linear lesions were present on the face, peduncle, and fluke.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21058
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1290 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Palm Bay, floating approximately 45 m NNE of 1296 Wild Rose Drive NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Skin lesions; Verified through complainant photographs and FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21058

RECOVERY DATE N/A

GENDER Female **TL** 215 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **22 January 2021**, at 1642 hrs, FWC biologist-William D. Greer (WDG) received a text from a staff member at Paddling Paradise regarding a dead manatee in Turkey Creek in Palm Bay, Brevard County. The complainant, Danny (321-271-8250), described a gray, bloated manatee near a residential dock. At 1720 hrs, WDG received photo verification. Due to time of day, a response was not planned. **23 January**, at 1031 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek. FWC case number 1290 was assigned. The complainant, Virginia Baker (407-810-3970), described a gray manatee with bubbling skin beside her dock. At 1050 hrs, CMM received photo verification. At 1340 hrs, CMM arrived at the residence and launched a kayak. CMM towed the carcass to a more secluded location and secured it with a rope to mangroves. Due to an elevated carcass load, this carcass was not recovered or necropsied.

EXTERNAL From photographs - All of the dorsal epidermis was present. There was a thin brown agal mat on the dorsal aspect. The carcass was distended with gas. The face was bleached. There were multiple white, linear lesions on the head.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologist
- Bleached epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21059
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1233 **FWC Region:** NE

Sex: Male **Length:** 250 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-27 **By:** FWC-WDG MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 120 m WSW of 6049 N Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21059

RECOVERY DATE 27 January 2021

GENDER Male **TL** 250 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **22 January 2021**, at 1256 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding two dead manatees in the Indian River, Merritt Island, Brevard County. FWC case number 1233 was assigned. The complainant, Monique Gamble (321-986-6092), stated that the first carcass was five feet long and washed up on shore, while the second carcass was eight feet long and 100 yards away. At 1754 hrs, WDG received two verification photos. Due to a high carcass load, a response was not available. **27 January**, at 0945 hrs, WDG and FWC biologist-Sean M. Tennant (SMT) arrived at the Port St. John boat ramp and launched the FWC Key West boat. WDG and SMT towed MEC21059, MEC21060, and MEC21073 to a remote location and completed an external work up on MEC21059 by 1220 hrs.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. The cranial dorsal dermis was eroded. One small barnacle was present on the remaining epidermis. There were numerous rents due to decomposition and/or scavenging at the axillae, anus and throughout the ventrum. A minimum of two well-healed watercraft-related scar patterns was observed on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

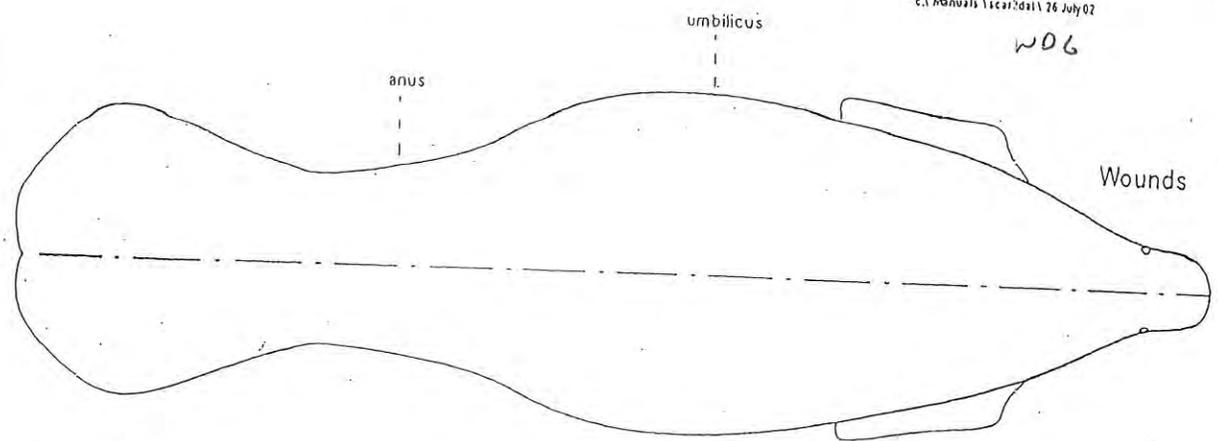
REPORT FILED BY Wappes / Greer

Date 27 JAN 2021

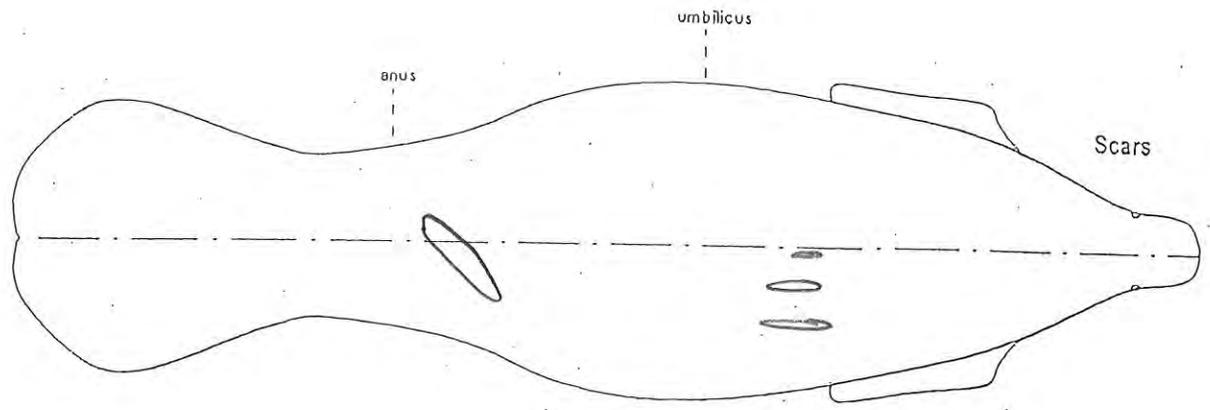
Field I.D. MEC21059

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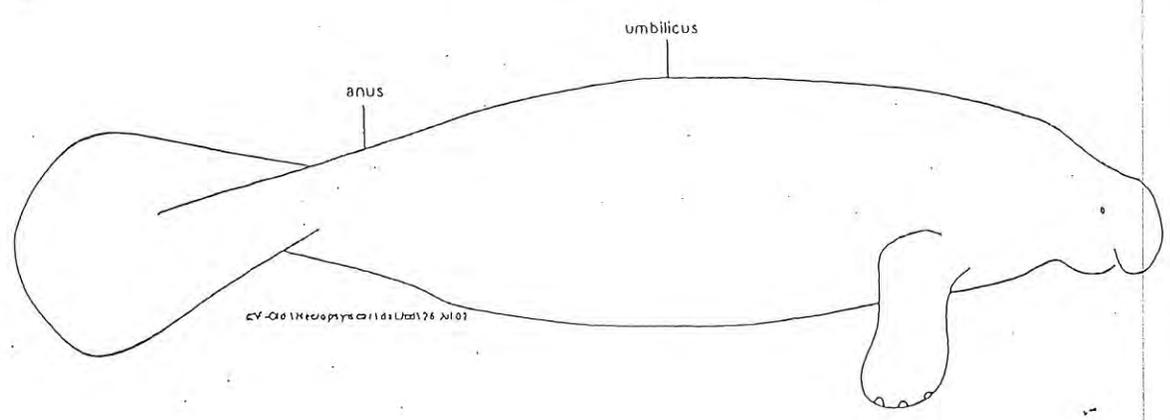
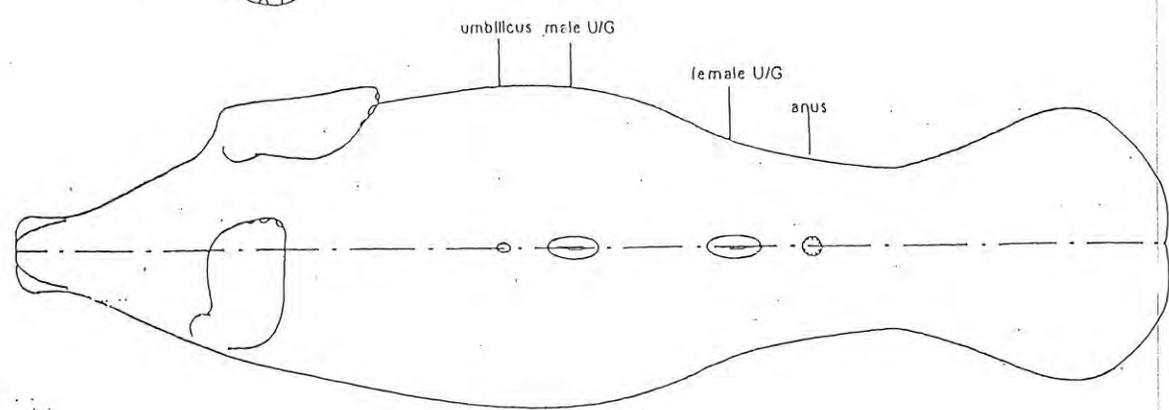
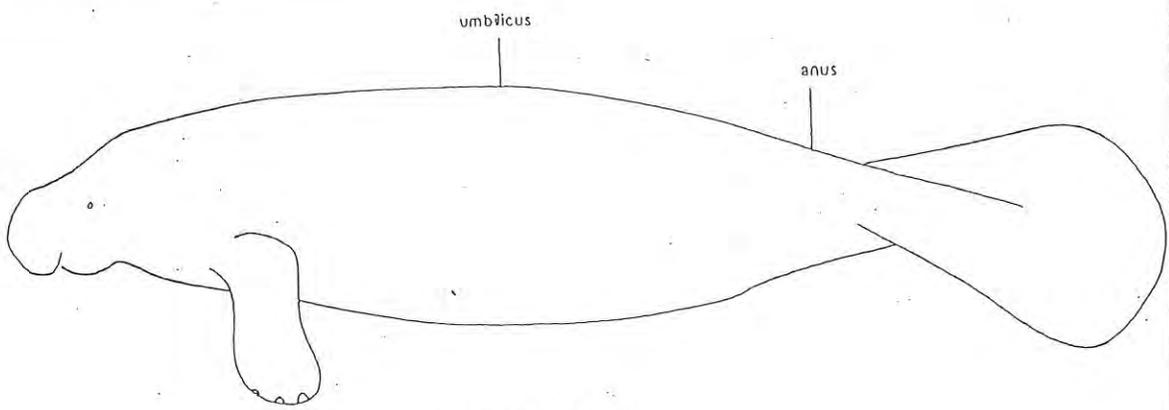
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MBC 21059



CV-001 Neurophysaridae 176 x101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21060
Date of Report: 2021-Jan-22
Filed By: FWC EC Field Station

FWC Case # 1233 **FWC Region:** NE

Sex: Male **Length:** 255 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-27 **By:** FWC-WDG MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 155 m W of 6049 N Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	255 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21060

RECOVERY DATE 27 January 2021

GENDER Male **TL** 255 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **22 January 2021**, at 1256 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding two dead manatees in the Indian River, Merritt Island, Brevard County. FWC case number 1233 was assigned. The complainant, Monique Gamble (321-986-6092), stated that the first carcass was five feet long and washed up on shore, while the second carcass was eight feet long and 100 yards away. At 1754 hrs, WDG received two verification photos. Due to a high carcass load, a response was not available. **27 January**, at 0945 hrs, WDG and FWC biologist-Sean M. Tennant (SMT) arrived at the Port St. John boat ramp and launched the FWC Key West boat. WDG and SMT towed MEC21059, MEC21060, and MEC21073 to a remote location and completed an external work up on MEC21060 by 1220 hrs.

EXTERNAL Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging throughout the ventral aspect. The face and flippers were eroded. A minimum of two well-healed watercraft-related scar patterns was observed. There was one round, eroded patch of dermis on the mid right dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-01-22_PUBLIC_ECFL_12; 2021-01-27_FWC050_0981 through 0994

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

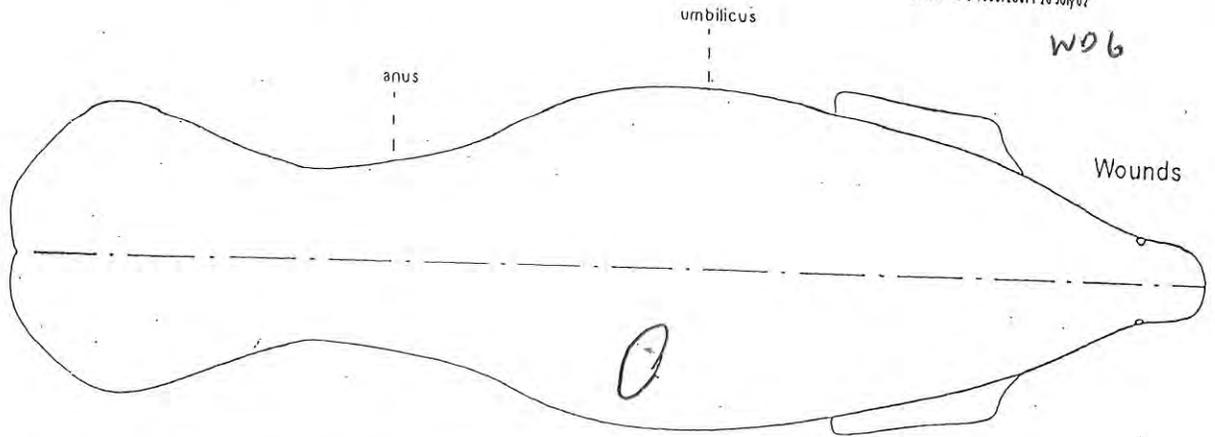
REPORT FILED BY Wappes / Greer

Date 27 JAN 2021

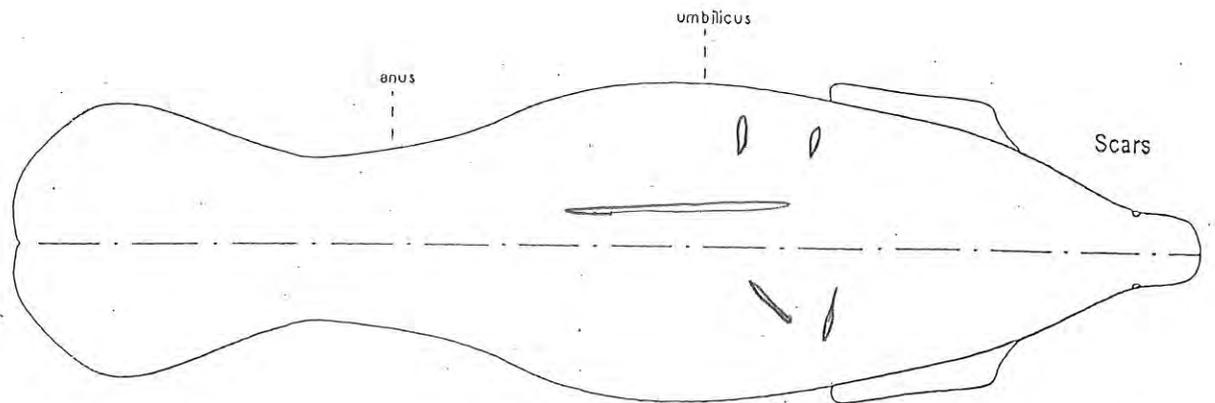
Field I.D. MEC21060

c:\Manuals\scar\dal\26 July02

W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21061
Date of Report: 2021-Jan-23
Filed By: FWC EC Field Station

FWC Case # 1291 **FWC Region:** NE

Sex: Female **Length:** 139 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-23 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Satellite Beach, floating approximately 30 m N of 435 St. George's Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Bleached epidermis; Skin lesions; Verified through complainant photographs and FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	139 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21061

RECOVERY DATE N/A

GENDER Female **TL** 139 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 23 January 2021, at 1037 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee near in Berkeley Canal in Satellite Beach, Brevard County. FWC case number 1291 was assigned. The complainant, Margie Stahl (321-210-4312), stated that the carcass was four to six feet long, back-up, all gray, and hadn't breathed since she had been watching it. The complainant stated that her neighbor also watched the manatee all morning and he believed it was dead. At 1053 hrs, CMM received photos that were inconclusive. At 1155 hrs, CMM arrived at the reported residence, launched a kayak, and secured the carcass to a residential dock with the owner's permission. At 1246 hrs, CMM requested LE assistance and left the location. At approximately 1430 hrs, CMM called Dispatch to check on the tow request and was notified that the carcass would not be towed due to a boating accident in Brevard County. At 1438 hrs, CMM arrived at the reported residence, launched a kayak, and towed the carcass to a location where it could be dragged up an embankment. With the help of the complainant's neighbor, the carcass was loaded at 1515 hrs and transported to the EC Field Station. Due to the small size, the carcass was not necropsied. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Almost all of the epidermis was present. The face and epidermis of the fluke margin were bleached. There was a thin, dark green algal mat on the dorsal and lateral aspects. At least five small, white linear lesions were observed on the dorsal aspect. No watercraft-related scars or wounds were observed.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- Bleached epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21062
Date of Report: 2021-Jan-24
Filed By: FWC EC Field Station

FWC Case # 1343 **FWC Region:** NE

Sex: Unknown **Length:** 150 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-24 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Cane Creek

Locality description: Melbourne, grounded approximately 80 m SW of 507 E Melbourne Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21062

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 150 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 24 January 2021, at 1043 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a young dead manatee in Crane Creek, Melbourne, Brevard County. FWC case number 1343 was assigned. The complainant, Karen (321-848-8416), stated that one person could lift the carcass and that it was all gray in color. At 1048 hrs, SMW received a verification photo. Due to the small size, a response was not planned. The remains were left on site.

EXTERNAL From photographs - All of the ventral epidermis was present. The carcass was distended with gas. Transverse folds were observed on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Fetal folds

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21063
Date of Report: 2021-Jan-24
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 150 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-24 **By:** FWC-SMW

DATE COLLECTED: 2021-Jan-24 **By:** FWC-SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL warm water discharge, approximately 440 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21063

RECOVERY DATE 24 January 2021

GENDER Female **TL** 150 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 24 January 2021, at 1440 hrs, FWC biologist-Sara M. Wappes (SMW) and FWC intern-Kylie Lawson arrived at the FPL-CCEC power plant to recover MEC21053 and to search for additional carcasses/pending rescue cases. At 1455 hrs, SMW located an additional carcass (MEC21063). SMW completed an external work up. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The fluke margin was eroded and/or scavenged. There were rents due to decomposition and/or scavenging at the anus and the head. The GI tract protruded through a decompositional rent at the head. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but a necropsy was not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Scavenging

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21064
Date of Report: 2021-Jan-24
Filed By: FWC EC Field Station

FWC Case # FWC Region: NE

Sex: Female Length: 284 cm Weight: 295.0 kg

DATE REPORTED: 2021-Jan-24 By: FWC-SMW
DATE COLLECTED: 2021-Jan-25 By: FWC-SMW MMPL-TDW
DATE NECROPSIED: 2021-Jan-25 By: MMPL-MdW,ALP,TDW

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 715 m ENE of 101 Cottrell Avenue.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Emaciated; Cobblestone-like epidermis; Bleached epidermis; Depleted fat(s); Serous fat(s); Relatively empty GI tract; Dry, hard feces; Crumbly feces; Sandy feces; Tarry, black GI contents; Asymmetric carcass; Large air-filled cyst (bulla) left lung with hemorrhage and lung collapse; Wet, frothy, heavy right lung; Fluid, froth in airways; Distended hemidiaphragm; Swollen kidneys; Displaced abdominal organs; Enlarged lymph nodes; Congested mesenteries, meninges; Fat-like tags small intestine serosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other.

MATERIALS COLLECTED:

Genetics. -80 samples: liver, both lungs, urine, kidney, feces, brain, fat.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Histology report.

REMARKS:

PIT tag scan negative. Lactating. Uterine Scar. Carcass found with dependent calf (REC2107). Total length dorsum-up=255 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	284 cm	Fluke base:	84 cm	Girth at axillae:	139 cm
Snout to anus:	186 cm	Fluke width:	65 cm		
Snout to U/G:	171 cm	Girth at fluke base:	93 cm		
Snout to umbilicus:	112 cm	Girth at anus:	131 cm		
Flipper width:	16 cm	Girth at umbilicus:	185 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	1.8 cm	2.1 cm		
Outer Blubber Thickness:	1.4 cm	0.3 cm	Abdominal Fat Thickness:	1 cm
Inner Blubber Thickness:	0.8 cm	1.6 cm	Epidermis Thickness:	0.1 cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	5	5.5
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21064
RECOVERY DATE 25 January 2021
GENDER Female **TL** 284 cm **WT** 295 kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 25 January 2021
CONDITION Fresh

HISTORY **24 January 2021**, at 1440 hrs, FWC biologist-Sara M. Wappes (SMW) and FWC intern-Kylie Lawson (KL) arrived at the FPL-CCEC power plant to recover MEC21053 and to search for additional carcasses/pending rescue cases. At 1507 hrs, SMW located an additional carcass (MEC21064) with a dependent calf (REC2107) attempting to nurse from it. After rescuing REC2107, SMW secured MEC21064 to a mangrove at 1652 hrs. **25 January**, at 1032 hrs, SMW, KL, and MMPL-Tara Whitcomb (TDW) arrived at the FPL-CCEC power plant. KL and TDW pulled the carcass to a location that it could be Ezy-lifted from. The carcass was loaded via Ezy-lift at 1138 hrs. TDW transported the carcass (MEC21064) and MEC21053 to the MMPL.

EXTERNAL All of the epidermis was present. A small amount of bloody fluid and tan mucus exuded from the nares. The carcass had a peanut-shaped head. The left side of the body was distended, and the right side was flattened. The ventrum was concave. The epidermis had cobblestone-like patches on all aspects. The ventral fluke had numerous superficial fresh scrapes. The ventral epidermis had diffuse bleached spots and thin tan plaques. No watercraft-related wounds were observed. A minimum of six well-healed watercraft-related scar patterns was observed on the dorsal aspect. Bloody fluid was milked from both teats. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was moderate, serous abdominal, mesenteric, and omental fat. The abdominal organs were displaced to the right side due to distension of the left hemidiaphragm.

STOMACH The stomach was contracted and contained 0.5 L of flocculent, brown fluid mixed with tan mucus. The mucosa was grey and pink. No parasites were observed.

DUODENUM The duodenum was contracted and contained a small amount of thick, cloudy, dark brown to black fluid. The mucosa was pink and dark grey. No parasites were observed.

JEJUNUM & ILEUM The mesentery was mildly congested with a small region of moderate congestion. The serosa of the mid small intestine contained a few oval-shaped tan tags of fat-like structure. The small intestine was contracted and contained a moderate amount of watery, dark brown to black fluid. The mucosa of the proximal small intestine was pink and that of the distal small intestine was light brown. The wall was rugose due to contraction throughout. No parasites were grossly observed.

CECUM The cecum was contracted and contained 100 mL of thick, dark brown to black fluid with a few brown specks. The mucosa was unremarkable. No parasites were observed.

COLON The mesentery was mildly congested. The colon was contracted. The proximal colon contained a scant amount of thick, flocculent, dark brown to black fluid. The mucosa was stained black. The mid colon contained a scant amount of wet, tarry, pasty, well-digested, dark brown to black feces. The mucosa was brown. The distal colon contained a scant amount of dry, hard, crumbly, slightly fibrous, sandy, moderately formed, dark green to black feces. The distal-most one meter contained a scant amount of dry, hard, well-formed, well-digested, slightly fibrous, very sandy, olive green feces. The mucosa of the distal colon was unremarkable. The wall was rugose due to contraction throughout. No parasites were observed.

PANCREAS The pancreas was pink on serosal and cut surfaces.

SPLEEN The spleen was light red to purple on serosal surfaces and dark red on cut surfaces.

LIVER The margins of the liver were slightly rounded. The liver was firm. Serosal surfaces were blue to purple and cut surfaces were dark brown to black. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 50 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The uterus was contracted. The right horn contained an almost resolved scar (5.5 cm wide x 5.0 cm circumference). The ovaries contained numerous small corpora albicantia. There was abundant milk on cut surfaces of the mammary glands.

KIDNEYS There was scant perirenal fat. The kidneys appeared swollen. Serosal surfaces were pink to light purple. On cut surfaces of the left kidney, the cortices were tan and the medullae were red. On cut surfaces of the right kidney, the cortices were dark pink and the medullae were dark red. The corticomedullary boundaries were distinct in both kidneys.

URINARY BLADDER The bladder was contracted and contained a small amount of clear, light yellow urine. The mucosa was unremarkable. An ELISA toxicology sample was collected.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left hemidiaphragm was severely distended. The left lung was dark pink, red and purple on serosal surfaces. Approximately 80% of the left lung consisted of a large distended bubble. The bubble consisted mostly of air and deflated upon incision. There were a few chronic flattened blood clots inside. The inner layer of the capsule was hemorrhagic. The medial margins of the bubble gradually transitioned into lung tissue. The remainder of the lung (mostly the caudal tip) was collapsed. The cut surfaces of the remainder of the parenchyma were dark pink to red. The airways contained a small amount of bloody fluid. The right pleural cavity contained a small amount of red-tinged fluid. The right lung was heavy. Serosal surfaces were pink to purple and cut surfaces were light red, very wet, and frothy. The airways contained a large amount of tan froth. The mucosa was dark pink in both lung airways. No parasites were observed. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS The meninges were mildly congested.

SKELETON The vertebral column curved to the left due to distension of the left pleural cavity. Otherwise, NVL.

OTHER The axillary lymph nodes were enlarged. The cortex:medulla ratio of the adrenal glands was 1:1.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Asymmetric carcass
- Cobblestone-like, bleached epidermis
- Skin scrapes
- Mucus, fluid from nares
- Depleted, serous fat
- Large air-filled cyst (bulla) left lung with hemorrhage and lung collapse

- Wet, frothy, heavy right lung
- Froth, fluid in airways
- Distended hemidiaphragm
- Displaced abdominal organs
- Relatively empty GI tract with tarry, black contents
- Dry, hard, crumbly feces mixed with sand
- Enlarged lymph nodes
- Swollen kidneys
- Congested mesenteries, meninges
- Fat-like tags small intestine serosa
- Lactating
- Uterine scar
- Carcass found with dependent calf (REC2107)

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Anna L. Panike
Tara D. Whitcomb

REPORT FILED BY de Wit

PRELIMINARY DATA.

FINDINGS MAY BE ADDED OR

DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

FWC Case # _____ FWC District: _____
Sex: M Undetermined Length: 284 cm (estimated _____) Weight 295 kg.
Date reported: _____ By: _____
Date collected: _____ By: _____
Date necropsied: 25 Jan '21 By: MMPL MdW, ALP, TDW

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other _____

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other feces, brain, fat
Genetics Box # 100 L+R

Female reproductive findings or N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted/Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

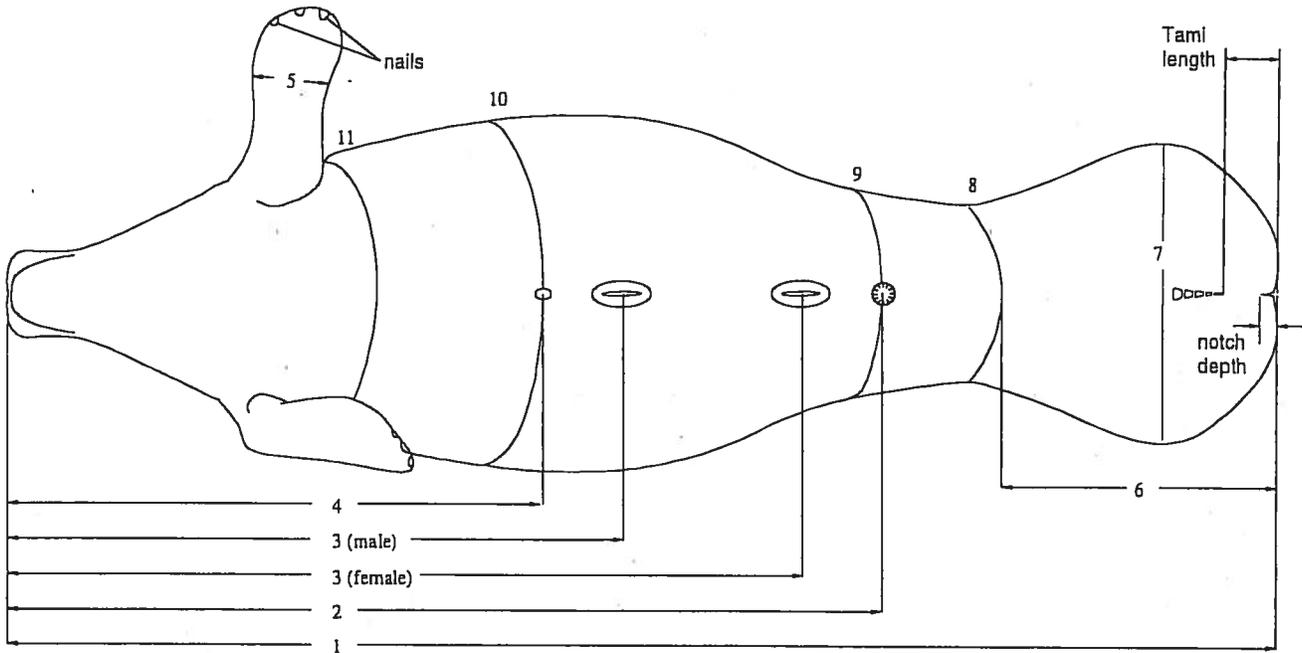
PIT TAG Scan Negative; Positive (Left _____ - _____ - _____)(Right _____ - _____ - _____); N/T

REMARKS: TL dorsum up = 255 cm
ELISA in - 80°C

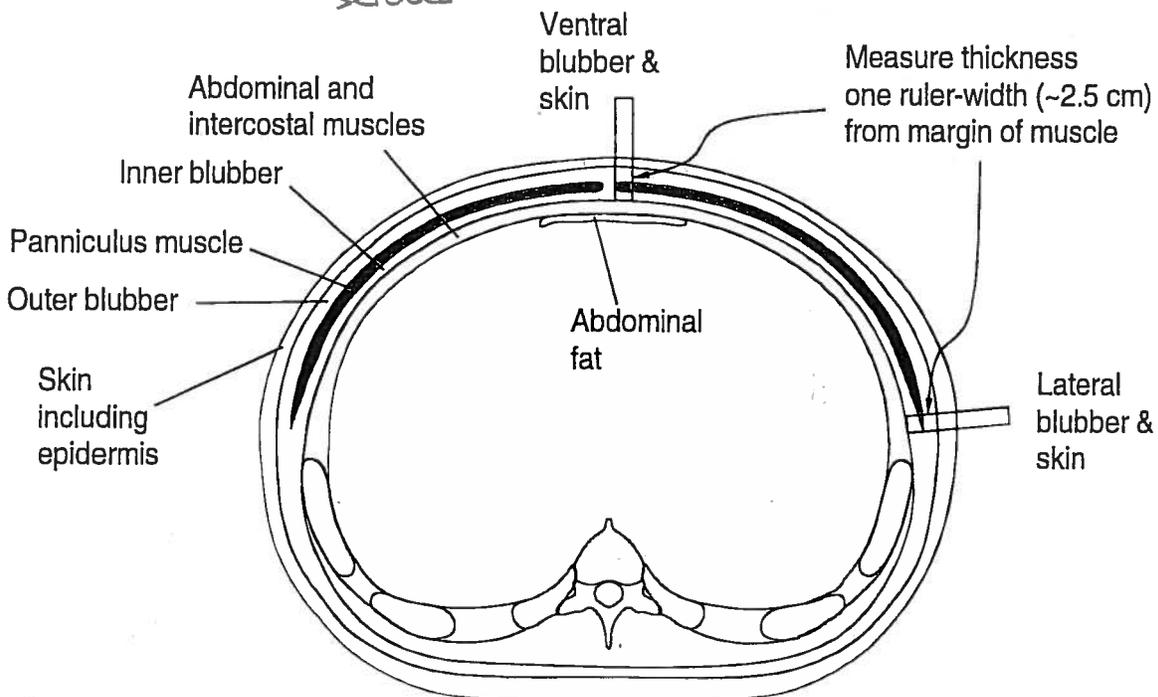
Field ID # MEC21064

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|--|---------------------------------------|-------------------------------------|
| 1. Total length <u>284</u> cm | 6. Fluke base <u>84</u> cm | 11. *Girth at axillae <u>139</u> cm |
| 2. Snout to anus -C <u>186</u> cm | 7. Fluke width <u>65</u> cm | |
| 3. Snout to U/G -C <u>171</u> cm | 8. *Girth at fluke base <u>93</u> cm | |
| 4. Snout to umbilicus -C <u>112</u> cm | 9. * Girth at anus <u>131</u> cm | |
| 5. Flipper width <u>16</u> cm | 10. *Girth at umbilicus <u>185</u> cm | (Nail count: <u>L4 R4</u>) |



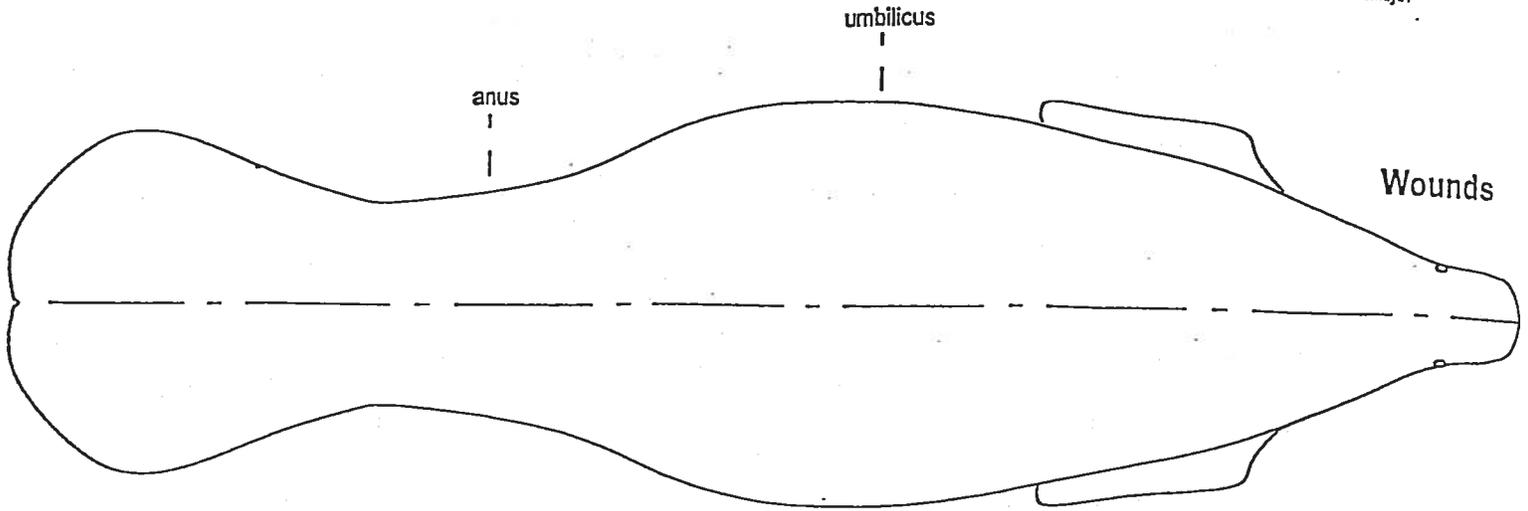
Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	<u>1.8</u> cm	<u>2.1</u> cm	(Epidermis <u>0.1</u> cm)
Outer fat.....	<u>1.4</u> cm	<u>0.3</u> cm	(Abdominal fat <u>1</u> cm)
Inner fat.....	<u>0.8</u> cm	<u>1.6</u> cm	<i>serous</i>



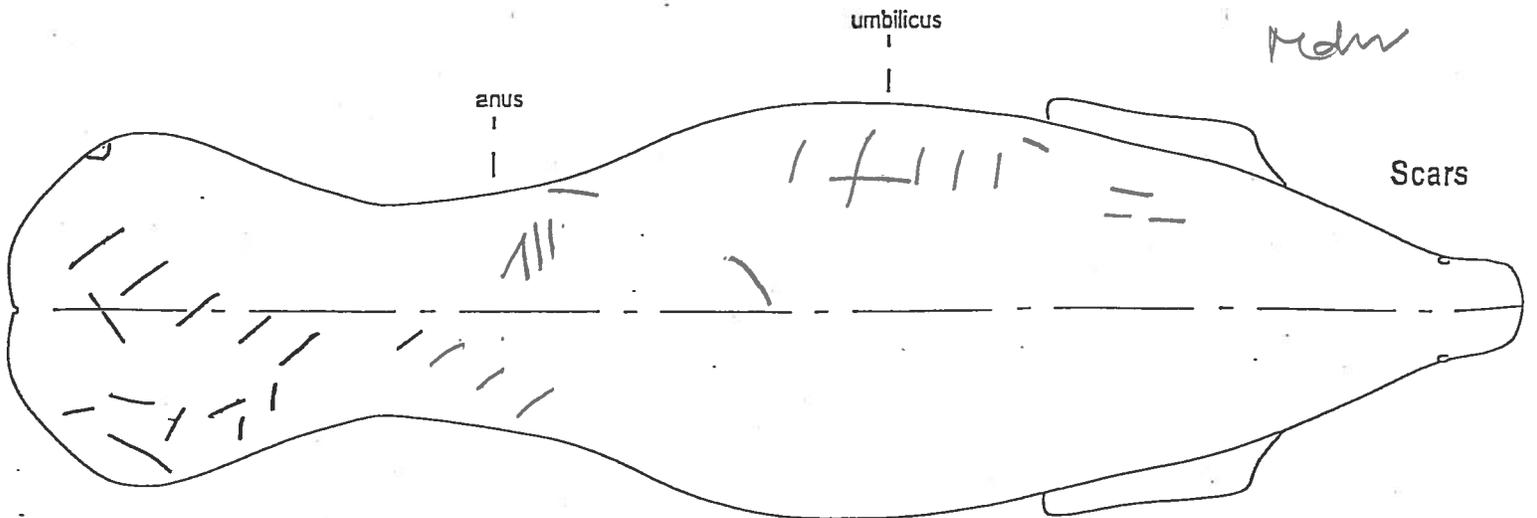
Date 25 Jan 21

Field I.D. MEC21064

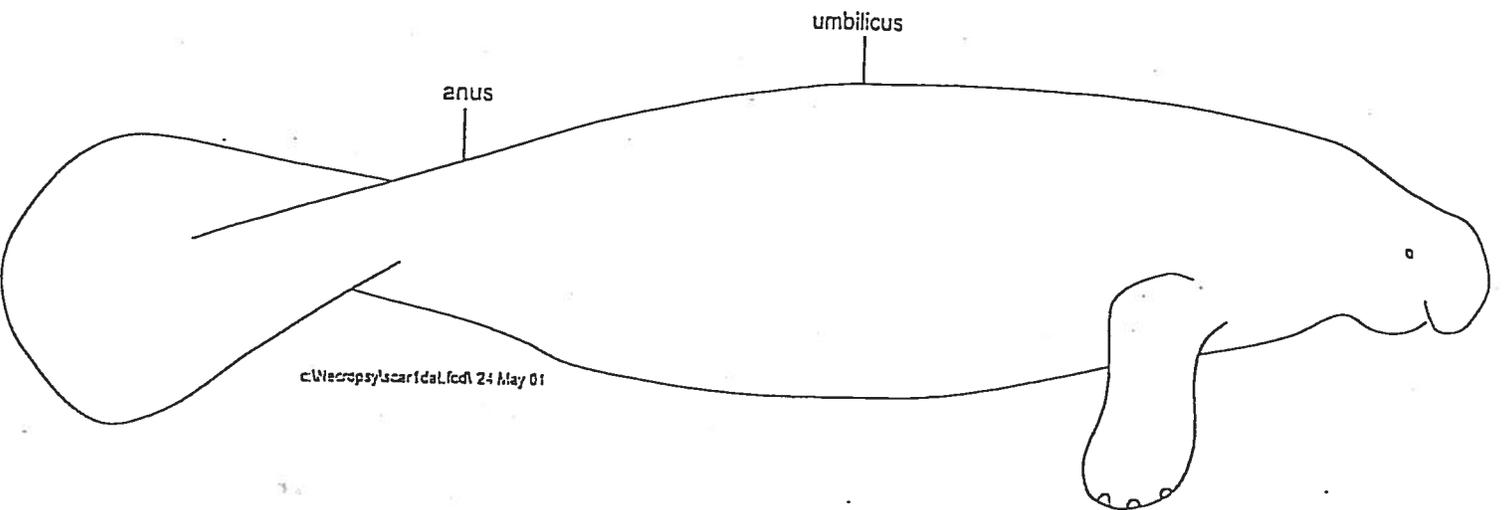
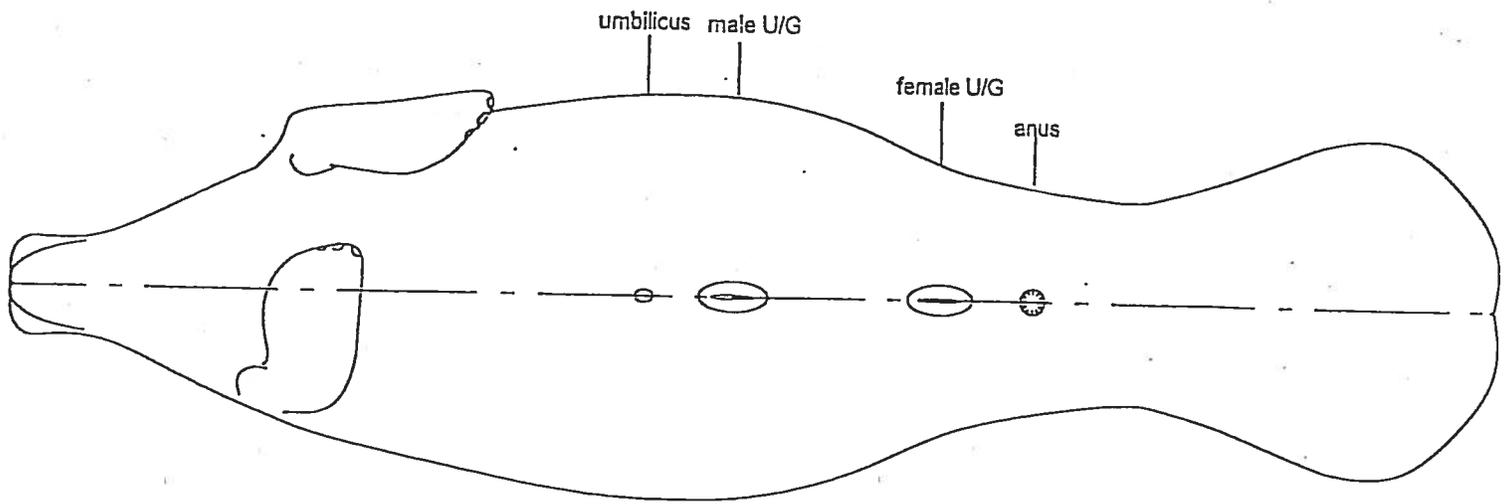
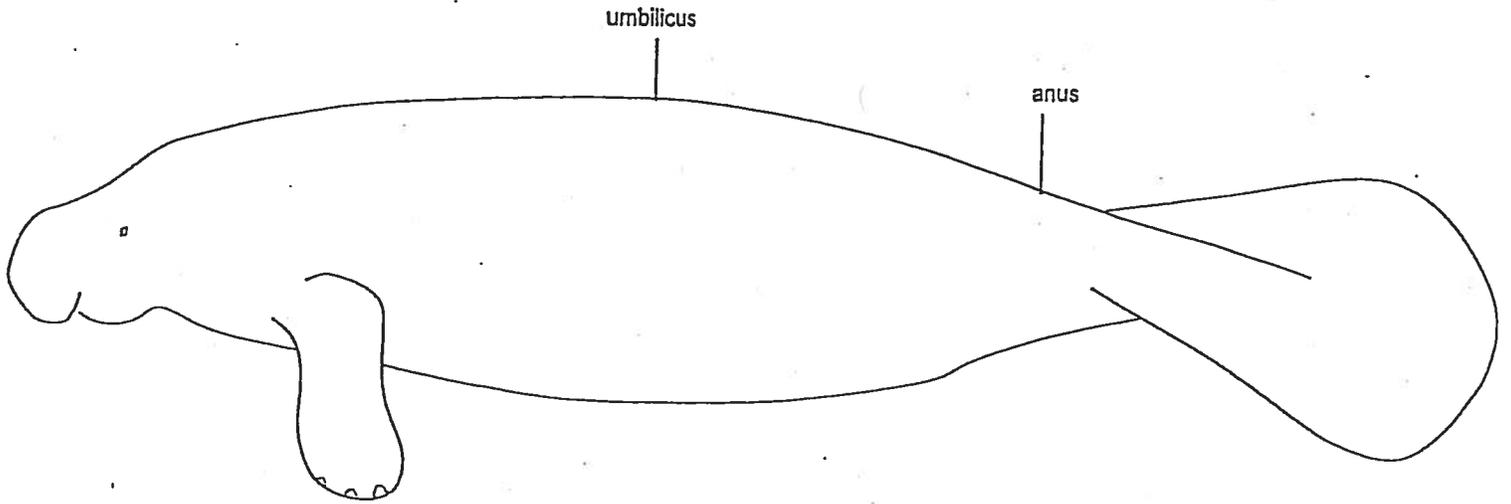
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.



NECROPSY REPORT FINAL REPORT

Field ID: MEC21064
 Alternate Field ID:
 Accession Number: 21-12
 Species: *Trichechus manatus latirostris*
 Date: 25 Jan 2021 (DOR); 25 Jan 2021 (DON)
 Location: FL
 Sex, Age: F
 TL: 284.0 cm
 WT: 295
 .0 kg
 Body Condition: Emaciated
 Condition at Investigation: Dead
 Carcass Disposition/Post-Mortem Interval: 24> hours

HISTORY

Findings include:

- Emaciated
- Asymmetric carcass
- Cobblestone-like, bleached epidermis
- Depleted, serous fat
- Large air-filled cyst left lung with hemorrhage and lung collapse
- Wet, frothy right lung
- Froth, fluid in airways
- Distended hemidiaphragm
- Displaced abdominal organs
- Relatively empty GI tract with tarry, black contents
- Dry, hard, crumbly feces mixed with sand
- Enlarged lymph nodes
- Congested mesenteries, meninges
- Fat-like tags small intestine serosa
- Lactating
- Uterine scar
- Carcass found with dependent calf

Probable Cause of Death: Natural; Other

ANCILLARY DIAGNOSTICS

Test	Tissue/Sample	Result	Comment

Test	Tissue/Sample	Result	Comment

MICROSCOPIC DESCRIPTION

Received are 17 H&E slides.

There is mild lymphoid depletion in the right axillary lymph node. Medullary spaces are expanded by clear spaces (edema). Macrophages are mildly increased. Within the cytoplasm of some macrophages, there are erythrocytes (erythrophagocytosis). There is perinodal serous atrophy of adipocytes. The T-Septal lymph node is moderately cellular. There is expansion of the medullary sinus by clear spaces. Macrophages are mildly increased. Within the cytoplasm of some macrophages, there are erythrocytes (erythrophagocytosis). There is serous atrophy of perinodal adipocytes. There is mild depletion of lymphocytes within splenic periarteriolar lymphoid sheaths. There is serous atrophy of peri-splenic adipocytes.

There is mild, multifocal atrophy of cardiomyocytes. There is interstitial expansion by clear spaces (edema). There is mild myxomatous expansion of the atrioventricular valve.

Hepatocytes are atrophied. Within hepatocytes and Kupffer cells have small to moderate amounts of brown granules (hemosiderin).

There is mild congestion in the brain.

There is mild renal congestion.

There is serous atrophy of peri-adrenal adipocytes.

There is marked, diffuse depletion of pancreatic acinar zymogen granules. There is serous atrophy of peri-pancreatic adipocytes.

A serocellular crust covers the tail skin (56). Within the crust there are degenerate heterophils, necrotic cellular debris, and algae (suspect water mold). There is mild hyperplasia of the underlying epithelium. There is loss of pigment within basal epithelial cells. At one margin, there are two foci of epithelial cells hydropic swelling and pallor.

There is mild atrophy of myofibers of the right hemidiaphragm. There is a single degenerate myofiber. Near the crust of the left hemidiaphragm, there are few degenerate myofibers. Involved myofibers have clumped sarcoplasm. The interstitium is expanded by clear spaces and small amounts of fibrin.

The right lung is moderate congested. Bronchioles contain mucoproteinaceous exudate. Two sections of the left lung are examined. There is multifocal flooding of alveolar spaces and bronchiolar lumina with macrophages and heterophils in varying numbers. There is multifocal extravasation of erythrocytes. There is focally extensive alveolar collapse (atelectasis) with the cleft containing macrophages. Involved alveolar septa are expanded by clear spaces (edema). At the region of collapse, extravasated extended along the pleura. Four sections of the lung at the site of hemorrhage are examined (54A→D). There is disruption of the pulmonary parenchyma by extravasated erythrocytes, fibrin, and scattered heterophils. Adjacent alveolar septa are intact or ruptured and expanded by clear spaces (edema). Few heterophils and fibroblasts are present within the expanded wall. Thrombi are present within vessels. Lining pneumocytes are plump (Type 2 pneumocyte hyperplasia). Alveolar lumina contain extravasated erythrocytes and clumped fibrin.

The following tissues have no significant histological findings: Stomach, duodenum, cecum, distal large intestine, mid-small intestine, peduncle muscle (57),

MORPHOLOGIC DIAGNOSES

Musculoskeletal System/Integumentary System

A. Hemidaphragm:

- a. Left and Right: Atrophy, multifocal, mild.
- b. Left: Myofiber degeneration and necrosis, focal with interstitial edema and fibrin exudation.

Respiratory System

A. Lung:

- a. Bronchopneumonia, heterophilic, subacute, multifocal, mild.
- b. Infarction, subacute.
- c. Atelectasis, multifocal with subpleural hemorrhage.
- d. Interstitial edema and fibroplasia, multifocal, moderate with Type 2 Pneumocyte hyperplasia.

Nervous System

- #### A. Brain: Congestion, mild.

Urinary and Reproductive System

- #### A. Kidney: Congestion, mild.

Digestive System/Body as a Whole

- #### A. Pancreas, Exocrine: Atrophy, marked.

Cardiovascular System

A. Heart:

- a. Cardiomyocyte atrophy, multifocal, mild.

- b. Interstitial edema.
- c. Valvular endocardiosis, mild.

Hepatobiliary System

- A. Liver:
 - a. Atrophy.
 - b. Hemosiderosis.

Integumentary System

- A. Tail Skin:
 - a. Hydropic degeneration, focal.
 - b. Serocellular crust formation with algae and epithelial hyperplasia and pigmentary loss.

Endocrine System

- A. Adrenal Gland: Peri-adrenal serous atrophy of fat.

Hematolymphatic System

- A. Spleen:
 - a. Lymphoid depletion, mild.
 - b. Serous atrophy of fat.
- B. Axillary Lymph Node:
 - a. Lymphoid depletion, mild.
 - b. Edema and mild erythrophagocytosis.
 - c. Serous atrophy of fat.
- C. T-Septal Lymph Node:
 - a. Edema and erythrophagocytosis.
 - b. Serous atrophy of fat.

INTERPRETATIVE SUMMARY

DIAGNOSES
Starvation: Serous Atrophy of Fat, Hepatic Atrophy, Skeletal Muscle Atrophy, Pancreatic Atrophy
Left Hemidiaphragmatic Myofiber Degeneration
Acute Pulmonary Infarction
Pneumonia

Primary Diagnostic Category: **Starvation** /Organ Specific

Linked Cases: MSE21048, MEC21069

This female manatee was emaciated. Based on the serous atrophy of fat, myofiber atrophy, hepatic atrophy, and pancreatic atrophy. Findings are similar to MSE21048 and MEC21069 and support starvation. There was no evidence of infectious agents.

Findings in the grossly gas filled left lung are similar to MEC21069 and include infarction, atelectasis, and pneumonia (which were not adjacent). While no torsion was observed grossly, this may be one potential cause of infarction. In addition, rupture of alveolar septa and hemorrhage could have also led to a similar lesion. Infectious agents were not observed. There were no widespread hemorrhages or thrombosis in organs that would support a vasculopathy or hemorrhagic diathesis. That said, the reason for the unilateral pulmonary bullae formation, rupture, and hemorrhage was not determined. In addition, there was myofiber degeneration of the left hemi-diaphragm near the crus. While phrenic nerve damage may have led to degeneration, the localization near the crus could suggest damage from excessive stretch. Starvation could also affect diaphragm function.

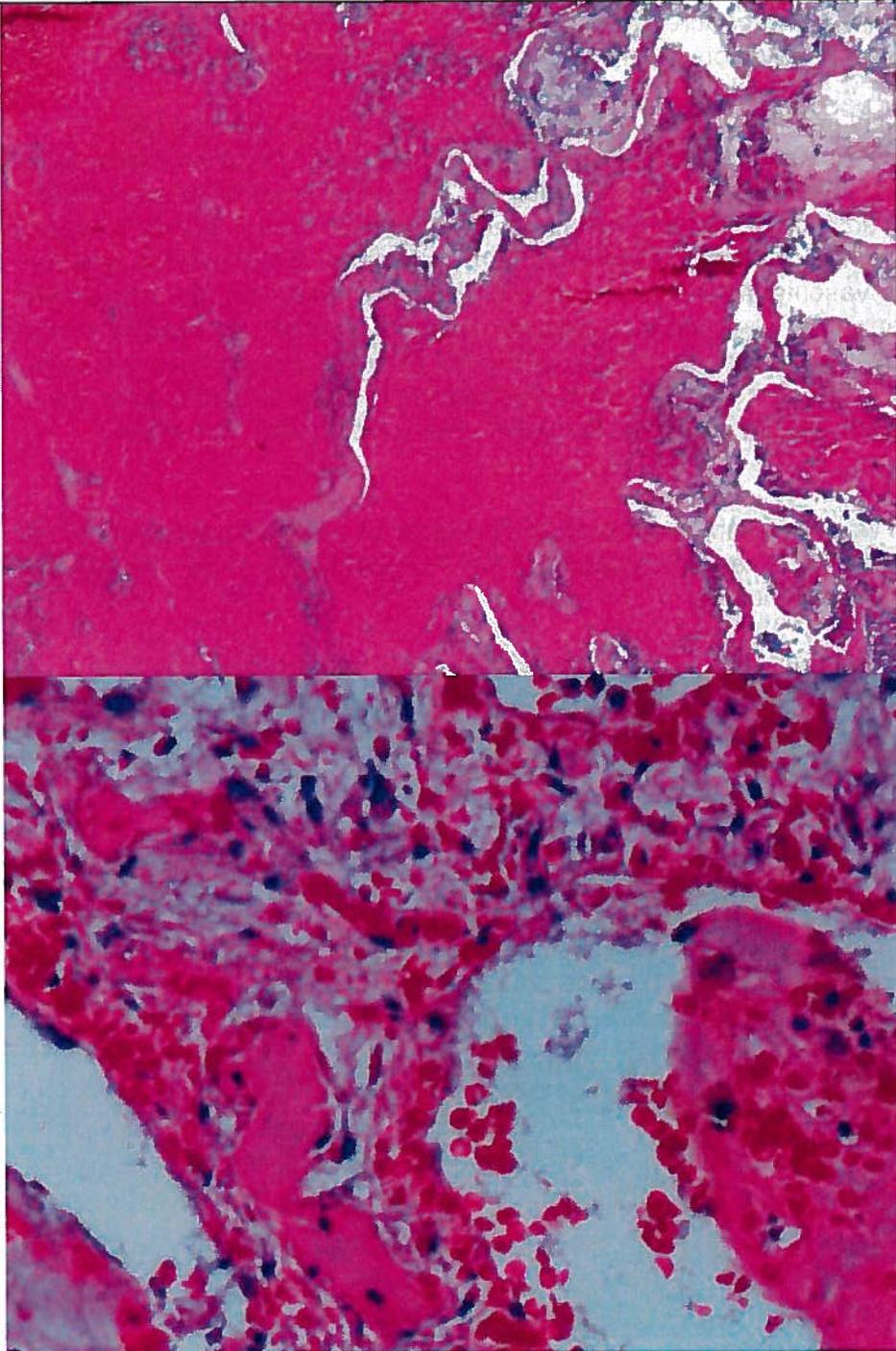
Lymphoid depletion was mild and would indicate a degree of immunosuppression which may be stress related. Edema and congestion of the T-Septal lymph node may reflect increased drainage from the lungs.

The tail skin had a focal region of swelling of epithelial cells and this degenerative change could reflect an early stage of cold stress. However, epithelial cells were viable. There was also an inflammatory crust overlying the epithelium with algae (water mold?) that is considered incidental.

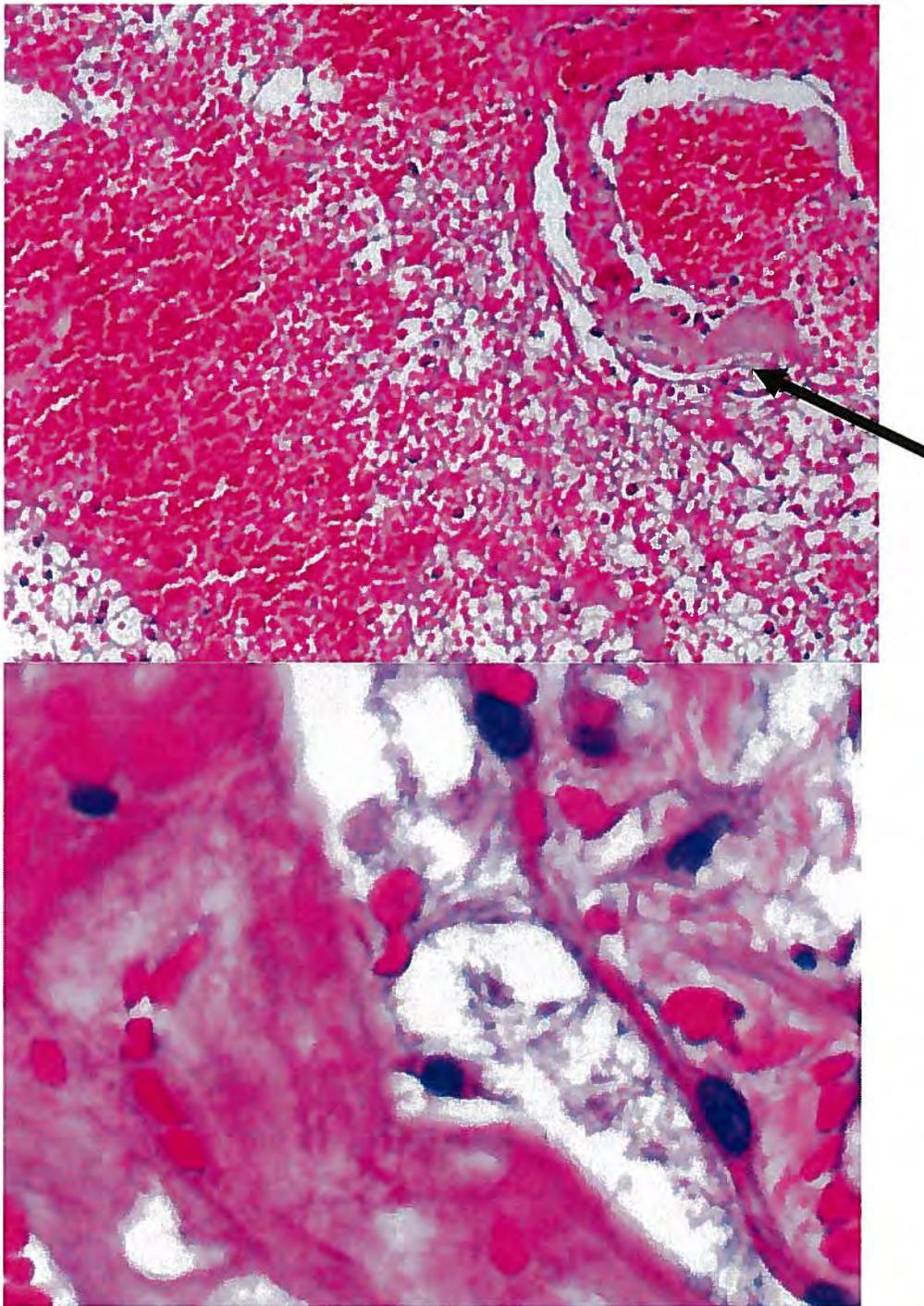
TEST	PURPOSE	SITE	RESULT

DATE: 2/16/2021	REPORTING PATHOLOGIST: David S. Rotstein, DVM, MPVM, DACVP
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FIGURES



Left Lung. There is disruption of the parenchyma which is filled with erythrocytes, fibrin, and fewer heterophils. Remaining alveolar septa are flooded with erythrocytes.(upper). In the lower, photo, alveolar interstitial walls are expanded by clear spaces (edema) and few fibrocytes. Vessels within interstitial walls are occluded by fibrin thrombi. Fibrin is present within alveolar spaces.



Left Lung. Remnant alveolar septa are present at the site of hemorrhage (Upper photo, arrow). Type 2 pneumocyte line alveolar interstitial walls (lower).

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21065
Date of Report: 2021-Jan-25
Filed By: FWC EC Field Station

FWC Case # 1417 **FWC Region:** NE

Sex: Male **Length:** 173 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-25 **By:** FWC-SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, floating approximately 120 m SW of 491 Treasure Lagoon Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Cold stress lesions; Bloody nares; Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	173 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21065

RECOVERY DATE 25 January 2021

GENDER Male **TL** 173 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 25 January 2021, at 1214 hrs, FWC biologist-William D. Greer received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Manatee Cove Park in Indian River, Merritt Island, Brevard County. FWC case number 1417 was assigned. The complainant, MaryBeth (321-633-1874), stated that she had not seen the carcass but that it had been reported to her. At 1250 hrs, FWC biologist-Sara M. Wappes (SMW) and FWC intern-Kylie Lawson arrived at Manatee Cove Park and verified the dead manatee. SMW towed the carcass via kayak to a remote shoreline and completed an external work up. The remains were left on site.

EXTERNAL Almost all of the epidermis was present. Red-tinged fluid exuded from the nares. The epidermis of the face and axillae was bleached. The carcass was slightly distended with gas. There was a moderate brown algal mat on the lateral aspects and circular, pitted lesions on the lateral aspects. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Bloody nares
- Bleached epidermis
- Circular, pitted lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21066
Date of Report: 2021-Jan-25
Filed By: FWC EC Field Station

FWC Case # 1405 **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: St. Sebastian River

Locality description: Micco, floating approximately 30 m SE of 9988 Sebastian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21066

RECOVERY DATE N/A

GENDER Male **TL** 215 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **25 January 2021**, at 1039 hrs, FWC biologist-Allison Burns (ACP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Sebastian River, Micco, Brevard County. FWC case number 1405 was assigned. The complainant, Janice King (772-589-4364), stated that the carcass was 6-7 feet long and up against her seawall. At 1439 hrs, ACP received verification photos, requested FWC LE assistance to tow carcass to a remote location, and forwarded the information to the EC Field Station. **26 January**, the complainant contacted ACP to let her know the carcass was still there, but now stuck under her dock. **27 January**, the complainant informed ACP that a neighbor had towed the carcass to a nearby remote island. At 1520 hrs, ACP cancelled the request for FWC LE assistance. Due to the advanced stage of decomposition and elevated carcass load, this carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - Approximately 40% of the ventral epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. A portion of the GI tract protruded through a rent on the mid ventrum due to decomposition and/or scavenging.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21067
Date of Report: 2021-Jan-25
Filed By: MEC21067

FWC Case # 1451 **FWC Region:** NE

Sex: Female **Length:** 296 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-26 **By:** FWC-SMW MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 145 m NNE of 100 Bellewood Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Watercraft wound(s); Bleached epidermis; Verified through complainant photographs and FWC biologists.
External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Other (Wounds).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Wound measurements.

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	296 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21067

RECOVERY DATE 26 January 2021

GENDER Female **TL** 296 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **25 January 2021**, at 1710 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee at Manatee Hammock Campground in Indian River, Titusville, Brevard County. FWC case number 1451 was assigned. The complainant, David (321-264-5083), stated that the carcass was belly-up and decomposing. At 1800 hrs, ALP received a verification photo and forwarded the information to the EC Field Station. **26 January**, at 1120 hrs, FWC biologists-Sara M. Wappes (SMW) and Sean M. Tennant (SMT) arrived at the FPL-CCEC boat ramp and launched the ECFL Key West boat. SMW and SMT towed MEC21067, MEC21068, and MEC21070 to remote shoreline. An external work-up was completed on MEC21067 by 1700 hrs.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The epidermis of the axillae was bleached. The carcass was distended with gas. There was a fresh watercraft-related wound series on the mid right lateral aspect. A minimum of six well-healed watercraft-related scar patterns was observed on the dorsal aspect and fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Fresh watercraft wounds
- Bleached epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

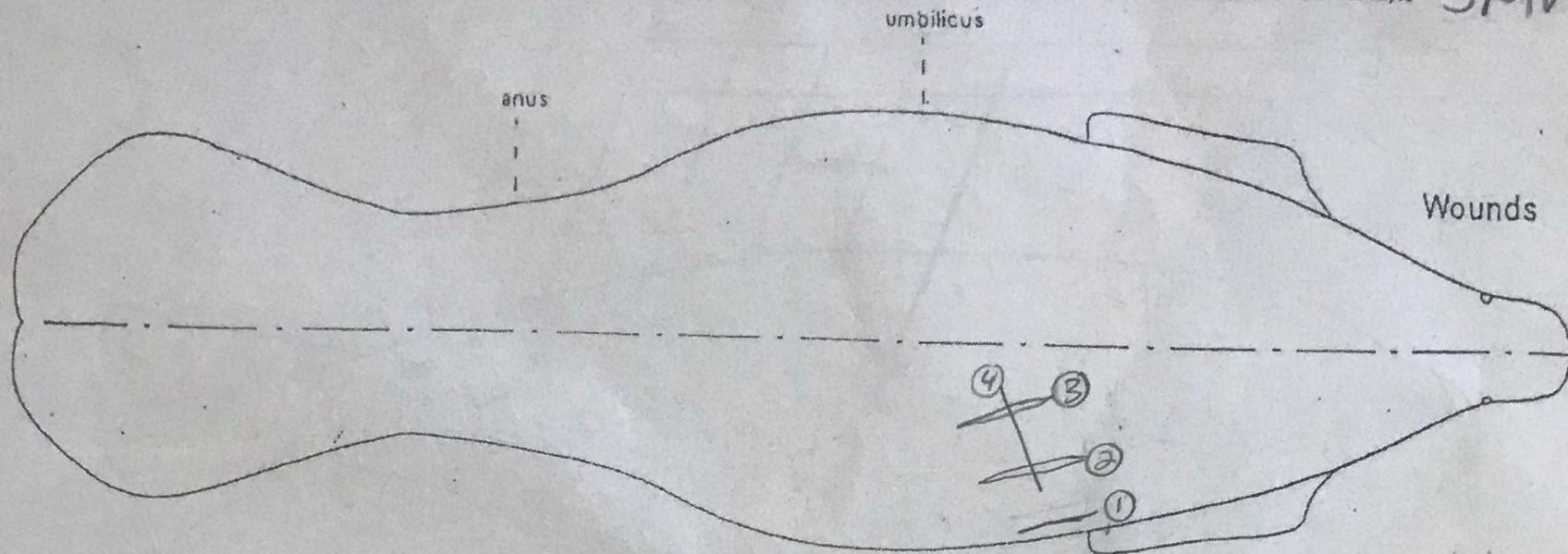
REPORT FILED BY Wappes

Date 28 JAN 2021

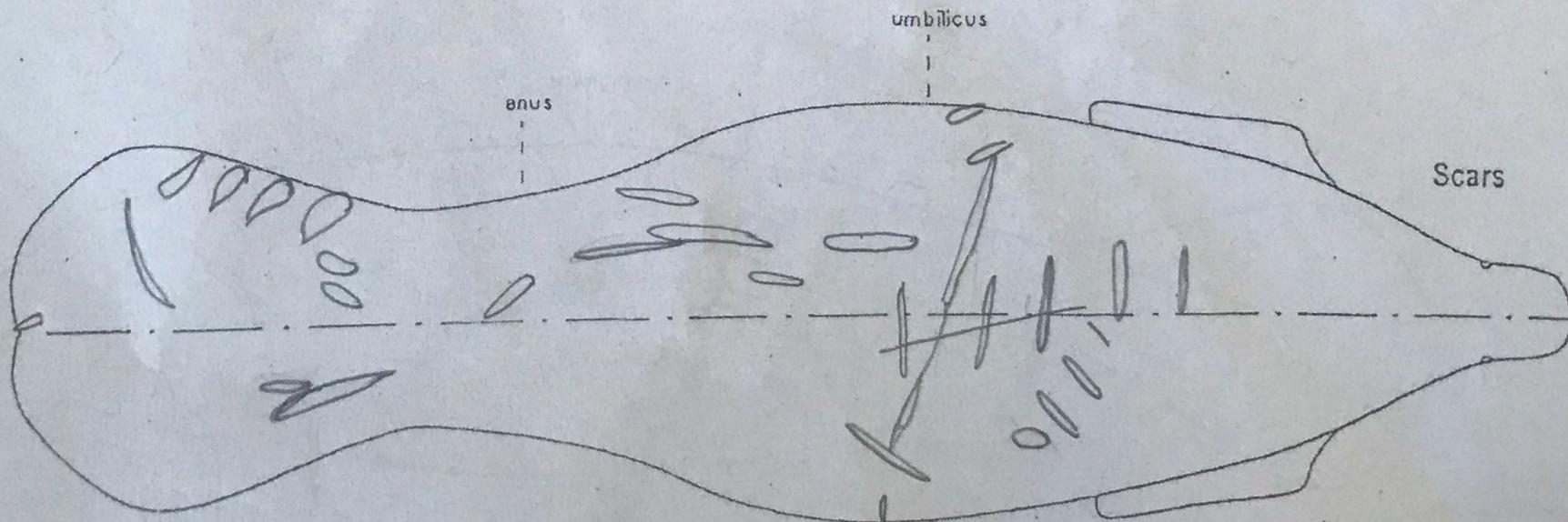
Field I.D. MEC21067

CSI Manuals 1 scar2011 26 July 02

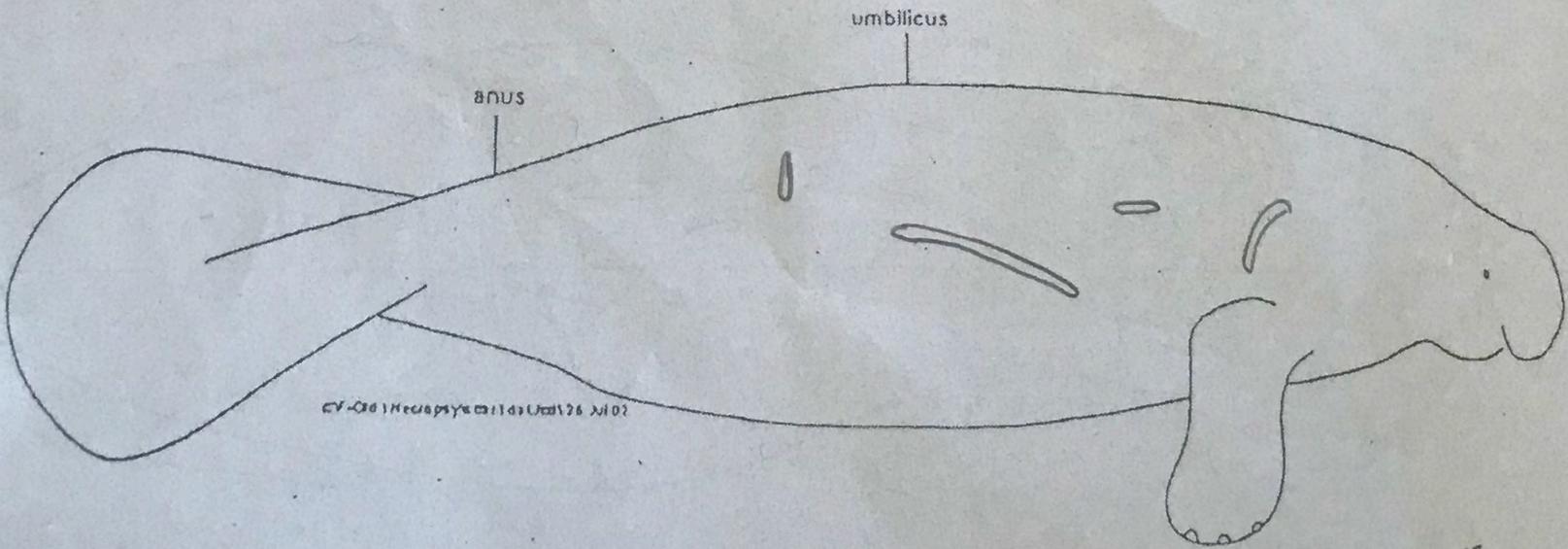
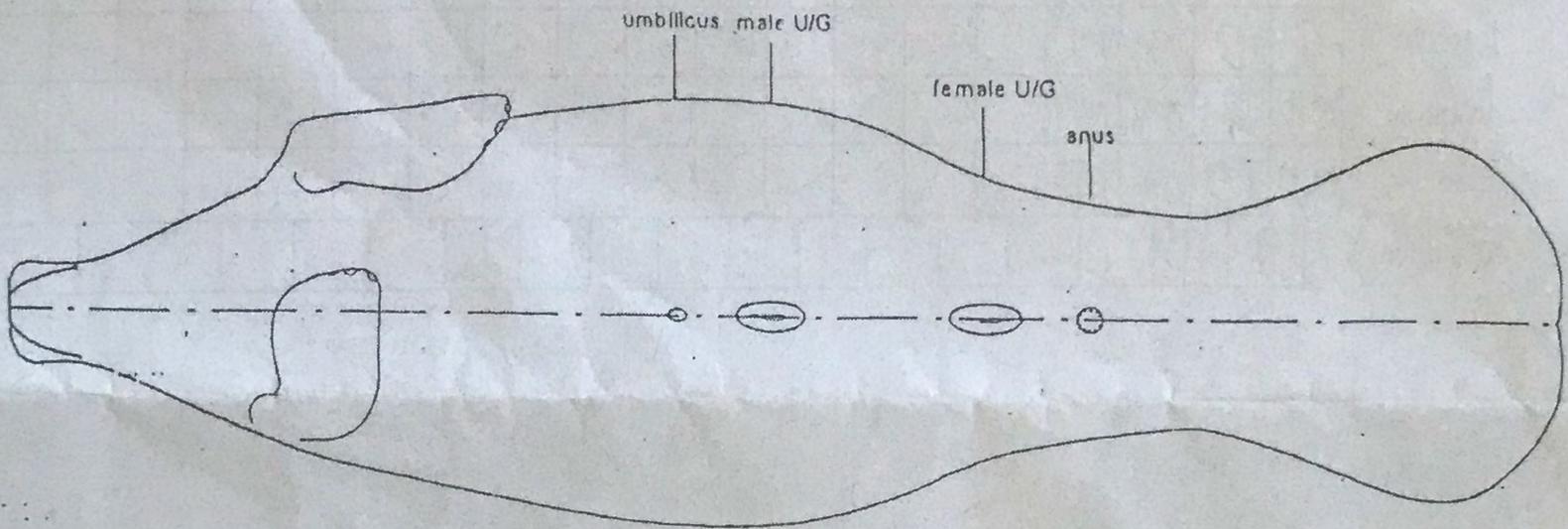
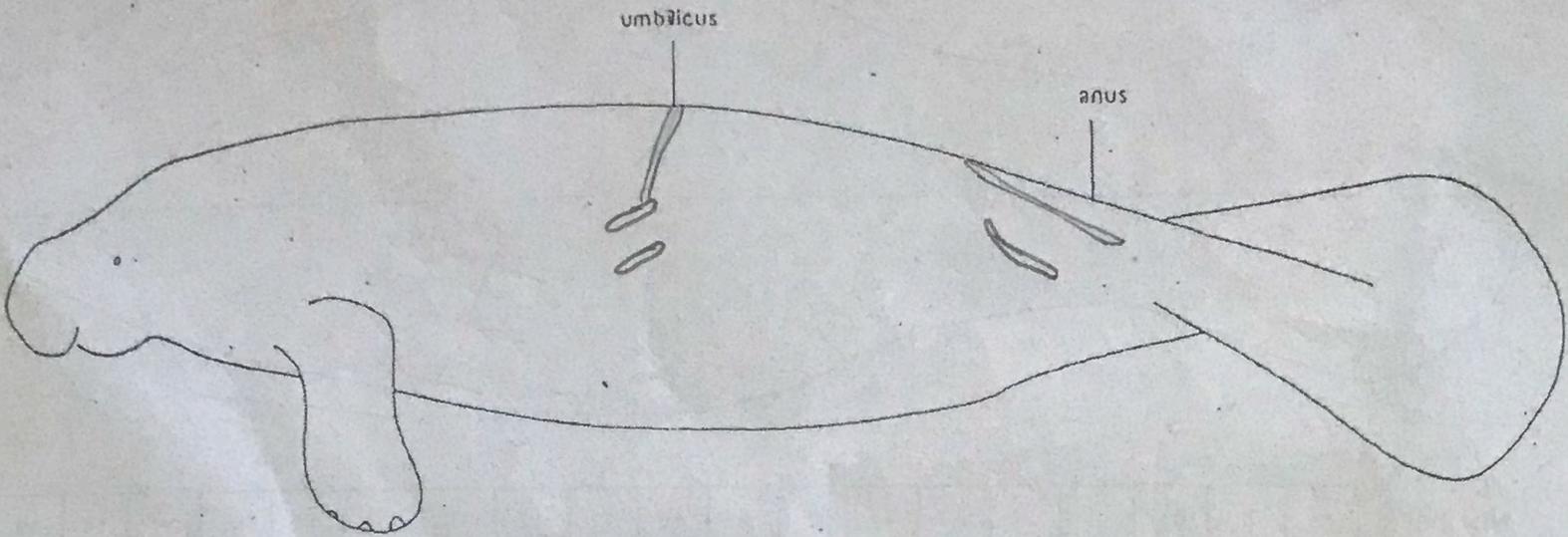
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	7	15	13.5	17																
Width	0.1	2	0.8	0.4																
Depth	0.2	1.5	0.6	0.2																
Distance	9	10																		



FIELD I.D. MEC21067



CV-061 Necropsy Unit 26 x102

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21068
Date of Report: 2021-Jan-26
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 335 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Jan-26 **By:** FWC-SMW MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL intake canal, approximately 135 m NE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Known as MIPS ID PE340, first sighted on 08 Feb 1995 at Port Everglades power plant.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	335 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21068

RECOVERY DATE 26 January 2021

GENDER Female **TL** 335 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 26 January 2021, at 0706 hrs, FWC biologist-William D. Greer (WDG) received a text from FPL-Jennifer Pickett regarding a dead manatee in the FPL-CCEC intake canal in the Indian River, Cocoa, Brevard County. Jennifer stated that the carcass was bloated with sloughing skin. At 0706 hrs, WDG received a verification photo. At 1120 hrs, FWC biologists-Sara M. Wappes (SMW) and Sean M. Tennant (SMT) arrived at the FPL-CCEC boat ramp and launched the ECFL Key West boat. SMW and SMT towed MEC21068, MEC21067, and MEC21070 to a remote shoreline. An external work-up was completed on MEC21068 by 1620 hrs.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was distended with gas. A small amount of red-tinged fluid exuded from the nares. A minimum of thirteen well-healed watercraft-related scar patterns was observed on the dorsum and fluke. The fluke margin was slightly irregular but well-healed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photograph and FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

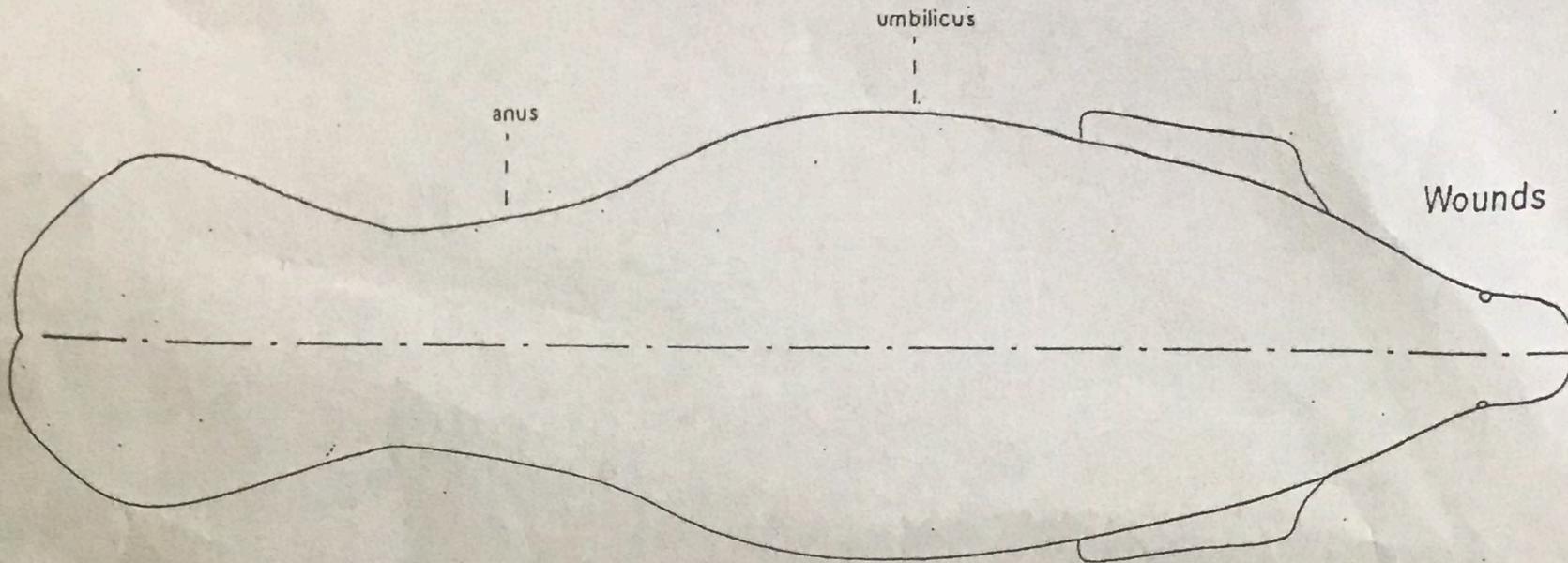
PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 26 JAN 2021

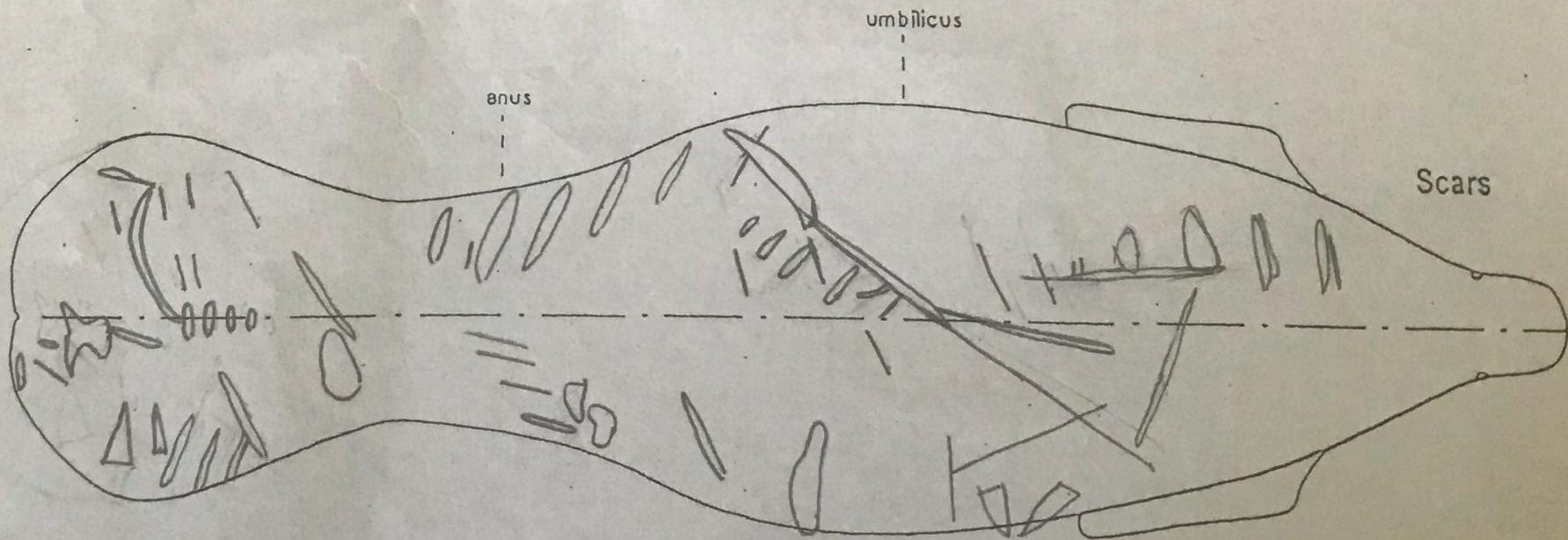
Field I.D. MEC21068

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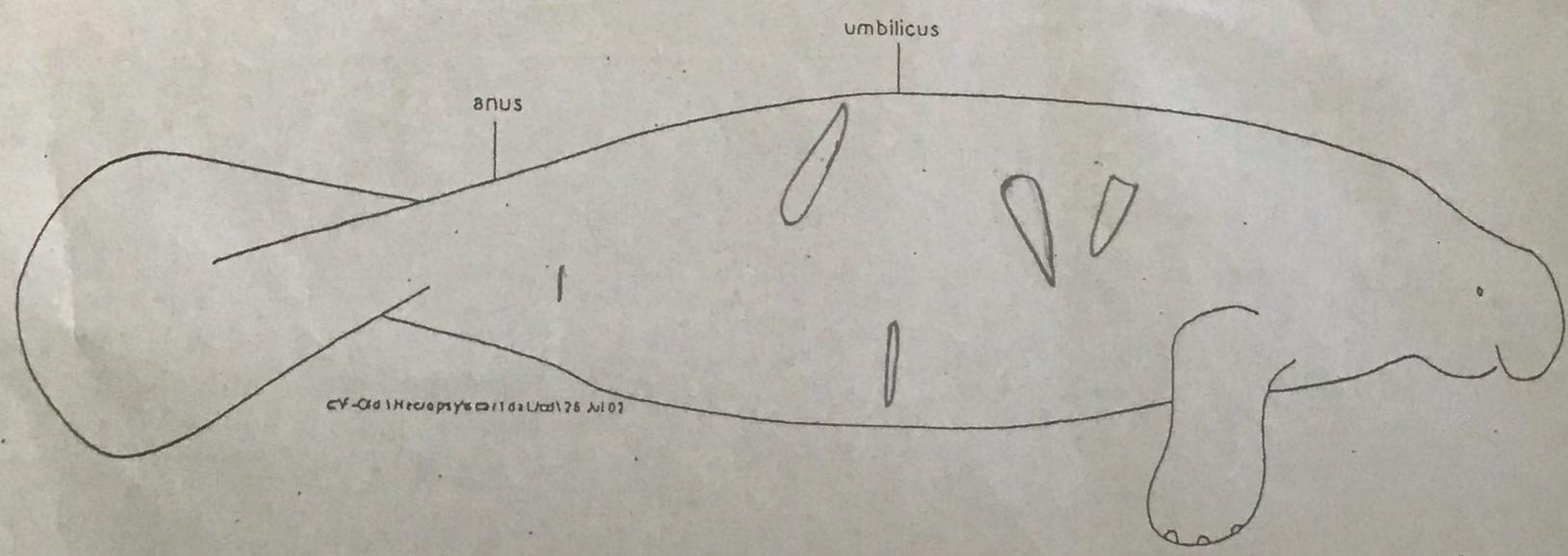
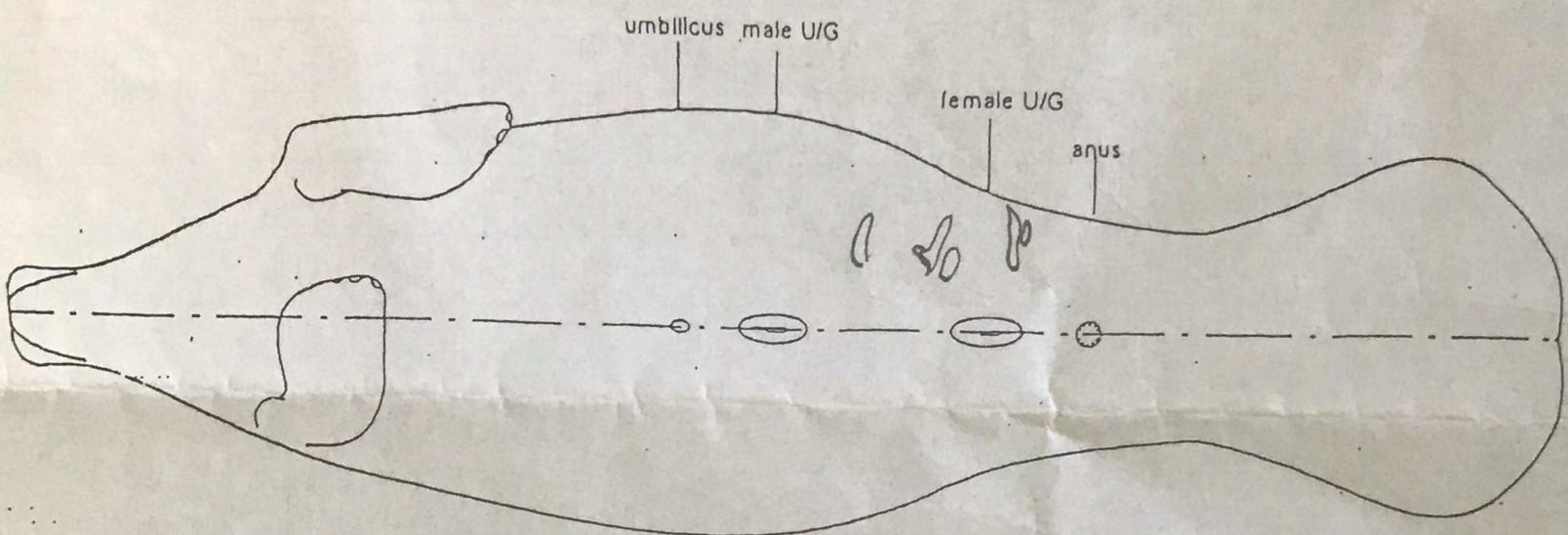
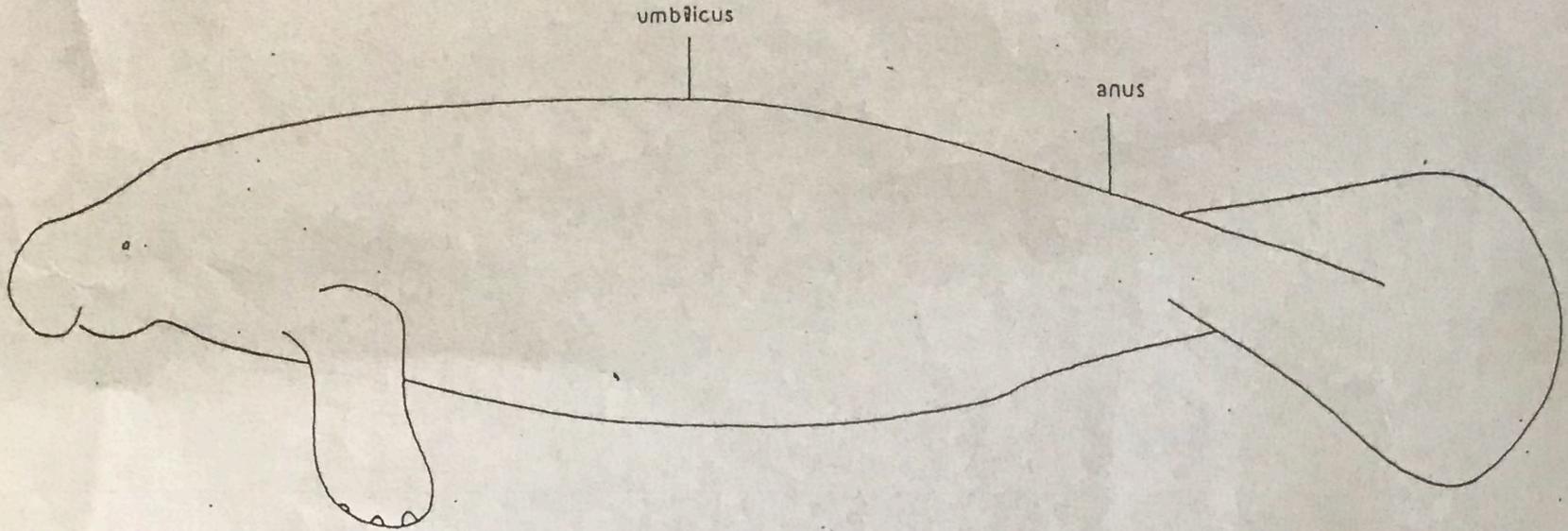
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21068



CV-001 Necropsy 01/03/02 12:00

Bassett, Brandon

From: Rood, Kari
Sent: Monday, February 1, 2021 10:08 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21068=PE340

MEC21068=PE340

Carcass location: Indian River, Cocoa
Female

First sighted 2/8/95 at Port Everglades Power Plant
Last sighted 3/5/10 at Indian River, FPL Canaveral, Titusville
USGS should be able to provide a complete sighting history if needed.

Verifiers: MARTZ 1/31/21 & KAH 2/1/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21069
Date of Report: 2021-Jan-26
Filed By: FWC MMPL

FWC Case # 1481 **FWC Region:** NE

Sex: Female **Length:** 290 cm **Weight:** 473.0 kg

DATE REPORTED: 2021-Jan-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-26 **By:** MMPL-SMT

DATE NECROPSIED: 2021-Jan-27 **By:** MMPL-MdW,AJG

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge, approximately 280 m NE of 7227 N Highway 1.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Flat ventrum; Depleted fat(s); Serous fat(s); Serous muscle; Pneumothorax; Wet lung(s); Blood clots; Empty GI tract; Crumbly feces; Dry feces; Bloody eyes, nares; Distended on left dorsum; Torsion left lung with deflated hemorrhagic bulla; Fluid, froth in airways; Fluid in pleural cavities, abdominal cavity; Dispaced abdominal organs; Black discolored lesions stomach mucosa; Congested urinary bladder-, airways mucosa, mesenteries; Specks abdominal fat, hemidiaphragm.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics, Histology- 80 samples: liver, both lungs, urine, kidney, feces, fat, brain. UF samples: Lung swabs bacteriology, urine.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Bacteriology report. Histology report. Cytology report.

REMARKS:

PIT tag scan positive (Right: 00-06E7-57D9). Lactating. Uterine Scar. Cobblestone-like epidermis; Bleached epidermis; Reported alive and floating sideways on 25 Jan 2021. Known as SWFTm1023b, REC1027, rescued from Mosquito Lagoon on 23 June 2010 for buoyancy issues of unknown cause. Remodeled ribs. Total length dorsum-up=285 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	290 cm	Fluke base:	83 cm	Girth at axillae:	176 cm
Snout to anus:	192 cm	Fluke width:	72 cm		
Snout to U/G:	178 cm	Girth at fluke base:	124 cm		
Snout to umbilicus:	102 cm	Girth at anus:	159 cm		
Flipper width:	17 cm	Girth at umbilicus:	221 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left	5	5.5
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21069
RECOVERY DATE 26 January 2021
GENDER Female **TL** 290 **cm** **WT** 473 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 27 January 2021
CONDITION Fresh

HISTORY **25 January 2021**, at 1032 hrs, FWC biologist-Sara M. Wappes (SMW), FWC intern-Kylie Lawson (KL), and MMPL-Tara Whitcomb arrived at the FPL-CCEC power plant to recover MEC21064. At 1102 hrs, SMW noticed a sideways swimming manatee in need of rescue. At 1203 hrs, while the rescue effort was being organized, the injured manatee spooked and left the shallow water and rejoined the aggregation of manatees at the warm water discharge. The rescue was called off at 1215 hrs. **26 January**, at 0915 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Indian River, Cocoa, Brevard County. FWC case number 1481 was assigned. The complainant, Kelly Parrish (803-622-0101), stated that the carcass was 80 feet offshore. At 1026 hrs, CMM received a photo that was inconclusive. At 1120 hrs, FWC biologists-Sara M. Wappes (SMW) and Sean M. Tennant (SMT) arrived at the FPL-CCEC boat ramp and launched the ECFL Key West boat. SMW and SMT verified the carcass was the same live manatee from the day before at 1300 hrs and secured it at the OUC boat ramp at 1333 hrs. FWC biologist-William D. Greer and FWC intern-Kylie Lawson arrived at the OUC boat ramp at 1430 hrs and loaded the carcass via U-trailer at 1446 hrs. SMT transported the carcass to the MMPL arriving by 1830 hrs.

EXTERNAL All of the epidermis was present. Copious bloody mucus and fluid exuded from the nares. The eyes were bloody. The left dorsum was more distended than the right. There was a thick green and brown algal mat on the dorsal and lateral aspects. No watercraft-related wounds were observed. The ventral epidermis had cobblestone-like patches. The epidermis in the axillae was slightly bleached. The ventrum was flat. There was a minimum of ten well-healed watercraft-related scar patterns. The fluke margin had a well-healed mutilation between the 7 and 8 o'clock positions. A small amount of bloody fluid was milked from the right teat and a small amount of milk came from the left teat. PIT tag scan was positive on one side (Right 00-06E7-57D9), known as SWFTm1023b, REC1027, rescued from Mosquito Lagoon on 23 June 2010 for buoyancy issues of unknown cause. A genetics sample was collected.

ABDOMINAL There was moderate, serous abdominal fat, and a small amount of serous mesenteric and omental fat. There were black specks on the abdominal fat. The abdomen contained at least 2.5 L of red-tinged fluid. The abdominal organs were displaced to the right due to distension of the left hemidiaphragm.

STOMACH The stomach contained a small amount of grey-green mucus. There were two regions with irregular-shaped black to dark red stripes in the mucosa of the major curvature. Otherwise, the mucosa was light pink. No parasites were observed.

DUODENUM The duodenum contained 750 mL of thick, brown to black fluid. The mucosa was light brown. No parasites were observed.

JEJUNUM & ILEUM The mesentery was mildly congested. The proximal small intestine contained a small amount of flocculent, brown to black fluid. The distal small intestine contained a small amount of thick, brown fluid. The mucosa was unremarkable throughout. No parasites were grossly observed.

CECUM The cecum contained a scant amount of wet, pasty, homogeneous, yellow to olive green digesta. The mucosa was unremarkable. No parasites were observed.

COLON The mesentery was mildly congested. The colon was contracted. The proximal colon contained a scant amount of wet, pasty, homogeneous, olive green feces mixed with a few yellow seeds. There was a mild infection of small dead trematodes. The wall was rugose due to contraction. The mucosa was red discolored on

the tips of the contracted rugae and otherwise unremarkable. The mid colon contained a small amount of dry, crumbly, moderately formed, fibrous, moderately digested, brown feces. The distal colon contained a scant amount of dry, well-formed, moderately digested, fibrous, brown to dark green feces. No parasites were observed in the mid- or distal colon. The mucosa was unremarkable.

PANCREAS The pancreas was surrounded by serous, red tissue. Serosal and cut surfaces were dark pink to red.

SPLEEN The spleen was light red to dark pink on serosal surfaces and dark red on cut surfaces.

LIVER The margins of the liver were mostly sharp. The liver was firm. Serosal surfaces were blue to purple and cut surfaces were dark brown.

GALLBLADDER The gallbladder was distended and contained 250 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The uterus was contracted. The left horn contained an old scar (5.5 cm wide x 5 cm circumference). The ovaries had numerous small corpora albicantia and several small follicles.

KIDNEYS There was scant perirenal fat. The kidneys were swollen and firm. Serosal surfaces were dark pink to purple. On cut surfaces, the cortices were light pink and the medullae were dark red. The corticomedullary boundaries were distinct.

URINARY BLADDER The bladder contained 150 mL of watery, clear, dark yellow urine with a smell of ketosis. The mucosa was severely congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left hemidiaphragm was severely distended and had spots of green discoloration on the mid-medial ventral aspect. A large amount of air was released when the pleural cavity was opened. The left pleural cavity also contained 1.5 L of bloody fluid and a few loose, well-formed blood clots. The caudal half of the left lung had a 180-degree counterclockwise torsion around the longitudinal axis. Most of the ventral surface of the left lung consisted of a deflated air sac that was purple, dark red and black on serosal surfaces. The inner lining of the sac consisted of hemorrhagic tissue. The sac contained approximately 1.5 L of loose, well-formed blood clots. The caudal tip and the dorsal serosal surface of the left lung were pale pink. The remaining lung parenchyma dorsal to the sac was much thinner than that of a normal lung and pink to light red on cut surfaces. The airways contained a small amount of bloody fluid. The right pleural cavity contained 1.75 L of bloody fluid. The right lung was heavy, light pink to light purple on serosal surfaces, and red and wet on cut surfaces. The airways contained a large amount of blood-tinged fluid and froth. The airway mucosa was pink to light red in both lungs. No parasites were observed.

HEAD & NECK REGIONS The nasopharyngeal mucosa was severely congested and coated with red-tinged froth. The trachea contained red-tinged froth.

SKELETON Left ribs 8 - 11 were remodeled at the head which protruded slightly into the pleural cavity. The remodeling was smooth.

OTHER All fat, connective tissue and a portion of the muscle was severely serous. The cortex:medulla ratio of the adrenal glands was 1:1.

COMMENTS The left lung pathology was recent and not associated with the remodeled rib heads.

SIGNIFICANT FINDINGS

- Bloody eyes, nares
- Distended on left dorsum
- Flat ventrum
- Depleted, serous fat
- Serous tissue
- Pneumothorax
- Torsion left lung with deflated hemorrhagic bulla
- Wet, heavy right lung
- Fluid, froth in airways
- Fluid in pleural cavities, abdominal cavity
- Blood clots
- Displaced abdominal organs
- Empty GI tract
- Dry, crumbly feces
- Black discolored lesions stomach mucosa
- Congested urinary bladder-, airway mucosa, mesenteries
- Specks abdominal fat, hemidiaphragm
- Cobblestone-like, slightly bleached epidermis
- Lactating
- Uterine scar
- Remodeled ribs
- PIT tag positive, known as SWFTm1023b, REC1027

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY Martine de Wit, DVM
Andrew J. Garrett

REPORT FILED BY de Wit

FWC Case # _____ FWC District: _____
Sex: M Undetermined Length: 290 cm (estimated _____) Weight 473 kg.
Date reported: _____ By: _____
Date collected: 26 Jan 21 By: SMT
Date necropsied: 27 Jan 21 By: MDW AJG

LOCATION: State: FL (____) County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - Scars - Fluke - Cranial - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other Swabs lungs bacteriology, urine -> uF

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other

-80 ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other feces, fat, brain

Genetics Box # 100 x2
Female reproductive findings or N/A

LACTATING Yes - No - UNK PREGNANT Yes No - UNK UTERINE SCAR Yes - No - UNK

UTERINE HORNS: Small diameter Contracted / Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

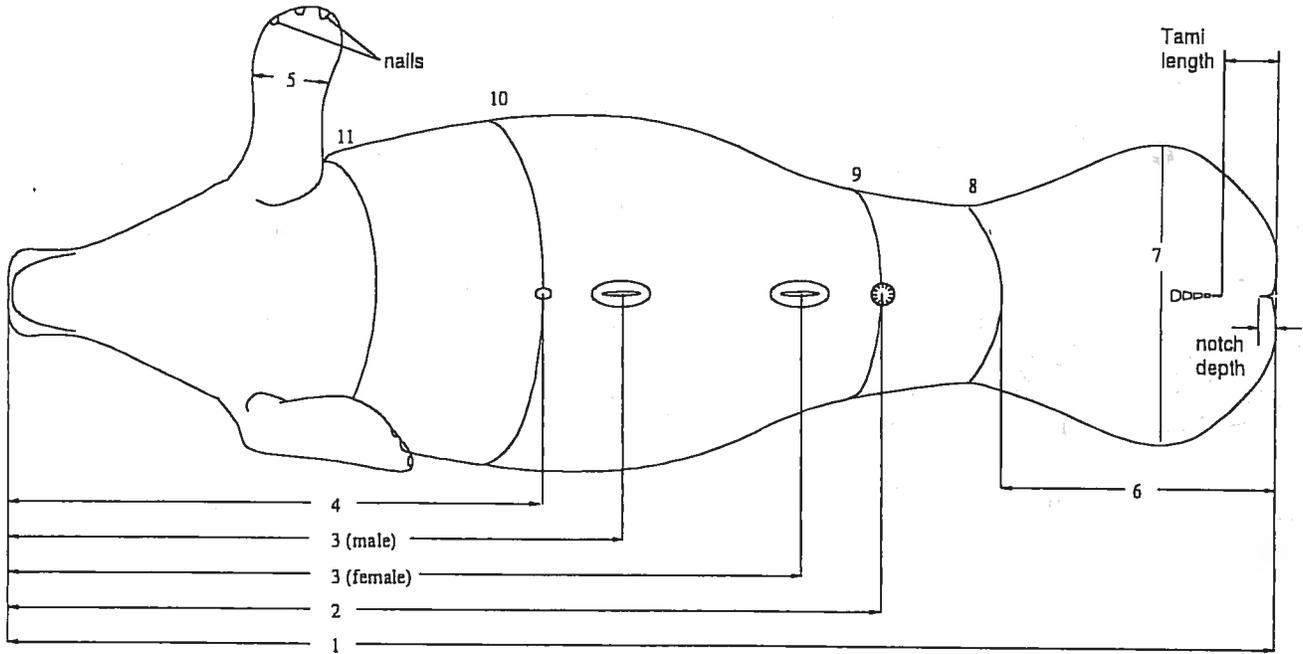
PIT TAG Scan: Negative Positive not reading (Left _____ - _____) (Right 00 - 06 E7 - 57D9; N/T

REMARKS: SWFTM1023B, REC1027

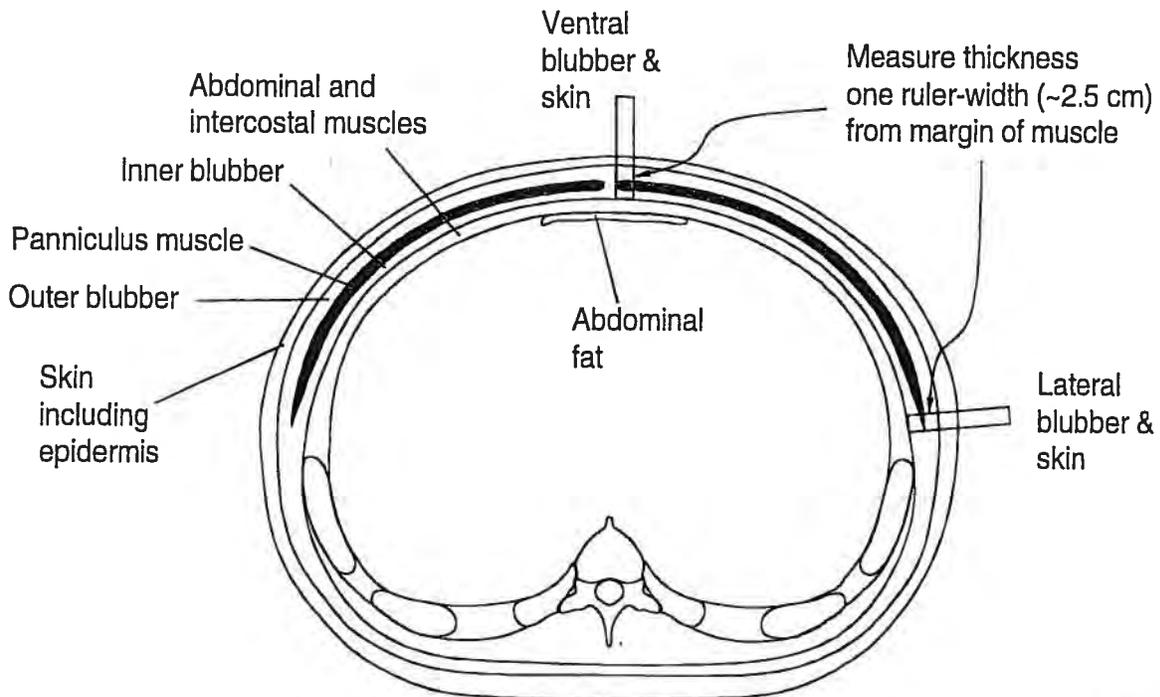
TL dorsum up 285 cm

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|--|---------------------------------------|--------------------------------------|
| 1. Total length <u>290</u> cm | 6. Fluke base <u>83</u> cm | 11. *Girth at axillae <u>176</u> cm |
| 2. Snout to anus -C <u>192</u> cm | 7. Fluke width <u>72</u> cm | |
| 3. Snout to U/G -C <u>178</u> cm | 8. *Girth at fluke base <u>124</u> cm | |
| 4. Snout to umbilicus -C <u>102</u> cm | 9. * Girth at anus <u>159</u> cm | |
| 5. Flipper width <u>17</u> cm | 10. *Girth at umbilicus <u>221</u> cm | (Nail count: L <u>4</u> R <u>4</u>) |



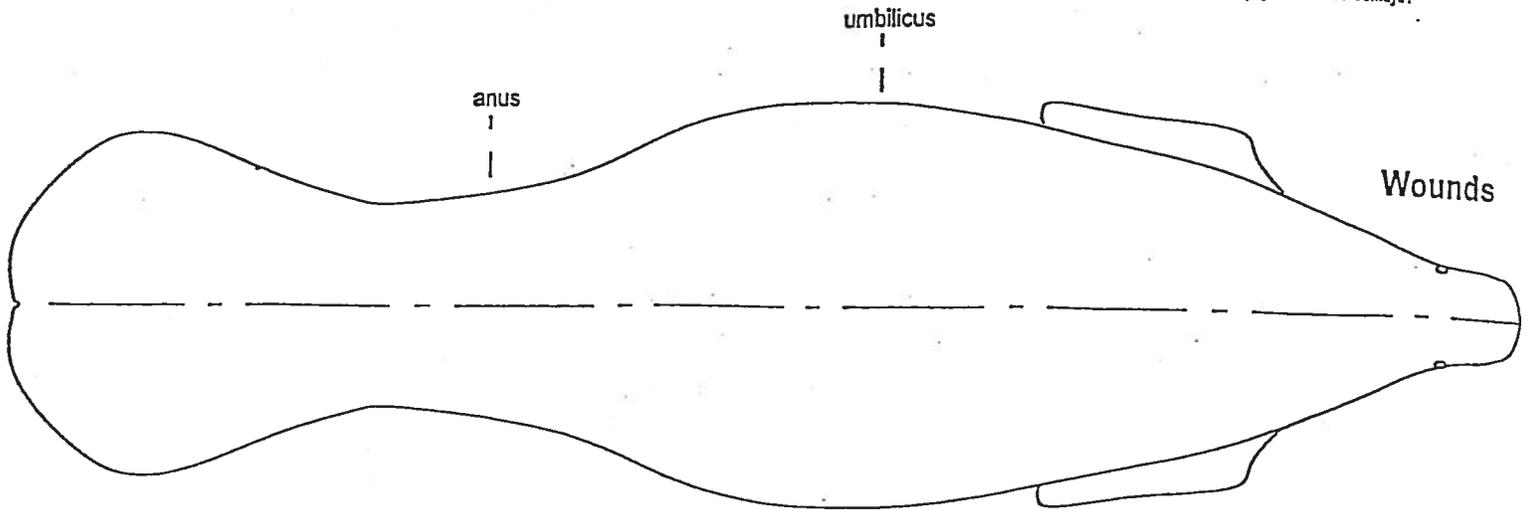
Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



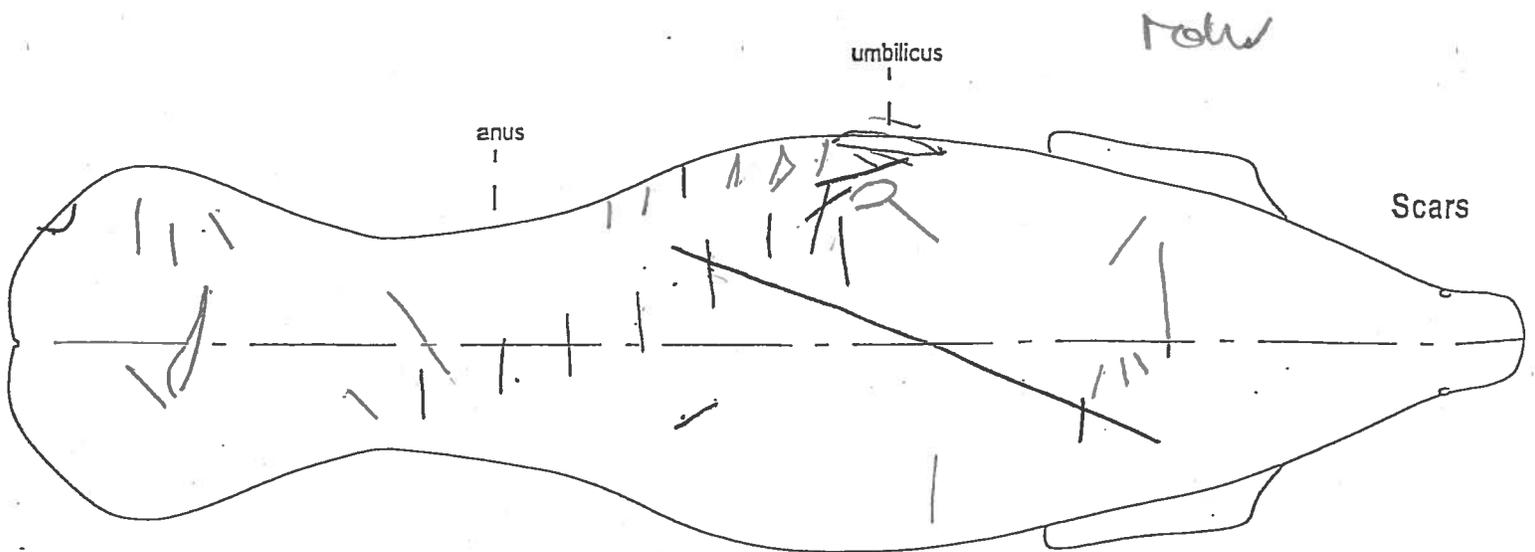
Date 27 Jan 21

Field I.D. MEC21069

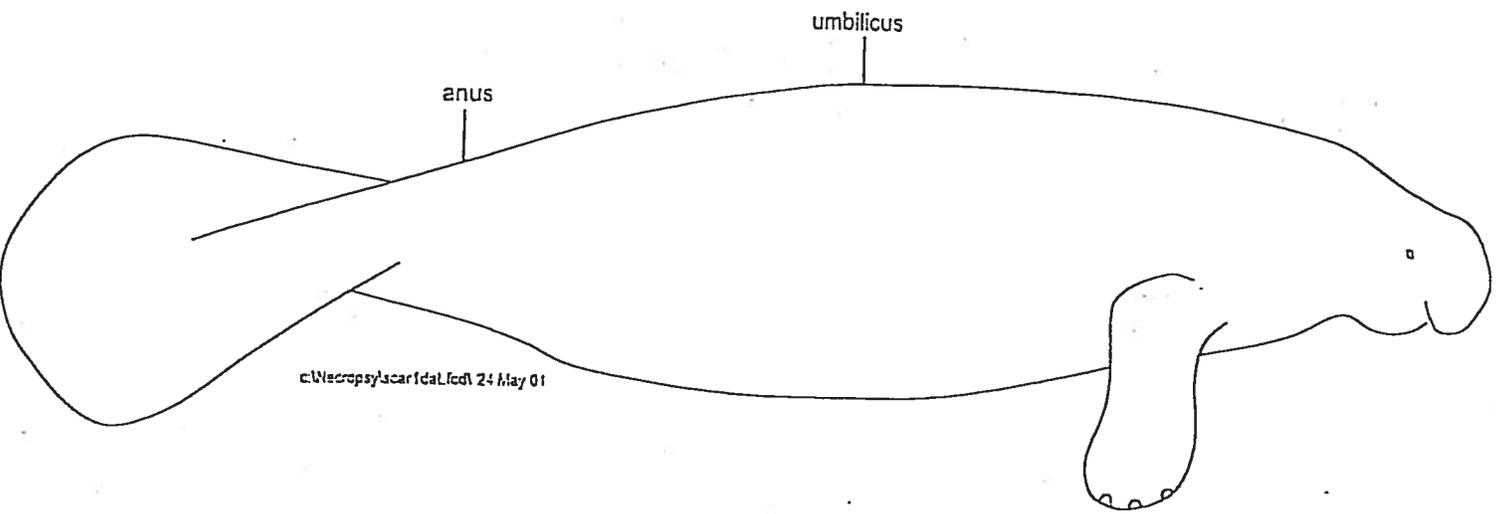
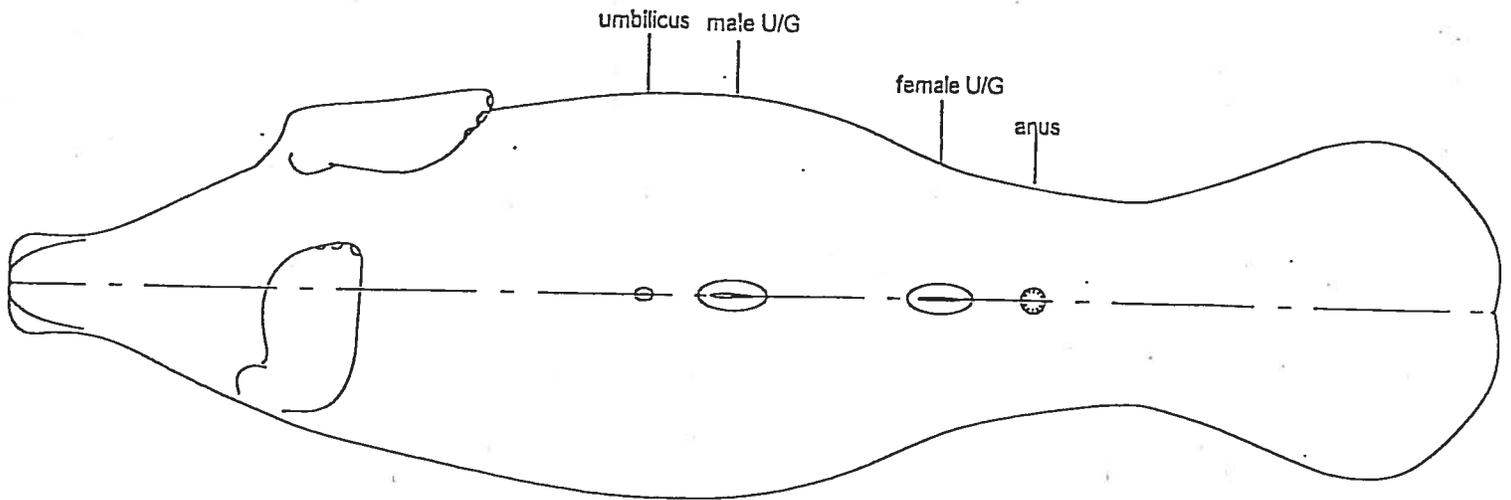
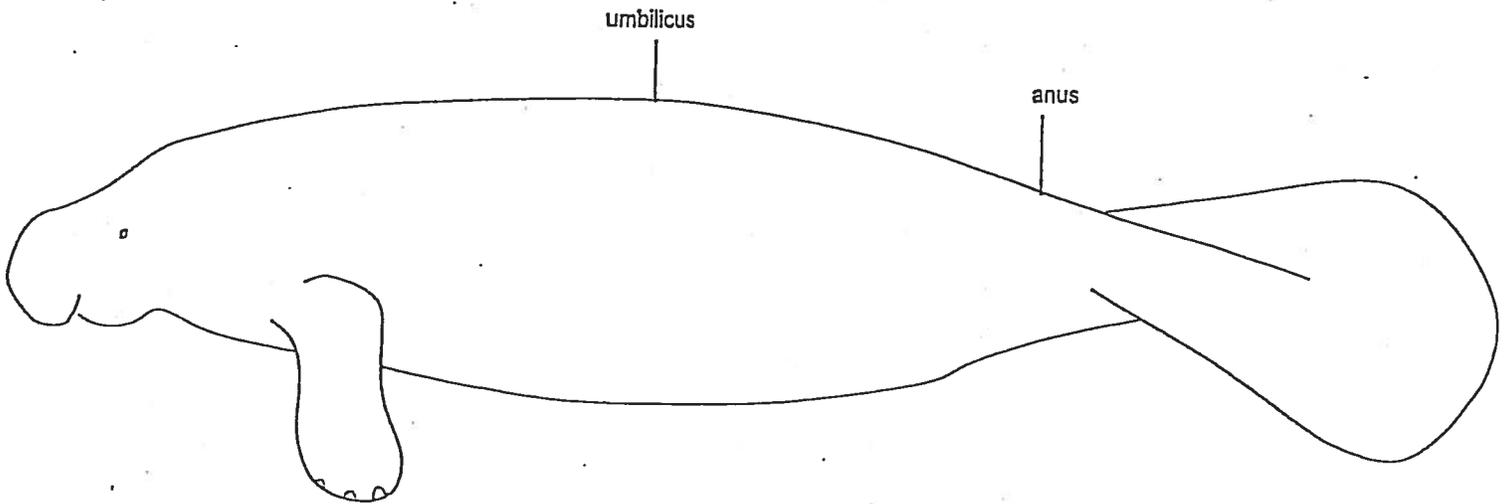
et D-Old 1 Necropsy 1 scar2dat 1 30May01



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



University of Florida
Detailed Multi Isolate Report

Clinical Microbiology, Parasitology and Serology
 2015 SW 16th Ave. Gainesville, FL 32610
 352-294-4541 fax 352-846-0531
 www.vetmed.ufl.edu cmpps@ufl.edu

Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069
Patient Comments : MANATEE

Specimen : 070337
Specimen Date/Time : 1/30/2021 10:27:02AM
Source : Tissue **Species** : Exotic (ZOO/Wildlife Animal)
Requesting Physician : Stacy, Nicole I.
Specimen Comments : LEFT LUNG

Isolate	: 1	2			
Organism	: Listonella anguillarum	Streptococcus mutans			

<u>Antimicrobial</u>					
Amikacin	<= 4	S	<= 16	NI	
Amoxicillin/Clavulanic Acid	<= 0.25	S	<= 0.25	S	
Ampicillin	<= 0.25	NI	<= 0.25	S	
Cefalexin	2	NI			
Cefazolin	4	I	<= 2	S	
Cefovecin	<= 0.25	NI	<= 0.06	NI	
Cefpodoxime	<= 1	NI	<= 2	NI	
Ceftazidime	<= 4	S			
Cephalothin			<= 2	NI	
Chloramphenicol	<= 2	S	<= 8	I	
Clindamycin			<= 0.5	NI	
Doxycycline	<= 0.25	NI	<= 0.12	NI	
Enrofloxacin	<= 0.12	NI	<= 0.25	NI	
Erythromycin			<= 0.25	S	
Gentamicin	0.5	S	<= 4	NI	
Imipenem	<= 1	S	<= 1	S	
Marbofloxacin	<= 0.12	NI	<= 1	NI	
Minocycline			<= 0.5	NI	
Nitrofurantoin					
Orbifloxacin	<= 1	NI			
Oxacillin + 2% NaCl			<= 0.25	NI	
Penicillin			<= 0.06	S	
Piperacillin/Tazobactam	<= 8	S			
Pradofloxacin	<= 0.25	NI	<= 0.25	NI	
Rifampin			<= 1	NI	
Tetracycline	<= 4	NI	1	S	

Y. J. J. 2/2/21

Detailed Multi Isolate Report

Clinical Microbiology, Parasitology and Serology
 2015 SW 16th Ave. Gainesville, FL 32610
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Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069

Specimen : 070337
Specimen Date/Time : 1/30/2021 10:27:02AM
Source : Tissue **Species** : Exotic (ZOO/Wildlife Animal)

Isolate	: 1	2			
Organism	: Listonella anguillarum	Streptococcus mutans			
Antimicrobial					
Trimethoprim/Sulfamethoxazole	<= 0.5 S	<= 2 NI			

S=Sensitive I=Intermediate R=Resistant
 NI=No interpretation exists according to CLSI standards NM= No MIC, not able to read

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Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069
Patient Comments : MANATEE

Specimen : 070335
Specimen Date/Time : 1/30/2021 10:29:15AM
Source : Tissue **Species** : Exotic (Z00/Wildlife Animal)
Requesting Physician : Stacy, Nicole I.
Specimen Comments : LEFT LUNG

Isolate : 1	2		
Organism : Salmonella species	Streptococcus mutans		

Antimicrobial

Antimicrobial	1	2	3	4
Amikacin		R	<= 16	NI
Amoxicillin/Clavulanic Acid	1	R	<= 0.25	S
Ampicillin		R	<= 0.25	S
Cefalexin		R		
Cefazolin		R	<= 2	S
Cefovecin	1	NI	<= 0.06	NI
Cefpodoxime	<= 1	S	<= 2	NI
Ceftazidime	<= 4	S		
Cephalothin			<= 2	NI
Chloramphenicol	4	S	<= 8	I
Clindamycin			<= 0.5	NI
Doxycycline	1	NI	<= 0.12	NI
Enrofloxacin	<= 0.12	NI	<= 0.25	NI
Erythromycin			<= 0.25	S
Gentamicin		R	<= 4	NI
Imipenem	<= 1	S	<= 1	S
Marbofloxacin	<= 0.12	NI	<= 1	NI
Minocycline			<= 0.5	NI
Nitrofurantoin				
Orbifloxacin	<= 1	NI		
Oxacillin + 2% NaCl			0.5	NI
Penicillin			<= 0.06	S
Piperacillin/Tazobactam	<= 8	NI		
Pradofloxacin	<= 0.25	NI	<= 0.25	NI
Rifampin			<= 1	NI
Tetracycline	<= 4	NI	1	S

Handwritten: 2/2/21

Detailed Multi Isolate Report

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Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069

Specimen : 070335
Specimen Date/Time : 1/30/2021 10:29:15AM
Source : Tissue **Species** : Exotic (ZOO/Wildlife Animal)

Isolate	: 1	2			
Organism	: Salmonella species	Streptococcus mutans			
Antimicrobial					
Trimethoprim/Sulfamethoxazole	<= 0.5 S	<= 2 NI			

S=Sensitive I=Intermediate R=Resistant
 NI=No interpretation exists according to CLSI standards NM= No MIC, not able to read

University of Florida
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 352-294-4541 fax 352-846-0531
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Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069
Patient Comments : MANATEE

Specimen : 070334
Specimen Date/Time : 1/30/2021 10:31:06AM
Source : Tissue **Species** : Exotic (ZOO/Wildlife Animal)
Requesting Physician : Stacy, Nicole I.
Specimen Comments : RIGHT LUNG

Isolate	: 1	2	3	4
Organism	: Listonella anguillarum	Past. multocida ss multocida	Streptococcus mutans	Stenotrophom onas maltophilia

Antimicrobial

Amikacin	<= 4	S	<= 4	NI	<= 16	NI	> 32	NI
Amoxicillin/Clavulanic Acid	<= 0.25	S	<= 0.25	S	<= 0.25	S	> 8	R
Ampicillin	<= 0.25	NI	<= 0.25	S	<= 0.25	S	> 8	NI
Cefalexin	2	NI	1	NI			> 16	NI
Cefazolin	4	I	<= 1	S	<= 2	S	> 32	R
Cefovecin	<= 0.25	NI	<= 0.25	NI	<= 0.06	NI	> 8	NI
Cefpodoxime	<= 1	NI	<= 1	NI	<= 2	NI	> 8	NI
Ceftazidime	<= 4	S	<= 4	NI			16	I
Cephalothin					<= 2	NI		
Chloramphenicol	<= 2	S	<= 2	S	<= 8	I	16	I
Clindamycin					<= 0.5	NI		
Doxycycline	<= 0.25	NI	<= 0.25	NI	<= 0.12	NI	4	NI
Enrofloxacin	<= 0.12	NI	<= 0.12	NI	<= 0.25	NI	0.5	NI
Erythromycin					<= 0.25	S		
Gentamicin	<= 0.25	S	2	NI	<= 4	NI	> 8	NI
Imipenem	<= 1	S	<= 1	S	<= 1	S	> 8	R
Marbofloxacin	<= 0.12	NI	<= 0.12	NI	<= 1	NI	0.5	NI
Minocycline					<= 0.5	NI		
Nitrofurantoin								
Orbifloxacin	<= 1	NI	<= 1	NI			2	NI
Oxacillin + 2% NaCl					<= 0.25	NI		
Penicillin					<= 0.06	S		
Piperacillin/Tazobactam	<= 8	S	<= 8	NI			> 64	NI
Pradofloxacin	<= 0.25	NI						
Rifampin					<= 1	NI		

Handwritten:
 4/2/21
 2/2/21

Detailed Multi Isolate Report

Clinical Microbiology, Parasitology and Serology
 2015 SW 16th Ave. Gainesville, FL 32610
 352-294-4541 fax 352-846-0531
 www.vetmed.ufl.edu cmps@ufl.edu

Patient ID : 431823
Surname : RS WALSH/STACY MMT
First Name : MEC21069

Specimen : 070334
Specimen Date/Time : 1/30/2021 10:31:06AM
Source : Tissue **Species** : Exotic (ZOO/Wildlife Animal)

Isolate	1	2	3	4
Organism	: Listonella anguillarum	Past. multocida ss multocida	Streptococcus mutans	Stenotrophom onas maltophilia

Antimicrobial

Tetracycline	<= 4	NI	<= 4	NI	0.5	S	> 16	NI
Trimethoprim/Sulfamethoxazole	<= 0.5	S	<= 0.5	S	<= 2	NI	<= 0.5	S

S=Sensitive I=Intermediate R=Resistant

NI=No interpretation exists according to CLSI standards NM= No MIC, not able to read

Client ID: AQUATIC
Client Name: RS-Walsh/Stacy Marine Mammal Testing
Client Address: Email Invoices to: ladler1@ufl.edu
Gainesville, FL 32610
Primary Phone# (352) 294-4198
Clinician: Nicole I. Stacy, DVM
Ordered Tests: Aerobic culture (2 organisms)
Pending Tests:
Requisition # 070337

Patient ID: 431823
Patient Name: MEC21069
Collected Date: 1/28/2021
Collected Time:
Received Date: 1/28/2021
Specimen: Left lung
Prelim By:
Reported By: LG 2/2/2021

Preliminary Results

Comments:

Final Results

Scant

1 *Listonella (Vibrio) anguillarum* 50%
2 *Streptococcus mutans* 50%

Comments:
See susceptibilities

Technician: LG

Date 2/2/2021



Scan here to take our survey

2/2/2021 Microbiology Results Report - Left lung 070337
Stacy, DVM, Nicole I.

Client ID: AQUATIC
Client Name: RS-Walsh/Stacy Marine Mammal Testing
Client Address: Email Invoices to: ladler1@ufl.edu
Gainesville, FL 32610
Primary Phone# (352) 294-4198
Clinician: Nicole I. Stacy, DVM
Ordered Tests: Aerobic culture (2 organisms)
Pending Tests:
Requisition # 070335

Patient ID: 431823
Patient Name: MEC21069
Collected Date: 1/28/2021
Collected Time:
Received Date: 1/28/2021
Specimen: Left Lung
Prelim By:
Reported By: LG 2/2/2021

Preliminary Results

Comments:

Final Results

Scant
1 Salmonella species Group B 50%
2 Streptococcus mutans 50%

Comments:
See susceptibilities

Technician: LG

Date 2/2/2021



Scan here to take our survey

2/2/2021 Microbiology Results Report - Left Lung 070335
Stacy, DVM, Nicole I.

Client ID: AQUATIC
Client Name: RS-Walsh/Stacy Marine Mammal Testing
Client Address: Email Invoices to: ladler1@ufl.edu
Gainesville, FL 32610
Primary Phone# (352) 294-4198
Clinician: Nicole I. Stacy, DVM
Ordered Tests: Aerobic culture (2 organisms)
Pending Tests:
Requisition # 070334

Patient ID: 431823
Patient Name: MEC21069
Collected Date: 1/28/2021
Collected Time:
Received Date: 1/28/2021
Specimen: Right lung
Prelim By:
Reported By: LG 2/2/2021

Preliminary Results

Comments:

Final Results

Very scant growth
1 *Listonella (Vibrio) anguillarum* 25%
2 *Pasteurella multocida* ss *multocida* 25%
3 *Streptococcus mutans* 25%
4 *Stenotrophomonas maltophilia* 25%

Comments:
See susceptibilities

Technician: LG

Date 2/2/2021



Scan here to take our survey

2/2/2021 Microbiology Results Report - Right lung 070334
Stacy, DVM, Nicole I.

EXFOLIATIVE CYTOLOGY REPORT
University of Florida Aquatic Animal Health Program

2015 SW 16th Ave
 Gainesville, Florida 32610
 352-294 4093 (o)
 352-870 5108 (c)
 StacyN@ufl.edu

REPORT DATE: January 28, 2021	COLLECTION DATE: January 27, 2021
ANIMAL ID: MEC21069	SPECIES: <i>Trichechus manatus latirostris</i>

*[This report includes interpretative summaries of cytologic findings in the submitted specimens;
 full reports with detailed cytologic description for each site will be available upon request, slides are on file]*

Moderate to marked histiocytic and lesser heterophilic inflammation Presence of rare extracellular and phagocytized small plump bacilli and coccobacilli Presence of rare large plump bacilli suggestive of post-mortem anaerobe growth	
Frequent lysed cells present Histiocytic and heterophilic inflammation Presence of occasional small aggregates of coccobacilli, small bipolar bacilli, and small plump bacilli	
Urine	
Ketone	
SEDIMENT:	
WBC/HPF	

Nicole I. Stacy, DVM, DrMedVet, DACVP

NECROPSY REPORT FINAL REPORT

Field ID: MEC21069
Alternate Field ID: PIT tag positive, known as SWFTm1023b, REC1027
Accession Number: 21-11
Species: *Trichechus manatus latirostris*
Date: 26 Jan 2021 (DOR); 27 Jan 2021 (DON)
Location: FL
Sex, Age: F
TL: 290.0 cm
WT: 473.0 kg
Body Condition: Emaciated
Condition at Investigation: Dead
Carcass Disposition/Post-Mortem Interval: 24> hours

HISTORY

Findings include:

- Bloody eyes, nares
- Distended on left dorsum
- Flat ventrum
- Depleted serous fat
- Serous tissue
- Pneumothorax
- Torsion left lung with deflated hemorrhagic bulla
- Wet right lung
- Fluid, froth airways
- Fluid pleural cavities
- Blood clots
- Displaced abdominal organs
- Empty GI tract
- Black discolored lesions stomach mucosa
- Congested urinary bladder mucosa, mesenteries
- Specks abdominal fat, hemidiaphragm
- Cobblestone-like, slightly bleached epidermis
- Lactating
- Uterine scar
- Remodeled ribs

Probable Cause of Death: Natural; Other

ANCILLARY DIAGNOSTICS

Test	Tissue/Sample	Result	Comment
Cytology	Lung	Frequent lysed cells present Histiocytic and heterophilic inflammation Presence of occasional small aggregates of coccobacilli, small bipolar bacilli, and small plump bacilli Presence of frequent large plump bacilli suggestive of post-mortem anaerobe growth Respiratory epithelial cell hyperplasia	
Urinalysis	Urine	Protein 3+, few hyaline casts, rare large plump bacilli	

MICROSCOPIC DESCRIPTION

Received are 17 H&E slides.

The T-Septal lymph node is mildly cellular with loosely formed follicles. Medullary spaces are expanded by clear spaces (edema), fibrin, erythrocytes, and macrophages. Macrophages contain intracytoplasmic brown granular pigment (hemosiderin). There is serous atrophy of perinodal adipocytes. There is moderate, diffuse depletion of periarteriolar lymphoid sheaths. The center contains erythrocytes. There is serous atrophy of splenic adipocytes.

There is atrophy of cardiomyocytes. There is expansion of the interstitium by clear spaces (edema). There is serous atrophy of adipocytes.

There is serous atrophy of the duodenal tunica serosa.

Hepatocytes have mildly decreased cytoplasm. There are discrete clear vacuoles within the cytoplasm as well as mild to moderate amounts of brown granules (hemosiderin). Hemosiderin is present within Kupffer cells which occasionally form small clusters. There is moderate, diffuse congestion.

Two sections of the stomach are examined. In one section, the submucosa is expanded by clear spaces (edema) with interspersed erythrocytes. There is congestion of submucosal vessels. The mucosa is intact. Few mucosal vessels are plugged with smudgy eosinophilic substance (suspect fibrin). There is moderate depletion of

mucosal-associated lymphoid tissue of the cecum. Mucosal vessels are congested. There is congestion of proximal large intestine mucosal vessels.

There is mild to moderate renal congestion. There is serous atrophy of peri-renal adipose. There is moderate congestion of urinary bladder submucosal vessels.

There is serous atrophy of peri-adrenal adipocytes.

Within the axillary skin, there are multifocal, loose aggregates of lymphocytes, plasma cells, and heterophils. There is multifocal pigment loss in the basal epithelium. There is moderate dermal congestion. Few rhabditiform nematodes are present on the surface.

There is marked depletion of pancreatic acinar zymogen granules.

There is multifocal atrophy of myofibers of the right and left hemidiaphragm. There is interstitial expansion by eosinophilic proteinaceous fluid (edema). In the left hemidiaphragm, primarily at the interface with the fascial crus, there is degeneration and necrosis of myofibers. Involved myofibers have contracted sarcoplasm with loss of cross-striations. Few heterophils and macrophages infiltrate the degenerate myofibers. Occasional peduncle myofibers have broad hyaline contraction bands. There is mild interstitial edema.

Two sections of the right lung are examined. There is a fibrinous pneumonia. Alveolar spaces and bronchiolar lumina contain fibrin, extravasated erythrocytes, foamy macrophages, and few heterophils. Occasionally, colonies of bacterial colonies are present within alveolar spaces. Bronchiolar lumina contain mucoproteinaceous exudate. There is expansion of alveolar interstitial walls by lightly eosinophilic fluid. There is diffuse, moderate congestion. Eight sections of the left lung are examined. There is variability of histopathologic findings. In some sections, there is flooding of alveolar spaces and few bronchiolar lumina with extravasated erythrocytes. There is multifocal alveolar hyperinflation with septal disruption. In other sections, there collapse of alveolar spaces leaving slits containing few macrophages and lightly eosinophilic granular proteinaceous fluid. In Slide 29LC, there is an expansive accumulation extravasated erythrocytes and serum. There are vessels at the margin which contain fibrin thrombi. There is diffuse expansion of the nasopharyngeal mucosa by clear spaces (edema). There is diffuse, moderate congestion.

The following tissues have no significant histological findings: Proximal small intestine

MORPHOLOGIC DIAGNOSES

Musculoskeletal System/Integumentary System

- A. Hemidiaphragm:
 - a. Left and Right: Atrophy, multifocal.
 - b. Left: Myofiber degeneration and necrosis, subacute, multifocal with heterophilic and histiocytic myositis.
- B. Peduncle Muscle: Contraction bands, multifocal, mild.

Respiratory System

- A. Right Lung:
 - a. Fibrinous pneumonia, acute, multifocal to coalescing with occasional intra-alveolar bacterial cocci and interstitial edema.
 - b. Bronchiolar mucoproteinaceous exudate.
 - c. Pulmonary edema.
 - d. Congestion, diffuse, mild to moderate.
- B. Left Lung:
 - a. Atelectasis, multifocal with histiocytosis.
 - b. Alveolar hyperinflation with multifocal septal disruption.
 - c. Infarction
- C. Nasopharyngeal Mucosa: Edema and congestion.

Nervous SystemNEUrinary and Reproductive System

- A. Urinary Bladder: Congestion, diffuse, moderate.
- B. Kidney: Congestion, diffuse, mild.

Digestive System/Body as a Whole

- A. Stomach: Submucosal edema, moderate with congestion.
- B. Intestine:
 - a. Mucosal-associated lymphoid tissue depletion.
 - b. Congestion.
- C. Pancreas, Exocrine: Atrophy, diffuse, moderate.

Cardiovascular System

- A. Heart:
 - a. Interstitial edema.
 - b. Cardiomyocyte atrophy, multifocal.
 - c. Serous atrophy of fat.

Hepatobiliary System

- A. Liver:
 - a. Hepatic lipidosis.
 - b. Hemosiderosis.
 - c. Congestion, diffuse, moderate.

Integumentary System

A. Axillary Skin:

- a. Dermatitis, heterophilic and lymphoplasmacytic, multifocal, mild.
- b. Basal epithelial pigment loss, multifocal, mild.

Endocrine System

A. Adrenal Gland: Peri-adrenal serous atrophy of fat.

Hematolymphatic System

A. Spleen:

- a. Periarterolar lymphoid sheaths, moderate.
- b. Peri-splenic serous atrophy of fat.

B. T-Septal Lymph Node:

- a. Lymphoid depletion, diffuse, moderate.
- b. Edema and congestion, diffuse, moderate.
- c. Hemosiderosis.

INTERPRETATIVE SUMMARY

DIAGNOSES
Starvation: Serous Atrophy of Fat, Skeletal Muscle Atrophy, Pancreatic Atrophy
Left Hemidiaphragmatic Myofiber Degeneration and Necrosis
Acute Pulmonary Infarction
Acute Fibrinous Pneumonia

Primary Diagnostic Category: **Starvation** /Organ Specific

Linked Cases: MSE21048, MEC21064

This female manatee was emaciated. Based on the serous atrophy of fat, myofiber atrophy, and pancreatic atrophy. Gastric submucosal edema with mild hemorrhage could reflect decreased albumin. Findings are similar to MSE21048.

There was a left sided pneumothorax and there was torsion of the left lung along with hemorrhagic bullae. Histopathologic lesions in the left lung and left hemidiaphragm indicate the response to the pneumothorax. This includes the formation of bullae which in some regions were air-filled and in others contained extravasated erythrocytes. There was a site of infarction that likely corresponded to the site of torsion. Torsion along with pneumothorax would contribute to the pulmonary atelectasis. Bacteria were observed occasionally and are considered secondary. (This may account for the clinical response of some animals to antibiotics).

The left hemidiaphragm exhibited atrophy of myofibers similar to the right hemidiaphragm. However, in the left hemidiaphragm, there was degeneration of myofibers. The cause was not evident, but one consideration would include phrenic nerve damage. Atrophy of the hemidiaphragm myofibers would further contribute to dysfunction. Starvation may have an effect on diaphragmatic function. One study in rats indicated that force and endurance are affected.¹

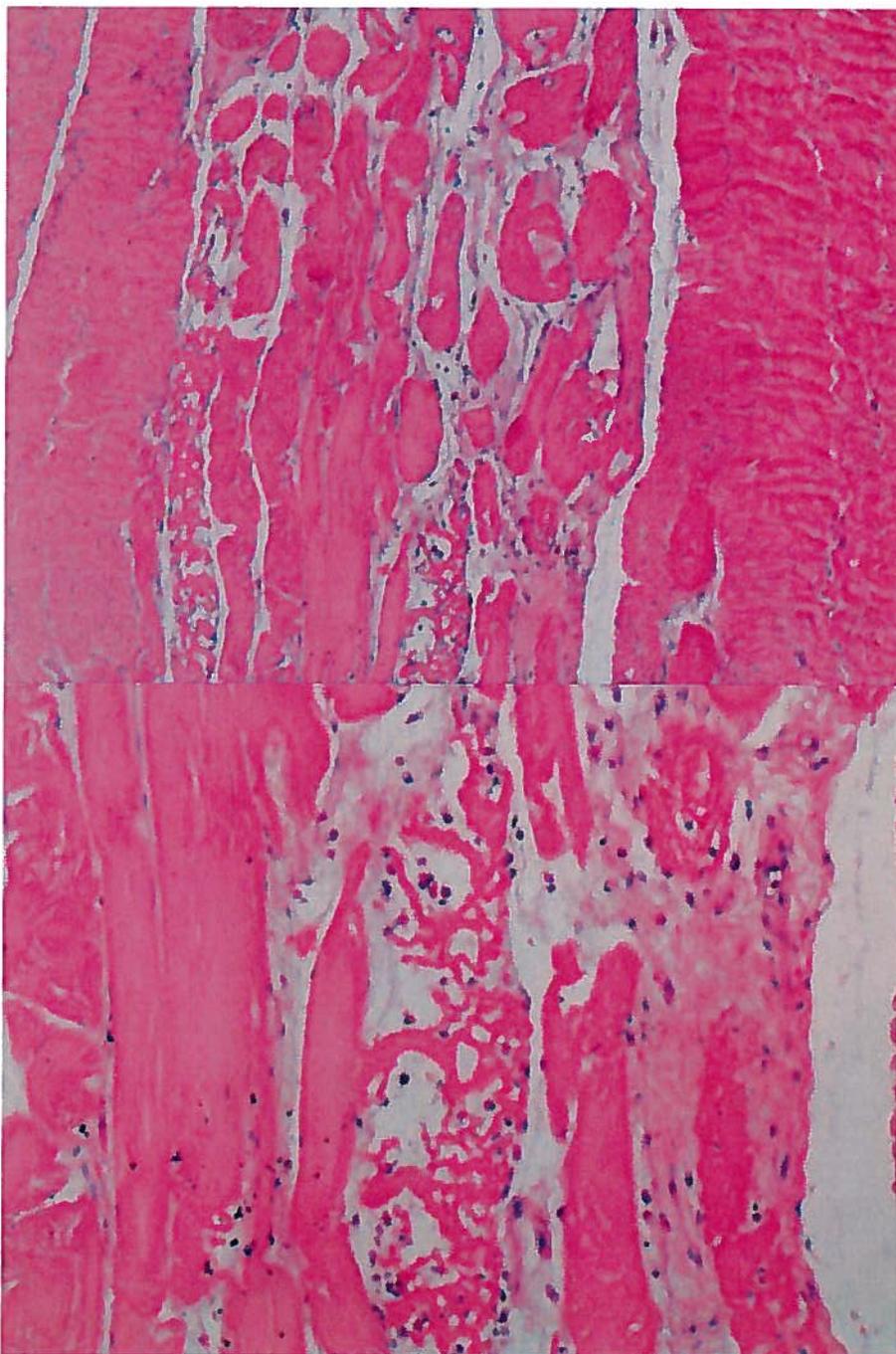
Lymphoid depletion was observed and would indicate immunosuppression which may be stress related. Edema and congestion of the T-Septal lymph node may reflect increased drainage from the lungs.

TEST	PURPOSE	SITE	RESULT

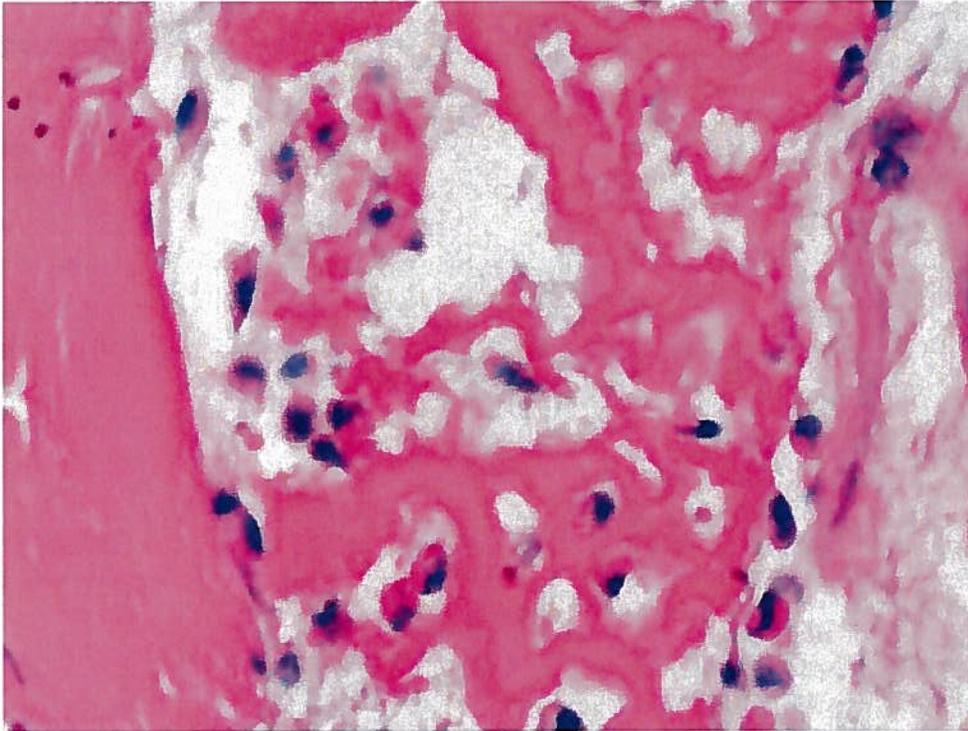
DATE:
2/15/2021

REPORTING PATHOLOGIST:
David S. Rotstein, DVM, MPVM, DACVP

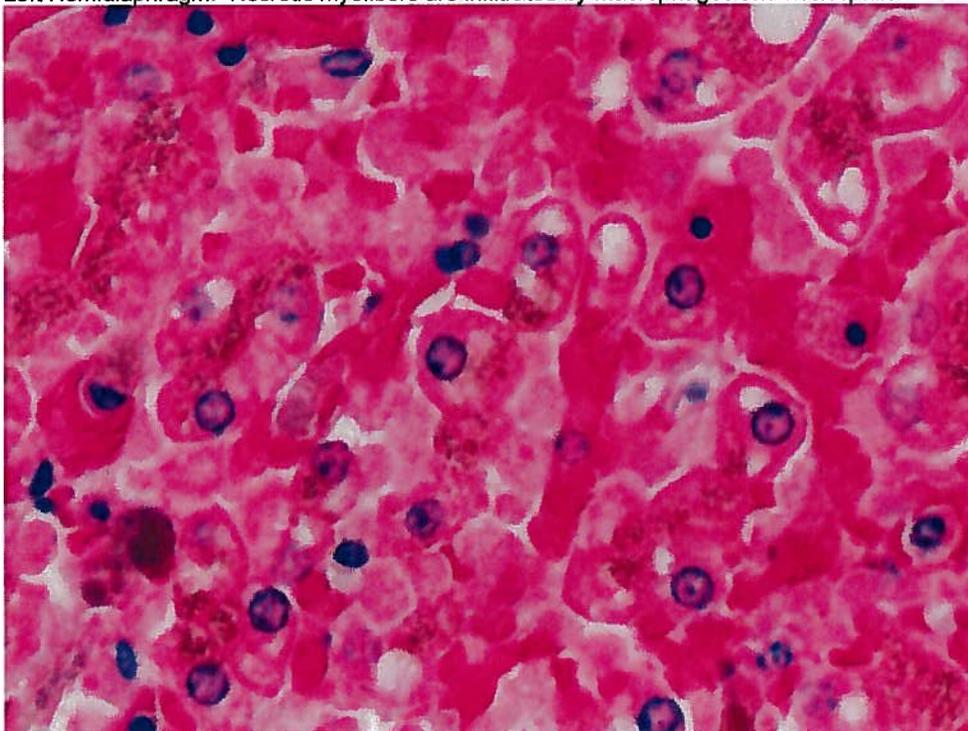
¹ Gölgeli A, Ozesmi C, Sürer C. Effect of acute starvation on rat diaphragm function. *Jpn J Physiol.* 1994;44(6):743-7. doi: 10.2170/jjphysiol.44.743. PMID: 7760528.



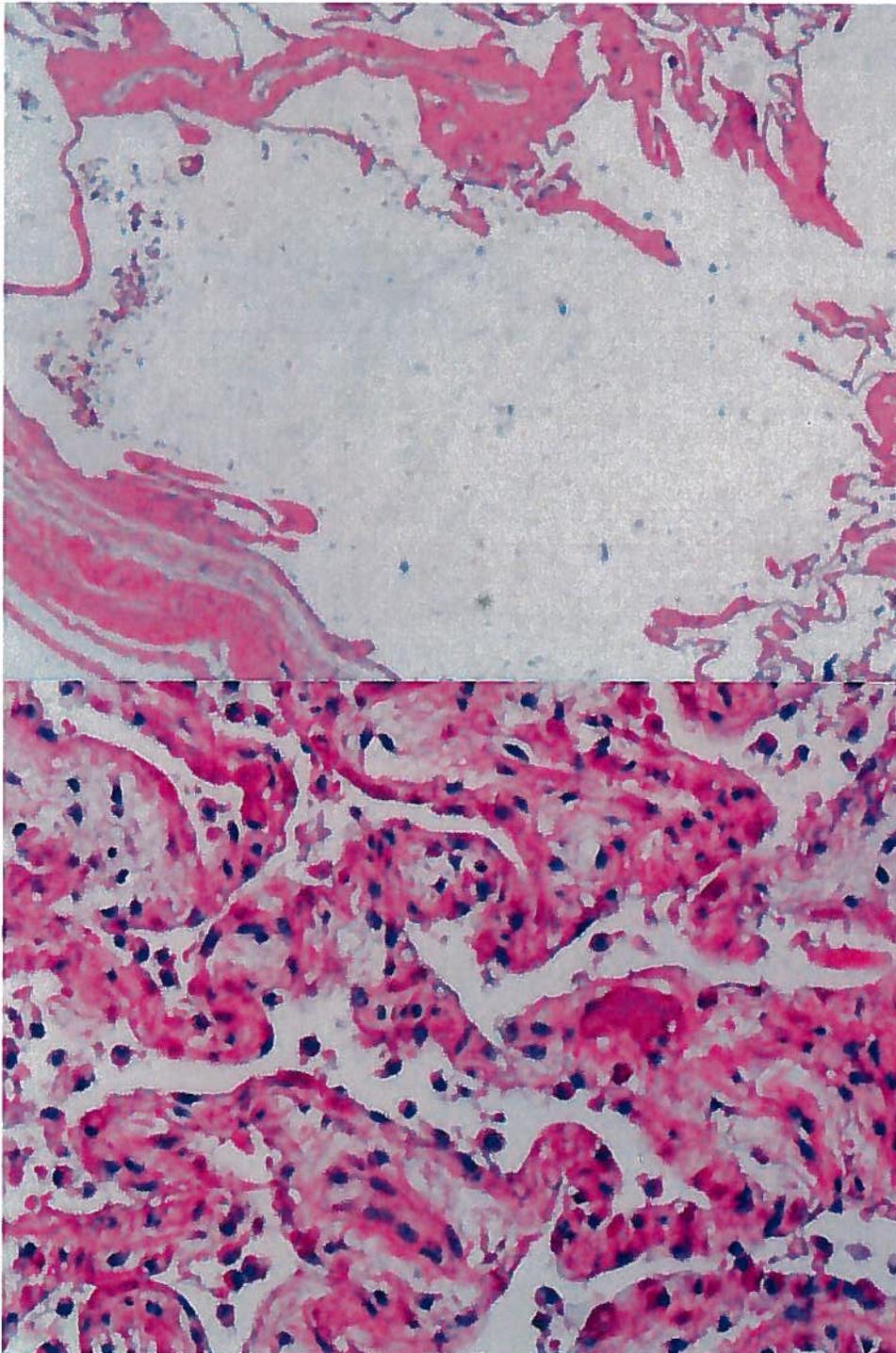
Left Hemidiaphragm. There is multifocal necrosis and degeneration of myofibers.



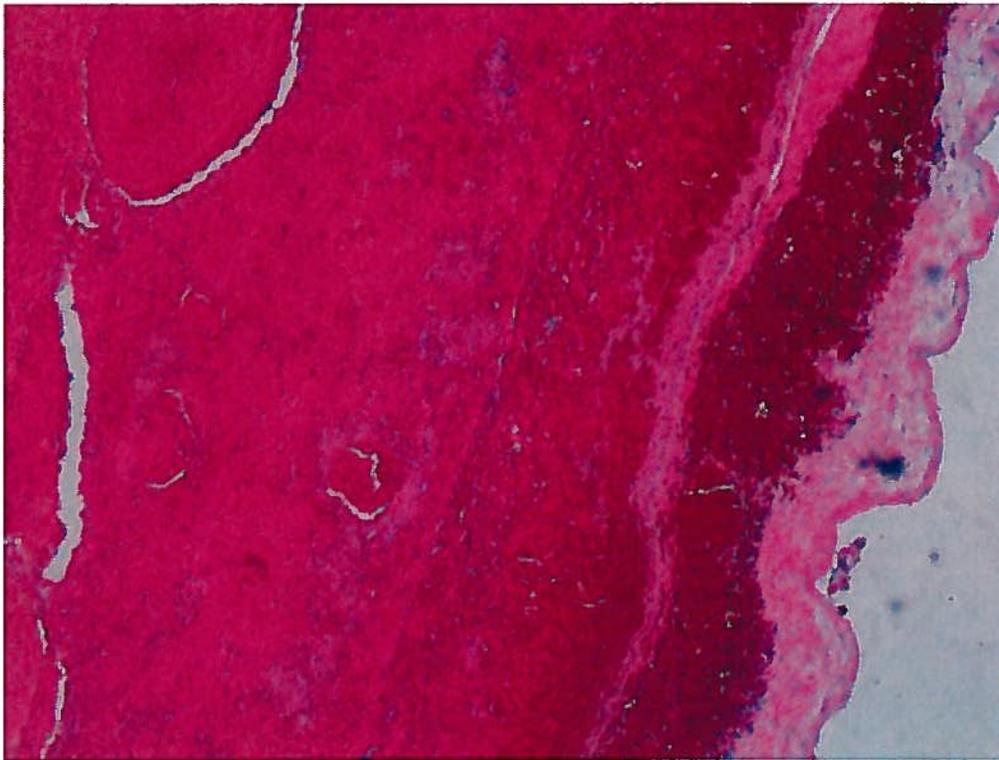
Left Hemidiaphragm. Necrotic myofibers are infiltrated by macrophages and heterophils.



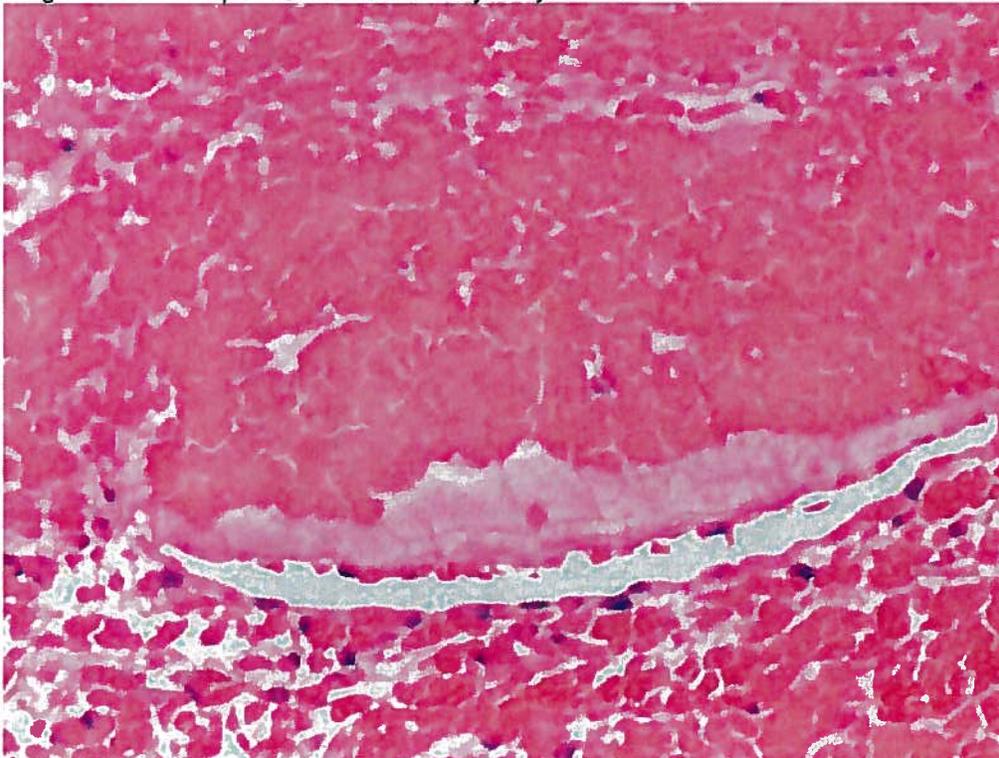
Liver. Hepatocytes have vacuolated cytoplasm and brown, intracytoplasmic granules. There is moderate congestion.



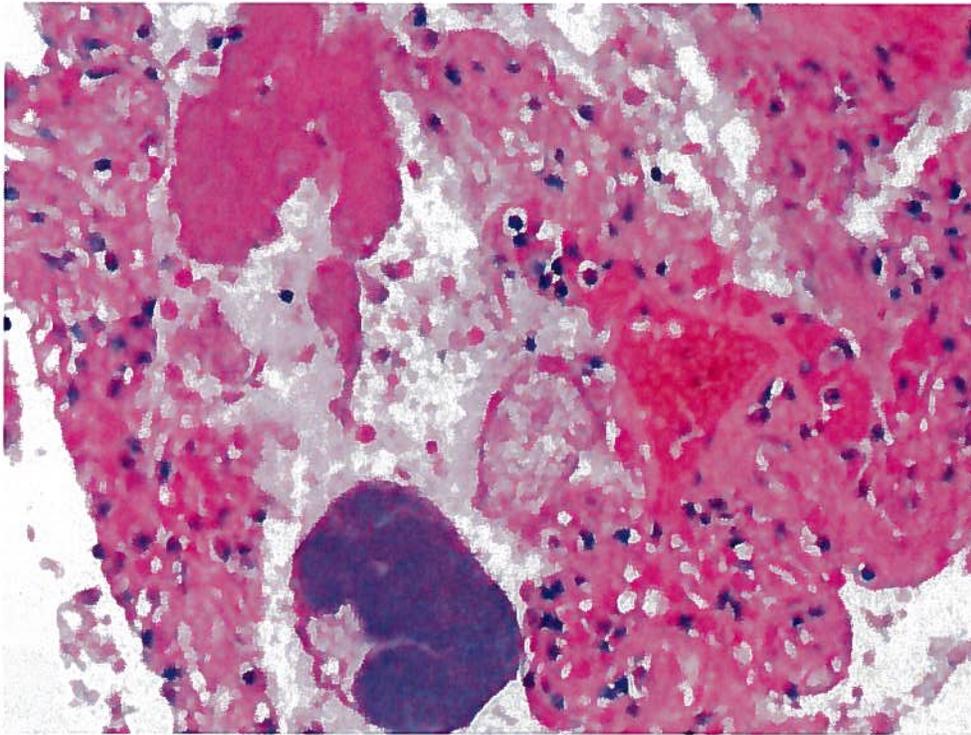
Left Lung. In the upper photo, there is alveolar hyperinflation and in the lower photo, there is alveolar spaces (atelectasis).



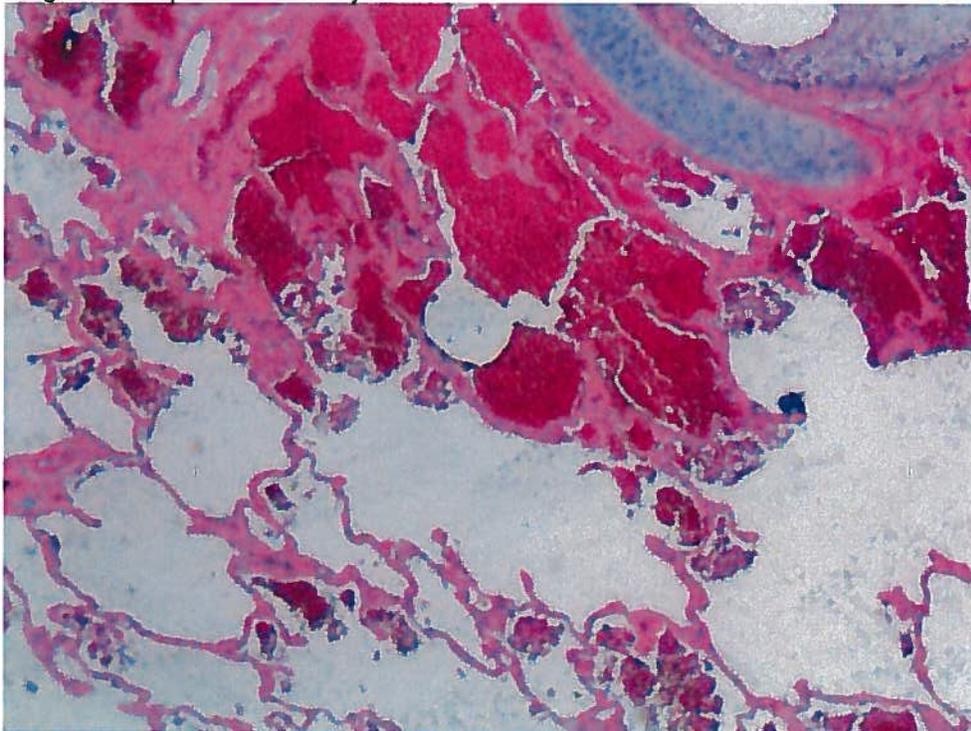
Lung. The clot is composed of extravasated erythrocytes.



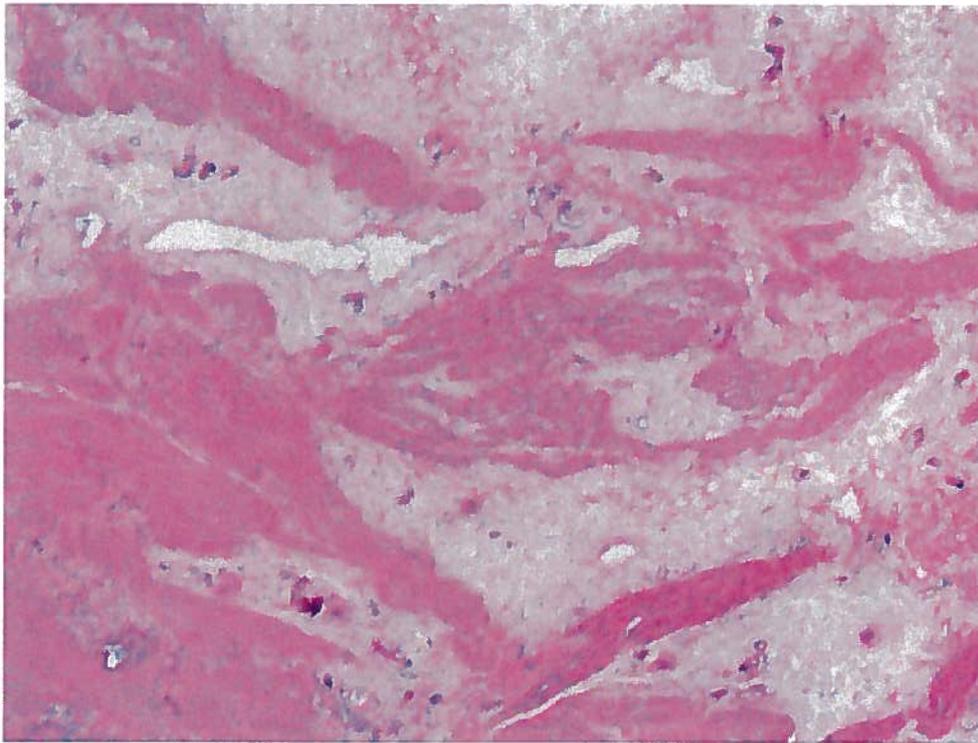
Fibrin is present within the lumen of a vessel.



Lung. Alveolar spaces occasionally contain bacterial cocci and fibrin.



There is multifocal flooding of alveolar spaces with extravasated erythrocytes.



Stomach. There is gastric mucosal edema.

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21070
Date of Report: 2021-Jan-26
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 272 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** FWC-SMW MMPL-SMT

DATE COLLECTED: 2021-Jan-26 **By:** FWC-SMW MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, floating approximately 1.07 km ENE of 100 May Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Watercraft wound(s); Cobblestone-like epidermis; Bleached epidermis; Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	272 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21070

RECOVERY DATE 26 January 2021

GENDER Female **TL** 272 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 26 January 2021, at 1120 hrs, FWC biologists-Sara M. Wappes (SMW) and Sean M. Tennant (SMT) arrived at the FPL-CCEC boat ramp and launched the ECFL Key West boat. At 1358 hrs, while towing MEC21068 and on the way to recover MEC21067, SMW and SMT discovered an additional carcass floating in the channel (MEC21070). SMW and SMT towed all three carcasses to a remote location. An external work up was completed on MEC21070 by 1700 hrs.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. There was cobblestone-like epidermis on the ventrum. The epidermis of the axillae was bleached. Bleached spots were observed on the inner layer of dorsal epidermis. There was a superficial linear watercraft-related wound on the mid dorsum. The wound did not penetrate the dermis. The carcass was slightly distended with gas. There was a minimum of five well-healed watercraft-related scar patterns. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Superficial watercraft wound
- Cobblestone-like, bleached epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

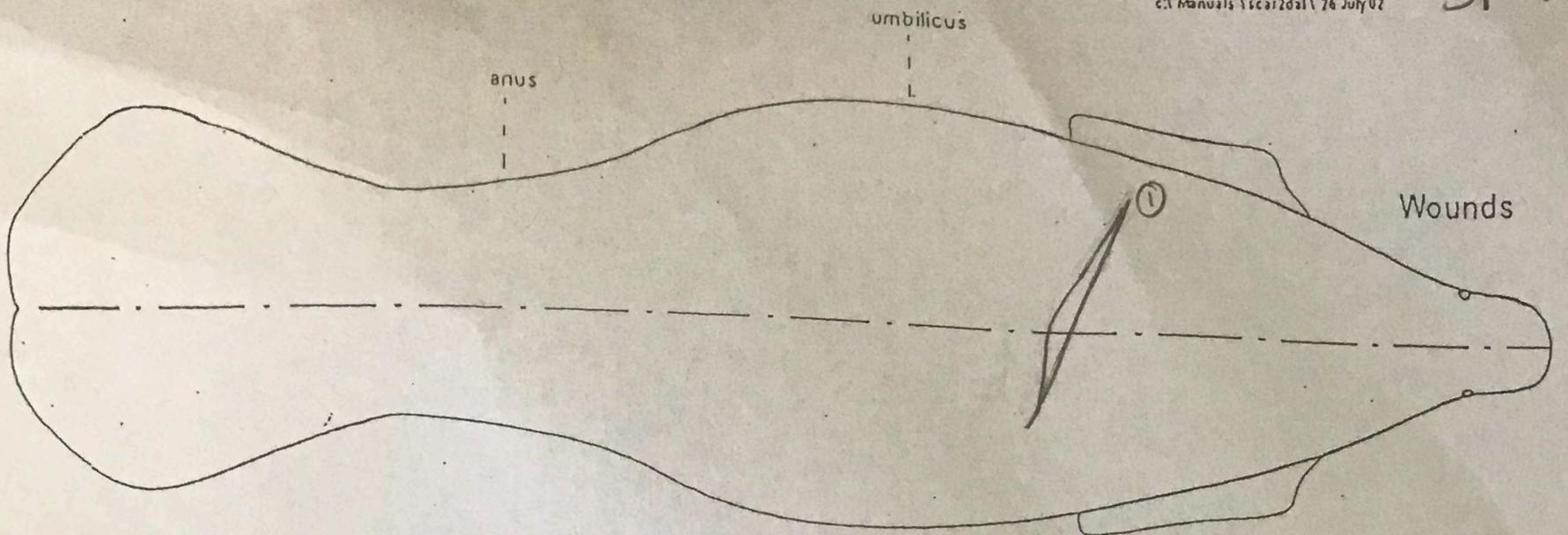
REPORT FILED BY Wappes

Date 26 JAN 2021

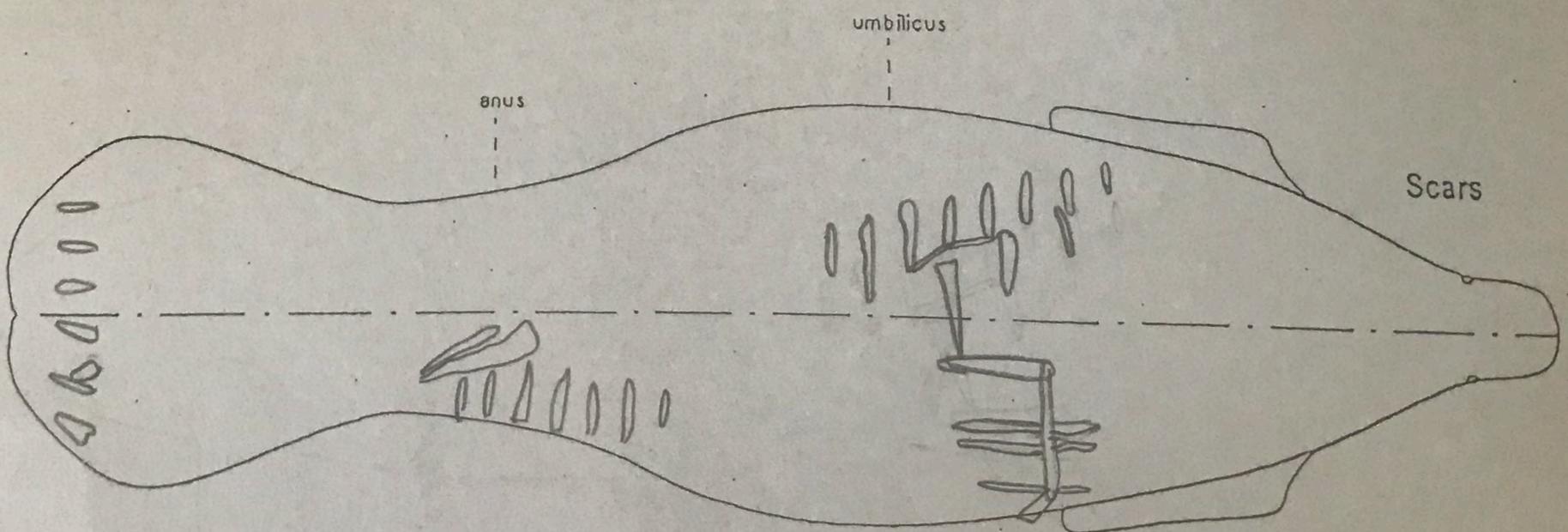
Field I.D. MEC21070

c:\Manuals\1scar2dat\ 26 July 02

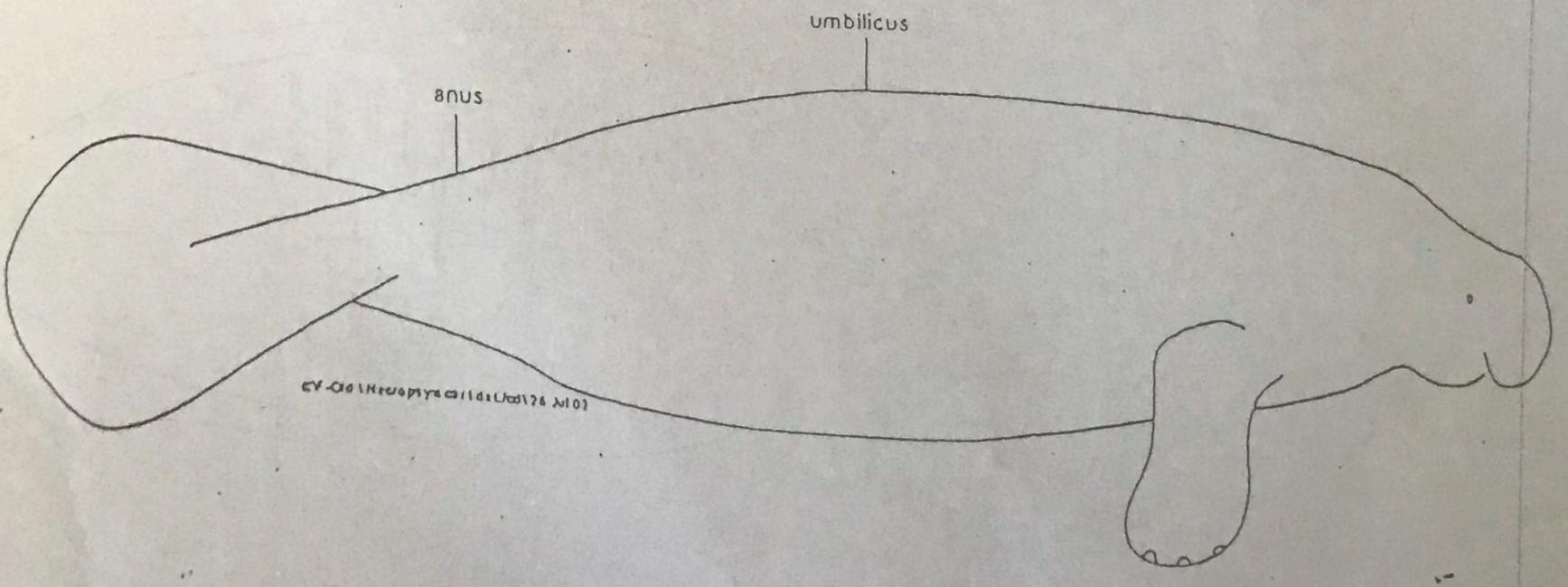
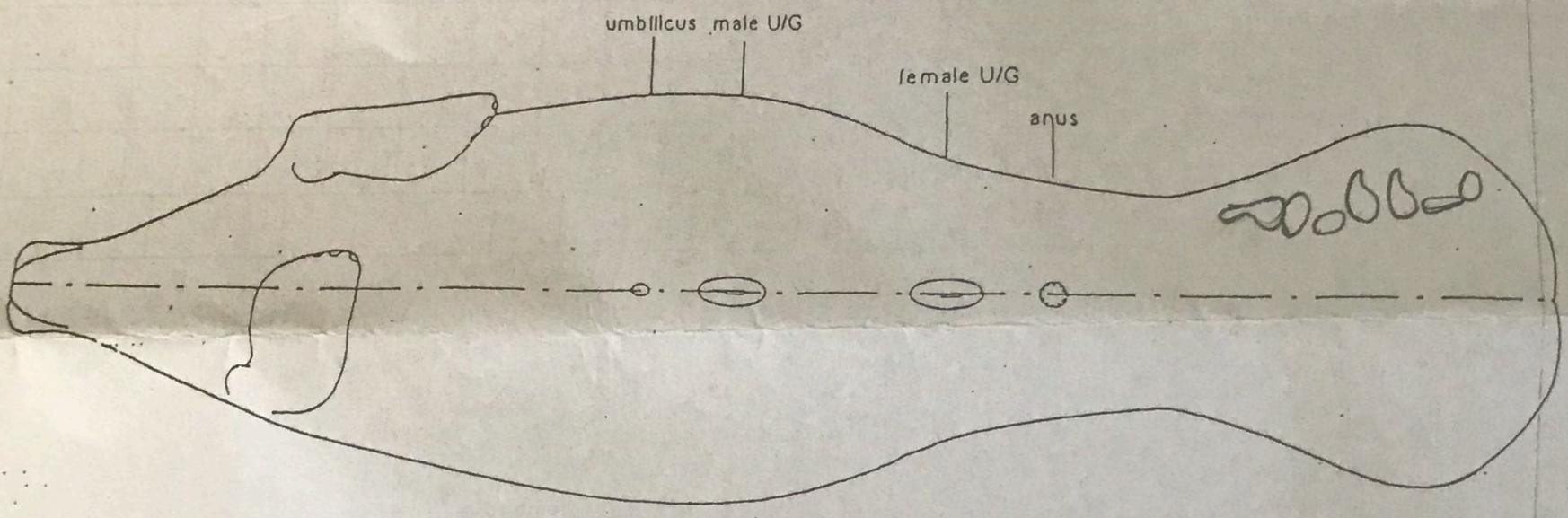
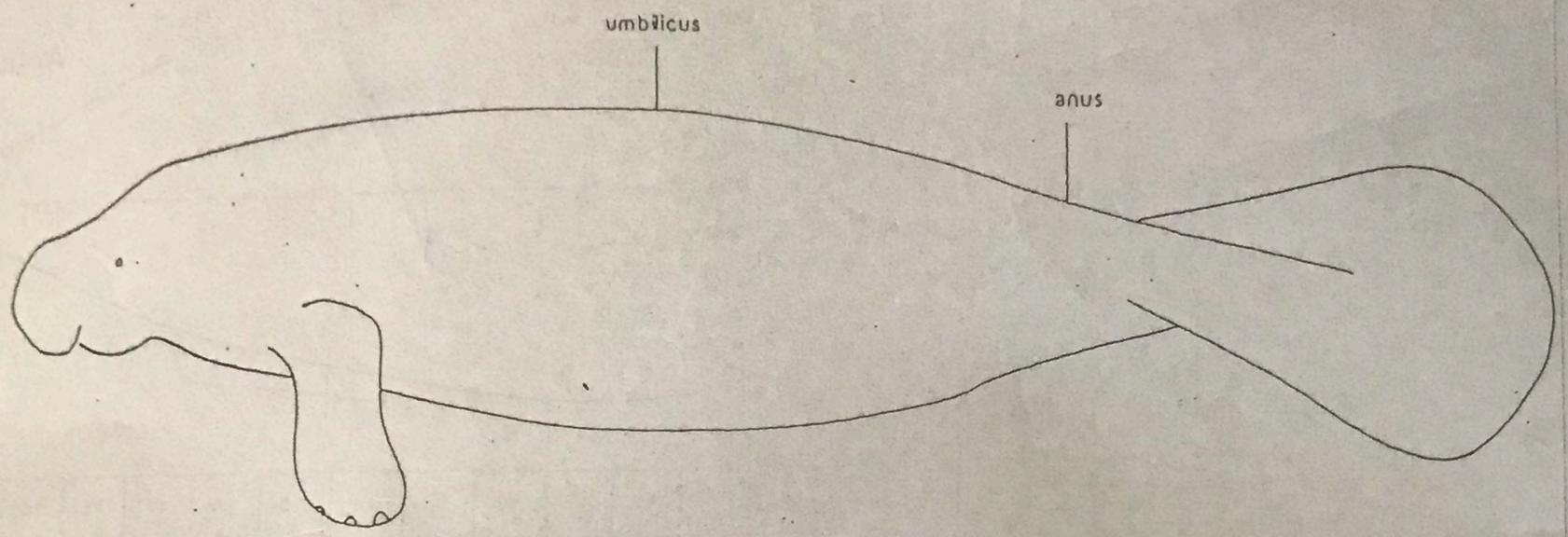
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	44																			
Width	40																			
Depth	-																			
Distance																				



FIELD I.D. MEC21070



CV-061K000154114176 N101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21071
Date of Report: 2021-Jan-26
Filed By: FWC EC Field Station

FWC Case # 1510 **FWC Region:** NE

Sex: Unknown **Length:** 120 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, beached approximately 90 m NE of 6250 N HWY 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	120 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21071

RECOVERY DATE N/A

GENDER Undetermined **TL** 120 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 26 January 2021, at 1508 hrs, FWC biologist-William D. Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee between the FPL-CCEC power plant and the Port St. John boat ramp in Indian River, Cocoa, Brevard County. FWC case number 1510 was assigned. The complainant, Robert Gross (321-507-2718), stated that the carcass was four feet long and bloated. At 1513 hrs, WDG received a verification photo. Due to advanced stage of decomposition, location, small size, and high carcass load, this carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photograph - Approximately 50% of the dorsal epidermis was present but sloughing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21072
Date of Report: 2021-Jan-26
Filed By: FWC EC Field Station

FWC Case # 1519 **FWC Region:** NE

Sex: Unknown **Length:** 300 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, beached approximately 620 m NE of 200 14th Place.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21072

RECOVERY DATE N/A

GENDER **Undetermined** TL 300 cm (est) WT N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 26 January 2021, at 1629 hrs, FWC biologist-William D. Greer (WDG) received a text alert regarding a dead manatee on Spoil Island 36 in Indian River, Vero Beach, Indian River County. FWC case number 1519 was assigned. The complainant, Allen Holden (772-480-0902), stated that the carcass was ten feet long, white, and belly-up on shore. At 1720 hrs, WDG received a verification photo. Due to location, advanced state of decomposition, and high carcass load, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photograph - All of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were multiple rents due to decomposition and/or scavenging near the anus.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21073
Date of Report: 2021-Jan-26
Filed By: FWC EC Field Station

FWC Case # 1458 **FWC Region:** NE

Sex: Male **Length:** 265 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-27 **By:** FWC-WDG MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 35 m NW of 5795 N Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	265 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21073

RECOVERY DATE 27 January 2021

GENDER Male **TL** 265 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 January 2021**, at 0920 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Merritt Island, Brevard County. FWC case number 1458 was assigned. The complainant, Patricia Hobbs (321-693-4473), stated that the carcass was 6 feet long, but she had no photos of it. **27 January**, at 0945 hrs, WDG and FWC biologist-Sean M. Tennant (SMT) arrived at the Port St. John boat ramp and launched the FWC Key West boat. SMT and WDG verified the carcass at 1030 hrs and towed it, MEC21059, and MEC21060 to remote shoreline where an external work up was completed by 1140 hrs. The remains were left on site.

EXTERNAL Approximately 30% of the epidermis was present but sloughing. The carcass was distended with gas. There was a moderate brown algal mat on the dorsal and lateral aspects and a mild infestation of barnacles on the dorsal aspect. A minimum of two well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes / Greer

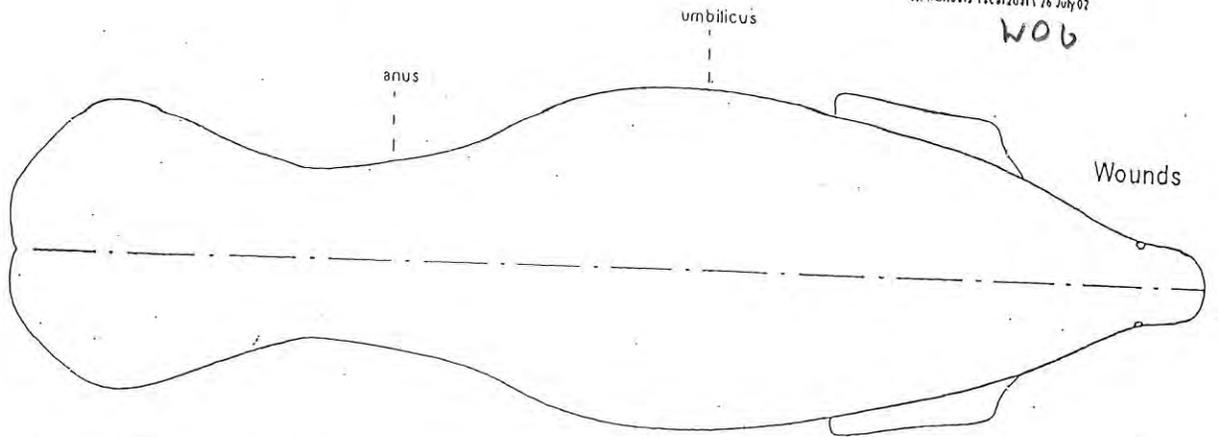
PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 27 Jan 2021

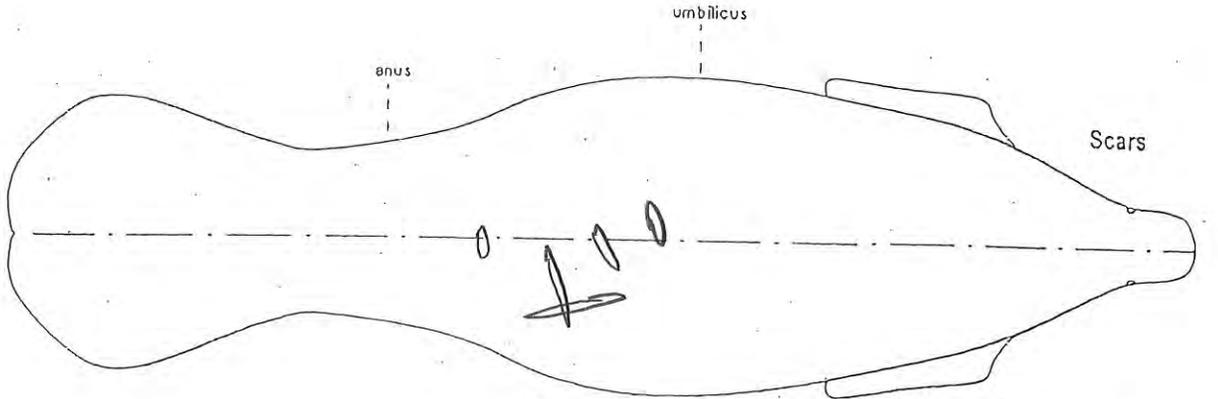
Field I.D. MEC21073

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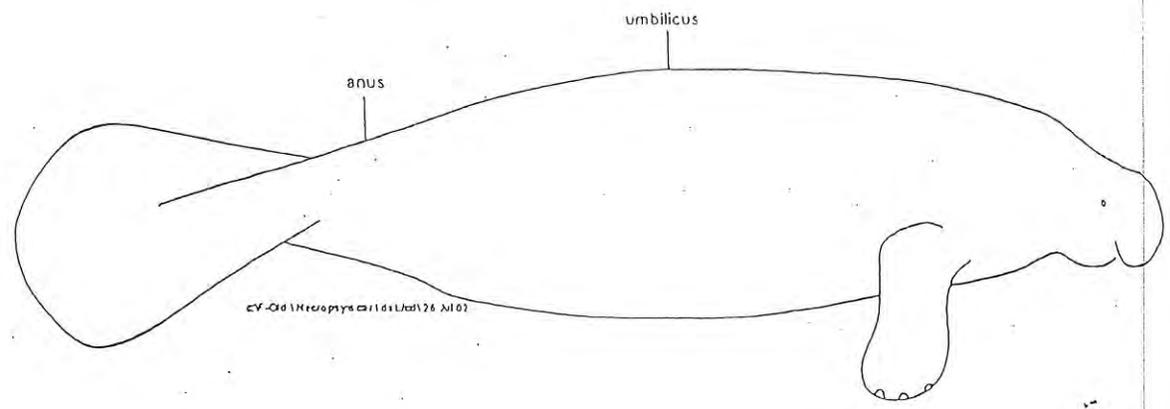
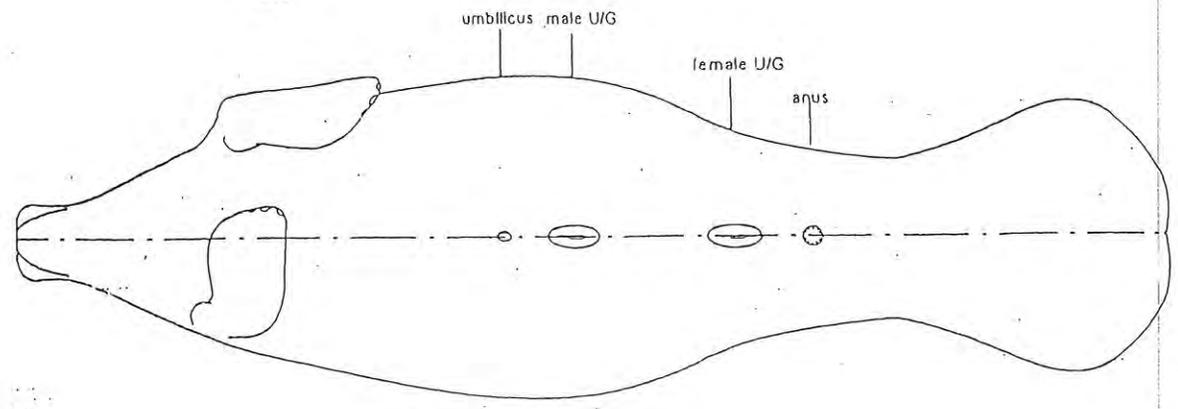
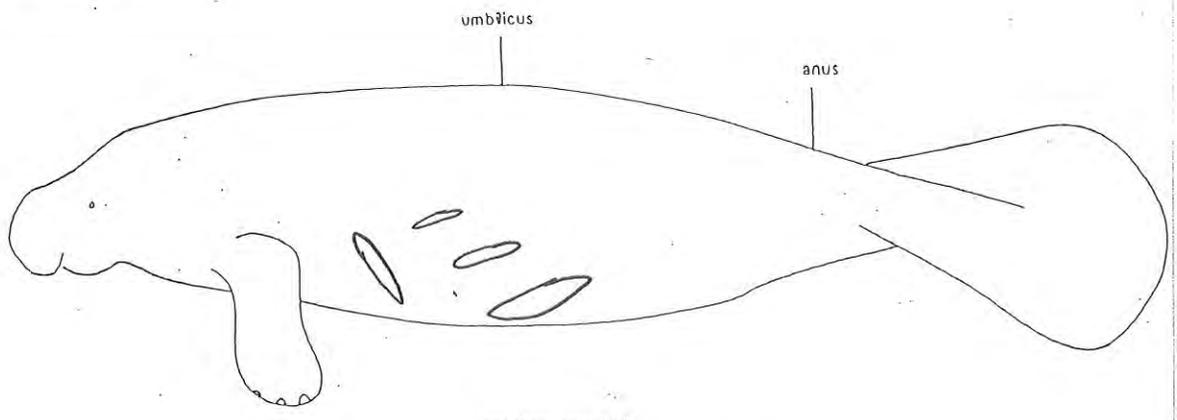
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MBC21070



CV-001 Neurophys 01/01/01/26 Jul 02

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21074
Date of Report: 2021-Jan-27
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 200 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-27 **By:** FWC-WDG MMPL-SMT

DATE COLLECTED: 2021-Jan-27 **By:** FWC-WDG MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, beached approximately 620 m N of 500 Treasure Lagoon Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	200 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21074

RECOVERY DATE 27 January 2021

GENDER Male **TL** 200 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 27 January 2021, at 0945 hrs, FWC biologists-William D. Greer (WDG) and Sean M. Tennant (SMT) arrived at the Port St. John boat ramp and launched the FWC Key West boat to collect carcasses MEC21059, MEC21060, and MEC21073. At 1146 hrs, they discovered an additional carcass (MEC21074). An external work up was completed by 1209 hrs. The remains were left on site.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. A few linear lesions were present on the dorsal and lateral aspects. Both eyes were missing. There were rents due to decomposition and/or scavenging between the axillae, between the anus and urogenital opening, and caudal to the anus. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes / Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21075
Date of Report: 2021-Jan-27
Filed By: FWC EC Field Station

FWC Case # 1772 **FWC Region:** NE

Sex: Male **Length:** 291 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-06 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, floating approximately 120 m NW of 11705 Roseland Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-072A-B6D3; Right: 00-072A-DD62). Known as RNE1007, MSTm1021, "Stoli", rescued on 08 July 2010 for watercraft injuries. Also FWC case numbers 1582 and 1699.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	291 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21075
RECOVERY DATE 06 February 2021
GENDER Male **TL** 291 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **27 January 2021**, at 1448 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 1582 was assigned. The complainant, Holly Dill (772-589-5556), stated that the carcass was 6-8 feet long and free floating with its skin peeling. At 1516 hrs, CMM received a verification photo. Due to location, state of decomposition, and high carcass load, no response was planned. **29 January**, at 1618 hrs, CMM received a text alert from Dispatch regarding a dead manatee south of Dale Wimbrow Park in the St. Sebastian River. FWC case number 1699 was assigned. The complainant, Helga (561-371-5361), stated that the carcass was belly-up and beached behind her house. At 1646 hrs, CMM received verification photos and requested FWC LE assistance to tow the carcass to a remote area. **30 January**, at 1342 hrs, CMM received a text alert from Dispatch that the officer did not have a small enough vessel to reach the carcass in its current location. **03 February**, at 1547 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from Dispatch regarding a dead manatee in the St. Sebastian River. FWC case number 1772 was assigned. The complainant, Natalie Routhier (561-718-9727), reported the manatee had been there for multiple days. SMW explained the elevated carcass load and that a team would try to respond on the weekend. **06 February**, at 0900 hrs, CMM arrived at the reported location and completed an external work up by 1000 hrs. CMM launched a kayak and towed the carcass to a secluded location.

EXTERNAL Approximately 30% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the urogenital opening, the axilla, and the lower jaw. A minimum of seven well-healed watercraft-related scar patterns was observed. There were two well-healed circular mutilations at the 4 o'clock position of the fluke. PIT tag scan was positive (Right: 00-072A-B6D3; Left: 00-72A-DD62), known as RNE1007, MSTm1021, "Stoli", rescued on 08 July 2010 for watercraft injuries and released on 04 August 2015 in Cracker Creek, Port Orange. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- PIT tag positive, RNE1007, MSTm1021, "Stoli"

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

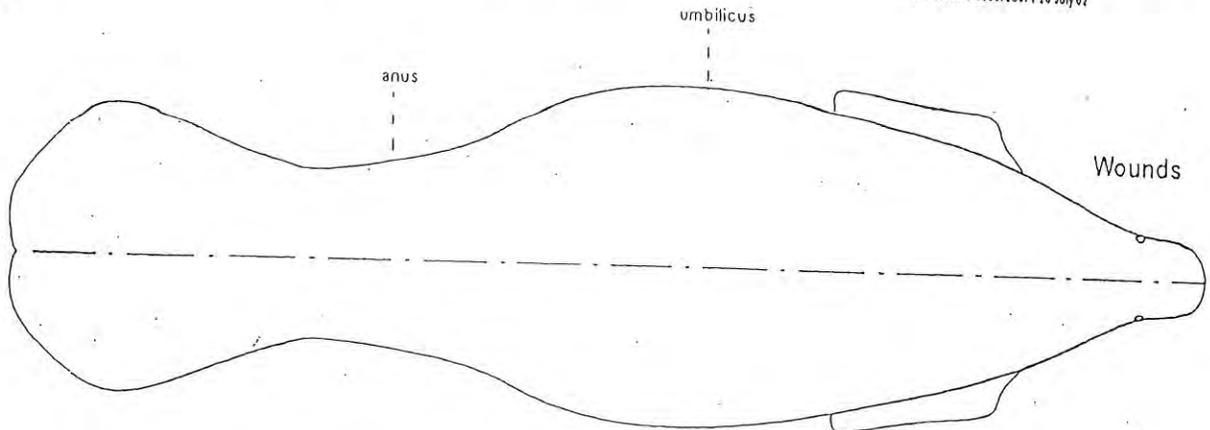
REPORT FILED BY Metcalf / Wappes

CMM

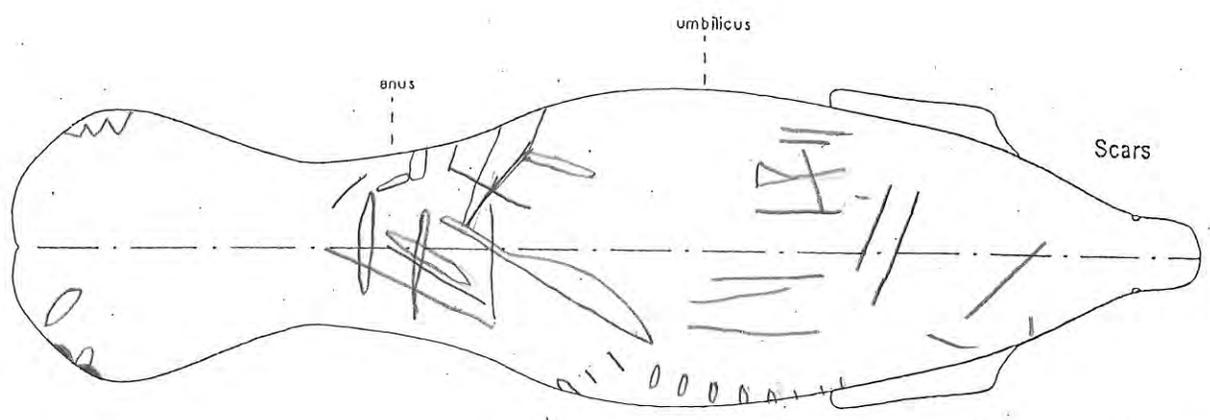
Date 06 FEB 2021

Field I.D. MEC21075

© Manuals & Scar Data 26 July 02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Length																					
Width																					
Depth																					
Distance																					

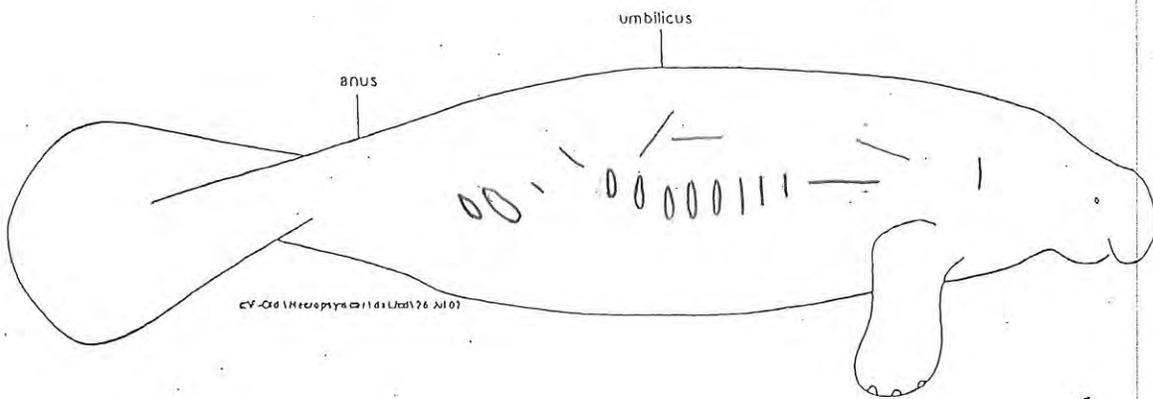
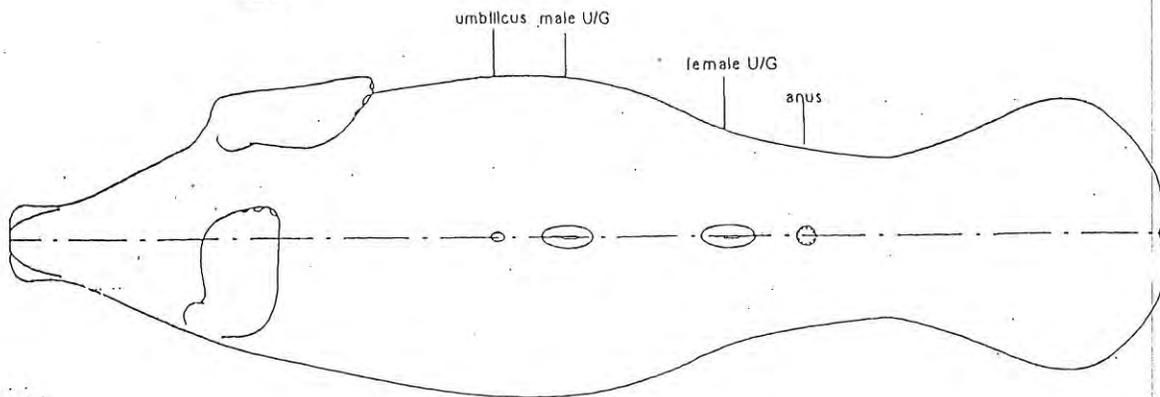
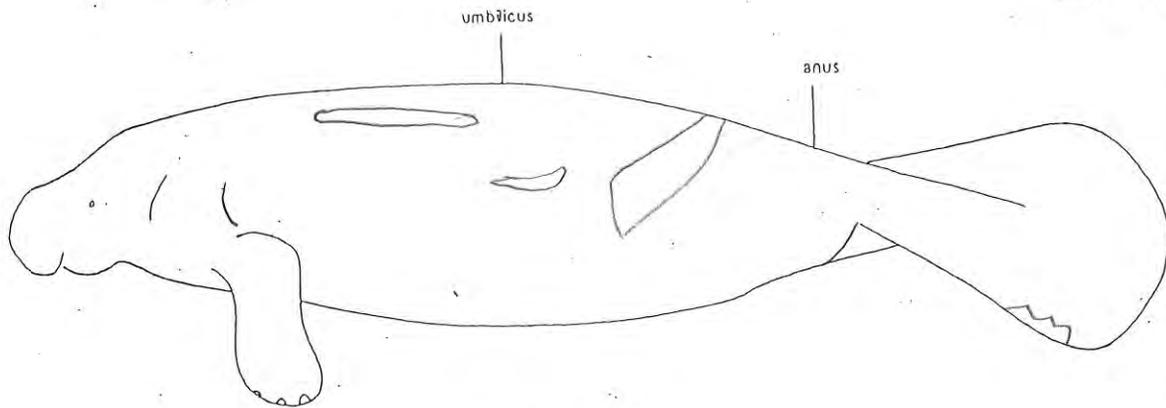


FIELD I.D.

MEC21075

06 Feb 2021

QMM



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21076
Date of Report: 2021-Jan-27
Filed By: FWC EC Field Station

FWC Case # 1695 **FWC Region:** NE

Sex: Female **Length:** 197 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-30 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, grounded approximately 30 m SE of 10420 S Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Skin lesions; Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 1592.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	197 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21076

RECOVERY DATE 30 January 2021

GENDER Female **TL** 197 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **27 January 2021**, at 1713 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Banana River, Merritt Island, Brevard County. FWC case number 1592 was assigned. The complainant, Rick Fredrickson (321-698-0433), described a small, exploded, dead manatee behind the residence where he was doing landscape work. At 1800 hrs, ALP received photo verification and forwarded the information to the EC Field Station. The carcass was not collected or necropsied due to the state of decomposition and an elevated carcass load. **29 January**, at 1549 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from Dispatch regarding a dead manatee in the Banana River. FWC case number 1695 was assigned. The complainant, Stacy Thompson (321-666-2078), reported the carcass behind her residence that had been there for four days. At 1557 hrs, CMM received photo verification. Based on the location and photo, it was concluded to be the same manatee. At 1620 hrs, CMM requested LE assistance but an officer was unavailable. CMM was notified that the request would not be filled for a few days due to gas shortages. **30 January**, CMM arrived at the residence at 1302 hrs and completed an external work up by 1338 hrs. CMM then towed the carcass via kayak to a secluded location.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened. A small amount of watery red fluid exuded from the nares. The epidermis was bleached at the flippers and axilla. A few linear lesions were observed in the remaining epidermis. There was a decompositional rent at the anus. A portion of the GI tract protruded from the urogenital opening. Two short well-healed linear scars were present on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- Skin lesions
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

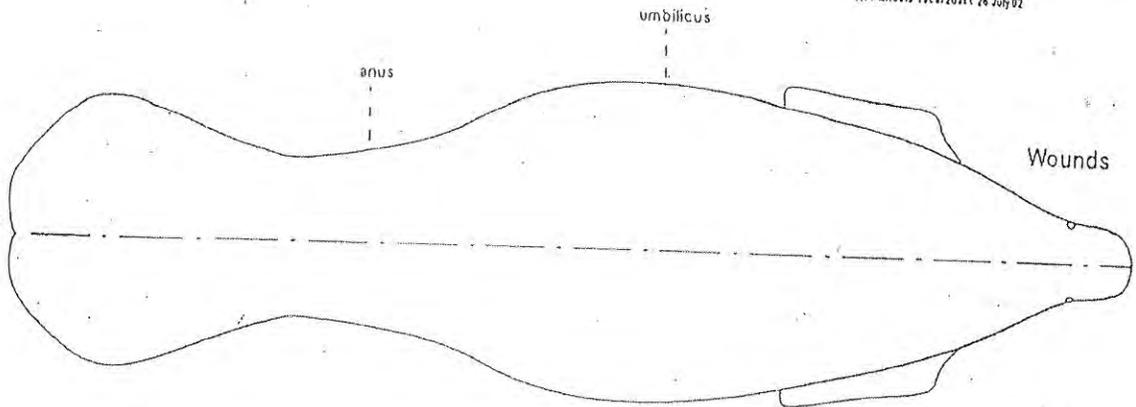
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REPORT FILED BY Metcalf

Date 30 Jan 2021

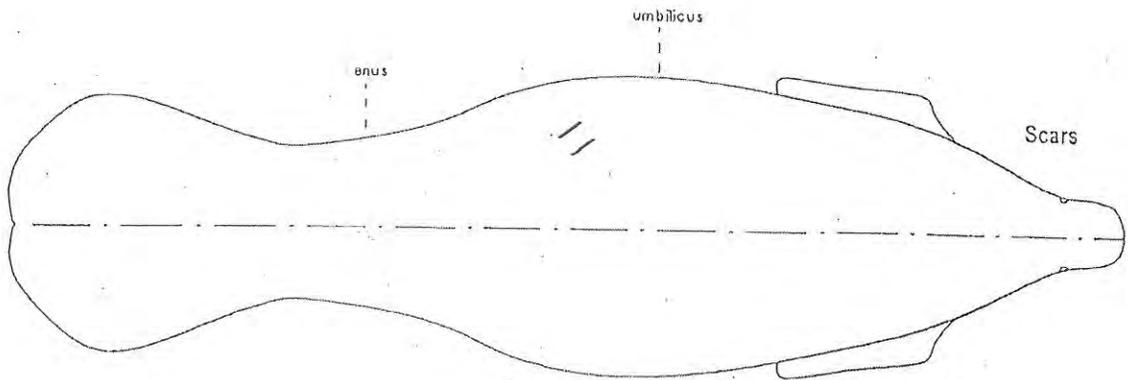
Field I.D. MEC21076

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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

Color



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21077
Date of Report: 2021-Jan-28
Filed By: FWC EC Field Station

FWC Case # FWC Region: NE

Sex: Female Length: 307 cm Weight: 473.0 kg

DATE REPORTED: 2021-Jan-28 By: FPL-Jennifer Pickett to FWC-WDG
DATE COLLECTED: 2021-Jan-28 By: FWC-CMM MMPL-SMT FWC Intern-K. Lawson
DATE NECROPSIED: 2021-Jan-29 By: FWC-WDG,CMM

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, floating at the FPL power plant intake canal, approximately 120 m NE of 132 Cottrell Avenue.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Serous fat(s); Relatively empty GI tract; Pneumothorax; Wet lung(s); Bloody lung(s); Heavy lungs; Bloody nares; Fluid, mud in airways; Fluid in pleural cavities; Fibrin-like material in right pleural cavity; Raised red nodules left lung serosal; Bloody liver, kidneys; Sand in duodenum, colon; Congested urinary bladder mucosa, colon wall; Specks abdominal fat, parietal pleura.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-072A-9C79; Right: 00-072A-A59B). Uterine Scar. A field necropsy was performed. Monofilament in colon. Plastic bag in stomach. Cobblestone-like epidermis; Healing skin lesions; Known as TBC098, CBC1307, "Megawatt", captured during the 2013 Brevard County research captures. Total length dorsum-up=296 cm. Macroalgae in mouth.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	307 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left	6	4.6
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21077

RECOVERY DATE 28 January 2021

GENDER Female **TL** 307 **cm** **WT** 473 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 29 January 2021

CONDITION Moderately Decomposed

HISTORY **28 January 2021**, at 1317 hrs, FWC biologist-William D. Greer (WDG) received a text and photo from FPL-Jennifer Pickett (JP) confirming a dead manatee at the FPL-Cape Canaveral Energy Center (CCEC). JP stated that the manatee was a large adult and was against the boom leading to the CCEC intake canal. At 1500 hrs, FWC biologists-Sean M. Tennant and Carley M. Metcalf (CMM) and FWC intern-Kylie L. Lawson arrived at the intake canal. CMM launched a kayak and towed the carcass to the boat ramp. At 1534 hrs, the carcass was loaded into the U-trailer and transported to the EC Field Station pending necropsy the following day. **29 January**, at 1000 hrs, WDG and CMM completed a field necropsy at the field station. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 90% of epidermis was present and sloughing. Bloody fluid exuded from the nares. There was cobblestone-like epidermis on the ventral and lateral aspects. A thin brown algal mat was present on the dorsal aspect. The carcass was slightly distended with gas. There was one barnacle on the ventral aspect at the axilla. A minimum of eight well-healed watercraft-related scar patterns was observed. There was one well-healed, rounded mutilation at the 7 o' clock position of the fluke and two well-healed, rounded mutilations at the 10 o' clock position. Numerous healing lesions were observed on the dorsal and ventral aspect of the 6 o' clock position of the fluke. PIT tag scan was positive (Left: 00-072A-9C79; Right: 00-072A-A59B), known as TBC098, CBC1307, "Megawatt", captured during the 2013 Brevard County research captures. A genetics sample was collected.

ABDOMINAL There was moderate, serous abdominal and omental fat and a small amount of serous mesenteric fat. The abdominal fat was gassy. There were black specks on the abdominal fat (see photo).

STOMACH The stomach contained 2.3 L of very moist, moderately chewed, stringy, leafy, light brown ingesta mixed with black and white banded vegetation (see photo). There was an approximately 20 cm long piece of tattered black plastic bag in the contents. The contents were coated in a thick layer of viscous, white mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 250 mL of wet, moderately chewed, stringy, leafy ingesta mixed with black and white banded vegetation and an abundant amount of sand (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The small intestine was mostly empty except for a small amount of viscous white, yellow, and orange fluid. The mucosa was white and sloughing in sheets. No parasites were grossly observed.

CECUM The cecum contained 25 mL of very moist, poorly digested, leafy, stringy, yellow to orange digesta mixed with a small amount of viscous, yellow to orange fluid (see photo). The mucosa was unremarkable. No parasites were observed.

COLON The proximal colon was mostly empty except for intermittent sections of moist, poorly digested, poorly formed, leafy, stringy, light brown feces. The mid colon contained moist, moderately digested, well-formed, stringy, leafy, dark brown feces mixed with a small amount of sand. The distal colon contained moist, moderately digested, well-formed, stringy, leafy, dark brown feces. There was a 19.7 cm long piece of clear >20 lb test diameter monofilament line in the distal colon (see photo). The mucosa was white and sloughing in sheets throughout. There was a small region of congestion in the proximal-most colon. The proximal colon

wall was rugose. No parasites were observed throughout.

PANCREAS The pancreas was red on serosal surfaces and tan on cut surfaces.

SPLEEN The spleen was gray to black on serosal surfaces and red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to brown and cut surfaces were brown and bloody.

GALLBLADDER The gallbladder contained 50 mL of viscous, orange bile. The mucosa was bile stained.

REPRODUCTIVE There was abundant, serous reproductive fat. The uterine horns were contracted. The left uterine horn contained a scar (4.6 cm wide x 6.0 cm circumference). No scars were present in the left uterine horn. Both ovaries contained numerous fluid-filled follicles (maximum diameter 0.8 cm).

KIDNEYS There was moderate perirenal fat. The kidneys were tan on serosal surfaces. On cut surfaces of the left kidney, the cortices were red, and the medullae were dark red and bloody. On cut surfaces of the right kidney, the cortices were tan, and the medullae were dark red. The corticomedullary boundaries were distinct (see photo).

URINARY BLADDER The urinary bladder contained 25 mL of clear, yellow urine. The mucosa was severely congested.

HEART There was abundant, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right hemidiaphragm was distended due to gas in the right pleural cavity. The right pleural cavity contained 3.7 L of watery, red fluid mixed with fibrin-like material. The left pleural cavity contained 3.4 L of watery, red fluid. There were red specks on the parietal pleura (see photos). The lungs were heavy. Serosal surfaces were pink to blue and cut surfaces were dark red, wet, and bloody. The dorsal aspect of the left lung had raised, dark red nodules (see photo). There was a moderate amount of red-tinged fluid in the primary airways. The mucosa was pink. There was a mild infection of dead trematodes.

HEAD & NECK REGIONS There was one strand of red macroalgae in the mouth (see photo). The trachea contained a moderate amount of viscous, red fluid mixed with mud. There was a moderate infection of dead trematodes (see photo).

SKELETON NVL.

OTHER Some of the fat layers were serous and exuded watery, clear fluid.

COMMENTS

SIGNIFICANT FINDINGS

- Bloody nares
- Serous fat
- Pneumothorax
- Fluid, mud in airways
- Wet, bloody, heavy lungs
- Fluid in pleural cavities

- Fibrin-like material right pleural cavity
- Raised red nodules left lung serosa
- Bloody liver, kidneys
- Relatively empty GI tract
- Sand in duodenum, colon
- Congested urinary bladder mucosa, colon wall
- Red specks parietal pleura
- Black specks abdominal fat
- Cobblestone-like epidermis
- Healing skin lesions
- Macroalgae in mouth
- Monofilament in colon
- Plastic bag in stomach
- Uterine scar
- PIT tag positive, TBC098, CBC1307, “Megawatt”

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Carley M. Metcalf

REPORT FILED BY Metcalf / Greer

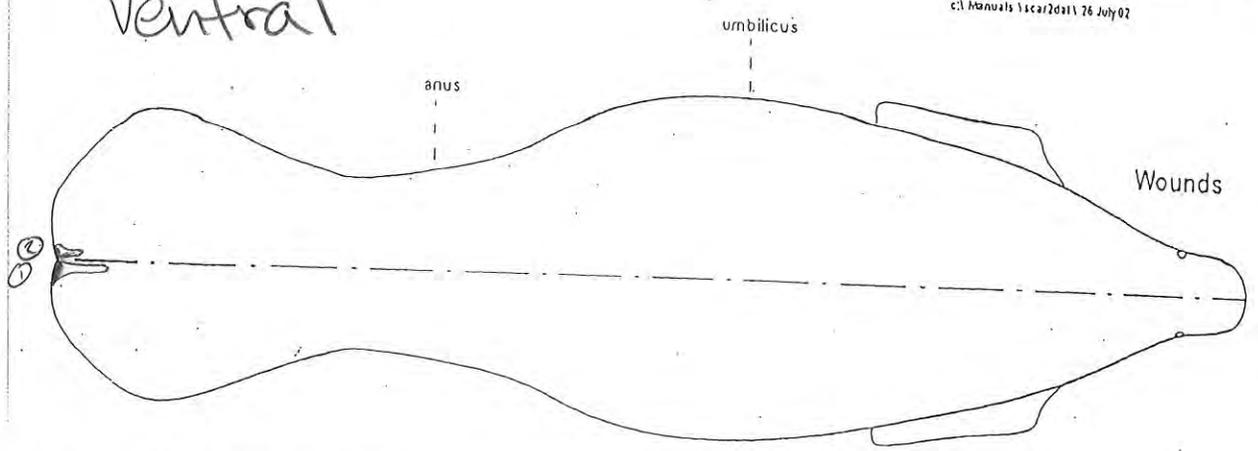
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 29 JAN 2021

Field I.D. MEC21077

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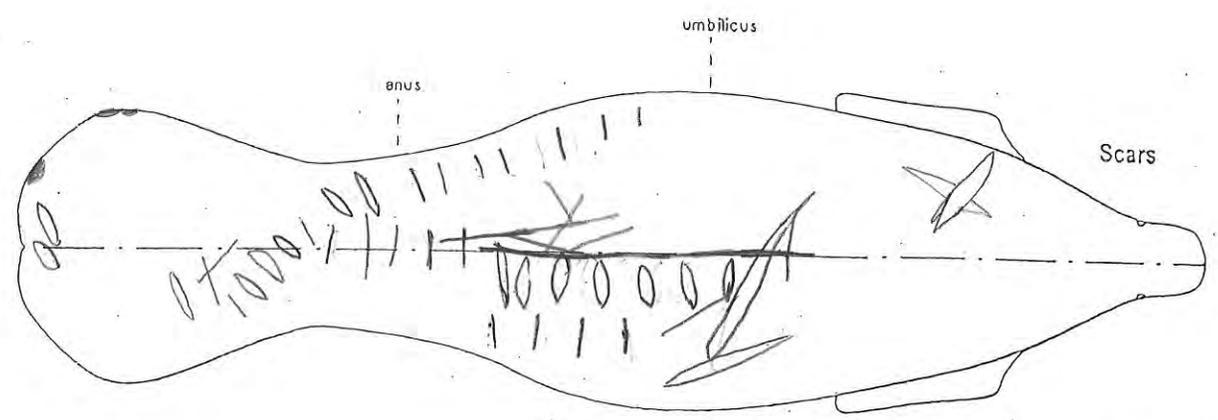
Ventral



CMM

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	0.5	4.0																		
Width	0.3	1.3																		
Depth	0.3	0.1																		
Distance	2.3																			

CMM



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21078
Date of Report: 2021-Jan-30
Filed By: FWC EC Field Station

FWC Case # 1753 **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-30 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne Beach, floating approximately 40 m WSW of 247 Seaview Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC biologist.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case numbers 1724 and 1730.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21078

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **30 January 2021**, at 0837 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Melbourne Beach, Brevard County. FWC case number 1724 was assigned. The complainant, Jill Martin (973-951-1599), stated that the carcass was four feet long and back-up. At 0840 hrs, CMM received verification photos. CMM received two additional reports from Dispatch of this dead manatee throughout the day. FWC case numbers 1730 and 1753 were assigned. At 1500 hrs, CMM located the carcass and towed it via kayak to nearby secluded shoreline. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21079
Date of Report: 2021-Jan-30
Filed By: FWC EC Field Station

FWC Case # 1735 **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-30 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Grant-Valkaria, beached approximately 470 m NE of 7170 U.S. 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21079

RECOVERY DATE N/A

GENDER Male **TL** 215 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 30 January 2021, at 1038 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Grant-Valkaria, Brevard County. FWC case number 1735 was assigned. The complainant, Gay Drown (321-266-0280), stated that the carcass was white, belly-up, and had washed ashore on Grange Island. At 1136 hrs, CMM received a verification photo. Based on location, advanced stage of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From photograph – All of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, and axilla.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21080
Date of Report: 2021-Jan-30
Filed By: FWC EC Field Station

FWC Case # 1752 **FWC Region:** NE

Sex: Unknown **Length:** 250 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-30 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Mosquito Lagoon

Locality description: New Smyrna Beach, floating approximately 935 m NW of 8248 S Atlantic Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant video.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21080

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 250 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **30 January 2021**, at 1410 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Mosquito Lagoon, New Smyrna Beach, Volusia County. FWC case number 1752 was assigned. The complainant, Brandon Armitage (386-478-6886), stated that the carcass was gray, freshly deceased, belly-up and around six feet long. At 1417 hrs, CMM received a verification video. Based on location, advanced stage of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From video - Approximately 50% of the ventral epidermis was present but sloughing on the visible portion of the carcass.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant video

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21081
Date of Report: 2021-Jan-31
Filed By: FWC EC Field Station

FWC Case # 1802 **FWC Region:** NE

Sex: Male **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-31 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Grand Canal

Locality description: Satellite Beach, floating approximately 35 m NW of 473 N Waterway Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant video.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21081

RECOVERY DATE N/A

GENDER Male **TL** 180 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 31 January 2021, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Grand Canal, Satellite Beach, Brevard County. FWC case number 1802 was assigned. The complainant, Noah (321-261-5644), stated that the carcass was a six-foot-long juvenile and located under the mangroves near the Tortoise Island drawbridge. At 1011 hrs, SMW received a verification video. Based on location, advanced state of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From video - Approximately 40% of the ventral epidermis was present but sloughing. The carcass appeared slightly distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant video

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21082
Date of Report: 2021-Jan-31
Filed By: FWC EC Field Station

FWC Case # 1826 **FWC Region:** NE

Sex: Unknown **Length:** 300 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-31 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 3.95 km S of the intersection of Peacock's Pocket Road and Playalinda Beach Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 1820. Scavenging.

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MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21082

RECOVERY DATE N/A

GENDER Undetermined **TL** 300 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 31 January 2021, at 1431 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee at Peacock's Pocket in the Indian River, Merritt Island, Brevard County. FWC case number 1820 was assigned. The complainant, Shannon Tucker (386-307-2204), stated that the carcass was all white and a full-grown adult. At 1435 hrs, SMW received a photo that was inconclusive. At 1603 hrs, SMW received another text alert from Dispatch regarding a dead manatee at Peacock's Pocket. FWC case number 1826 was assigned. The complainant, stated that the carcass was at least nine feet long and belly-up with vultures on it. At 1636 hrs, SMW received a verification photo. Based on the location, advanced state of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From photograph - Almost all of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were scavenging rents on the caudal ventrum.

_ COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph
- Scavenging

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21083
Date of Report: 2021-Jan-31
Filed By: FWC EC Field Station

FWC Case # 1814 **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-31 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-20 **By:** FWC CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Eau Gallie River

Locality description: Melbourne, grounded approximately 45 m NE of 954 Placid Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 1800.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21083

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **31 January 2021**, at 0906 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee near the railroad tracks in the Eau Gallie River, Melbourne, Brevard County. FWC case number 1800 was assigned. The complainant, Adam Margio (407-405-0512), stated that the carcass was 4.5-5 feet long and that two people could lift it but not one person. At 0910 hrs, SMW received a verification photo. At 1141 hrs, SMW received a text alert from Dispatch regarding the carcass. FWC case number 1814 was assigned. The complainant, Mike Adams (352-205-5040), stated the carcass was juvenile and belly-up. At 1146 hrs, SMW received a photo verifying the location of the carcass. Due to the location, advanced state of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From photographs - All of the ventral epidermis was missing. The carcass was dorsoventrally flattened. There were loose GI contents and bird droppings on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21084
Date of Report: 2021-Jan-30
Filed By: FWC EC Field Station

FWC Case # 1740 **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-30 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, beached approximately 1.3 km SW of 1970 Pine Island Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21084

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **30 January 2021**, at 1115 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Merritt Island, Brevard County. FWC case number 1740 was assigned. The complainant, Elaine Cook (321-427-2225), stated that the carcass was white, back-up, and 5-6 feet long. The complainant had no photos. **31 January**, at 1212 hrs, CMM received a verification photo from the complainant who had gone back to take a photo. Based on the location, advanced state of decomposition, and high carcass load, the carcass was not recovered or necropsied.

EXTERNAL From photograph - All of the dorsal epidermis was missing.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21085
Date of Report: 2021-Feb-03
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 300 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-03 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-03 **By:** FWC-CMM MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded approximately 250 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC staff. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21085

RECOVERY DATE 03 February 2021

GENDER Male **TL** 300 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 03 February 2021, at 0858 hrs, FWC biologist-William D. Greer (WDG) received a text message from FPL-Jennifer Pickett (JP) regarding a dead manatee at the CCEC discharge in the Indian River in Cocoa, Brevard County. The complainant, JP (321-634-4505), described a 9-foot-long, bloated dead manatee near the discharge. A photo was not available for verification. FWC biologist-Sean M. Tennant (SMT) located the carcass at approximately 1015 hrs and loaded it via Ezy-lift by 1120 hrs. SMT switched trucks with FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson to collect MEC21086 in Merritt Island. CMM and K. Lawson transported the carcass to the Brevard County Landfill where an external work-up was completed at 1411 hrs.

EXTERNAL Approximately 50% of epidermis was present but sloughing. The carcass was distended with gas. Watery, red fluid exuded from the nares. There was cobblestone-like epidermis on the lateral and ventral aspects. The epidermis of the face and axilla was slightly bleached. The dorsal dermis was severely eroded due to decomposition. No watercraft-related wounds were grossly observed. There was a minimum of two well-healed watercraft-related scar patterns was observed on the left lateral aspect and the ventral fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

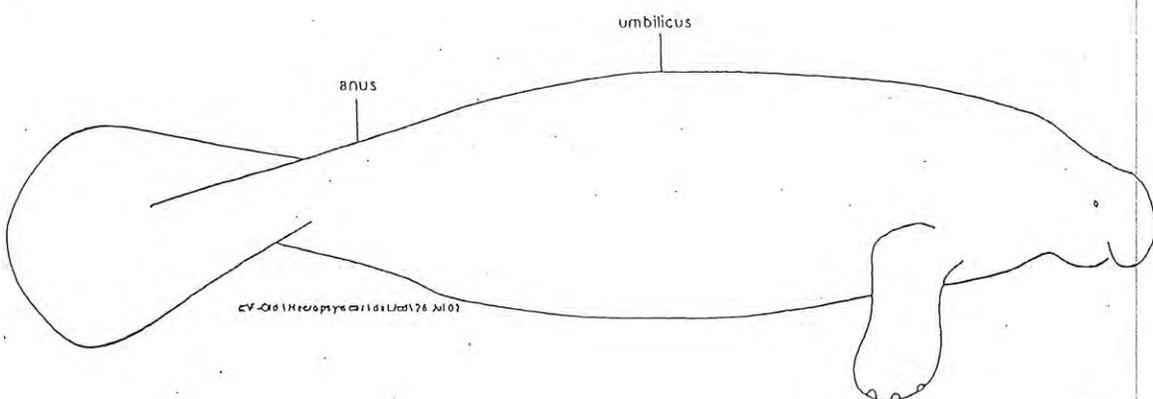
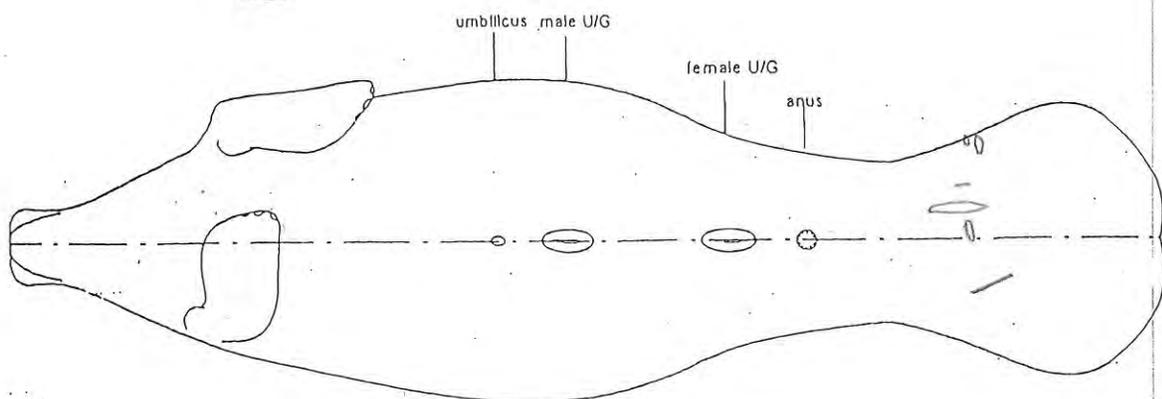
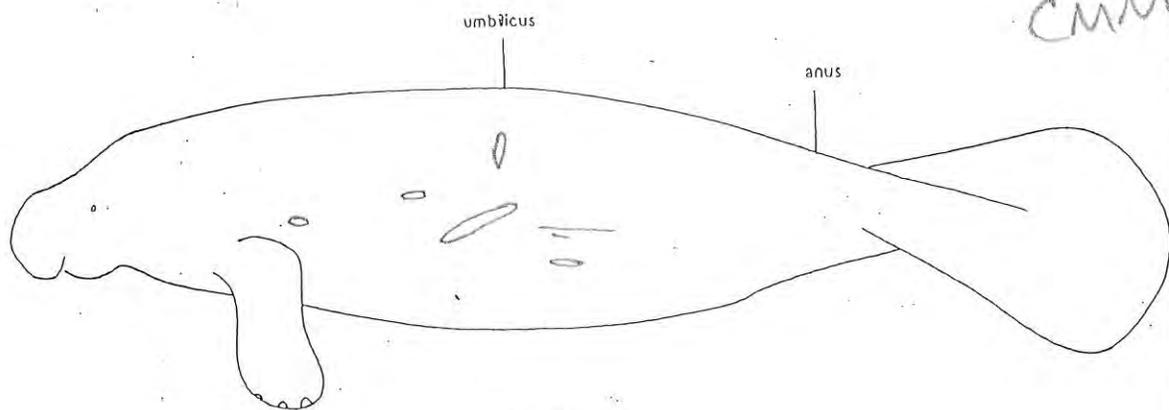
REPORT FILED BY Metcalf

FIELD I.D.

MEC21085

03 FEB 2021

CMM



CV-061 Neuroptys arida Uda176 x101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21086
Date of Report: 2021-Feb-03
Filed By: FWC EC Field Station

FWC Case # 1930 FWC Region: NE

Sex: Female Length: 296 cm Weight: 495.0 kg

DATE REPORTED: 2021-Feb-03 By: Citizen to fwc NE Dispatch
DATE COLLECTED: 2021-Feb-03 By: FWC-SMT
DATE NECROPSIED: 2021-Feb-04 By: FWC-CMM,WDG MMPL-SMT

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Banana River

Locality description: Merritt Island, floating approximately 200 m E of 2509 N Banana River Drive.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Fluid in abdominal cavity, pleural cavities; Relatively empty upper GI tract; Sand in GI tract; Congested urinary bladder mucosa, colon wall, mesenteries; Seagrass in mouth; Black specks parietal pleura.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-0672-1A0C; Right: 00-0671-D8E7). Uterine Scar. A field necropsy was performed. Cobblestone-like epidermis; Bleached epidermis; Known as RSE1501, rescued on 05 Jan 2015 for entrapment and released the same day. Total length dorsum-up=294 cm.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	296 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	6.5	7
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21086
RECOVERY DATE 03 February 2021
GENDER Female **TL** 296 cm **WT** 495 kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 04 February 2021
CONDITION Moderately Decomposed

HISTORY **03 February 2021**, at 1054 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee at Kelly Park in Banana River, Merritt Island, Brevard County. FWC case number 1930 was assigned. The complainant, Quinn (321-446-8977), stated that the carcass was full grown, at least 8 feet long, and freshly dead. At 1059 hrs, SMW received a verification photo. FWC biologist-Sean M. Tennant (SMT) arrived at Kelly Park at 1220 hrs, verified that he would need a trailer, and secured the carcass to the boat ramp at 1230 hrs. SMT returned to Kelly Park at 1555 hrs, loaded the carcass into the trailer at 1610 hrs, recovered MEC21087, and transported both carcasses to the EC Field Station at 1805 hrs. **04 February**, at 0940 hrs, a field necropsy was completed. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. The epidermis of the ventrum and axillae was slightly bleached. There was a small amount of cobblestone-like epidermis on the caudal ventrum. The carcass was slightly dorsoventrally flattened due to emaciation. The ventrum was flat. Watery, red fluid exuded from the nares. A minimum of three well-healed watercraft-related scar patterns was observed on the dorsal aspect. There was a mild infestation of barnacles and barnacle scars on the dorsal aspect. PIT tag scan was positive (Right: 00-0671-D8E7; Left: 00-0672-1A0C), RSE1501, rescued for entrapment in Palm Beach on 05 January 2015. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, omental, and mesenteric fat. The abdominal fat was gassy. There was 5 L of watery, red fluid in the abdominal cavity. The mesenteries were mildly congested (see photo).

STOMACH The stomach contained 1 L of slightly moist, moderately chewed, leafy, yellow to green and brown ingesta mixed with mangrove propagules and a small amount of sand (see photo). There was diffuse congestion in the stomach mucosa. No parasites were observed.

DUODENUM The duodenum contained 300 mL of wet, moderately chewed, leafy, yellow to green and brown ingesta mixed with a small amount of light gray fluid, mangrove propagules, and sand (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The small intestine was mostly empty with intermittent sections of moist, moderately chewed, leafy, green to yellow ingesta mixed with viscous, orange to tan fluid. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum contained 3 L of moist, poorly digested, leafy, stringy yellow to green digesta mixed with a small amount of viscous, orange to tan fluid (see photo). The mucosa was black and sloughing. No parasites were observed.

COLON The proximal colon contained slightly moist, poorly formed, poorly digested, extremely leafy, light brown feces mixed with a large amount of sand. The mid colon contained slightly dry, poorly formed, moderately digested, leafy, tubular, light brown feces mixed with a large amount of sand. The distal colon wall was congested (see photo). The distal colon contained slightly dry, moderately formed, moderately digested, tubular, brown feces mixed with a moderate amount of sand. The mucosa was sloughing throughout. No parasites were observed.

PANCREAS The pancreas was pink on serosal surfaces and tan on cut surfaces.

SPLEEN The spleen was gray and black on serosal surfaces and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to gray and cut surfaces were dark red.

GALLBLADDER The gallbladder contained 100 mL of golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The uterine horns were contracted. The right uterine horn contained a scar (7 cm wide x 6.5 cm circumference). Both ovaries contained numerous fluid-filled follicles (maximum diameter 0.7 cm).

KIDNEYS There was a small amount of perirenal fat. The kidneys were tan on serosal surfaces. On cut surfaces, the cortices and medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder was empty of contents. The mucosa was slightly congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact and distended due to gas in the pleural cavities. There were black specks on the parietal pleura. The left pleural cavity contained 4 L of watery, red fluid. The right pleural cavity contained 3.5 L of watery, red fluid. The lungs were blue to gray on serosal surfaces and pink and wet on cut surfaces. There were raised lesions in the primary airways (see photo).

HEAD & NECK REGIONS There was a small thatch of seagrass in the mouth (see photo).

SKELETON NVL.

OTHER Most fat and muscle layers were serous.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Depleted, serous fat
- Serous tissue
- Fluid in abdominal cavity, pleural cavities
- Wet lungs
- Relatively empty upper GI tract
- Sand throughout GI tract
- Congested urinary bladder mucosa, colon wall, mesenteries
- Seagrass in mouth
- Black specks parietal pleura
- Bleached, cobblestone-like epidermis
- Uterine scar
- PIT tag positive, RSE1501

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Sean M. Tennant
Carley M. Metcalf
Kylie Lawson (FWC intern)

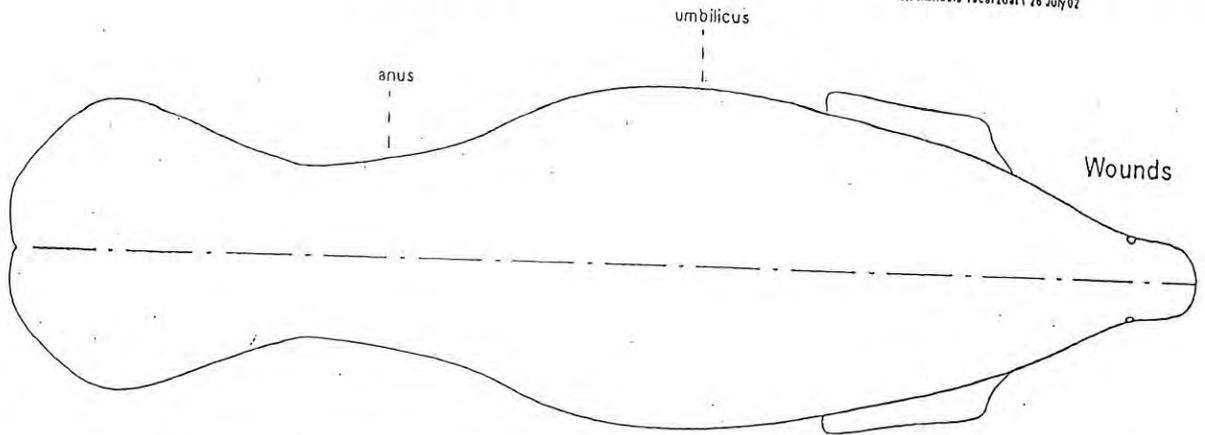
REPORT FILED BY Wappes / Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 04 FEB 2021

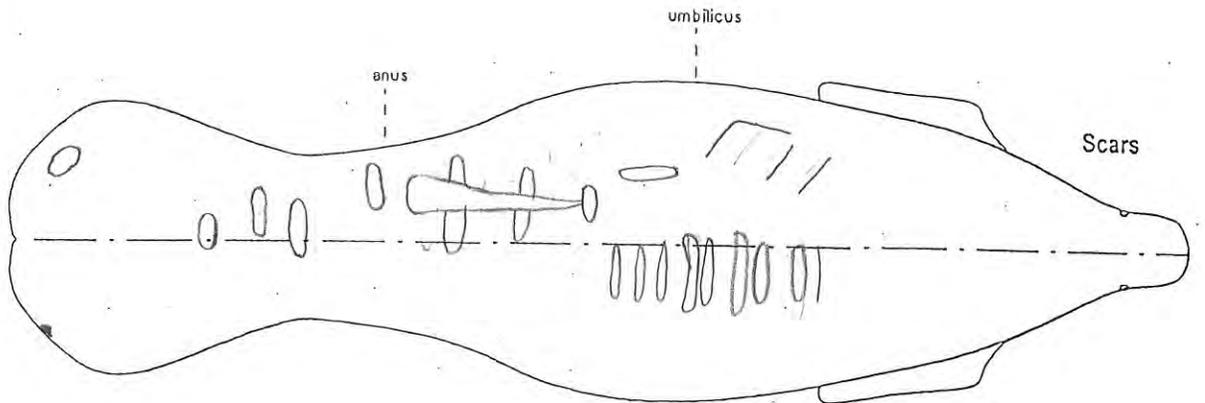
Field I.D. MEC210866

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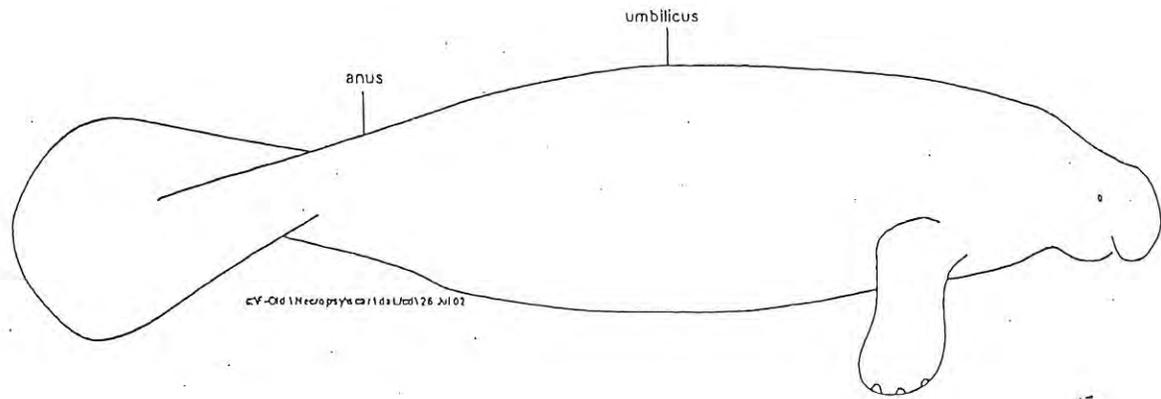
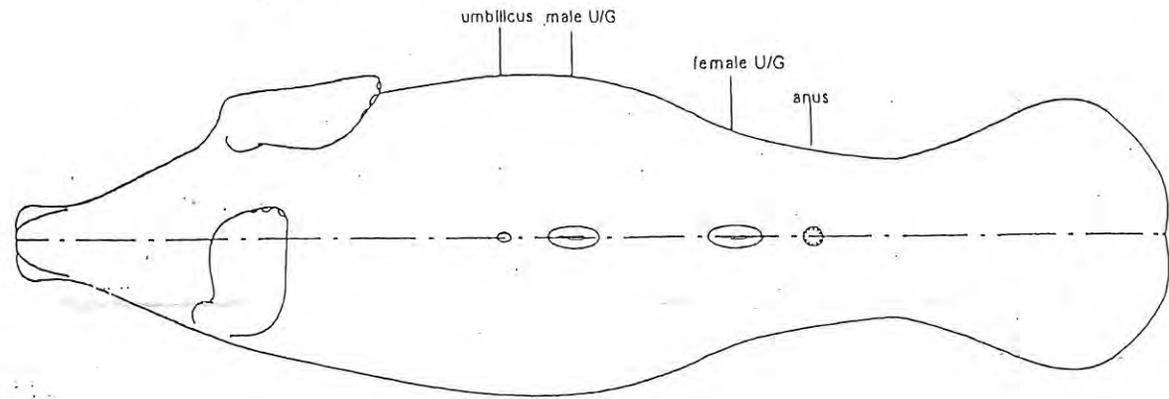
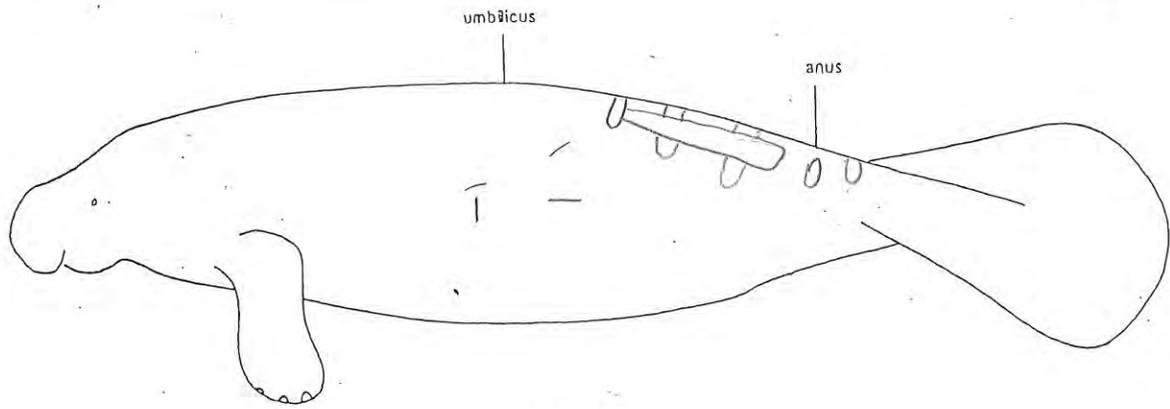
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Length																				
Width																				
Depth																				
Distance																				

CMM



FIELD I.D. MFC21086
04 FEB 2021

CMM



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21087
Date of Report: 2021-Feb-03
Filed By: FWC EC Field Station

FWC Case # 1936 **FWC Region:** NE

Sex: Female **Length:** 274 cm **Weight:** 374.0 kg

DATE REPORTED: 2021-Feb-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-03 **By:** FWC-CMM MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Satellite Beach, floating approximately 25 m SW of 645 Jackson Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Flat ventrum; Longitudinal folds; Verified through complainant photograph and FWC staff. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Total length dorsum-up=269 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	274 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21087

RECOVERY DATE 03 February 2021

GENDER Female **TL** 274 **cm** **WT** 374 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **03 February 2021**, at 1158 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Grand Canal in Satellite Beach, Brevard County. FWC case number 1936 was assigned. The complainant, Gordon Craft (321-91-4614), stated the manatee was 7 to 8 feet long and floating. At 1300 hrs, SMW received a photo confirming the carcass. FWC biologist-Carley M. Metcalf and Sean M. Tennant and FWC intern-Kylie C. Lawson arrived at the location at 1640 hrs, launched a kayak, and recovered the carcass via Ezy-lift at 1738 hrs. At 1647 hrs, SMW received a text alert from Dispatch regarding the same manatee. FWC case number 1955 was assigned. The complainant, Bob Brecklin (321-419-2886), stated he could see the biologists towing it by kayak. The carcass was transported to the EC Field Station. **04 February**, at 1015 hrs, an external work up was completed. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. Watery, bloody fluid exuded from the nares. There was a thin green algal mat on the dorsal body and fluke. The carcass had a peanut-shaped head and was dorsoventrally flattened. The ventrum was flat with a slightly longitudinal fold. A minimum of six well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects. The fluke margin was irregular but well-healed between the 4 and 8 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Peanut-shaped head
- Flat ventrum
- Longitudinal fold

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

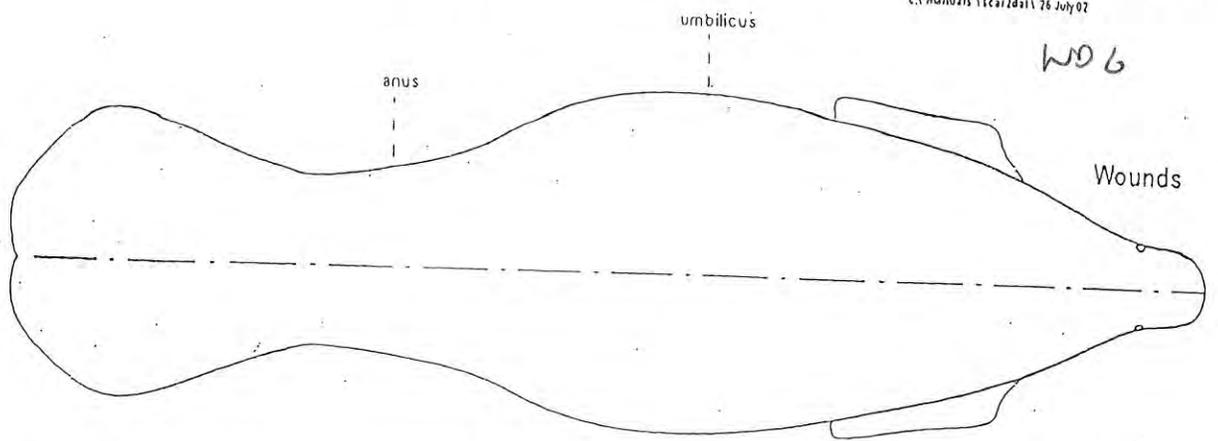
REPORT FILED BY Greer

Date 04 FEB 2021

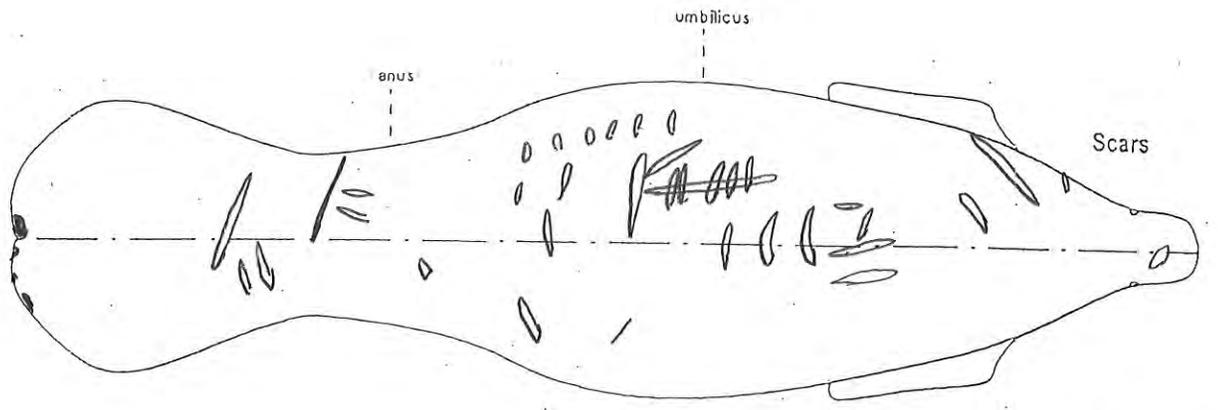
Field I.D. MEC21087

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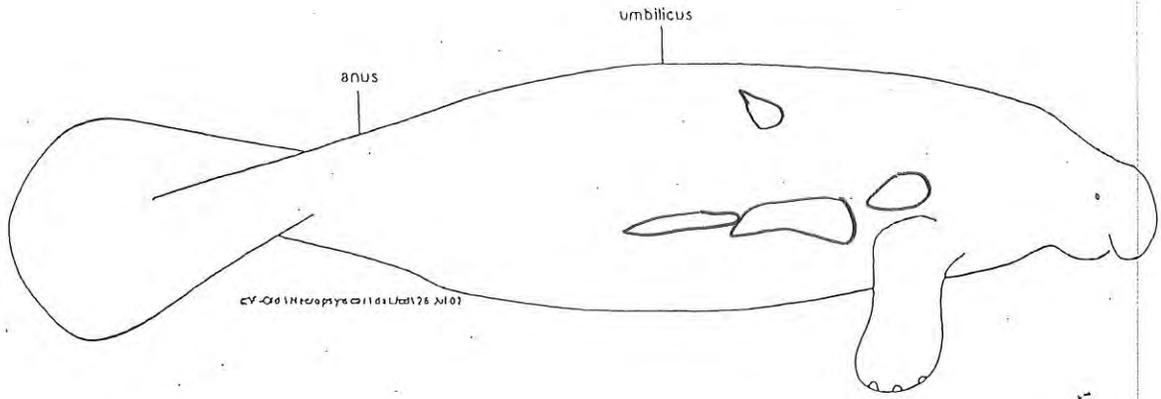
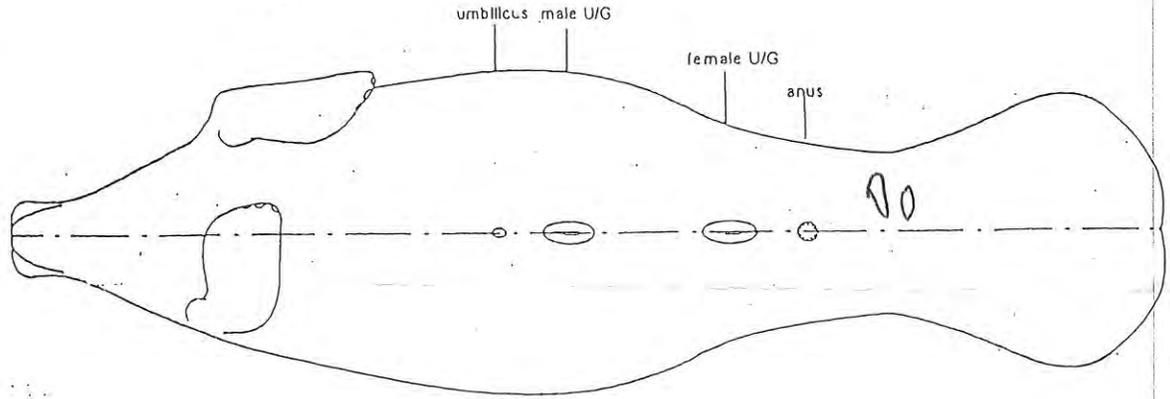
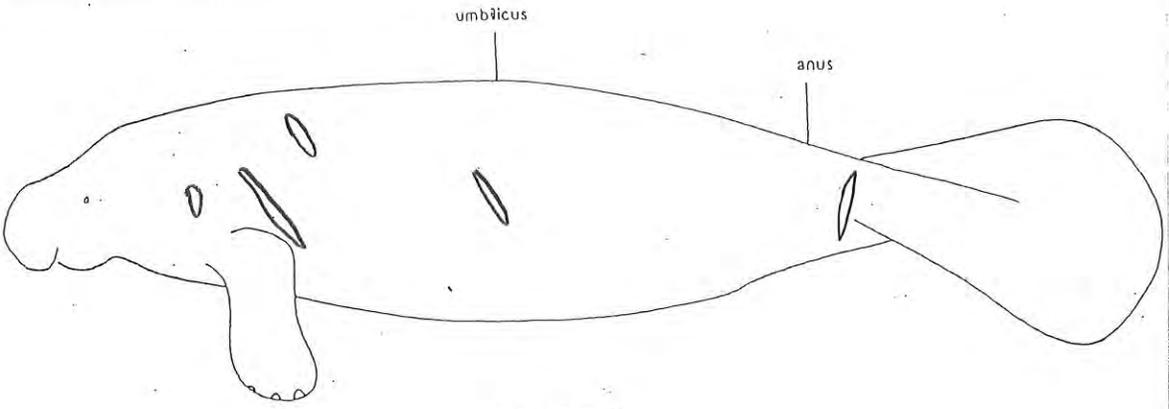
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC210871



CV-06 11/11/07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21088
Date of Report: 2021-Feb-03
Filed By: FWC EC Field Station

FWC Case # 1940 FWC Region: NE

Sex: Male Length: 280 cm Weight: 289.0 kg

DATE REPORTED: 2021-Feb-03 By: Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-03 By: FWC-CMM

DATE NECROPSIED: 2021-Feb-04 By: FWC-CMM,WDG MMPL-SMT

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Banana River

Locality description: Merritt Island, beached approximately 2.3 km E of 1750 Sea Ray Drive.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Relatively empty GI tract; Dry, hard feces; Pneumothorax; Wet lung (s); Fluid in abdominal cavity, pleural cavities; Congested mesenteries, urinary bladder mucosa, peritoneum, colon wall; Sand in GI tract; Sand, shells, mud in airways; Black specks abdominal fat.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Plastic in colon. Healing watercraft wound(s); Total length dorsum-up=267 cm. Known as MIPS ID BC744, first sight on 16 July 2010 at Port Canaveral Locks.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	280 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21088

RECOVERY DATE 03 February 2021

GENDER Male **TL** 280 **cm** **WT** 289 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 04 February 2021

CONDITION Moderately Decomposed

HISTORY **03 February 2021**, at 1317 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Banana River, Cape Canaveral, Brevard County. FWC case number 1940 was assigned. The complainant, Duane (239-203-8487), stated that the carcass was belly-up and freshly dead. At 1356 hrs, SMW received a verification photo. FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie Lawson arrived at the carcass at 1510 hrs and loaded it via Ezy-lift by 1540 hrs. After collecting MEC21087, CMM transported both carcasses to the EC Field Station arriving by 1805 hrs. **04 February**, at 1050 hrs, a field necropsy was conducted. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 60% of the epidermis was present but sloughing. The carcass was slightly dorsoventrally flattened due to emaciation. There was a nearly healed watercraft-related wound series on the left caudal dorsum and a healing wound series on the right lateral aspect. A mild infestation of barnacles was present on the dorsal fluke. A minimum of five well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was moderate, serous abdominal fat and a small amount of serous omental, and mesenteric fat. There were bands of moderate congestion on the peritoneum. There was black specks on the abdominal fat (see photo).

STOMACH The stomach contained 300 mL of viscous, gray, opaque fluid and a small amount of sand (see photo). The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained 200 mL of viscous, gray, opaque fluid and a small amount of sand (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was mildly congested (see photo). The small intestine was mostly empty throughout with intermittent sections of viscous, orange to tan fluid. The proximal and mid small intestine wall was rugose. The mucosa was otherwise unremarkable throughout. No parasites were grossly observed.

CECUM The cecum was contracted and contained <25 mL of wet, poorly digested, leafy, stringy, green to brown digesta mixed with orange fluid (see photo). The mucosa was unremarkable. No parasites were observed.

COLON The mesentery and colon wall were mildly congested (see photo). The proximal colon contained slightly moist, poorly formed, poorly digested, leafy, stringy, light brown feces. There was a 15.3 x 11.5 cm piece of plastic (see photo) in the contents. The mid colon contained slightly moist, slightly crumbly, moderately formed, poorly digested, leafy, stringy, brown feces. The distal colon contained dry, hard, well-formed, well-digested, stringy, brown feces mixed with a small amount of sand and red macroalgae. The mucosa was white and sloughing in the distal, mid, and proximal colon. No parasites were observed throughout.

PANCREAS The pancreas was red on serosal surfaces and tan on cut surfaces.

SPLEEN The spleen was black and gray on serosal surfaces and red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were gray to blue and cut surfaces were dark red.

GALLBLADDER The gallbladder contained approximately 50 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The reproductive organs were large. There was no fluid on cut surfaces of the seminal vesicles, epididymides or deferent ducts.

KIDNEYS There was a small amount of serous perirenal fat. The right kidney was tan to pink on the serosal surfaces. The left kidney was dark red on the serosal surfaces. On cut surfaces, the cortices were pink and the medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder was empty of contents. The mucosa was moderately congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right hemidiaphragm was distended due to gas in the pleural cavity. The right pleural cavity contained 3.5 L of watery, red fluid. The left pleural cavity contained 2.5 L of watery, red fluid. The lungs were mottled gray and pink on serosal surfaces and dark pink and wet on cut surfaces. The primary airways contained sand, shells, and mud (see photos).

HEAD & NECK REGIONS The trachea contained a small amount of sand, shells, and mud.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
 - Depleted, serous fat
 - Fluid in abdominal cavity, pleural cavities
 - Congested mesenteries, urinary bladder mucosa, peritoneum, colon wall
 - Relatively empty GI tract
 - Dry, hard feces
 - Sand in GI tract
 - Pneumothorax
 - Wet lungs
 - Sand, shells and mud in airways
 - Black specks abdominal fat
 - Healing watercraft wounds
 - Plastic in colon
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Sean M. Tennant
Carley M. Metcalf
Kylie Lawson (FWC intern)

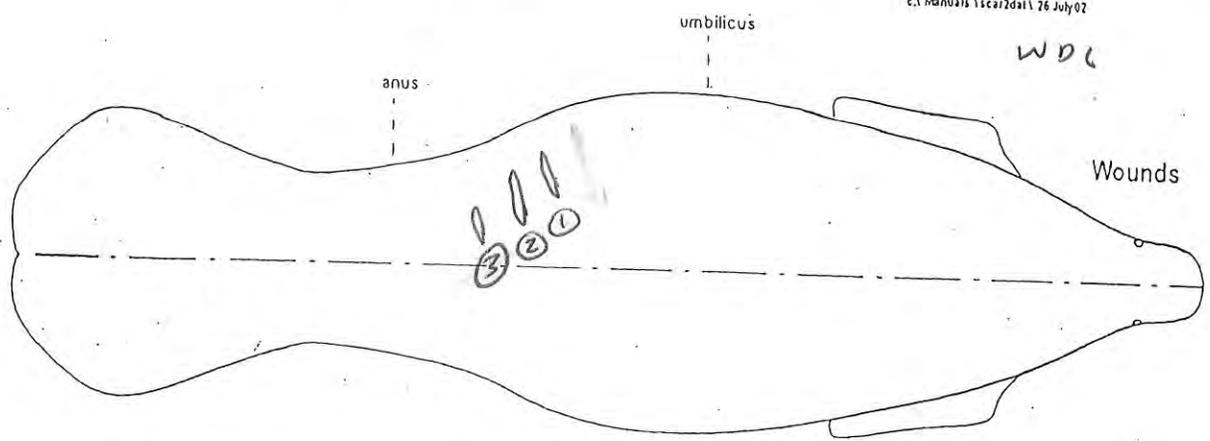
REPORT FILED BY Wappes / Tennant

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 04 FEB 2021

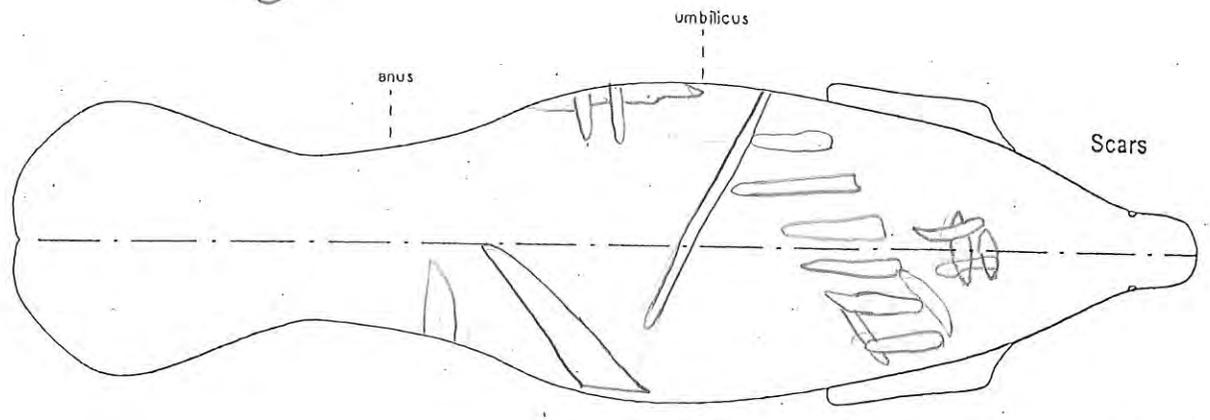
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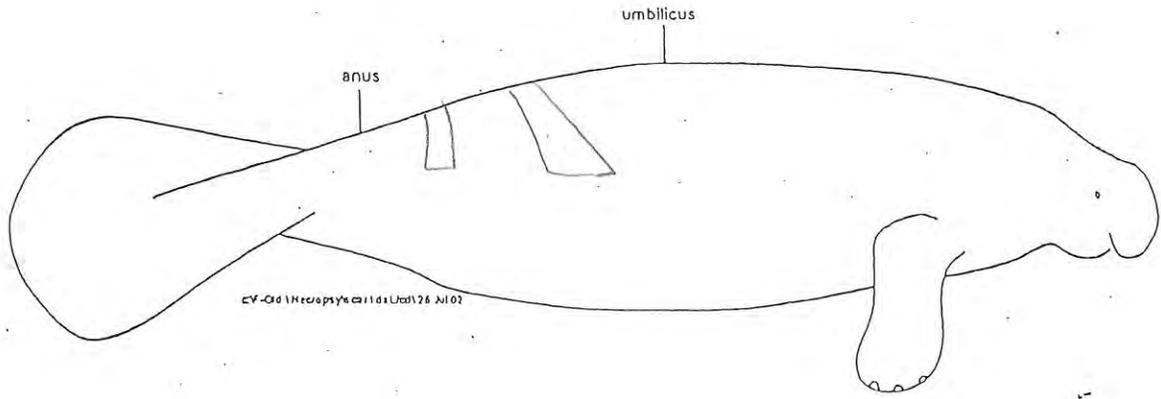
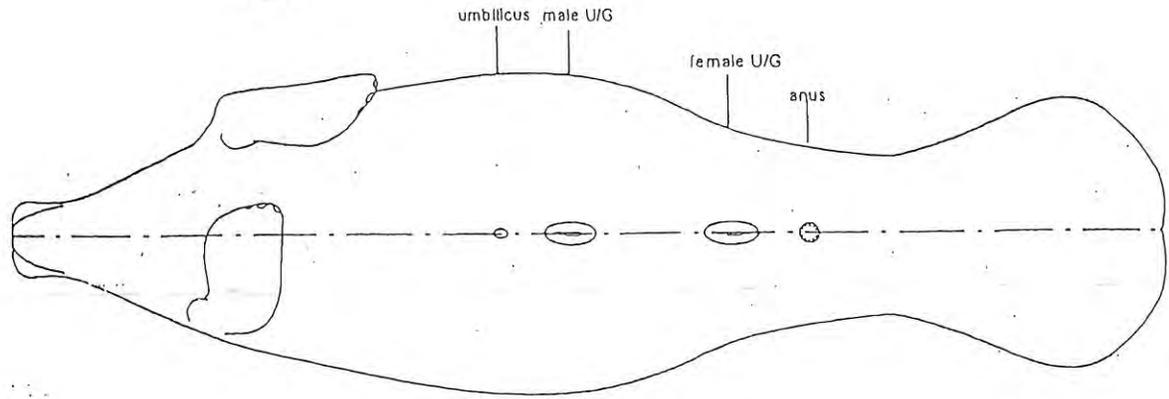
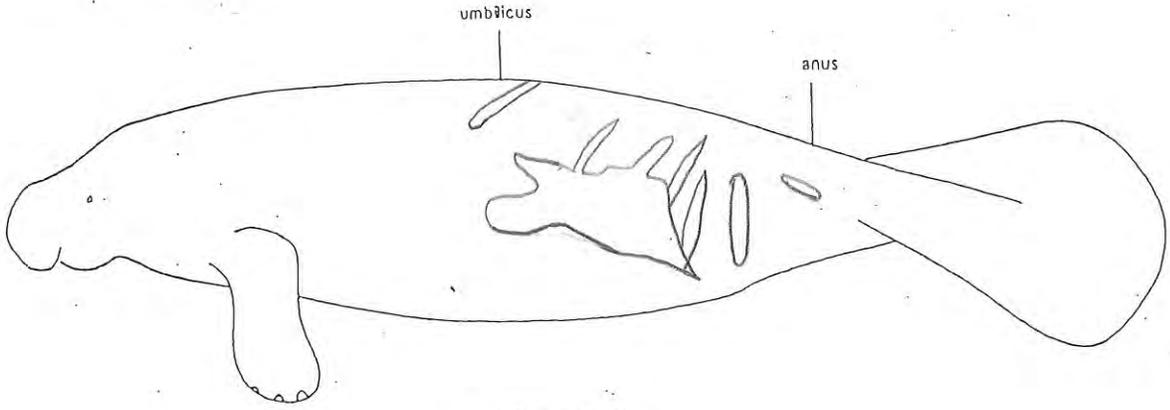


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Length	12.4	17.0	13.1																	
Width	2.0	2.5	2.1																	
Depth	0.1	0.1	0.1																	
Distance	9.0	9.0																		

CMM



FIELD I.D. MEC21088
04 FEB 2021



CV-06 1/18/2019 by CAI 1/16/2021

Bassett, Brandon

From: Rood, Kari
Sent: Tuesday, February 9, 2021 2:04 PM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21088=BC744

MEC21088=BC744

Carcass location: Banana River, Merritt Island
Male

First sighted 7/16/10 at Port Canaveral Locks
Last sighted 8/2/17 in Volusia County, ICW, Edgewater
USGS should be able to provide a complete sighting history if needed.

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21089
Date of Report: 2021-Feb-03
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 40 m SW of 650 Park Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21089

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 (est) **cm** **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **03 February 2021**, at 1330 hrs, FWC biologist-Carley M. Metcalf (CMM) received a call from a citizen regarding a dead manatee in the Indian River in Merritt Island, Brevard County. The complainant, Emily Green (321-514-3280), stated that the manatee was five feet in length and white. At 1332 hrs, CMM received a photo verifying the carcass. Due to the advanced stage of decomposition and limited staff availability, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs – Approximately 40% of the dorsal epidermis was present but sloughing. The carcass is dorsoventrally flattened due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21090
Date of Report: 2021-Feb-04
Filed By: FWC EC Field Station

FWC Case # 1985 **FWC Region:** NE

Sex: Male **Length:** 164 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-04 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Palm Bay, grounded approximately 45 m SW of 1570 Anglers Drive NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Skin lesions; Bleached epidermis; Large lesion on head; Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Carcass grounded dorsum-up.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	164 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21090

RECOVERY DATE 04 February 2021

GENDER Male **TL** 164 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 04 February 2021, at 1250 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek in Palm Bay, Brevard County. FWC case number 1985 was assigned. The complainant, Christine Penlend (321-543-5367), stated that the manatee was about three feet in length, grounded dorsum-up on the bottom, and they hadn't seen a breath in 30 minutes. At 1350 hrs, CMM received a photo verifying the carcass. FWC biologist-William D. Greer (WDG) and FWC intern-Kylie C. Lawson (KCL) arrived at 1500 hrs and loaded the carcass by Ezy-lift at 1510 hrs. WDG and KCL then collected MEC21092 and transported both carcasses to the Brevard County landfill. At 1710 hrs, an external work-up was completed on both carcasses.

EXTERNAL All of the epidermis was present. The carcass was markedly thin with a peanut-shaped head and flattened lateral peduncle. The snout, flippers and ventral aspect were bleached. There was an approximately 5 cm wide circular lesion on the right side of the head. Numerous linear lesions were present on the ventrum. A moderate infestation of copepods was present near the head and on the lateral aspects. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists
- Peanut-shaped head
- Skin lesions
- Large lesion on head
- Bleached epidermis
- Grounded dorsum-up

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21091
Date of Report: 2021-Feb-04
Filed By: FWC EC Field Station

FWC Case # 1997 **FWC Region:** NE

Sex: Female **Length:** 180 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: St. Sebastian River

Locality description: Micco, floating approximately 2.04 km WSW of 9582 Tortoise Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Thick algal mat. Verified through complainant photographs and FWC biologists.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21091
RECOVERY DATE N/A
GENDER Female **TL** 180 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **04 February 2021**, at 1430 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee near the C-54 Spillway in the St. Sebastian River, Micco, Brevard County. FWC case number 1997 was assigned. The complainant, Saul Hornung (321-403-7773), stated that the carcass was a baby, about three feet long, and that 1-2 people could easily lift it. The complainant stated that he had taken no pictures but only poked it with his fishing pole to ensure that it was dead, but he said that he would go back for photos. At 1438 hrs, SMW received a verification photo. **11 February**, at 1315 hrs, SMW and FWC biologist-Christine M. Fontaine were in the area searching for another carcass and went to MEC21091 to verify the gender and total length. Due to the advanced stage of decomposition and multiple other carcasses, this carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - Approximately 70% of the dorsal epidermis was present but sloughing. There was a thick brown algal mat on dorsal and lateral aspects.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Thick algal mat

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes / Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21092
Date of Report: 2021-Feb-04
Filed By: FWC EC Field Station

FWC Case # 1986 **FWC Region:** NE

Sex: Male **Length:** 196 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-04 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 45 m E of 55 Riverside Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Bloody nares; Thick algal mat. Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Cleft flipper.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	196 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21092

RECOVERY DATE 04 February 2021

GENDER Male **TL** 196 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 04 February 2021, at 1244 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Cocoa, Brevard County. FWC case number 1986 was assigned. The complainant, Sandy Gershater (407-267-1101), stated that the manatee was about 5 feet in length and wasn't moving, and a photo was inconclusive. At 1555 hrs, FWC biologist-William D. Greer (WDG) and FWC intern-Kylie C. Lawson (KCL) arrived and loaded the carcass by Ezy-lift at 1610 hrs. At 1710 hrs, an external work-up was completed on both carcasses (MEC21909 & MEC21092). The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. Watery, bloody fluid exuded from the nares. The carcass was slightly dorsoventrally flattened. Both flippers were cleft. The snout and flippers were bleached. No watercraft-related scars or wounds were observed. The epidermis was covered in mud. There was a thick brown algal mat on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Bloody nares
- Bleached epidermis
- Thick algal mat
- Cleft flippers

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21093
Date of Report: 2021-Feb-04
Filed By: FWC EC Field Station

FWC Case # 2017 **FWC Region:** NE

Sex: Male **Length:** 329 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-05 **By:** FWC-CMM MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 60 m SE of 7745 US Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC biologists. External work-up performed, but necrosy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Known as MIPS ID BC562, first sighted on 22 Feb 1991 in the Indian River, OUC/Reliant power plant. Scavenging.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	329 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21093
RECOVERY DATE 05 February 2021
GENDER Male **TL** 329 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **04 February 2021**, at 1845 hrs, FWC on-call biologist-Amber R. Howell (ARH) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Cocoa, Brevard County. FWC case number 2017 was assigned. The complainant, Kathy Glenn (321-403-2210), described a manatee that was belly-up with ribs exposed. The complainant could not get a good photo due to time of day but would try in the morning. At 1850 hrs, ARH forwarded the information to the EC Field Station. **05 February**, at 0859 hrs, ARH received photo verification and forwarded it to the EC Field Station. At 1115 hrs, FWC biologist-Carley M. Metcalf and FWC biologist-Sean M. Tennant launched the Key West boat at the OUC boat ramp, towed the carcass to a remote area, and completed an external work up by 1215 hrs. The remains were left on site.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. There were large rents on the ventrum due to decomposition and/or scavenging through which ribs, the skull, and the abdominal cavity were exposed. A minimum of six well-healed watercraft-related scar patterns was observed on the dorsal aspect. A minimum of eight well-healed fluke mutilations were present between 3 and 10 o' clock positions. There was an area of eroded dermis that was a possible watercraft-related wound on the dorso-cranial aspect. Deep to the eroded dermis, there was red, hemorrhagic tissue. PIT tag scan was negative. A genetics sample was collected.

Commented [BB1]: I'm thinking delete. It doesn't really seem hemorrhagic to me.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

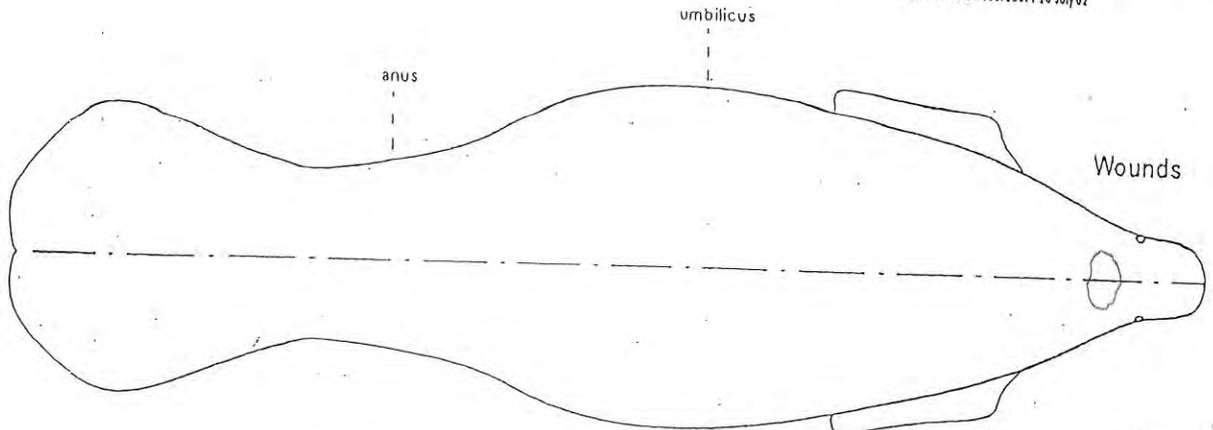
NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf / Tennant

Date 05 FEB 2021

Field I.D. MEC21093

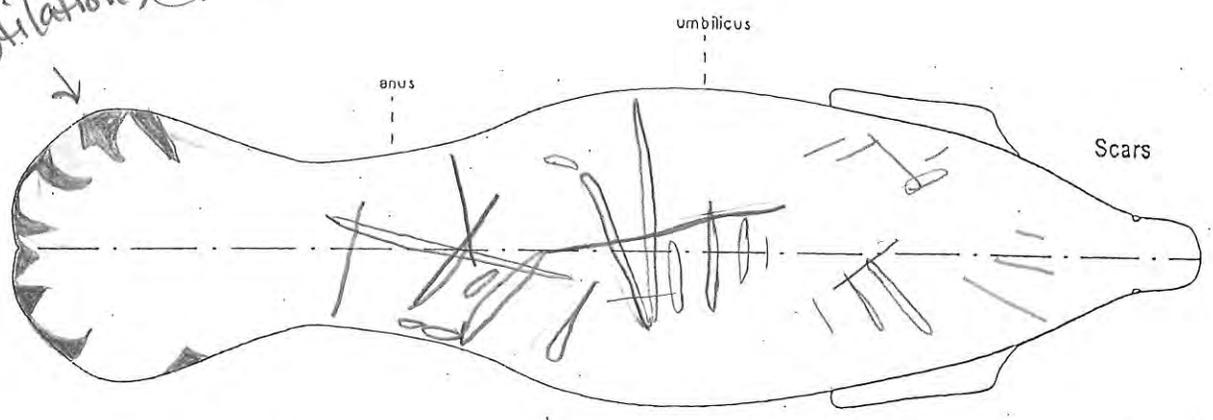
ct Manuals \scar2011 26 July 02



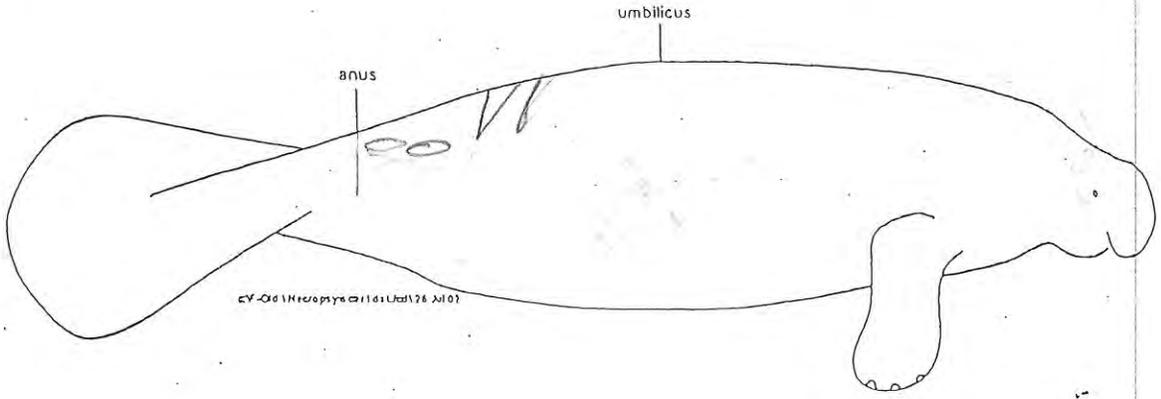
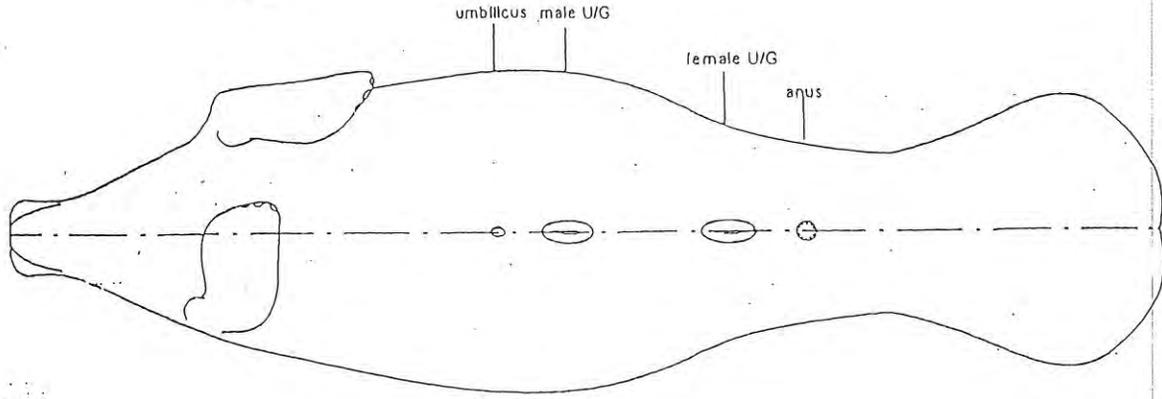
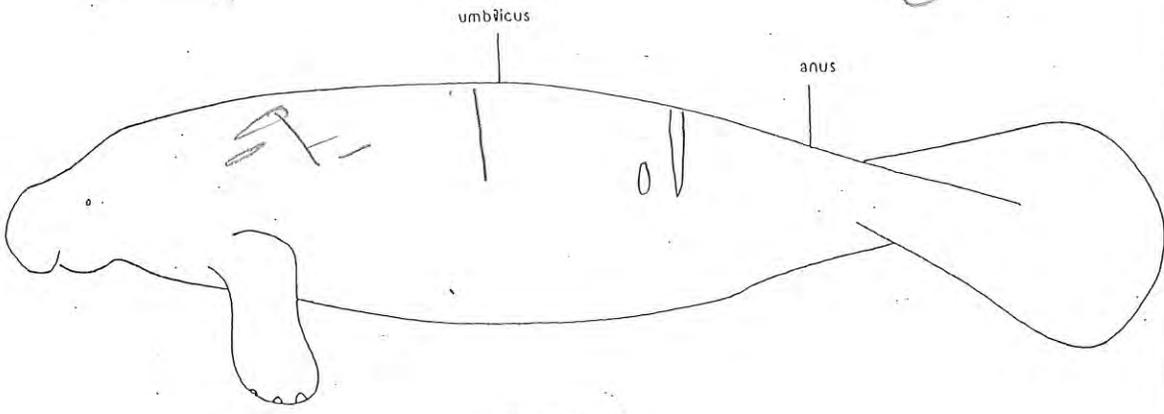
- possible wound not measured

Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

mutilations CMM



FIELD I.D. MEC21093
05 FEB 2021
CMM



CV-061 Necropsy Card Ucd 126 2107

Bassett, Brandon

From: Rood, Kari
Sent: Tuesday, February 9, 2021 2:44 PM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21093=BC562

MEC21093=BC562

Carcass location: Indian River, Cocoa
Male

First sighted 2/22/1991 at Indian River, OUC/Reliant Power Plant
Last sighted 3/5/2004 at Indian River, Haulover Canal
USGS should be able to provide a complete sighting history if needed.

Verifiers: SMW 2/7/21 & KAH 2/9/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21094
Date of Report: 2021-Feb-05
Filed By: FWC EC Field Station

FWC Case # 2102 **FWC Region:** NE

Sex: Female **Length:** 147 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-05 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-06 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Sebastian, beached approximately 40 m E of 9560 Riverside Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Peanut-shaped head; Cobblestone-like epidermis; Bleached epidermis; Cold stress lesions; Verified through complainant photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 2055.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	147 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21094

RECOVERY DATE 06 February 2021

GENDER Female **TL** 147 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **05 February 2021**, at 1357 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Sebastian, Indian River County. FWC case number 2055 was assigned. The complainant, Barbara Warrick (518-429-8467), described a small manatee that she was viewing with binoculars. A neighbor had waded to the manatee and confirmed it was dead. The photo provided for verification was indistinct. Due to a field team already responding to MEC21040, a response was not planned. **06 February**, at 0843 hrs, CMM received a text alert from Dispatch regarding a dead manatee in the Indian River. FWC case number 2102 was assigned. The complainant, Paul (201-960-5278), described a five-foot-long dead manatee he saw in the river the day before and was now seeing further offshore. At 0852 hrs, CMM received photo verification. At 1120 hrs, CMM arrived at the reported location and could not see the manatee from shore. CMM launched a kayak and located the dead manatee at 1152 hrs. CMM completed an external work up at 1228 hrs and towed the carcass to secluded shoreline. Due to the small size, the carcass was not necropsied. The remains were left on site.

EXTERNAL All of the epidermis was present but sloughing. There was cobblestone-like epidermis on the ventral aspect. The carcass had a slight peanut-shaped head. There was a moderate brown algal mat on the dorsal and lateral aspects. Transverse folds were present on the ventrum. A mild barnacle infestation was present on the ventral fluke. There were multiple small linear lesions on the dorsal aspect. The face, flippers, axilla, and fluke margin were bleached. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologist
- Peanut-shaped head
- Cobblestone-like, bleached epidermis
- Cold stress lesions
- Fetal folds

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21095
Date of Report: 2021-Feb-06
Filed By: FWC EC Field Station

FWC Case # 2445 **FWC Region:** NE

Sex: Female **Length:** 300 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-06 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-13 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Satellite Beach, floating approximately 110 m WSW of 96 E Eau Gallie Blvd.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologist.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Other (Flipper scars).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case numbers 2110, 2124, and 2315. Flipper entanglement scars.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21095

RECOVERY DATE 06 February 2021

GENDER Female **TL** 300 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **06 February 2021**, at 1009 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee off Dragon Point in the Indian River, Satellite Beach, Brevard County. FWC case number 2110 was assigned. The complainant, Kelly Reynolds (321-987-0088), described a free floating, three-foot-long manatee with white skin showing. At 1037 hrs, CMM received photo verification. At 1305 hrs, CMM received a text alert from Dispatch regarding the carcass. FWC case number 2124 was assigned. The complainant, Jordan Wallis (321-537-3785), described a seven to eight-foot-long manatee with a red belly and flippers laying to the side. A photo was not available. At 1317 hrs, CMM received an update from the previous complainant that the carcass was against the rocks at the Anchorage yacht basin by the Eau Gallie Causeway. At 1350 hrs, CMM arrived at the Eau Gallie boat ramp, launched a kayak and located to the carcass. Due to the large size of the carcass, the lack of viable shoreline for an external work up, and CMM being alone in the field, the carcass was not collected or necropsied. CMM towed the carcass to mangroves just north of the Eau Gallie Causeway. **09 February**, at 1332 hrs, CMM received a text message and photo from Satellite Beach PD-Keith Grosse regarding a dead manatee floating off Dragon Point in the Banana River. Based on a photo, it was confirmed to be the carcass first reported on 06 February. The EC Field Station received one more text alert regarding this manatee (FWC case number 2315) on 09 February but did not receive photo verification. Based on time of day and advanced level of decomposition, a response was not planned. **11 February**, at 1015 hrs, CMM received a text alert from Dispatch regarding a dead manatee in the Banana River. FWC case number 2445 was assigned. The complainant, Vince Lamb (321-258-5168), described a large, dead manatee in the mangroves next to his residence. At 1318 hrs, CMM received photo verification. Due to field teams being occupied by carcass responses in different locations, a response was not planned. **12 February**, at 1609 hrs, FWC biologist-William D. Greer contacted FWC Captain Bonds via email for assistance with finding an officer to go on a carcass response the following day with CMM. At 1700 hrs, FWC Officer Maslo called CMM and coordinated to meet the following morning. **13 February**, at 0900 hrs, CMM and Officer Maslo departed from Melbourne Harbor on a FWC LE vessel to tow the carcass. At 0920 hrs, CMM and Officer Maslo arrived at the residence and towed the carcass to a secluded shoreline. An external work up was started but, due to safety concerns due to rapidly declining weather, the team headed back to the harbor. CMM and Officer Maslo left the site at 1015 hrs. The remains were left on site.

EXTERNAL Less than 10% of the epidermis was present but sloughing. The carcass was distended with gas. Red, watery fluid exuded from the nares. There was a well-healed entanglement scar on the right flipper at the caudal medial aspect and a well-healed mutilation on the left flipper at the caudal margin of the distal one-third. A minimum of four well-healed watercraft-related scar patterns was observed on the dorsal aspect and dorsal fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- Flipper entanglement scars

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

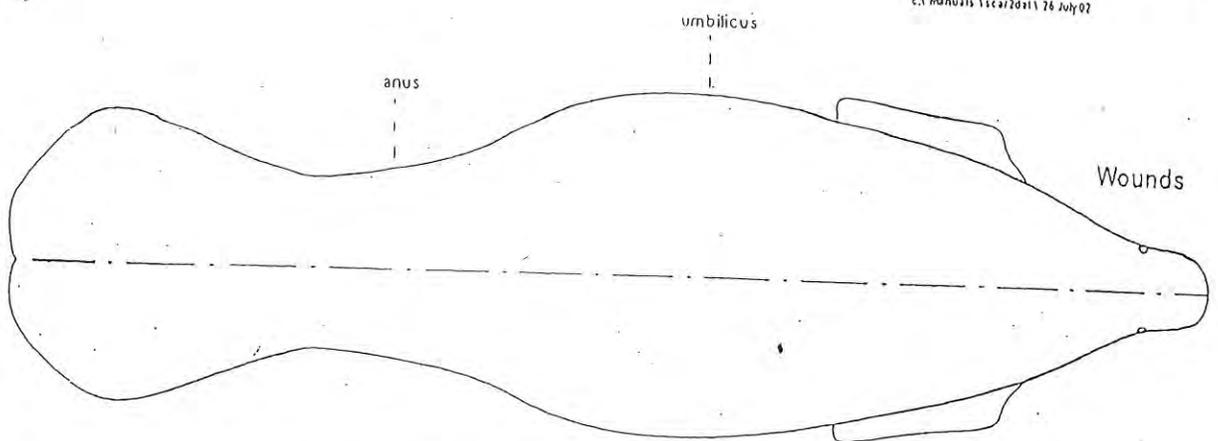
REPORT FILED BY Metcalf

CMM

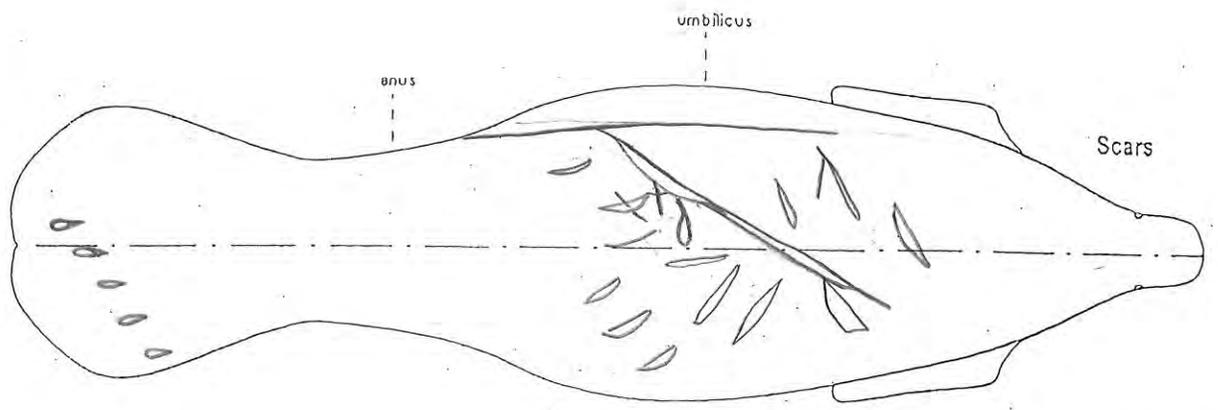
Date 13 FEB 2021

Field I.D. MEC21095

c:\Manuals\scar2011 76 July02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Length																					
Width																					
Depth																					
Distance																					



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21096
Date of Report: 2021-Feb-06
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 197 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-06 **By:** FWC-CMM

DATE COLLECTED: 2021-Feb-06 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Satellite Beach, floating approximately 410 m SW of 96 E Eau Gallie Blvd.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Bleached epidermis; Skin lesions; Verified by FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	197 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21096

RECOVERY DATE 06 February 2021

GENDER Female **TL** 197 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 06 February 2021, at 1515 hrs, while coming back from towing MEC21095, FWC biologist-Carley M. Metcalf (CMM) found a carcass on the south side of the Eau Gallie Causeway. CMM towed the carcass to the Eau Gallie boat ramp and completed an external work up at 1600 hrs. Due to an elevated case load, time of day, and advanced stage of decomposition, the carcass was not recovered or necropsied. CMM towed the carcass back to the location where it was originally verified.

EXTERNAL Approximately 60% of epidermis was present but sloughing. Watery, red fluid exuded from the nares. The carcass had a peanut-shaped head. There was a thin brown algal mat on the dorsal and lateral aspects. A moderate barnacle infestation was present on the dorsal fluke. The flippers and face were bleached. Small pitted lesions and a few linear lesions were present on the dorsal and lateral aspects. On the dorsal dermis, there were diffuse purple specks that were easily wiped away. One well-healed linear scar was observed on the right dorso-lateral aspect. The fluke margin was eroded due to decomposition. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Peanut-shaped head
- Bleached epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

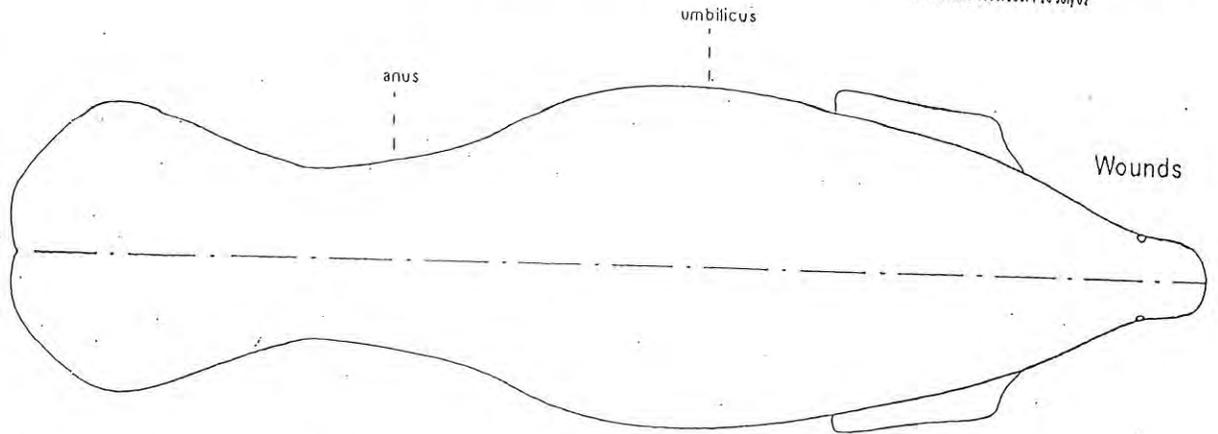
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REPORT FILED BY Metcalf

Date 06 FEB 2021

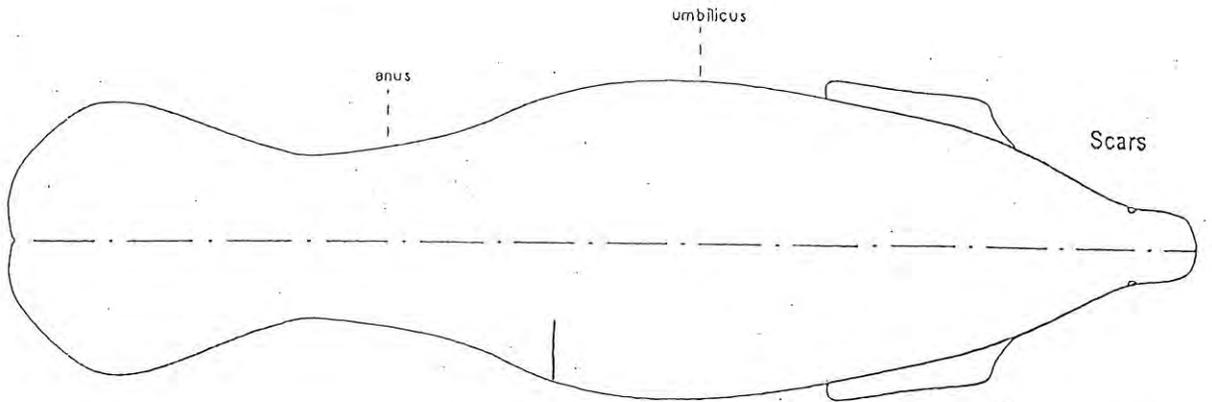
Field I.D. MEC 21096

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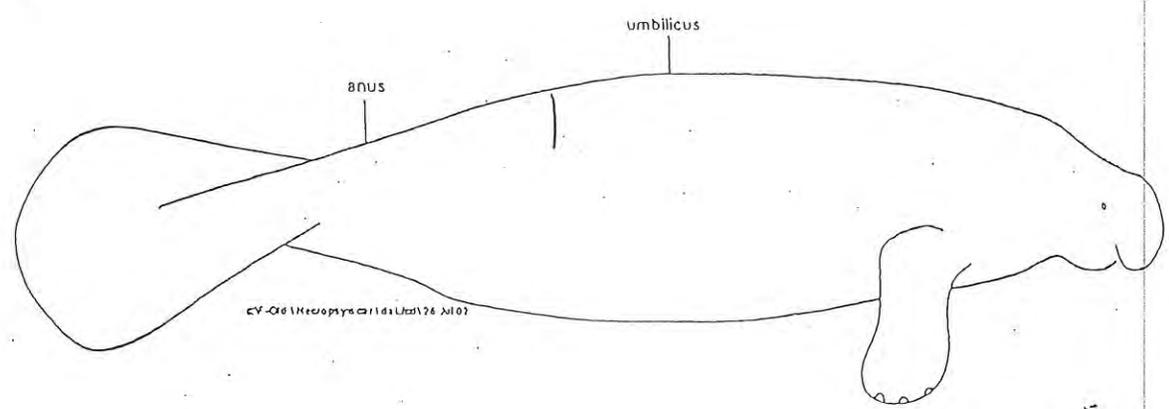
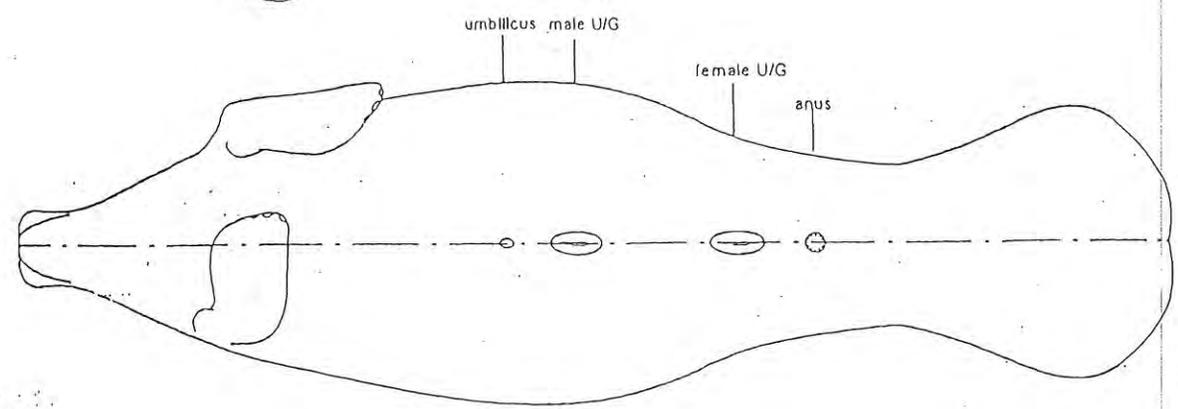
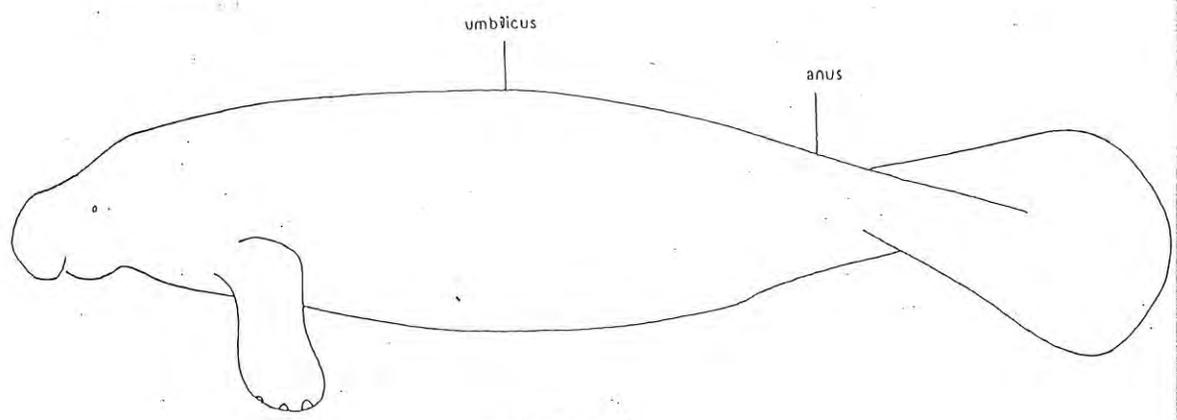


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

cm



FIELD I.D. MFC 21096
06 FEB 2021



CV-Gel Neurophysica 141 Uts 124 2102

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21097
Date of Report: 2021-Feb-06
Filed By: FWC EC Field Station

FWC Case # 2192 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-06 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, grounded approximately 475 m SW of 4551 Pebble Bay S.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 2140. Carcass grounded dorsum-up.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21097

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **06 February 2021**, at 1634 hrs, FWC biologist-Carley M. Metcalf received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Vero Beach, Indian River County. FWC case number 2140 was assigned. The complainant, Misty Harp, submitted the report via tip hotline and provided no contact information or size estimate, but a photo was provided. Due to the time of day and elevated carcass load, no response was available. **07 February**, at 1533 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from Dispatch regarding the same dead manatee. FWC case number 2192 was assigned. The complainant, Jennifer Kureen (321-217-0799), stated the manatee was beached and about six feet in length. At 1541 hrs, SMW received a photo from the complainant confirming it was the same manatee. Due to an elevated carcass load, this carcass was not recovered or necropsied.

EXTERNAL From photographs – All of the dorsal epidermis was present. There was a thin green algal mat on the dorsal aspect.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21098
Date of Report: 2021-Feb-07
Filed By: FWC EC Field Station

FWC Case # 2164 **FWC Region:** NE

Sex: Male **Length:** 297 cm **Weight:** 417.0 kg

DATE REPORTED: 2021-Feb-07 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-08 **By:** FWC-WDG MMPL-CMF

DATE NECROPSIED: 2021-Feb-08 **By:** FWC-WDG MMPL-CMF

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Elbow Creek

Locality description: Melbourne, grounded approximately 35 m WSW of 530 Thomas Barbour Drive.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Bloody lung(s); Crumbly feces; Dry feces; Fluid in abdominal-, pleural cavities; Bloody nares; Congested mesentery, urinary bladder-, GI mucosa, peritoneum; Relatively empty upper GI tract; Fluid in airways; Slightly bloody liver; Gray specks lung serosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics. Stomach contents in alcohol.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Bleached epidermis; Skin lesions; Total length dorsum-up=287 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	297 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:
 Fluid in epididymides (Thick, milky fluid). Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21098

RECOVERY DATE 08 February 2021

GENDER Male **TL** 297 **cm** **WT** 417 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 08 February 2021

CONDITION Moderately Decomposed

HISTORY **07 February 2021**, at 1026 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding an injured manatee in the Eau Gallie River in Melbourne, Brevard County. FWC case number 2164 was assigned. The complainant, Cindy Dickens (321-863-7267), stated that the manatee was in the canal behind her home and had a bloody spot on the head or tail. At 1104 hrs, SMW received an inconclusive photo. SMW contacted FWC intern-Kylie C. Lawson (KCL) to check on the manatee. At 1207 hrs, Cindy informed SMW that the bloody spot was just a sea grape leaf on the manatee, so SMW cancelled the request for KCL. At 1605 hrs, Cindy informed SMW that she thought the manatee was dead as it hadn't moved since the initial sighting. **08 February**, at 0807 hrs, FWC biologist-William D. Greer (WDG) arrived at the manatee's location and confirmed it was dead. At 1020 hrs, WDG met FWC biologist-Christine M. Fontaine (CMF) at Ballard Park and launched the Key West boat, towed the carcass, and loaded it by Ezy-lift at 1125 hrs. WDG and CMF transported the carcass to the Brevard County landfill where a field necropsy was completed by 1350 hrs.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. The carcass was slightly distended with gas but dorsoventrally flattened. Watery, red fluid was exuded from the nares. The flippers and head were slightly bleached. There was a moderate brown algal mat on the dorsal aspect. Linear white lesions were present near the flippers. A minimum of eight well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal and mesenteric fat. There was moderate, serous omental fat. The peritoneum was mildly congested. The abdominal cavity contained an abundant amount of watery, red fluid (see photos).

STOMACH The stomach contained 1 L of wet, moderately chewed, stringy, leafy, green to brown ingesta. The contents were covered in viscous, white mucus. The mucosa was pink (see photos). No parasites were observed.

DUODENUM The duodenum was empty of contents (see photo). The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained viscous, gray fluid mixed with a small amount of vegetation specks throughout. The mucosa was mildly congested. There were small, circular raised nodules in the proximal small intestine mucosa (see photo). No parasites were grossly observed throughout.

CECUM The cecum contained 1.5 L of very moist, poorly digested, stringy, leafy, green to brown digesta. The mucosa was severely congested (see photo). No parasites were observed.

COLON The mesentery was severely congested (see photo). The proximal colon contained moist, well-formed, moderately digested, fibrous, stringy, green feces. The mid and distal colon contained dry, crumbly, moderately digested, poorly formed, very fibrous, stringy, brown feces (see photo). The mucosa was moderately congested. No parasites were observed.

PANCREAS The pancreas was light pink on serosal and cut surfaces.

SPLEEN The spleen was mottled gray and black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was slightly soft. Serosal surfaces were blue to purple, and cut surfaces were brown and slightly bloody.

GALLBLADDER The gallbladder contained 25 mL of pasty green bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The seminal vesicles were large and contained a large amount of tan fluid. The testes were large. The vas was thick, milky fluid present on cut surfaces of the epididymides.

KIDNEYS There was a small amount of perirenal fat. The kidneys were tan on serosal surfaces. On cut surfaces, the cortices were red and the medullae were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained 700 mL of pale-yellow urine. The mucosa was slightly congested.

HEART There was moderate, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. There was 2.8 L of watery, red fluid in the right pleural cavity and 3.6 L in the left pleural cavity. The lungs were pink, blue and gray on serosal surfaces and dark red, wet, and bloody on cut surfaces. The left lung had numerous small gray to black specks on the serosa. The primary airways contained a moderate amount of watery, red fluid (see photos). The mucosa was unremarkable. No parasites were observed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER The muscle and fat layers were serous and exuded watery, red fluid when cut.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
 - Bloody nares
 - Depleted, serous fat
 - Serous tissue
 - Fluid in abdominal-, pleural cavities
 - Congested mesentery, urinary bladder-, GI mucosa, peritoneum
 - Relatively empty upper GI tract
 - Dry, crumbly feces
 - Wet, bloody lungs
 - Fluid in airways
 - Slightly bloody liver
 - Gray specks in left lung serosa
 - Slightly bleached epidermis
 - Skin lesions
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

William D. Greer
Christine M. Fontaine

REPORT FILED BY Greer

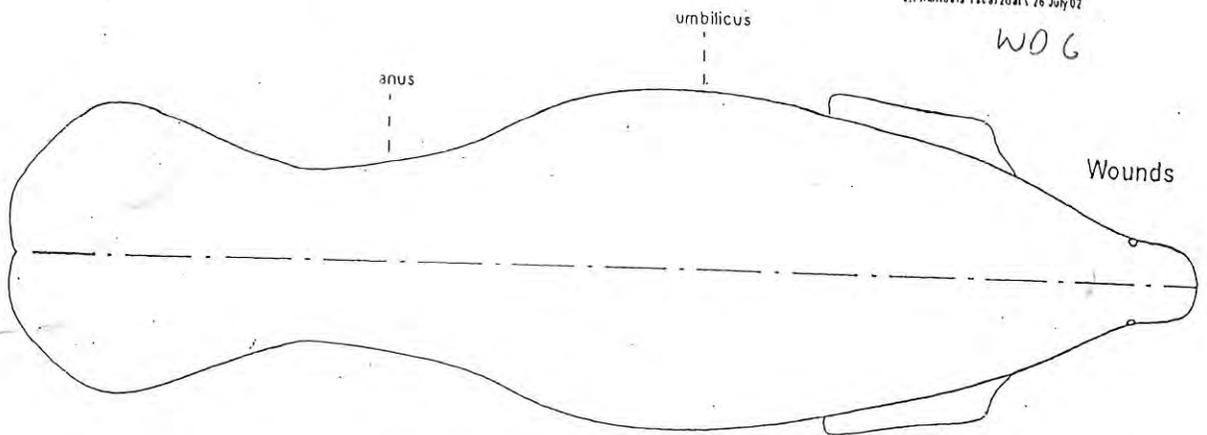
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 08 FEB 2021

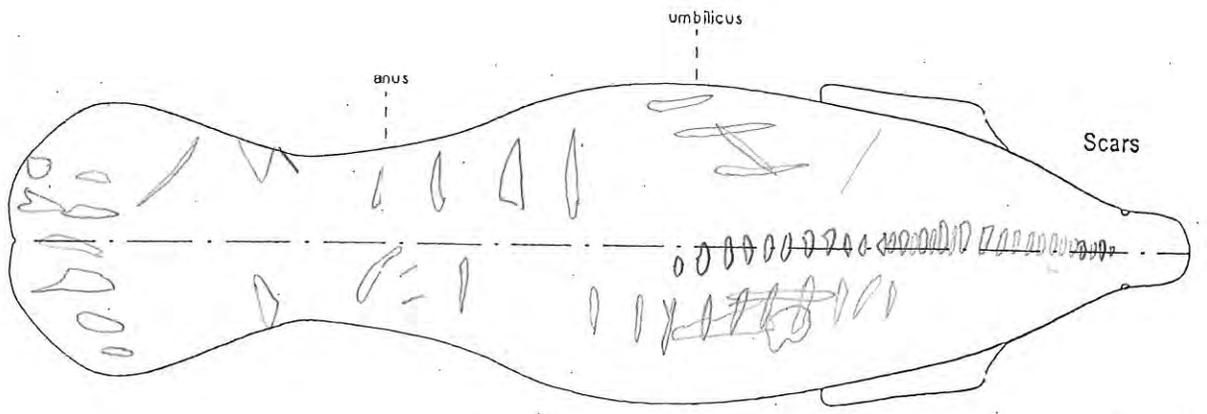
Field I.D. MRC 21098.

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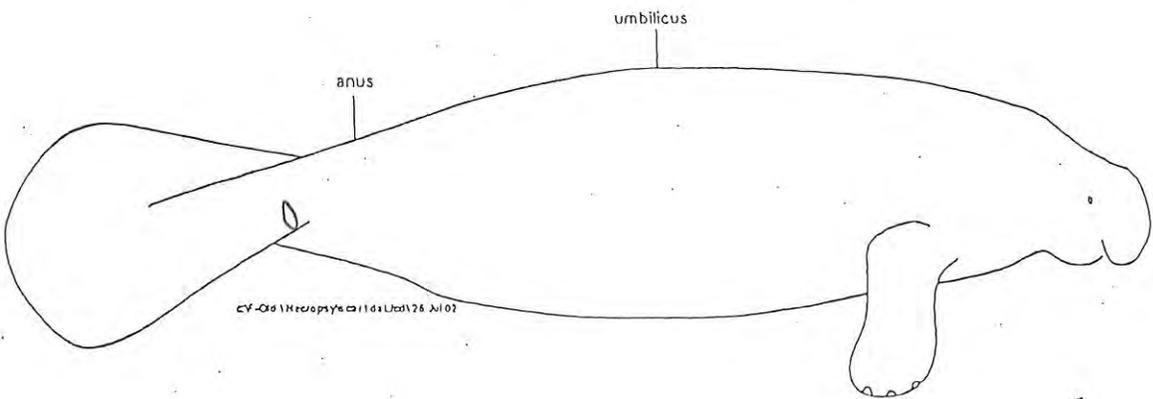
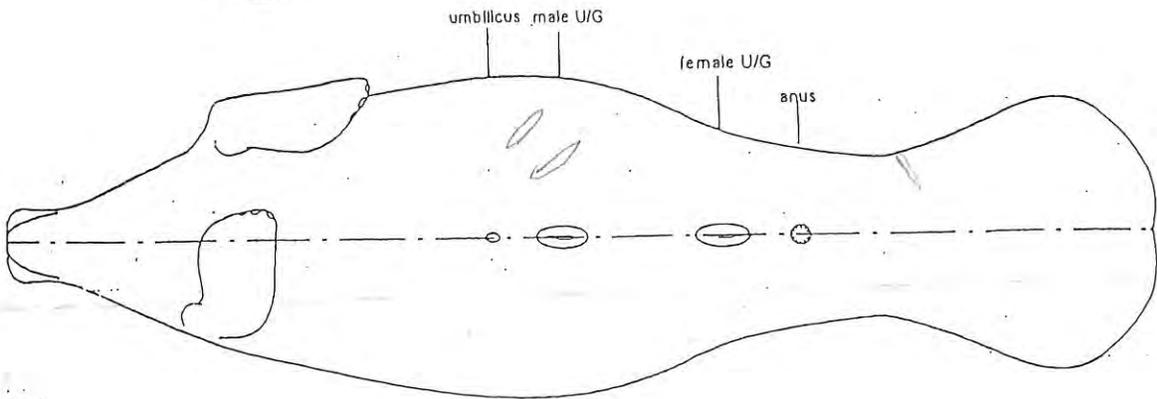
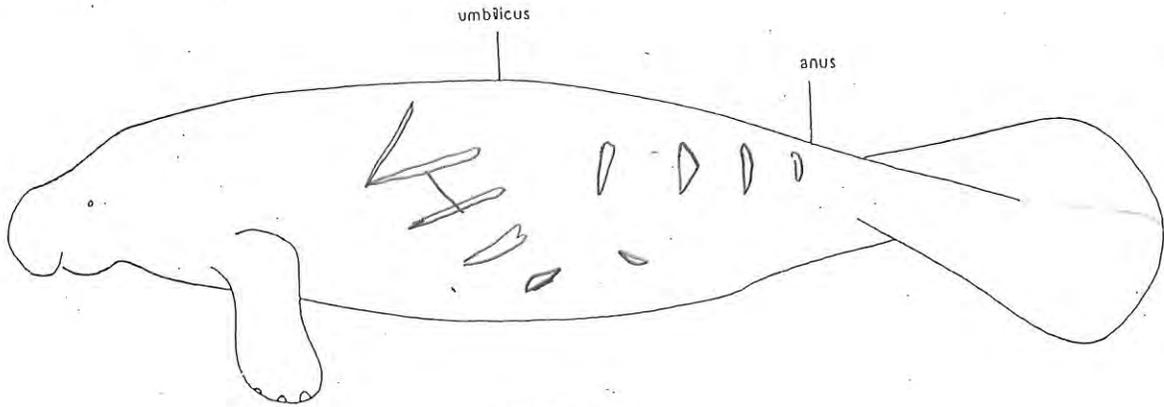
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MCC21098



CV-G6 Neurophysiology Unit 28 Jul 02

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21099
Date of Report: 2021-Feb-08
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 170 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-08 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,WDG MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL warm water discharge, approximately 245 m NNE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	170 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21099

RECOVERY DATE 09 February 2021

GENDER Male **TL** 170 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 08 February 2021, at 1055 hrs, FWC biologist-William D. Greer (WDG) received a text and photos from FPL-Jennifer Pickett confirming two dead manatees in the FPL-CCEC discharge area. Both carcasses (MEC21099 and MEC21100) were badly decomposed, so a response was planned for the next day.

09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. In addition to MEC21099, they also collected MEC21106 - MEC21113. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and completed external workups on MEC21099 and MEC21106 - MEC21109 by 1355 hrs. The carcasses were via Ant-lift at 1430 hrs and disposed of at the Brevard County landfill.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was distended with gas. The epidermis on the fluke margin, head and axillae was slightly bleached. There was a moderate brown algal mat on the dorsal aspect. A linear white lesion was observed on the head. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photograph and FWC biologists
- Bleached epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21100
Date of Report: 2021-Feb-08
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 240 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-08 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL warm water discharge, approximately 245 m NNE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photograph and FWC biologists.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	240 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21100

RECOVERY DATE N/A

GENDER Female **TL** 240 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 08 February 2021, at 1055 hrs, FWC biologist-William D. Greer (WDG) received a text and photos from FPL-Jennifer Pickett confirming two dead manatees in the FPL-CCEC discharge area. Both carcasses (MEC21099 and MEC21100) were badly decomposed, so a response was planned for the next day.

09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. MEC21100 was stuck in one of the concrete discharge areas and could not be safely removed. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and confirmed that based on the location, there was no safe way to remove the carcass. The remains were left on site.

EXTERNAL WDG was only able to see a portion of the head as the rest of the body was covered by foam from the discharge. The epidermis was gray and sloughing from the ventral head.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photograph and FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21101
Date of Report: 2021-Feb-08
Filed By: FWC EC Field Station

FWC Case # 2226 **FWC Region:** NE

Sex: Female **Length:** 160 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-08 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-08 **By:** FWC-SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Crane Creek

Locality description: Melbourne, floating approximately 35 m W of 2222 S Harbor Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Thickened epidermis; Bleached epidermis; Verified through photograph and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Scavenging.

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Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	160 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21101

RECOVERY DATE 08 February 2021

GENDER Female **TL** 160 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 08 February 2021, at 1053 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Crane Creek, Melbourne, Brevard County. FWC case number 2226 was assigned. The complainant, Dave Thornton (321-294-7856), stated that the carcass was belly-up near their construction barge. At 1105 hrs, SMW received a verification photo. SMW and FWC intern-Kylie Lawson arrived at the carcass at 1305 hrs, launched a kayak, towed it to secluded shoreline, and completed an external work up by 1340 hrs. The remains were left on site.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The remaining ventral fluke and peduncle epidermis was thickened and bleached. The carcass was dorsoventrally flattened. There were rents due to decomposition and/or scavenging at the urogenital opening and anus. The fluke margin and cranial dorsum were eroded due to decomposition and/or scavenging. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-08_FWC050_1265 through 1272

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Thickened, bleached epidermis
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21102
Date of Report: 2021-Feb-08
Filed By: FWC EC Field Station

FWC Case # 2250 **FWC Region:** NE

Sex: Male **Length:** 183 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-08 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-09 **By:** FWC-WDG

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Grant, beached approximately 80 m ENE of 4840 U.S. 1 .

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Bloody nares. Verified thorough complainant photograph and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 2237.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	183 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21102
RECOVERY DATE 09 February 2021
GENDER Male **TL** 183 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **08 February 2021**, at 1306 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Grant, Brevard County. FWC case number 2237 was assigned. The complainant, Bob Krezner (321-544-9023), stated that the manatee was about six feet long and was on shore. At 1318 hrs, SMW received a photo from the complainant. At 1648 hrs, SMW received a text alert from Dispatch regarding a dead manatee in Indian River. FWC case number 2250 was assigned. The complainant, Gina (239-200-9653), stated that the manatee was 4-5 feet long and had vultures on it, but no photo was available. Due to the time of day, a response was not available. **09 February**, at 1052 hrs, FWC biologist-William D. Greer and FWC intern-Kylie C. Lawson arrived at the manatee's location and walked it to a nearby boat ramp. The carcass was loaded via Ant-lift at 1110 hrs and transported to the Brevard County landfill where an external workup was completed by 1210 hrs.

EXTERNAL Approximately 60% of the epidermis was present but sloughing. The carcass was slightly dorsoventrally flattened. Bloody fluid exuded from the nares, left eye socket and tear dorsal to the left flipper. No watercraft-related scars were observed. There were patches of bleached epidermis on all aspects. A thin brown algal mat was present on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

Commented [BB1]: Shark?

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists
- Bleached epidermis
- Bloody nares

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Greer

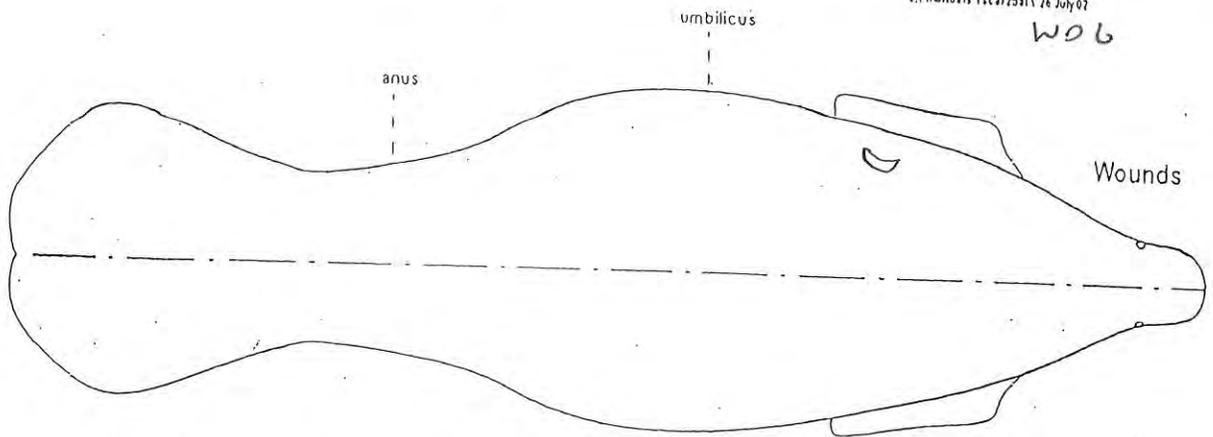
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FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 09 FEB 2021

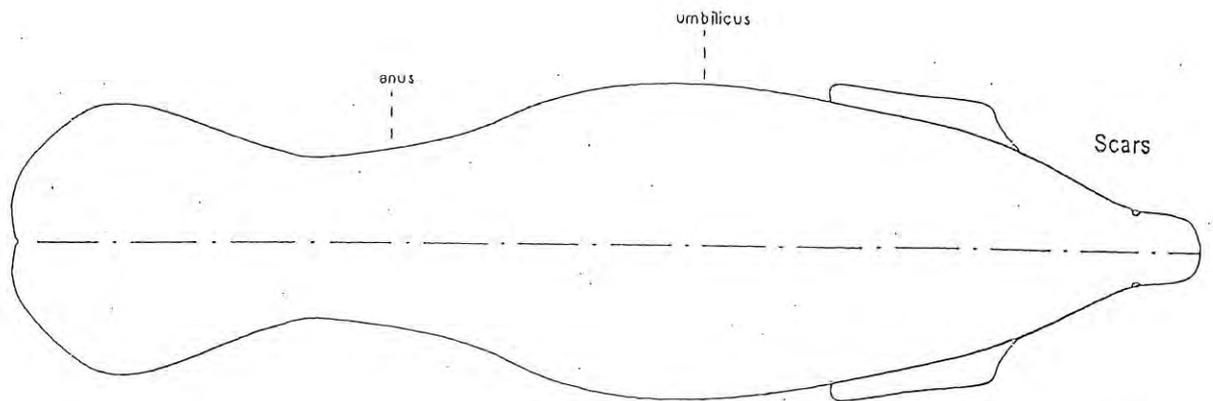
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CSI Manuals / Scar Data 26 July 07

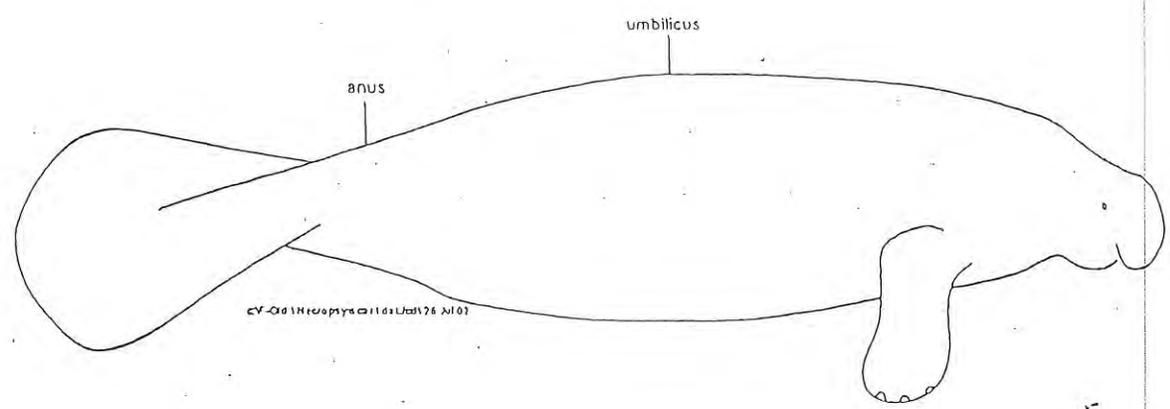
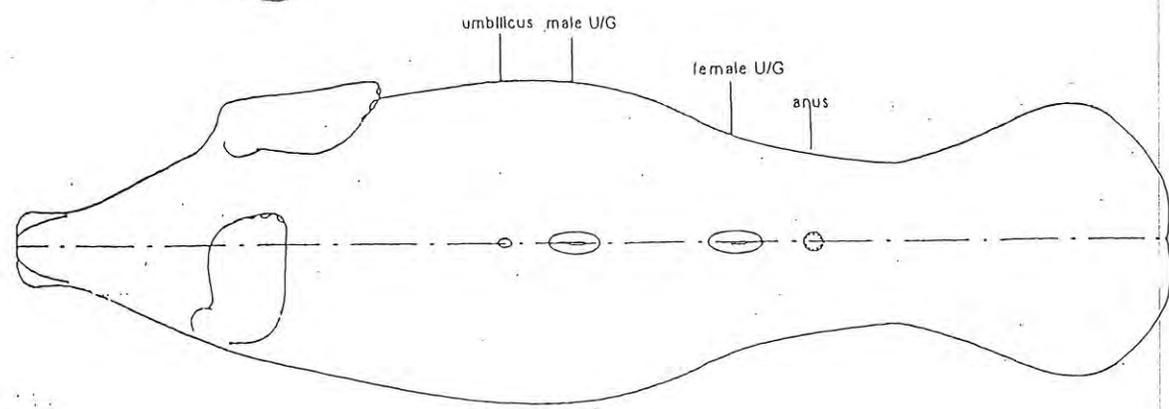
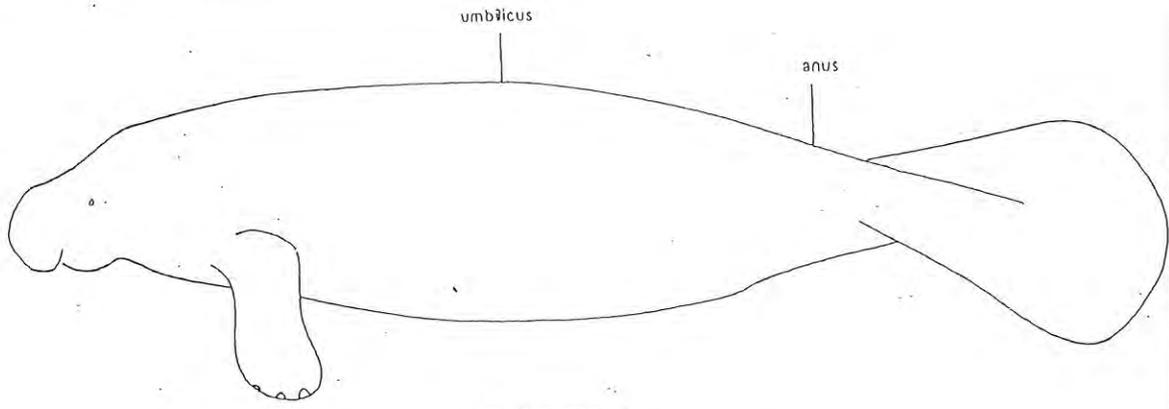
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC 21122



CV-06 (Neurophys) 011 ds Uad/26 Jul 01

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21103
Date of Report: 2021-Feb-08
Filed By: FWC EC Field Station

FWC Case # 2243 **FWC Region:** NE

Sex: Male **Length:** 150 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-08 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Eau Gallie River

Locality description: Melbourne, floating approximately 115 m NE of 1051 Tortoise Cove.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Bleached epidermis; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21103

RECOVERY DATE N/A

GENDER Male **TL** 150 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **08 February 2021**, at 1448 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Eau Gallie River, Melbourne, Brevard County. FWC case number 2243 was assigned. The complainant, Christopher Lockwood (321-541-5362), stated that the carcass was four feet long and 1-2 people could lift it. At 1456 hrs, SMW received a verification photo. Due to the small size, remote location, and high carcass load, this carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - All of the ventral epidermis was present. The epidermis of the axillae and face was bleached. The carcass was slightly distended with gas. Transverse folds were present on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified by complainant photographs
- Fetal folds
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21104
Date of Report: 2021-Feb-08
Filed By: FWC MMPL

FWC Case # 2258 **FWC Region:** NE

Sex: Male **Length:** 276 cm **Weight:** 331.0 kg

DATE REPORTED: 2021-Feb-08 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,T. Johnson MMPL-CMF

DATE NECROPSIED: 2021-Feb-10 **By:** MMPL-MdW,BLB,BDB,ALP

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 55 m ENE of 3859 N Indian River Drive.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Relatively empty GI tract; Dry, hard feces; Crumbly feces; Wet lung(s); Bloody nares; Congested colon wall; Fluid in pleural cavities; Enlarged lymph nodes.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples. Burgess samples: feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Chronic diaphragmatic hernia of small and large intestine. Chronic lung tear. Remodeled ribs. Total dorsal length=277 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	276 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21104
RECOVERY DATE 09 February 2021
GENDER Male **TL** 276 **cm** **WT** 331 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 10 February 2021
CONDITION Badly Decomposed

HISTORY **08 February 2021**, at 1814 hrs, FWC on-call biologist-Denise M. Boyd (DMB) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Cocoa, Brevard County. FWC case number 2258 was assigned. The complainant, Linda Gunde (321-501-3228), stated that the manatee was an adult and against her seawall. At 2023 hrs, DMB received a photo confirming the carcass and passed the information to EC Field Station staff. **09 February**, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. In addition to MEC21099, they also collected MEC21106 - MEC21113. SMW and CMF towed the carcasses to the Port St. John boat ramp and met FWC biologist-Trent Johnson (TJ). The carcasses were loaded into a U-trailer by 1415 hrs. TJ transported the carcass to the MMPL arriving at 1730 hrs.

EXTERNAL Approximately 90% of the epidermis was present and sloughing. Bloody fluid exuded from the nares. The carcass was dorsoventrally flattened due to emaciation. The ventrum was flat. The epidermis on the face and flippers was slightly bleached and thickened. The ventral epidermis was cobblestone-like. No watercraft-related wounds were observed. There was a minimum of four well-healed watercraft-related scar patterns on the dorsal and lateral aspects. The fluke margin had a well-healed mutilation at the 6 o'clock position. There was a thick green algal mat on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric and omental fat. The omental fat was discolored black. Almost the entire small intestine and multiple loops of colon were herniated into the left pleural cavity through a large tear in the left hemidiaphragm.

STOMACH The stomach was contracted and contained 100 mL of thick, cloudy, pink to grey fluid. The mucosa was dark grey. No parasites were observed.

DUODENUM The duodenum was contracted and contained 50 mL of thick, cloudy, pink to grey fluid. The mucosa was dark grey. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained a scant amount of tan and pink mucus. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum was contracted and contained a scant amount of thick, cloudy, light brown fluid mixed with small chunks of light brown paste. The mucosa was autolyzed. No parasites were observed.

COLON The proximal colon contained a small amount of dry, hard, well-formed, poorly digested, very fibrous, brown feces. An ELISA toxicology sample was collected. The distal colon contained a scant amount of dry, crumbly, poorly formed, well-digested, slightly fibrous, green feces. The mucosa was autolyzed throughout. The wall had regions of moderate congestion. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was firm. The serosal surfaces were mottled grey and black and the cut surfaces were dark grey.

LIVER The margins were rounded. The liver was soft. The serosal surfaces were dark pink to dark blue. The cut surfaces were dark red to brown. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 25 mL of viscous, flocculent, dark yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The testes were moderate in size. The seminal vesicles were small and empty of contents. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant serous perirenal fat. The kidneys were soft. The serosal surfaces were dark pink to red. On cut surfaces, the cortices were dark pink and the medullae were red to dark purple. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 400 mL of cloudy, light pink urine. The mucosa was autolyzed. An ELISA toxicology sample was collected.

HEART There was scant gassy epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM The right hemidiaphragm was intact and distended. The left hemidiaphragm had a 20 x 13 cm tear with thick, round margins at the mid aspect through which intestines herniated. The right pleural cavity contained 4 L and the left contained 0.5 L of watery, cloudy, dark red fluid. The tissue underneath the right lateral parietal pleura was thickened and serous. The left lung had a complete chronic puncture through the mid-medial aspect due to a remodeled offset fracture of left rib 12. The lungs were pink to light purple on serosal surfaces and dark pink to wet on cut surfaces. The airways contained a small amount of watery, dark red fluid. No parasites were observed. The mucosa was pink. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS NVL.

SKELETON Left ribs 10-13 were remodeled at the proximal one-third. The remodeling of left ribs 11 and 12 was offset, sharp and tore the parietal pleura (see photos).

OTHER All fat, connective tissue and muscle was severely serous. The axillary lymph nodes were slightly enlarged and firm.

PHOTOGRAPHS

COMMENTS The diaphragmatic hernia and lung tear did not appear to cause disease from chronic trauma (no findings of inflammation).

SIGNIFICANT FINDINGS

- Bloody nares
- Emaciated
- Depleted, serous fat
- Serous tissue
- Relatively empty GI tract
- Dry, hard, crumbly feces
- Congested colon wall
- Wet lungs
- Fluid pleural cavities
- Enlarged lymph nodes

- Chronic diaphragmatic hernia of small and large intestine
- Chronic tear lung
- Remodeled ribs

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

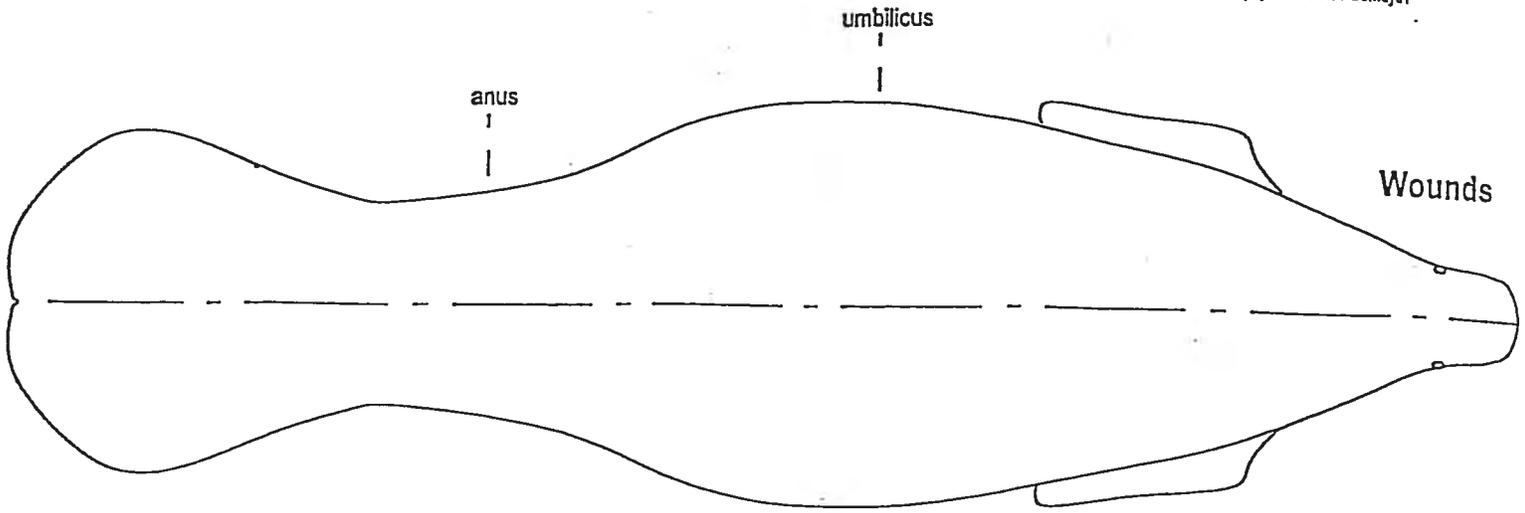
REPORT FILED BY de Wit

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

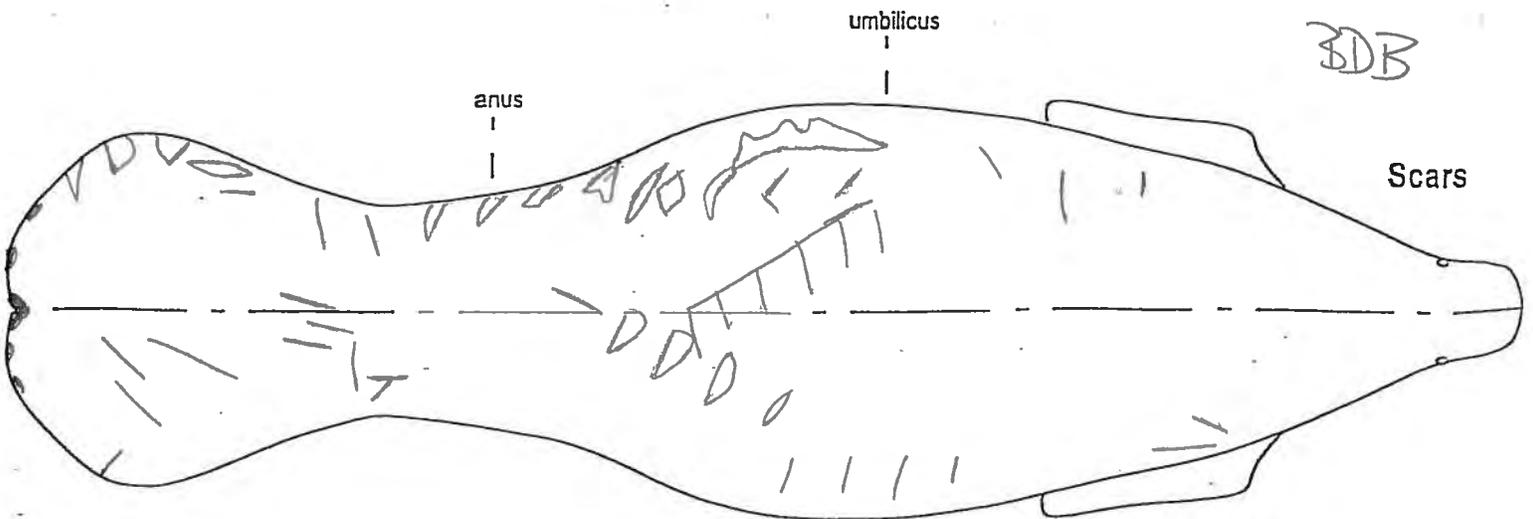
Date 09 Feb 2021

Field I.D. MEC21104

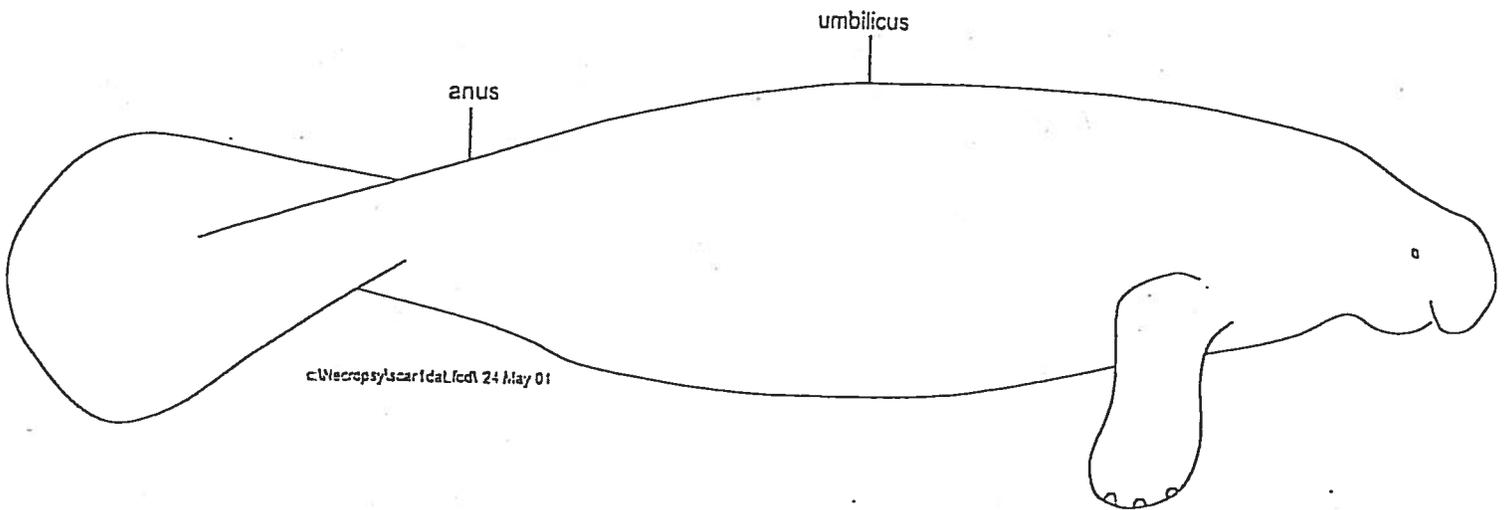
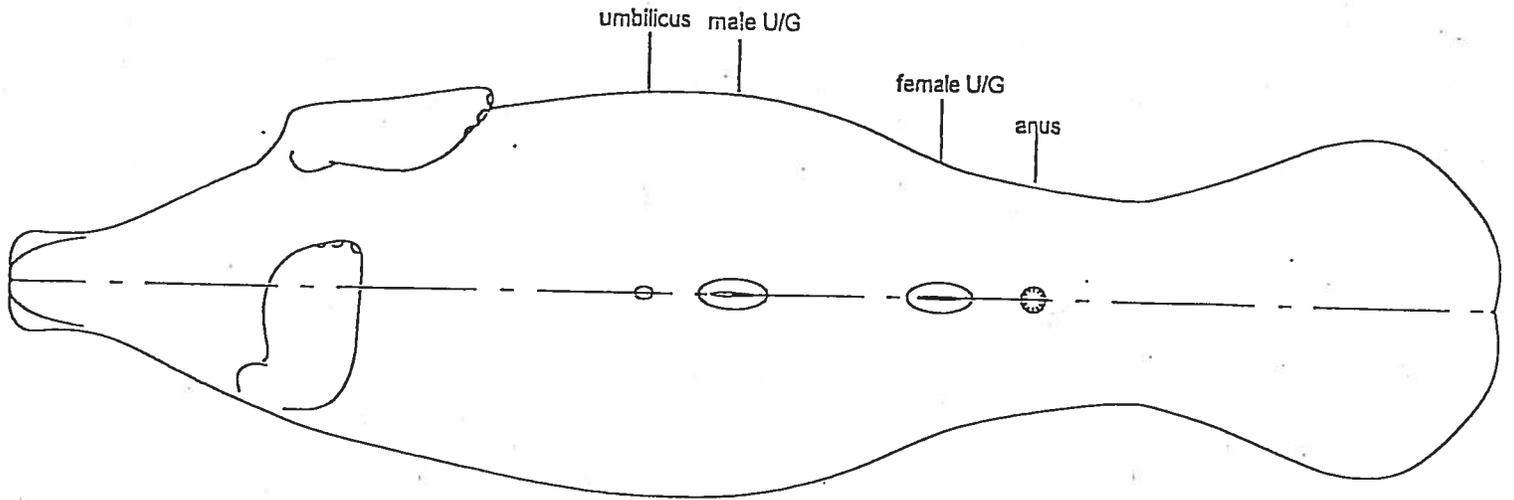
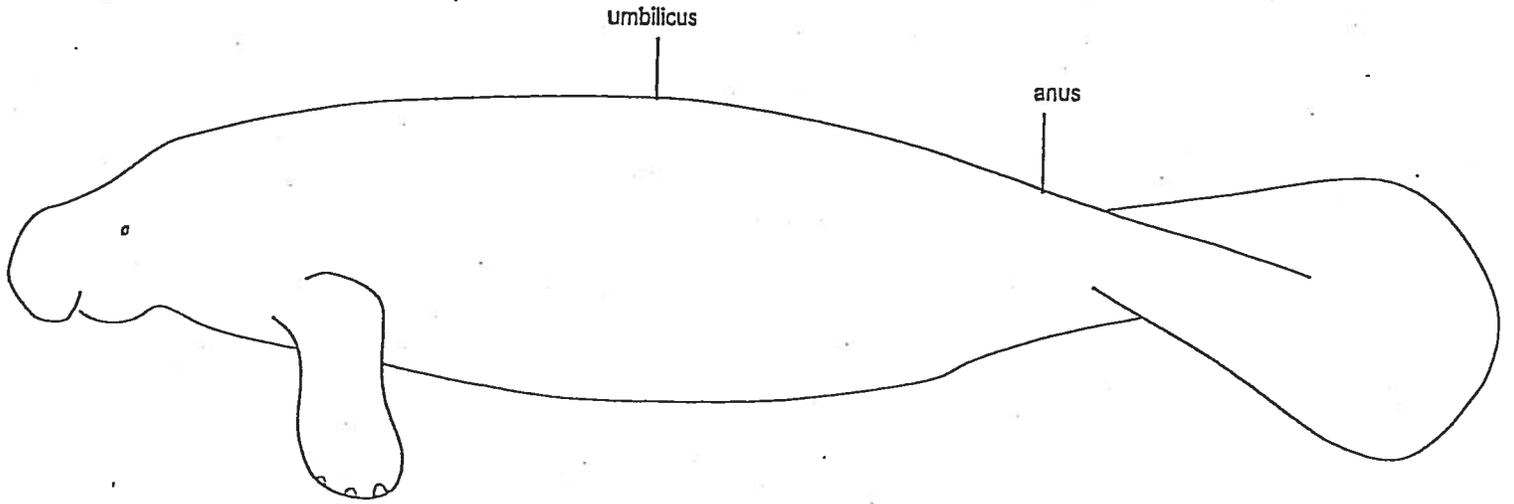
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



FWC Case # _____ FWC District: _____
Sex: M / F / Undetermined Length: 276 cm (estimated _____) Weight 331 kg.
Date reported: _____ By: _____
Date collected: 9 Feb '21 By: HSC TAJOHNSON
Date necropsied: 10 Feb 21 By: MdW BUB BDD ALP

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - Scars - Flukes - Cranial - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other feces frozen Burgess

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other feces

Genetics Box # 101

Female reproductive findings of N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted/Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

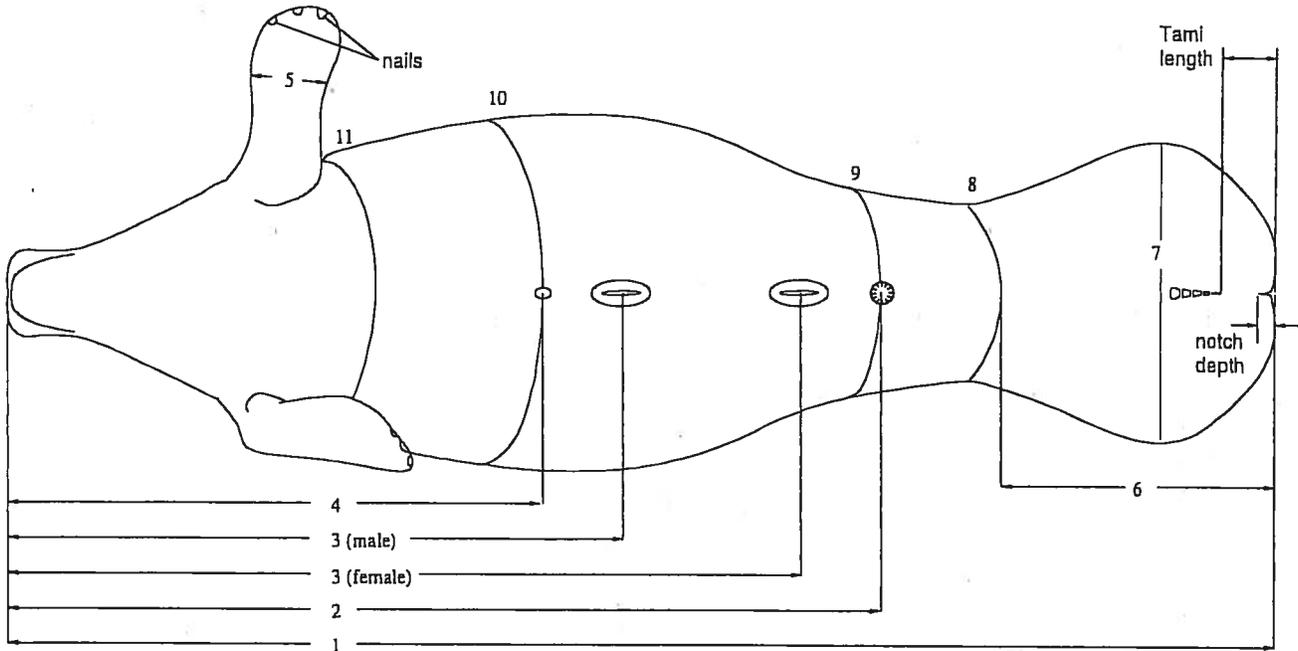
PIT TAG Scan: Negative; Positive (Left _____ - _____ - _____)(Right _____ - _____ - _____); N/T

REMARKS: dorsal SL 277 cm

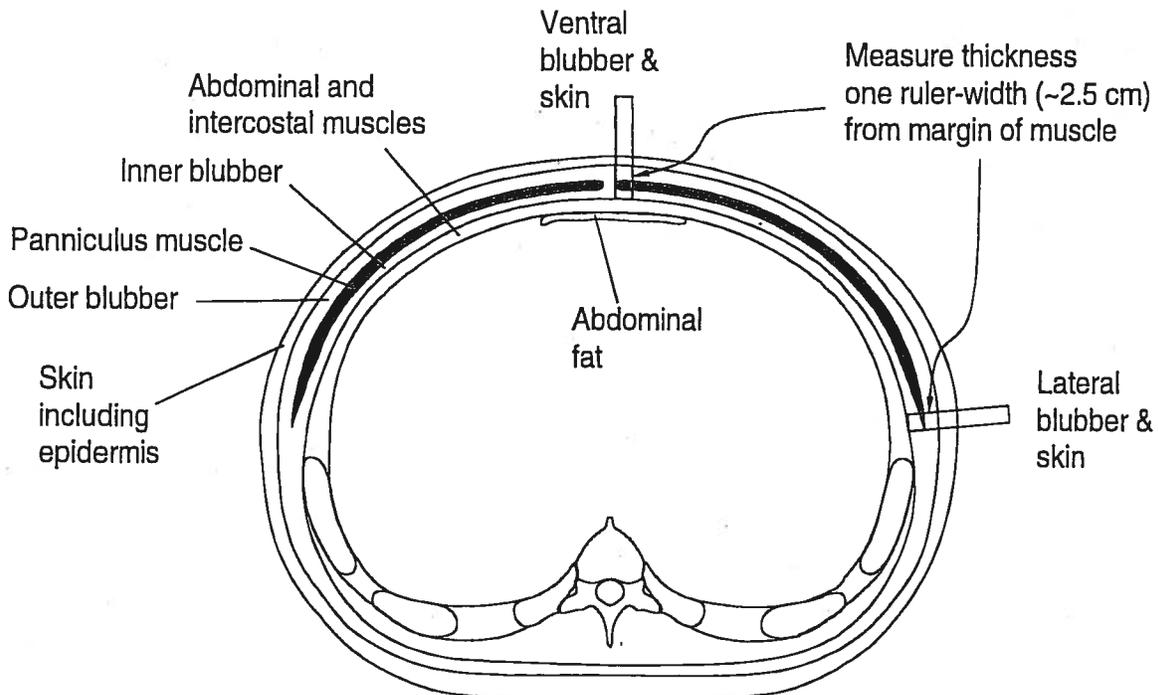
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8. *Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L ___ R ___) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21105
Date of Report: 2021-Feb-09
Filed By: FWC MMPL

FWC Case # 2273 **FWC Region:** NE

Sex: Male **Length:** 176 cm **Weight:** 86.0 kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-09 **By:** FWC-WDG,T. Johnson

DATE NECROPSIED: 2021-Feb-10 **By:** MMPL-MdW,BLB,BDB,ALP

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, floating approximately 20 m S of 400 Port Royal Blvd.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Bleached epidermis; Depleted fat(s); Serous fat(s); Serous muscle; Crumbly feces; Dry feces; Adhered lung with abscess; Large amount of mud in airways, lung parenchyma; Vegetation in airways; Congested urinary bladder mucosa; Caulerpa in GI tract.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples. Burgess samples: feces frozen. Stomach contents in alcohol.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Total length dorsum-up=170 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	176 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21105
RECOVERY DATE 09 February 2021
GENDER Male **TL** 176 **cm** **WT** 86 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 10 February 2021
CONDITION Badly Decomposed

HISTORY 09 February 2021, at 0858 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Berkeley Canal, Satellite Beach, Brevard County. FWC case number 2273 was assigned. The complainant, Delaney (321-616-3162), stated that the carcass was 5-6 feet long and fresh. At 0904 hrs, CMM received a verification photo. FWC biologist-William Greer (WDG) and FWC intern-Kylie Lawson arrived at the carcass at 0940 hrs and loaded it at 0955 hrs. WDG then transferred the carcass to FWC biologist-Trent Johnson's truck at 1028 hrs. Trent then arrived at the Port St. John boat ramp where FWC biologists-Sara Wappes and Christine Fontaine loaded MEC21104 and MEC21110 through MEC21113 into the U-trailer by 1415 hrs. TJ transported all six carcasses to the MMPL arriving by 1730 hrs.

EXTERNAL All of the epidermis was present. The carcass had a peanut-shaped head. The epidermis had diffuse bleached spots on the body. The epidermis on the caudal fluke and flippers was bleached. No watercraft-related wounds were observed. There was one well-healed watercraft-related scar pattern on the dorsal head. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat.

STOMACH The stomach contained 750 mL of moist, moderately chewed, stringy, leafy, brown and green ingesta (including *Caulerpa* pieces). The mucosa was unremarkable. There was a mild infection of dead nematodes. An ELISA toxicology sample was collected.

DUODENUM The duodenum contained 100 mL of moist, moderately chewed, stringy, leafy, brown and green ingesta (including *Caulerpa* pieces). The mucosa was unremarkable. There was a mild infection of dead nematodes.

JEJUNUM & ILEUM The small intestine contained a scant amount of pink and grey mucus. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum contained 400 mL of moist, well-digested, fibrous, stringy, brown to green digesta. The mucosa was unremarkable. No parasites were observed.

COLON The colon was contracted. The proximal colon contained a small amount of moist, well-digested, poorly formed, slightly fibrous, brown feces. The distal colon contained a moderate amount of dry, well-formed or crumbly, well-digested, slightly fibrous, dark green feces. The mucosa was unremarkable throughout. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was soft, friable, and autolyzed.

LIVER The liver was soft, friable, and autolyzed. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained a small amount of viscous, dark yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The testes were small. The seminal vesicles were small and empty of contents. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant, serous perirenal fat. The kidneys were soft. Serosal surfaces were dark blue to purple. On cut surfaces, the cortices were dark pink and the medullae were dark purple to red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 125 mL of cloudy, dark pink urine. The mucosa was mildly congested. An ELISA toxicology sample was collected.

HEART There was scant, serous epicardial fat. The heart was soft. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact and distended due to gas in the pleural cavities. The left lung was adhered to the parietal pleura at the mid dorsal-lateral aspect at left rib 10, which was associated with a large abscess on the serosa and in the parenchyma (3.8 x 3.6 cm, see photos). The lungs were swollen and very gassy. Serosal surfaces were mottled pink, light red and dark grey, and cut surfaces were pink to red and contained a large amount of dark grey sediment throughout. The airways contained an abundant amount of dark grey and brown sediment and a few small pieces of vegetation. No parasites were observed. The mucosa was tan to light pink. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS The trachea was occluded with dark brown mud. The nares were partially occluded with mud. There were a few poorly chewed blades of *Caulerpa* in the mouth.

SKELETON NVL

OTHER The muscle and connective tissue were slightly serous.

COMMENTS

SIGNIFICANT FINDINGS

- Bleached epidermis
- Depleted, serous fat
- Serous tissue
- Adhered lung associated with abscess
- Large amount of mud in lungs and airways
- Vegetation in airways
- Dry, crumbly feces
- Congested urinary bladder mucosa
- *Caulerpa* in GI tract
- Autolyzed internal organs

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

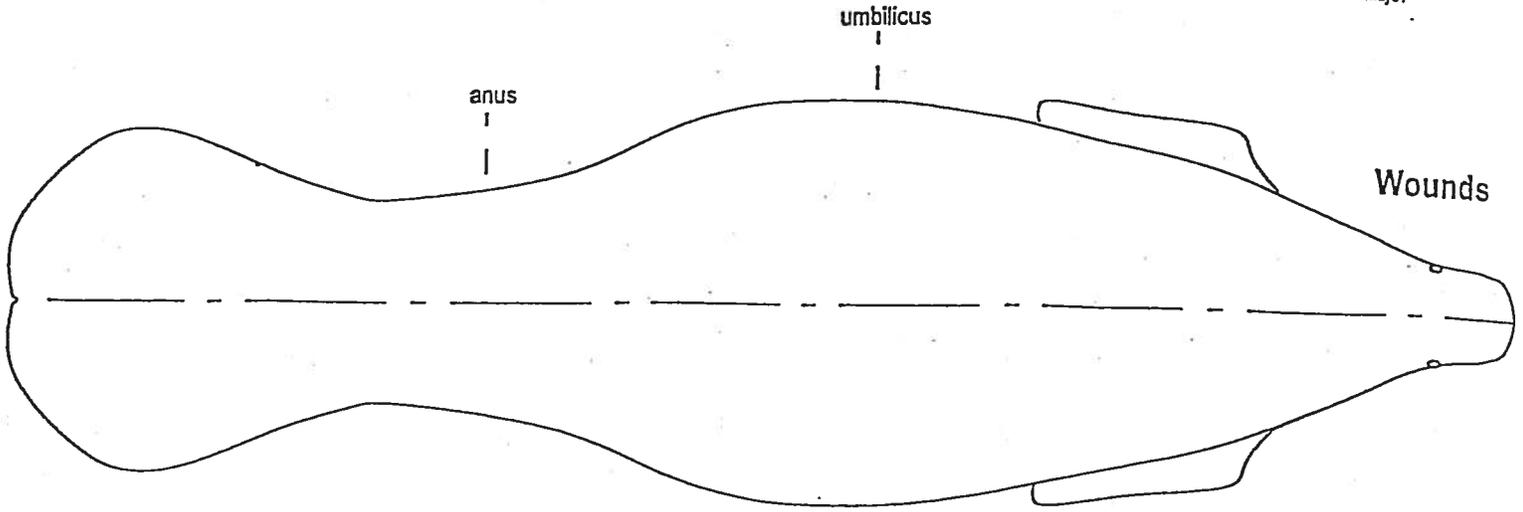
Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

REPORT FILED BY de Wit

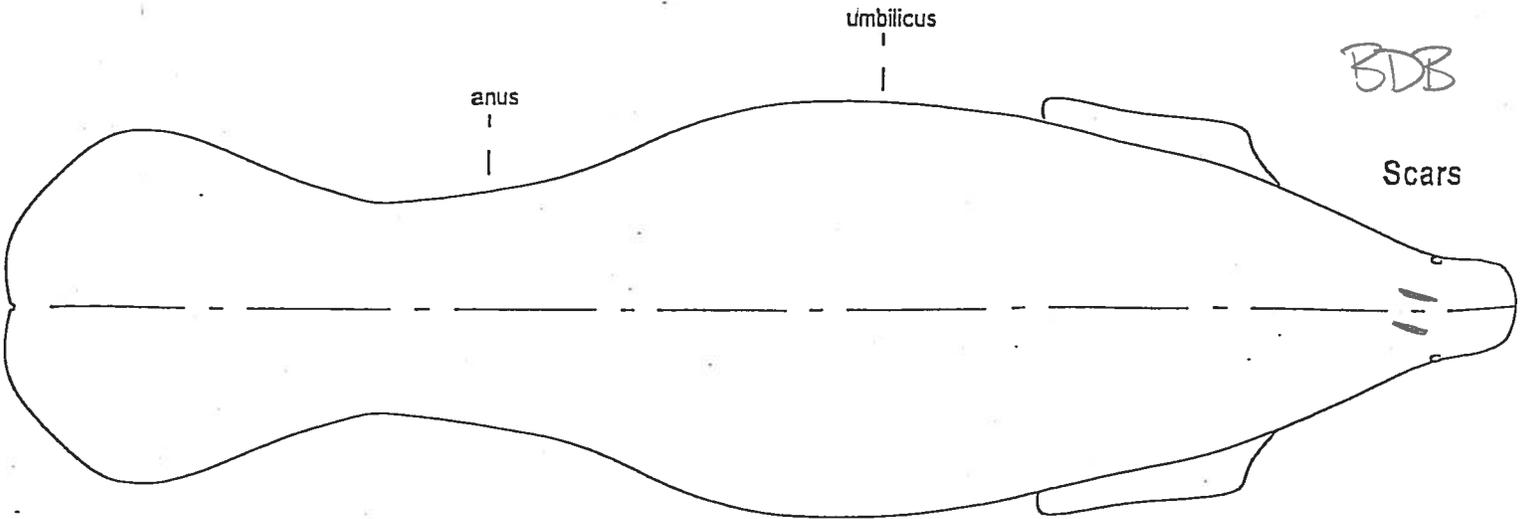
Date 09 Feb 2021

Field I.D. MFC21105

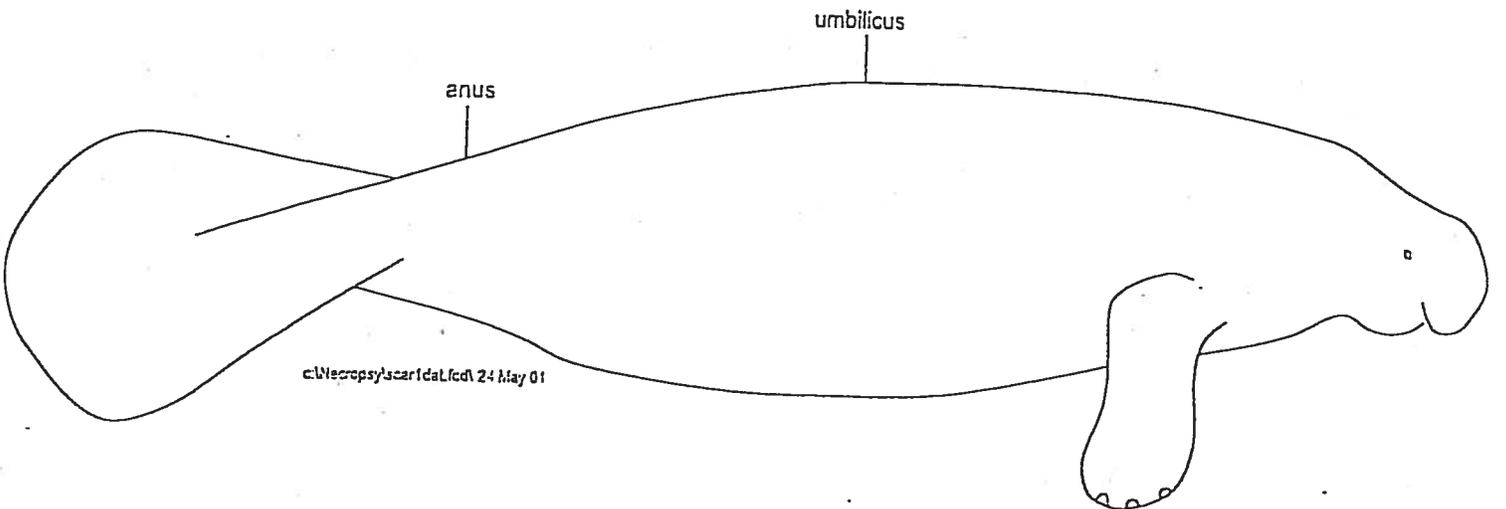
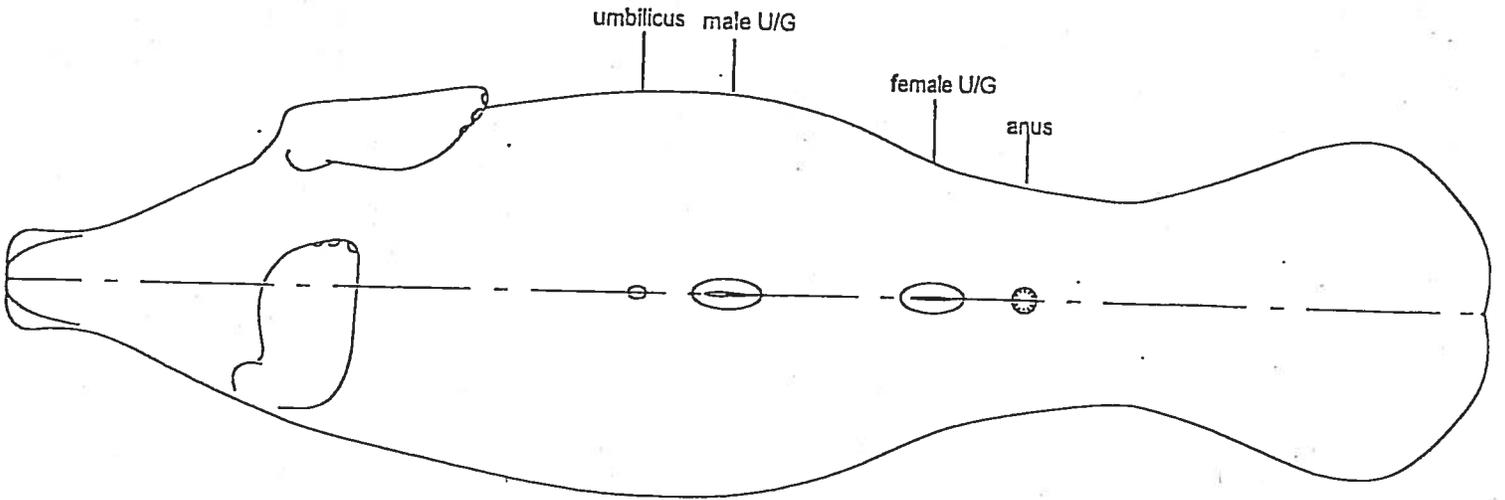
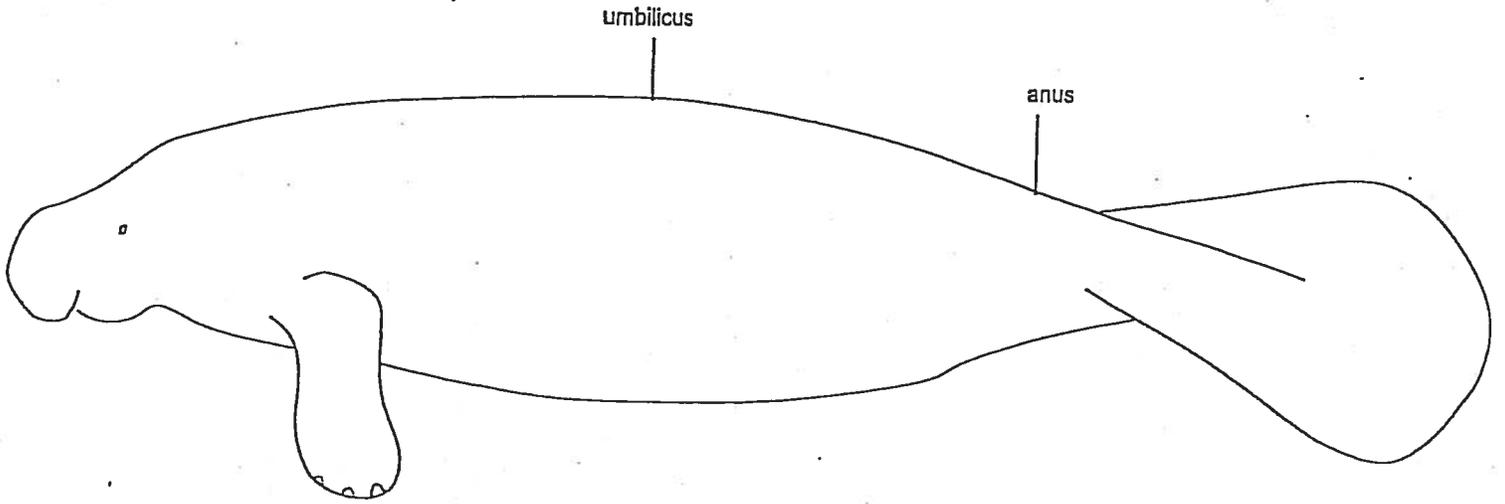
ct1 D-Old \ Necropsy \ scar2dat1 30May61



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



FWC Case # _____ FWC District: _____
Sex: M / F / Undetermined Length: 1710 cm (estimated _____) Weight 810 kg.
Date reported: _____ By: _____
Date collected: 9 Feb '21 By: HSC T. Johnson
Date necropsied: 10 Feb '21 By: Mdw BDB BDB ALP

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____

(4) Perinatal (<150 cm): Natural - Undetermined

Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)

Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other

Explain: _____

PHOTOGRAPHS: Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -

Histology - Other feces frozen Burgess, Stomach cont in alcohol

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other _____

Genetics Box # 101

Female reproductive findings or N/A?

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted/Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

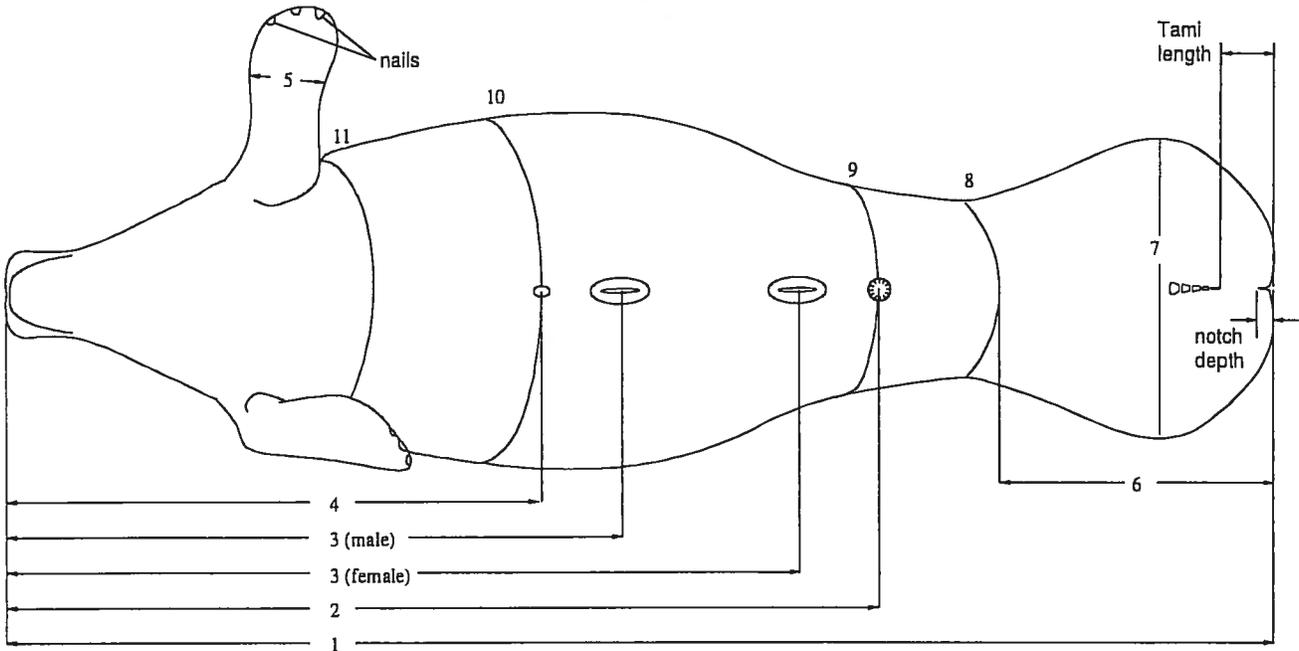
PIT TAG Scan: Negative; Positive (Left _____ - _____ - _____)(Right _____ - _____ - _____); N/T

REMARKS: dorsal SL 170 cm

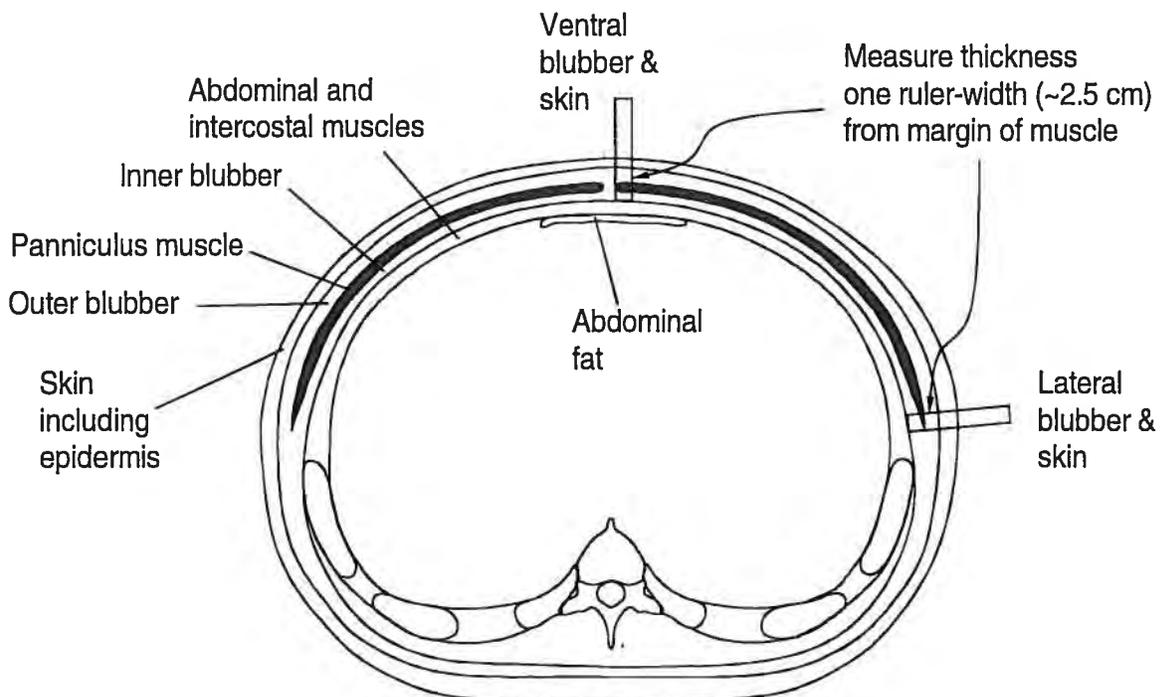
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8.*Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L__R__) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21106
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 162 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,WDG MMPL-CMF
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 355 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Thick algal mat. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	162 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21106

RECOVERY DATE 09 February 2021

GENDER Male **TL** 162 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. While searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and completed external workups on MEC21099 and MEC21106 - MEC21109 by 1355 hrs then loaded the carcasses via Ant-lift at 1430 hrs. The carcasses were disposed of at the Brevard County landfill.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was distended with gas. Bloody fluid exuded from the nares. There was a thick brown algal mat on the dorsal aspect. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Thick algal mat

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21107
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 127 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,WDG MMPL-CMF
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 245 m NNE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Cobblestone-like epidermis; Bleached epidermis; Skin lesions; Thick algal mat. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	127 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21107

RECOVERY DATE 09 February 2021

GENDER Female **TL** 127 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. While searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and completed external workups on MEC21099 and MEC21106 - MEC21109 by 1355 hrs then loaded the carcasses via Ant-lift at 1430 hrs. The carcasses were disposed of at the Brevard County landfill.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was distended with gas. There was cobblestone-like epidermis on the ventral aspect. Bleached epidermis was observed on the head, flippers, and ventral aspect. There was a thick brown algal mat on the dorsum. Linear white lesions were present on the head. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Cobblestone-like, bleached epidermis
- Skin lesions
- Thick algal mat

PROBABLE CAUSE OF DEATH Perinatal, Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21108
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 209 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,WDG MMPL-CMF
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 415 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Skin lesions; Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Other (Skin lesions).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	209 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21108

RECOVERY DATE 09 February 2021

GENDER Female **TL** 209 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. While searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and completed external workups on MEC21099 and MEC21106 - MEC21109 by 1355 hrs then loaded the carcasses via Ant-lift at 1430 hrs. The carcasses were disposed of at the Brevard County landfill.

EXTERNAL Less than 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened and had a slight peanut-shaped head. Bloody fluid exuded from the nares and mouth. The flippers were eroded due to decomposition which exposed flipper bones. There were two eroded linear wounds on the left peduncle. A minimum of one well-healed watercraft-related scar pattern was observed on the dorsal peduncle. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares
- Peanut-shaped head
- Skin lesions

PROBABLE CAUSE OF DEATH Verified, Not Necropsied

NECROPSY CONDUCTED BY

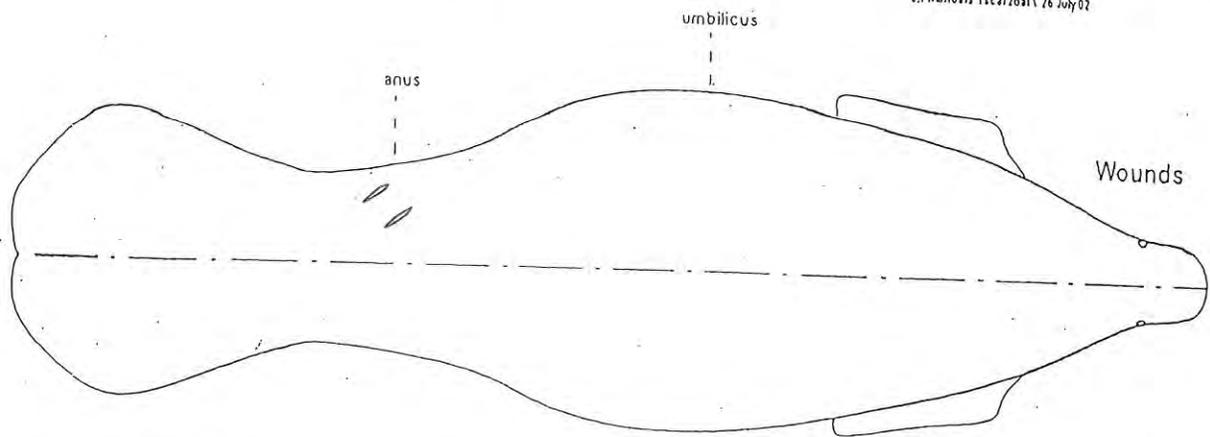
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REPORT FILED BY Greer

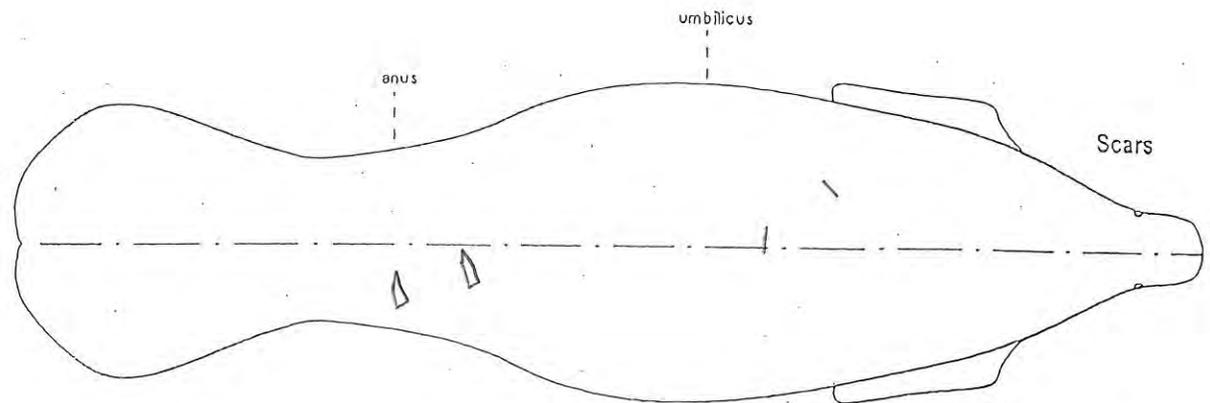
Date 09 FEB 2021

Field I.D. MEC2110B

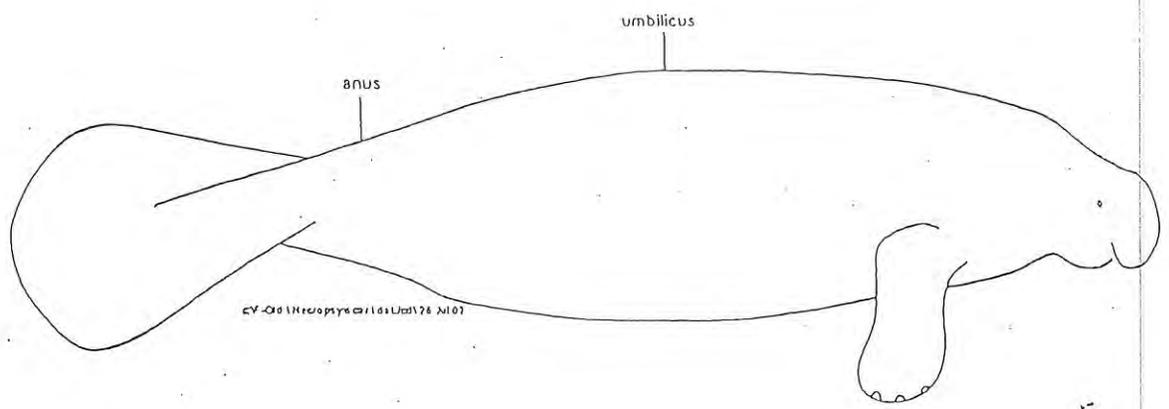
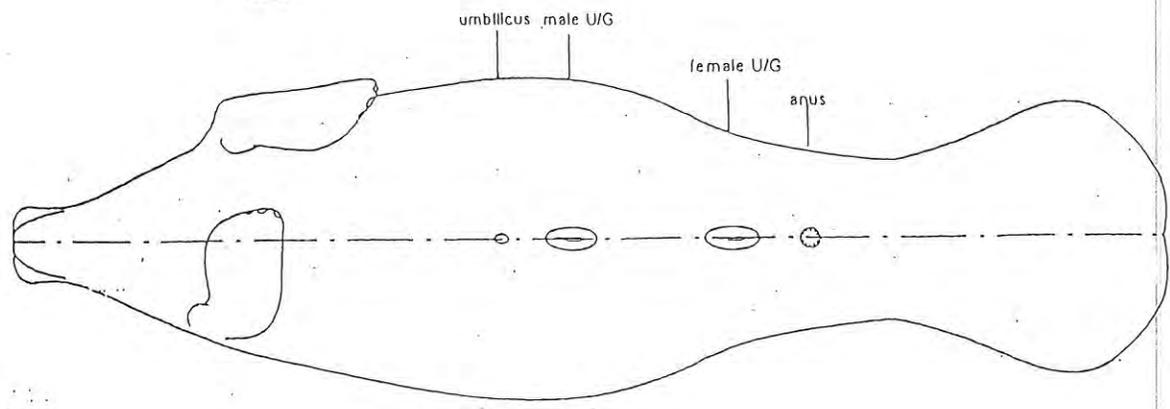
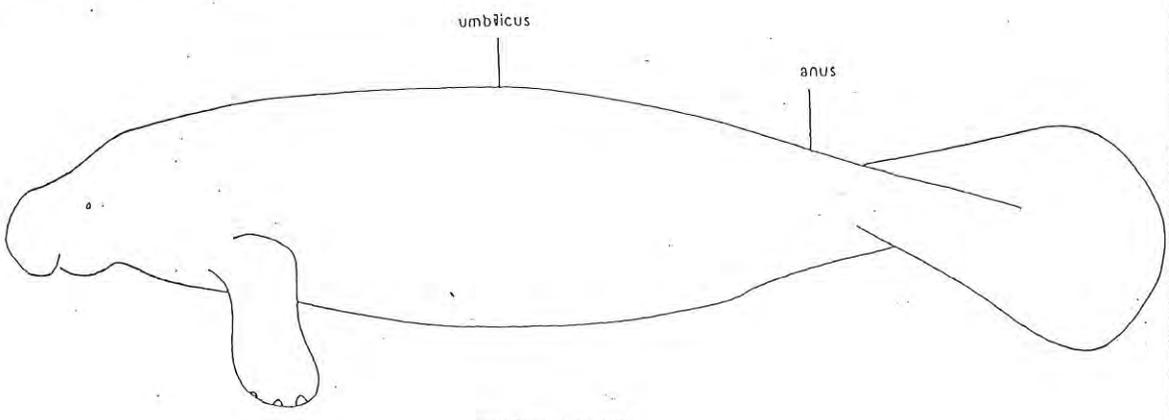
CSI Manuals Scar/Dat 1, 26 July 02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MRC2110B



CV-00 Ultrapsyca 101 Ulat 76 Jul 07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21109
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 224 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,WDG MMPL-CMF
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 265 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	224 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21109

RECOVERY DATE 09 February 2021

GENDER Male **TL** 224 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 09 February, at 1000 hrs, FWC biologists-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. After searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. At 1305 hrs, WDG and FWC intern-Kylie C. Lawson (KCL) arrived at FPL-CCEC and completed external workups on MEC21099 and MEC21106 - MEC21109 by 1355 hrs then loaded the carcasses via Ant-lift at 1430 hrs. The carcasses were disposed of at the Brevard County landfill.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The carcass was distended with gas. Bloody fluid exuded from the nares and mouth. A minimum of one well-healed watercraft-related scar pattern was observed on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

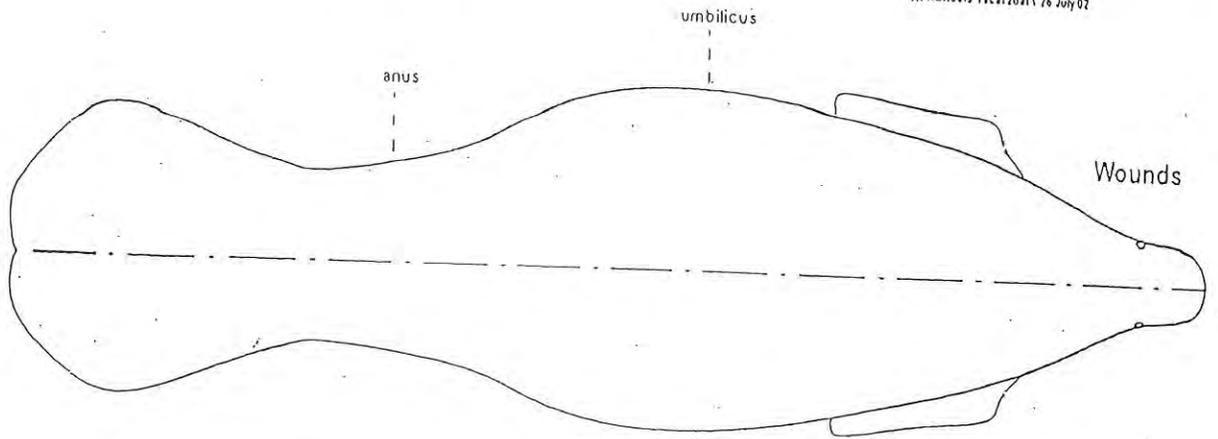
REPORT FILED BY Greer

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

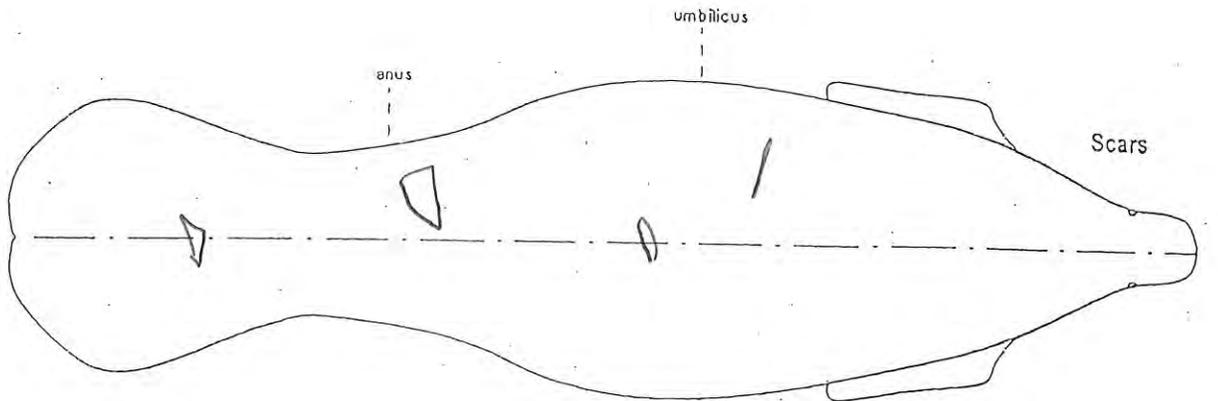
Date 09 FEB 2021

Field I.D. MEC21109

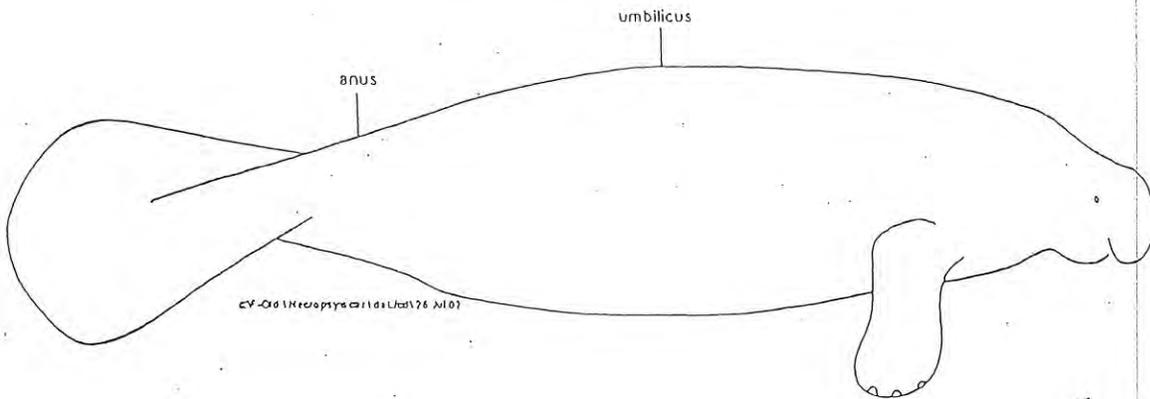
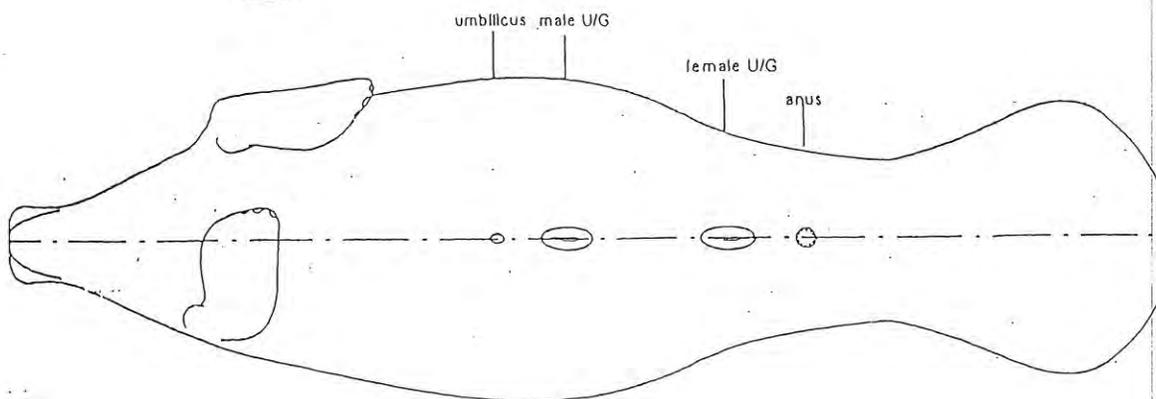
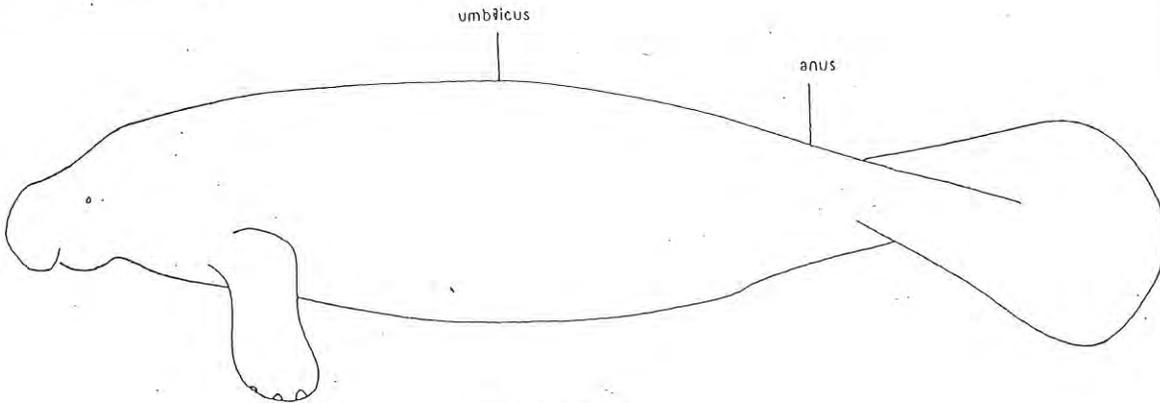
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21109



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21110
Date of Report: 2021-Feb-09
Filed By: FWC MMPL

FWC Case # FWC Region: NE

Sex: Male Length: 230 cm Weight: 216.0 kg

DATE REPORTED: 2021-Feb-09 By: FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 By: FWC-SMW,T. Johnson MMPL-CMF
DATE NECROPSIED: 2021-Feb-10 By: MMPL-MdW,BLB,BDB

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 280 m NE of 101 Cottrell Avenue.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Bleached epidermis; Depleted fat(s); Serous fat(s); Serous muscle; Relatively empty GI tract; Crumbly feces; Bloody nares; Fluid in abdominal cavity.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples. Burgess samples: feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Total length dorsum-up=232 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	230 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21110
RECOVERY DATE 09 February 2021
GENDER Male **TL** 230 **cm** **WT** 216 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 10 February 2021
CONDITION Badly Decomposed

HISTORY 09 February, at 1000 hrs, FWC biologists-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. After searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. SMW and CMF towed MEC21104 and MEC21110 - MEC21113 to the Port St. John boat ramp and met FWC biologist-Trent Johnson (TJ). They loaded the carcasses into a U-trailer by 1415 hrs and TJ transported them to the MMPL arriving at 1730 hrs.

EXTERNAL Approximately 60% of the epidermis was present but sloughing. Bloody fluid exuded from the nares. The carcass was dorsoventrally flattened due to emaciation. The ventrum was flat. The remaining epidermis of the ventral aspect was bleached in the axillae and caudal fluke. There was a thick green algal mat on the dorsal and lateral aspects. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was scant, serous, partially rendered abdominal fat, and scant, serous mesenteric and omental fat. The body cavity contained 5 L of slightly viscous, cloudy, dark red fluid.

STOMACH The stomach contained 100 mL of watery, flocculent, pink fluid. The mucosa was autolyzed. No parasites were observed.

DUODENUM The duodenum was friable, torn due to decomposition, and empty of contents. The mucosa was autolyzed. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained a scant amount of slightly viscous, light brown fluid mixed with a scant amount of well-chewed, dark green vegetation. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum contained 250 mL of moist, soft, well-digested, slightly fibrous, green digesta (assumed *Caulerpa*, based on one intact piece of algae). The mucosa was unremarkable. No parasites were observed. An ELISA toxicology sample was collected.

COLON The proximal colon contained a small amount of moist, crumbly, fibrous, moderately digested, poorly formed, light brown feces. The distal colon contained a small amount of moist, crumbly, well-digested, poorly formed, dark green feces. The mucosa was autolyzed throughout. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was soft, friable, and autolyzed.

LIVER The liver was soft, friable, and autolyzed. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained a small amount of viscous, red-yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The testes were small. There was no fluid on cut surfaces of the epididymides. The seminal vesicles were small and empty of contents.

KIDNEYS The perirenal fat was rendered. The kidneys were soft and friable. Serosal surfaces were dark pink to dark tan, and cut surfaces were dark red. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 25 mL of watery, red-tinged urine. The mucosa was autolyzed. An ELISA toxicology sample was collected.

HEART There was no epicardial fat. The heart was soft. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were mostly missing due to decomposition. The lungs were soft, friable, and autolyzed. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER All fat, connective tissue and muscle was severely serous.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Bleached epidermis
- Thick algal mat
- Bloody nares
- Depleted, serous fat
- Serous tissue
- Fluid in abdominal cavity
- Relatively empty GI tract
- Crumbly feces
- Autolyzed internal organs

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

REPORT FILED BY de Wit

FWC Case # _____ FWC District: _____
Sex: M / F / Undetermined Length: 230 cm (estimated _____) Weight 216 kg.
Date reported: _____ By: _____
Date collected: _____ By: _____
Date necropsied: _____ By: _____

LOCATION: State: FL (____) County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - ~~Scars~~ - ~~Fluke~~ - ~~Cranial~~ - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -

Histology - Other feces frozen Burgess

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other cecum cont

Genetics Box # 106

Female reproductive findings of N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted/Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

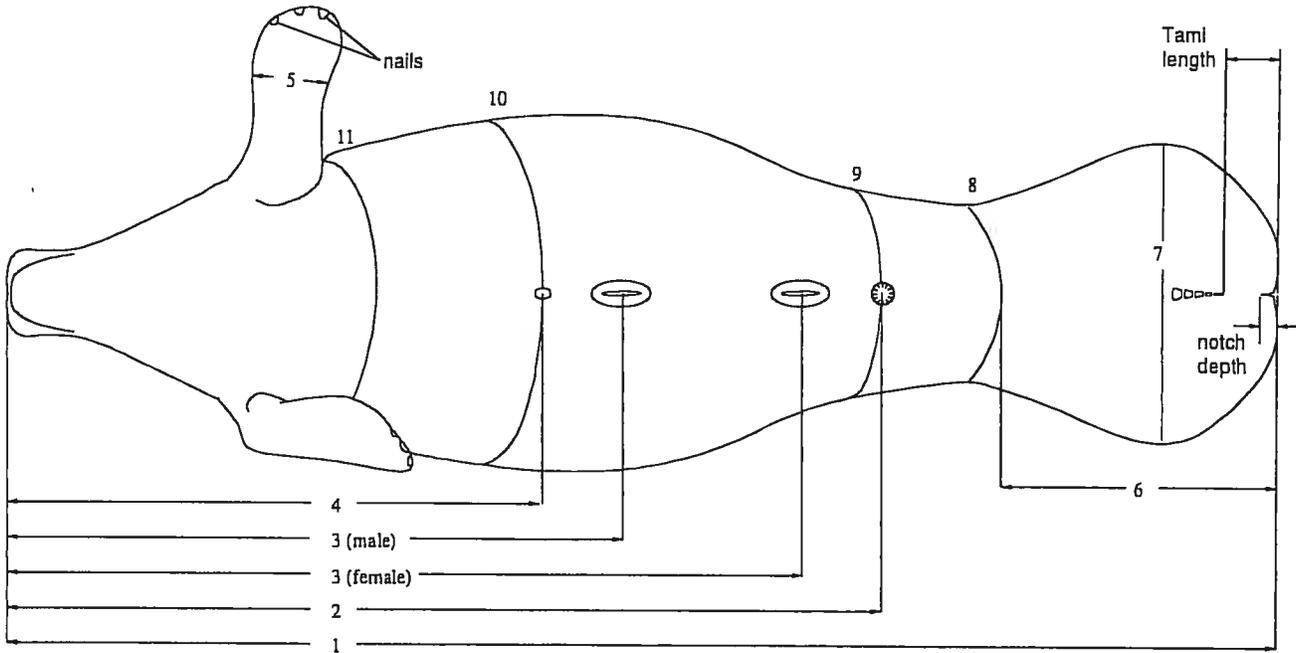
PIT TAG Scar: Negative; Positive (Left _____ - _____ - _____)(Right _____ - _____ - _____); N/T

REMARKS: Dorsal SL 232 cm

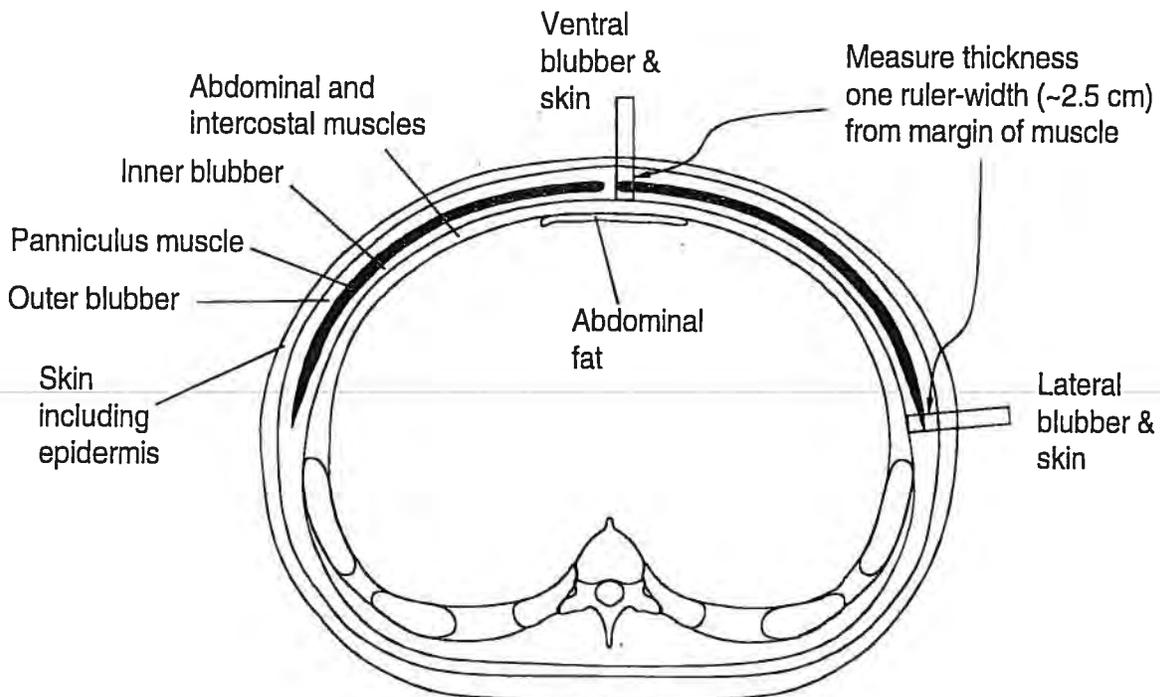
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8. *Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L__R__) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21111
Date of Report: 2021-Feb-09
Filed By: FWC MMPL

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 281 cm **Weight:** 385.0 kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SMW,T. Johnson MMPL-CMF
DATE NECROPSIED: 2021-Feb-10 **By:** MMPL-MdW,BLB,BDB,ALP

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 250 m NNE of 101 Cottrell Avenue.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Relatively empty GI tract; Crumbly feces; Sandy feces; Bloody eyes, nares; Fluid in pleural cavity; Dark red ascites; Specks parietal pleura.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Entangled flipper).

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples. Burgess samples: feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-0671-E9EF; Right: 00-0671-F45F). Uterine Scar. A field necropsy was performed. Monofilament in colon. Plastic in colon. Braided line in colon. Plastic coated wire in colon. Entangled in monofilament (left flipper). Braided line entangled around left flipperKidney stones. Known as MIPS ID BC809, LPZ103230, REC1507, "Bree", first sighted on 11 Feb 2010 at FPL Canaveral power plant, captured on 09 Feb 2015 as the mother of a rescued calf. Total length dorsum-up=286 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	281 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	8	6.5
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21111

RECOVERY DATE 09 February 2021

GENDER Female **TL** 281 **cm** **WT** 385 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 10 February 2021

CONDITION Badly Decomposed

HISTORY 09 February, at 1000 hrs, FWC biologists-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. After searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. SMW and CMF towed MEC21104 and MEC21110 - MEC21113 to the Port St. John boat ramp and met FWC biologist-Trent Johnson (TJ). They loaded the carcasses into a U-trailer by 1415 hrs and TJ transported them to the MMPL arriving at 1730 hrs.

EXTERNAL Approximately 75% of the epidermis was present but sloughing. Bloody fluid exuded from the eyes and nares. The ventrum was flat. The ventral neck appeared swollen. The ventral epidermis had a few patches of cobblestone-like epidermis. There was a well-healed triangular-shaped white scar on the dorsal muzzle. A thick green algal mat was present on the dorsal aspect. No watercraft-related wounds were observed. A minimum of three well-healed watercraft-related scar patterns was observed on the dorsal aspect. The fluke margin had a well-healed mutilation at the 7 o'clock position. The proximal aspect of the left flipper had a chronic entanglement of several loops of monofilament and braided line associated with white scar tissue. PIT tag scan was positive (Left: 00-0671-E9EF; Right: 00-0671-F45F), known as MIPS ID BC809, LPZ103230, REC1507, Bree, captured on 09 February 2015 as the mother of a rescued calf. A genetics sample was collected.

ABDOMINAL There was scant, serous abdominal, mesenteric, and omental fat. The abdomen contained 1.5 L of watery, dark red fluid.

STOMACH The stomach was distended with gas and contained 350 mL of watery, flocculent, pink fluid. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum was distended with gas and contained 250 mL of watery, flocculent, pink fluid mixed with small chunks of orange paste. The mucosa was tan and the distal portion had black streaks. No parasites were observed.

JEJUNUM & ILEUM The small intestine contained a scant amount of viscous, bright orange mucus. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum was contracted and contained 25 mL of viscous, homogeneous, dark green paste and a few pieces of moderately digested green *Caulerpa*. The mucosa was tan. The distal portion of the mucosa had black streaks. No parasites were observed.

COLON Portions of the distal colon were contracted. The distal colon contained a moderate amount of moist, slightly fibrous, crumbly, sandy, well-digested, dark green feces. The proximal colon contained a small amount of moist, fibrous, stringy, well-formed, moderately digested, sandy, light green to light brown feces. An ELISA toxicology sample was collected. There were numerous pieces of clear monofilament line (between 8 and 15 lb test diameter), one piece of braided line, one piece of green-stained plastic bag, one firm string of thin green plastic, and one small piece of black plastic coated wire throughout the colon (see photo). The mucosa was sloughing. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was soft, friable, and autolyzed.

LIVER The liver was soft, friable, and autolyzed. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder was empty of contents. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The uterus was contracted. The right horn contained a scar (6.5 cm wide x 8 cm circumference). The left horn contained an old, poorly defined, almost resolved scar. There were no follicles on the ovaries.

KIDNEYS There was scant, serous perirenal fat. The kidneys were firm and swollen. Serosal surfaces were dark red to light purple. On cut surfaces, the cortices were dark pink and the medullae were dark red. The centers of the medullae contained tan grit. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 75 mL of clear, light yellow urine. The mucosa was unremarkable. An ELISA toxicology sample was collected.

HEART There was scant, serous epicardial fat. The heart was soft. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were torn at the cranial aspect. The parietal pleura had diffuse black and red gelatinous specks. The right pleural cavity contained 4 L of watery, dark red fluid. The lungs were friable. Serosal surfaces were pink to purple and cut surfaces were red. The cut surfaces of the right lung were very wet. The airways were torn due to decomposition and empty of contents. The mucosa was autolyzed. No parasites were observed. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS NVL.

SKELTON The left flipper entanglement was at the elbow joint and penetrated onto the bone, but there was no bone reaction visible.

OTHER All fat, connective tissue, and muscle was severely serous.

COMMENTS

SIGNIFICANT FINDINGS

- Bloody eyes, nares
- Emaciated
- Depleted, serous fat
- Serous tissue
- Relatively empty GI tract
- Crumbly, sandy feces
- Fluid in pleural cavity
- Wet lung
- Dark red ascites
- Specks parietal pleura
- Kidney stones
- Uterine scars
- Chronic embedded flipper entanglement
- Monofilament, plastic, braided line, plastic-coated wire in colon
- PIT tag positive, known as LPZ103230, REC1507, Bree, BC809

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

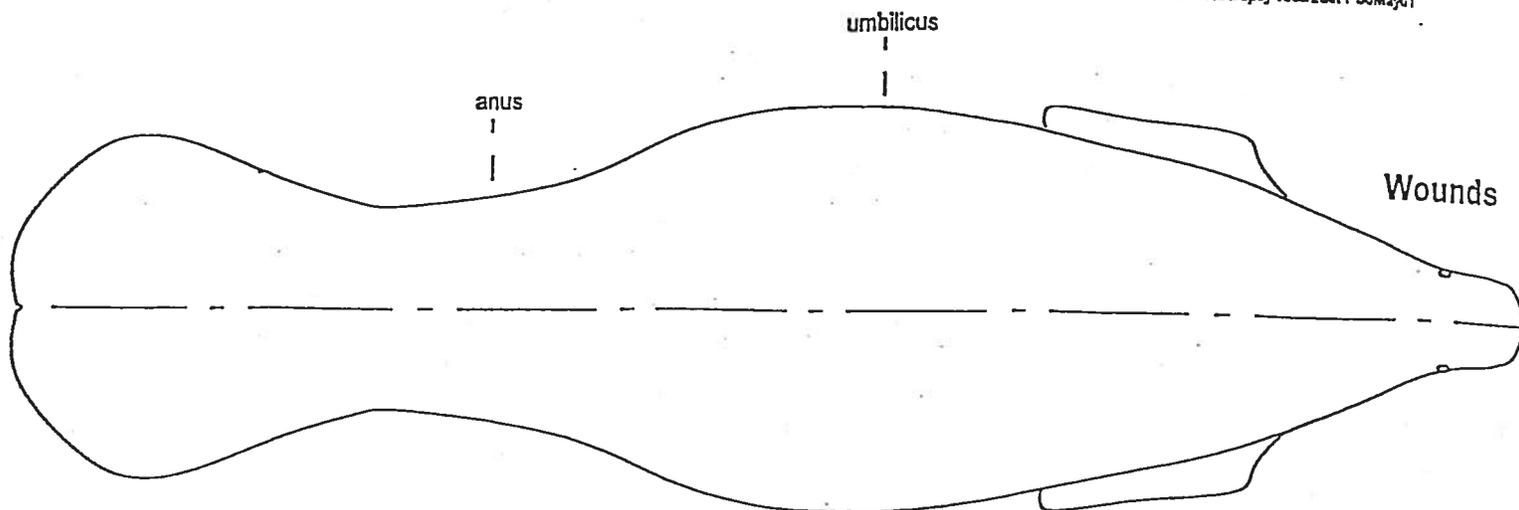
REPORT FILED BY de Wit

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

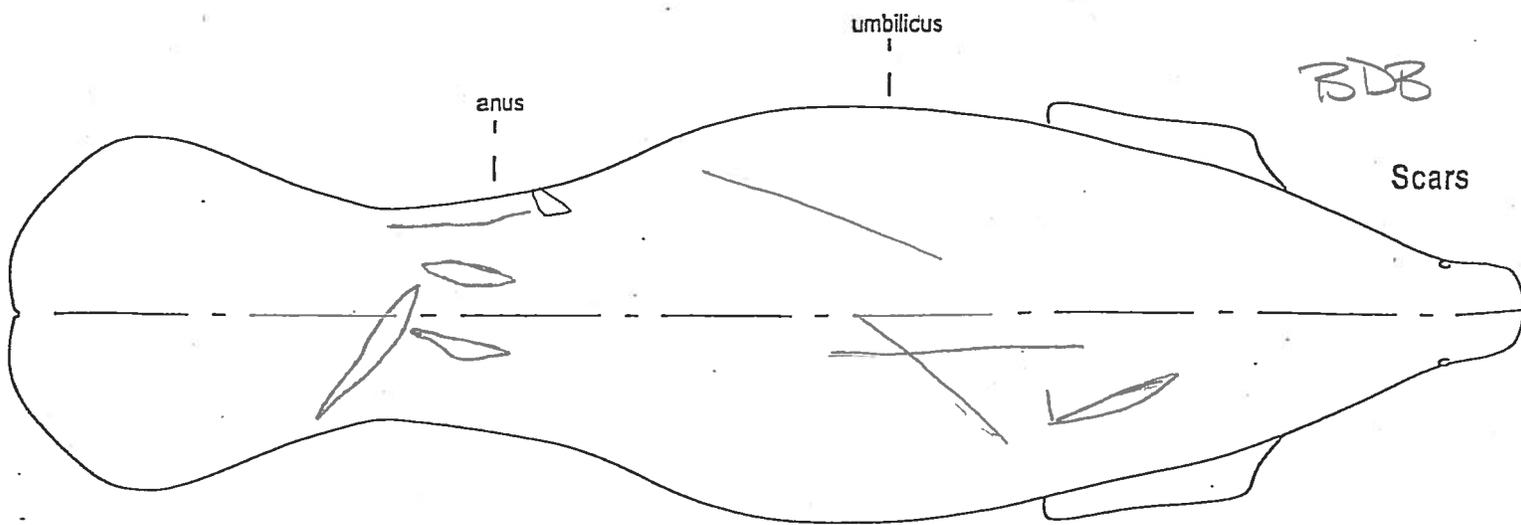
Date 09 Feb 2021

Field I.D. MEC2111

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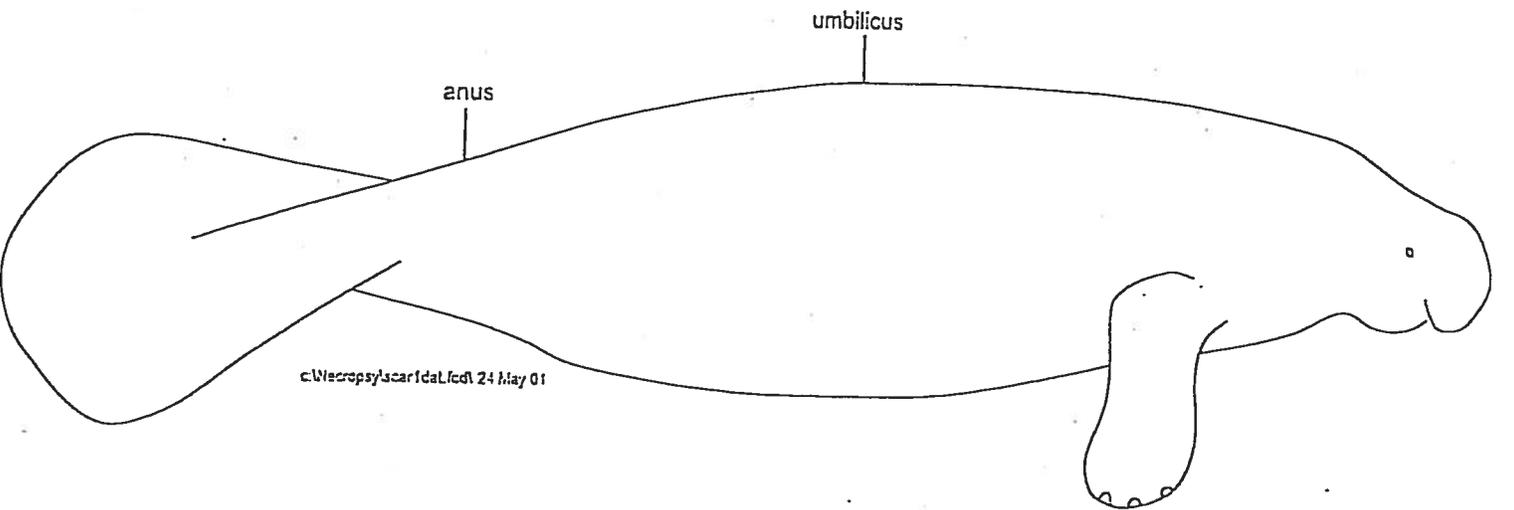
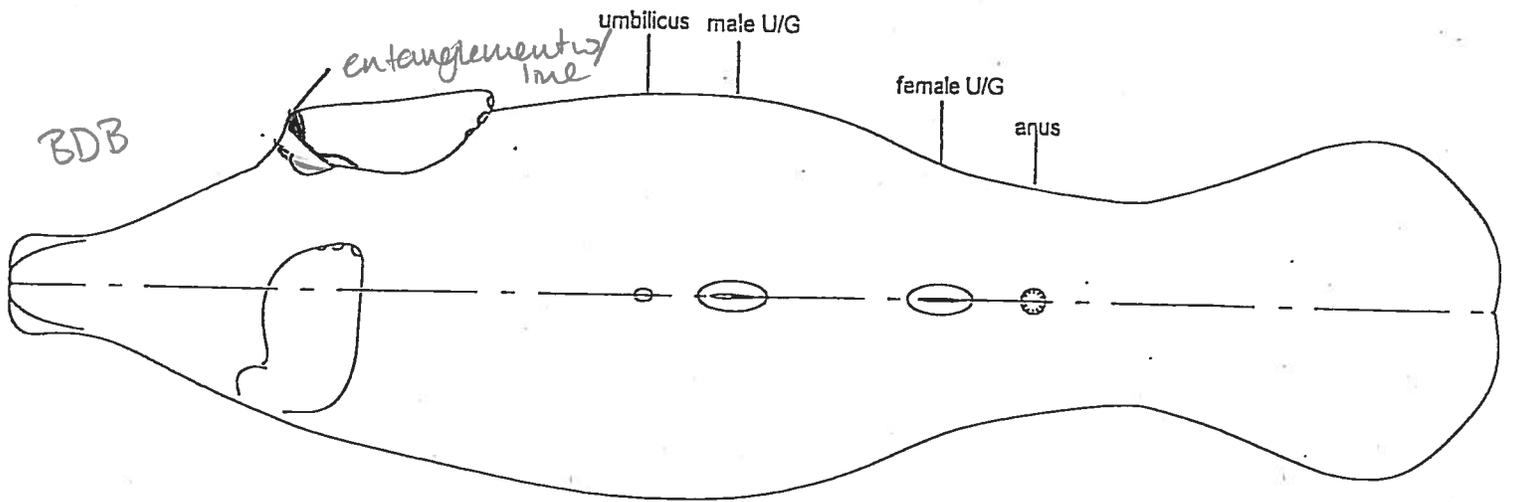
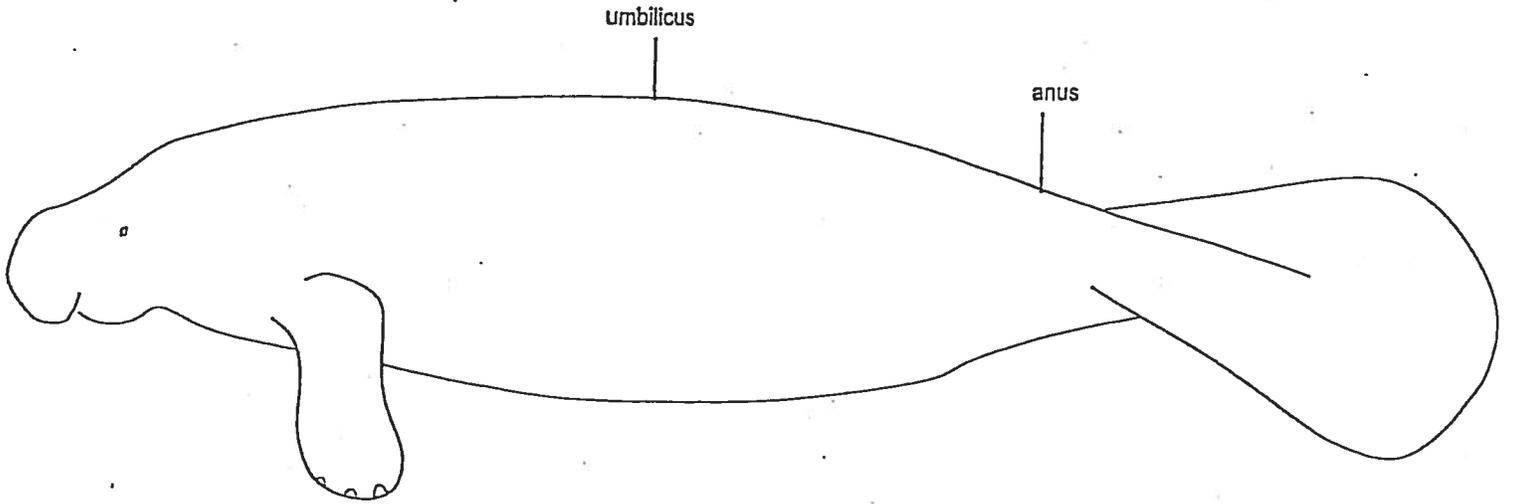
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Length																				
Width																				
Depth																				
Distance																				



over →

FIELD I.D.

MFC2111



Bassett, Brandon

From: Rood, Kari
Sent: Monday, February 22, 2021 9:04 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21111=BC809

MEC21111. This animal was PIT tag positive and is also known as REC1507, LPZ103230, and Bree.

Carcass location: Indian River, Port St. John
Female

First sighted 2/11/10 at Indian River, FPL Canaveral Power Plant
Rescued 2/9/15 from Banana River (mother of rescued calf)
Released 3/24/15 in Banana River
Last sighted 3/16/17 at Indian River, FPL Canaveral Power Plant
USGS should be able to provide a complete sighting history if needed.

PIT tag positive; verified via photo-ID: HONAKER 2/20/21 & KAH 2/22/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

FWC Case # _____ FWC District: _____
Sex: M / F Undetermined Length: 281 cm (estimated _____) Weight 385 kg.
Date reported: _____ By: _____
Date collected: 9 Feb '21 By: HSC T. Johnson
Date necropsied: 10 Feb '21 By: MdW BUB BDB ACP

LOCATION: State: FL (____) County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (≤150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site Other

MTLS COLLECTED: Genetics Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other feces frozen Burgess entangled flipper

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver Lung Urine - Kidney (if no urine) - Other feces

Genetics Box # 101

Female reproductive findings or N/A

LACTATING Yes No UNK PREGNANT Yes No UNK UTERINE SCAR Yes No - UNK

UTERINE HORNS: Small diameter - Contracted Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

PIT TAG Scan: Negative; Positive (Left 00 - 0671 - E9EF (Right 00 - 0671 - F45F); N/T

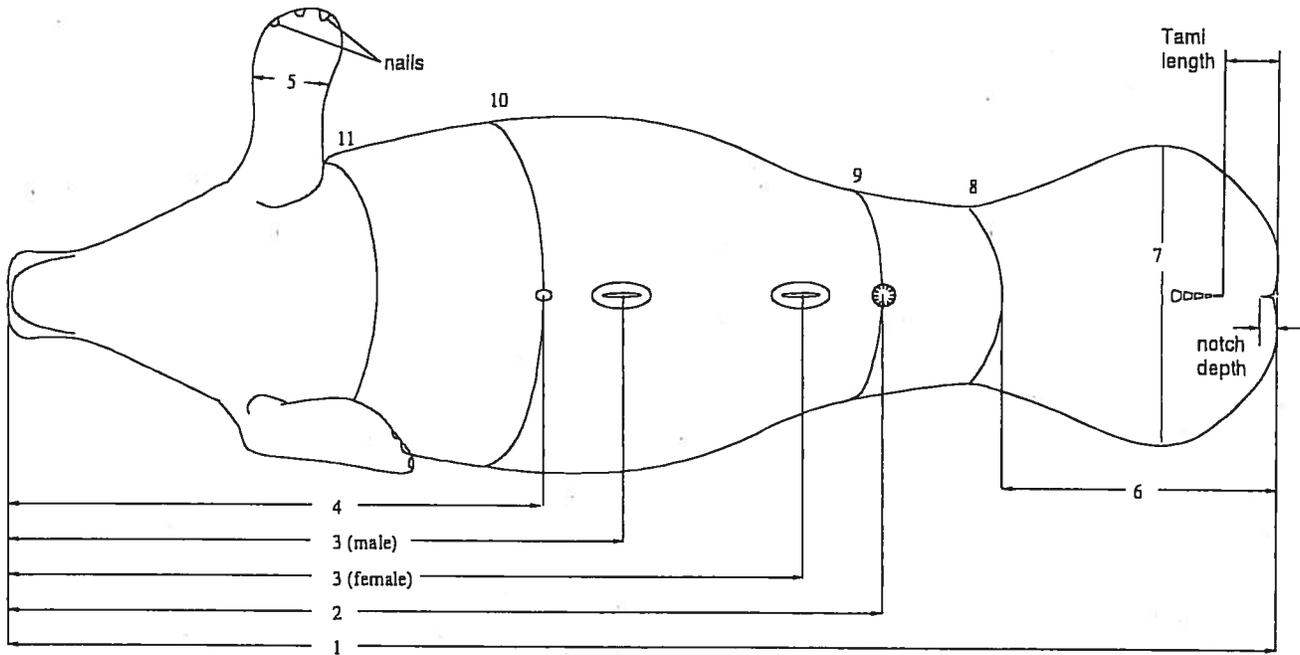
REMARKS: Dorsal SL = 286

L teat mutilated

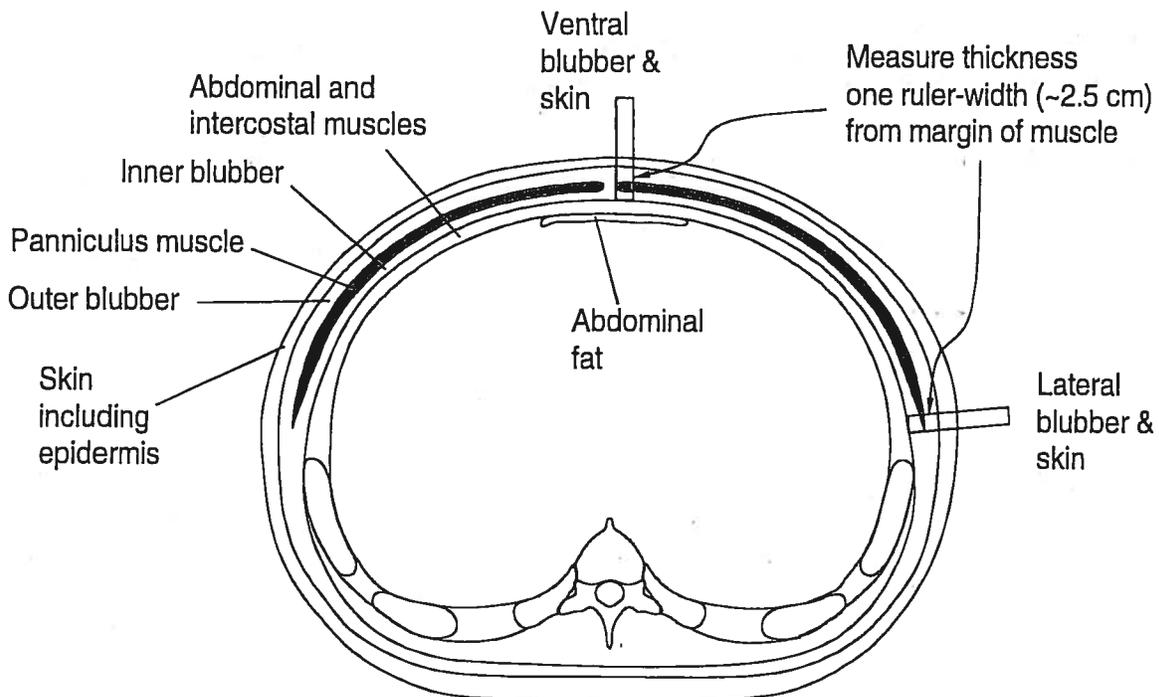
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8. *Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L ___ R ___) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21112
Date of Report: 2021-Feb-09
Filed By: FWC MMPL

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 223 cm **Weight:** 195.0 kg

DATE REPORTED: 2021-Feb-09 **By:** FWC-SMW MMPL-CMF
DATE COLLECTED: 2021-Feb-09 **By:** FWC-SWM,T. Johnson MMPL-CMF
DATE NECROPSIED: 2021-Feb-10 **By:** MMPL-MdW,BLB,BDB,ALP

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 250 m NNE of 101 Cottrell Avenue.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Relatively empty GI tract; Dry, hard feces; Crumbly feces; Gritty sediment in GI tract; Fluid in pleural cavities; Dark red ascites; Swollen kidneys; Small string of algae in mouth; Enlarged lymph nodes.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal, Other (Healing wound).

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples. Burgess samples: feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Bleached epidermis; Adhered kidney with chronic tear. Lung adhesion with old blood clots and fibrin. Almost healed watercraft wound. Remodeling ribs. Abscess in peduncle muscle. Total length dorsum-up=219 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	223 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21112

RECOVERY DATE 09 February 2021

GENDER Female **TL** 223 **cm** **WT** 195 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 10 February 2021

CONDITION Badly Decomposed

HISTORY 09 February, at 1000 hrs, FWC biologist-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. After searching for a previously reported carcass (MEC21099), they also collected MEC21106 - MEC21113. SMW and CMF towed MEC21104 and MEC21110 - MEC21113 to the Port St. John boat ramp and met FWC biologist-Trent Johnson (TJ). They loaded the carcasses into a U-trailer by 1415 hrs and TJ transported them to the MMPL arriving at 1730 hrs.

EXTERNAL All of the epidermis was present. There was a thick green algal mat on the dorsal aspect. The caudal right dorsum had an almost healed watercraft wound pattern which had raised white scar tissue. The ventrum was flat. The epidermis was bleached on the flippers. No watercraft-related scars were observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was scant, serous abdominal, mesenteric, and omental fat. The abdomen contained 2 L of watery, cloudy, dark red fluid.

STOMACH The stomach was contracted and contained 125 mL of thick, cloudy, flocculent, pink fluid. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum was contracted and contained 50 mL of thick, cloudy, flocculent, pink fluid mixed with gritty sediment. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained a scant amount of pink mucus. The distal small intestine contained a scant amount of tan mucus. The mucosa was unremarkable throughout. No parasites were grossly observed.

CECUM The cecum was contracted and contained 125 mL of wet, poorly digested, fibrous, light green digesta. The mucosa was sloughing. The wall had patches of severe congestion. No parasites were observed.

COLON The colon was contracted. The proximal colon contained a scant amount of dry, hard, well-formed, sandy, moderately digested, fibrous, light brown feces. An ELISA toxicology sample was collected. The mid colon contained a small amount of dry, hard, sandy, well-formed, moderately digested, fibrous, dark green feces. The distal colon contained a small amount of dry, firm, crumbly, sandy, well-digested, moderately formed, green feces. The mucosa was sloughing throughout. The wall had diffuse patches of severe congestion. No parasites were observed.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was purple to black on serosal surfaces, and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was soft. Serosal surfaces were dark blue and cut surfaces were dark red. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 25 mL of viscous, flocculent, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The diameter of the uterus was small. No scars were present. There were no follicles on the ovaries.

KIDNEYS There was a small amount of serous perirenal fat. The kidneys were swollen. The mid-dorsal aspect of the right kidney was strongly adhered to the capsule. The mid-dorsal aspect of the kidney capsule was torn due to partially remodeled fractured right rib 15 (see photos). The right kidney had dark grey mottling on all aspects. Both kidneys were light purple to dark blue on serosal surfaces. On cut surfaces, the cortices were dark grey and the medullae were red. The corticomedullary boundaries were distinct.

URINARY BLADDER The bladder contained 15 mL of cloudy, dark pink urine. The mucosa was unremarkable. An ELISA toxicology sample was collected.

HEART There was scant, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. Each pleural cavity contained 0.5 L of watery, dark red fluid. There were black specks on the left parietal pleura. The right parietal pleura was coated with gelatinous, dark grey material and had a dense concentration of dark grey mottling. The cranial ventral one-third of the right lung was adhered to the hemidiaphragm and associated with a small amount of resolving blood clots and dark tan fibrin. The right lung had a mostly healed scar at the caudal tip. Both lungs were pink to red on serosal surfaces, and dark red and wet on cut surfaces. The airways contained a small amount of viscous, dark red fluid and a few pieces of light green vegetation. No parasites were observed. The mucosa was dark pink. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS There was a few small strings of well-chewed *Caulerpa* and one 8 cm long string piece of Tyvek bag in the back of the mouth. The trachea contained a small amount of watery, dark red fluid. The mucosa was red.

SKELTON Right rib 14 had a partially remodeled transverse fracture at the mid one-third. Right ribs 15 and 16 had offset partially remodeled oblique fractures at the proximal one-third. The fracture of right rib 15 protruded into the pleural cavity and was associated with the lung and kidney lesions. Right rib 17 had a closed subluxation. The rib trauma was deep to the almost healed watercraft wound on the caudal right dorsum.

OTHER All muscle, fat and connective tissue was severely serous. There was a 5 cm diameter abscess in the left ventral peduncle muscle. The axillary lymph nodes were slightly enlarged and firm.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Depleted, serous fat
- Serous tissue
- Relatively empty GI tract
- Gritty sediment in GI tract
- Dry, hard, crumbly feces
- Fluid pleural cavities
- Wet lungs
- Dark red ascites
- Swollen kidneys
- Small string of algae in mouth
- Enlarged lymph nodes

- Adhered kidney with chronic tear
- Lung adhesion with old blood clots and fibrin
- Bleached epidermis
- Almost healed watercraft wound
- Abscess peduncle muscle
- Remodeling ribs

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

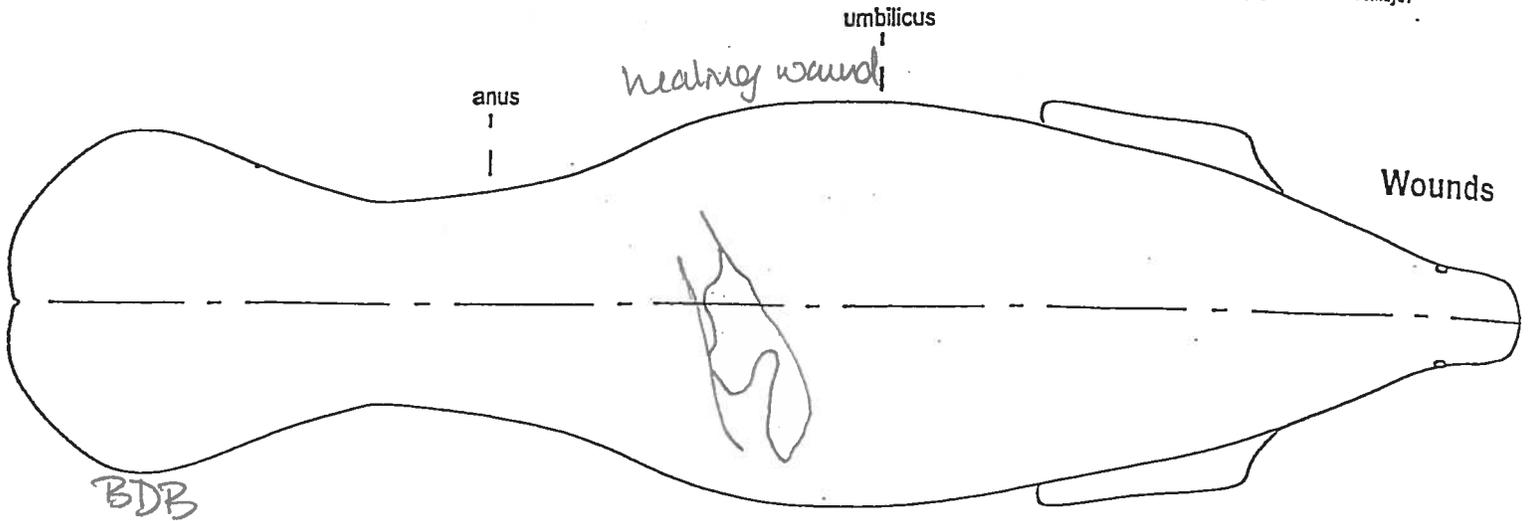
REPORT FILED BY de Wit

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

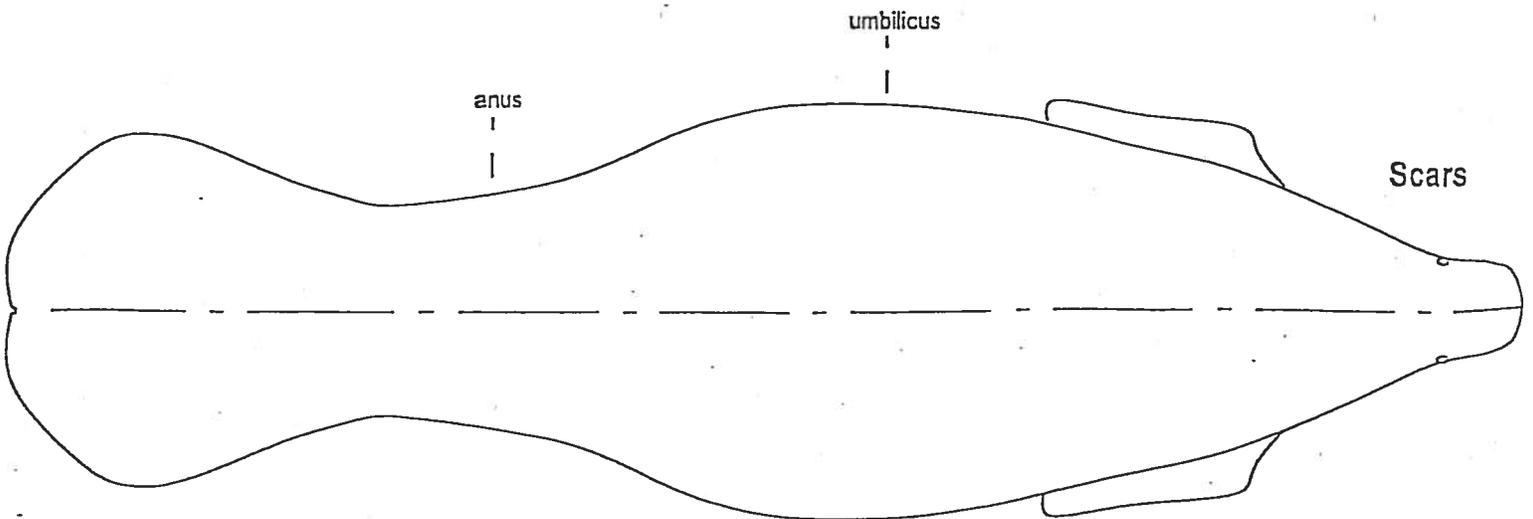
Date 09 Feb 2021

Field I.D. MFC21112

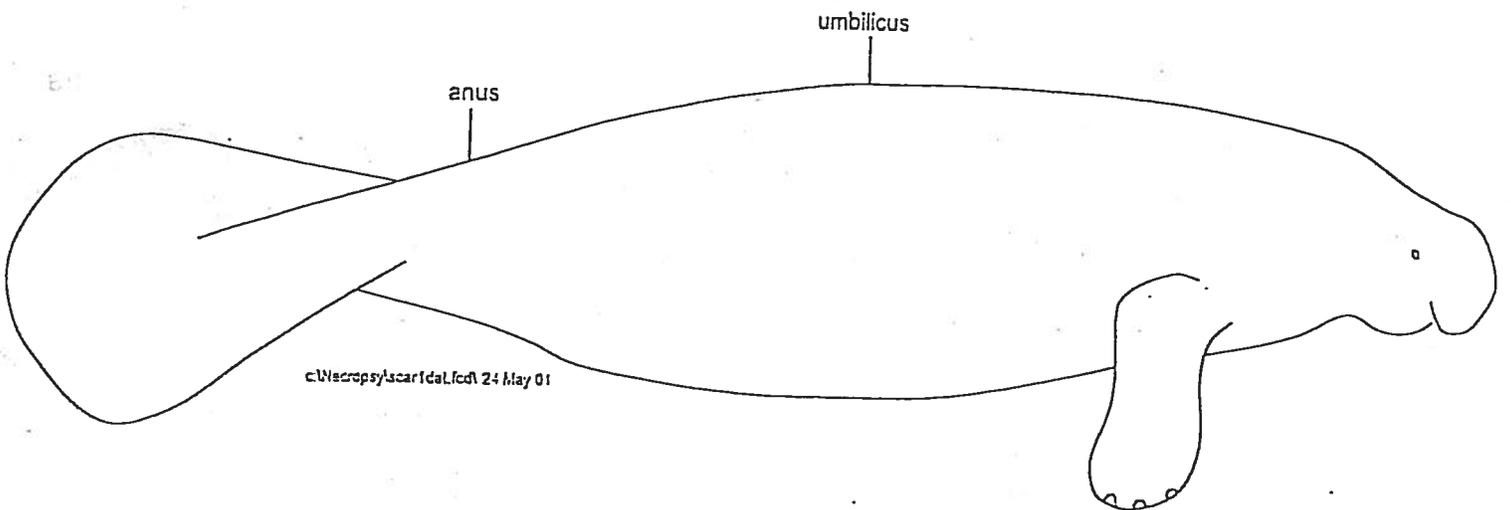
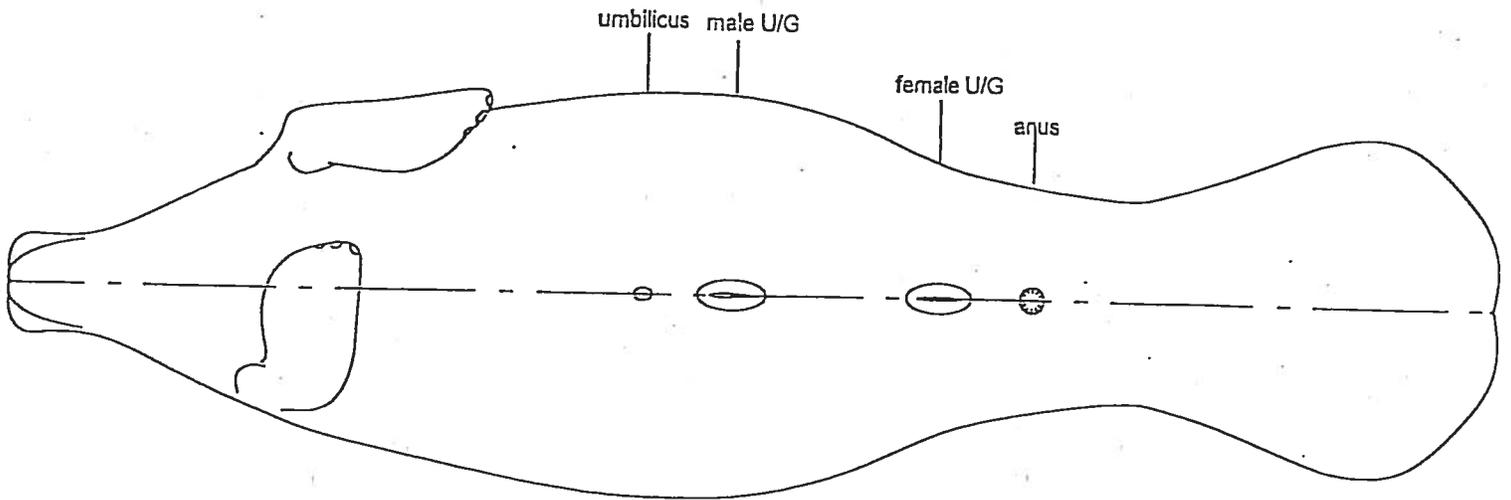
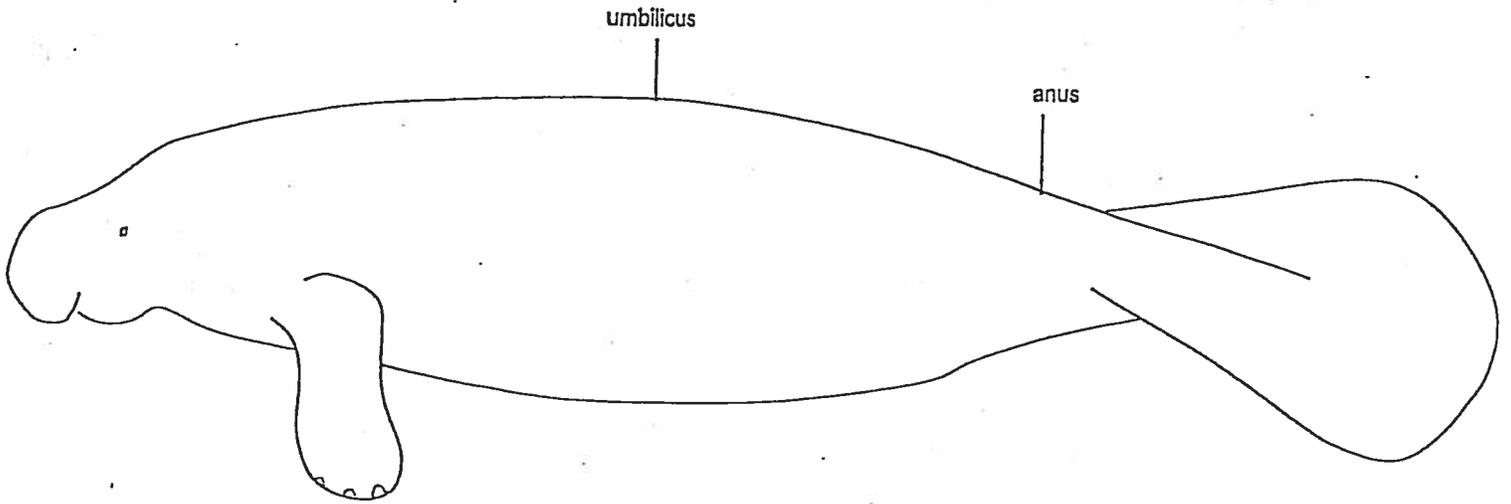
CID-Old 1 Necropsy 1 scar2dat1 30May61



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Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



FWC Case # _____ FWC District: _____
Sex: M F Undetermined Length: 223 cm (estimated _____) Weight 195 kg.
Date reported: _____ By: _____
Date collected: 9 Feb 21 By: HSC T. Johnson
Date necropsied: 10 Feb 21 By: MdW BLB BDB ALP

LOCATION: State: FL (____) County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site Other
MTLS COLLECTED: Genetics Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other Peces Burgess Frozen healing wound
Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____
ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other Peces
Genetics Box # 101

Female reproductive findings or N/A
LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK
UTERINE HORNS: Small diameter - Contracted/Distended - UNK
ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation
Organ weights - Rescue Report/Map - Other _____

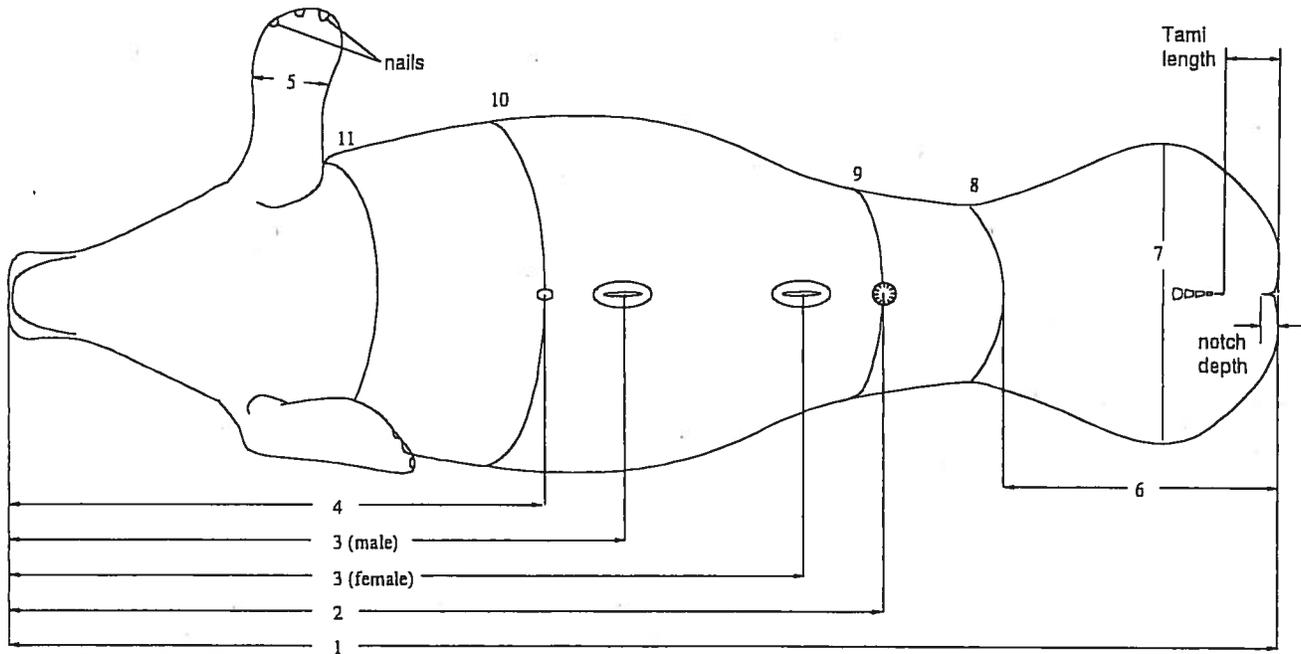
PIT TAG Scan: Negative; Positive (Left _____ - _____ - _____)(Right _____ - _____ - _____); N/T

REMARKS: Dorsal SL 219 cm

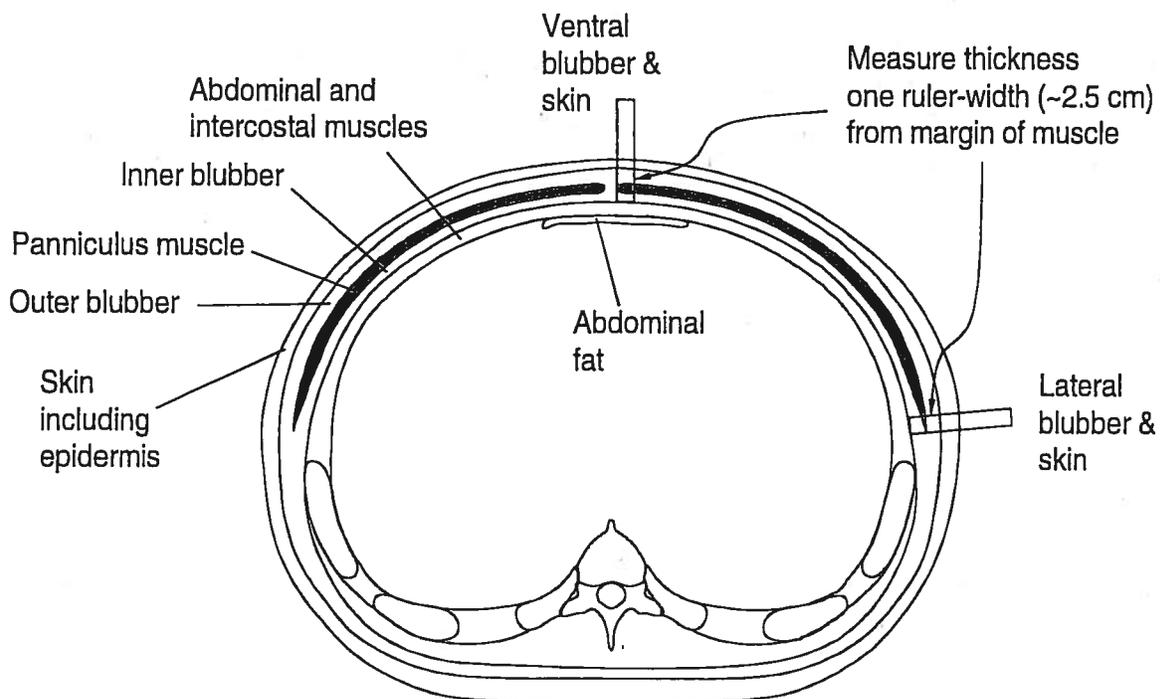
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8. *Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L__R__) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21113
Date of Report: 2021-Feb-09
Filed By: FWC MMPL

FWC Case # FWC Region: NE

Sex: Female Length: 312 cm Weight: 387.0 kg

DATE REPORTED: 2021-Feb-09 By: FWC-SMT MMPL-CMF
DATE COLLECTED: 2021-Feb-09 By: FWC-SMW,T. Johnson MMPL-CMF
DATE NECROPSIED: 2021-Feb-10 By: MMPL-MdW,BLB,BDB,ALP

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded in the FPL warm water discharge area, approximately 265 m NE of 101 Cottrell Avenue.

CONDITION: Badly Decomposed
PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Relatively empty GI tract; Wet lung(s); Bloody lung (s); Lung bullae associated with blood clots and hemorrhagic tissue; Fluid, sediment in airways; Fluid in pleural cavities; Few tan lesions colon wall; Swollen, firm kidneys; Congested mesenteries, GI tract, urinary bladder mucosa, peritoneum.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Amputated flipper, Flat ventrum).

MATERIALS COLLECTED: Genetics, ELISA toxicology samples, Histology, Partial skeleton (Skull), Burgess samples: feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:
Histology report.

REMARKS:
PIT tag scan negative. Lactating. Uterine Scar. Cobblestone-like epidermis; Gritty sediment kidneys. Amputated flipper. Total length dorsum-up=311 cm. Known as MIPS ID BC618, first sighted on 17 Dec 2004 in the Indian River, OUC/Reliant power plant.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	312 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	4.5	5.5
Right		
Left	6.5	6
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21113

RECOVERY DATE 09 February 2021

GENDER Female **TL** 312 **cm** **WT** 387 **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 10 February 2021

CONDITION Badly Decomposed

HISTORY 09 February, at 1000 hrs, FWC biologists-Sara M. Wappes (SMW) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting MEC21104, SMW and CMF arrived at FPL-CCEC at 1140 hrs. After searching for a previously reported carcass, (MEC21099), they also collected MEC21106 - MEC21113. SMW and CMF towed MEC21104 and MEC21110 - MEC21113 to the Port St. John boat ramp and met FWC biologist-Trent Johnson (TJ). They loaded the carcasses into a U-trailer by 1415 hrs and TJ transported them to the MMPL arriving at 1730 hrs.

EXTERNAL Almost all of the epidermis was present and sloughing. The carcass had a peanut-shaped head and was dorsoventrally flattened due to emaciation. The ventrum was concave and had folds. The left dorsum, lateral aspect and ventrum had a thick green and brown algal mat. The epidermis had cobblestone-like patches. The left flipper was missing due to a well-healed amputation at the proximal aspect. A small amount of milk was expressed from the right teat. No watercraft-related wounds were observed. There was a minimum of ten well-healed watercraft-related scar patterns on the dorsal aspect. The fluke margin had well-healed mutilations at the 3 and between the 4 and 5 o'clock positions, and was irregular but well-healed along the remainder. A few barnacles were present in ventral body creases. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat. The peritoneum was mildly congested.

STOMACH The stomach was distended with gas and contained 0.5 L of watery, cloudy, tan fluid. The mucosa was red to purple at the major curvature, and was otherwise dark pink. No parasites were observed.

DUODENUM The duodenum was distended with gas and contained 1 L of watery, cloudy, tan fluid. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was moderately congested. The small intestine contained a small amount of thick, homogeneous, orange mucus. The mucosa was unremarkable. The wall was contracted. No parasites were grossly observed.

CECUM The cecum was contracted and contained 50 mL of thick, pasty, homogeneous, light brown fluid mixed with dark green specks. The mucosa had black stripes and regions of moderate congestion. No parasites were observed.

COLON The mesentery was moderately congested. The proximal colon had portions that were distended with gas and portions that were contracted. The proximal colon contained a scant amount of thick, homogeneous, tan and brown fluid. The mucosa of the distended portions had tan to pink mottling and a few diffuse circular tan lesions. The mucosa of the contracted portions had regions of severe congestion. The mid colon was contracted and contained a scant amount of thick, dark brown fluid. The distal colon was contracted and contained a scant amount of moist, well-formed, pasty, homogeneous, well-digested, light brown and green feces. The wall was rugose due to contraction. The mucosa of the mid- and distal colon had regions of severe congestion. No parasites were observed throughout.

PANCREAS The pancreas was surrounded by serous red tissue. The serosal and cut surfaces were dark pink.

SPLEEN The spleen was red and purple on serosal surfaces, and red on cut surfaces.

LIVER The margins were rounded. The liver was soft. The serosal surfaces were pink to dark blue and the cut surfaces were red and slightly bloody. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 175 mL of viscous, flocculent, cloudy, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The uterus was contracted. There was a mostly resolved scar in the right horn (5.5 cm wide x 4.5 cm circumference) and a resolving scar in the left horn (6 cm wide x 6.5 cm circumference). The ovaries had a few small and large fluid-filled follicles (maximum diameter 2.5 cm). The right mammary gland was dark red and bloody and contained a small amount of milk. The left mammary gland was almost absent.

KIDNEYS There was scant serous perirenal fat. The kidneys were swollen and firm. The serosal surfaces were light pink to light purple. On cut surfaces, the cortices were pink to grey and the medullae were light red to dark purple. A few of the medulla centers of both kidneys had a gritty texture, which was associated with a small tan lesion in the right pelvis. The corticomedullary boundaries were mostly indistinct. An ELISA toxicology sample was collected.

URINARY BLADDER The bladder was empty of contents. The mucosa was mildly congested.

HEART There was scant serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left pleural cavity contained 750 mL and the right contained 500 mL of slightly viscous, dark red fluid. There were grey specks on the right parietal pleura. The left lung was dark pink to purple on serosal surfaces. The mid three quarters of the lateral aspect of the left lung had bubbles of gas distension which was associated with an adhesion to the parietal pleura. On cut surfaces of the bubbles, there was bloody fluid and approximately 750 mL of loose, well-formed blood clots. The parenchyma surrounding the bubbles was collapsed and hemorrhagic. The cranial and caudal tips were dark red and bloody on cut surfaces. The airways contained a moderate amount of dark red fluid. The mucosa was tan to light pink. No parasites were observed. The right lung was light pink to light red on serosal surfaces, and dark pink to red and wet on cut surfaces. The airways contained a small amount of dark red fluid and small amount of gritty tan sediment and small white shell fragments. The mucosa was light pink. No parasites were observed. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER The cortex:medulla ratio of the adrenal glands was 2:1. Much of the muscle and connective tissue was serous.

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Depleted, serous fat
- Serous tissue
- Lung bullae associated with blood clots and hemorrhagic tissue

- Wet, bloody lungs
- Fluid, sediment airways
- Fluid pleural cavities
- Relatively empty GI tract
- Few tan lesions colon wall
- Swollen, firm kidneys
- Congested mesenteries, GI tract, urinary bladder mucosa, peritoneum
- Gritty sediment kidneys
- Lactating
- Uterine scars
- Missing flipper
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brandon L. Bassett
Brittany D. Barbeau

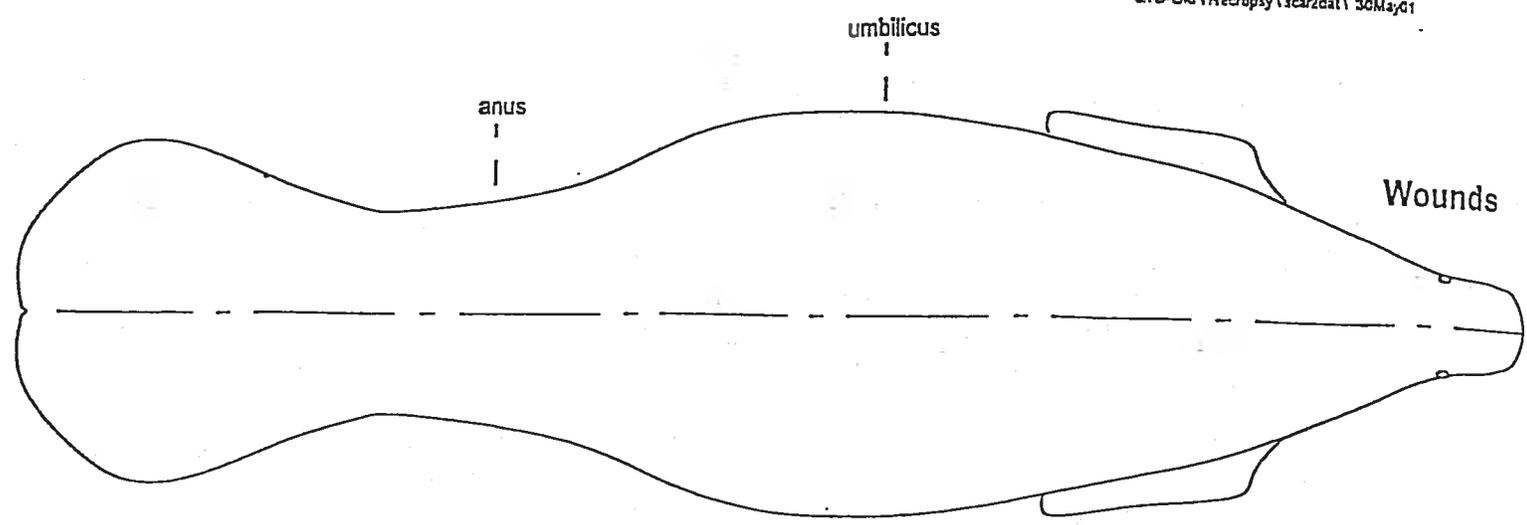
REPORT FILED BY de Wit

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

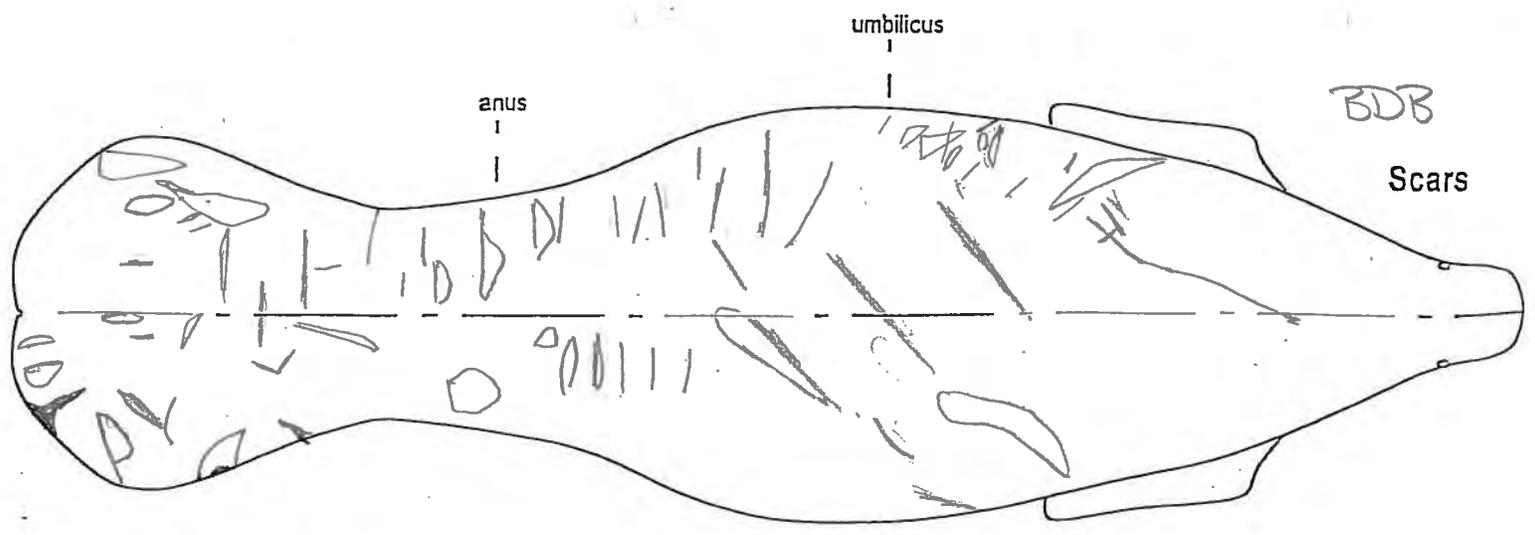
Date 09 Feb 2021

Field I.D. MEC2113

cid-Old1 Necropsy1 scar2dat1 30May01



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



over →

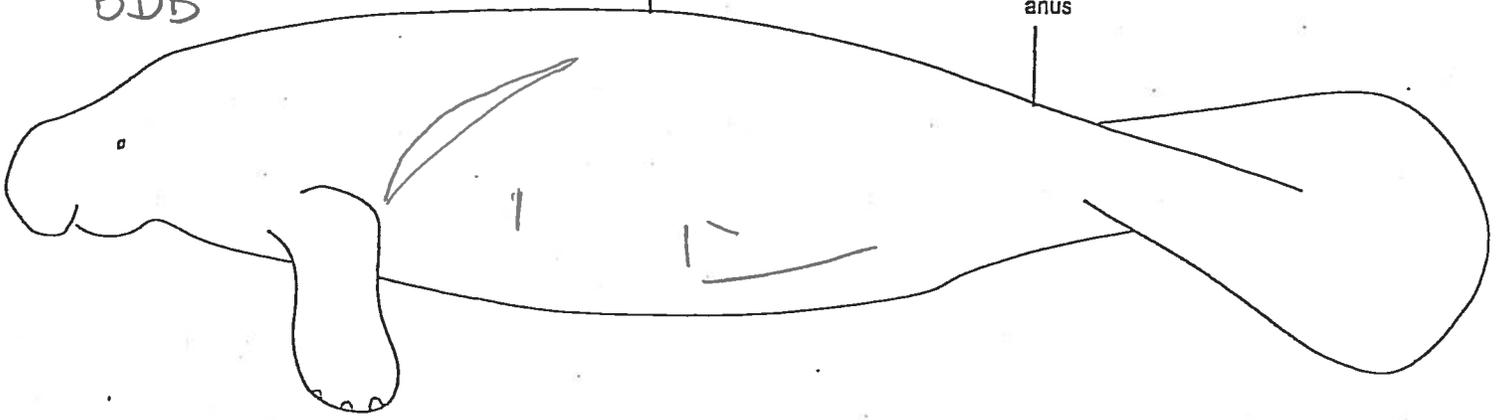
FIELD I.D.

MEC21113

BDB

umbilicus

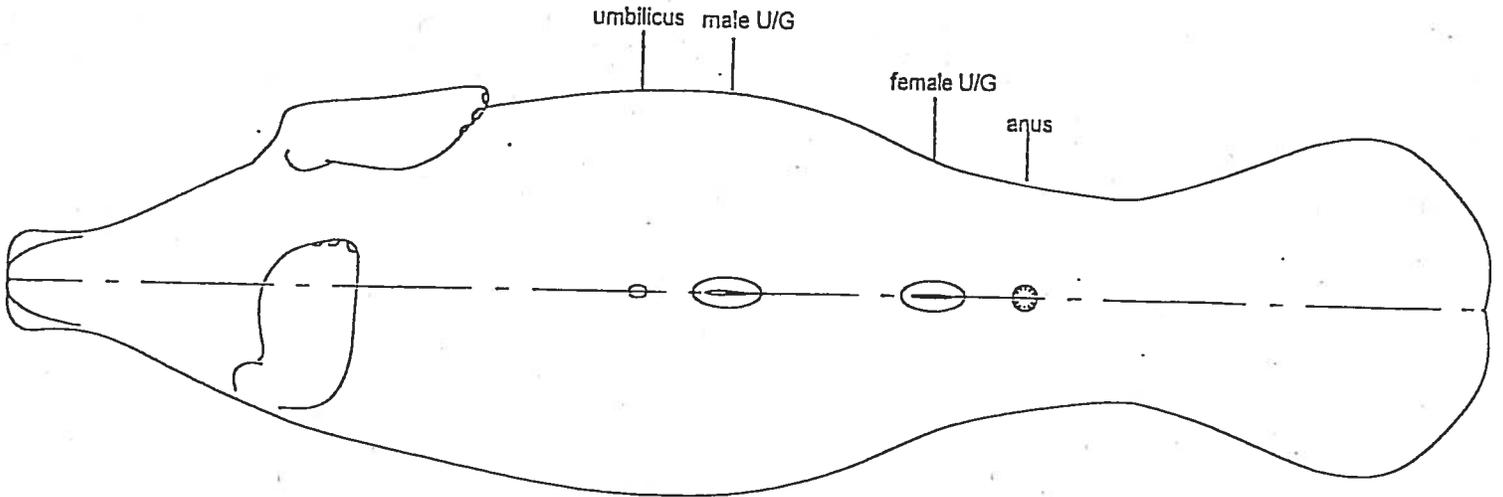
anus



umbilicus male U/G

female U/G

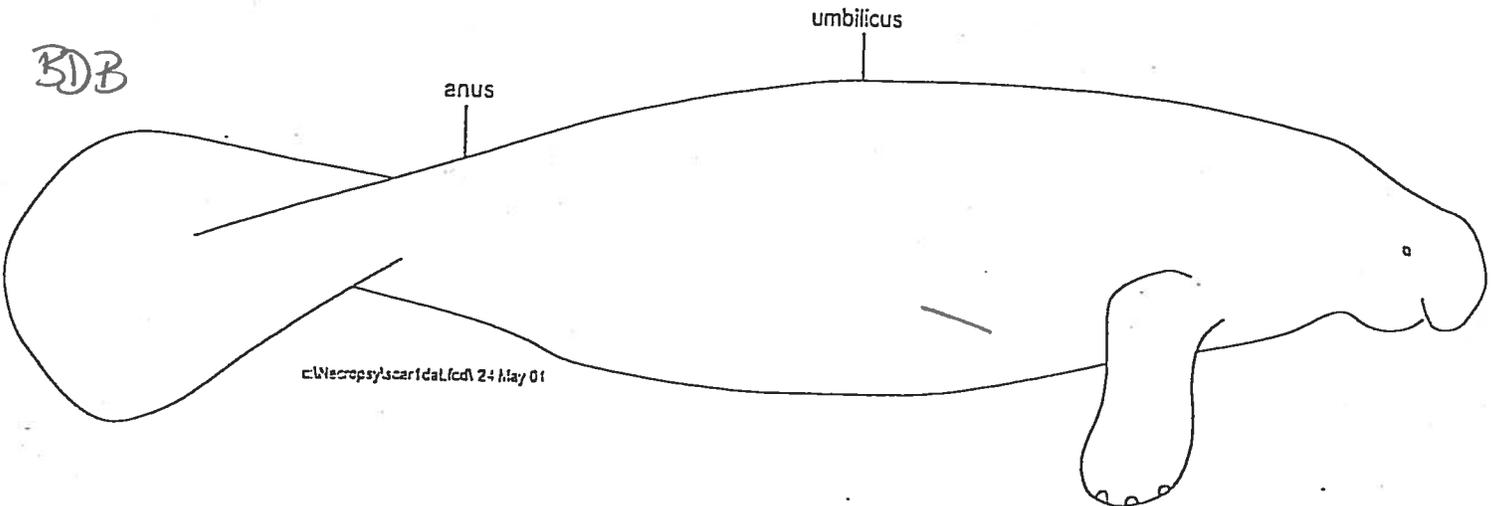
anus



BDB

umbilicus

anus



NECROPSY REPORT FINAL REPORT

Field ID: MEC21113
 Alternate Field ID:
 Accession Number: 21-15
 Species: *Trichechus manatus latirostris*
 Date: 09 Feb 2021 (DOR); 10 Feb 2021 (DON)
 Location: FL
 Sex, Age: F
 TL: 312.0 cm
 WT 387.0 kg
 Body Condition: Emaciated
 Condition at Investigation: Dead
 Carcass Disposition/Post-Mortem Interval: 24> hours

HISTORY

Findings include:

- Emaciated
- Depleted, serous fat
- Serous tissue
- Lung bullae associated with blood clots and hemorrhagic tissue
- Wet, bloody lungs
- Fluid, sediment airways
- Fluid pleural cavities
- Relatively empty GI tract
- Few tan lesions colon wall
- Swollen, firm kidneys
- Congested mesenteries, GI tract, urinary bladder mucosa, peritoneum
- Gritty sediment kidneys
- Lactating
- Uterine scars
- Missing flipper
- Cobblestone-like epidermis

Probable Cause of Death: Natural; Other

ANCILLARY DIAGNOSTICS

Test	Tissue/Sample	Result	Comment

MICROSCOPIC DESCRIPTION

Received are 11 H&E slides.

The caudal mesenteric lymph node is moderately cellular and follicles are well-formed. There are increased macrophages within follicles which have intracytoplasmic nuclear debris (tingible bodies). There is mild medullary sinus edema. Macrophages which occasionally contain erythrocytes (erythrophagocytosis) are present within the medullary sinus and subcapsular space. There is moderate congestion with mild endothelial hypertrophy. There is mild splenic periarteriolar lymphoid depletion. There is multifocal fibrosis.

Ventricular cardiomyocytes are attenuated (atrophied) with the right more affected than the left. There is multifocal interstitial expansion by clear (spaces) and fibrillar proteinaceous substance (fibrin) with few interspersed macrophages. Cardiomyocytes within this region are occasionally vacuolated (degeneration). There is serous atrophy of epicardial adipocytes.

There is mild hepatocellular atrophy. Hepatocytes contain few discrete clear vacuoles (lipid). Within hepatocytes and clusters of Kupffer cells, there is intracytoplasmic brown granular pigment (hemosiderin). There is moderate congestion.

Approximately 10% of glomeruli exhibit thickening of Bowman's capsule. There is mild, multifocal segmental thickening of glomerular basement membranes. There is moderate congestion of the mammary gland.

There is multifocal flooding of right pulmonary alveolar spaces with lightly eosinophilic proteinaceous fluid. In the left lung, there is multifocal collapse of alveolar (atelectasis) spaces with lightly eosinophilic proteinaceous fluid and few macrophages as well as alveolar hyperinflation. On one margin, collapsed alveolar septa are expanded by mature collagen and covered by a dense layer of extravasated erythrocytes and serum.

There are two regions of degeneration of hemidiaphragm myofibers which have clumped sarcoplasm. Within this region, there are macrophages, few heterophils, and loosely arranged streaming fibroblasts. There is a focal interstitial infiltrate of lymphocytes. There is expansion of one surface by mature collagen. There is serous atrophy of the lateral fat. There are clear clefts (emphysematous change, presumptive) in the adipose. There is mild atrophy of peduncle myofibers. There is serous atrophy of fat. There is expansion of the axilla skeletal muscle by clear spaces (edema).

There is autolysis of the pancreas. There is moderate depletion of pancreatic acinar zymogen granules.

The following tissues have no significant histological findings: Adrenal gland, proximal large intestine, distal large intestine

MORPHOLOGIC DIAGNOSES

Musculoskeletal System/Integumentary System

- A. Hemidiaphragm:
 - a. Myofiber degeneration, patchy with heterophilic and histiocytic hemidiaphragmitis and fibroplasia.
 - b. Hemidiaphragmitis, lymphocytic, focal, mild.
 - c. Fascial fibrosis.
- B. Lateral Fat: Serous atrophy with emphysematous expansion.
- C. Axial Skeletal Muscle: Interstitial edema, diffuse, mild.

Respiratory System

- A. Right Lung: Pulmonary edema, multifocal.
- B. Left Lung:
 - a. Atelectasis and hyperinflation.
 - b. Fibrosis, regionally extensive with overlying hemorrhage and clot formation.

Nervous System

NE

Urinary and Reproductive System

- A. Kidney: Membranous glomerulopathy, segmental, multifocal, mild with Bowman's capsule thickening.

Digestive System/Body as a Whole

- A. Pancreas, Exocrine: Atrophy, moderate.

Cardiovascular System

- A. Heart:
 - a. Cardiomyocyte atrophy, multifocal, mild to occasionally moderate with interstitial edema and individual cardiomyocyte degeneration.
 - b. Epicardial serous atrophy of fat.

Hepatobiliary System

- A. Liver:
 - a. Atrophy, mild.
 - b. Hemosiderosis.
 - c. Congestion.

Endocrine System

NSF

Hematolymphatic System

- A. Spleen: Lymphoid depletion.
- B. Caudal Mesenteric Lymph Node: Edema, fibrin exudation, and erythrophagocytosis (draining lymph node).

INTERPRETATIVE SUMMARY

DIAGNOSES
Myocardial Atrophy and Degeneration
Hemidiaphragmitis and Fibroplasia
Pulmonary Fibrosis with Hemorrhage

Primary Diagnostic Category: **Organ Specific (Non-Infectious)**

Linked Cases:

There are findings in this case that are similar to other 2020-2021 Florida East Coast UME cases including hepatic atrophy (mild in this case), myocardial atrophy, hemidiaphragm myofiber degeneration, serous atrophy of fat, and lymphoid depletion (mild in this case). However, the findings differ from the other cases in the chronicity. In the hemidiaphragm, for example, there is fibroplasia and lymphocytic infiltrates denoting a chronic and in the case of fibroplasia, reparative response. The left lung had a mix of collapse and hyperinflation, but also had a band of fibrosis with an overlying clot. Similar to the hemidiaphragm, fibrosis indicates a chronic response that is likely at least 2 weeks in duration. Similar to other cases, there was myocardial atrophy and interstitial edema, but there were also few degenerate cardiomyocytes. One consideration of this observation could be a component of nutritional compromise (taurine, other). This was not a diffuse change. To sum up, this case may represent a spectrum, and in particular an animal in a slightly later stage.

TEST	PURPOSE	SITE	RESULT

DATE: 2/27/2021	REPORTING PATHOLOGIST: David S. Rotstein, DVM, MPVM, DACVP
--------------------	---

FIGURES

No Figures

Bassett, Brandon

From: Rood, Kari
Sent: Monday, February 22, 2021 10:19 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21113=BC618

MEC21113=BC618

Carcass location: Indian River, Port St. John
Female

First sighted 12/17/04 at Indian River, OUC/Reliant Power Plant
Last sighted 10/7/14 at Indian River, Kennedy Point Yacht Club
USGS should be able to provide a complete sighting history if needed.

Verifiers: HONAKER 2/20/21 & KAH 2/22/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

FWC Case # _____ FWC District: _____
Sex: M / F / Undetermined Length: 312 cm (estimated _____) Weight 387 kg.
Date reported: _____ By: _____
Date collected: 9 Feb 21 By: HSC Trent Johnson
Date necropsied: 10 Feb 21 By: MMPL MdW BUB BDB ACP

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (≤150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - Scars - Fluke - Cranial - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other feces frozen in Bugees amputated
flippers,
flat ventrum

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other fat, feces

Genetics Box # 101

Female reproductive findings or N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted / Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights - Rescue Report/Map - Other _____

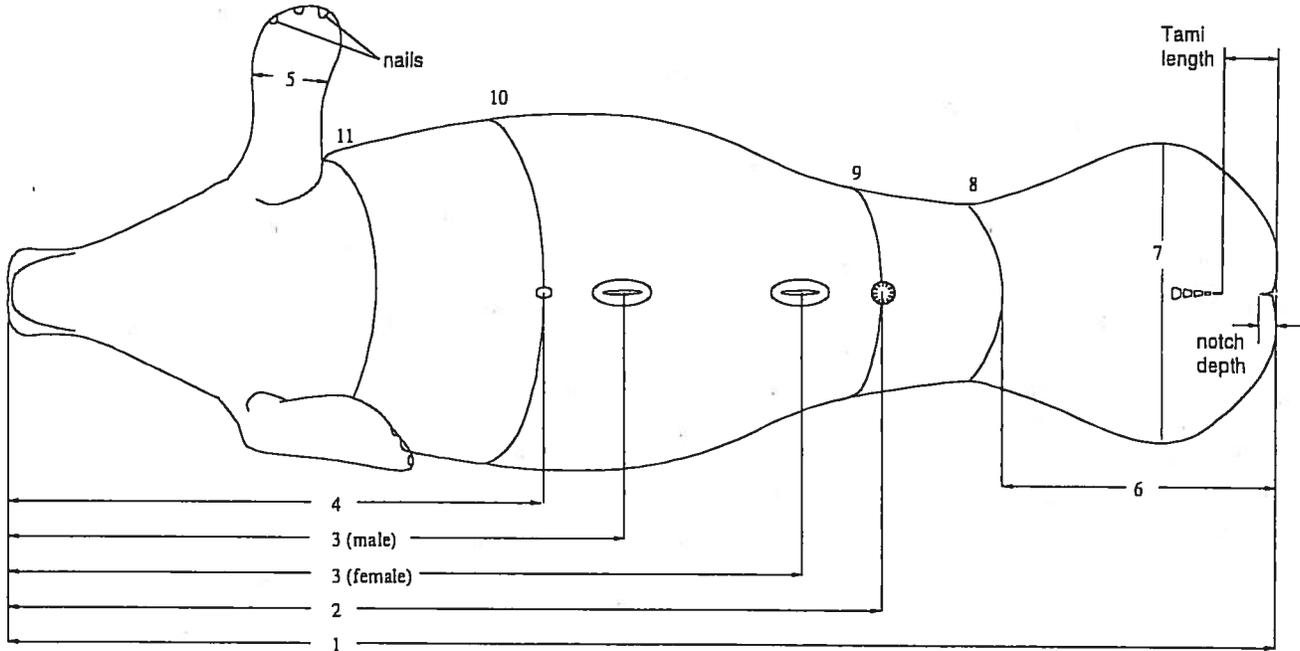
PIT TAG Scan: Negative; Positive (Left _____ - _____ - _____) (Right _____ - _____ - _____); N/T

REMARKS: Dorsal SL = 311 cm

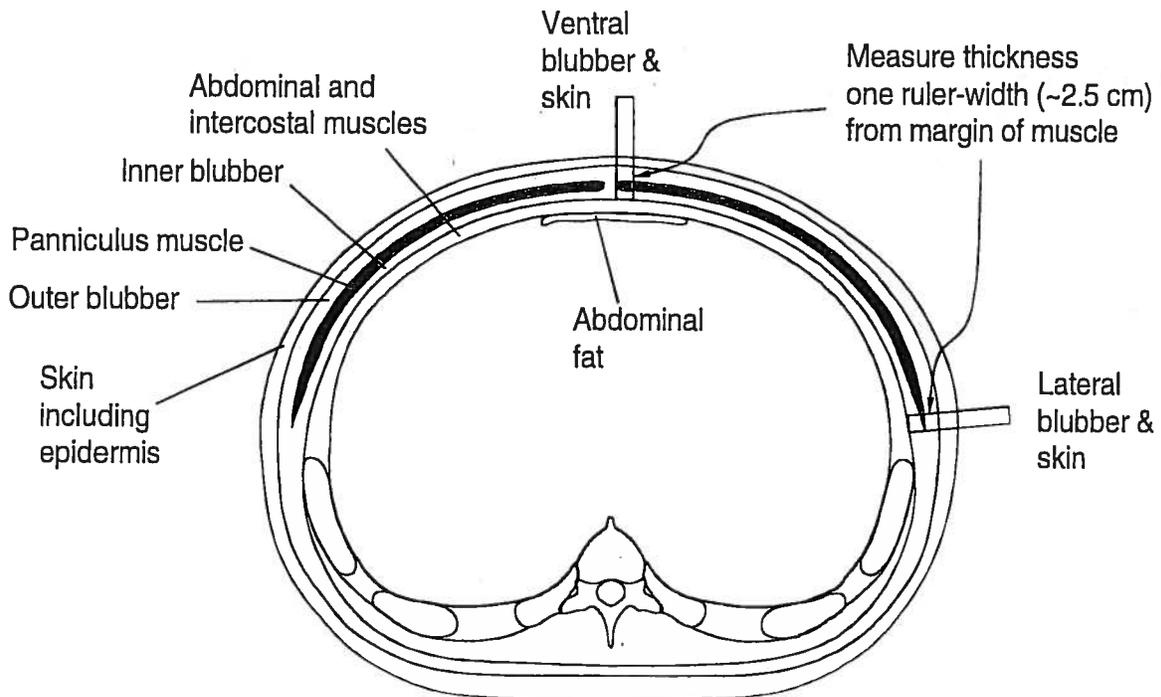
Field ID # _____

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|-----------------------------------|----------------------------------|--------------------------------|
| 1. Total length _____ cm | 6. Fluke base _____ cm | 11. *Girth at axillae _____ cm |
| 2. Snout to anus -C _____ cm | 7. Fluke width _____ cm | |
| 3. Snout to U/G -C _____ cm | 8. *Girth at fluke base _____ cm | |
| 4. Snout to umbilicus -C _____ cm | 9. * Girth at anus _____ cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus _____ cm | (Nail count: L ___ R ___) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21114
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # 2296 **FWC Region:** NE

Sex: Unknown **Length:** 190 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-24 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Sykes Creek

Locality description: Merritt Island, floating approximately 255 m E of 1410 Sykes Creek Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial. Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. The actual length of the remains was 184cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	190 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21114

RECOVERY DATE 24 February 2021

GENDER Female **TL** 184, 190 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1246 hrs, FWC biologist- Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2296 was assigned. The complainant, Lewis Pavlovich (989-392-5006), described a belly down manatee that was not breathing or moving when approached. The complainant nudged the carcass with a paddle, and this did not illicit any reaction. At 1340 hrs, CMM received photo verification. Due to time of day and heavy case load, a response was not planned. **21 February**, at 1458 hrs, FWC biologist- Sara M. Wappes received a text alert from Dispatch regarding the same dead manatee. FWC case number 3176 was assigned. The complainant, Eileen Wilson (407-435-4648), stated there was a dead, three to four-foot manatee in the mangroves that was all white. No photos were available. **24 February**, at 1054 hrs, SMW received a text alert from Dispatch regarding the same dead manatee. FWC case number 3388 was assigned. The complainant, Chuck Taylor (321-298-7749), stated the manatee was four to five feet long and all white. No photos were available. At 1220 hrs, CMM arrived at the carcass location, towed it to a remote location and completed an external workup by 1248 hrs. The remains were left on site.

EXTERNAL Based on the complainant photos from 09 February 2021, all epidermis was present on the dorsal aspect. There was a thick, brown agal mat on the dorsal aspect. From external workup on 24 February. All epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were multiple rents present on the ventrum due to decomposition and/or scavenging. There was a minimum of one well-healed watercraft-related scar series on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-09_PUBLIC_ECFL_1271 through 1273; 2021-02-24_FWC049_4632 through 4641

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologist

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

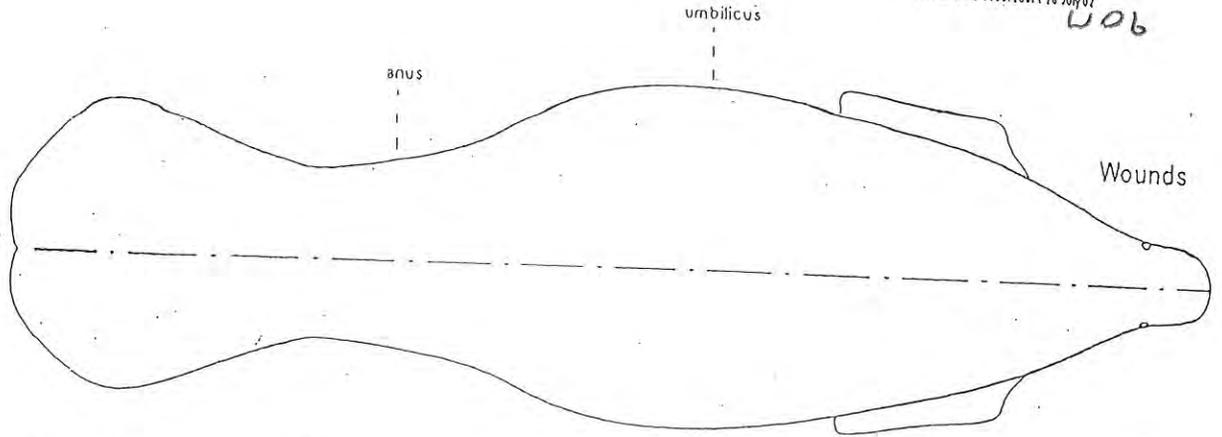
NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf/Greer

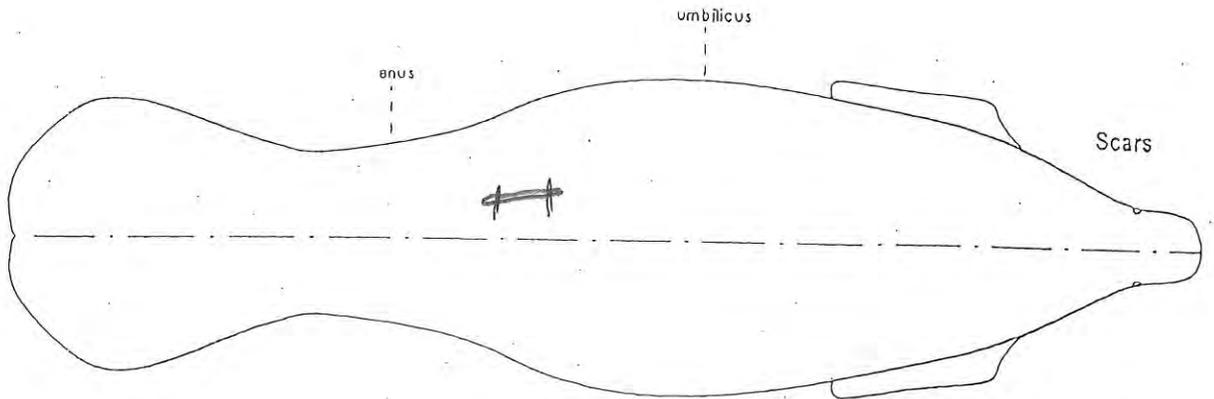
Date 19 MAR 2021

Field I.D. M022114

CSI Manuals / Scar Data / 26 July 02
U06

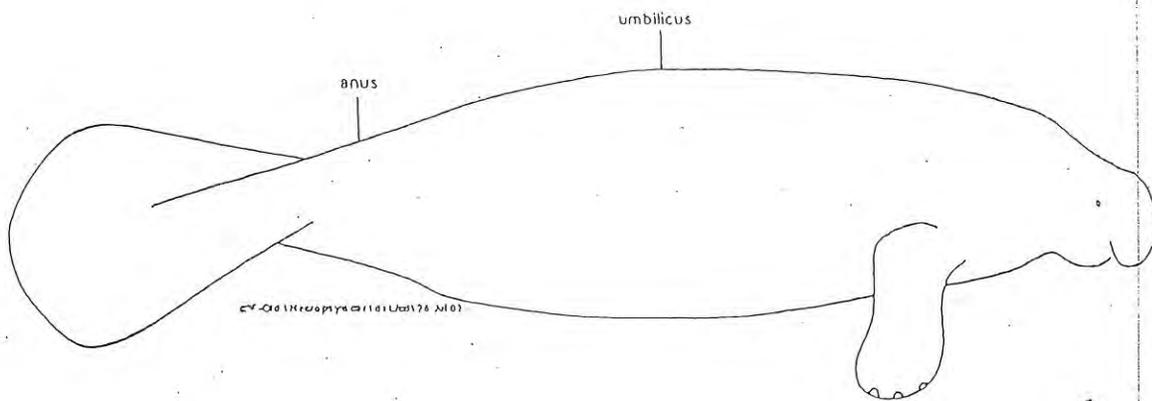
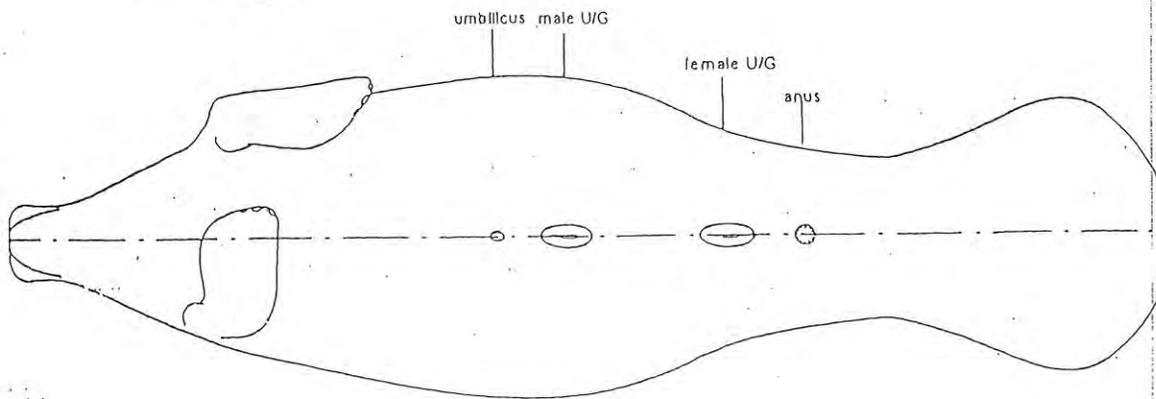
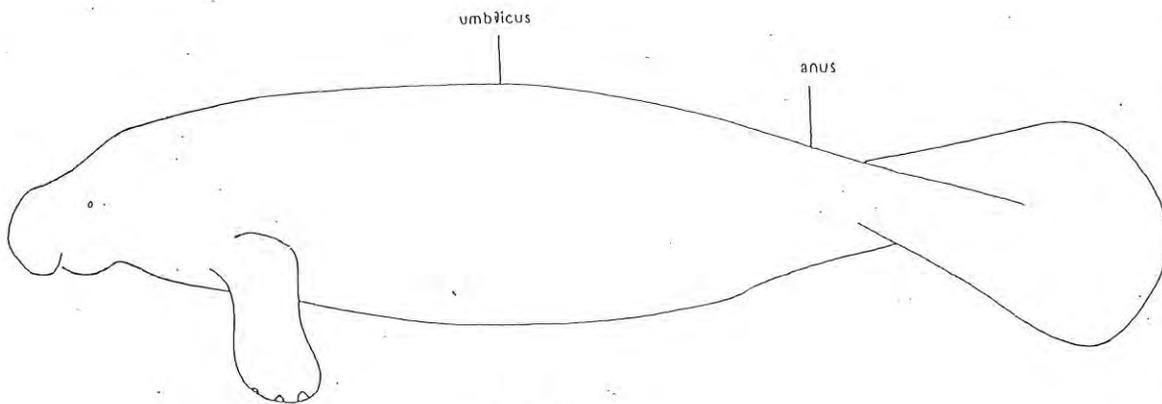


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC212114



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MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21115
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # 2312 **FWC Region:** NE

Sex: Male **Length:** 135 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Berkeley Canal

Locality description: Satellite Beach, floating approximately 60 m NE of 401 St. Geroge's Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	135 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21115

RECOVERY DATE N/A

GENDER Male **TL** 135 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1426 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text message and photo from a previous complainant regarding a dead manatee in Berkeley Canal in Satellite Beach, Brevard County. The complainant, Duane (321-616-3162), described a four to five-foot-long manatee on the western side of the canal. At 1426 hrs, CMM received photo verification. CMM received two more text alerts on this day from Dispatch regarding the dead manatee (FWC case numbers 2308 and 2322) but did not receive verification photos. At 1600 hrs, FWC biologist-William D. Greer and FWC intern-K. Lawson arrived at the reported residence and found that the carcass had floated further west into a canal system and was no longer visible. No further reports were received.

EXTERNAL From photograph - Approximately 50% of the ventral epidermis was present but sloughing. The carcass is distended with gas. Transverse folds were present on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph
- Fetal folds

PROBABLE CAUSE OF DEATH

Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21116
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # 2323 **FWC Region:** NE

Sex: Female **Length:** 292 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-10 **By:** FWC-WDG MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 25 m NE of 3618 North Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	292 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21116

RECOVERY DATE 10 February 2021

GENDER Female **TL** 292 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1638 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Cocoa, Brevard County. FWC case number 2323 was assigned. The complainant, Mike Futch (919-523-8803), stated that the manatee was about seven feet in length and was grounded. At 1647 hrs, CMM received a photo confirming the carcass. Due to the time of day, no response was made. **10 February**, at 1000 hrs, FWC biologists-William D. Greer (WDG) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. After collecting other carcasses, WDG and CMF secured MEC21116 to the Key West at 1450 hrs and towed it to a remote location. An external work-up was completed by 1530 hrs. The remains were left on site.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was distended with gas. There was a thin brown algal mat on the left lateral aspect. There was a mild infestation of barnacle scars on the fluke. A minimum of three well-healed watercraft-related scar patterns was observed on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologists

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

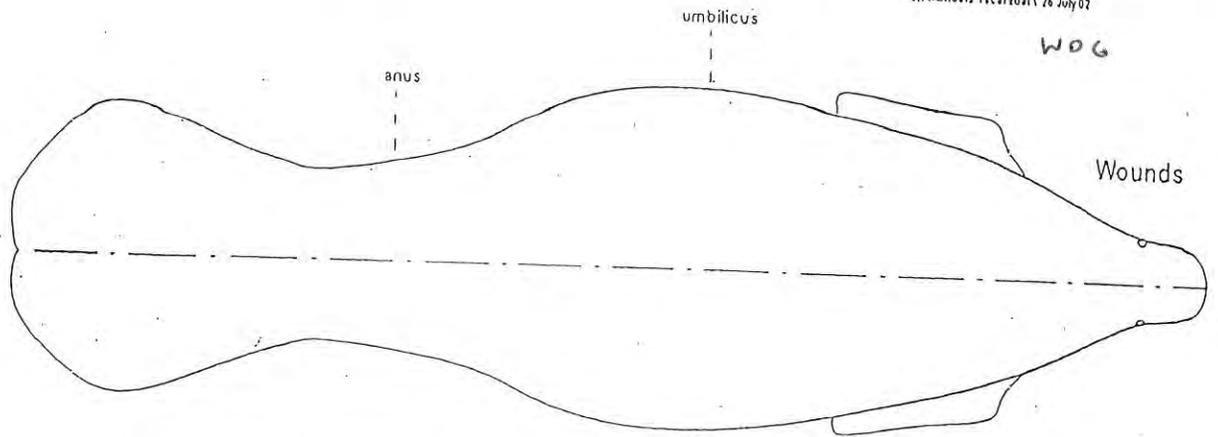
REPORT FILED BY Greer

Date 10 FEB 2021

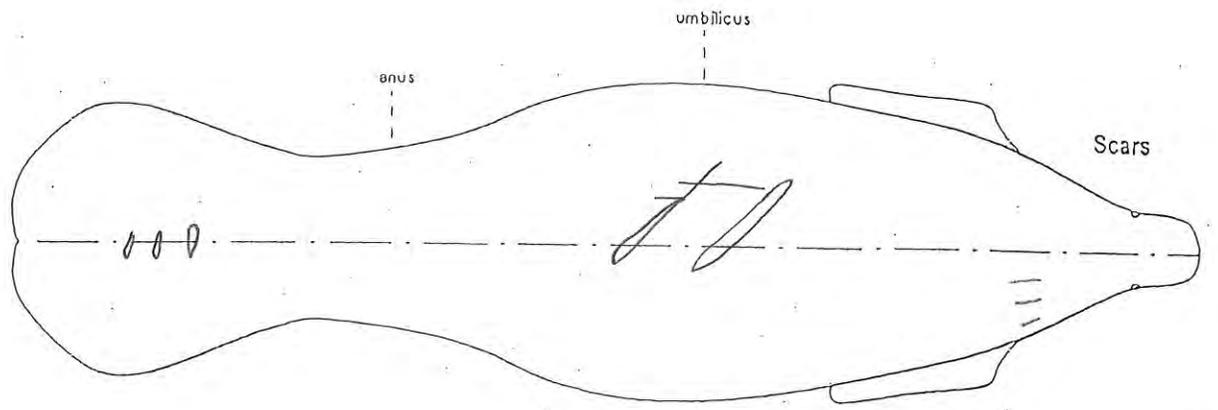
Field I.D. MEC21116

CSI Manuals Secretariat 26 July 02

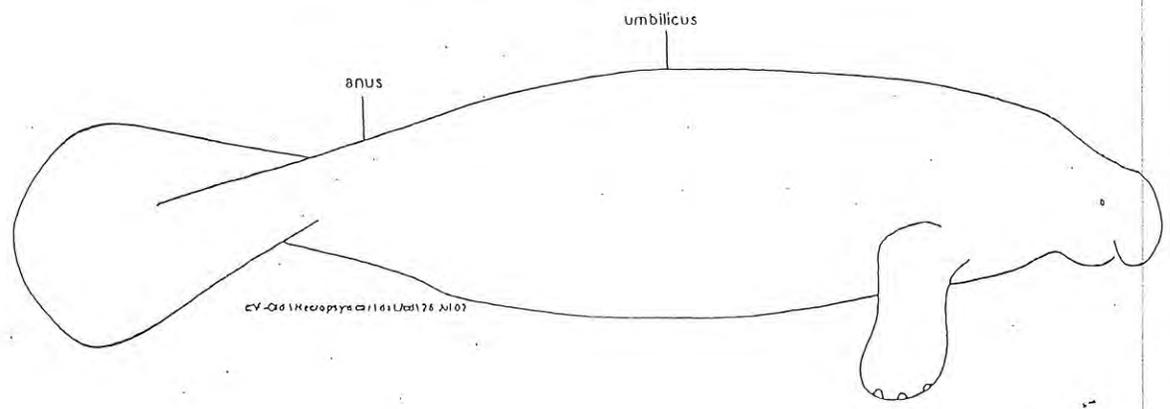
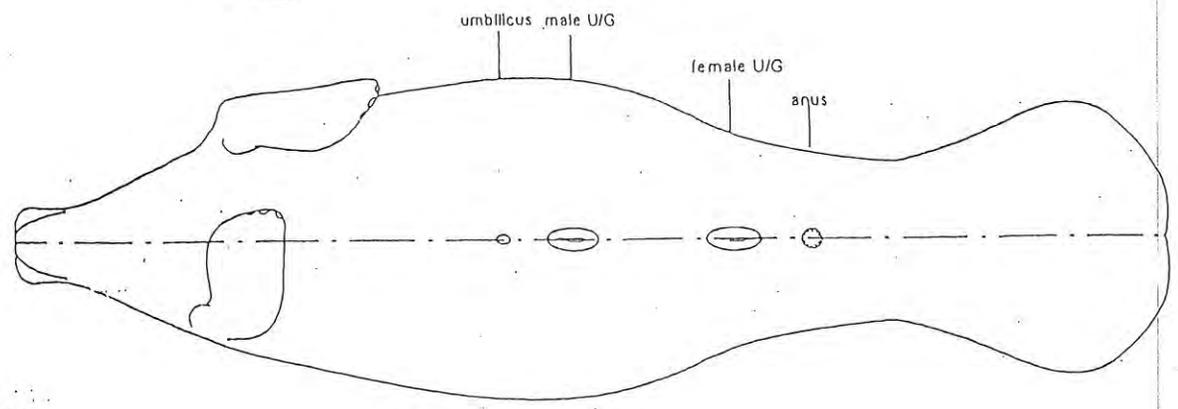
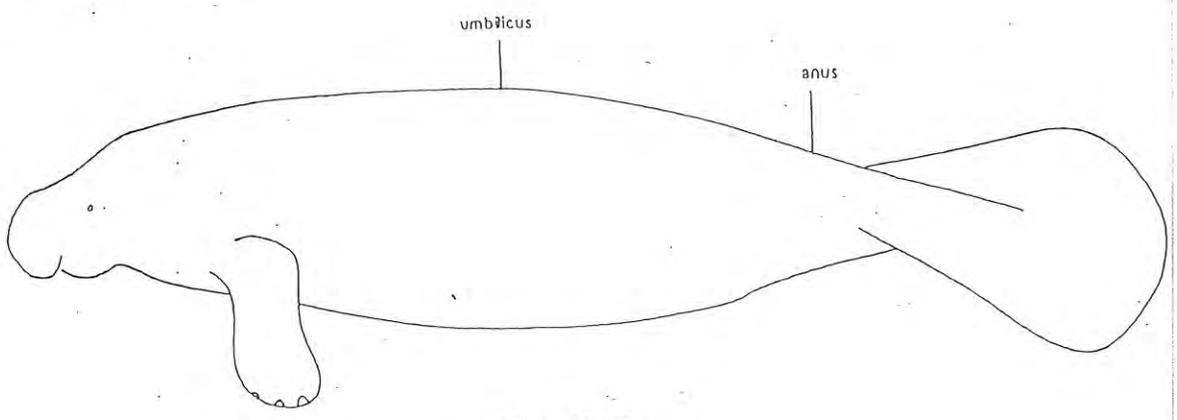
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21116



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21117
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # 2314 **FWC Region:** NE

Sex: Male **Length:** 273 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-10 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Turkey Creek

Locality description: Palm Bay, floating approximately 80 m SW of 3048 Indian River Drive NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Emaciated; Bleached epidermis; Cobblestone-like epidermis; Skin lesions; Verified through complainant photograph and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	273 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21117

RECOVERY DATE 10 February 2021

GENDER Male **TL** 273 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1608 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Turkey Creek in Palm Bay, Brevard County. FWC case number 2314 was assigned. The complainant, Dave (321-961-7619), described a dead manatee in the bushes across from the Pollak Park boat ramp. At 1655 hrs, CMM received photo verification. Due to time of day, a response was not planned. **10 February**, at 1420 hrs, CMM arrived at Goode Park, launched a kayak, and towed the carcass to the boat ramp. The carcass was loaded via Ezy-lift by 1452 hrs and transported to the Brevard County Landfill. CMM completed an external work up at 1630 hrs.

EXTERNAL Approximately 90% of epidermis was present but sloughing. A small amount of watery, red fluid and one dead trematode exuded from the nares. The carcass had a peanut-shaped head and was dorsoventrally flattened. The epidermis was covered in mud. There was a thin green algal mat on the dorsal aspect. Cobblestone-like epidermis was present on the ventrum. Bleaching epidermis was observed on the face, flippers, and axilla. There were multiple linear lesions on the lateral and dorsal aspects. A minimum of one well-healed watercraft-related scar pattern was observed on the dorsal aspect. There was one well-healed mutilation at the four o'clock position of the fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologist
- Emaciated
- Bleached, cobblestone-like epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

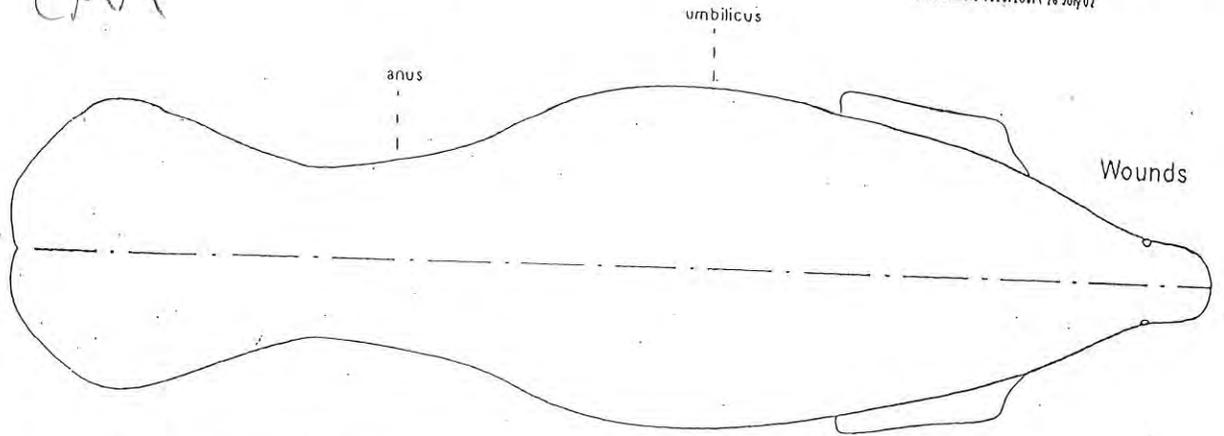
REPORT FILED BY Metcalf

Date 10 FEB 2021

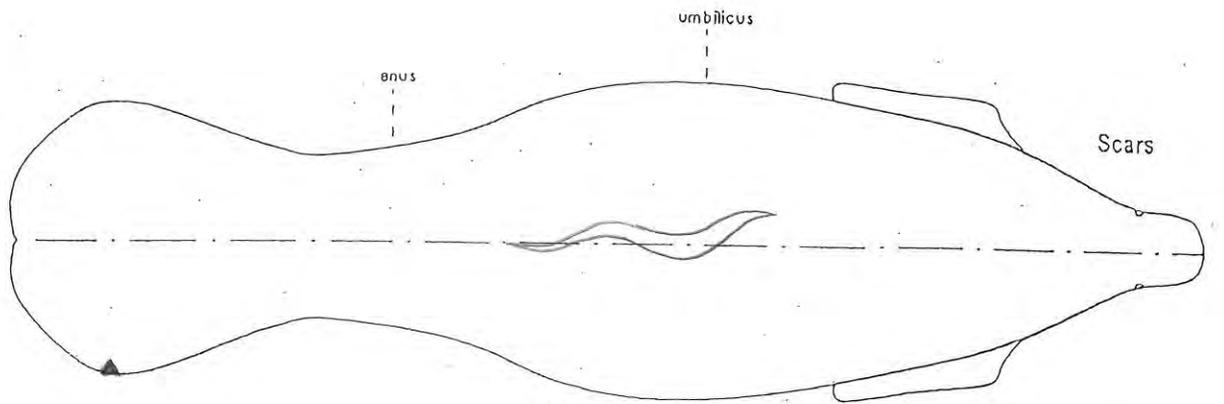
Field I.D. MEC21117

CMM

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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21118
Date of Report: 2021-Feb-10
Filed By: FWC MMPL

FWC Case # 2341 FWC Region: NE

Sex: Female Length: 294 cm Weight: 438.0 kg

DATE REPORTED: 2021-Feb-10 By: Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-10 By: FWC-WDG MMPL-CMF HSC-T. Johnson
DATE NECROPSIED: 2021-Feb-11 By: MMPL-MdW,SMT,TDW

LOCATION: State: FL Latitude: N
County: Brevard Longitude: W
Waterway: Indian River

Locality description: Port St. John, grounded approximately 35 m NE of the northernmost building at 6850 North Highway 1.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Bloody eyes, nares; Sand in duodenum; Relatively empty lower GI tract; Fluid in pleural cavities; Dark red ascites; Firm, swollen, bloody kidneys; Bloody liver; Congested urinary bladder mucosa, GI tract, mesenteries; Petechiae colon mesentery.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Ventral fluke, Monofilament from anus).

MATERIALS COLLECTED: Genetics, ELISA toxicology samples, Histology, Partial skeleton (Skull.). Stomach contents in alcohol. Burgess samples; feces frozen.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Histology report.

REMARKS:

PIT tag scan negative. Uterine Scar. Monofilament in colon. Acorn pieces upper GI tract. Total length dorsum-up=291 cm. Known as MIPS ID BC715, first sighted on 07 Feb 2007 at Berkeley Street Canal.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	294 cm	Fluke base:	92 cm	Girth at axillae:	177 cm
Snout to anus:	191 cm	Fluke width:	71 cm		
Snout to U/G:	175 cm	Girth at fluke base:	115 cm		
Snout to umbilicus:	107 cm	Girth at anus:	153 cm		
Flipper width:	18 cm	Girth at umbilicus:	220 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	11	7
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21118
RECOVERY DATE 10 February 2021
GENDER Female **TL** 294 **cm** **WT** 438 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 11 February 2021
CONDITION Moderately Decomposed

HISTORY 10 February 2021, at 0805 hrs, FWC biologist-William Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 2341 was assigned. The complainant, Tim Lewis (203-291-8609), stated that there were two dead manatees (MEC21118 and MEC21119) on shore behind his house. Both manatees were gray and appeared fresh. At 0818 hrs, WDG received a verification photo. WDG and FWC biologist-Christine Fontaine arrived at Port St. John boat ramp at 1000 hrs, launched the Key West boat, secured the carcasses to the boat at 1040 hrs, and loaded them into the U-trailer at 1130 hrs. FWC-Trent Johnson transported both carcasses (MEC21118 and MEC21119) to the MMPL arriving by 1445 hrs.

EXTERNAL Almost all of the epidermis was present and sloughing. Bloody fluid exuded from the eyes and nares. The carcass had a dip in the dorsal midline. The ventrum was flat and slightly wrinkled. There was a moderate green algal mat on the dorsal aspect. A mild infestation of barnacles was present on the ventral aspect. No watercraft-related wounds were observed. A minimum of five well-healed watercraft-related scar patterns was observed on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous, very gassy abdominal fat and scant, serous mesenteric and omental fat. The abdomen contained 1.5 L of bloody fluid.

STOMACH The stomach contained 6.5 L of moist, well-chewed, fibrous, leafy, tan and green vegetation which included mangrove propagules, a few pieces of acorn, a few green algae, and possible shore-line vegetation. The ingesta were coated with a moderate layer of tan mucus. The mucosa was unremarkable. No parasites were observed. An ELISA toxicology sample was collected.

DUODENUM The duodenum contained 2.5 L of moist, well-chewed, fibrous, leafy, tan and green vegetation which included mangrove propagules, a few pieces of acorn, a few green algae, and possible shore-line vegetation and 500 mL of tan to grey sand. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was moderately congested. The small intestine contained a scant amount of yellow and orange mucus. There was one section in the mid small intestine that contained a bolus of moist, well-chewed, fibrous, leafy, tan and green vegetation. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained 750 mL of wet, well-digested, slightly fibrous, slightly leafy, brown digesta. The mucosa was sloughing. The wall had several black stripes. No parasites were observed.

COLON The mesentery was severely congested and had regions with petechiae. The proximal colon contained a small amount of moist, well-digested, fibrous, stringy, well-formed, brown feces. The wall had patches of moderate congestion. The mid colon contained a small amount of moist, well-digested, slightly fibrous, well-formed, olive green feces. The distal colon contained a small amount of dry, well-digested, slightly stringy, well-formed, dark green feces. There were one 45 cm long 12 lb test diameter and one 22 cm long 15 lb test diameter piece of clear monofilament line in the most distal colon contents. The wall had patches of moderate congestion. The mucosa was sloughing throughout. No parasites were observed.

PANCREAS The pancreas was very gassy, friable, and autolyzed.

SPLEEN The spleen was purple on serosal surfaces and dark red on cut surfaces.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were blue to purple and cut surfaces were dark brown to dark red and bloody. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 25 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The uterus was contracted. The right horn contained a recent scar (7 cm wide x 11 cm circumference). The left horn contained an old almost resolved scar. The uterine mucosa was dark red. The ovaries contained numerous corpora albicantia. There was no milk on cut surfaces of the mammary glands.

KIDNEYS There was scant, gassy perirenal fat. The kidneys were firm and appeared swollen. Serosal surfaces were purple to pink. Cut surfaces were dark red and bloody, and the center of the medullae was tan. The corticomedullary boundaries were indistinct.

URINARY BLADDER The bladder contained 25 mL of clear, light yellow urine. The mucosa was moderately congested. An ELISA toxicology sample was collected.

HEART There was scant, serous epicardial fat. The heart was friable. The papillary muscle of the left ventricle appeared enlarged. Valves and chambers were otherwise unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right pleural cavity contained 8 L and the left contained 7 L of dark red fluid. The lungs were light pink and light purple on serosal surfaces, and dark pink and slightly wet on cut surfaces. The airways contained a scant amount of red fluid. No parasites were observed. The mucosa was light pink. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS The trachea contained a small amount of bloody fluid.

SKELETON NVL.

OTHER The muscle, connective tissue, and fat was very gassy and slightly serous. The cortex:medulla ratio of the right adrenal gland was 1:1.

COMMENTS

SIGNIFICANT FINDINGS

- Bloody eyes, nares
- Emaciated
- Depleted, serous fat
- Slightly serous tissue
- Relatively empty lower GI tract
- Sand in duodenum
- Fluid in pleural cavities
- Wet lungs
- Dark red ascites
- Firm, swollen, bloody kidneys
- Bloody liver
- Congested urinary bladder mucosa, GI tract, mesenteries

- Petechiae colon mesentery
- Monofilament in feces
- Acorn pieces upper GI tract
- Uterine scars

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Sean M. Tennant

REPORT FILED BY de Wit

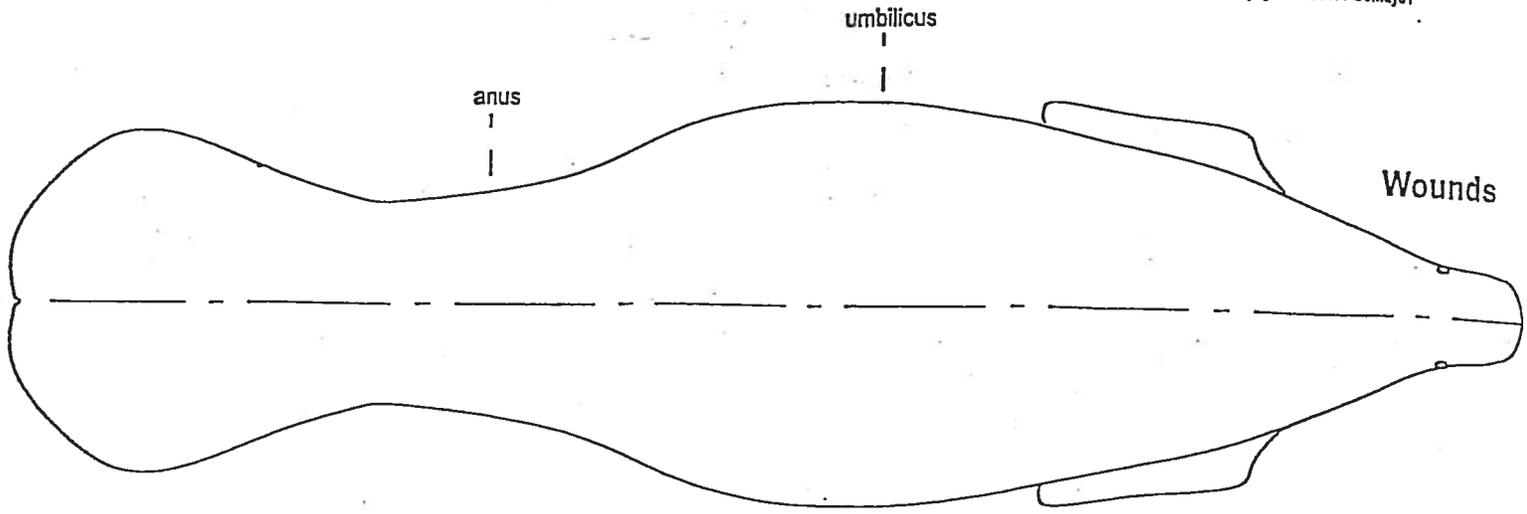
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DRAFT

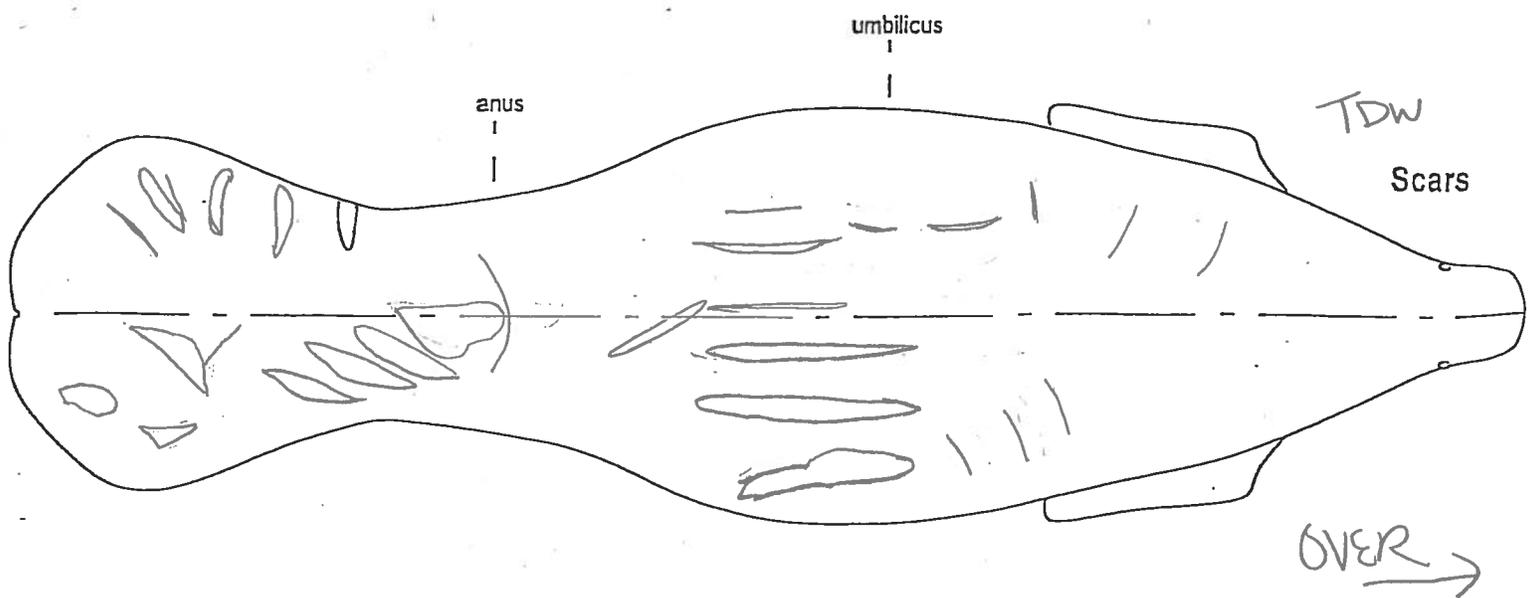
Date 10 Feb 2021

Field I.D. MEC2118

ct D-Old \ Necropsy \ scar2dat \ 30May01

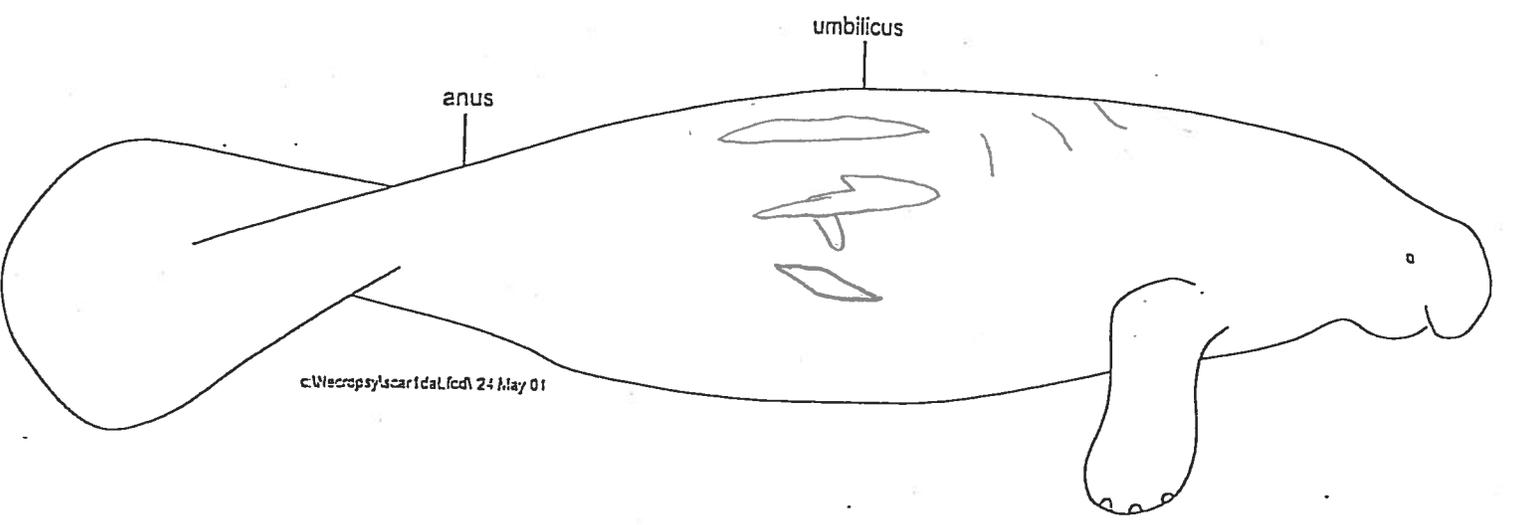
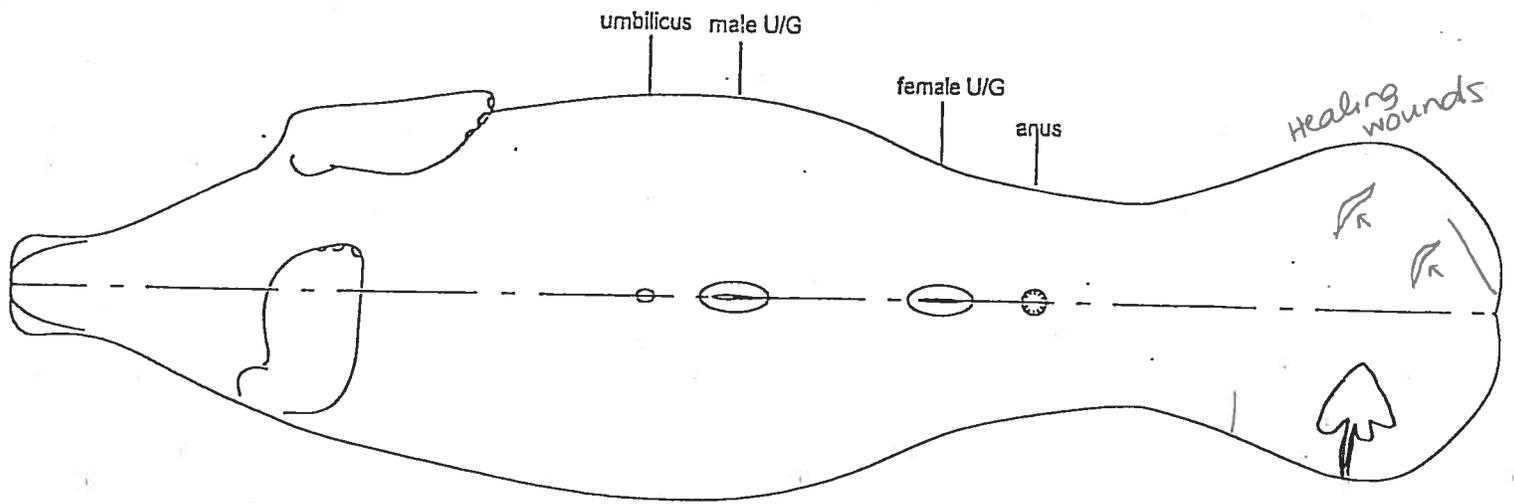
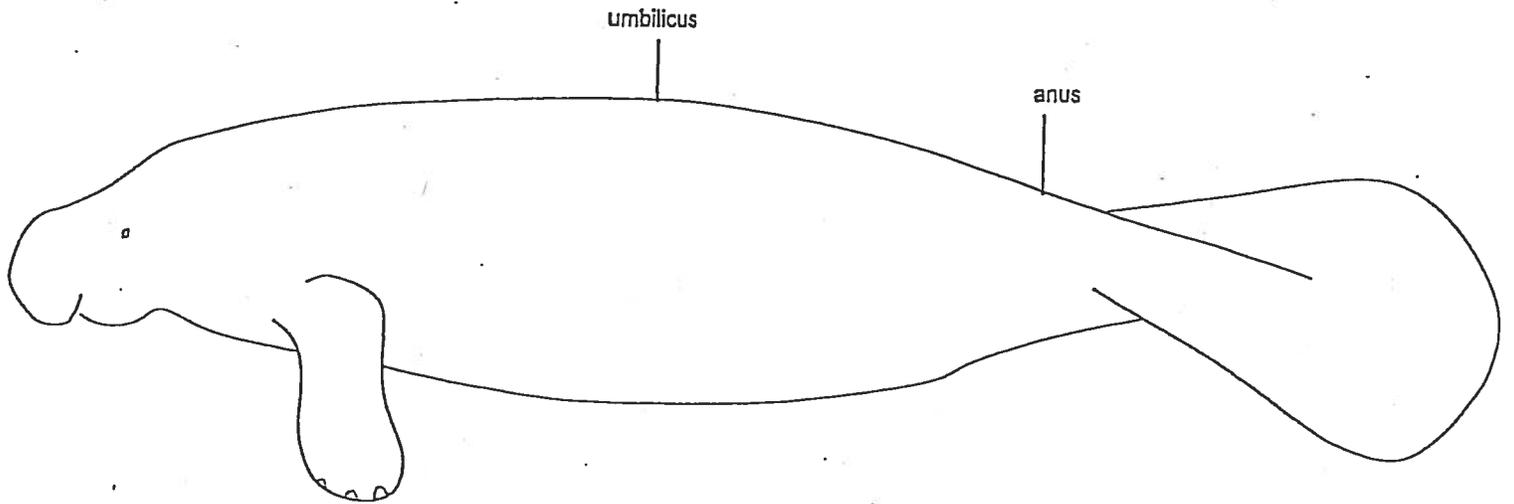


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC21118



NECROPSY REPORT FINAL REPORT

Field ID: MEC21118
 Alternate Field ID:
 Accession Number: 21-16
 Species: *Trichechus manatus latirostris*
 Date: 10 Feb 2021 (DOR); 11 Feb 2021 (DON)
 Location: FL
 Sex, Age: F
 TL: 294.0 cm
 WT 438.0 kg
 Body Condition: Emaciated
 Condition at Investigation: Dead
 Carcass Disposition/Post-Mortem Interval: 24> hours

HISTORY

Findings include:

- Bloody eyes, nares
- Emaciated
- Depleted, serous fat
- Slightly serous tissue
- Relatively empty lower GI tract
- Sand in duodenum
- Fluid pleural cavities
- Wet lungs
- Dark red ascites
- Firm, swollen, bloody kidneys
- Congested urinary bladder mucosa, GI tract, mesenteries
- Monofilament in feces
- Uterine scars

Probable Cause of Death: Natural; Other

ANCILLARY DIAGNOSTICS

Test	Tissue/Sample	Result	Comment

MICROSCOPIC DESCRIPTION

Received are 1 H&E slides.

The T-Septal lymph node is mildly depleted. Medullary sinuses are expanded by clear spaces (edema), fibrin, and macrophages. Vessels are moderately congested. The caudal mesenteric lymph node is moderately cellular. There is moderate congestion. There is mild depletion of splenic periarteriolar lymphoid sheaths. There is mild to occasionally moderate capsular fibrosis. Within the capsule, there are accumulations of hemosiderophages.

There is multifocal atrophy of cardiomyocytes. Multifocally, there are cardiomyocytes which exhibit vacuolation. There are random cardiomyocytes which have enlarged nuclei and mildly increased sarcoplasm (hypertrophied). There is multifocal expansion of interstitial spaces by lightly eosinophilic fluid (edema). In the left ventricle, there is fatty infiltration. There is serous atrophy of epicardial adipocytes.

The right ovary has follicles of varying maturational stages. Two corpora albicantia are present. Uterine glands are mildly depleted. There are multifocal accumulations of pigment-laden macrophages (hemosiderin). There is multifocal perivascular fibrosis.

There is mild hepatic atrophy. Diffusely, hepatocytes contain small to moderate numbers of granular brown intracytoplasmic pigment. There is multifocal vacuolation of hepatocytes. There is moderate congestion.

There is fatty infiltration of the peduncle muscle. Surrounding adipocytes exhibit no serous atrophy. There is interstitial edema of the hemidiaphragm. There is serous atrophy of adipocytes within the crus. There is fatty infiltration of the axillary muscle. There is multifocal serous atrophy of adipocytes.

There is mild, multifocal epithelial hyperplasia of the mediolateral skin. There is mild, multifocal loss of pigment in the basal epithelium. Few rhabditiform nematodes are present on the surface.

There is moderate renal congestion.

In the left and right lung, there is lightly eosinophilic fluid within alveolar spaces. There is pleural expansion by clear spaces (edema).

The following tissues have no significant histological findings: Urinary bladder, mammary gland, adrenal gland, stomach, proximal large intestine

MORPHOLOGIC DIAGNOSES

Musculoskeletal System/Integumentary System

- A. Hemidiaphragm:
 - a. Interstitial edema.
 - b. Serous atrophy of fat.

B. Axillary Muscle: Serous atrophy of fat.

Respiratory System

A. Lung: Pulmonary edema.

Nervous System

NE

Urinary and Reproductive System

A. Uterine Horn: Fibrosis, focally extensive with hemosiderophages (uterine scar).

B. Ovary:

- a. Corpora albicantia.
- b. Folliculogenesis.

Digestive System/Body as a Whole

NSF

Cardiovascular System

A. Heart:

- a. Cardiomyocyte atrophy, multifocal with individual cardiomyocyte degeneration.
- b. Interstitial edema.
- c. Epicardial serous atrophy.

Hepatobiliary System

A. Liver:

- a. Atrophy, mild.
- b. Hemosiderosis.
- c. Congestion.

Endocrine System

NSF

Hematolymphatic System

A. Spleen:

- a. Lymphoid depletion, mild.
- b. Capsular fibrosis and hemosiderosis.

B. T-Septal Lymph Node: Edema, fibrin exudation, and histiocytosis

INTERPRETATIVE SUMMARY

DIAGNOSES
Pulmonary Edema
Cardiomyocyte Atrophy
Uterine Scar
Lymphoid Depletion (Mild)

DIAGNOSES

Primary Diagnostic Category: **Organ Specific (Non-Infectious)**

Linked Cases:

There are findings in this case that are similar to other 2020-2021 Florida East Coast UME cases including myocardial atrophy, serous atrophy of fat, and mild lymphoid depletion. There is mild hepatic atrophy. The changes were not as pronounced as other UME cases. Myocardial atrophy and vacuolation of cardiomyocytes may reflect a nutritional component. As observed grossly, there was a uterine scar. This may reflect variability in the animals nutritional/caloric access. There was red-tinged fluid in the pleural and abdominal cavity. The exact cause was not determined, but considerations would be cardiac failure and possibly diminished oncotic pressure from decreased albumin production by the liver. This is speculation and bloodwork on living animals may provide stronger support for low albumin. No infectious agents were observed.

TEST	PURPOSE	SITE	RESULT

DATE: 2/27/2021	REPORTING PATHOLOGIST: David S. Rotstein, DVM, MPVM, DACVP
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FIGURES

No Figures

Bassett, Brandon

From: Rood, Kari
Sent: Monday, February 22, 2021 11:11 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21118=BC715

MEC21118=BC715

Carcass location: Indian River, Port St. John
Female

First sighted 2/7/07 at Berkeley Street Canal
Last sighted 1/24/18 at Indian River, FPL Canaveral Power Plant
USGS should be able to provide a complete sighting history if needed.

Verifiers: HONAKER 2/20/21 & KAH 2/22/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

FWC Case # _____ FWC District: _____
Sex: M / F / Undetermined Length: 294 cm (estimated _____) Weight 438 kg.
Date reported: _____ By: _____
Date collected: 10 Feb 21 By: HSC T. Johnson
Date necropsied: 11 Feb 21 By: MMPL MdW SMT TDW

LOCATION: State: FL (____) County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - Scars - Fluke - Cranial - Internal Site Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton -
Histology - Other Stomach cont alcohol, feces frozen Burgess
Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____
ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other _____

Genetics Box # 101

Female reproductive findings or N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted / Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation
Organ weights - Rescue Report/Map - Other _____

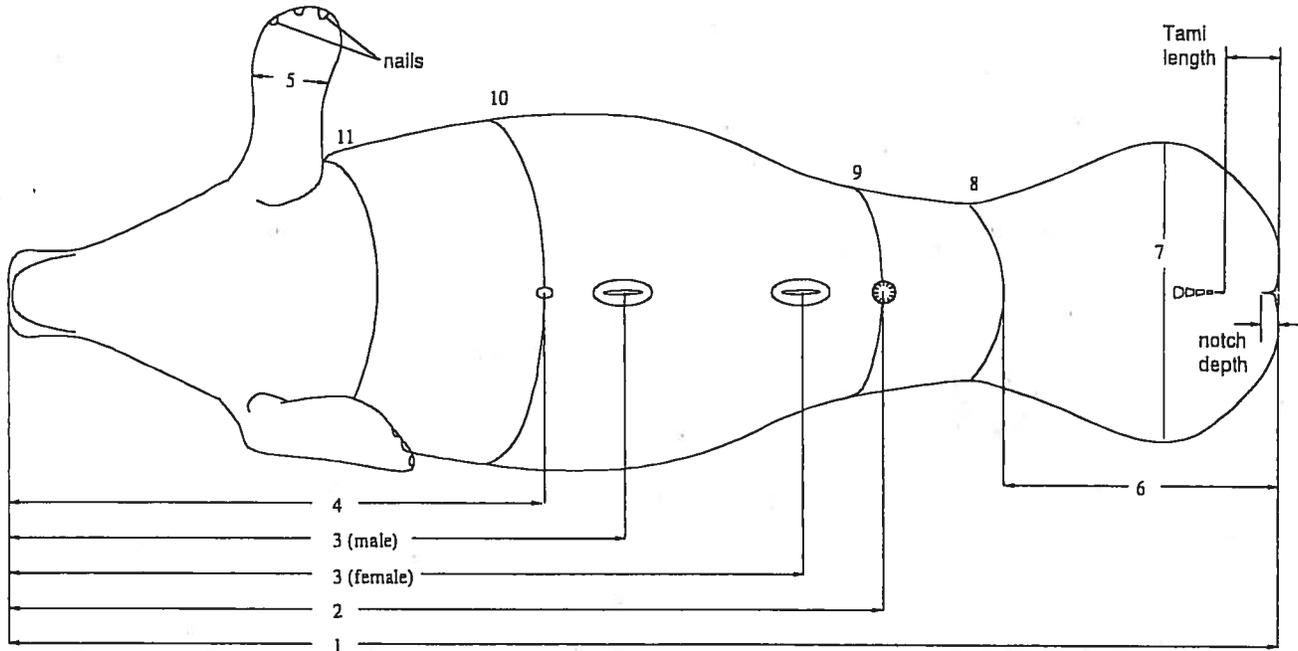
PIT TAG Scan: Negative; Positive (Left _____ - _____ - _____) (Right _____ - _____ - _____); N/T

REMARKS: Straight Length: 291cm

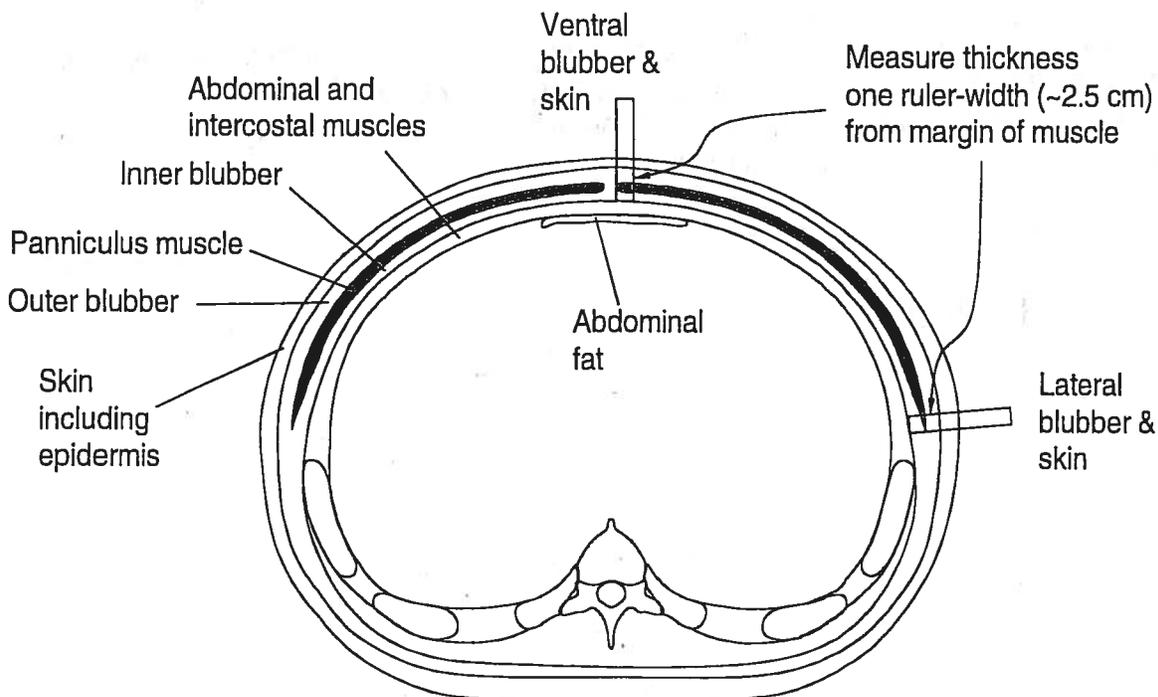
Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only.

USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- 1. Total length 294 cm
 - 2. Snout to anus -C 191 cm
 - 3. Snout to U/G -C 175 cm
 - 4. Snout to umbilicus -C 107 cm
 - 5. Flipper width 18 cm
 - 6. Fluke base 92 cm
 - 7. Fluke width 31 cm
 - 8. *Girth at fluke base 115 cm
 - 9. * Girth at anus 153 cm
 - 10. *Girth at umbilicus 200 cm
 - 11. *Girth at axillae 177 cm
- (Nail count: L 4 R 4)



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21119
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2352 **FWC Region:** NE

Sex: Female **Length:** 195 cm **Weight:** 124.0 kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-10 **By:** FWC-WDG MMPL-CMF HSC-T. Johnson
DATE NECROPSIED: 2021-Feb-11 **By:** MMPL-MdW,SMT,TDW

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Port St. John, grounded approximately 45 m E of the northernmost building at 7030 North Highway 1.

CONDITION: Badly Decomposed
PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Serous muscle; Pneumothorax; Relatively empty GI tract; Fluid in pleural cavities; Fibrin strings on lungs; Algae in mouth; Congested mesenteries, urinary bladder mucosa, colon; Bloody liver; Black specks parietal pleura.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Cold stress lesions).

MATERIALS COLLECTED: Genetics, ELISA toxicology samples, Partial skeleton (Skull). Burgess samples: feces frozen. Algae from mouth in alcohol.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Bleached epidermis; Spongy epidermis; Total length dorsum-up=190 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	195 cm	Fluke base:	59 cm	Girth at axillae:	115 cm
Snout to anus:	129 cm	Fluke width:	47 cm		
Snout to U/G:	118 cm	Girth at fluke base:	82 cm		
Snout to umbilicus:	72 cm	Girth at anus:	101 cm		
Flipper width:	11 cm	Girth at umbilicus:	140 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21119
RECOVERY DATE 10 February 2021
GENDER Female **TL** 195 cm **WT** 124 kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 11 February 2021
CONDITION Badly Decomposed

HISTORY 10 February 2021, at 0805 hrs, FWC biologist-William Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 2341 was assigned. The complainant, Tim Lewis (203-291-8609), stated that there were two dead manatees (MEC21118 and MEC21119) on shore behind his house. Both manatees were gray and appeared fresh. At 0818 hrs, WDG received a verification photo. WDG and FWC biologist-Christine Fontaine arrived at Port St. John boat ramp at 1000 hrs, launched the Key West boat, secured the carcasses to the boat at 1040 hrs, and loaded them into the U-trailer at 1130 hrs. FWC-Trent Johnson transported both carcasses (MEC21118 and MEC21119) to the MMPL arriving by 1445 hrs.

EXTERNAL Almost all of the epidermis was present but sloughing. The epidermis was bleached on the face, flippers, and ventrum. The epidermis was spongy on the ventral neck. There was a thin green algal mat on the dorsal aspect. A minimum of two well-healed watercraft-related scar patterns was observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was scant, serous abdominal, mesenteric, and omental fat.

STOMACH The stomach contained approximately 100 mL of viscous, tan mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained approximately 100 mL of viscous, dark grey mucus. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was severely congested. The small intestine contained a scant amount of tan to yellow mucus. The proximal small intestine wall was rugose due to contraction and the rugae were stained tan. The mucosa was autolyzed throughout. No parasites were grossly observed.

CECUM The cecum was displaced to the right due to distension of the left hemidiaphragm. The cecum contained 500 mL of moist, well-digested, fibrous, stringy, light brown to green digesta. The mucosa was sloughing. No parasites were observed. An ELISA toxicology sample was collected.

COLON The mesentery was severely congested. The proximal-most one meter contained a small amount of moist, well-digested, fibrous, stringy, moderately formed, green to brown feces. The remainder of the proximal colon contained a small amount of moist, well-digested, slightly stringy, well-formed, dark green feces. The wall had patches of severe congestion. The mucosa was sloughing. The mid colon contained a small amount of moist, well-digested, pasty, poorly formed, dark green feces. The mucosa was sloughing. The distal colon contained a small amount of moist, well-digested, pasty, moderately formed, dark green feces. The mucosa was black and sloughing. No parasites were observed throughout.

PANCREAS The pancreas was soft, friable, and autolyzed.

SPLEEN The spleen was purple on serosal and cut surfaces.

LIVER The margins of the liver were rounded. The liver was soft. Serosal surfaces were blue to grey, and cut surfaces were dark red and bloody. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder contained 25 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was scant, serous reproductive fat. The diameter of the uterus was small. There were no scars. The ovaries did not have any follicles.

KIDNEYS There was scant, gassy perirenal fat. The kidneys were pink to dark pink on serosal surfaces. On cut surfaces, the cortices were light brown and the medullae were dark red. The corticomedullary boundaries were mostly distinct.

URINARY BLADDER The bladder contained approximately 10 mL of clear, light yellow urine. The mucosa was moderately congested. An ELISA toxicology sample was collected.

HEART There was scant, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left hemidiaphragm was distended due to gas in the pleural cavity. The right pleural cavity contained 500 mL and the left contained 250 mL of dark red fluid. The caudal tip of the left lung was folded along the longitudinal axis. The lungs were coated with a few strings of fibrin. Serosal surfaces were light pink to light purple and cut surfaces were light pink. The airways contained a small amount of watery, red fluid. The mucosa was light pink. No parasites were observed. The parietal pleura had black specks. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS There was a large thatch of poorly chewed, branched, tan algae in the mouth. The trachea contained a small amount of watery, red fluid.

SKELETON NVL.

OTHER All muscle, fat, and connective tissue was severely serous.

COMMENTS

SIGNIFICANT FINDINGS

- Depleted, serous fat
 - Serous tissue
 - Pneumothorax
 - Fluid in pleural cavities
 - Fibrin strings on lungs
 - Relatively empty GI tract
 - Black specks parietal pleura
 - Algae in mouth
 - Congested mesenteries, urinary bladder mucosa, colon
 - Bloody liver
 - Bleached, spongy epidermis
-

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY

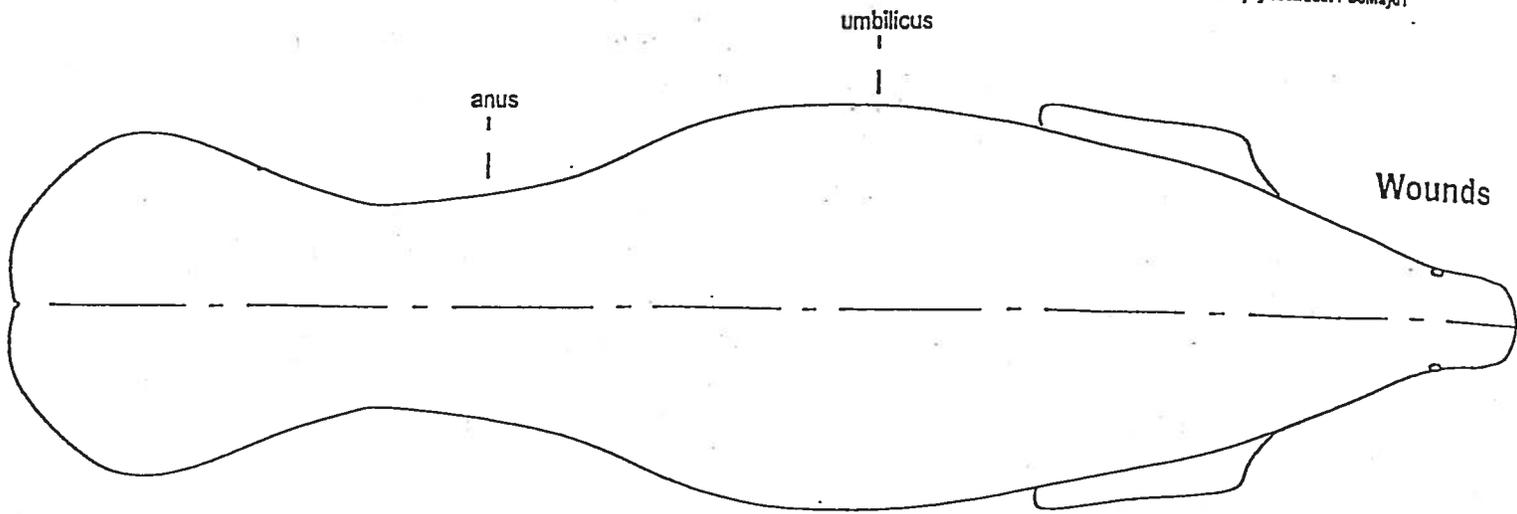
Martine de Wit, DVM
Sean M. Tennant

REPORT FILED BY de Wit

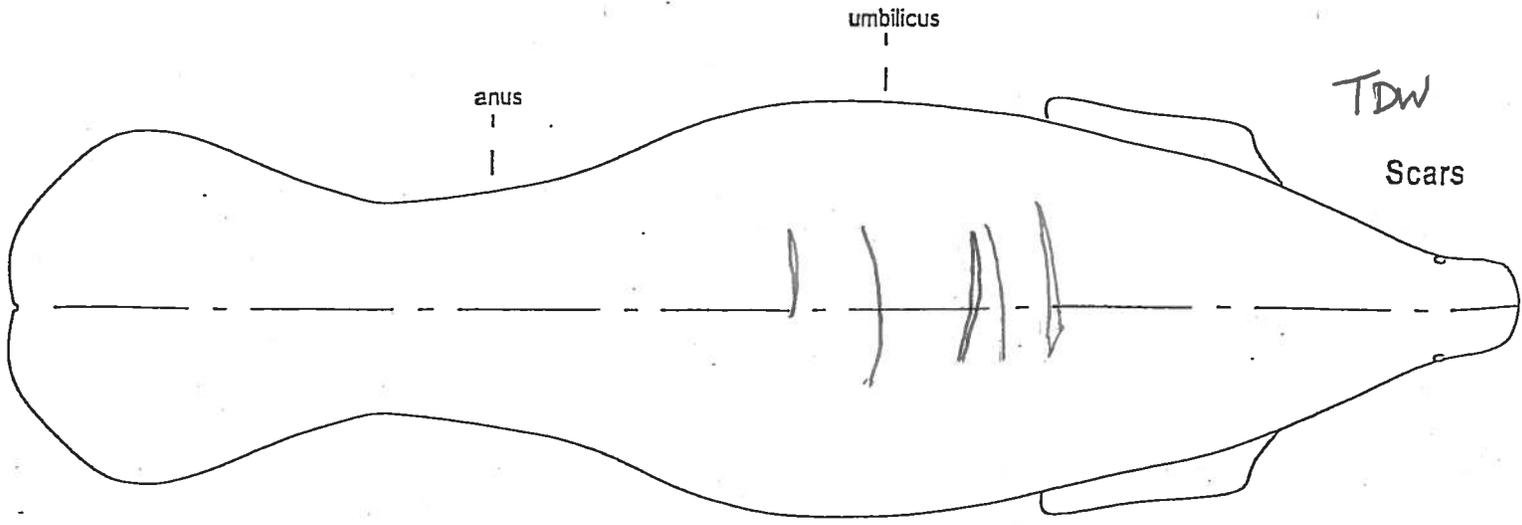
Date 10 Feb 2021

Field I.D. MEC21119

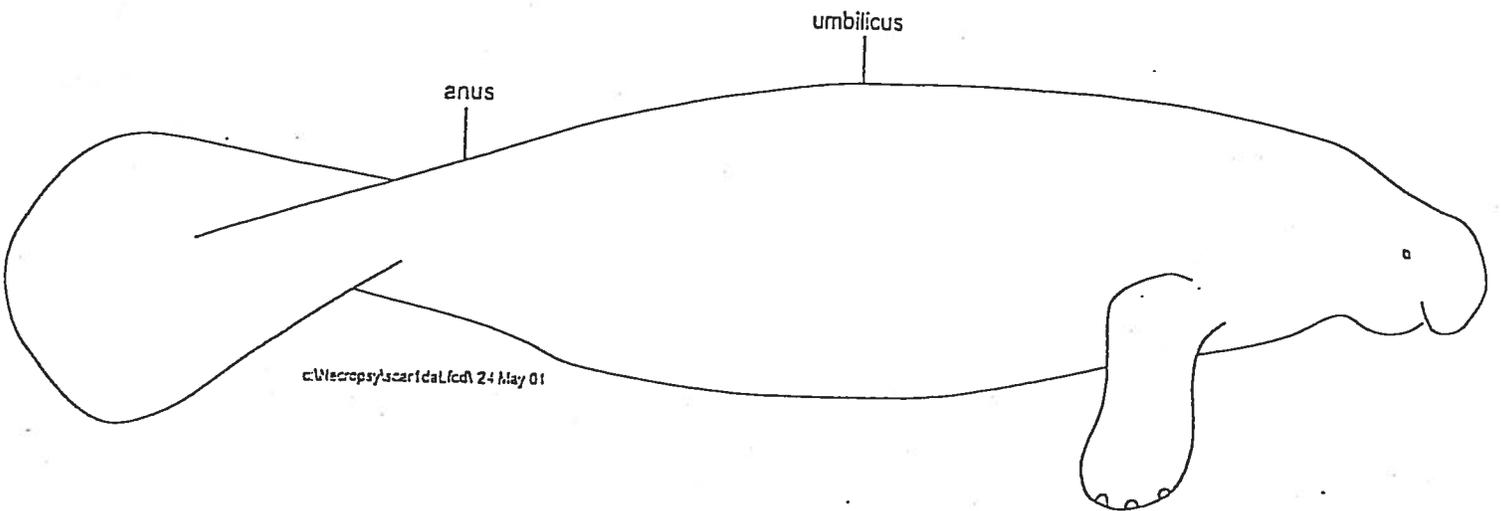
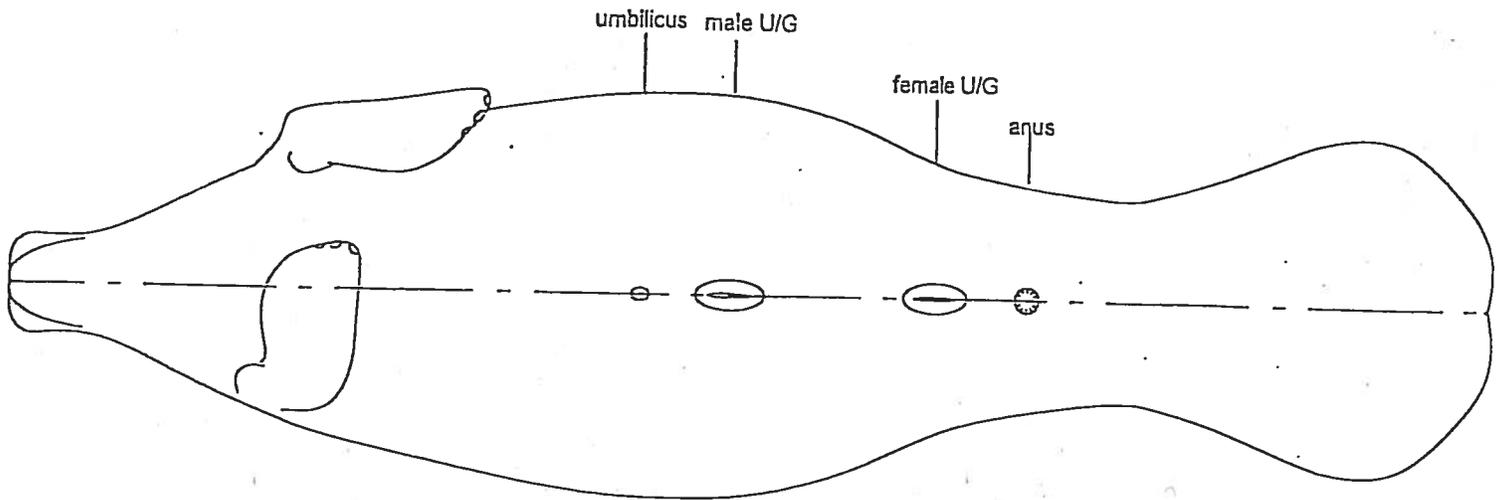
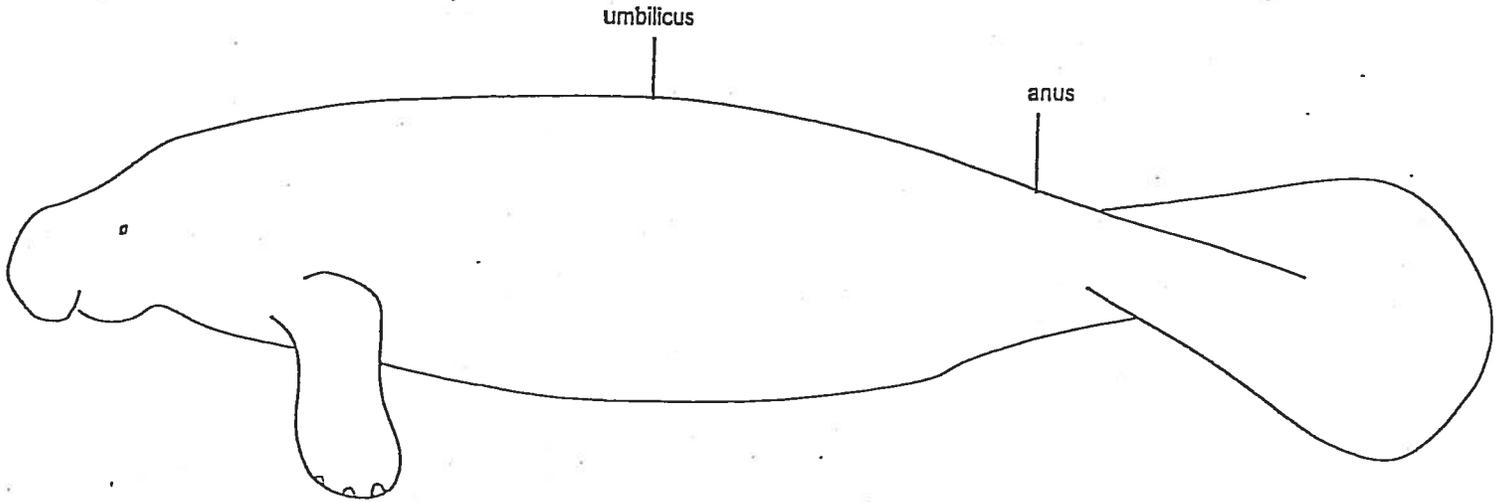
c:\D-Old\Hecropsy\scar2dat1 30May01



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



FWC Case # _____ FWC District: _____
Sex: M F Undetermined Length: 195 cm (estimated _____) Weight 124 kg.
Date reported: _____ By: _____
Date collected: 10 Feb 21 By: HSC T Johnson
Date necropsied: 11 Feb 21 By: MMPL MdW SMT TDW

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: - Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human _____
(4) Perinatal (<150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal - Ventral - R. Lateral - L. Lateral - Scars - Fluke - Cranial - Internal - Site - Other

MTLS COLLECTED: Genetics - Earbone - Partial Skeleton - Complete Skeleton - _____

Histology - Other feces frozen Burgess, algae mouth alcohol 70% cold stress lesion

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other _____

ELISA Tox: Stomach - Liver - Lung - Urine - Kidney (if no urine) - Other cecum cont

Genetics Box # 101

Female reproductive findings or N/A

LACTATING Yes - No - UNK PREGNANT Yes - No - UNK UTERINE SCAR - Yes - No - UNK

UTERINE HORNS: Small diameter - Contracted/Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

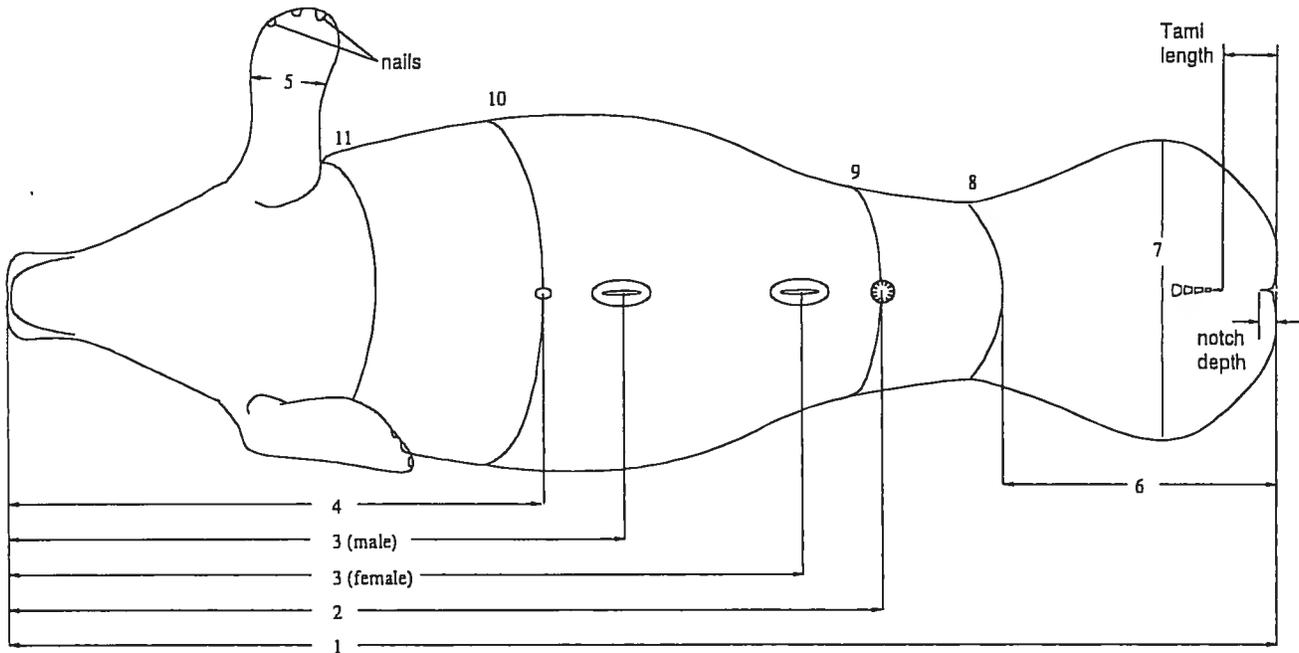
Organ weights - Rescue Report/Map - Other _____

PIT TAG Scan Negative Positive (Left _____ - _____ - _____) (Right _____ - _____ - _____); N/T

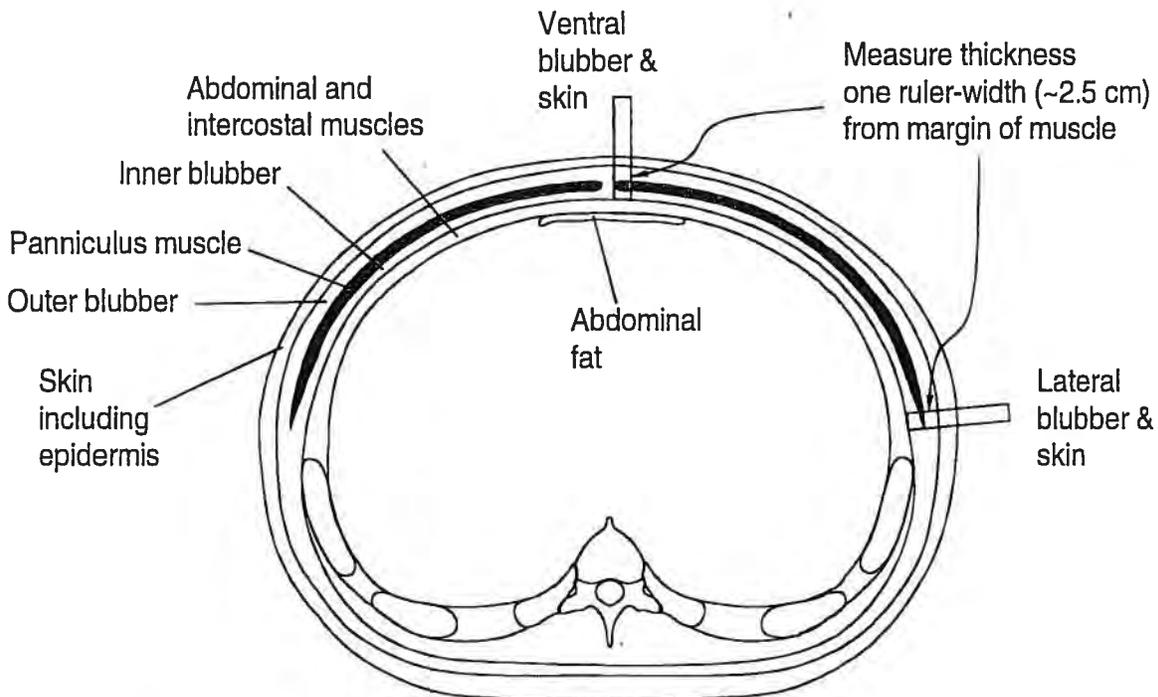
REMARKS: Straight Length: 190cm

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|---------------------------------------|---------------------------------------|--------------------------------------|
| 1. Total length <u>195</u> cm | 6. Fluke base <u>59</u> cm | 11. *Girth at axillae <u>115</u> cm |
| 2. Snout to anus -C <u>129</u> cm | 7. Fluke width <u>47</u> cm | |
| 3. Snout to U/G -C <u>118</u> cm | 8. *Girth at fluke base <u>82</u> cm | |
| 4. Snout to umbilicus -C <u>72</u> cm | 9. * Girth at anus <u>101</u> cm | |
| 5. Flipper width <u>11</u> cm | 10. *Girth at umbilicus <u>140</u> cm | (Nail count: L <u>4</u> R <u>4</u>) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	_____ cm	_____ cm	(Epidermis _____ cm)
Outer fat.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Inner fat.....	_____ cm	_____ cm	



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21120
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2353 **FWC Region:** NE

Sex: Female **Length:** 169 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-10 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Palm Bay, grounded approximately 20 m ENE of 1531 Anglers Drive NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Flat ventrum; Longitudinal folds; Bleached epidermis; Cobblestone-like epidermis; Skin lesions; Verified through complainant photograph and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	169 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21120

RECOVERY DATE 10 February 2021

GENDER Female **TL** 169 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 10 February 2021, at 1624 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Palm Bay, Brevard County. FWC case number 2353 was assigned. The complainant, Scott Gabriel (321-427-8363), described a dead manatee behind his residence that was small enough that two people could lift it. At 0957 hrs, SMW received photo verification. At 1302 hrs, FWC biologist-Carley M. Metcalf (CMM) arrived at a remote location close to the reported residence, launched a kayak, and towed the carcass to the truck. The carcass was loaded via Ezy-lift by 1358 hrs and transported to the Brevard County Landfill. An external work up was completed at 1630 hrs.

EXTERNAL Almost all of the epidermis was present but sloughing. There was a thin green to brown algal mat on the dorsal and lateral aspects. The ventrum was flat with a longitudinal fold. Cobblestone-like epidermis was observed on the ventral aspect. There were copepods on the ventrum. Bleached epidermis was present at the axilla, flippers, nares, and fluke margin. There were multiple small, linear lesions on all aspects. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC biologist
- Flat ventrum
- Longitudinal fold
- Bleached, cobblestone-like epidermis
- Skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21121
Date of Report: 2021-Feb-09
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 280 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** VCMMST to FWC-WDG

DATE COLLECTED: 2021-Feb-09 **By:** VCMMST

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Atlantic Ocean

Locality description: New Smyrna Beach, beached approximately 110 m SE of 1309 Hill Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Emaciated; Peanut-shaped head; Longitudinal folds; Cobblestone-like epidermis; Bloody nares. Verified through photographs and VCMMST personnel.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Carcass measured ventrum-up by beach patrol officer.

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MORPHOMETRICS:

Total length:	280 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21121

RECOVERY DATE N/A

GENDER Female **TL** 280 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 09 February 2021, at 0709 hrs, FWC biologist-William D. Greer received a text from Volusia County Marine Mammal Stranding Team (VCMMST)-Chad Murch (CM) regarding a dead manatee in the Atlantic Ocean, New Smyrna Beach, Volusia County. CM reported an adult carcass with sloughing epidermis grounded at the tide line on the beach just south of SR-44. He sent verification photos at 0711 hrs. Beach Patrol collected a total length using a full-length tape measure with the carcass ventrum up, and they flipped the carcass for dorsal photos. Due to an elevated carcass load, EC Field Station staff were not available to respond. VCMMST personnel collected the carcass and disposed of it.

EXTERNAL From photographs - Approximately 70% of the epidermis was present but sloughing. Red-tinged fluid exuded from the nares. The carcass was dorsoventrally flattened due to emaciation. The ventrum was slightly concave with longitudinal folds. The carcass had a peanut-shaped head. Thin patches of cobblestone-like epidermis were present on the ventrum. A thin brown algal mat was observed on the lateral aspects.

COMMENTS

SIGNIFICANT FINDINGS

- Verified by photos and VCMMST staff
- Emaciated
- Peanut-shaped head
- Longitudinal folds
- Bloody nares
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21123
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2357 **FWC Region:** NE

Sex: Female **Length:** 303 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-10 **By:** FWC-WDG MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating approximately 305 m ENE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Longitudinal folds; Cobblestone-like epidermis; Asymmetric to left side. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	303 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21123

RECOVERY DATE 10 February 2021

GENDER Female **TL** 303 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 10 February 2021, at 1000 hrs, FWC biologists-William D. Greer (WDG) and Christine M. Fontaine (CMF) launched the Key West boat from the Port St. John boat ramp. At 1022 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Cocoa, Brevard County. FWC case number 2357 was assigned. The complainant, Albert Davies (407-920-2436), stated that there was an eight to nine-foot dead manatee just south of the FPL-Cape Canaveral Energy Center. After collecting MEC21122, WDG and CMF arrived and confirmed MEC21123 at 1221 hrs and secured it to the boat. WDG and CMF towed both carcasses to a remote location where an external workup was completed by 1421 hrs. The remains were left on site.

EXTERNAL All of the epidermis was present. The carcass was dorsoventrally flattened. There was cobblestone-like epidermis on all aspects. A moderate green algal mat was present on the dorsal aspect. The carcass was distended to the left aspect. There were longitudinal folds on the ventrum. A minimum of four well-healed watercraft-related scar patterns was observed on the caudal dorsal aspect and fluke. PIT tag scan was negative. A genetics sample was collected.

COMMENTS Carcass became stuck with the dorsum up, and staff were unable to roll the carcass for ventral photos. External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Asymmetric to left side
- Longitudinal folds
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

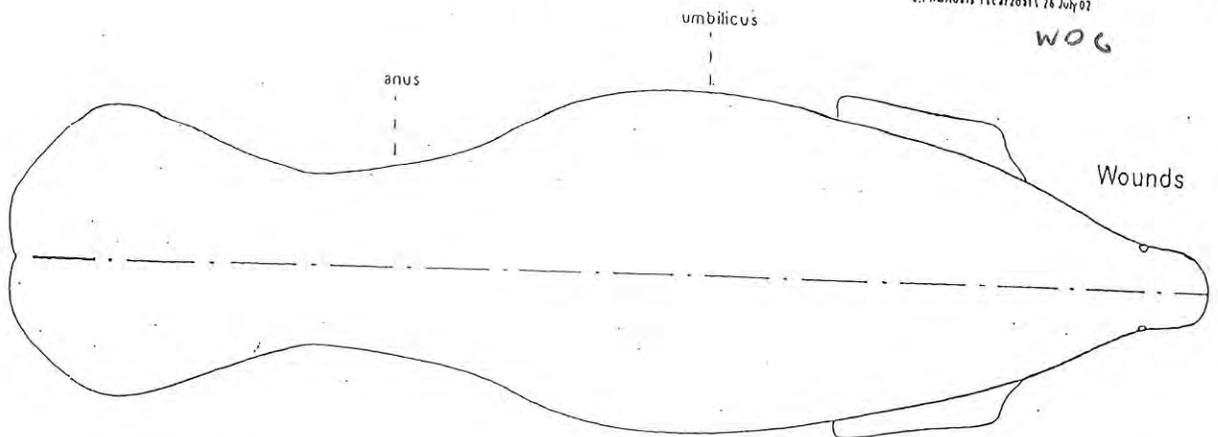
REPORT FILED BY Greer

Date 10 FEB 2021

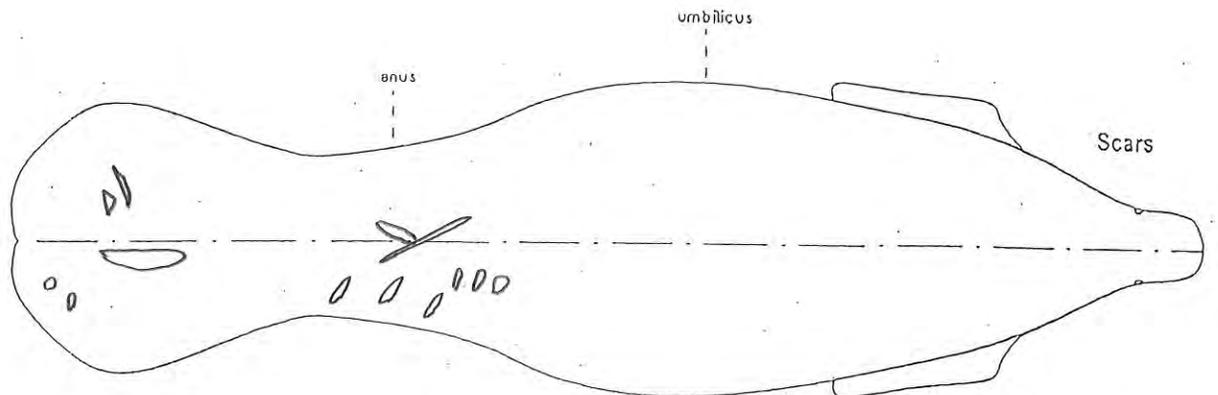
Field I.D. MEC 21123

CSI Manuals 1 Scar2dat1 26 July 02

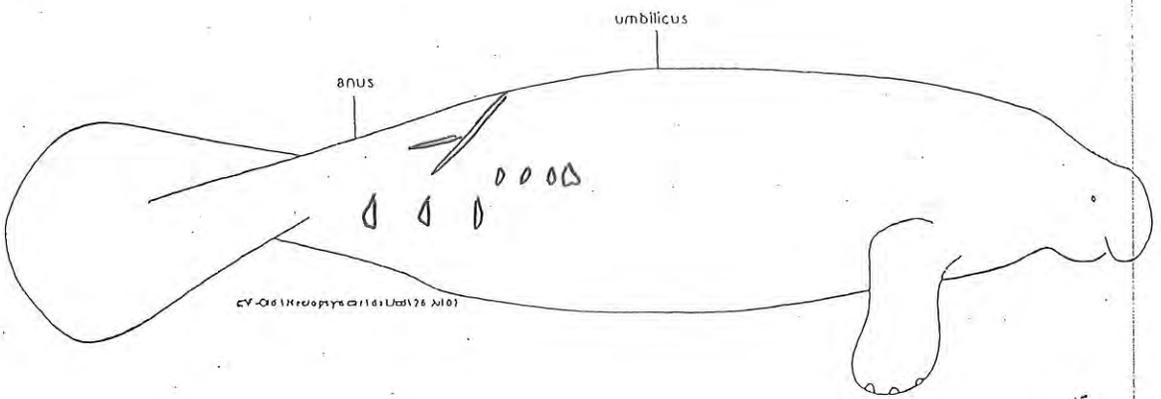
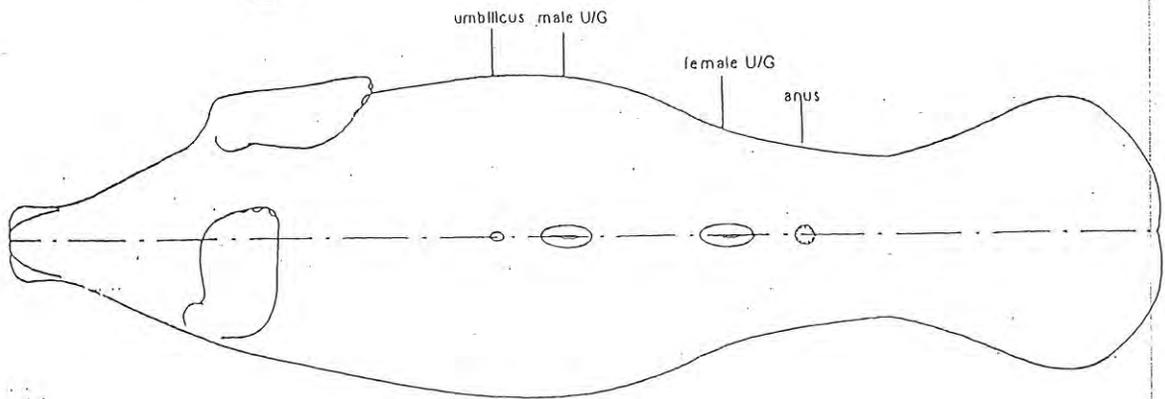
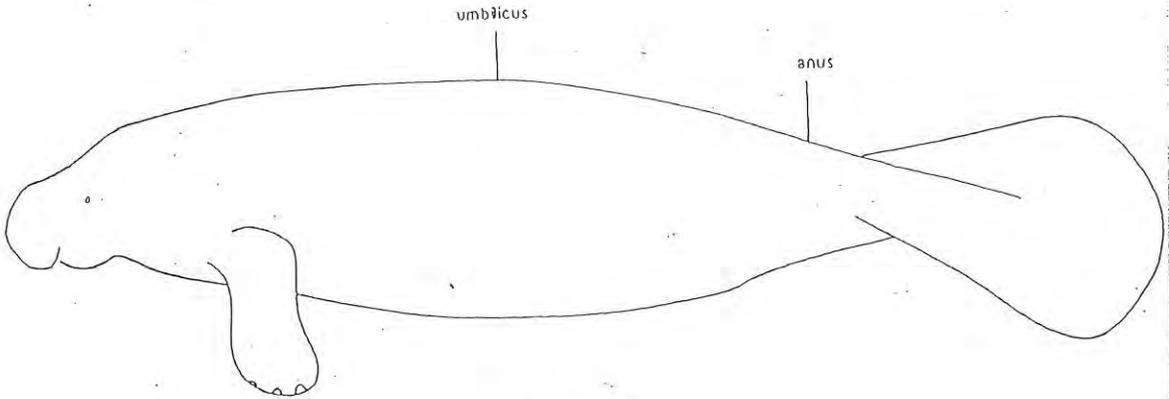
WOG



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MECZ123



01 28 1978 161 01 06 1978

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21124
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2373 **FWC Region:** NE

Sex: Female **Length:** 150 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, floating approximately 880 m W of 2930 Maritime Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Fetal folds; Bleached epidermis; Cobblestone-like epidermis; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21124

RECOVERY DATE N/A

GENDER Female **TL** 150 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 10 February 2021, at 1204 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Cocoa, Brevard County. FWC case number 2373 was assigned. The complainant, David Kobus (309-830-5652), had reported a small manatee carcass floating north of the 528 bridge. SMW received verification photos at 1238 hrs. Due to the small size and advanced stage of decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs – Approximately 90% of the ventral epidermis was present but sloughing. The carcass was distended with gas. All visible epidermis was cobblestone-like. There were transverse folds on the ventrum. All body creases and the axillae appeared slightly bleached. There was at least one large barnacle on the left lateral aspect. The fluke margin was scalloped.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Bleached, cobblestone-like epidermis
- Fetal folds

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21125
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2393 **FWC Region:** NE

Sex: Male **Length:** 283 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-11 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Micco, floating approximately 45 m NE of 9025 Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Verified through complainant photograh and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Shark scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	283 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21125

RECOVERY DATE 11 February 2021

GENDER Male **TL** 283 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **10 February 2021**, at 1431 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Micco, Brevard County. FWC case number 2393 was assigned. The complainant, Dean Westberg (305-299-4621), stated that the carcass was almost full grown and belly-up with flippers flat to its chest. At 1442 hrs, SMW received a verification photo. **11 February**, at 0950 hrs, SMW and FWC biologist-Christine Fontaine (CMF) arrived at the Main Street boat ramp in Sebastian and launched the Key West boat. After recovering and completing an external work up on MEC21126, SMW and CMF secured MEC21125 to the Key West at 1138 hrs and towed it to a remote island. An external work up was completed by 1215 hrs. The remains were left on site.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was distended with gas. The muzzle was missing due to shark scavenging. Patches of cobblestone-like epidermis was present on the lateral aspects. A minimum of seven well-healed watercraft-related scar patterns was observed on the caudal dorsal aspect and fluke. The fluke margin had one large well-healed V-shaped mutilation between the 5 and 7 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-11_FWC049_4455 through 4475

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Cobblestone-like epidermis
- Shark scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

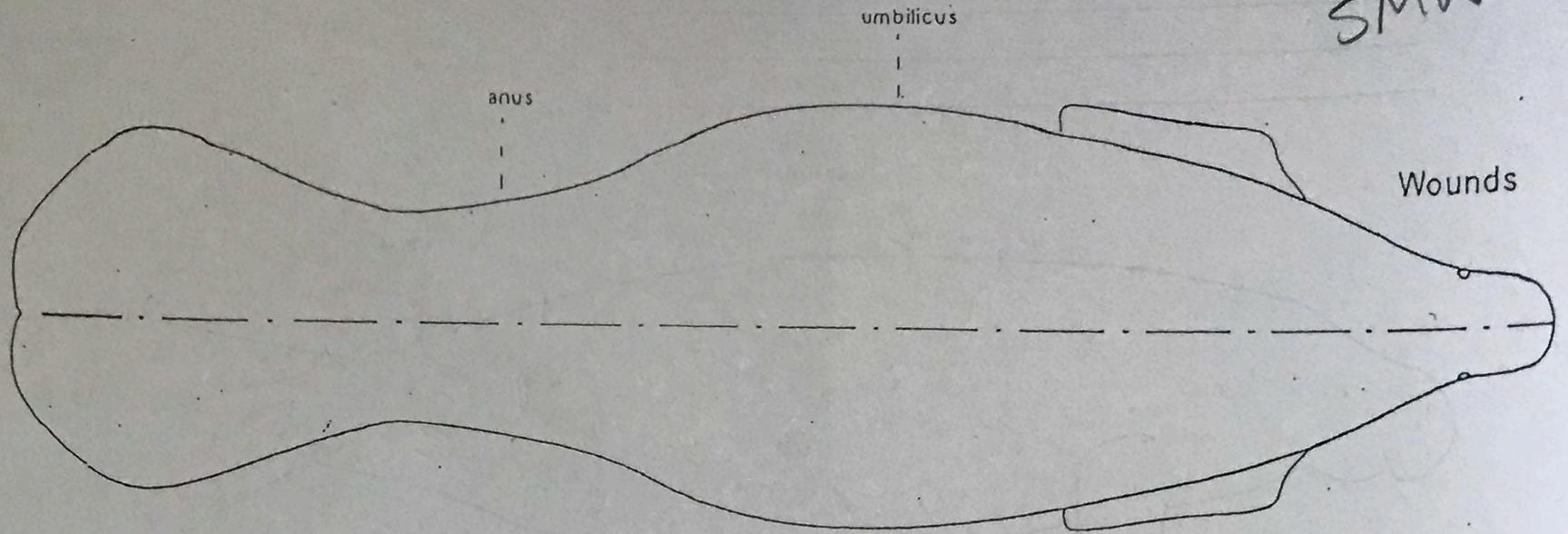
REPORT FILED BY Wappes

Date 11 FEB 2021

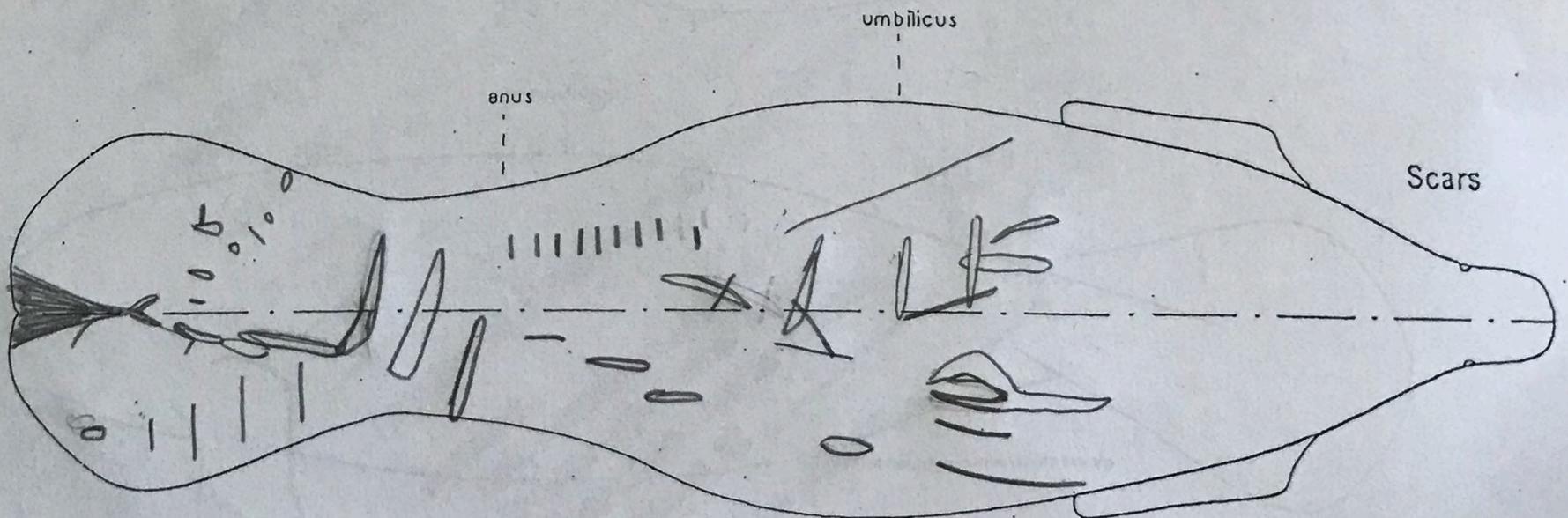
Field I.D. MEC21175

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SMW

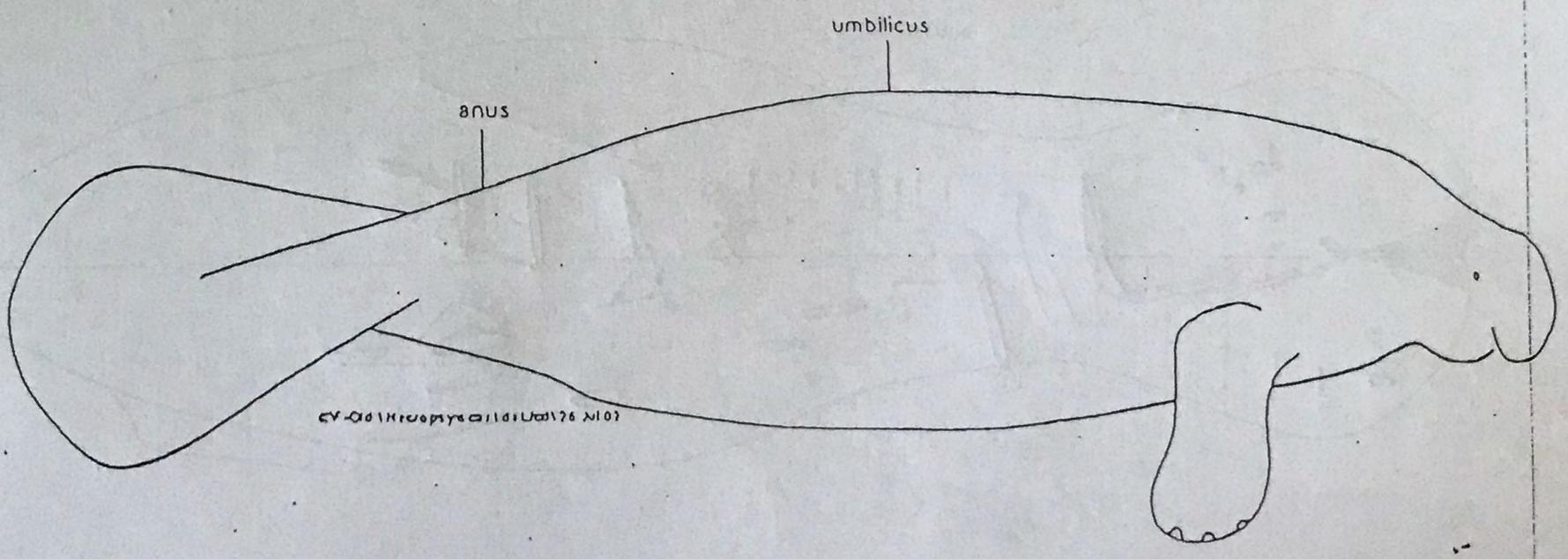
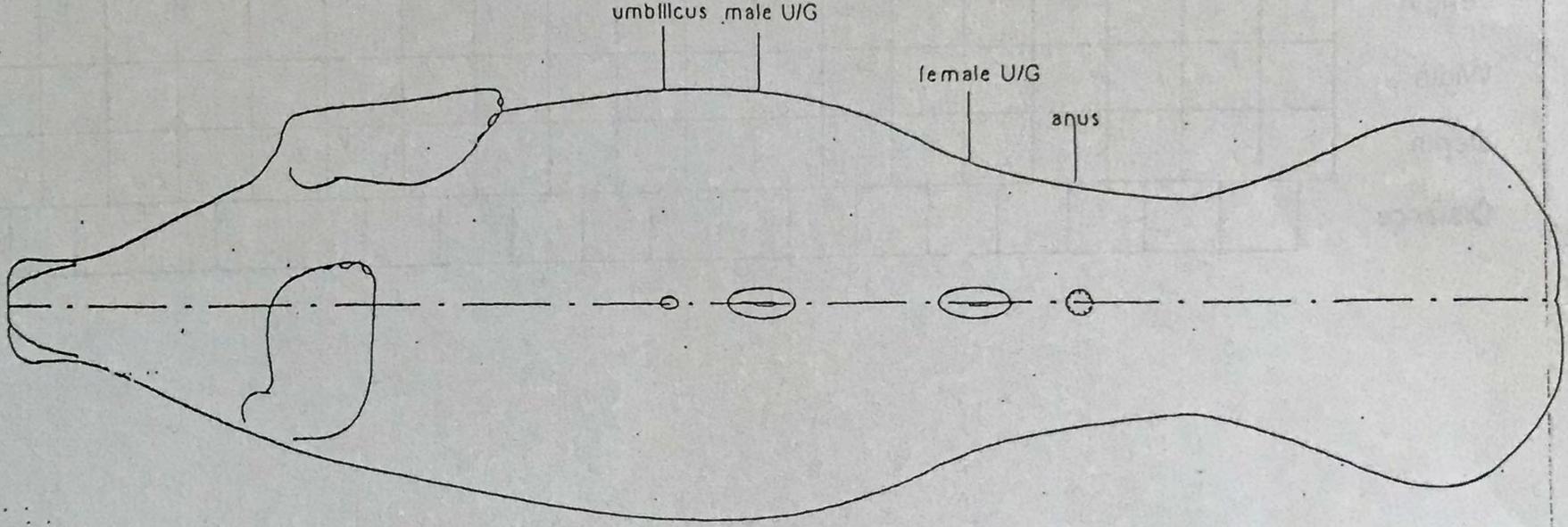
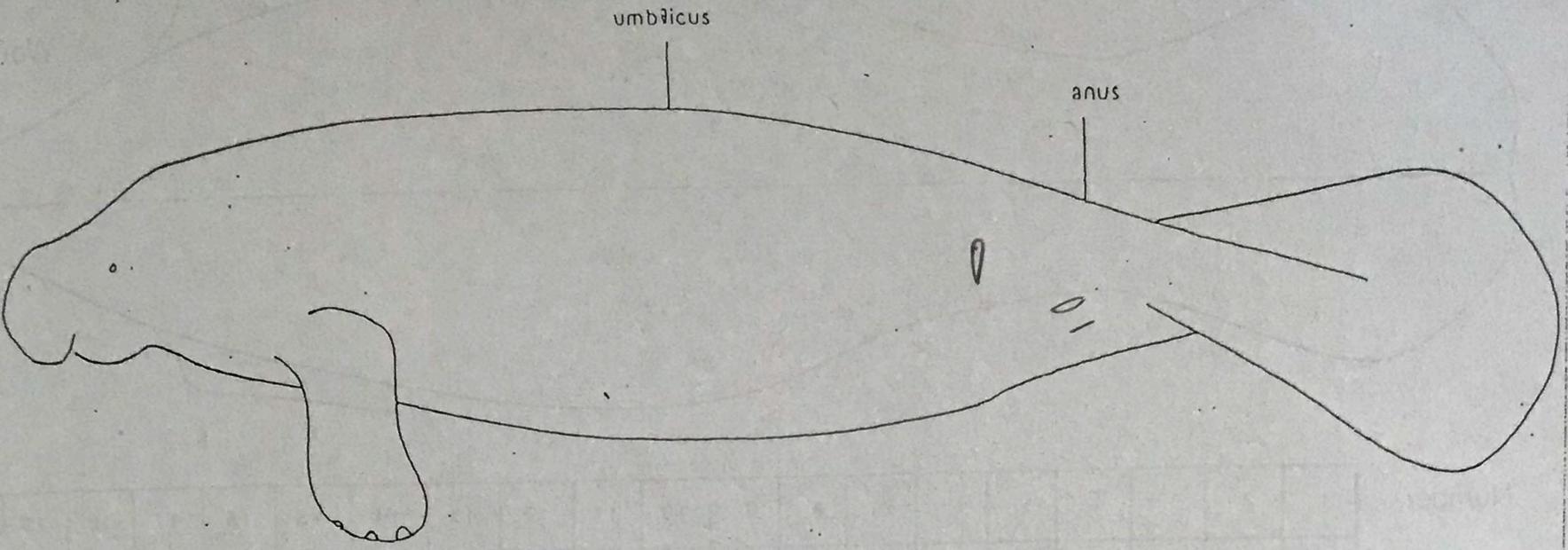


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC21175



CV-001Hr00pysc11d1U0176 N107

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21126
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2395 **FWC Region:** NE

Sex: Female **Length:** 291 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-11 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Sebastian, floating approximately 350 m E of 6688 110th Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Thin peduncle; Bloody nares. Verified through complainant photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Shark scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	291 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21126

RECOVERY DATE 11 February 2021

GENDER Female **TL** 291 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **10 February 2021**, at 1503 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Sebastian, Indian River County. FWC case number 2395 was assigned. The complainant, Randy Nuderzeld (616-648-8883), stated that the carcass was belly-up and fresh. At 1559 hrs, SMW received a verification photo. **11 February**, SMW and FWC biologist-Christine Fontaine arrived at the Main Street boat ramp in Sebastian at 0950 hrs, launched the Key West boat, secured the carcass to the Key West at 1028 hrs, and towed it to a nearby spoil island. An external work-up was completed by 1107 hrs. The remains were left on site.

EXTERNAL Approximately 60% of the epidermis was present but sloughing. Red-tinged fluid exuded from the nares. The carcass was slightly distended with gas. The peduncle was thin. Patches of dermis were missing from the cranial left lateral aspect due to shark scavenging. The face was eroded due to decomposition and/or scavenging. There was a thin brown algal mat on the lateral aspects. A minimum of five well-healed watercraft-related scar patterns was observed on the dorsal aspect. There were two small well-healed circular mutilations at the 5 o'clock position of the fluke margin. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologists
- Thin peduncle
- Bloody nares
- Shark scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

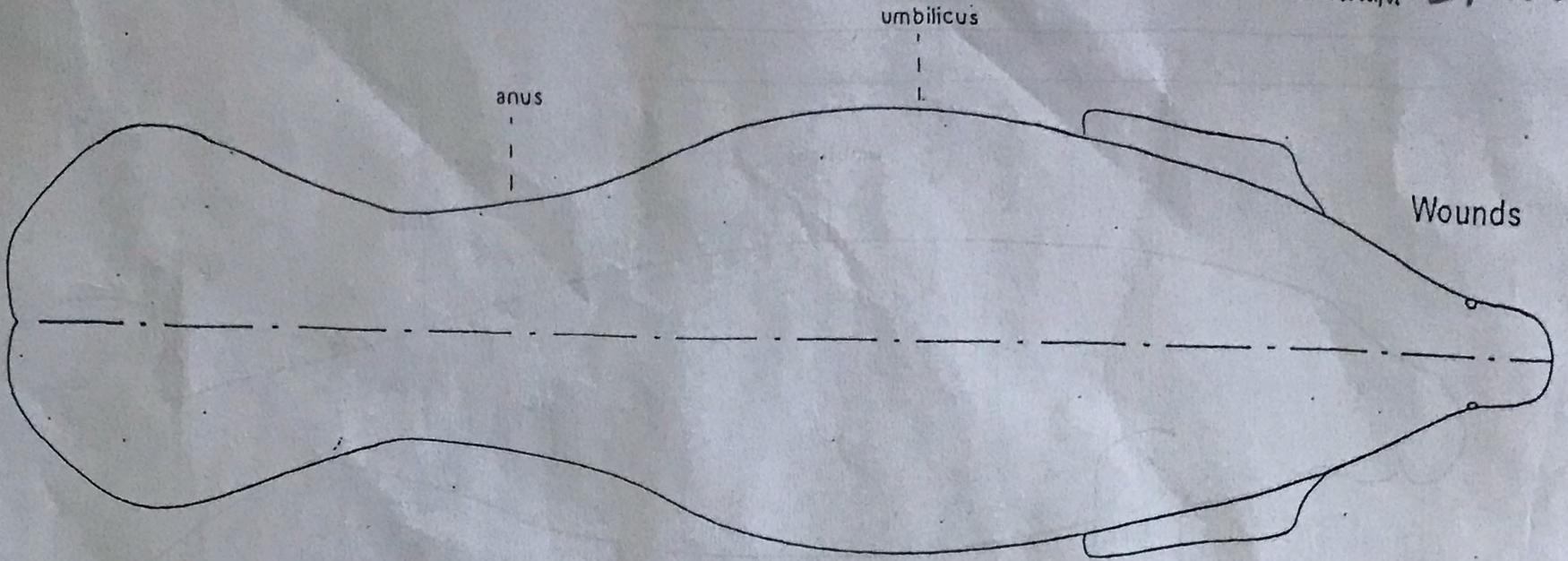
REPORT FILED BY Wappes

Date 11 FEB 2021

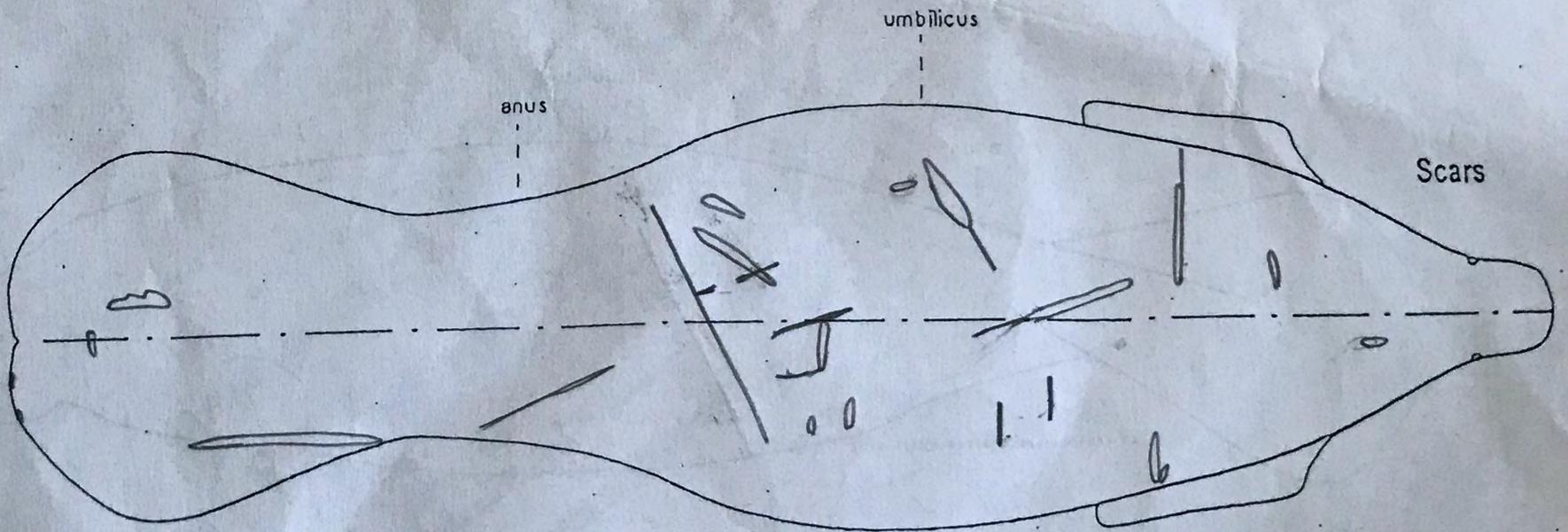
Field I.D. MEC21126

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SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21127
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2800 **FWC Region:** NE

Sex: Male **Length:** 314 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-11 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, floating approximately 30 m ENE of 7810 S Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 2400.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	314 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21127

RECOVERY DATE 10 February 2021

GENDER Male **TL** 314 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **10 February 2021**, at 1536 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Banana River in Merritt Island, Brevard County. FWC case number 2400 was assigned. The complainant, Linda Schmidt (865-504-3898), described a bloated, dead manatee at her neighbor's address. At 1602 hrs, SMW received photo verification. Due to time of day, a response was not planned. **11 February**, at approximately 1150 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-K. Lawson arrived at the residence, completed an external work-up of the carcass by 1300 hrs, and towed it to a vacant lot next door. **16 February**, at 0850 hrs, CMM received a text alert from Dispatch regarding a dead manatee in the Banana River in Merritt Island, Brevard County. FWC case number 2800 was assigned. The complainant, John Zurasky (321-693-8461), described a dead manatee that had been in the same location for multiple days. At 1019 hrs, CMM received photo verification. FWC biologist-William D. Greer (WDG) and FWC biologist-Sean M. Tennant (SMT) launched the Key West boat at the Patrick Air Force Base boat ramp at 1159 hrs, arrived at the carcass at 1227 hrs, and towed it to a remote shoreline.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened. The flippers were eroded due to decomposition which exposed the flipper bones. A minimum of three well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted. Due to operator error, there are no photos of the external work-up from 11 February. External photos were taken on 16 February when the carcass was towed.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

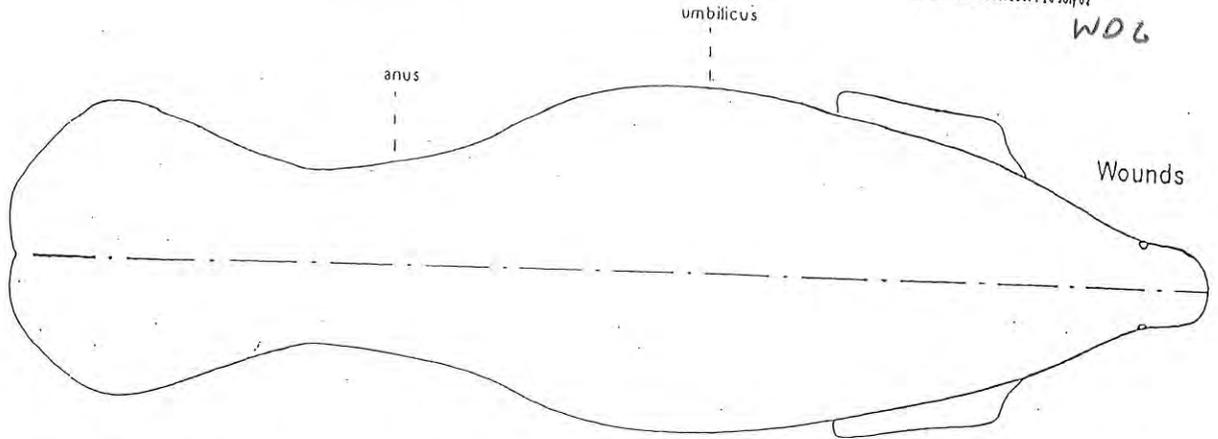
REPORT FILED BY Metcalf / Greer

Date 16 FEB 2021

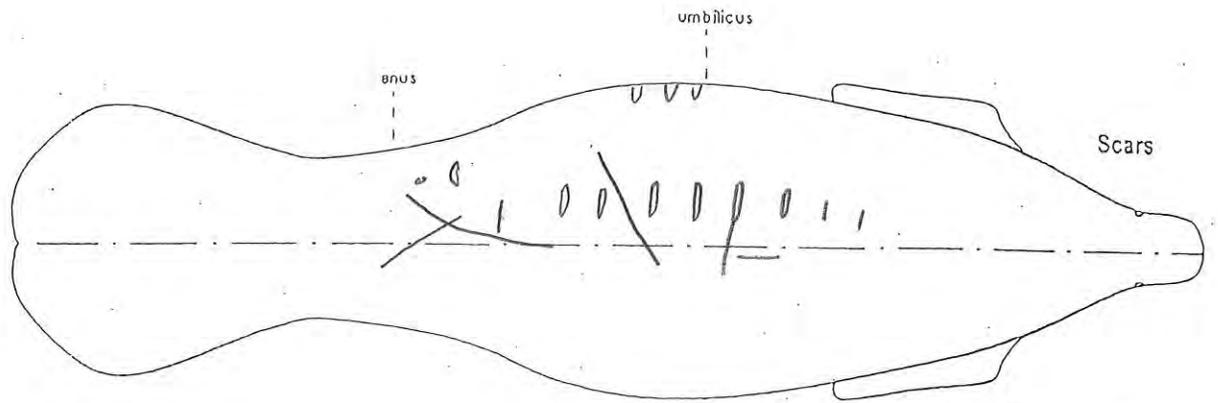
Field I.D. MCC21127

CSI Manuals / Scar Data / 26 July 02

W06

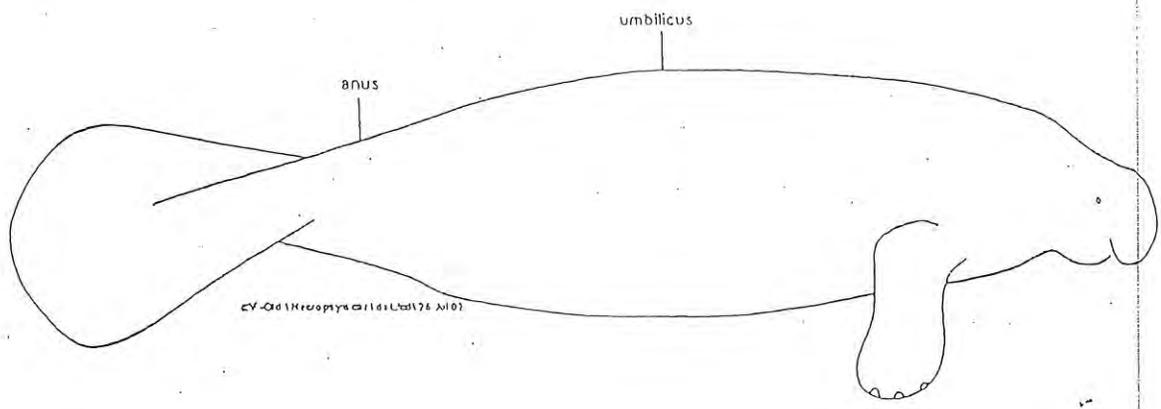
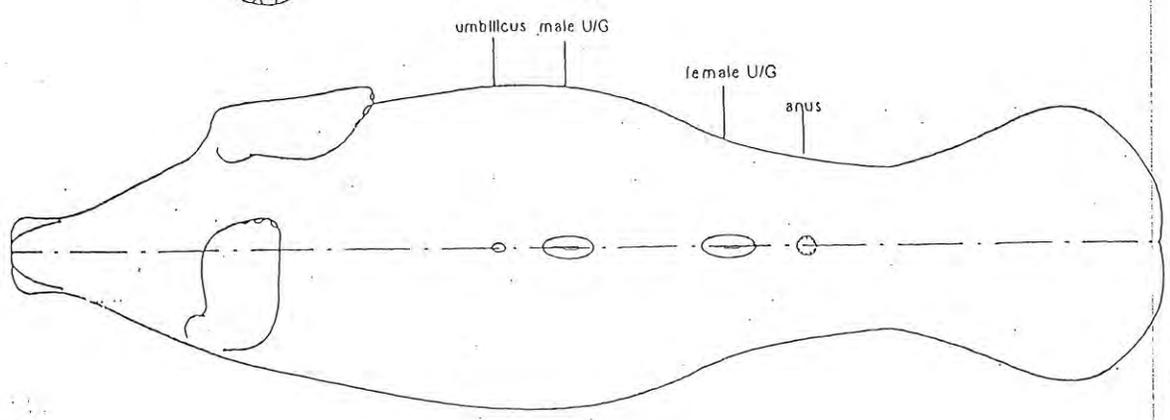
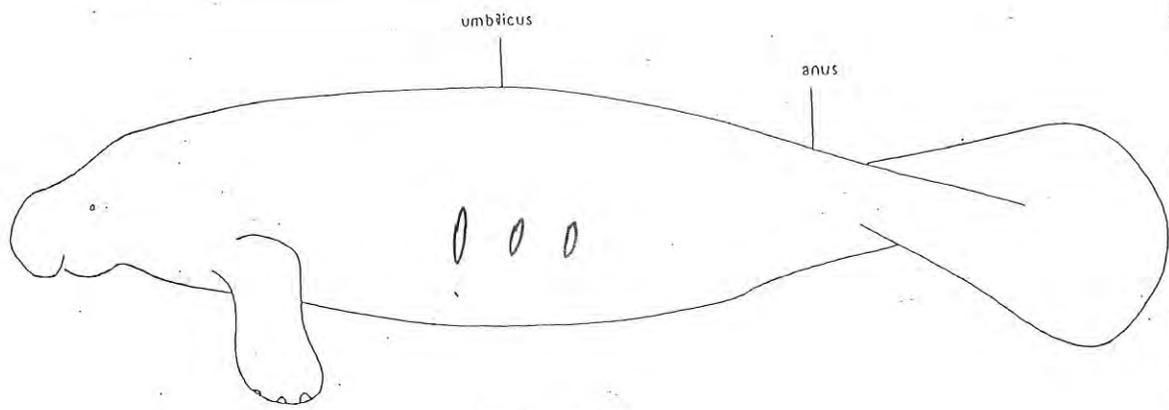


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

me2127



CV-0011/Reophs/101/101/101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21128
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2446 **FWC Region:** NE

Sex: Male **Length:** 189 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-11 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne Beach, floating approximately 50 m WSW of 1111 River Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares. Verified through complainant photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case number 2417.

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Lat/Long	

MORPHOMETRICS:

Total length:	189 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21128

RECOVERY DATE 11 February 2021

GENDER Male **TL** 189 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **10 February 2021**, at 1842 hrs, FWC on-call biologist-Denise M. Boyd (DMB) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Melbourne Beach, Brevard County. FWC case number 2417 was assigned. The complainant, Matt Smith (321-288-0453), described a juvenile, belly-up dead manatee along the sea wall behind his residence. At 1910 hrs, DMB received photo verification. At 1917 hrs, DMB forwarded the information to the EC Field Station. **11 February**, at 1015 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-K. Lawson arrived at the Melbourne Beach kayak ramp. At 1016 hrs, CMM received a text alert from Dispatch regarding the carcass. FWC case number 2446 was assigned. The complainant, Caroline Atkinson (321-794-5470), described a dead manatee that had just floated north past her dock. No photos were available for verification. At 1030 hrs, CMM launched a kayak, located the carcass, and towed it to the ramp. The carcass was loaded via Ezy-lift at 1106 hrs and transported to the Brevard County Landfill. CMM and K. Lawson completed an external work-up at 1600 hrs.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was distended with gas. There was a thin green algal mat on the dorsal aspect. Watery, red fluid exuded from the nares. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted. Due to operator error, there are no photographs of the external work-up.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21129
Date of Report: 2021-Feb-11
Filed By: FWC EC Field Station

FWC Case # 2443 **FWC Region:** NE

Sex: Male **Length:** 178 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-11 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Grand Canal

Locality description: Satellite Beach, floating approximately 25 m SSE of 136 Lanternback Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Bloody nares. Verified through complainant photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	178 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21129

RECOVERY DATE 11 February 2021

GENDER Male **TL** 178 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 11 February 2021, at 1000 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Grand Canal in Satellite Beach, Brevard County. FWC case number 2443 was assigned. The complainant, Amy Christiano (321-271-8042), described a small, dead manatee in the mangroves behind her residence. At 1004 hrs, CMM received photo verification. At 1330 hrs, CMM and FWC intern-Kylie C. Lawson (KCL) arrived at the reported residence. At 1400 hrs, the carcass was loaded via Ezy-lift and transported to the Brevard County Landfill. An external work up was completed at 1545 hrs.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was distended with gas. Watery, red fluid exuded from the nares. There was bleached epidermis at the axilla and face. A thin green to brown algal mat was present on the dorsal aspect. No watercraft-related scars or wounds were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted. Due to operator error, there are no photographs of the external work-up.

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC biologist
- Bloody nares
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21130
Date of Report: 2021-Feb-11
Filed By: FWC EC Field Station

FWC Case # 2469 **FWC Region:** NE

Sex: Female **Length:** 260 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne, floating approximately 1.1 km WNW of 1326 S Riverside Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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Lat/Long	

MORPHOMETRICS:

Total length:	260 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21130

RECOVERY DATE N/A

GENDER Female **TL** 260 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 11 February 2021, at 1239 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Melbourne, Brevard County. FWC case number 2469 was assigned. The complainant, Michael Urbain (321-370-5012), described an eight to nine-foot-long floating dead manatee. At 1255 hrs, CMM received photo verification. Due to an elevated carcass load, this carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs – All of the ventral epidermis was present. There was a thin, green algal mat on the left lateral aspect. The axilla was bleached.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21131
Date of Report: 2021-Feb-11
Filed By: FWC EC Field Station

FWC Case # 2479 **FWC Region:** NE

Sex: Female **Length:** 250 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Grant-Valkaria, floating approximately 40 m N of 6045 US Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21131

RECOVERY DATE N/A

GENDER Female **TL** 250 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 11 February 2021, at 1515 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Grant-Valkaria, Brevard County. FWC case number 2479 was assigned. The complainant, Lindsey (321-750-4944), reported one belly-up, eight-foot-long dead manatee and a live manatee close to the carcass that was approximately three to four feet long. At 1519 hrs, CMM received photo verification. The live manatee appeared larger than four feet but was thin and had a bleached face. CMM forwarded the information to FWC biologist-William D. Greer who consulted with FWC-Andrew J. Garrett. It was decided that it was too late in the day for a rescue attempt. CMM asked the complainant to contact her in the morning if the live manatee was still in the area. Due to an elevated case load and advanced stage of decomposition, the carcass was not recovered or necropsied. The remains were left on site.

EXTERNAL From photographs - Approximately 30% of the ventral epidermis was present but sloughing. The carcass was slightly distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21132
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 190 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating at the FPL intake canal, approximately 180 m NNW of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Bloody nares; Thick algal mat. Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	190 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21132
RECOVERY DATE 12 February 2021
GENDER Male **TL** 190 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, at 0800 hrs, FWC biologist-William Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding three manatee carcasses on the intake side of the FPL Canaveral Power Plant in the Indian River, Cocoa, Brevard County. Jennifer stated that two smaller carcasses (MEC21132 and MEC21133) were up against the boom and one larger carcass was near the manatee interim warm water refuge (MEC21134). At 0800 hrs, WDG received verification photos of all three carcasses. FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) arrived at the FPL boat ramp at 1000 hrs, launched the Key West boat, and secured all three carcasses to the boat by 1106 hrs. SMW and CMF located and secured two additional carcasses from the intake canal (MEC21136 and MEC21137) to the boat by 1120 hrs. SMW and CMF located and secured four additional carcasses from the discharge area of the power plant (MEC21140-MEC21143) to the boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. The carcass was distended with gas. Watery, red fluid exuded from the nares. There was a thick brown algal on the dorsal and lateral aspects. Two large barnacles were present on the dorsal fluke. Thin patches of cobblestone-like epidermis was present on the ventrum. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Bloody nares
- Thick algal mat
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21133
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 173 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL intake canal, approximately 175 m NNW of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	173 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21133

RECOVERY DATE 12 February 2021

GENDER Male **TL** 173 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, at 0800 hrs, FWC biologist-William Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding three manatee carcasses on the intake side of the FPL Canaveral Power Plant in the Indian River, Cocoa, Brevard County. Jennifer stated that two smaller carcasses (MEC21132 and MEC21133) were up against the boom and one larger carcass was near the manatee interim warm water refuge (MEC21134). At 0800 hrs, WDG received verification photos of all three carcasses. FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) arrived at the FPL boat ramp at 1000 hrs, launched the Key West boat, and secured all three carcasses to the boat by 1106 hrs. SMW and CMF located and secured two additional carcasses from the intake canal (MEC21136 and MEC21137) to the boat by 1120 hrs. SMW and CMF located and secured four additional carcasses from the discharge area of the power plant (MEC21140-MEC21143) to the boat by 1205 hrs. SMW and CMF towed all carcasses to remote shoreline and completed external work ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 30% of the epidermis was present but sloughing. The carcass was distended with gas. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, cranial to the anus, and between the axillae. A minimum of one well-healed watercraft-related scar pattern was observed on the caudal dorsum. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

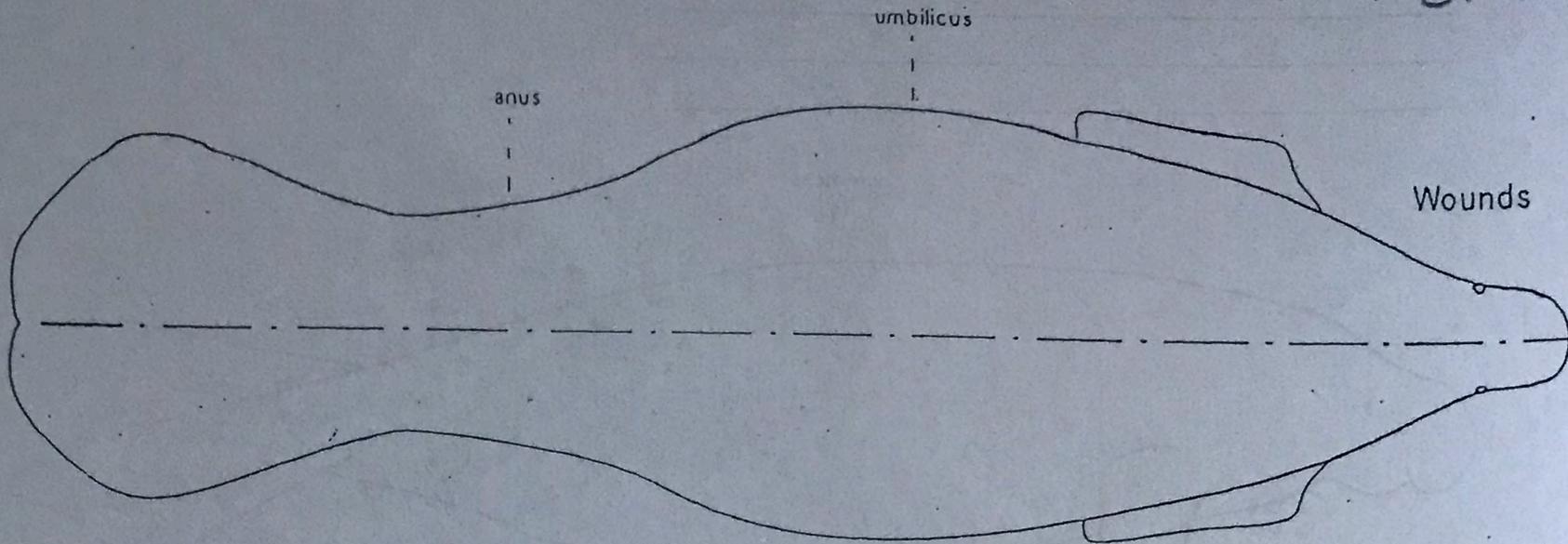
REPORT FILED BY Wappes

Date 12 FEB 2021

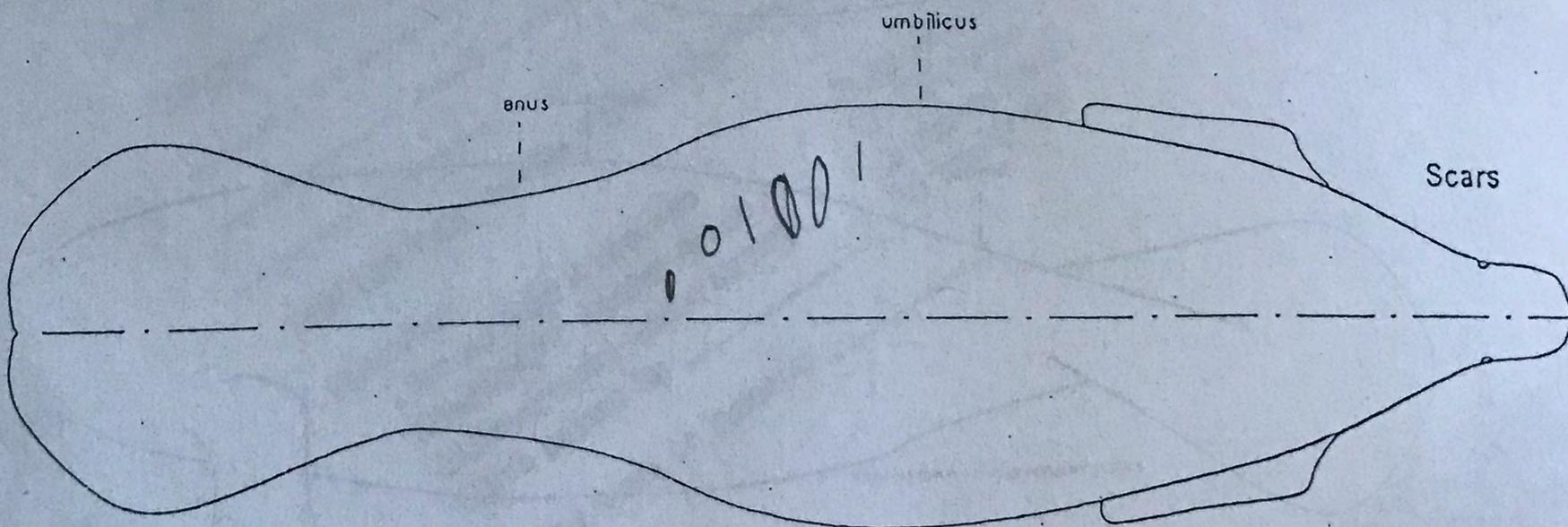
Field I.D. MEC21133

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SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21134
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 300 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded at the FPL intake canal, approximately 105 m NNE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of the remains was 293 cm. Known as MIPS ID EC040, first sighted on 06 Feb 2009 at Riviera Beach power plant.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21134

RECOVERY DATE 12 February 2021

GENDER Male **TL** 300 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, at 0800 hrs, FWC biologist-William D. Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding three manatee carcasses on the intake side of the FPL Canaveral Power Plant in the Indian River, Cocoa, Brevard County. Jennifer stated that two smaller carcasses (MEC21132 and MEC21133) were up against the boom and one larger carcass was near the manatee interim warm water refuge (MEC21134). At 0800 hrs, WDG received verification photos of all three carcasses. FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) arrived at the FPL boat ramp at 1000 hrs, launched the Key West boat, and secured all three carcasses to the boat by 1106 hrs. SMW and CMF located and secured two additional carcasses from the intake canal (MEC21136 and MEC21137) to the boat by 1120 hrs. SMW and CMF located and secured four additional carcasses from the discharge area of the power plant (MEC21140-MEC21143) to the boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the urogenital opening, cranial to the anus, and at multiple locations between axillae. A minimum of three well-healed watercraft-related scar patterns was observed on the dorsal and left lateral aspect and head. The fluke margin was missing from the 3 to 8 o'clock position. The margin was eroded but appeared to have a well-healed margin. Actual length of the remains was 293 cm. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

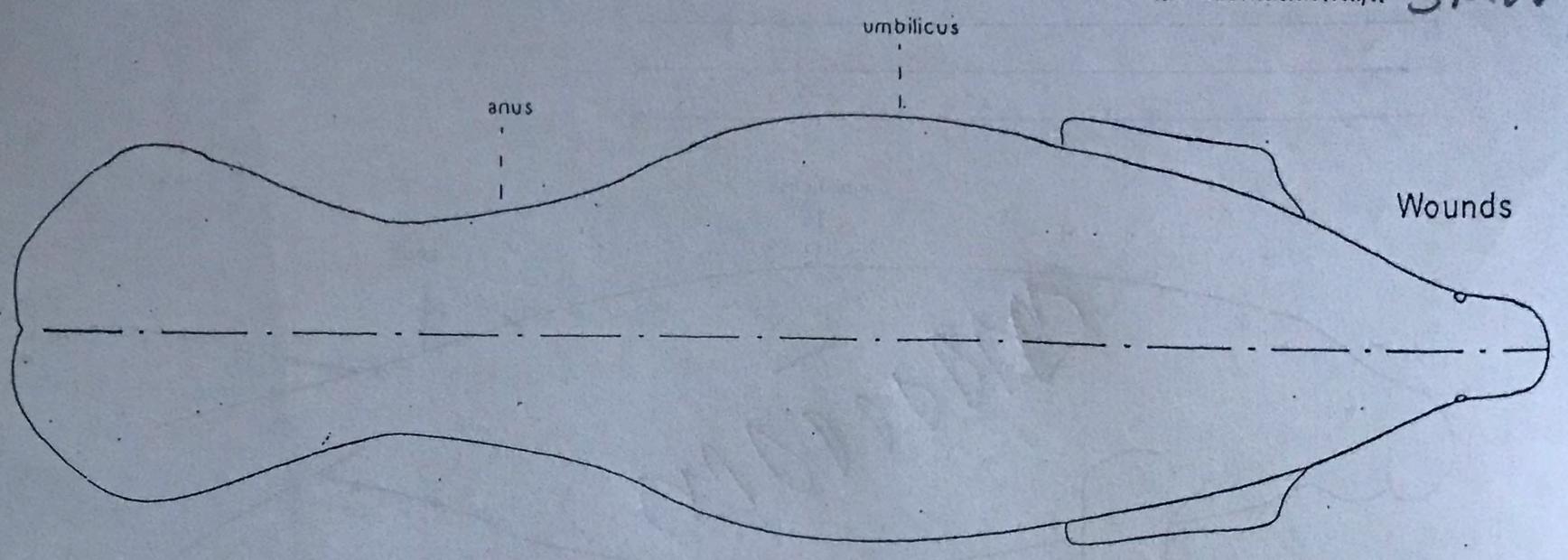
N/A

REPORT FILED BY Wappes

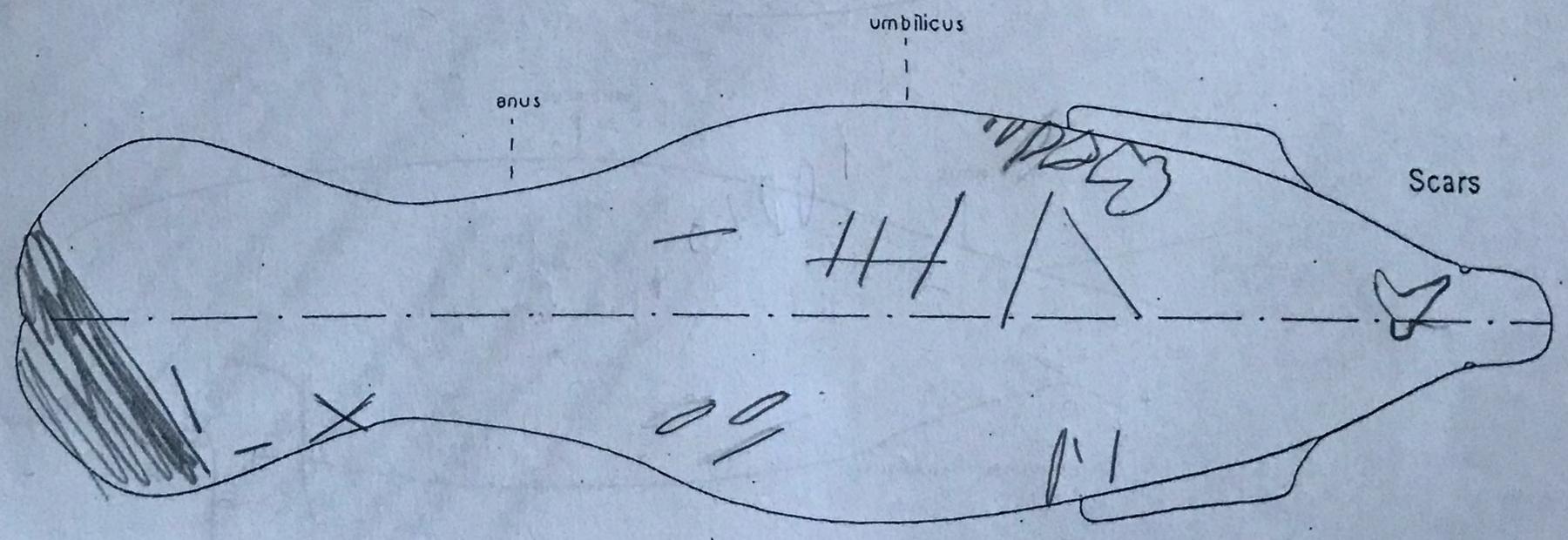
Date 12 FEB 2021

Field I.D. MEC21134

c:\Manuals\scar\2dalt\26 July 02 SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Bassett, Brandon

From: Rood, Kari
Sent: Tuesday, February 16, 2021 4:15 PM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21134=EC040

MEC21134=EC040

Carcass location: Indian River, Cocoa
Male

First sighted 2/6/09 at Rivera Beach Power Plant
Last sighted 3/8/13 at Indian River, FPL Canaveral Power Plant

Verifiers: SMW & KAH – 2/16/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21135
Date of Report: 2021-Feb-11
Filed By: FWC EC Field Station

FWC Case # 2489 **FWC Region:** NE

Sex: Unknown **Length:** 250 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Mullet Creek

Locality description: Melbourne Beach, floating approximately 515 m W of 437 Arrowhead Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21135

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 250 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **11 February 2021**, at 1619 hrs, FWC intern-Kylie C. Lawson (KCL) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Melbourne Beach, Brevard County. FWC case number 2489 was assigned. The complainant, Joy Gilbert (321-419-9203), had reported a small dead manatee approximately one-quarter mile south of the Mail Canal in Mullet Creek. KCL could not reach the complainant but left a message. At 1824 hrs, FWC biologist-William D. Greer (WDG) received a text from FWC volunteer-Casie Farrell regarding a dead manatee in Mullet Creek. Casie reported that her friend had seen the carcass at noon and estimated that it was 8 feet long. WDG received verification photos. Due to an elevated carcass load and significant decomposition, the carcass was not recovered or necropsied

EXTERNAL From photographs – Only the ventral fluke and peduncle were visible. The cranial portion of the carcass was sunken. No epidermis was present. The remaining dermis and soft tissue was severely eroded which exposed vertebrae. The mid-line of the fluke missing due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21136
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 333 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded at the FPL intake canal, approximately 320 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	333 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21132
RECOVERY DATE 12 February 2021
GENDER Female **TL** 333 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after recovering MEC21132, MEC21133, and MEC21134 from the FPL power plant intake canal, SMW and CMF located and secured two additional carcasses from the intake canal (MEC21136 and MEC21137) to the Key West boat by 1120 hrs. SMW and CMF located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the boat by 1205 hrs. SMW and CMF towed all carcasses to remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. Watery, red fluid exuded from the nares. The carcass was dorsoventrally flattened. There were rents due to decomposition and/or scavenging at the urogenital opening and caudal to the anus. A moderate brown algal mat was present on the dorsal and lateral aspects, and a moderate green algal mat was present on lateral aspects. Cobblestone-like epidermis was present on the dorsum. The right axilla was stained red to purple. There was a well-healed entanglement scar encircling the right flipper. A minimum of fifteen well-healed watercraft-related scar patterns was observed on the dorsal and lateral aspects and fluke. The fluke margin had one large well-healed mutilation from the 2 to 6 o'clock position, one small well-healed mutilation at the 1 o'clock position, and a minimum of two distinct eroded mutilations between the 8 and 9 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

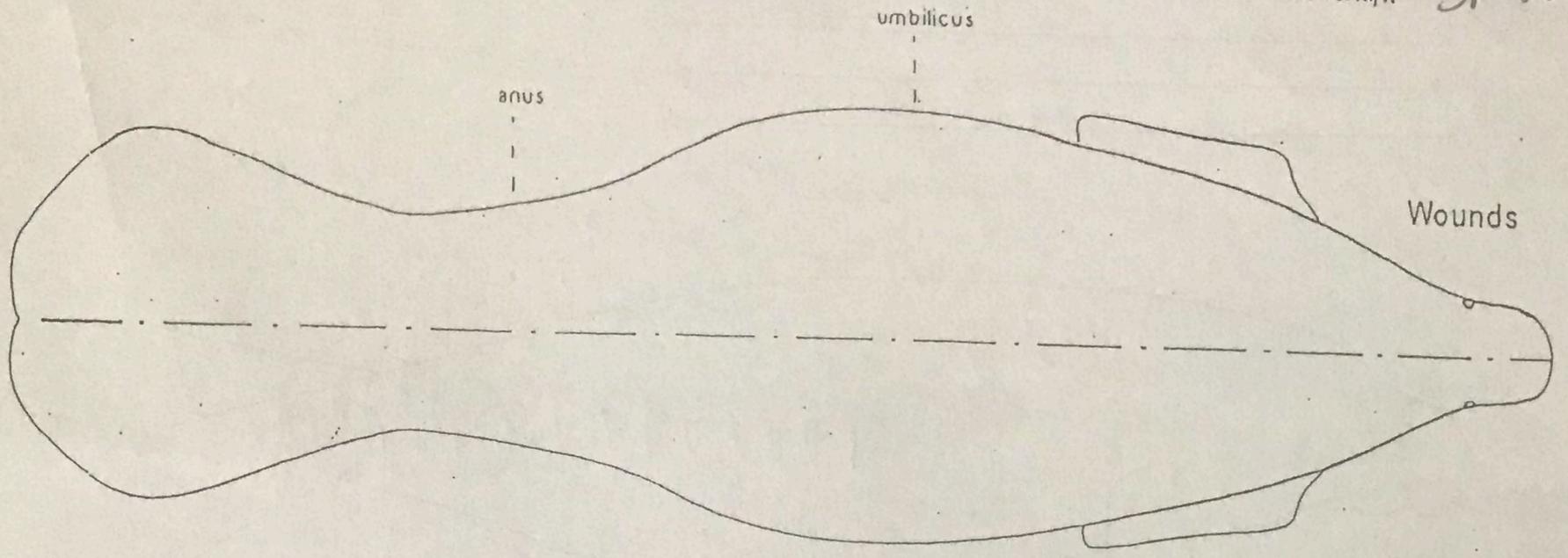
REPORT FILED BY Wappes

Date 12 FEB 2021

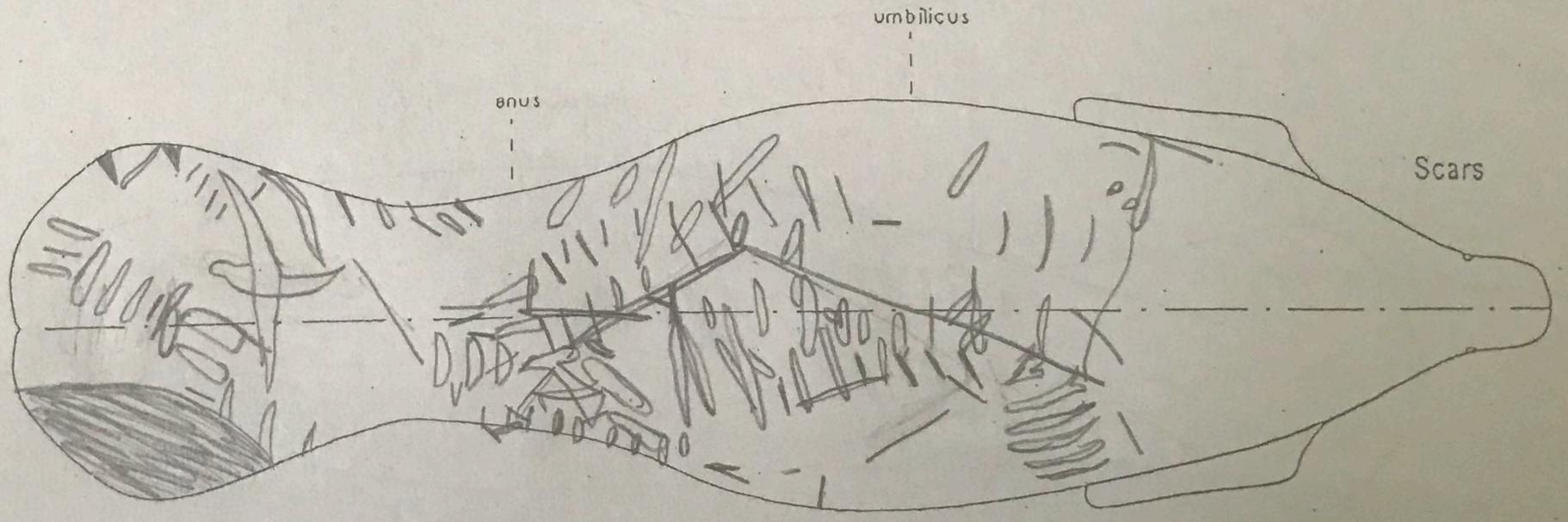
Field I.D. MEC21136

c:\Manuals\ScarData\126 July 02

SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21137
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 196 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL power plant intake area, approximately 375 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Flat ventrum; Cobblestone-like epidermis; Healing skin lesions; Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	196 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21137

RECOVERY DATE 12 February 2021

GENDER Female **TL** 196 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after collecting MEC21132, MEC21133, and MEC21134 from the FPL power plant intake area, FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) located and secured two additional carcasses from the intake canal (MEC21136 and MEC21137) to the Key West boat by 1120 hrs. SMW and CMF located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the boat by 1205 hrs. SMW and CMF towed all carcasses to remote shoreline and completed external work ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. Watery, red fluid exuded from the nares. The carcass was dorsoventrally flattened. There was cobblestone-like epidermis on the dorsal and ventral aspects. There was a thin green algal on the lateral aspects. The ventrum was flat. A healing wound was observed on the left caudal dorsum that curved to the left and mid peduncle. The ventral fluke margin had three distinct, healing wounds at the three o'clock position. No watercraft-related scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares
- Flat ventrum
- Cobblestone-like epidermis
- Healing skin lesions

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21138
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # 2524 **FWC Region:** NE

Sex: Unknown **Length:** 150 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 70 m ENE of 945 N Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21138

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 150 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, at 1021 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Cocoa, Brevard County. FWC case number 2524 was assigned. The complainant, Ann Holder (321-636-2031), had reported a small dead manatee grounded behind her residence, 945 N Indian River Drive. CMM received a verification photo at 1104 hrs. Due to the small size and significant decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs – Almost all of the dorsal epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The dermis of the fluke was eroded. There was at least one rent on the left lateral aspect due to decomposition and/or scavenging. There were numerous flies present on the carcass.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21139
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # 2569 **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Grand Canal

Locality description: Satellite Beach, floating approximately 25 m E of 509 Lanternback Island Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21139

RECOVERY DATE N/A

GENDER Male **TL** 215 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **12 February 2021**, at 1117 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Grand Canal in Satellite Beach, Brevard County. FWC case number 2529 was assigned. The complainant, Katherine Vecchio (770-605-5092), described a small manatee floating belly-up behind her residence. At 1125 hrs, CMM received photo verification. At 1228 hrs, CMM received a text alert from Dispatch regarding the carcass in the Grand Canal. FWC case number 2540 was assigned. The complainant, Brent Mills (561-613-1860), described a six to seven-foot-long, belly-up manatee floating behind his residence. At 1609 hrs, FWC biologist-William D. Greer contacted FWC-Captain Bonds via email for assistance finding an officer to go on a carcass response the following day with CMM. At 1700 hrs, FWC Officer Maslo called CMM and coordinated to meet the following morning to tow MEC21139 and MEC21095. At 1717 hrs, FWC on-call biologist-Anna L. Pankie (ALP) received a text alert from Dispatch regarding the carcass. FWC case number 2569 was assigned. The complainant, Jennifer Atchley (321-507-0599), described an approximately 6-foot-long, dead manatee floating out of the canal and into the Banana River. At 1730 hrs, ALP received photo verification and forwarded the information to the EC Field Station. Based on location, it was concluded to be MEC21139. **13 February** at 0900 hrs, CMM and Officer Maslo departed from Melbourne Harbor on a FWC LE vessel. The team did not make it to MEC21139 due to rapidly declining weather. The remains were left on site.

EXTERNAL From photographs - Approximately 80% of the ventral epidermis was present but sloughing. There was bleached epidermis at the flippers and ventrum. Mud was present on the flippers and ventral aspect.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21140
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 202 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL power plant discharge area, approximately 450 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Peanut-shaped head; Cobblestone-like epidermis; Bloody nares. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	202 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21140

RECOVERY DATE 12 February 2021

GENDER Male **TL** 202 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after collecting MEC21132, MEC21133, MEC21134, MEC21136, and MEC21137 from the FPL power plant intake canal, FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the Key West boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. Watery, red fluid exuded from the nares. The carcass was dorsoventrally flattened and had a slight peanut-shaped head. There was cobblestone-like epidermis on the remaining epidermis. A thin brown algal mat was present on the lateral aspects. There was a mild infestation of small barnacles on the ventrum. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-12_FWC050_1453 through 1466

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Peanut-shaped head
- Cobblestone-like epidermis
- Bloody nares

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21141
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 163 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating at the FPL power plant discharge area, approximately 375 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bloody nares; Thick algal mat. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	163 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21141

RECOVERY DATE 12 February 2021

GENDER Male **TL** 163 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after collecting MEC21132, MEC21133, MEC21134, MEC21136, and MEC21137 from the FPL power plant intake canal, FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the Key West boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 50% of the epidermis was present but sloughing. The carcass was distended with gas. Watery, red fluid exuded from the nares. There was a rent at the urogenital opening due to decomposition and/or scavenging through which a portion of the GI tract protruded. The flippers were eroded due to decomposition. A thick brown algal mat was present on the dorsal and lateral aspects. Small pitted lesions were observed on the dorsum. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bloody nares
- Thick algal mat
- Skin lesions

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21142
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 193 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, grounded in the FPL power plant discharge area, approximately 295 m NE of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Swollen head and neck. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Lat/Long	

MORPHOMETRICS:

Total length:	193 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21142
RECOVERY DATE 12 February 2021
GENDER Female **TL** 193 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after collecting MEC21132, MEC21133, MEC21134, MEC21136, and MEC21137 from the FPL power plant intake canal, FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the Key West boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. Patches of the dorsal and lateral dermis were eroded due to decomposition. The carcass was slightly distended with gas but dorsoventrally flattened. The head and neck region appeared swollen. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Swollen head and neck

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21143
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 197 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE COLLECTED: 2021-Feb-12 **By:** FWC-SMW MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating in the FPL warm water discharge area, approximately 295 m N of 101 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Bleached epidermis; Bloody nares; Thick algal mat. Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	197 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21143
RECOVERY DATE 12 February 2021
GENDER Female **TL** 197 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, after collecting MEC21132, MEC21133, MEC21134, MEC21136, and MEC21137 from the FPL power plant intake canal, FWC biologists-Sara Wappes (SMW) and Christine Fontaine (CMF) located and secured four additional carcasses from the discharge area of the power plant (MEC21140 - MEC21143) to the Key West boat by 1205 hrs. SMW and CMF towed all carcasses to a remote shoreline and completed external work-ups on all carcasses by 1605 hrs. The remains were left on site.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. The carcass was slightly distended with gas but dorsoventrally flattened. Watery, red fluid exuded from the nares. There was a thick brown algal mat on the dorsal and lateral aspects. Circular bleached spots were present on the ventral aspect. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Bleached spots epidermis
- Thick algal mat
- Bloody nares

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21144
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 250 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** USFWS-Stan Howater to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 1.39 km ENE of the northernmost building at 6225 Riverfront Center Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Flat ventrum; Bleached epidermis; Verified through complainant photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	250 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21144

RECOVERY DATE N/A

GENDER Female **TL** 250 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 12 February 2021, at 1404 hrs, FWC biologist-William D. Greer received a text from Merritt Island National Wildlife Refuge-Stan Howater regarding a dead manatee in the Indian River, Titusville, Brevard County. Stan reported an approximately 8-foot-long manatee carcass near the NASA causeway and sent verification photos at 1432 hrs. Due to an elevated carcass load and significant decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs – Approximately 80% of the epidermis on the cranial ventrum was present but sloughing. The carcass was slightly distended with gas but had a flat ventrum. There were bleached spots and a moderate dark green algal mat present on the remaining epidermis.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photographs
- Flat ventrum
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21145
Date of Report: 2021-Feb-10
Filed By: FWC EC Field Station

FWC Case # 2384 **FWC Region:** NE

Sex: Male **Length:** 160 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Sykes Creek

Locality description: Merritt Island, floating approximately 25 m SW of 245 Needle Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Verified through photograph and FWC Officer.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 2371.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	160 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21145

RECOVERY DATE N/A

GENDER Male **TL** 160 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **10 February 2021**, at 1204 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Sykes Creek, Merritt Island, Brevard County. FWC case number 2371 was assigned. The complainant, Frank Pawela (321-432-3716), had reported a small dead manatee behind 510 Alabama Avenue. No verification photos were available. At 1332 hrs, SMW received a text alert from Dispatch regarding a dead manatee in Sykes Creek. FWC case number 2384 was assigned. The complainant, Alan Dock (330-974-5146), had observed a small dead manatee while kayaking near Needle Boulevard and 4th Place. SMW requested FWC LE assistance to verify and tow the carcass. FWC Officer-Dan Rasey responded, sent a verification photo, and secured the carcass to mangroves. Due to an increased workload and significant decomposition, the carcass was not necropsied.

EXTERNAL From photograph – Almost all of the epidermis on the cranial ventrum was present but sloughing. There were several patches of cobblestone-like epidermis. Transverse folds were observed on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photograph and FWC Officer
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21146
Date of Report: 2021-Feb-16
Filed By: FWC EC Field Station

FWC Case # 2833 **FWC Region:** NE

Sex: Male **Length:** 218 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-16 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-16 **By:** FWC-WDG MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Sykes Creek

Locality description: Merritt Island, floating approximately 105 m ENE of 250 Cordoba Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Swollen head and neck. Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	218 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21146

RECOVERY DATE 16 February 2021

GENDER Male **TL** 218 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 16 February 2021, at 1454 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2833 was assigned. The complainant, Scott Ginn (321-537-6316), stated that there was a seven-foot manatee floating belly-up towards the mangroves. At 1459 hrs, CMM received a photograph of the carcass. At 1553 hrs, FWC biologists-William D. Greer (WDG) and Sean M. Tennant (SMT) launched the Key West boat from Cape Crossing Marina. At 1616 hrs, WDG and SMT secured the carcass to the Key west and towed it to a remote location where an external work-up was completed. The remains were left on site.

EXTERNAL Less than 10% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened. The head and neck region appeared swollen. A portion of the GI tract protruded from a rent at the urogenital opening. The left flipper was eroded due to decomposition which exposed some of the bones. A minimum of two well-healed watercraft-related scar patterns was observed on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photograph and FWC biologists
- Swollen head and neck

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Greer

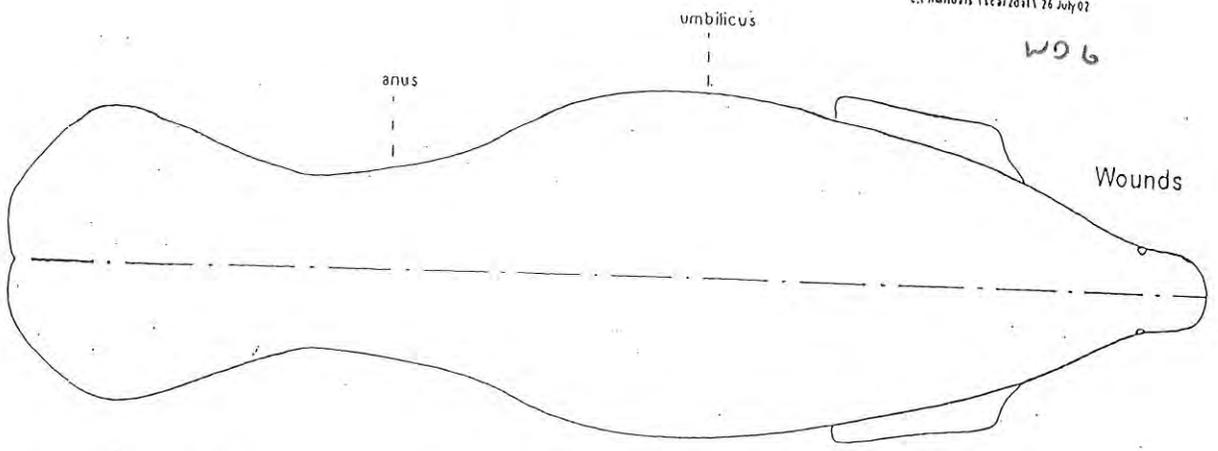
PRELIMINARY DATA:
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 16 FEB 2021

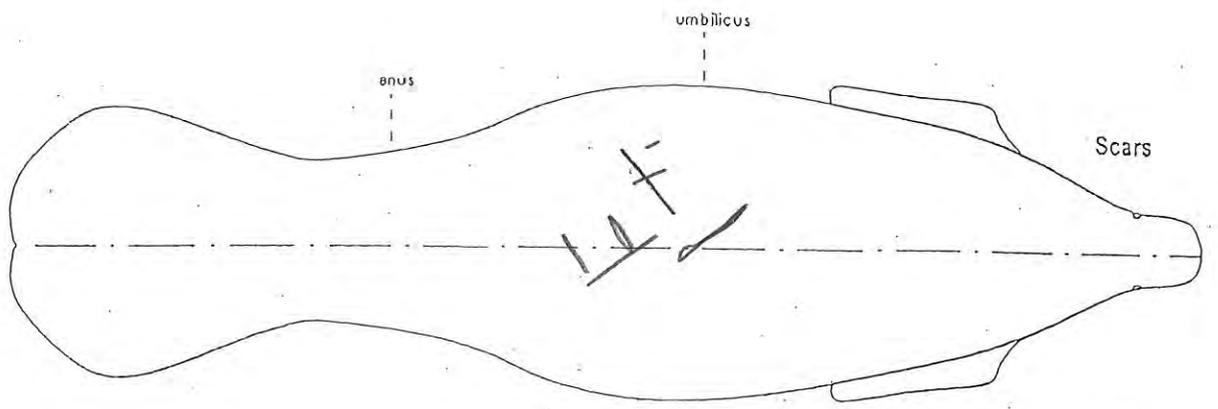
Field I.D. MRC21146

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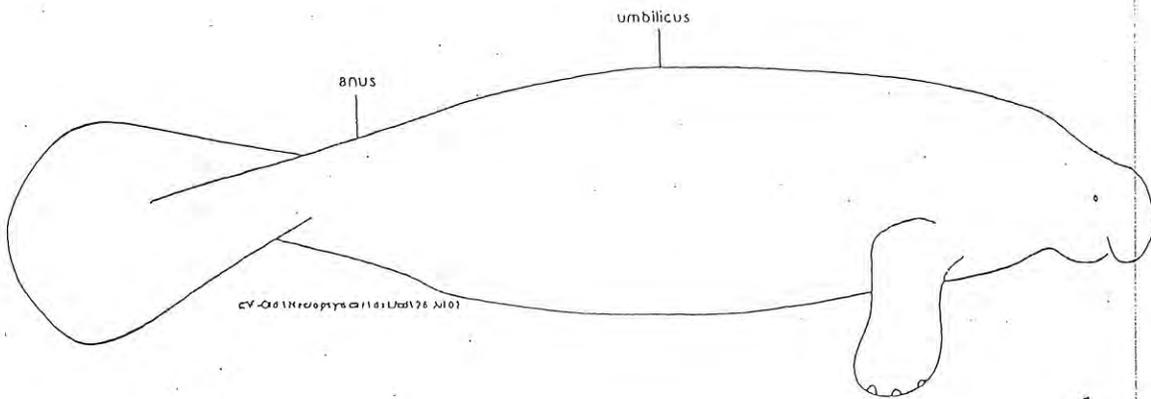
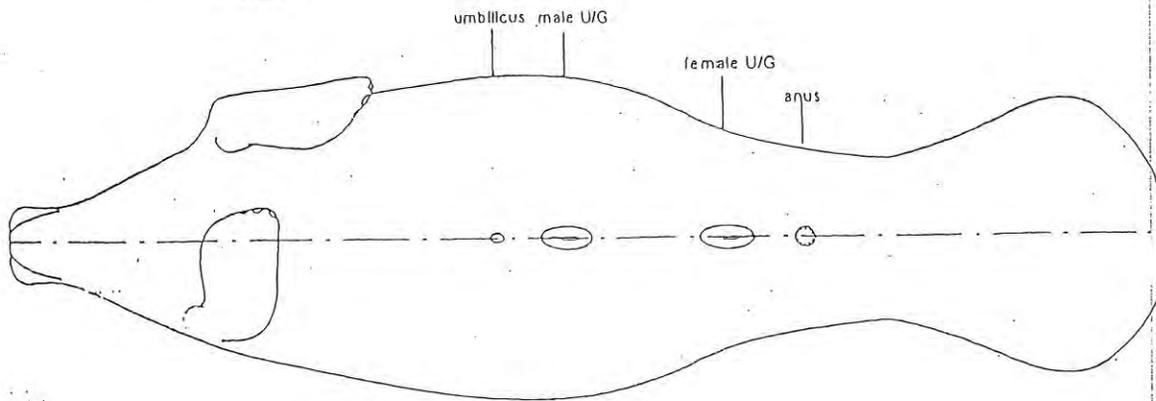
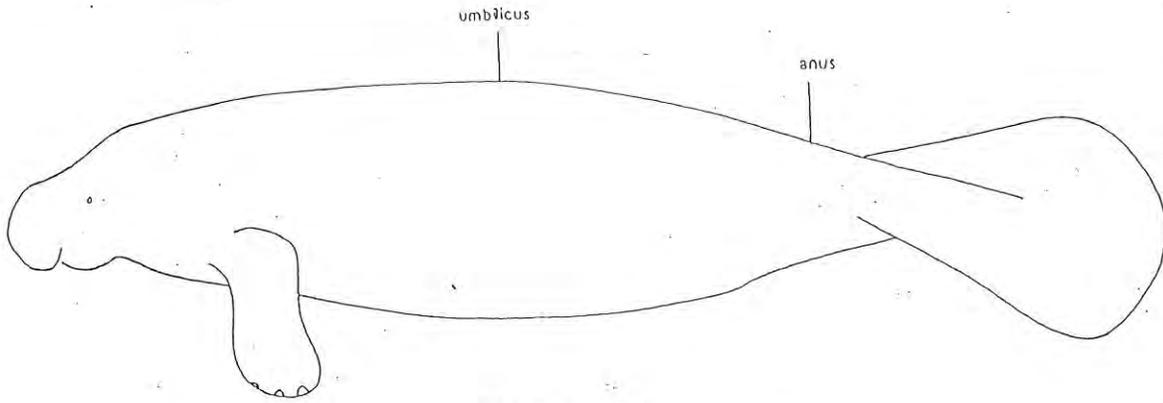
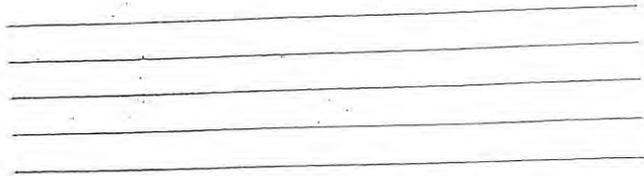


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MRC 21146



CV-06 11/10/01

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21147
Date of Report: 2021-Feb-13
Filed By: FWC EC Field Station

FWC Case # 2638 **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-13 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Eau Gallie River

Locality description: Melbourne, floating approximately 60 m SE of 1315 Richmond Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21147

RECOVERY DATE N/A

GENDER Male **TL** 215 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 13 February 2021, at 1602 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Eau Gallie River, Melbourne, Brevard County. FWC case number 2638 was assigned. The complainant, Dina Riley (772-324-1565), had reported a bloated, 12-foot-long carcass floating near 1285 Richmond Dr. CMM received verification photos at 1621 hrs. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – Approximately 70% of the ventral epidermis was present but sloughing. The carcass was distended with gas. There was a rent at the anus due to decomposition or scavenging, through which a portion of the GI tract protruded. There were bird droppings and numerous flies present on the ventrum. The margin of the fluke had several small well-healed mutilations between the 4 and 6 o'clock positions and at the 9 o'clock position, and two large, well-healed, triangular mutilations between the 7 and 8 o'clock positions.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21148
Date of Report: 2021-Feb-12
Filed By: FWC EC Field Station

FWC Case # 2663 **FWC Region:** NE

Sex: Female **Length:** 295 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-12 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-14 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River
Locality description: Titusville, grounded at Parrish Park boat ramp.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	295 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21148
RECOVERY DATE 14 February 2021
GENDER Female **TL** 295 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **12 February 2021**, at 1904 hrs, FWC on-call biologist-Anna Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a possible manatee carcass at Parrish Park boat ramp in the Indian River, Titusville, Brevard County. FWC case number 2577 was assigned. The complainant, Justin (407-494-8667), stated the manatee was floating back up and hadn't breathed in at least 20 minutes. ALP received verification photos and forwarded the information to the EC field station. **13 February**, at 1227 hrs, FWC biologist-Carley Metcalf received a text alert from Dispatch regarding a dead manatee under the dock at Parrish Park boat ramp. FWC case number 2614 was assigned. The complainant, Mike (321-695-8391), stated that the carcass was really big and he had no photos of it. **14 February**, at 0854 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from Dispatch regarding a freshly deceased manatee at Parrish Park with a live calf circling it. FWC case number 2663 was assigned. The complainant, BCSO-TJ, stated that the carcass was ten feet long and back up while the calf was 5-6 feet long. At 0858 hrs, SMW received verification photos of the carcass but not of the calf. SMW and FWC intern-Kylie Lawson arrived at Parrish Park boat ramp at 1117 hrs and loaded the carcass into the U-trailer by 1145 hrs. No calf was present when SMW and K. Lawson arrived. After collecting MEC21149, an external work up was completed on MEC21148 by 1400 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 60% of the epidermis was present but sloughing. There were small patches of cobblestone-like epidermis on the ventrum. There was a minimum of four well-healed, watercraft-related scars on the left dorsal and lateral aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-14_FWC050_1519 through 1533, 1542 through 1543

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

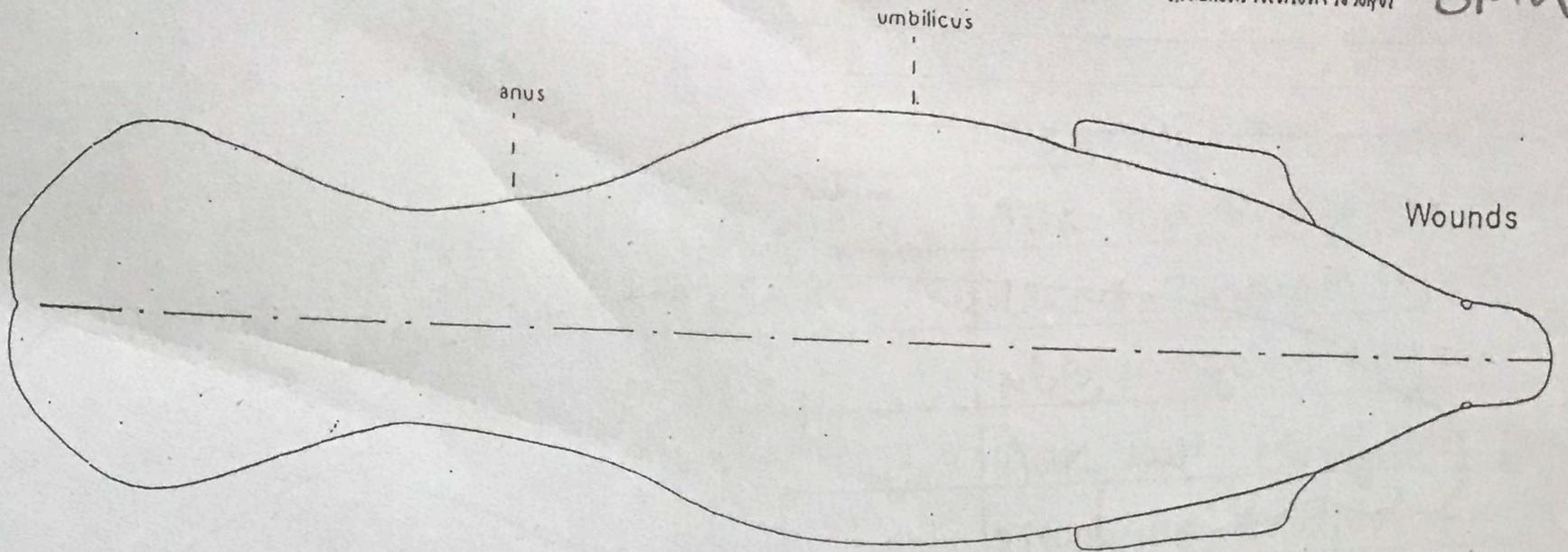
REPORT FILED BY Wappes

Date 14 FEB 2021

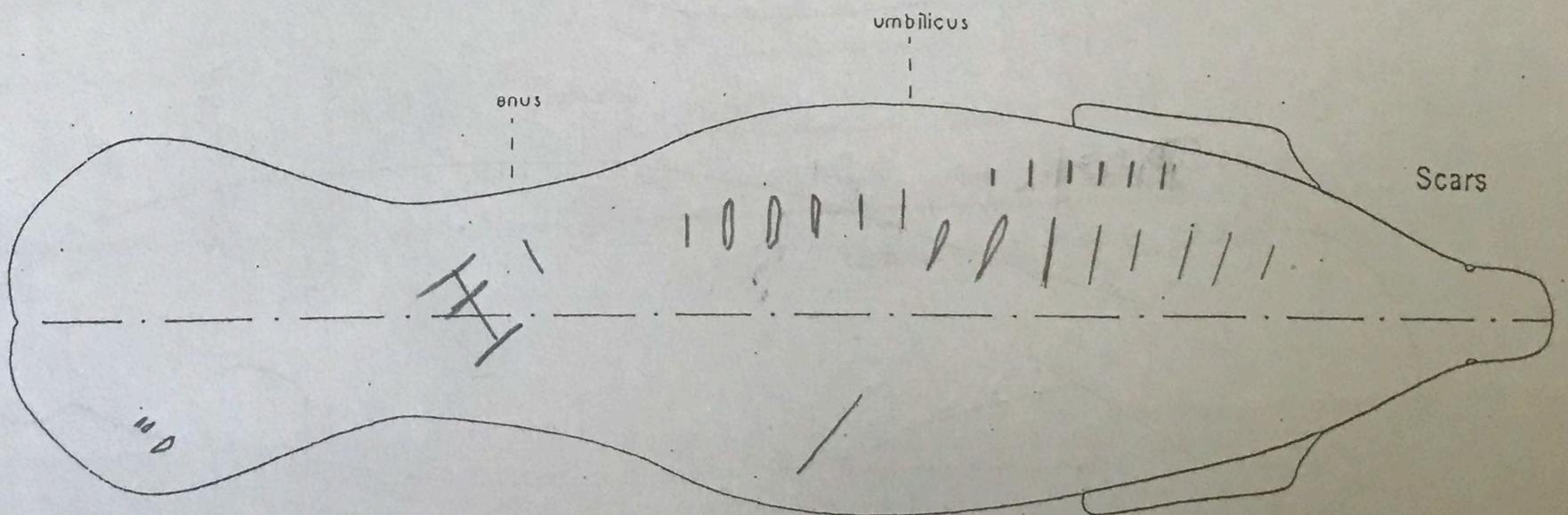
Field I.D. MEC21148

CSI Manuals Scar2dat1 26 July 02

SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet, Sep 2002

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21149
Date of Report: 2021-Feb-14
Filed By: FWC EC Field Station

FWC Case # 2678 **FWC Region:** NE

Sex: Female **Length:** 225 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-14 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-14 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Titusville, floating approximately 455 m ENE of 19 N Washington Avenue.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 215cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	225 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21149
RECOVERY DATE 14 February 2021
GENDER Female **TL** 225 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 14 February 2021, at 1143 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Titusville, Brevard County. FWC case number 2678 was assigned. The complainant, Michelle DeVoss (321-362-8914), stated that the carcass was badly decomposed. At 1228 hrs, SMW received a verification photo and requested FWC LE assistance since she was currently at Parrish Park boat ramp with FWC-Officer Seth Loeffler. SMW and FWC intern-Kylie Lawson arrived at the carcass location at 1240 hrs and secured the carcass to a cleat at Harbor Point Marina by 1258 hrs. Ofc. Loeffler towed the carcass to Parrish Park boat ramp, arriving by 1330 hrs. SMW and K. Lawson completed an external work up by 1345 hrs and loaded the carcass into the trailer with MEC21148 by 1415 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, and axillae. The fluke margin was eroded. The actual length of the remains was 215 cm. There was a moderate infestation of barnacle scars on the dorsal aspect. There was a small patch of cobblestone-like epidermis on the remaining epidermis of the ventrum. There was one well-healed linear scar on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-14_FWC050_1534 through 1541

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

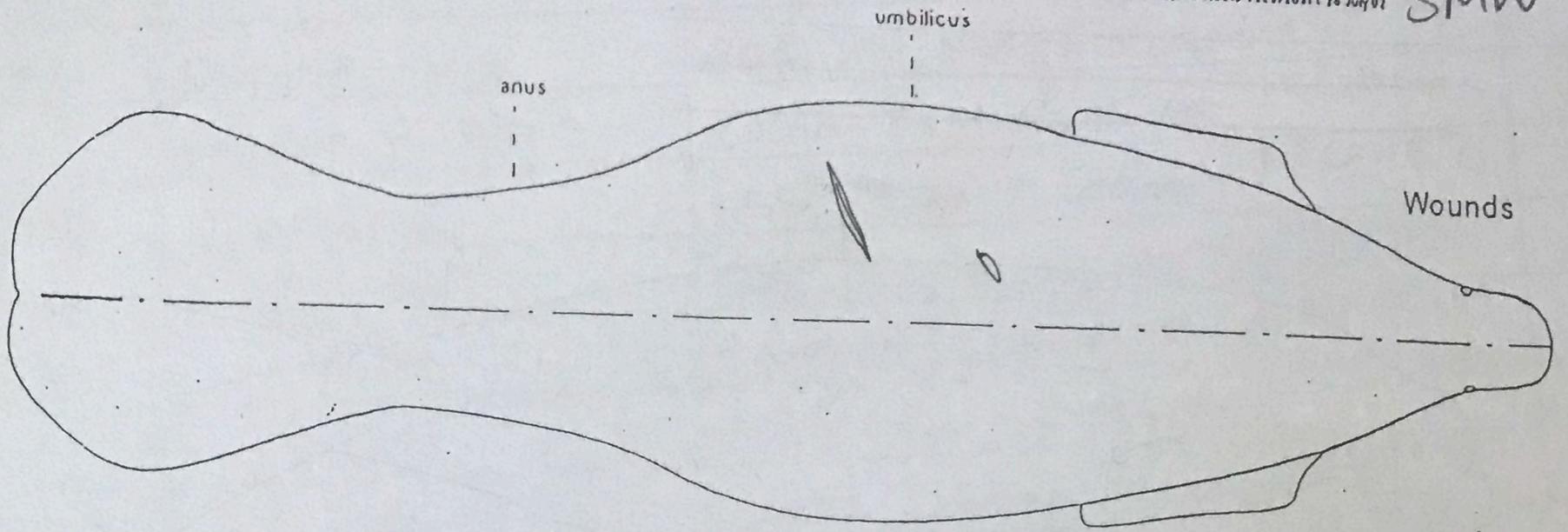
N/A

REPORT FILED BY Wappes

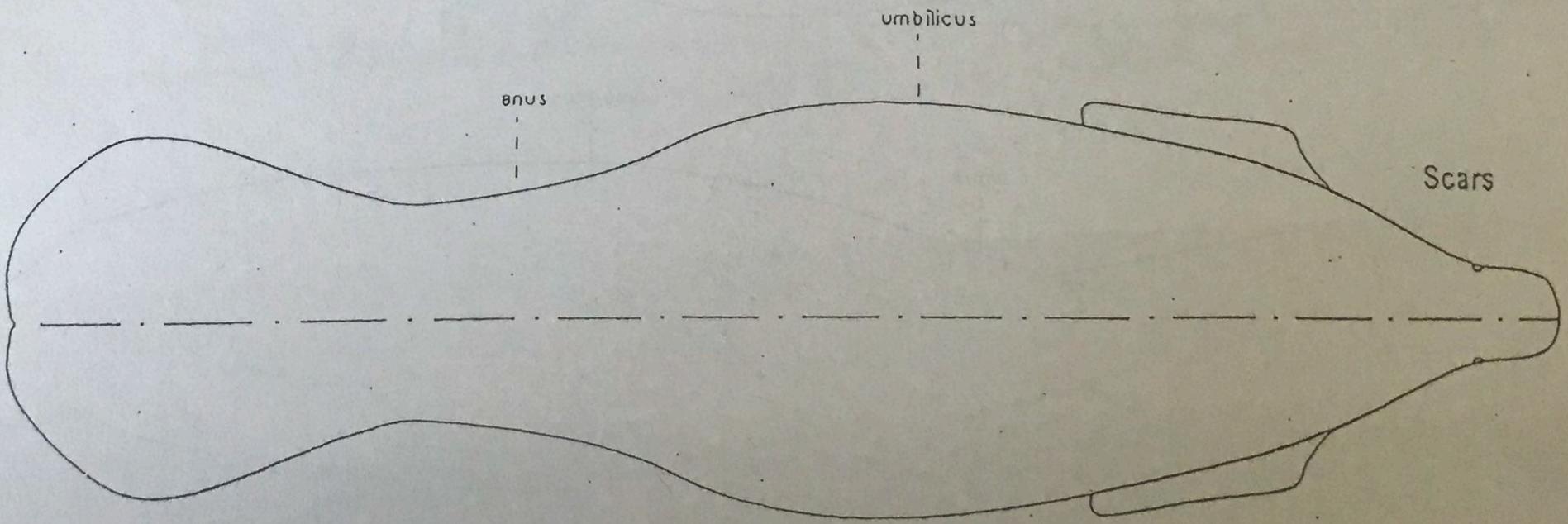
Date 14 FEB 2021

Field I.D. MEC21149

c:\Manuals\ScarData\26 July 02 SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21150
Date of Report: 2021-Feb-14
Filed By: FWC EC Field Station

FWC Case # 2702 **FWC Region:** NE

Sex: Male **Length:** 215 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-14 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-14 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Indialantic, floating approximately 20 m SE of 833 Brookside Drive.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21150
RECOVERY DATE 14 February 2021
GENDER Male **TL** 215 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 14 February 2021, at 1522 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Indialantic, Brevard County. FWC case number 2702 was assigned. The complainant, John (321-544-5678), stated that the carcass was 5-6 feet long and bloated. At 1530 hrs, SMW received a verification photo. SMW and FWC intern-Kylie Lawson arrived at the carcass location at 1634 hrs, loaded the carcass via Ant lift at 1655 hrs, arrived at the EC field station and completed an external work up by 1735 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The dermis of the flippers was sunburnt. The carcass was distended with gas. Watery, red fluid exuded from the nares. There was a mild infestation of barnacles on the ventral fluke. There was a thin brown algal mat on the lateral aspects. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-14_FWC050_1544 through 1556

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21151
Date of Report: 2021-Feb-14
Filed By: FWC EC Field Station

FWC Case # 2698 **FWC Region:** NE

Sex: Female **Length:** 278 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-14 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-15 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: 2021-Feb-15 **By:** FWC-SMW,FWC Intern-K. Lawson

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Palm Bay, floating approximately 35 m E of easternmost building of 3901 Dixie Highway NE.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Undetermined: Too Decomposed

EXPLAIN: Empty GI tract; Friable organs; Hardened yellow nodules on small intestine wall and mucosa; Hardened nodules in connective tissue dorsal to cecum and duodenum; Bloody lump on right lung.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	278 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21151

RECOVERY DATE 15 February 2021

GENDER Female **TL** 278 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE 15 February 2021

CONDITION Badly Decomposed

HISTORY 14 February 2021, at 1459 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Indian River, Palm Bay, Brevard County. FWC case number 2698 was assigned. The complainant, Victor Forvet (305-898-8788), stated that the carcass was full grown and gray with flippers flat to its chest. At 1600 hrs, SMW received a verification photo. 15 February, SMW and FWC intern-Kylie Lawson arrived at the carcass location at 1020 hrs, towed the carcass by hand to nearby remote shoreline, and completed a field necropsy by 1225 hrs. The remains were left on site.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. The epidermis of the flippers and fluke margin was bleached. The carcass was distended with gas. Bloody fluid exuded from the nares. There were circular and linear cold stress lesions on the dorsal and lateral aspects. There was a thin brown algal mat on the dorsal aspect. There was one well-healed linear scar on the dorsal aspect and one well healed scar on the ventral fluke. There were two well-healed triangular mutilations of the fluke margin at the 3 o'clock position. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a moderate amount of abdominal fat and small amount of serous mesenteric and omental fat. There was 4 L of watery red fluid in the abdominal cavity.

STOMACH The stomach contained 300 mL of watery, opaque, tan to yellow fluid and a scant amount of yellow, fibrous bits (see photo). There was a mild infection of dead nematodes. The mucosa was unremarkable.

DUODENUM The duodenum contained 500 mL of watery, opaque, tan to yellow fluid (see photo). There was a mild infection of dead nematodes. The mucosa had a small amount of yellow spots but was otherwise unremarkable (see photo). There were hardened nodules in the connective tissue dorsal to the duodenum (see photos).

JEJUNUM & ILEUM The small intestine contained a small amount of watery, opaque, tan to yellow fluid throughout. The mucosa contained yellow spots with some hardened, yellow nodules (see photos). No parasites were grossly observed.

CECUM The cecum was empty of contents. The mucosa had a small amount of yellow spots but was otherwise unremarkable (see photo). No parasites were observed. There were hardened nodules in the connective tissue dorsal to the cecum (see photos).

COLON The proximal colon contained watery dark green fluid. The distal colon contained moist, well formed, well digested, homogenous, dark green feces. The mucosa was unremarkable. No parasites were observed.

PANCREAS The pancreas was white to pink on serosal surfaces and pink on cut surfaces.

SPLEEN The spleen was soft and mottled grey to black on serosal surfaces. The spleen was brown to black on cut surfaces.

LIVER The liver was soft and friable. The serosa was separating from the parenchyma. The liver was grey to blue on serosal surfaces, and brown on cut surfaces.

GALLBLADDER The gallbladder contained a small amount of slightly viscous, yellow orange bile. The mucosa was bile-stained.

REPRODUCTIVE There was a moderate amount of serous reproductive fat. The diameter of the uterine horns was small. No scars were present. There were numerous fluid-filled follicles in each ovary.

KIDNEYS The perirenal fat was rendered. The kidneys were soft and friable. The kidney capsule was distended with gas. The kidneys were brown to pink on serosal surfaces. On cut surfaces, the cortices were brown to pink and the medullae were pink. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained 20 mL of watery, red fluid. The mucosa was unremarkable.

HEART There was a small amount of epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right pleural cavity contained 2.5 L of watery, red fluid. The left pleural cavity contained 3 L of watery, red fluid. The lungs were grey to green with black specks on serosal surfaces, and pink to red and wet on cut surfaces. There was a lump on the caudal half of the right lung that was very bloody and contained poorly formed blood clots on cut surfaces (see photos). The cut surfaces of the left lung contained dirt. The primary airways contained a moderate amount of watery, red fluid.

HEAD & NECK REGIONS NVL

SKELETON NVL

OTHER There were red, gelatinous specks on parietal pleura. A fecal sample was collected.

PHOTOGRAPHS 2021-02-15_FWC049_4489 through 4532

COMMENTS

SIGNIFICANT FINDINGS

- Bleached epidermis
 - Cold stress lesions
 - Some serous fats
 - Empty upper GI tract
 - Bloody lump on right lung
 - Yellow spots, hardened nodules in small intestine, cecum
 - Hardened nodules dorsal to cecum and duodenum
 - Red urine
 - Soft, friable internal organs
-

PROBABLE CAUSE OF DEATH Undetermined; Too Decomposed

NECROPSY CONDUCTED BY

Sara M. Wappes
Kylie C. Lawson (Intern)

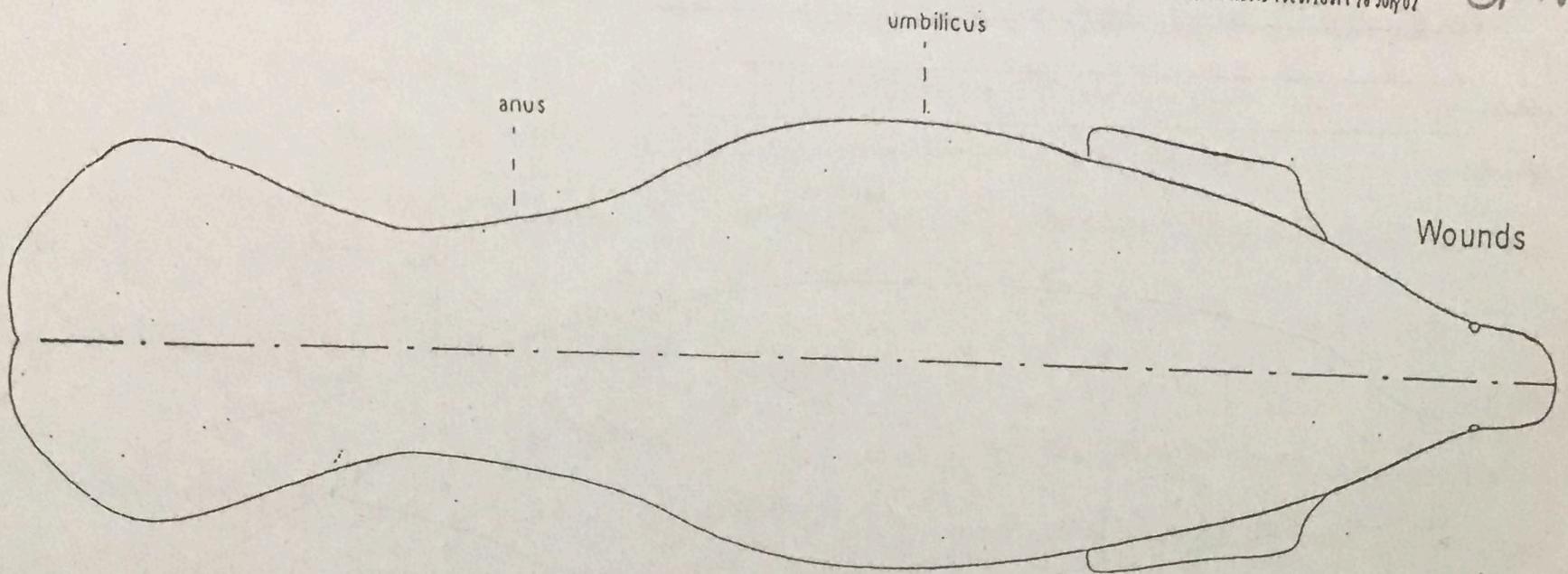
REPORT FILED BY Lawson/Wappes

Date 15 FEB 2021

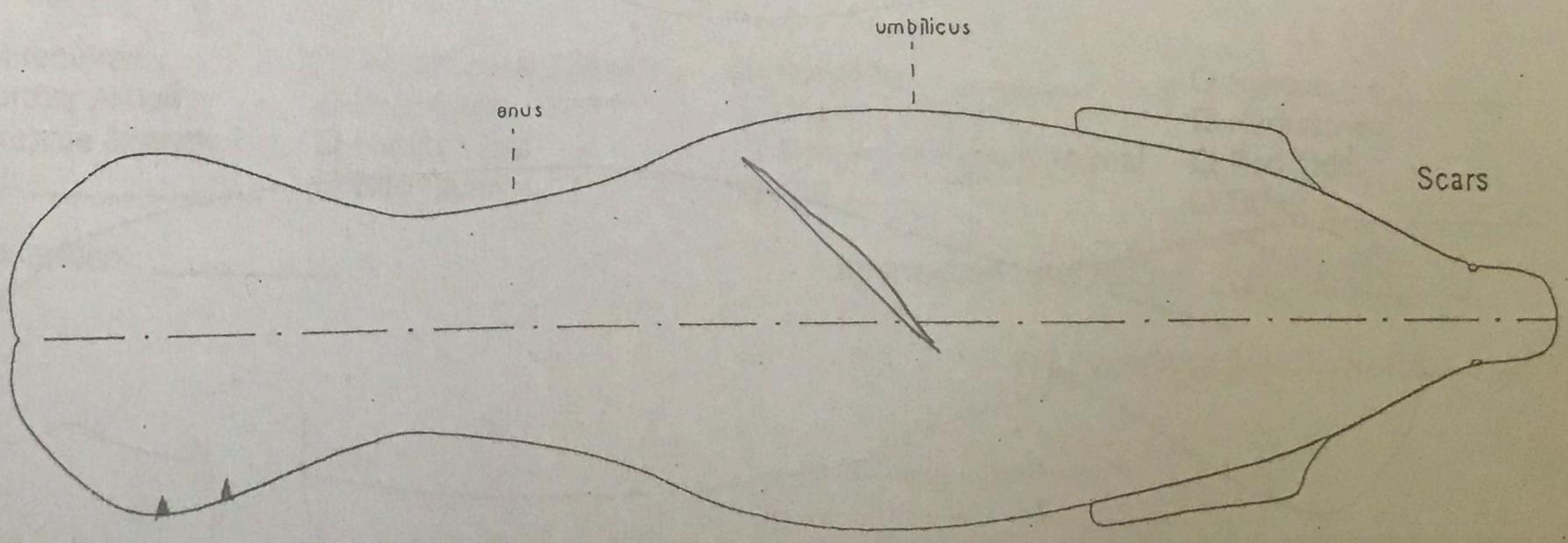
Field I.D. MEC21151

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SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21152
Date of Report: 2021-Feb-13
Filed By: FEC EC Field Station

FWC Case # 2720 **FWC Region:** NE

Sex: Male **Length:** 297 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-13 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-15 **By:** FWC-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 35 m SE of 525 Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Also FWC case numbers 2641 and 2648.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	297 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21152
RECOVERY DATE 15 Feb 2021
GENDER Male **TL** 297 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **13 February 2021**, at 1705 hrs, FWC on-call biologist-Anna L. Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee behind City Hall in Indian River, Titusville, Brevard County. FWC case number 2641 was assigned. The complainant, Miguel Guerra (321-446-7352), stated that the carcass was ten feet long and badly decomposed. ALP received verification photos and forwarded the information to the EC field station at 2009 hrs. ALP received one additional report of this carcass. FWC case number 2648 was assigned. **14 February**, FWC biologist-Sara M. Wappes recovered a badly decomposed carcass from this area (MEC21149) thinking it was the same carcass. At 1832 hrs, ALP received a text from Dispatch regarding a badly decomposed carcass near City Hall in Indian River, Titusville, Brevard County. FWC case number 2720 was assigned. The complainant, Susan Rothel (321-749-7441), stated that the carcass was full grown and badly decomposed. ALP received a verification photo and forwarded the information to the EC field station at 2043 hrs. **15 February**, FWC biologist-Sean Tennant and a Brevard County Sheriff's Office Deputy departed from the Titusville Marina at approximately 1000 hrs. The carcass was located at approximately 1100 hours, towed to a remote location and an external work up was completed by 1230 hours.

EXTERNAL Almost all of the epidermis was missing. There were rents on the ventrum near the axillae, urogenital slit, anus and peduncle caused by decomposition and/or scavenging. There were at least two healing watercraft related wound series on the dorsum. There was a minimum of two watercraft related scar patterns on the dorsum. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-15_FWC_MMPL_SMT_6018, 6022, 6024, 6026, 2029, 6032, 6033, 6035, 6036, 6038

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

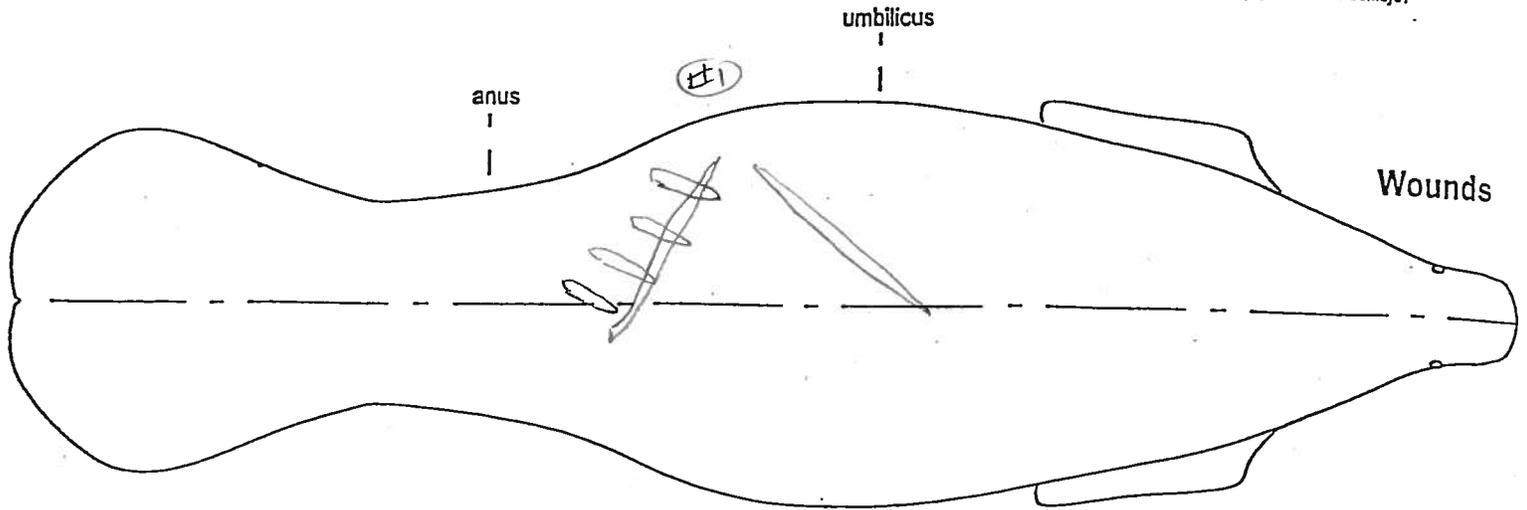
N/A

REPORT FILED BY Tennant/Wappes

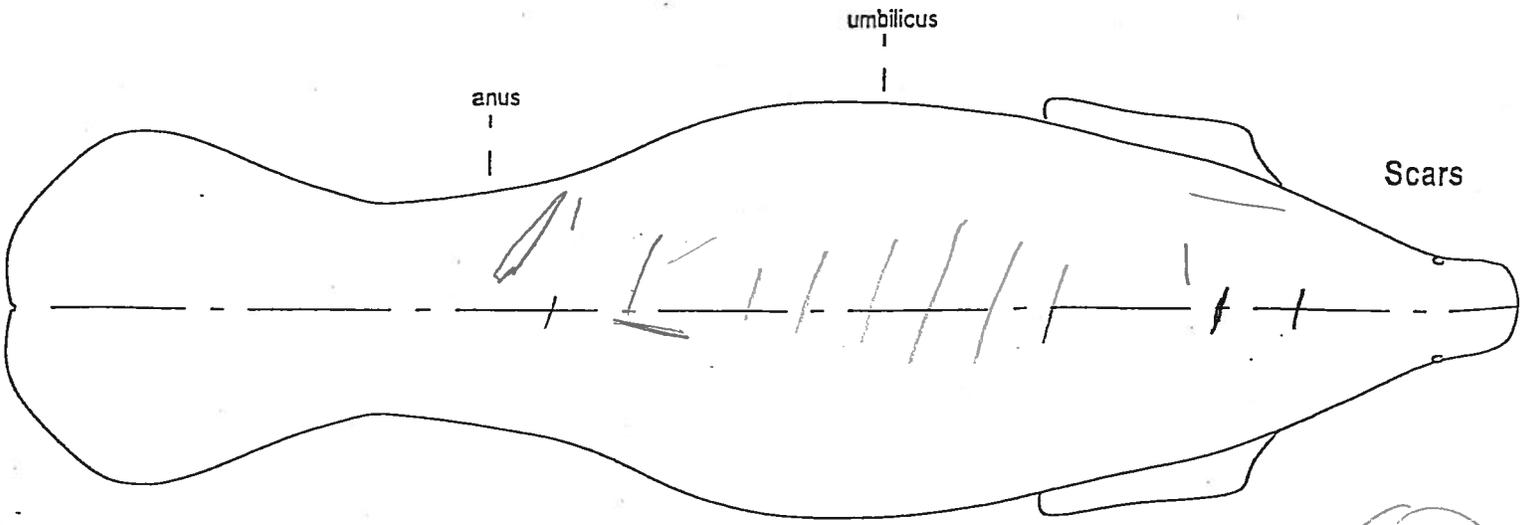
Date 24 Feb 2021

Field I.D. MEL21152

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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



SALT

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21153
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # 2751 **FWC Region:** NE

Sex: Male **Length:** 255 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-15 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Palm Bay, grounded approximately 55 m NE of 5141 Dixie Highway NE.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	255 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21153
RECOVERY DATE 15 February 2021
GENDER Male **TL** 255 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1104 hrs, FWC biologist-Bill Greer (WDG) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Palm Bay, Brevard County. FWC case number 2751 was assigned. The complainant, Amanda (407-227-5400), stated that the carcass had been there for three days and was beginning to smell. At 1245 hrs, WDG received a verification photo from 13 February. FWC biologist-Sara Wappes and FWC intern-Kylie Lawson arrived at the carcass location at 1258 hrs, completed an external work up by 1316 hrs, and towed the carcass by hand to nearby remote shoreline. The remains were left on site.

EXTERNAL Almost all of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, and each axilla. The dermis of the flippers and fluke margin was eroded. There was a minimum of three well-healed, watercraft-related scar series on the dorsal and right lateral aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-13_PUBLIC_ECFL_3709; 2021-02-15_FWC049_4533 through 4543

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

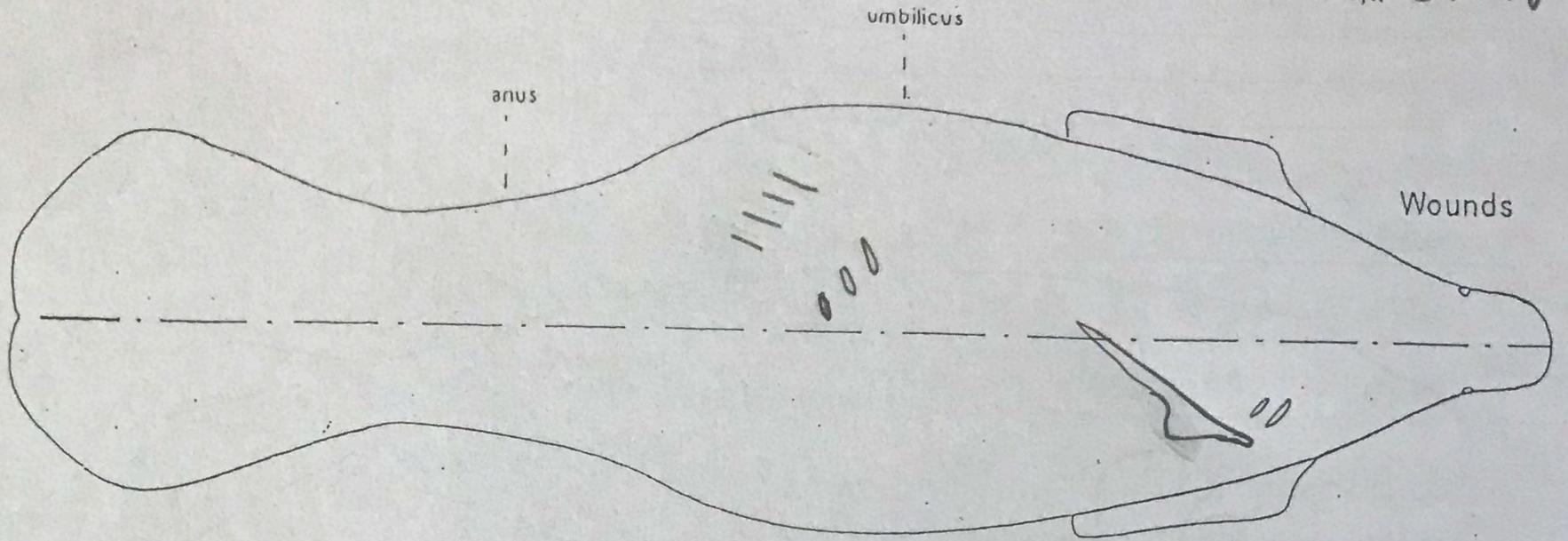
REPORT FILED BY Wappes

Date 15 FEB 2021

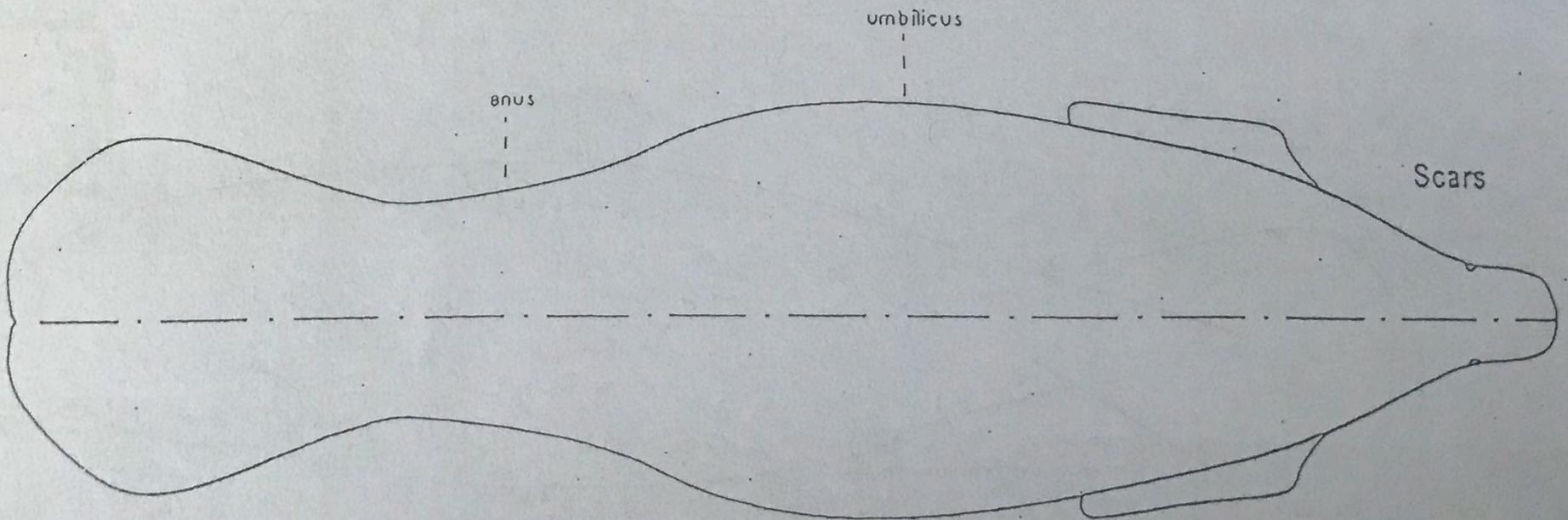
Field I.D. MEC21153

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SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21154
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # 2755 **FWC Region:** NE

Sex: Male **Length:** 323 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-15 **By:** FWC-WDG,SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Crane Creek

Locality description: Melbourne, floating approximately 70 m SSW of 507 E Melbourne Avenue.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	323 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21154

RECOVERY DATE 15 February 2021

GENDER Male **TL** 323 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1225 hrs, FWC biologist- William D. Greer (WDG) received a text alert from FWC NE Dispatch- Orlando regarding two dead manatees near the railroad bridge in Crane Creek in Melbourne, Brevard County. FWC case number 2755 was assigned. The complainant, Debbie Kemplar (321-795-4871), stated there were two dead adult manatees (MEC21154 and MEC21155) badly decomposed west of the railroad bridge. She then called back stating there was a third dead manatee (MEC21156) near the Florida Institute of Technology's (FIT) boat ramp. Debbie sent photos of MEC21154 and MEC21155 to WDG at 1424 hrs. WDG, FWC biologist- Sara M. Wappes, and FWC Intern- Kylie C. Lawson arrived at the Front Street boat ramp at 1530 hrs and launched the ECFL Key West. At 1555 hrs, WDG visually verified MEC21156 under the FIT dock and collected it at 1605 hrs. MEC21155 was collected at 1620 hrs. MEC21154 was found floating dorsum up and was collected at 1640 hrs. External work ups were completed at 1715 hrs. The remains of the three carcasses were left on site.

EXTERNAL Approximately 50% of the epidermis was present and sloughing. The carcass was distended with gas. Bloody fluid exuded from the urogenital opening and anus. The dorsal aspect of the head was sunburnt. There was a minimum of four well-healed watercraft-related scar series on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-15_FWC049_4573 through 4590

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

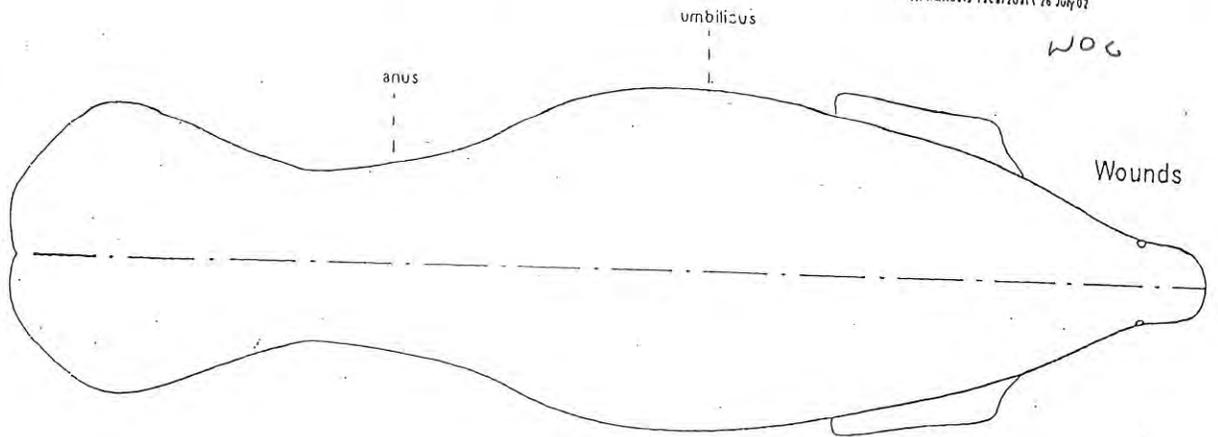
REPORT FILED BY Greer

Date 15 FEB 2021

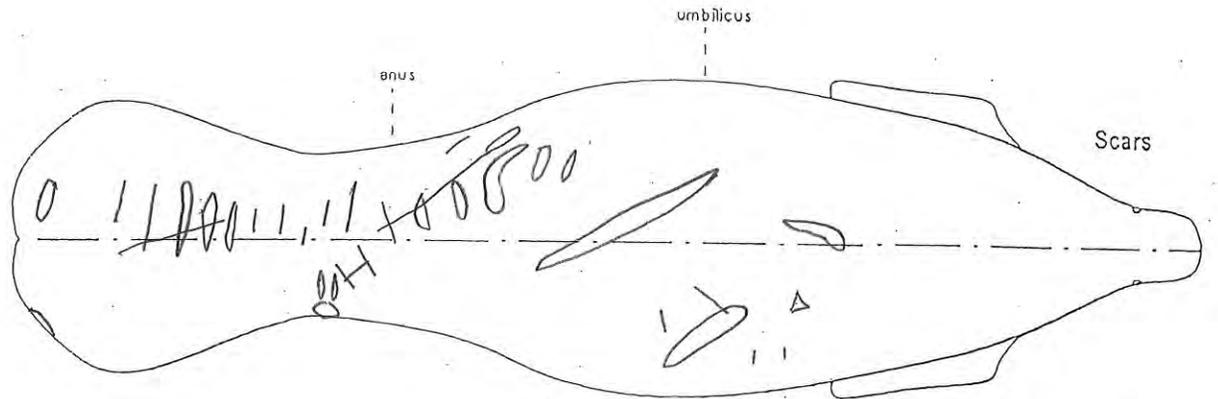
Field I.D. MCC21154

CSI Manuals 1 scar/2011 26 July 02

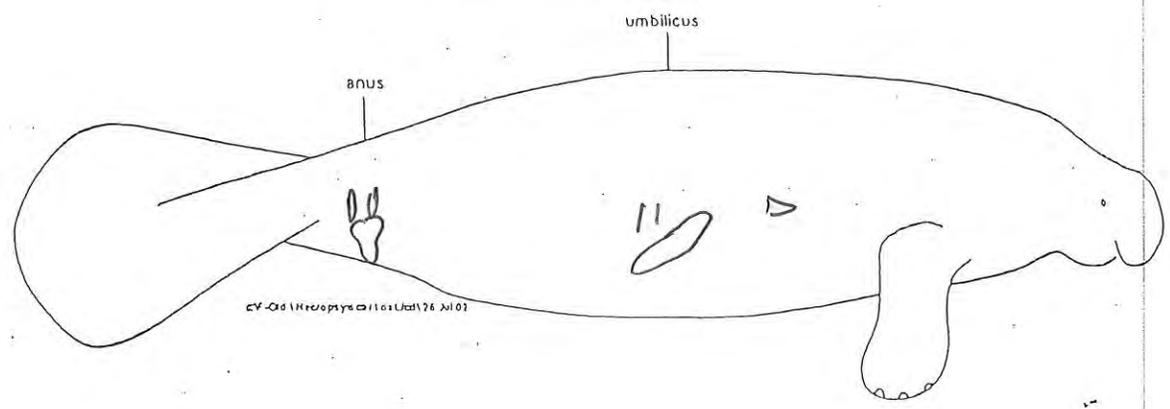
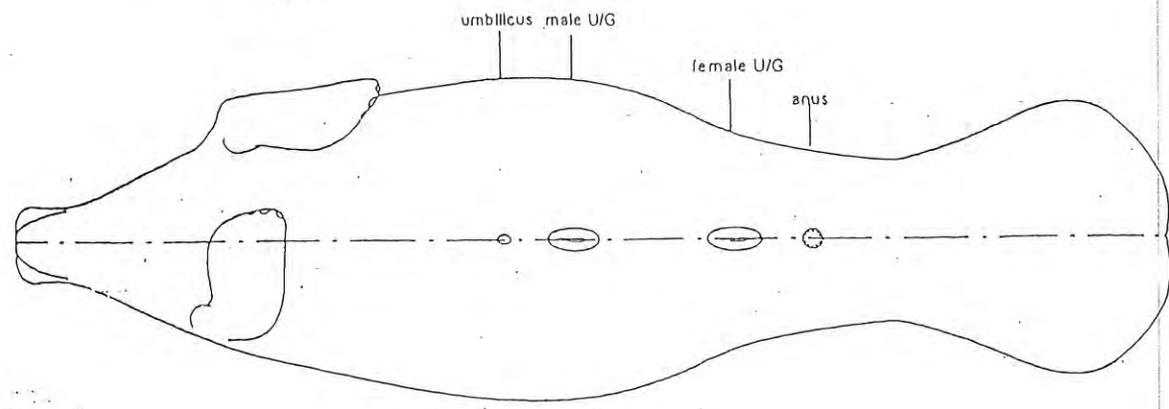
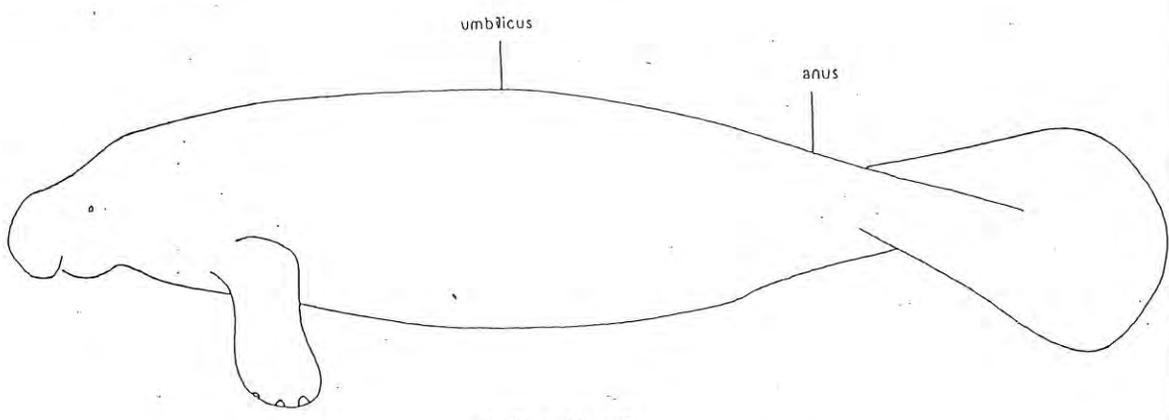
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Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC2154



CV-06 Micropterus salmoides 126 Jul 02

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21155
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # 2755 **FWC Region:** NE

Sex: Female **Length:** 284 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-15 **By:** FWC-WDG,SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Crane Creek

Locality description: Melbourne, grounded approximately 140 m SSW of 617 E Melbourne Avenue.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	284 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21155

RECOVERY DATE 15 February 2021

GENDER Female **TL** 284 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1225 hrs, FWC biologist- William D. Greer (WDG) received a text alert from FWC NE Dispatch- Orlando regarding two dead manatees near the railroad bridge in Crane Creek in Melbourne, Brevard County. FWC case number 2755 was assigned. The complainant, Debbie Kemplar (321-795-4871), stated there were two dead adult manatees (MEC21154 and MEC21155) badly decomposed west of the railroad bridge. She then called back stating there was a third dead manatee (MEC21156) near the Florida Institute of Technology's (FIT) boat ramp. Debbie sent photos of MEC21154 and MEC21155 to WDG at 1424 hrs. WDG, FWC biologist- Sara M. Wappes, and FWC Intern- Kylie C. Lawson arrived at the Front Street boat ramp at 1530 hrs and launched the ECFL Key West. At 1555 hrs, WDG visually verified MEC21156 under the FIT dock and collected it at 1605 hrs. MEC21155 was collected at 1620 hrs. MEC21154 was found floating dorsum up and was collected at 1640 hrs. External work ups were completed at 1715 hrs. The remains of the three carcasses were left on site.

EXTERNAL Approximately 10% of the epidermis was present and sloughing. The carcass was distended with gas. The dorsal aspect of the head was sunburnt. There was a minimum of six well-healed watercraft-related scar series on the dorsal and lateral aspects. There were 3 well-healed triangular tail mutilations on the trailing edge of the fluke between the 5 o'clock and 7 o'clock positions. The right flipper was cleft. The left flipper was severely entangled with multiple type of monofilaments, braid and small piece of rope and multiple areas of scar tissue. The left flipper as also extremely swollen. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-15_FWC049_4552 through 4570; 4572

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Entangled flipper

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

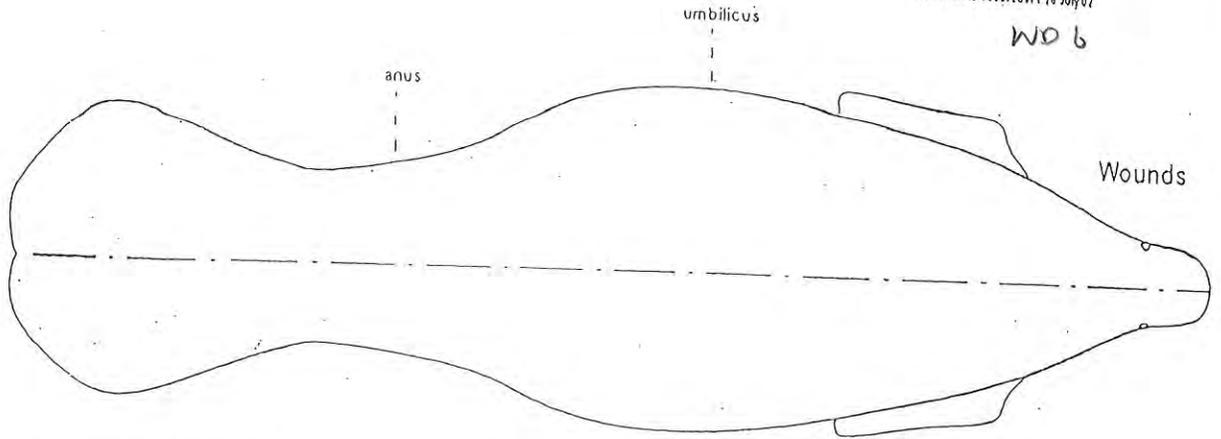
REPORT FILED BY Greer

Date 15 FEB 2021

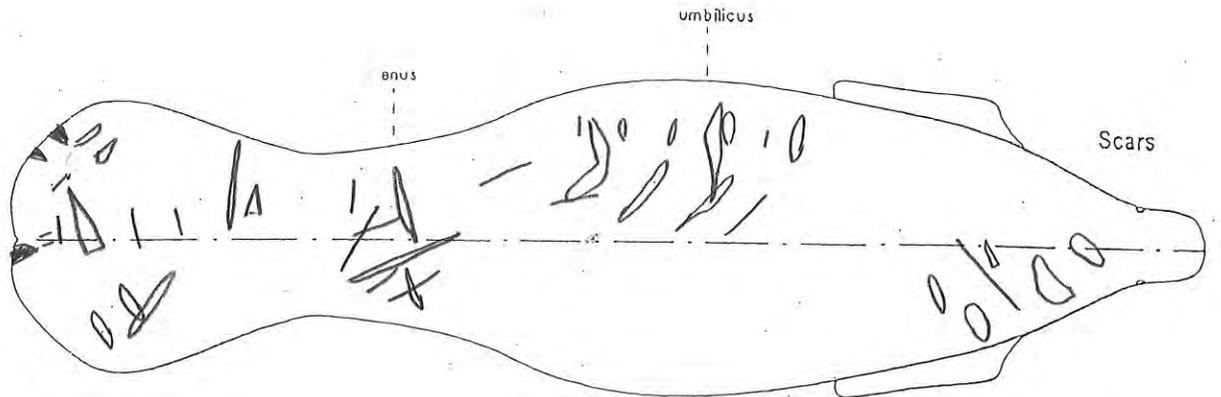
Field I.D. MEC21155

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WD 6



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21156
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # 2755 **FWC Region:** NE

Sex: Male **Length:** 273 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-15 **By:** FWC-WDG,SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Crane Creek

Locality description: Melbourne, floating approximately 80 m NNE of the northernmost building at 1308 River Drive.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	273 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21156

RECOVERY DATE 15 February 2021

GENDER Male **TL** 273 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1225 hrs, FWC biologist- William D. Greer (WDG) received a text alert from FWC NE Dispatch- Orlando regarding two dead manatees near the railroad bridge in Crane Creek in Melbourne, Brevard County. FWC case number 2755 was assigned. The complainant, Debbie Kemplar (321-795-4871), stated there were two dead adult manatees (MEC21154 and MEC21155) badly decomposed west of the railroad bridge. She then called back stating there was a third dead manatee (MEC21156) near the Florida Institute of Technology's (FIT) boat ramp. Debbie sent photos of MEC21154 and MEC21155 to WDG at 1424 hrs. WDG, FWC biologist- Sara M. Wappes, and FWC Intern- Kylie C. Lawson arrived at the Front Street boat ramp at 1530 hrs and launched the ECFL Key West. At 1555 hrs, WDG visually verified MEC21156 under the FIT dock and collected it at 1605 hrs. MEC21155 was collected at 1620 hrs. MEC21154 was found floating dorsum up and was collected at 1640 hrs. External work ups were completed at 1715 hrs. The remains of the three carcasses were left on site.

EXTERNAL Less than 10% of the epidermis was present and sloughing. Bloody fluid exuded from the nares. The carcass was distended with gas. There were signs of scavenging, bird feces on the ventral aspect. There was a minimum of three well-healed watercraft-related scar series on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-15_FWC049_4544 through 4551

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

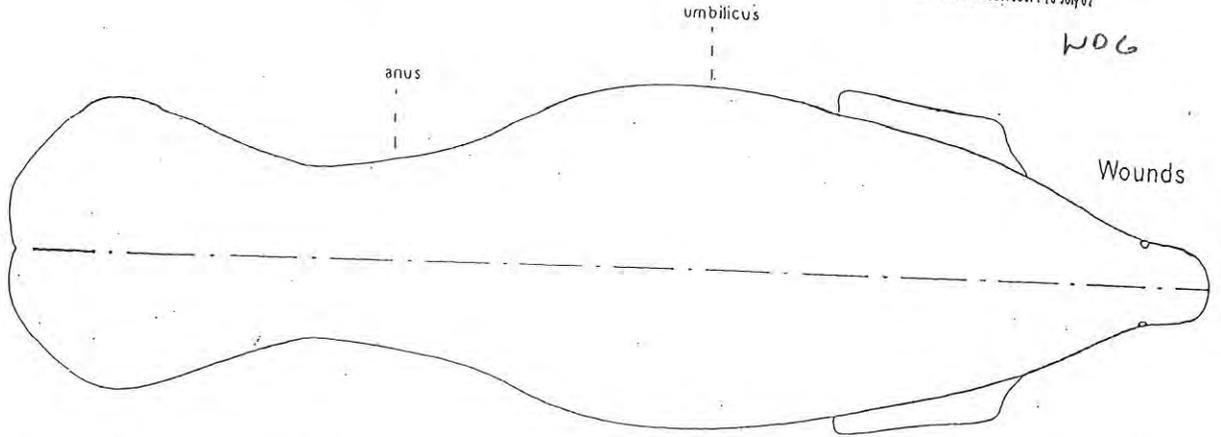
REPORT FILED BY Greer

Date 15 FEB 2021

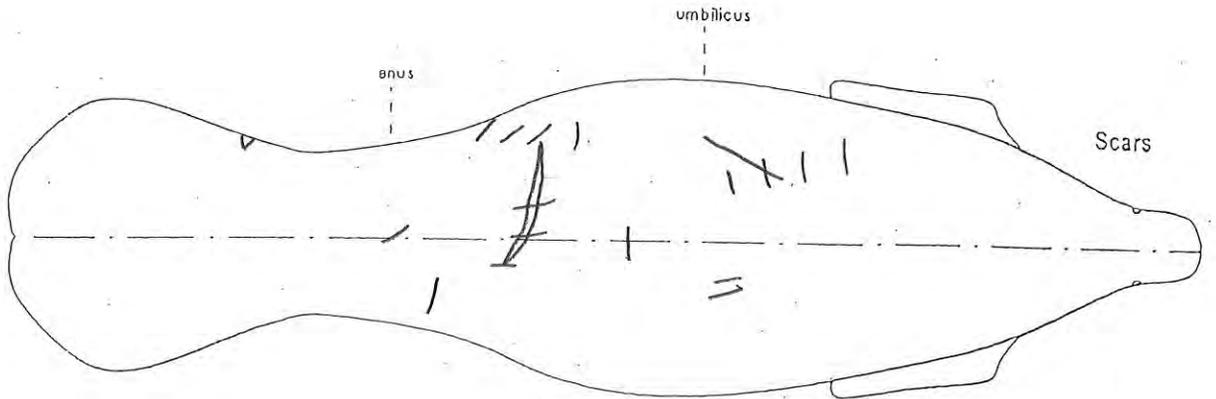
Field I.D. MCC21156

CSI Manuals ScarSheet 26 July 02

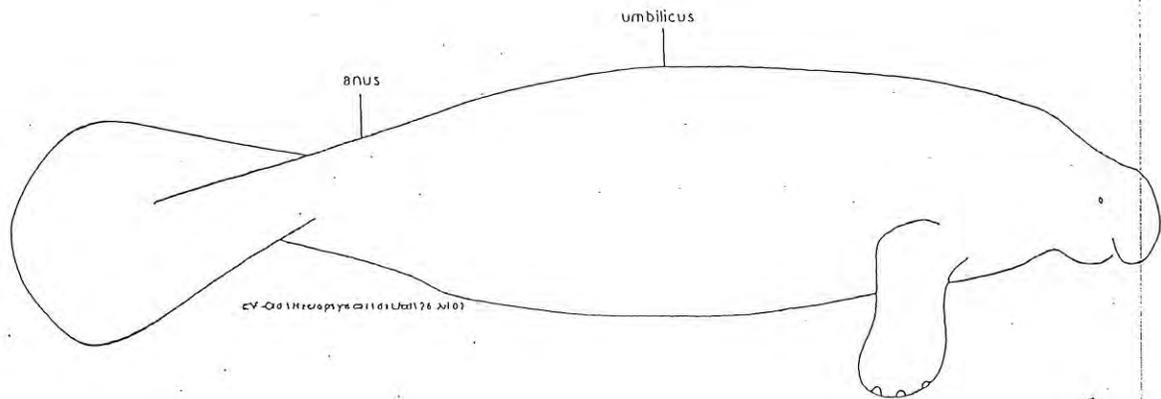
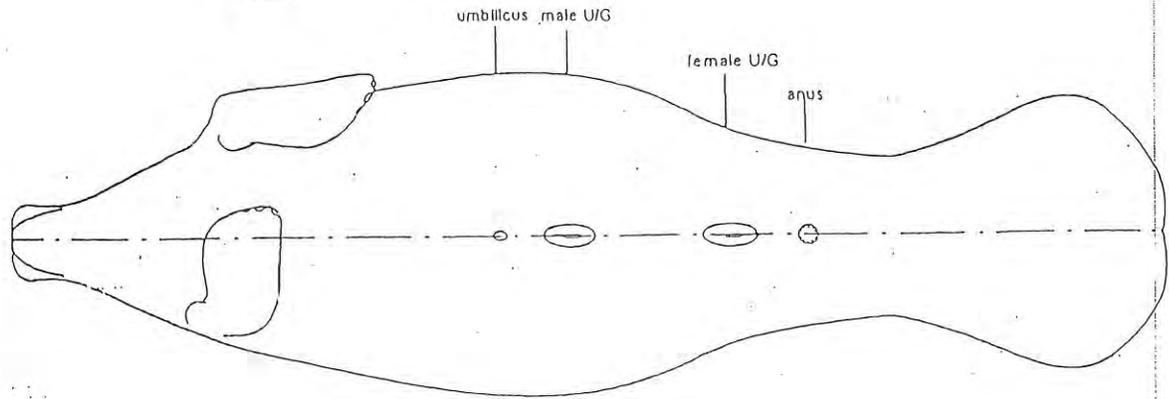
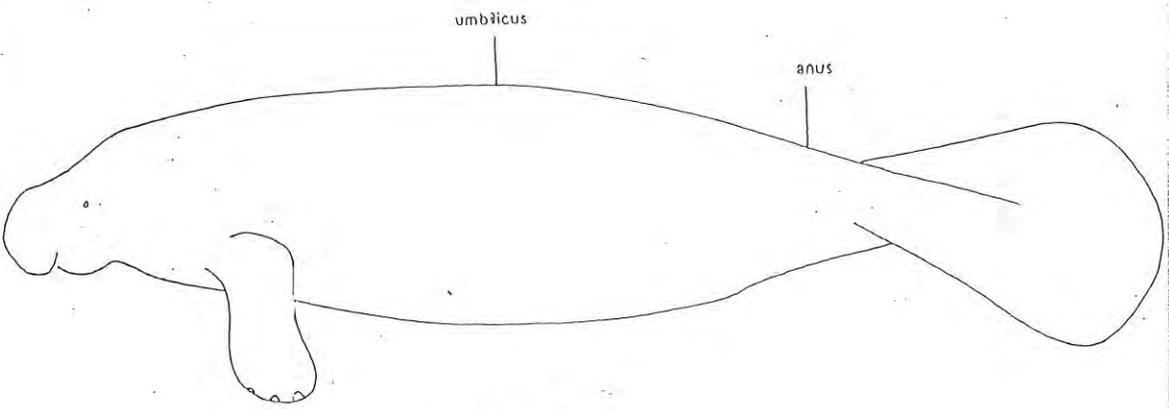
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



CV-001 Hercepsys 01101 Uat176 J101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21157
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # 2772 **FWC Region:** NE

Sex: Female **Length:** 292 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-16 **By:** FWC-WDG,MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, floating approximately 115 m ENE of 9570 South Tropical Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	292 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21157

RECOVERY DATE 16 February 2021

GENDER Female **TL** 292 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1455 hrs, FWC biologist- William D. Greer (WDG) received a text alert from FWC NE Dispatch- Orlando regarding a dead manatee in Banana River in Merritt Island, Brevard County. FWC case number 2772 was assigned. The complainant, Doug Grapevine (321-626-0691), stated there was a large, white manatee stuck in the mangroves behind his home. At 1610 hrs, WDG received a photo from the complainant confirming the carcass. Due to the time of day no response was available. 16 February, at 1200 hrs, WDG and FWC biologist- Sean M. Tennant (SMT) launched the ECFL Key West from the Patrick Space Force Base Marina. After collecting and completing external workups on two other carcasses WDG and SMT secured MEC21157 to the ECFL Key West at 1340 hrs. The carcass was towed to a remote location where an external workup was completed by 1430 hrs. The remains were left on site.

EXTERNAL All epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were decompositional rents at the urogenital opening and anus. The ventrum was sunburnt. There were seven deep parallel watercraft-related wounds on the dorsal peduncle extending to the fluke. No other watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

SKELETON From partial examination through wounds- (assuming wounds numbered cranially to caudally, with #1 being prop wound closest to head) Wounds #3 and #4 penetrated into the body cavity and cut through the fourth and fifth vertebrae and first and second vertebrae cranial to the first caudal vertebra, respectively. The injury resulted in a complete vertebral separation, and all four vertebrae had multiple fractures. Wound #5 and #6 cut into the first and second and fourth and fifth caudal vertebrae, respectively. The four involved vertebrae were fractured along the left vertebral process.

OTHER There was shredded, hemorrhagic tissue and a few small, well-formed blood clots within the wounds.

PHOTOGRAPHS 2021-02-15_PUBLIC_ECFL_4390 through 4391; 2021-02-16_FWC050_1591 through 1608

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologist
- Deep wounds on dorsal aspect
- Hemorrhagic tissue present within wounds
- Multiple fractured vertebrae observed within wounds

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Greer/Tennant

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21157
RECOVERY DATE
GENDER TL cm WT kg

SPECIES *T. manatus latirostris*
NECROPSY DATE
CONDITION

HISTORY

EXTERNAL

ABDOMINAL

STOMACH

DUODENUM

JEJUNUM & ILEUM

CECUM

COLON

PANCREAS

SPLEEN

LIVER

GALLBLADDER

REPRODUCTIVE

KIDNEYS

URINARY BLADDER

HEART

RESPIRATORY SYSTEM

HEAD & NECK REGIONS

SKELETON From partial examination through wounds- (assuming wounds numbered cranially to caudally, with #1 being prop wound closest to head) Wounds #3 and #4 penetrated into the body cavity and cut through the fourth and fifth vertebrae and first and second vertebrae cranial to the first caudal vertebra, respectively. The injury resulted in a complete vertebral separation, and all four vertebrae had multiple fractures. Wound #5 and #6 cut into the first and second and fourth and fifth caudal vertebrae, respectively. The four involved vertebrae were fractured along the left vertebral process.

OTHER There was shredded, hemorrhagic tissue and a few small, well-formed blood clots within the wounds.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Andrew J. Garrett
Brandon L. Bassett
Anna L. Panike
Brittany Barbeau
Tara D. Whitcomb
Sean M. Tennant
Christine M. Fontaine

REPORT FILED BY

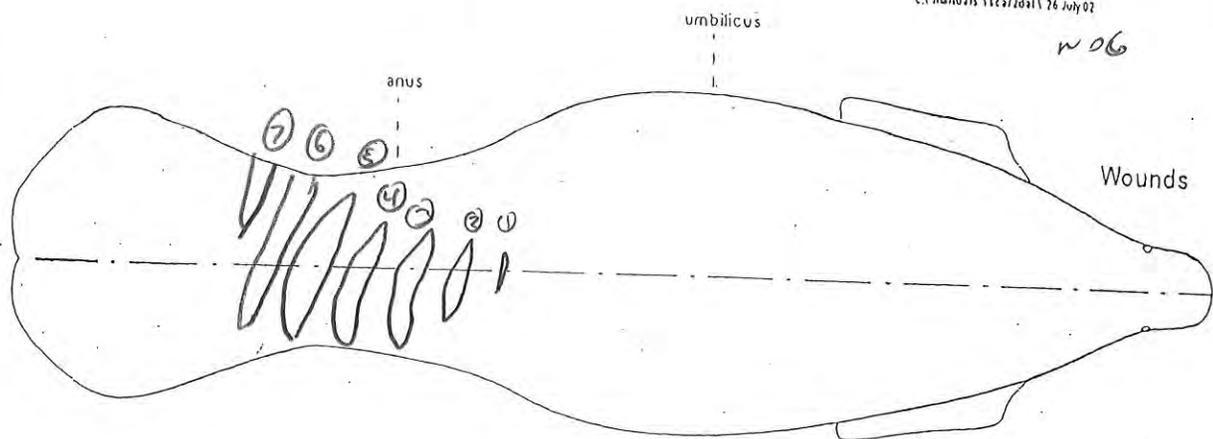
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 16 Feb 2021

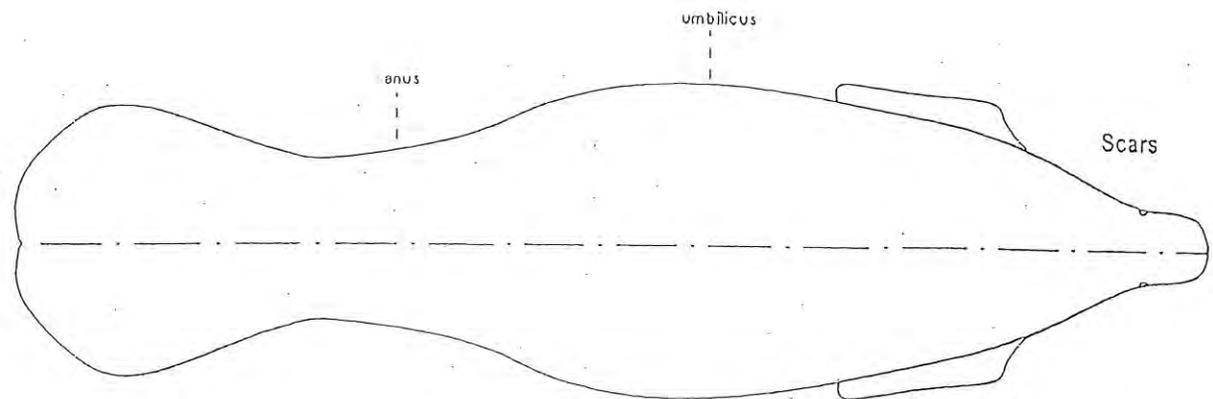
Field I.D. MBCZ1157

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W06

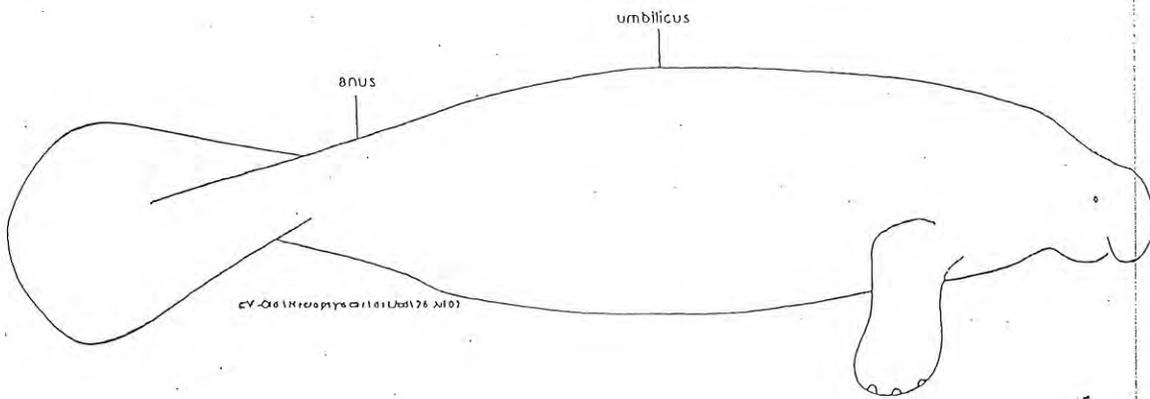
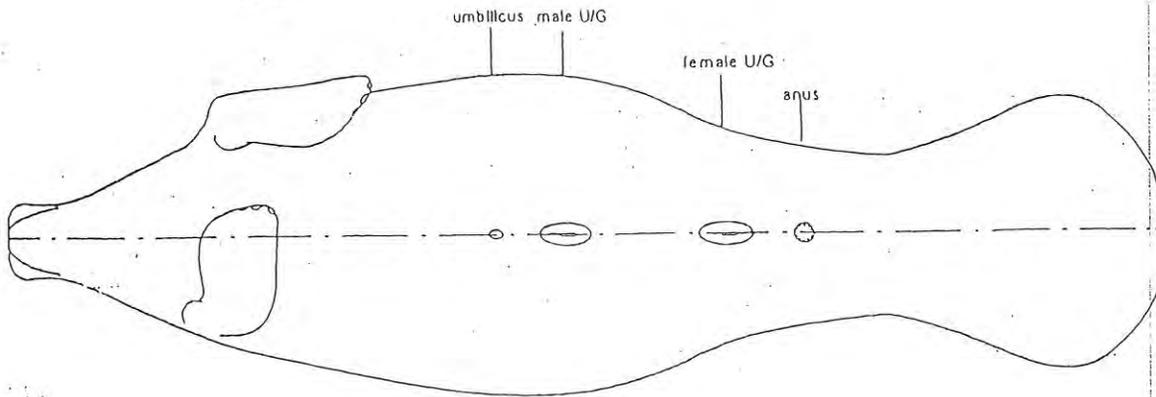
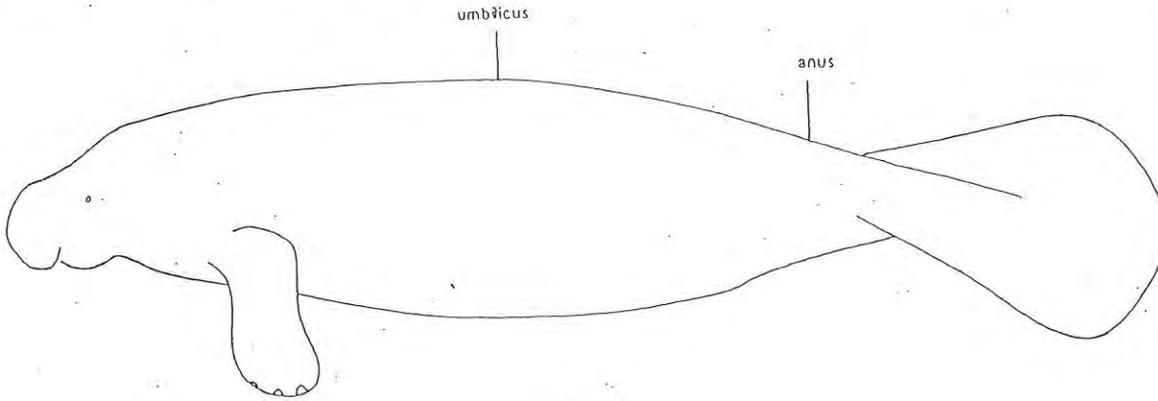


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

M 221157



CV-Qd 1/1/1997

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21158
Date of Report: 2021-Feb-16
Filed By: FWC EC Field Station

FWC Case # 2799 **FWC Region:** NE

Sex: Female **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-16 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Melbourne, beached approximately 560 m NE of 5700 U.S. 1 South.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21158

RECOVERY DATE N/A

GENDER Female **TL** 180 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 16 February 2021, at 0849 hrs, FWC biologist-Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Merritt Island, Brevard County. FWC case number 2799 was assigned. The complainant, Thoman Larruscain (321-265-9827), reported observing a 6-foot-long carcass and provided coordinates and a verification photo. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – Almost all of the ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. Several bleached spots were observed on the remaining epidermis. The dermis of the face, flippers, cranial ventrum, and fluke was severely eroded due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs
- Bleached epidermis

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21159
Date of Report: 2021-Feb-16
Filed By: FWC EC Field Station

FWC Case # 2813 **FWC Region:** NE

Sex: Male **Length:** 279 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-16 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-16 **By:** FWC-WDG,MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Merritt Island, grounded approximately 250 m ENE of 8285 Shoreside Lane.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	279 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21159

RECOVERY DATE 16 February 2021

GENDER Male **TL** 279 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY 16 February 2021, at 1106 hrs, FWC biologist- Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Banana River in Merritt Island, Brevard County. FWC case number 2813 was assigned. The complainant, Amy Cantro (321-682-9096), stated the carcass was six foot, belly up and had vultures on it. At 1119 hrs, CMM received a photo from the complainant verifying the carcass. At 1200 hrs, WDG and FWC biologist- Sean M. Tennant (SMT) launched the ECFL Key West from the Patrick Space Force Base Marina. WDG and SMT collected and towed MEC21127 to MEC21159's location where an external workup was completed by 1305 hrs. The remains were left on site.

EXTERNAL Approximately 70% of the epidermis was present and sloughing. The carcass was distended with gas. Watery, bloody fluid exuded from the nares and mouth. There was a moderate brown algal mat on the dorsal aspect. A minimum of three well-healed watercraft-related scar series were present on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-16-FWC050_1557 through 1570

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

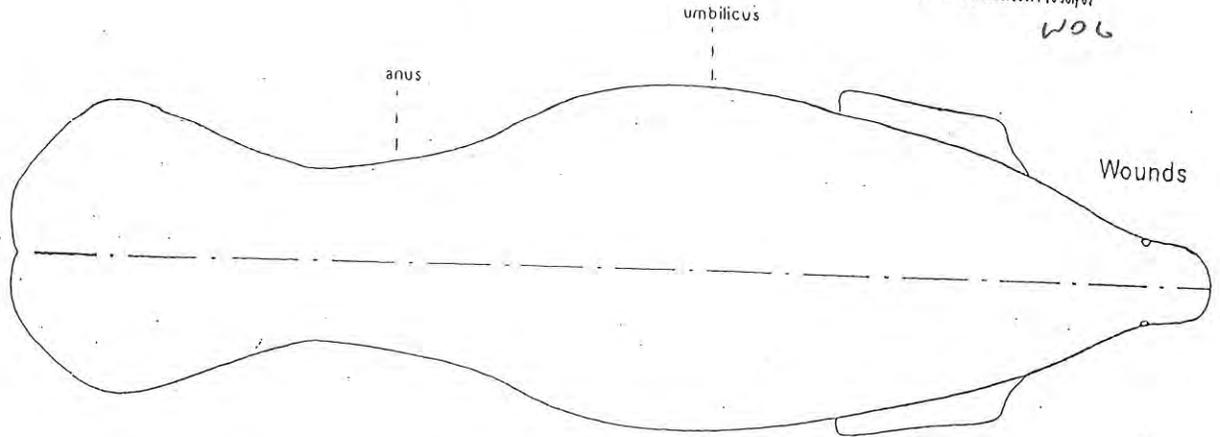
REPORT FILED BY Greer

Date 16 Feb 2021

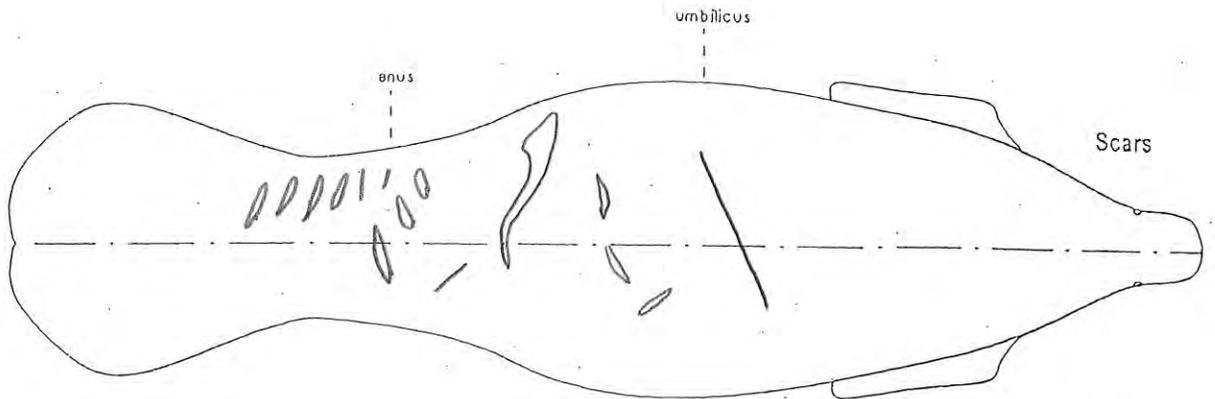
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CSI Manuals / ScarDat11 26 July 02

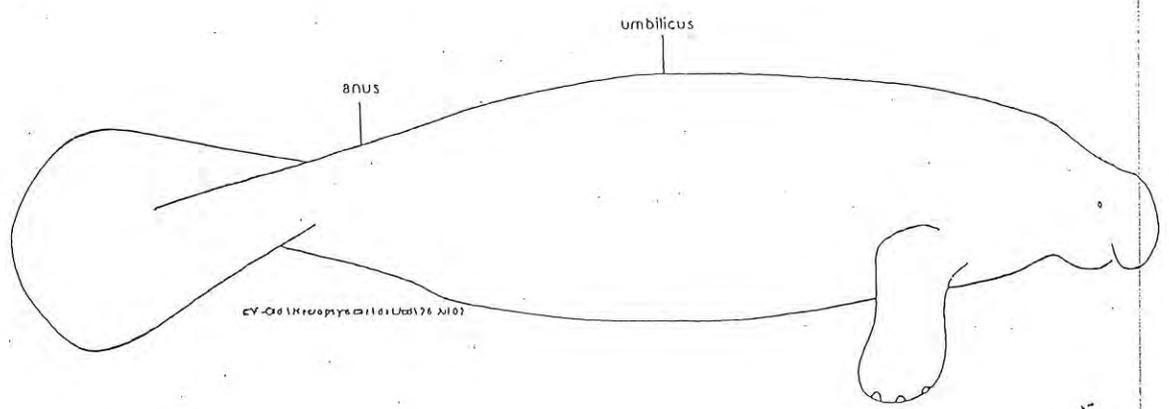
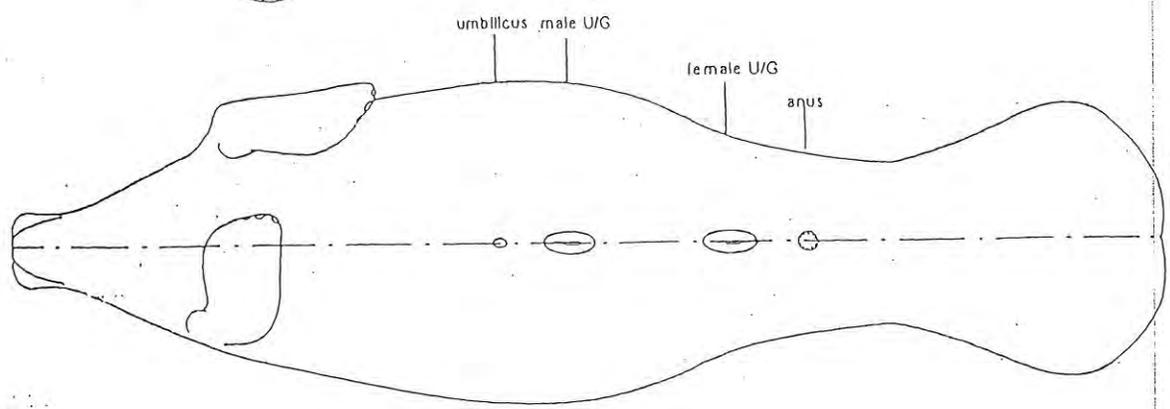
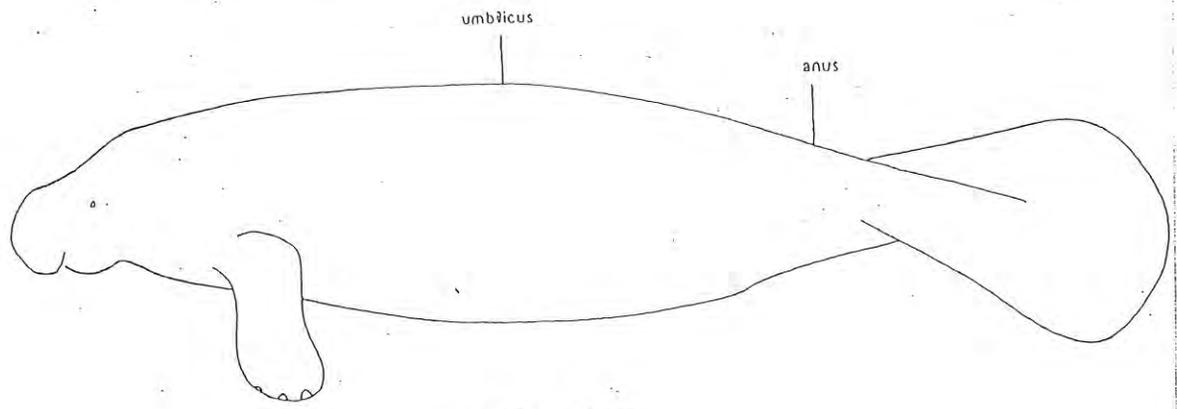
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MBC21159



CV-001 (Kruppys) 11/01/76 J102

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21160
Date of Report: 2021-Feb-15
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 165 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-15 **By:** Citizen to FWC-SMW

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, floating approximately 1.18 km NW of 7759 Pine Lake Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	165 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21160

RECOVERY DATE N/A

GENDER Undetermined **TL** 165 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 15 February 2021, at 1635 hrs, FWC biologist-Sara M. Wappes (SMW) received a text from a previous complainant, Rodney (321-720-4954), regarding a dead manatee in the Indian River, Merritt Island, Brevard County. Rodney reported observing a 5-foot-long manatee carcass floating under mangroves in the Pine Island Conservation Area and sent verification photos. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – All of the visible ventral epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The fluke margin was severely eroded. There was a large rent on the cranial ventrum due to decomposition and/or scavenging.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21161
Date of Report: 2021-Feb-16
Filed By: FWC EC Field Station

FWC Case # 2848 **FWC Region:** NE

Sex: Female **Length:** 316 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-16 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-17 **By:** FWC-CMM,SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 40 m ESE of 5280 U.S. 1 North.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-0799-9E48; Right: 00-0799-B296). Also known as RNE1604, SWFTm1609b.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	316 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21161
RECOVERY DATE 17 March 2021
GENDER Female **TL** 316 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **16 February 2021**, at 1735 hrs, FWC on-call biologist-Anna Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 2848 was assigned. The complainant, Alice Kelly (425-289-9211), stated that the carcass was 9-10 feet long and bloated with skin starting to slough. ALP received verification photos and forwarded the information to the EC field station at 2028 hrs. **17 February**, at 1235 hrs, FWC biologists-Sara Wappes (SMW) and Carley Metcalf arrived at the carcass location. SMW towed the carcass by hand to nearby remote shoreline. An external work up was completed by 1325 hrs. The remains were left on site.

EXTERNAL Approximately 30% of the epidermis was present but sloughing. The epidermis of the axillae was bleached. The carcass was distended with gas. Watery red fluid exuded from the nares. Both teats were lactating. There were two, well-healed, distinct scars on the ventrum. There was a minimum of thirteen well-healed, watercraft-related scar series on the dorsal aspect and fluke. PIT tag scan was positive (Left 00-0799-9E48; Right 00-0799-B296), RNE1604/SWFTm1609b, rescued for watercraft injuries in Tomoka River on 09 May 2016. A genetics sample was collected.

PHOTOGRAPHS 2021-02-17_FWC050_1641 through 1668

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- PIT tag positive
- Lactating

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

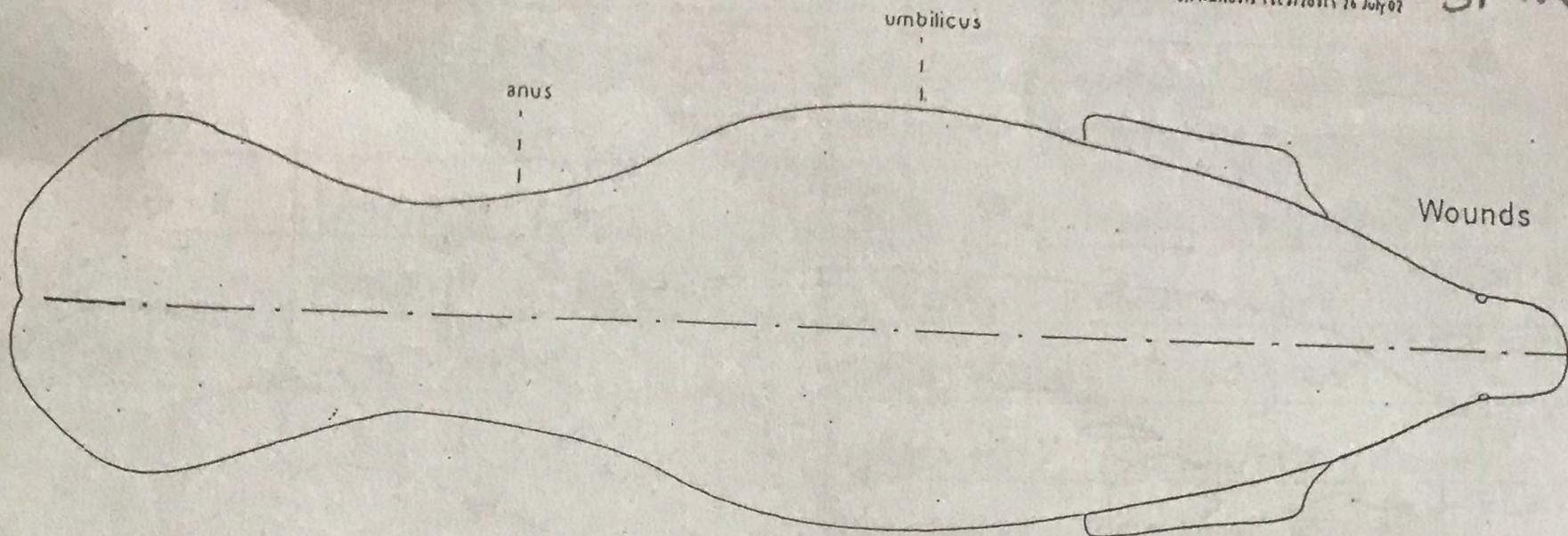
REPORT FILED BY Wappes

Date 17 FEB 2021

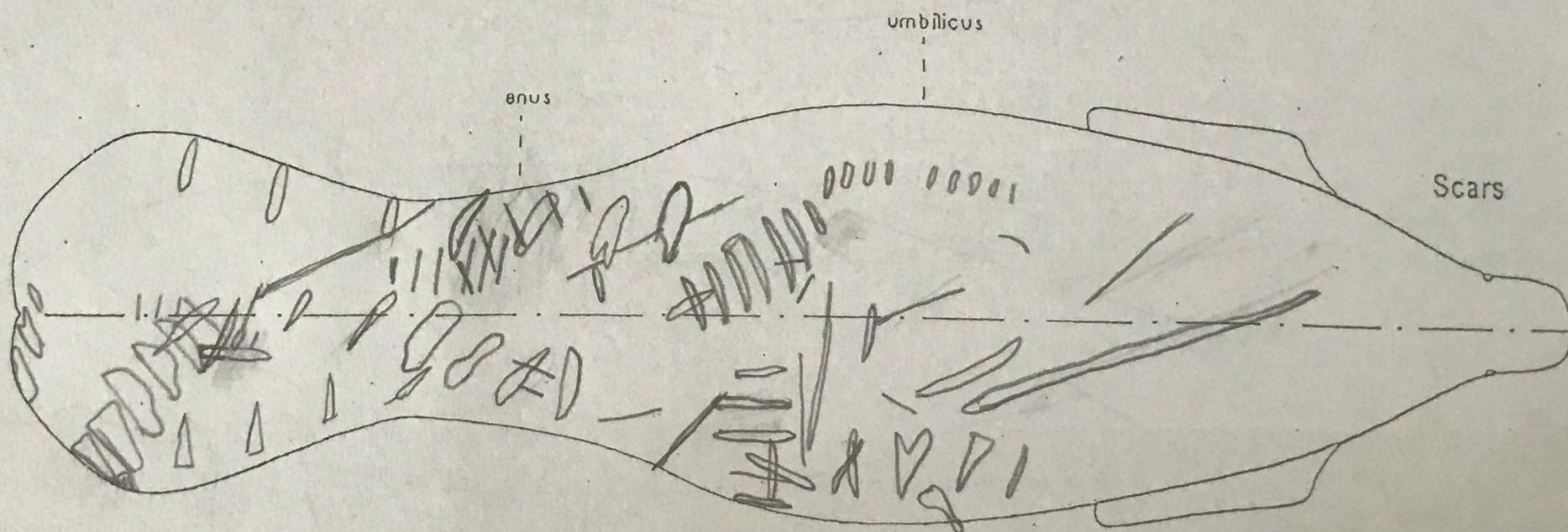
Field I.D. MEC21161

© Manuals 1 scar2dat1 26 July 02

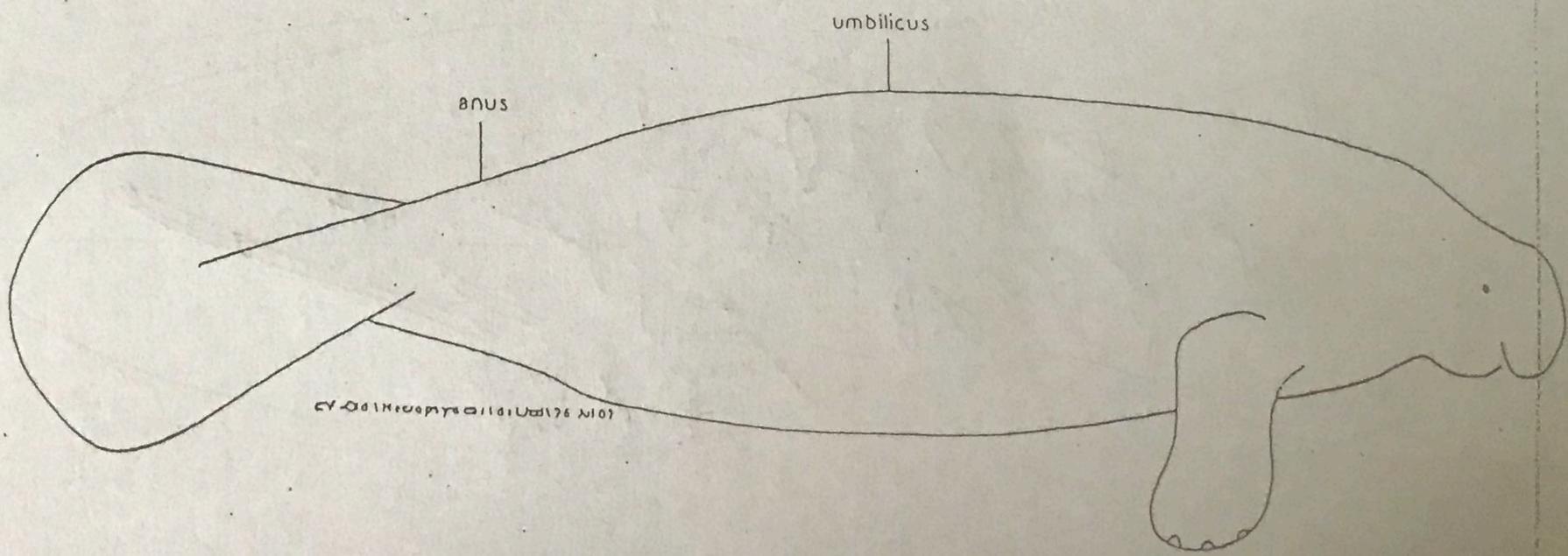
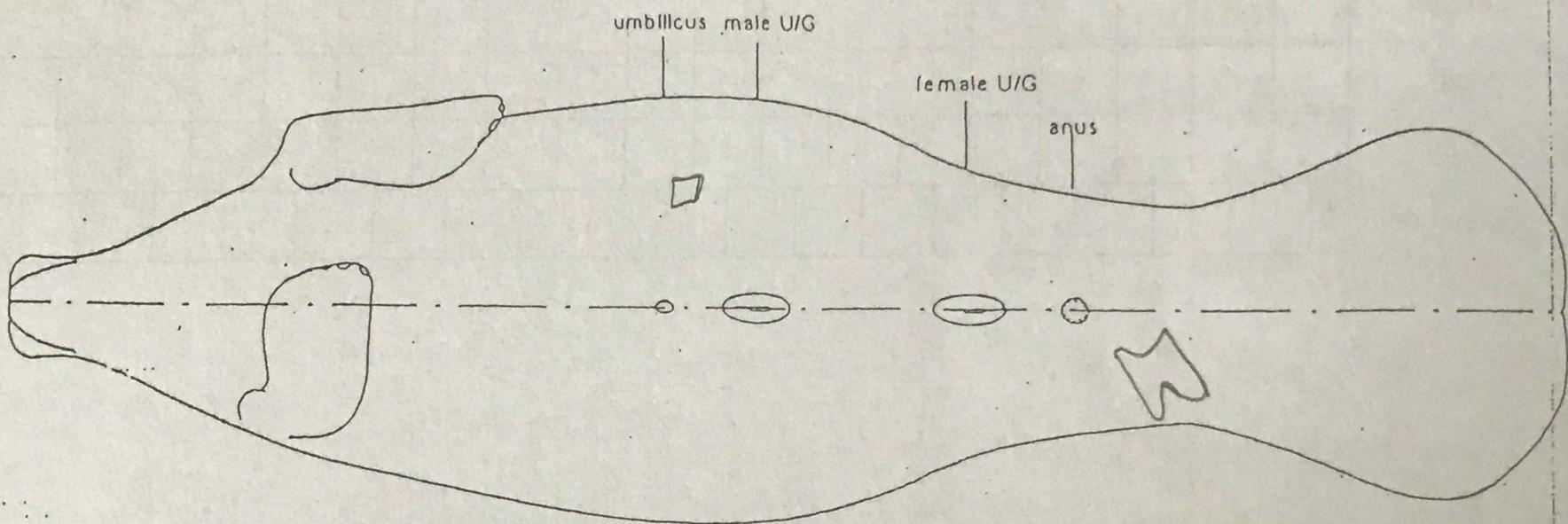
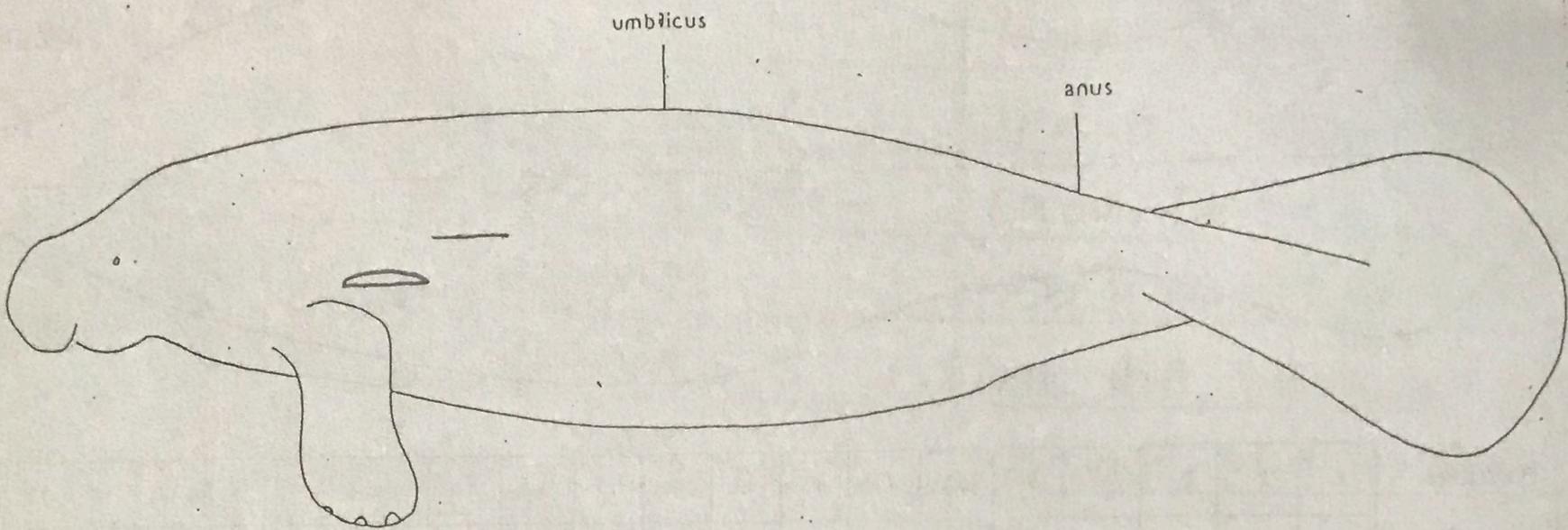
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21161



101 176 101 101 101 101 101 101 101 101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21162
Date of Report: 2021-Feb-17
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 246 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-17 **By:** FWC-CMM,SMW

DATE COLLECTED: 2021-Feb-17 **By:** FWC-CMM,SMW

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 185 m NE of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke.

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	246 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21162
RECOVERY DATE 17 February 2021
GENDER Male **TL** 250 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 17 February 2021, at 0917 hrs, FWC biologist-Bill Greer (WDG) received a text from Florida Power and Light (FPL)-Jennifer Pickett regarding an injured manatee on the discharge side of the FPL Canaveral power plant in the Indian River, Cocoa, Brevard County. No FWC case number was assigned. At 1120 hrs, FWC biologists-Carley Metcalf (CMM) and Sara Wappes (SMW) arrived at the FPL power plant. CMM monitored the injured manatee while SMW searched the area for carcasses. SMW located one carcass (MEC21162) on the intake side of the power plant. CMM and SMW completed an external work up by 1204 hrs and loaded the carcass via Ant lift at 1222 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. The dermis of the axillae and flippers was sunburnt. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging at the anus and urogenital opening. The fluke margin was eroded. The actual length of the remains was 246 cm. There were two well-healed linear scars on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-17_FWC050_1627 through 1640

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Scavenging

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

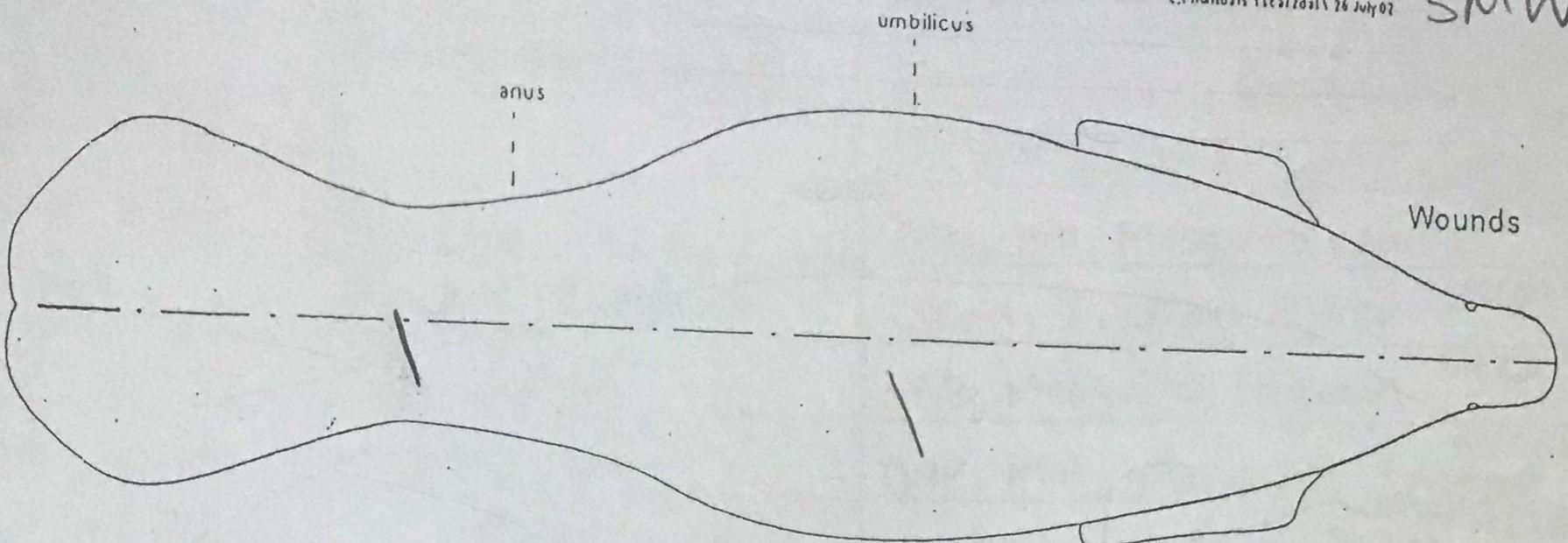
REPORT FILED BY Wappes

Date 17 FEB 2021

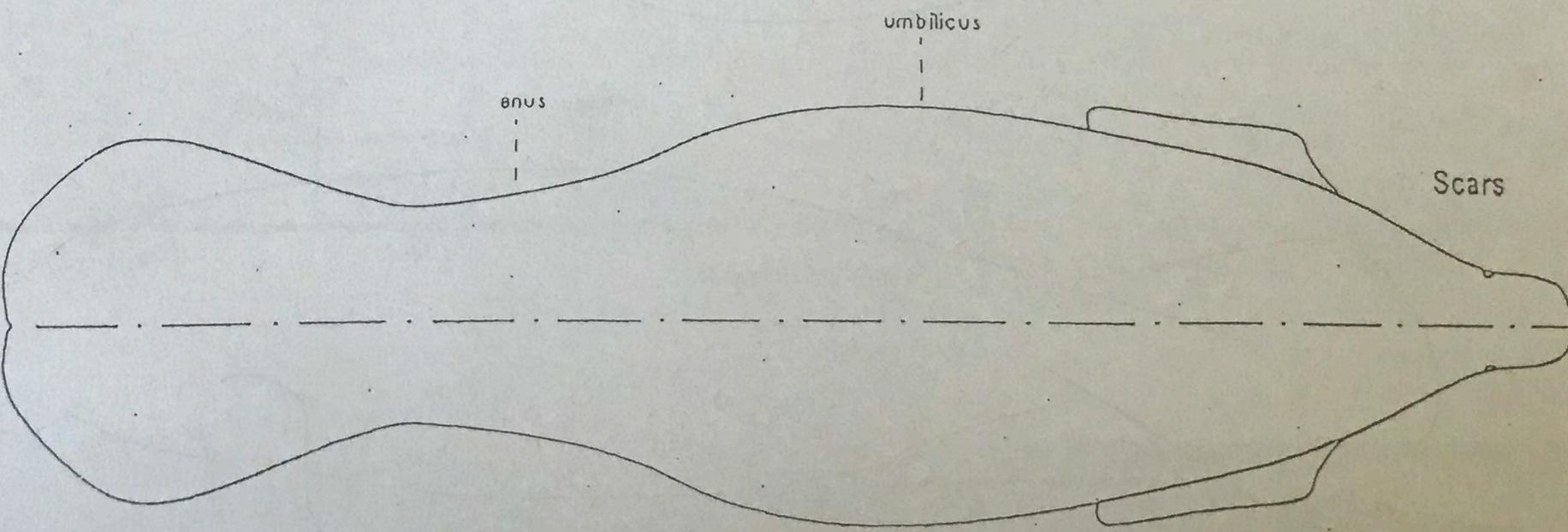
Field I.D. MEC21162

c:\Manuals\ScarData\ 26 July 02

SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21163
Date of Report: 2021-Feb-17
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 245 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-17 **By:** MINWR-Stan Howater to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 2.53 km E of the northernmost building at 3 Indian River Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	245 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21163

RECOVERY DATE N/A

GENDER Female **TL** 245 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 17 February 2021, at 1124 hrs, FWC biologist-William D. Greer (WDG) received a text from Merritt Island National Wildlife Refuge-Stan Howater regarding a dead manatee in the Indian River, Merritt Island, Brevard County. Stan reported observing a bloated, 8-foot-long carcass in the Catfish Creek Loop and provided a verification photo. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – Approximately 60% of the ventral epidermis was present but sloughing. The carcass was slightly distended with gas. There was a rent at the right axilla due to decomposition and/or scavenging. The dermis of the fluke was eroded. There were two circular shark bites through the fluke margin between the 3 and 5 o'clock positions.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21164
Date of Report: 2021-Feb-17
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 189 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-17 **By:** FWC-SMW
DATE COLLECTED: 2021-Feb-17 **By:** FWC-SMW,CMM
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Cocoa, floating approximately 80 m ESE of 5330 N Highway 1.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	189 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21164
RECOVERY DATE 17 February 2021
GENDER Male **TL** 189 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 17 February 2021, at 1235 hrs, FWC biologists-Sara Wappes (SMW) and Carley Metcalf (CMM) arrived at MEC21161 carcass location. While towing MEC21161 by hand to a nearby remote location, SMW located an additional manatee carcass at approximately 1250 hrs in Indian River, Cocoa, Brevard County. No FWC case number was assigned. Both carcasses were towed by hand to a remote location and an external work up on MEC21164 was completed by 1334 hrs. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The flippers and fluke margin were eroded due to decomposition. There were rents due to decomposition and/or scavenging throughout the ventrum. The GI tract protruded out of multiple decompositional rents. No watercraft related wound or scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-17_FWC050_1669 through 1676

COMMENTS Although not examined internally, it appeared that most bones were luxated due to decomposition.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21165
Date of Report: 2021-Feb-17
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 245 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-17 **By:** FWC Volunteer-J. Smith to FWC-WDG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 55 m NE of the northernmost building at 3 Indian River Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	245 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21165

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 245 cm (est) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY 17 February 2021, at 1809 hrs, FWC biologist-William D. Greer (WDG) received a text from FWC volunteer-Jamie Smith regarding a dead manatee in the Indian River, Titusville, Brevard County. Jamie reported observing a badly decomposed, 8-foot-long carcass on the rocks just S of the Max Brewer Causeway. WDG received verification photos at 1815 hrs. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – All of the ventral epidermis was missing. The remaining dermis was severely eroded. Large portions on soft tissue were missing from the ventrum which exposed the ribs and vertebrae.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs and by FWC volunteer

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21167
Date of Report: 2021-Feb-17
Filed By: FWC EC Field Station

FWC Case # 2927 **FWC Region:** NE

Sex: Female **Length:** 335 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-17 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-18 **By:** FWC-WDG,MMPL-SMT

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 230 m E of the easternmost building at 101 N Washington Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Known as MIPS ID RB027, "!", first sighted on 12 Jan 1981 at Riviera Beach Power Plant.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	335 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21167

RECOVERY DATE 18 February 2021

GENDER Female **TL** 335 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY **17 February 2021**, at 1803 hrs, FWC on-call biologist- Anna L. Panike (ALP) received a text alert from FWC NE Dispatch- Orlando regarding a dead manatee in Indian River, Titusville, Brevard County. FWC case number 2913 was assigned. The complainant, Scott Larese (321-529-4924), stated the manatee was medium sized and stuck on rocks near Valicenti Pavilion. At 1913 hrs, ALP received a photo confirming the carcass from the complainant and forwarded the information to ECFL staff. **18 February**, at 0804 hrs, FWC biologist- William D. Greer (WDG) received a text alert from Dispatch regarding the same manatee. FWC case number 2927 was assigned. The complainant, Lisa Maslyn (407-924-8560), did not answer or call back. FWC Ofc. Dan Rasey (DR) was at the park when the call came through and went to confirm. DR secured the carcass at 0855 hrs. Due to REC2109 in Cocoa no ECFL staff were immediately available to respond. At 1230 hrs, WDG, FWC biologist- Sean M. Tennant and FWC volunteer- Emily Hoshaw launched the NEFL capture boat from Titusville Marina, collected the carcass and towed it to a remote location and completed an external work-up at 1430 hrs. The remains were left on site.

EXTERNAL Approximately 70% of the epidermis was present and sloughing. The carcass was very distended with gas. Watery, bloody fluid exuded from the nares. A minimum of six well-healed watercraft-related scar series were observed on the dorsal aspect. The right flipper was amputated at the base of the flipper. A moderate brown algal mat was present on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-18_FWC050_1686 through 1700

COMMENTS This was likely the same animal that was reported alive on 13 Feb 2021 (CR#2602) and on 14 Feb 2021 but could not be confirmed.

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Amputated flipper

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Greer

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21168
Date of Report: 2021-Feb-13
Filed By: FWC EC Field Station

FWC Case # 2697 **FWC Region:** NE

Sex: Male **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-13 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Sykes Creek

Locality description: Merritt Island, floating approximately 20 m S of 144 Via Havarre.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21168

RECOVERY DATE N/A

GENDER Male **TL** 180 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Verified; Not Necropsied

HISTORY **13 February 2021**, at 1239 hrs, FWC biologist- Carley M. Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2626 was assigned. The complainant, Shawn (850-420-5117), described a belly up, small manatee floating in the canal behind his residence. At 1537 hrs, CMM received photo verification. Due to a heavy case load, a response was not planned. **14 February**, at 0948 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from Dispatch regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2667 was assigned. The complainant, Dan Sconyers (321-452-3771), described a six to seven-foot-long manatee floating behind his residence. Photos were not available for verification. At 1335 hrs, SMW received a text alert from Dispatch regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2690 was assigned. The complainant, Carolyn Robinson (321-759-6404), described a dead manatee under her neighbor's dock but could not provide detail because of her obstructed view. A photo was not available for verification. At 1430 hrs, SMW received a text alert from Dispatch regarding a dead manatee in Sykes Creek in Merritt Island, Brevard County. FWC case number 2697 was assigned. The complainant, Eugene Beckett (321-543-3253), described a dead manatee under his dock. At 1444 hrs, SMW received photo verification. Based on location and photo verification, it was concluded to be the same manatee reported the previous day (CR 2626). At 1500 hrs, SMW requested FWC LE assistance to tow the carcass but was notified officers were not available. **15 February**, at 1640 hrs, FWC Officer-Seth Loeffler contacted SMW to notify her that he arrived at the reported residence by land and was unable to locate the carcass. The remains were left on site.

EXTERNAL Based on the complainant photo, approximately 60% of the epidermis was present but sloughing on the ventral aspect. The carcass was distended with gas. GI tract appeared to be extruding from the urogenital opening. PIT tag scan was not performed.

OTHER

PHOTOGRAPHS 2021-02-13_PUBLIC_ECFL_1297 through 1298

COMMENTS

SIGNIFICANT FINDINGS

-
-

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21169
Date of Report: 2021-Feb-19
Filed By: FWC EC Field Station

FWC Case # 3052 **FWC Region:** NE

Sex: Unknown **Length:** 245 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-19 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, grounded approximately 280 m SSW of 315 Estuary Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	245 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21169

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 245 cm (est) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY **16 February 2021**, at 1237 hrs, FWC intern-Kylie C. Lawson (KCL) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Vero Beach, Indian River County. FWC case number 2819 was assigned. The complainant, Ann Hurst (305-587-4456), reported observing two manatee carcasses. KCL received verification photos of MEC21097 but no photos were taken of the second carcass. **19 February**, at 1732 hrs, FWC on-call biologist-Brandon L. Bassett (BLB) received a text alert from Dispatch regarding a dead manatee in the Indian River, Vero Beach. FWC case number 3052 was assigned. The complainant, Juanita Barnhart (410-302-8458), reported a manatee carcass floating belly-up near Bethell Creek and sent verification photos. BLB forwarded the information to EC Field Station staff at 1838 hrs. Due to significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – Almost all of the exposed epidermis was present but sloughing.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Panike

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21170
Date of Report: 2021-Feb-21
Filed By: FWC EC Field Station

FWC Case # 3145 **FWC Region:** NE

Sex: Male **Length:** 173 cm **Weight:** 94.0 kg

DATE REPORTED: 2021-Feb-21 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-21 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: 2021-Feb-21 **By:** FWC-SMW,FWC Intern-K. Lawson

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Titusville, grounded approximately 465 m ENE of 19 N Washington Avenue.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Cobblestone-like epidermis; Bleached epidermis; Healing watercraft wound(s); Serous fat(s); Serous muscle; Blood clots; Dry, hard feces; Crumbly feces; Relatively empty GI tract; Heavy algal mat; Caseous material in muscle layer; Frothy lungs.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Length dosum up: 174cm

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	173 cm	Fluke base:	52 cm	Girth at axillae:	104 cm
Snout to anus:	110 cm	Fluke width:	46 cm		
Snout to U/G:	77 cm	Girth at fluke base:	60 cm		
Snout to umbilicus:	67 cm	Girth at anus:	81 cm		
Flipper width:	cm	Girth at umbilicus:	122 cm	Nail count: R: 3	L: 3

	Ventral	Lateral		
Skin Thickness:	0.9 cm	1.5 cm		
Outer Blubber Thickness:	1.6 cm	1.4 cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	0.9 cm	1.3 cm	Epidermis Thickness:	0.1 cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21170
RECOVERY DATE 21 February 2021
GENDER Male **TL** 174 **cm** **WT** 94 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 21 February 2021
CONDITION Fresh

HISTORY 21 February 2021, at 0756 hrs, FWC biologist-Sara M. Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding an orphaned baby manatee in Indian River, Titusville, Brevard County. FWC case number 3145 was assigned. The complainant, Bobbie Letmon (321-431-1970), stated that she thought the manatee was alive and getting pushed around by the waves. At 0806 hrs, SMW received a video that was inconclusive if animal was alive or dead, but showed a small animal being tossed around by waves. At 0808 hrs, SMW requested FWC LE assistance to verify if animal was alive or dead but no officers were available. At 0815 hrs, SMW requested BCSO assistance to verify the animal. BCSO-TJ arrived at the manatee's location at 0848 hrs and verified that it was dead at 0856 hrs. SMW and FWC intern-Kylie Lawson arrived at the manatee's location at 1120 hrs and loaded the carcass via Ezy lift at 1150 hrs. After collecting MEC21171, SMW and K. Lawson arrived at the EC field station and completed a field necropsy by 1605 hrs. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Almost all of the epidermis was present. Watery, clear fluid exuded from the nares. There was cobblestone-like epidermis on the dorsal, ventral, and lateral aspects. There was a healing, superficial wound series on the left and mid cranial dorsum. Wounds #1 and 2 were triangular shaped and penetrated into the dermis. Wound #3 was linear and penetrated into the epidermis. A thin green algal mat was present on the dorsal aspect, and a thick brown algal mat present on dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal and mesenteric fat and a scant amount of serous omental fat. There was 400 mL of loose, well-formed blood clots in the abdominal cavity. There was an abscess filled with pale yellow purulent material in the muscle layer of the caudal ventrum (see photo). The muscle layer was serous.

STOMACH The stomach was contracted and contained 150 mL of wet, moderately chewed, stringy, green to brown ingesta mixed with a small amount of viscous, white mucus (see photo). No parasites were observed. The mucosa was unremarkable.

DUODENUM The duodenum was contracted, and the walls were rugose. The duodenum contained 100 mL of wet, moderately chewed, stringy, green to brown ingesta (see photo). No parasites were observed. The mucosa was partially stained yellow (see photo).

JEJUNUM & ILEUM The small intestine was contracted and the walls were rugose (see photo). The proximal small intestine contained a small amount of watery, yellow fluid and the wall was dark pink in color (see photo). The distal small intestine was mostly empty of contents with intermittent sections of moist, moderately formed, moderately digested, stringy, fibrous, green to brown ingesta. The diameter of the distal small intestine was very thin and the wall was light pink in color. No parasites were grossly observed. The mucosa was unremarkable.

CECUM The cecum contained 500 mL of slightly moist, poorly digested, leafy, stringy, green to brown digesta (see photo). No parasites were observed. The mucosa was unremarkable.

COLON The proximal colon contained dry, poorly digested, moderately formed, leafy, stringy, green to brown feces. The mid colon contained wet, poorly formed, stringy, dark green feces. The distal colon contained dry, hard, sandy, moderately formed, crumbly, brown feces. No parasites were observed. The mucosa was

unremarkable.

PANCREAS The pancreas was light pink on both serosal and cut surfaces.

SPLEEN The spleen was grey to black on serosal surfaces, and dark red on cut surfaces.

LIVER The liver was firm. The margins were sharp. The liver was grey to purple on serosal surfaces, and brown and bloody on cut surfaces.

GALLBLADDER The gall bladder contained 10 mL of viscous, yellow fluid. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The seminal vesicles were small and contained no fluid. The testes were small. There was no fluid on cut surfaces of the epididymides.

KIDNEYS There was scant serous perirenal fat. The serosal surfaces of the kidneys were tan to pink. On the cut surfaces, the cortices were tan to pink and the medullae were dark pink to red. The corticomedullary boundaries were distinct.

URINARY BLADDER The urinary bladder contained 50 mL of flocculent, yellow urine. The mucosa was slightly congested.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were light pink on serosal surfaces. On cut surfaces, the lungs were light pink to dark pink, were wet and contained abundant froth (see photos). The primary airways contained an abundant amount of froth and a moderate amount of watery, clear fluid.

HEAD & NECK REGIONS The trachea contained an abundant amount of froth. The mouth was in a rigor mortis state and could not be opened.

SKELETON NVL

OTHER A stomach contents sample was collected for IRL feeding ecology study. A fecal sample was collected.

PHOTOGRAPHS 2021-02-21_FWC049_4591 through 4631

COMMENTS

SIGNIFICANT FINDINGS

- Cobblestone-like epidermis
- Healing wound on dorsum
- Small amount, serous fats and muscle
- Abscess in muscle layer
- Blood clots in abdominal cavity
- Empty, contracted upper GI tract
- Dry, crumbly feces in colon
- Lungs/primary airways contained abundant froth and watery, clear fluid

PROBABLE CAUSE OF DEATH Natural; Cold Stress

NECROPSY CONDUCTED BY

Sara M. Wappes
Kylie C. Lawson (Intern)

REPORT FILED BY Lawson/Wappes

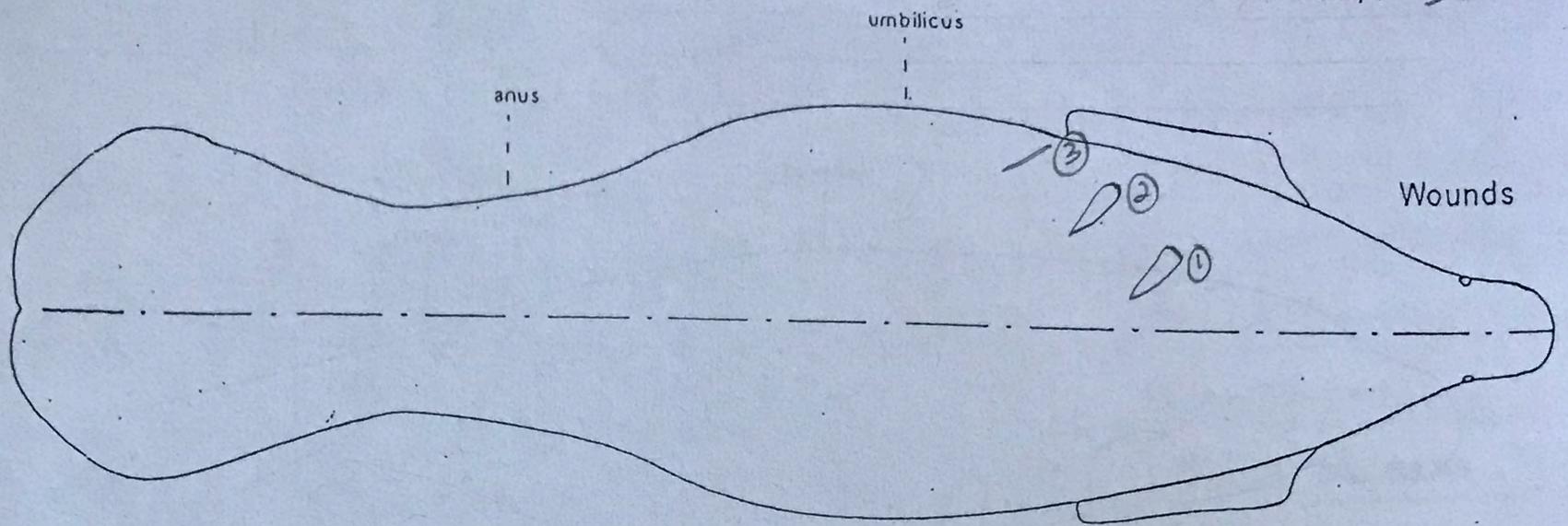
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 21 February 2021

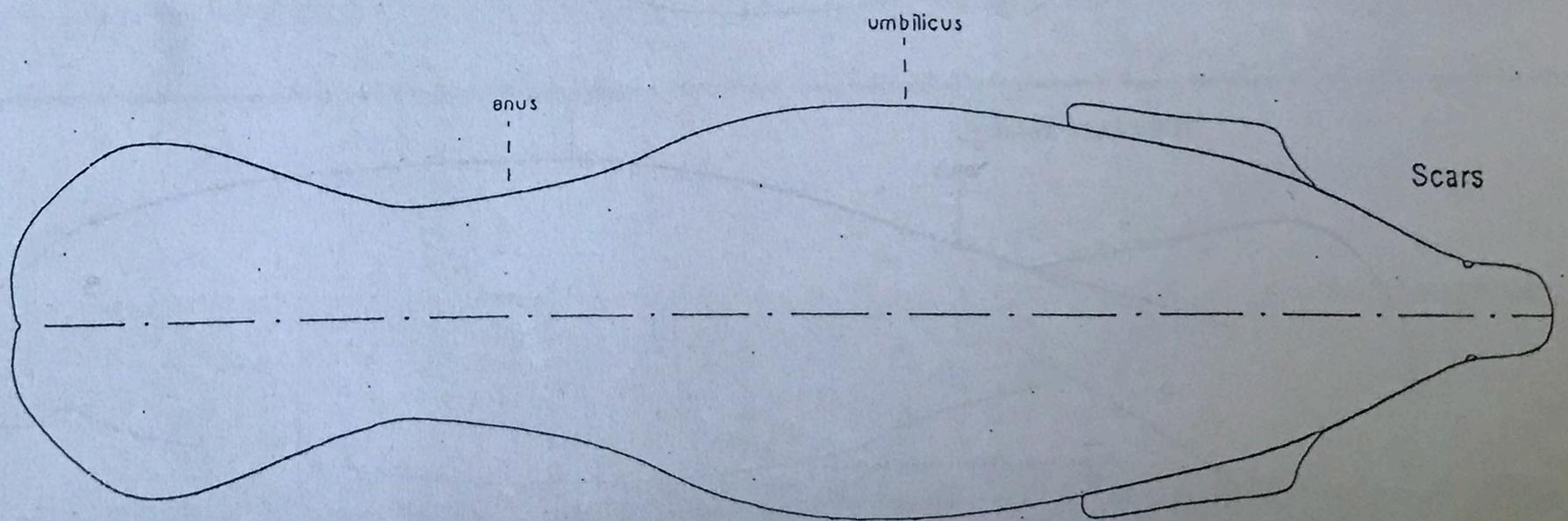
Field I.D. MEC21170

c:\Manuals\ScarData\ 26 July 02

SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	9.0	10	10																	
Width	3.2	3.0	0.1																	
Depth	0.2	0.3	0.1																	
Distance	13.5	14.5																		



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

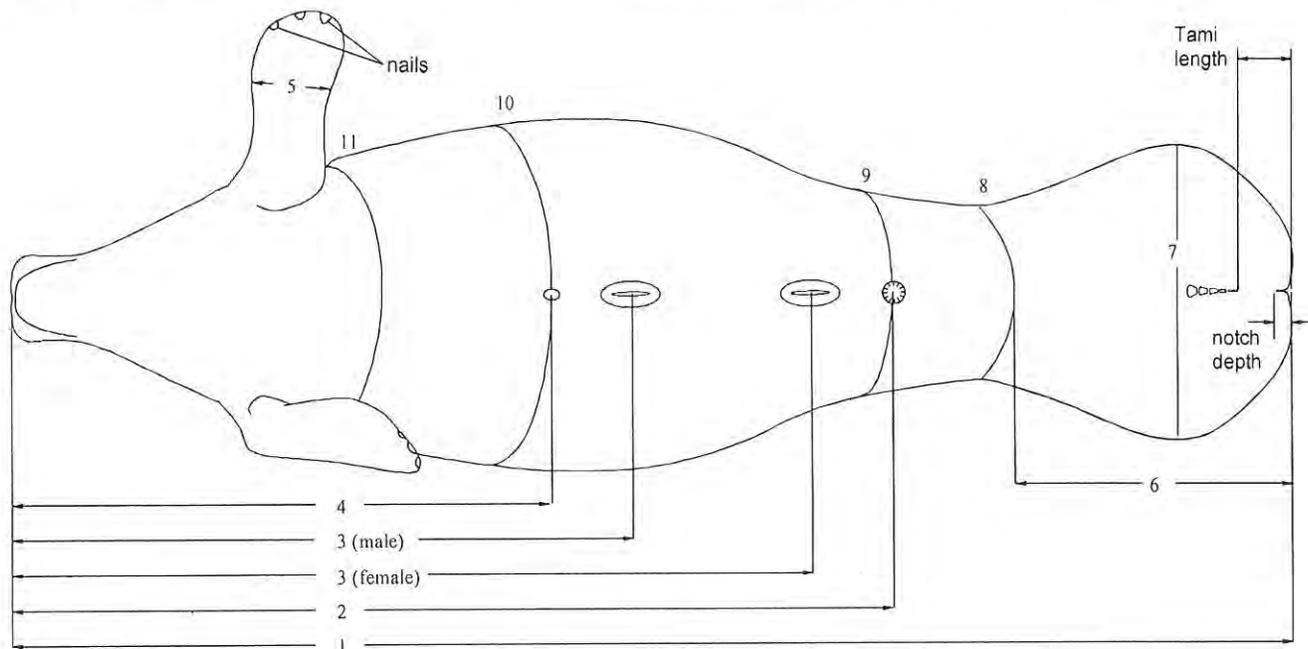
REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only.

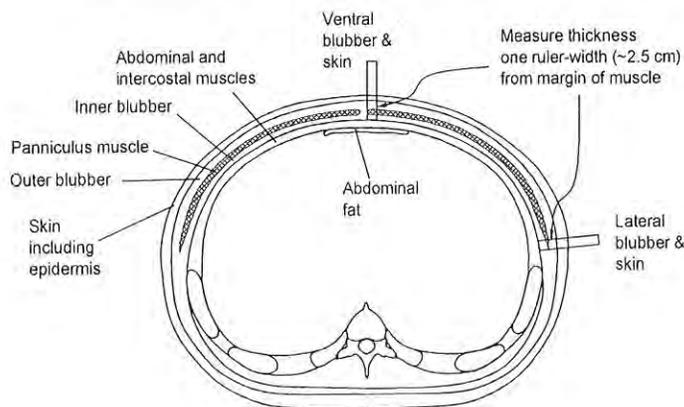
USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|---------------------------------------|---------------------------------------|--------------------------------------|
| 1. Total length <u>174</u> cm | 6. Fluke base <u>52</u> cm | 11. *Girth at axillae <u>104</u> cm |
| 2. Snout to anus -C <u>110</u> cm | 7. Fluke width <u>46</u> cm | (Depth of notch _____ cm) |
| 3. Snout to U/G -C <u>77</u> cm | 8. *Girth at fluke base <u>60</u> cm | (Tami ln _____ cm) |
| 4. Snout to umbilicus -C <u>67</u> cm | 9. * Girth at anus <u>81</u> cm | |
| 5. Flipper width _____ cm | 10. *Girth at umbilicus <u>122</u> cm | (Nail count: R <u>3</u> L <u>3</u>) |



Skin and Blubber (cm).

	Ventral	Lateral	
Skin.....	<u>0.9</u> cm	<u>1.5</u> cm	(Epidermis <u>0.1</u> cm)
Outer blubber.....	<u>1.6</u> cm	<u>1.4</u> cm	(Abdominal fat _____ cm)
Inner blubber.....	<u>0.9</u> cm	<u>1.3</u> cm	



Mammary dimensions R: ___ x ___ x ___ cm L: ___ x ___ x ___ cm

Lactating: R: Y/N L: Y/N

Placental Scaring: R / L: ___ x ___ x ___ cm

Pregnant: Y/N - Fetus length _____ cm Fetus gender M / F Fetus weight _____ kg

Gonads: R: ___ x ___ x ___ cm; _____ kg; L: ___ x ___ x ___ cm; _____ kg

Sperm: in testes Y / N; in epididymes Y / N Method: visual / microscope slide

Fluid in seminal vesicles Y / N; if yes, then vesicle dimensions R: ___ x ___ x ___ cm L: ___ x ___ x ___ cm

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21171
Date of Report: 2021-Feb-21
Filed By: FWC EC Field Station

FWC Case # 3153 **FWC Region:** NE

Sex: Female **Length:** 148 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-21 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-21 **By:** FWC-SMW,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Melbourne Beach, floating approximately 30 m W of 432 Arrowhead Lane.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	148 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21171
RECOVERY DATE 21 February 2021
GENDER Female **TL** 148 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 21 February 2021, at 1020 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Melbourne Beach, Brevard County. FWC case number 3153 was assigned. The complainant, Karen Ralston (901-870-6828), stated that the carcass was a baby and that they had secured it to their seawall. At 1042 hrs, SMW received a verification photo. SMW and FWC intern-Kylie Lawson arrived at the residence at 1335 hrs, loaded the carcass by hand at 1400 hrs, and transported the carcass to the EC field station. After necropsying MEC21170, an external work up was completed on MEC21171 by 1620 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. The carcass was distended with gas. There was cobblestone-like epidermis on the dorsal and ventral fluke. The epidermis of the flippers was slightly bleached. No watercraft-related wounds or scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-21_FWC049_4620 through 4629

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Perinatal; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21172
Date of Report: 2021-Feb-22
Filed By: FWC EC Field Station

FWC Case # 3467 **FWC Region:** NE

Sex: Female **Length:** 239 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-22 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-25 **By:** FWC-CMM,FWC Intern-K. Lawson

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: St. Sebastian River

Locality description: Sebastian, grounded approximately 70 m NW of 13085 83rd Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	239 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21172

RECOVERY DATE 25 February 2021

GENDER Female **TL** 239 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Verified; Not Necropsied

HISTORY **22 February 2021**, at 0906 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a deceased manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 3225 was assigned. The complainant, Linda Erbacher (561-427-4623), stated the manatee was free floating past her residence, north of the Dale Wimbrow boat ramp and got a photo from a neighbor. At 1025 hrs, SMW received photo verification. Due to a heavy case load, a response was not assembled. The carcass was reported three more times to the EC field station over three days (CR 3247, 3374, 3387). **24 February**, at 1424 hrs, FWC biologist-William D. Greer (WDG) and FWC biologist-Ana K. Nader (AKN) launched the ECFL Key West at the Dale Wimbrow boat ramp in Sebastian, Indian River. WDG and AKN were unable to locate the carcass. **25 February**, at 0930 hrs, SMW received a text alert from Dispatch regarding a dead manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 3446 was assigned. The complainant, Ernest Baker (321-537-8750), described a belly-up manatee free floating toward the railroad trestle. At 0941 hrs, SMW received photo verification and based on location and size, it was concluded this was the same carcass reported on 22 February (CR 3225). At 1130 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (KCL) arrived at the reported residence. KCL launched a kayak to retrieve the carcass and tow to shoreline for an external work up. At 1152 hrs, CMM received a text from Dispatch regarding a dead manatee in the St. Sebastian River, Sebastian, Indian River County. FWC case number 3467 was assigned. The complainant, Margaret (601-831-7688), described a dead manatee close to her dock. CMM informed her a team member was actively retrieving the carcass. At 1300 hrs, CMM and KCL completed the external work up and towed the carcass to remote shoreline. The remains were left on site.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The dermis on the ventral aspect was sunburnt. There were decompositional rents at the urogenital opening and anus. A small amount of red, watery fluid exuded from the nares. There was bleached epidermis on the face. There was a minimum of three watercraft related scar series on the dorsal aspect. Genetics sample was collected. PIT tag scan was negative.

PHOTOGRAPHS 2021-02-22_PUBLIC_ECFL_3739; 2021-02-25_PUBLIC_ECFL_5804; 2021_02_25_FWC049_4677 through 4692

COMMENTS

SIGNIFICANT FINDINGS

-
-

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

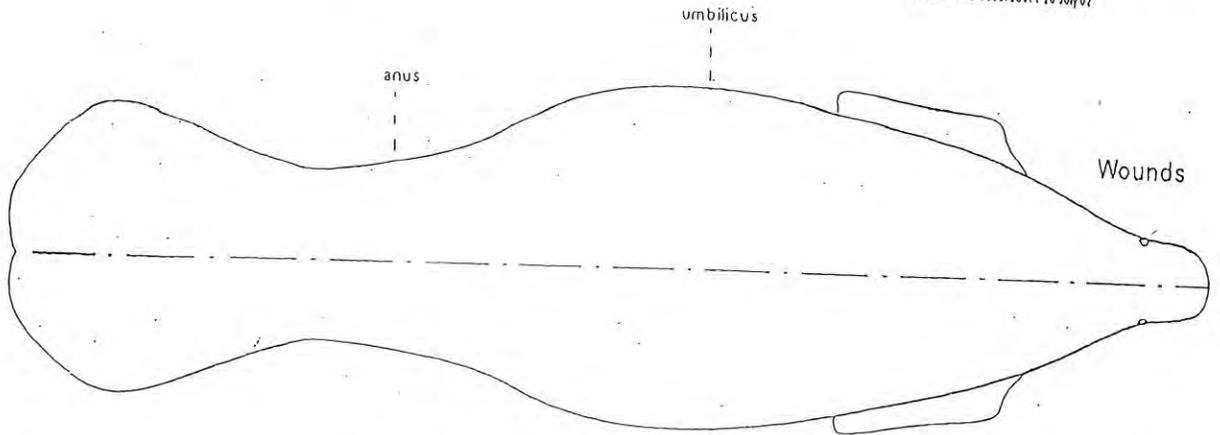
NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf

Date 25 FEB 2021

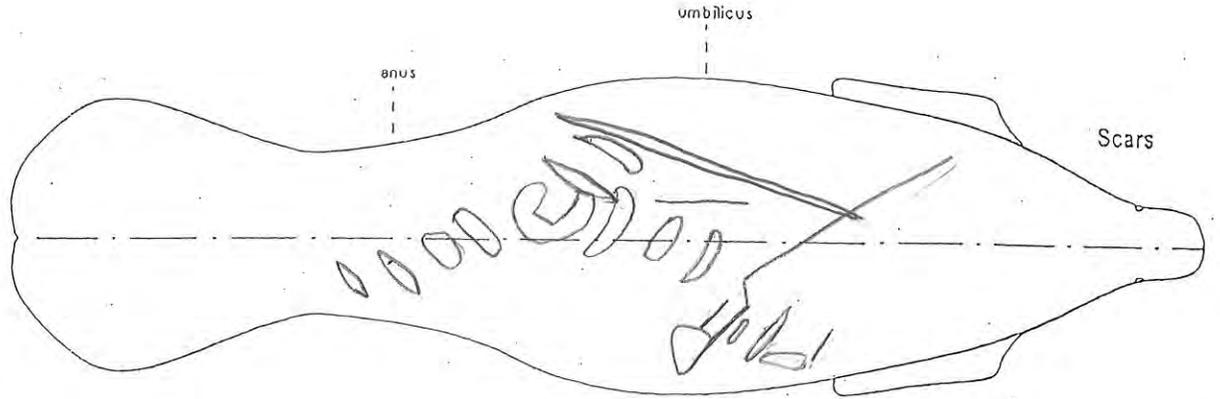
Field I.D. MEC21172

CSI Manuals 11car2011 26 July 02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

GMM

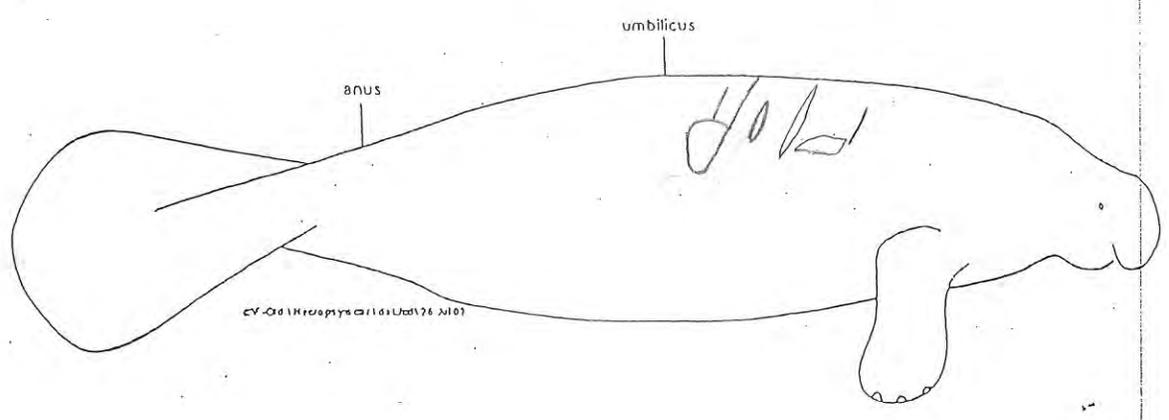
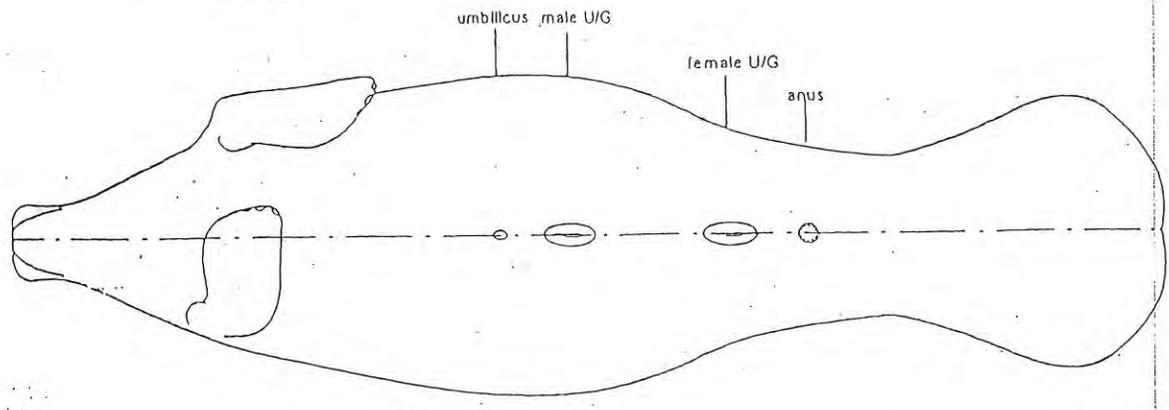
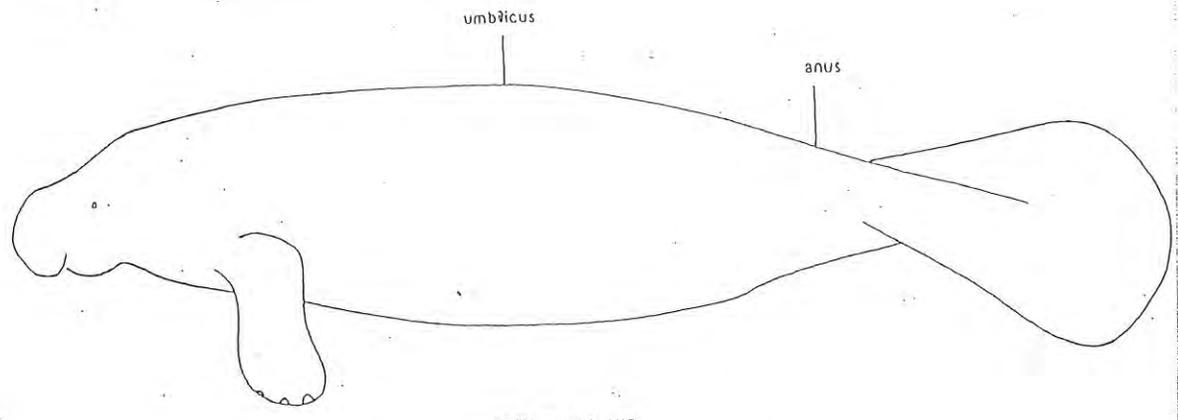


FIELD I.D.

MFC2172

25 FEB 2021

CMM



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21173
Date of Report: 2021-Feb-18
Filed By: FWC EC Field Station

FWC Case # 2937 **FWC Region:** NE

Sex: Male **Length:** 290 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-18 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-22 **By:** FWC-WDG,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Banana River

Locality description: Satellite Beach, grounded approximately 30 m W of 556 Laternback Island Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified by FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of the remains was 286 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	290 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21173
RECOVERY DATE 22 February 2021
GENDER Male **TL** 286; 290 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE
CONDITION Confirmed; Not Necropsied

HISTORY **18 February 2021**, at 0937 hrs, FWC Intern- Kylie C. Lawson (KCL) received a text alert from FWC NE Dispatch- Orlando regarding a dead manatee in Banana River in Satellite Beach, Brevard County. FWC case number 2937 was assigned. The complainant, Donna Crow (DC) (321-773-7573), stated there was a dead manatee behind her home but was unable to get photos of it. FWC biologist- Sean M. Tennant attempted to respond by land but was unable to access the property to confirm the carcass. **22 February**, at 0900 hrs, DC contacted FWC biologist- Carley M. Metcalf and advised the manatee was behind her home. At 1150 hrs, FWC biologists- William D. Greer (WDG), Ana K. Nader (AKN) and KCL launched the ECFL Key West from the Patrick Space Force Base Marina. At 1150 hrs, the carcass was confirmed visually and was secured to the ECFL Key West at 1153 hrs. The carcass was towed to a remote area and an external workup was completed. The remains were left on site.

EXTERNAL All of the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. The ventrum was sunburnt. There were decompositional rents at the urogenital opening, anus, head, throughout the dorsal aspect and at axilla. A minimum of two well-healed watercraft-related scar series were present on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-22_FWC050_1701 through 1712

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

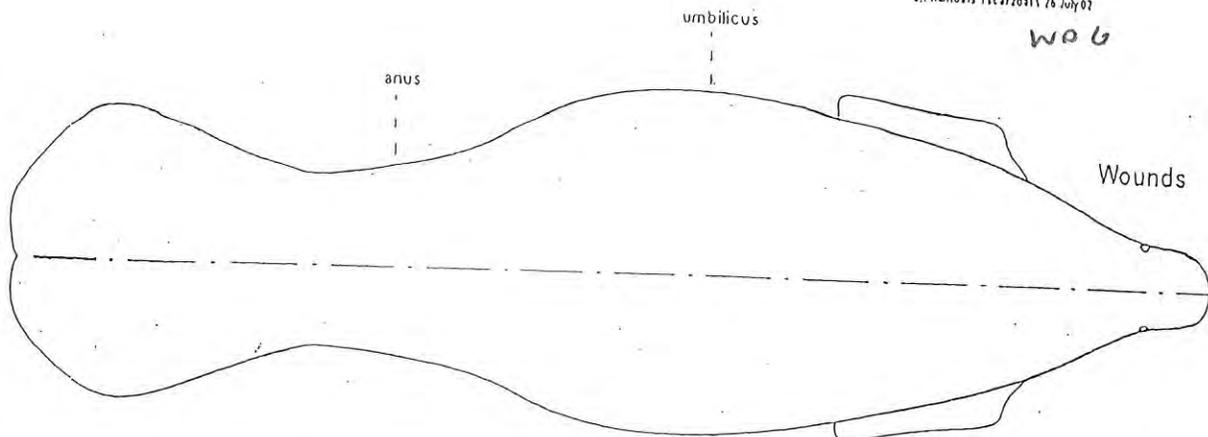
REPORT FILED BY Greer

Date 22 FEB 2021

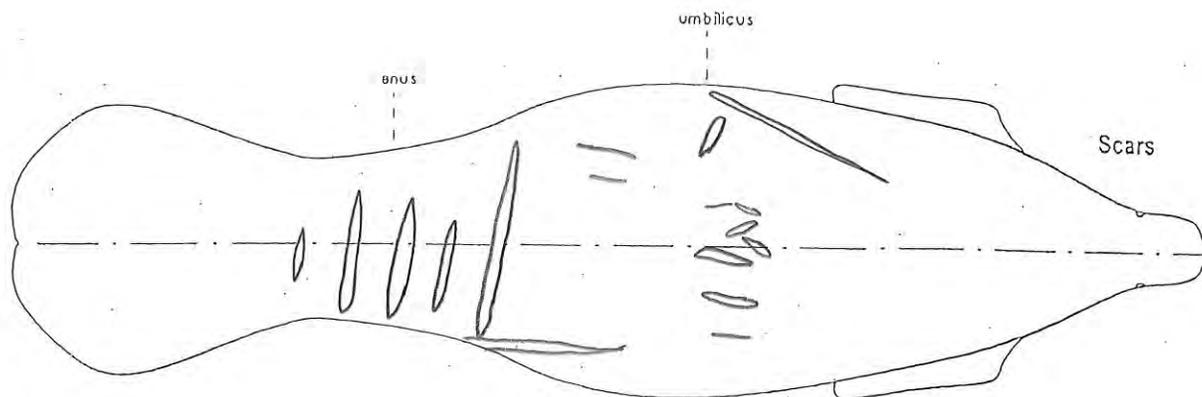
Field I.D. MEC21173

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W06

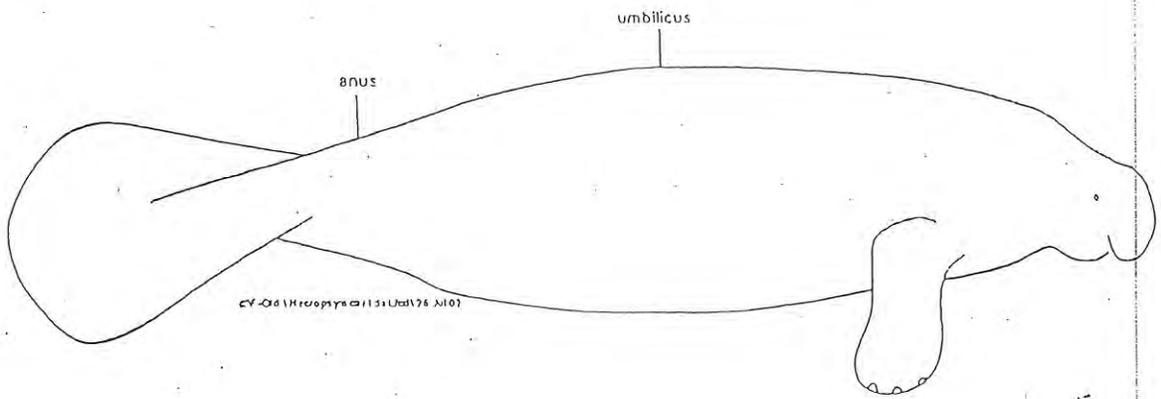
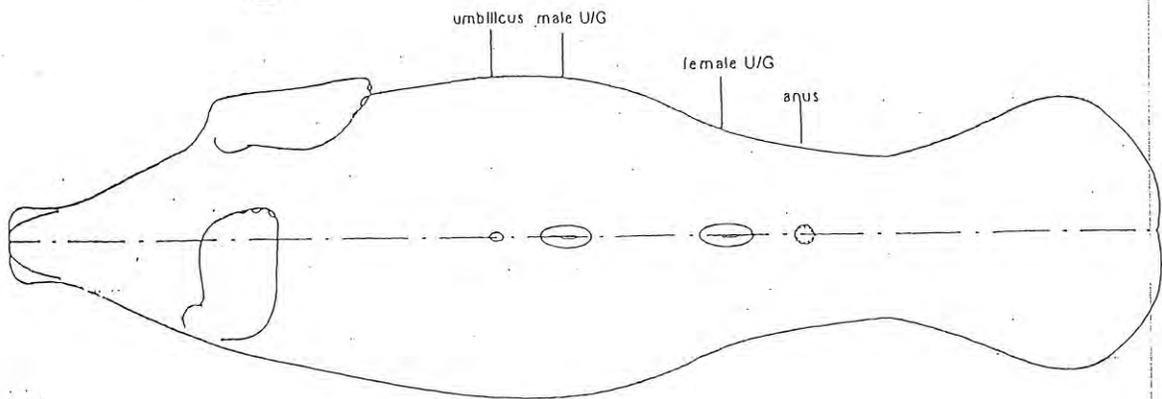
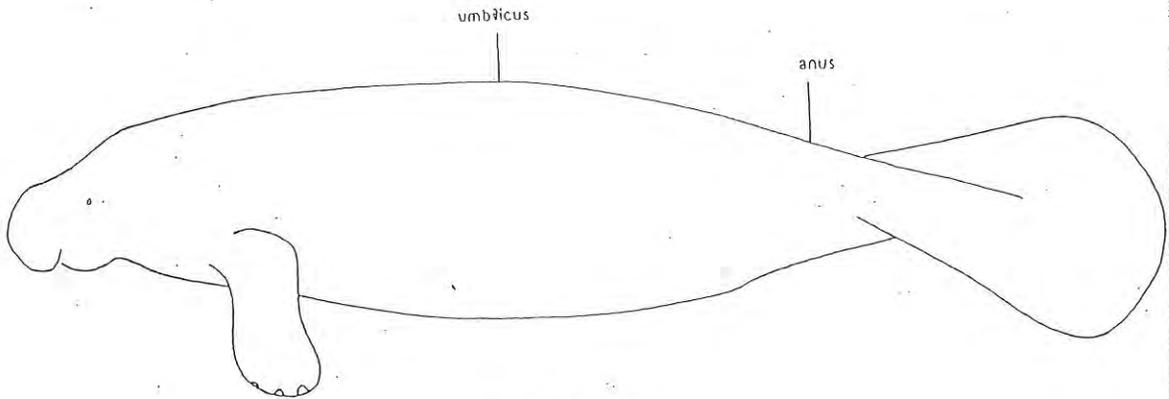


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D.

MEC21173



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21174
Date of Report: 2021-Feb-22
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 266 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-22 **By:** FPL-Jennifer Pickett to FWC-WDG

DATE COLLECTED: 2021-Feb-24 **By:** FWC-WDG,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Port St. John, floating approximately 335 m N of 132 Cottrell Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-06DD-7710; Right: 00-06DD-9369). Known as REC1708, incidental capture on 17 Aug 2017 in the Halifax River, Volusia County.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	266 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21174

RECOVERY DATE 24 February 2021

GENDER Male **TL** 266 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY **22 February 2021**, at 0914 hrs, FWC biologist- William D. Greer (WDG) received a text and photo from FPL- Jennifer Pickett (JP) confirmed a dead manatee in the discharge area of the FPL- Cape Canaveral Energy Center in Indian River, Cocoa, Brevard County. No FWC case number was assigned. JP stated the carcass was free floating. Due to other carcass response in the morning and poor weather in the afternoon no response was available. **23 February**, all ECFL staff were in Volusia County for the rescue of REC2110 so no response was available. **24 February**, at 0945 hrs, WDG and FWC biologist- Ana K. Nader (AKN) arrived at the Port St. John boat ramp and launched the ECFL Key West. At 1014 hrs, the carcass was secured to the Key West. After collecting MEC21175 both carcasses were towed to a remote area where an external work up was completed by 1200 hrs. The remains were left on site.

EXTERNAL Approximately 20% of the epidermis was present and sloughing. The carcass was distended with gas. Watery, bloody fluid exuded from the nares. The dermis was eroded at the ventral base of the right flipper. There was a minimum of four well-healed watercraft-related scar series on the dorsal and lateral aspects. PIT tag scan was positive (Left: 00-06DD-7710; Right 00-06DD-9369), RNE1708, incidental capture in Port Orange on 17 August 2017. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-22_PUBLIC_ECFL_7133; 2021-02-24_FWC050_1739 through 1764

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- PIT tag positive

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

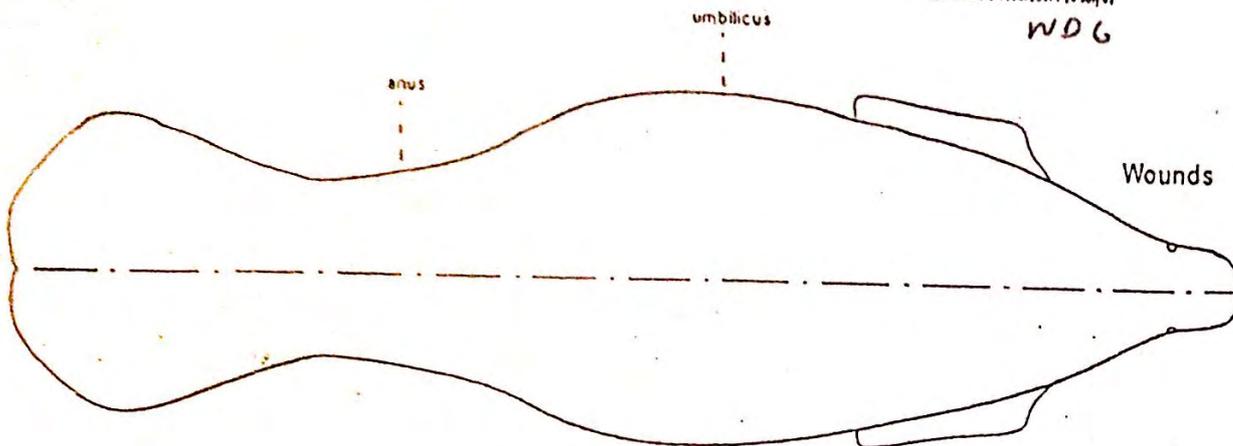
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Date 24 FEB 2021

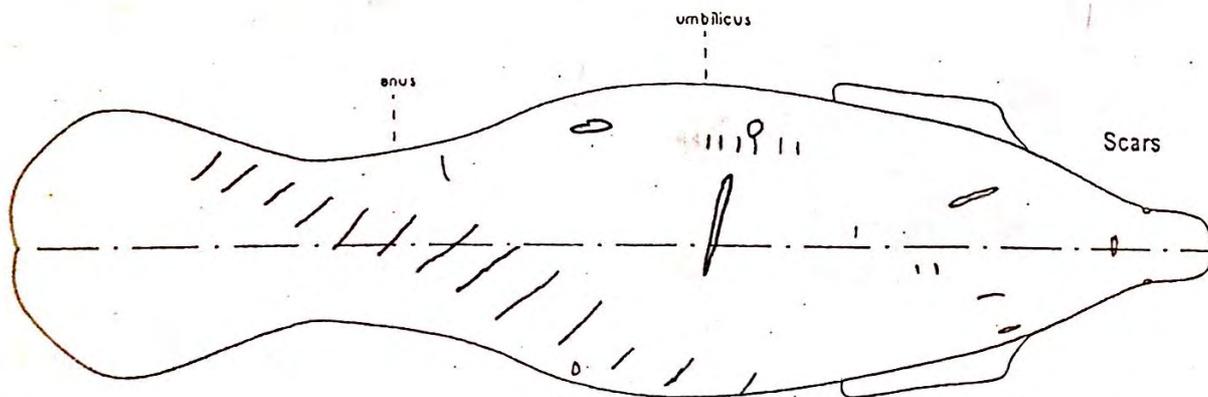
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U.S. ANIMALS RECORDS 26 July 82

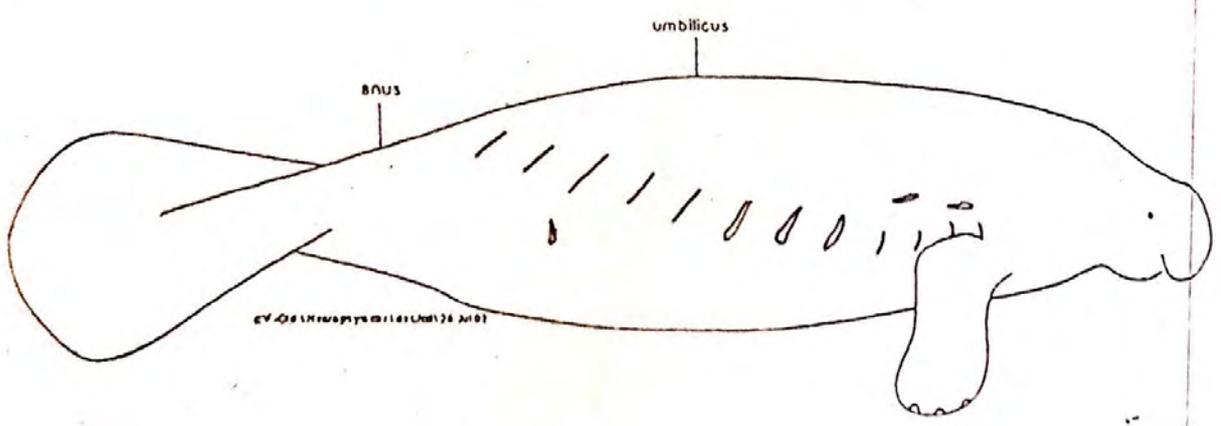
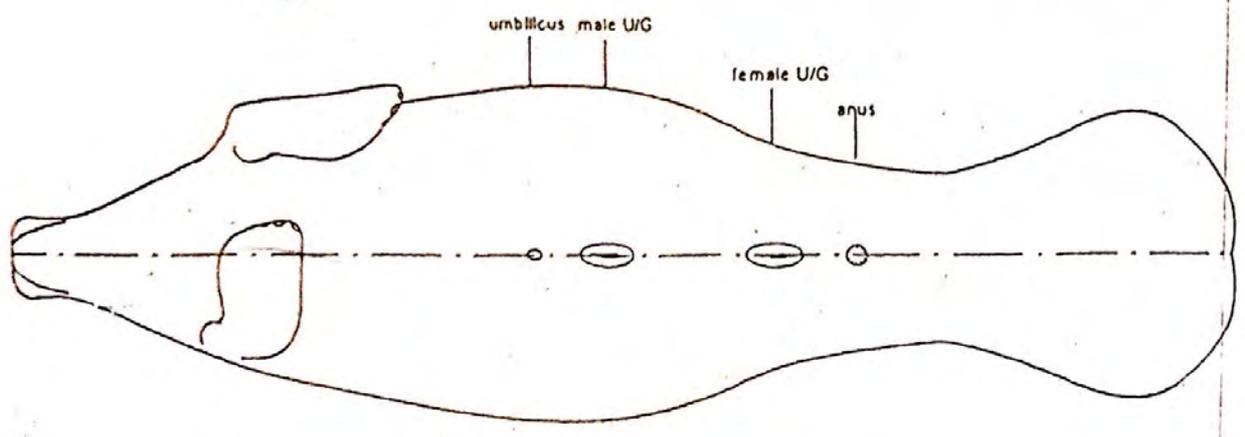
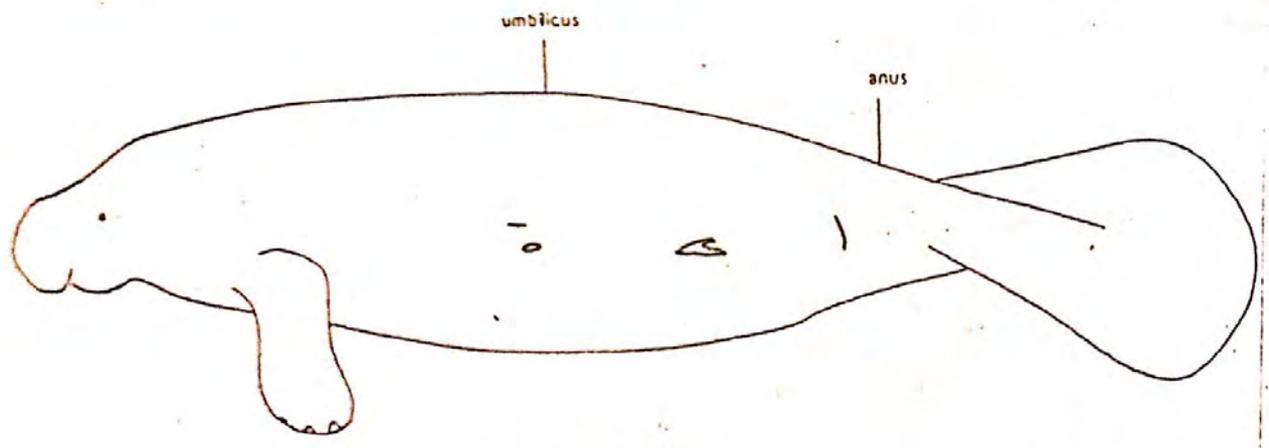
WDG



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet Sep 2002



© 2013 Herpetology Department, University of California, Berkeley

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21175
Date of Report: 2021-Feb-21
Filed By: FWC EC Field Station

FWC Case # 3198 **FWC Region:** NE

Sex: Male **Length:** 320 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-21 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-24 **By:** FWC-WDG,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 35 m W of 570 Indian Bay Blvd.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph and FWC biologists. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of the remains was 309 cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	320 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21175

RECOVERY DATE 24 February 2021

GENDER Male **TL** 309; 320 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; Not Necropsied

HISTORY **21 February 2021**, at 1813 hrs, FWC on-call biologist- Brandon L. Bassett (BLB) received a text alert from FWC NE Dispatch- Orlando regarding a dead manatee in Indian River in Merritt Island, Brevard County. FWC case number 3198 was assigned. The complainant, Daniel Thodos (321-501-9461), stated there was a large, badly decomposed dead manatee in the mangroves near his home. At 1832 hrs, BLB received a photo from the complainant confirming the carcass and forwarded the information to ECFL staff. **22 February**, Due to other carcass response in the morning and poor weather in the afternoon no response was available. **23 February**, all ECFL staff were in Volusia County for the rescue of REC2110 so no response was available. **24 February**, at 0945 hrs, FWC biologists- William D. Greer and Ana K. Nader arrived at the Port St. John boat ramp and launched the ECFL Key West. After collecting and securing MEC21174, at 1113 hrs, MEC21175 was secured to the Key West. Both carcasses were towed to a remote area where an external work up was completed by 1220 hrs. The remains were left on site.

EXTERNAL No epidermis was present. Watery, bloody fluid exuded from the nares. The carcass was dorsoventrally flattened due to decomposition and scavenging. There were multiple decompositional and scavenging rents present throughout the ventral aspect and when the carcass was maneuvered and flipped watery, fed fluid exuded from the rents. The colon was protruding from multiple rents. Signs of scavenging, bird feces and scratch marks, were present on the ventrum. The ventrum was sunburnt. The dermis of the right flipper was eroded, exposing bones. There was a minimum of six well-healed watercraft-related scar series on the dorsal and lateral aspects. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-02-21_PUBLIC_ECFL_0920; 2020-02-24_FWC050_1765 through 1791

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY N/A

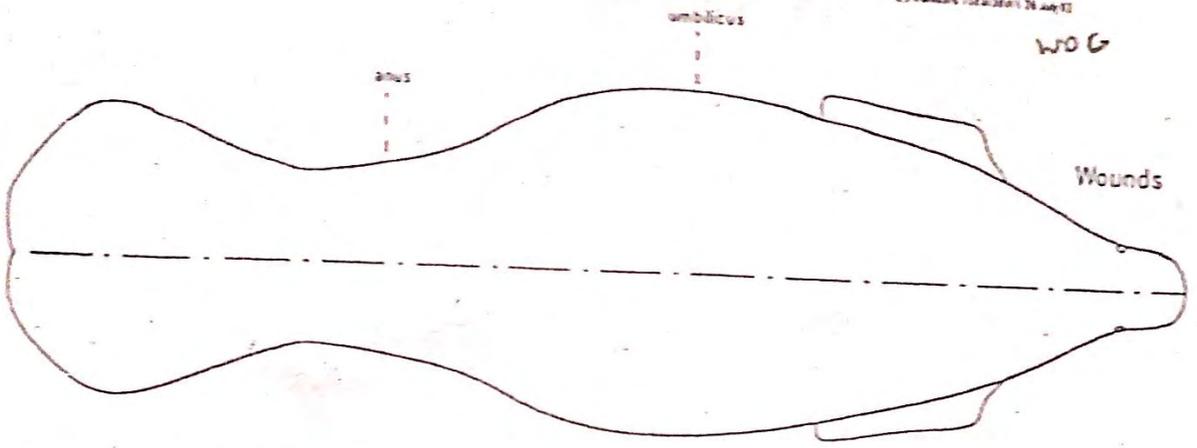
REPORT FILED BY Greer

Date 24 FEB 2021

Field ID. MVE 21175

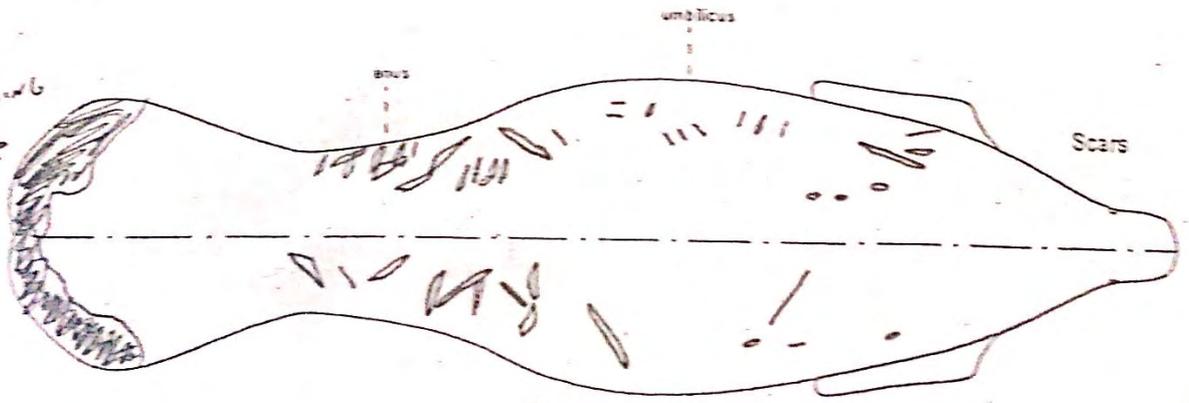
CS Woman's Testimony 28 July 12

WOG



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

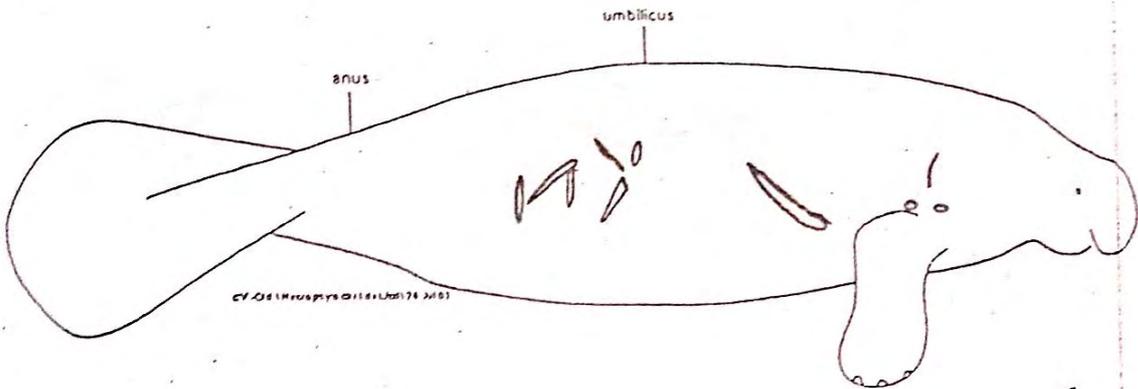
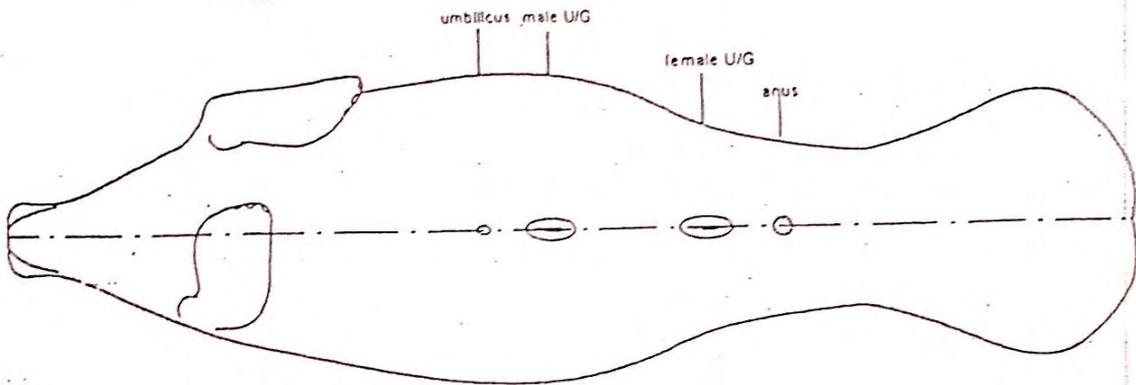
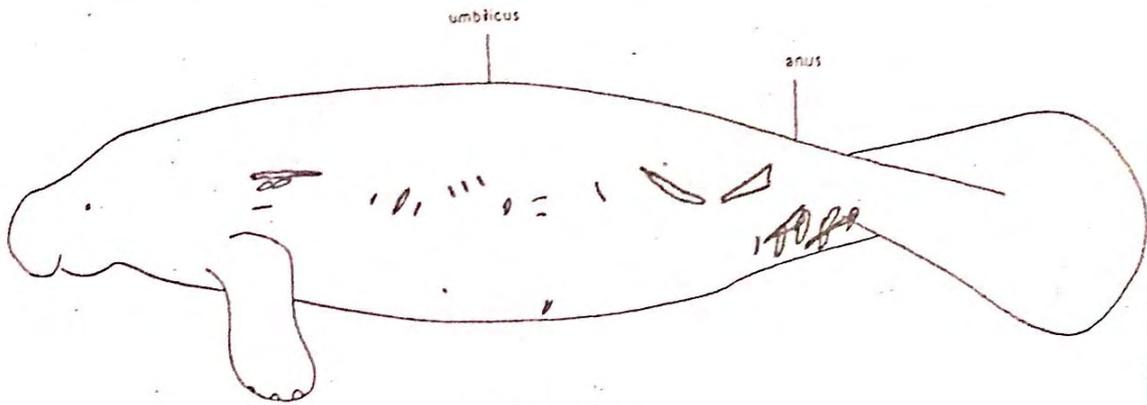
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DE CAMP



Scar Data sheet Sep 2002

FIELD I.D.

MCC2175



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21176
Date of Report: 2021-Feb-14
Filed By: FWC EC Field Station

FWC Case # 2713 **FWC Region:** NE

Sex: Unknown **Length:** 120 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-14 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Merritt Island, grounded approximately 1.74 km NW of the intersection of A Max Brewer Memorial Causeway and Playlinda Beach Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied; Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	120 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21176 **SPECIES** *T. manatus latirostris*
RECOVERY DATE N/A **NECROPSY DATE** N/A
GENDER Undetermined **TL** 120 cm (est) **WT** N/T kg **CONDITION** Confirmed; Not Necropsied

Commented [PA1]: Personally, I think it's bigger than this. No great reference points, but the small perinatal carcasses normally float on their side.

HISTORY 14 February 2021, at 1725 hrs, FWC on-call biologist-Anna Panike (ALP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the ICW, Mims, Brevard County. FWC case number 2713 was assigned. The complainant, Pete Stevens (813-417-5406), reported a small, badly decomposed manatee carcass grounded on the NE side of the NASA railway bridge and sent verification photos. ALP forwarded the information to EC Field Station staff at 2036 hrs. Due to the small size and significant decomposition the carcass was not recovered or necropsied.

EXTERNAL From photographs – Almost all of the visible ventral epidermis was missing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Panike

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21177
Date of Report: 2021-Feb-24
Filed By: FWC EC Field Station

FWC Case # 3371 **FWC Region:** NE

Sex: Female **Length:** 187 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-24 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-24 **By:** FWC-CMM

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Eau Gallie River

Locality description: Melbourne, floating approximately 150 m WNW of 904 Whitmire Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	187 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21177

RECOVERY DATE 24 February 2021

GENDER Female **TL** 187 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Verified; Not Necropsied

HISTORY 24 February 2021, at 0729 hrs, FWC on-call biologist-Brandon L. Bassett (BLB) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Eau Gallie River, Melbourne, Brevard County. FWC case number 3371 was assigned. The complainant, Kim Caplis (321-215-1392), described a six-foot-long dead manatee floating near the Eau Galli Yacht Basin. At 0809 hrs, BLB received photo verification and forwarded the information to the EC field station. At 1003 hours, FWC biologist-Carley M. Metcalf (CMM) arrived at Ballard Park, launched a kayak, and searched for the manatee. At approximately 1050 hrs, CMM located the manatee and towed it back to Ballard Park. The carcass was loaded via Ezy Lift at 1130 hrs. CMM transported the carcass to the Brevard County Landfill and completed an external work up at 1427 hrs. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 70% of the epidermis was present but sloughing. The carcass was distended with gas. A small amount of watery, red fluid exuded from the nares. There was bleaching at the axilla. There was a thin layer of mud on the dorsal aspect, dorsal fluke, and lateral aspects. One, well-healed scar series was observed on the left dorsal aspect. Genetics sample was collected. PIT tag scan was negative.

PHOTOGRAPHS 2021-02-24_FWC049_4653 through 4660

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

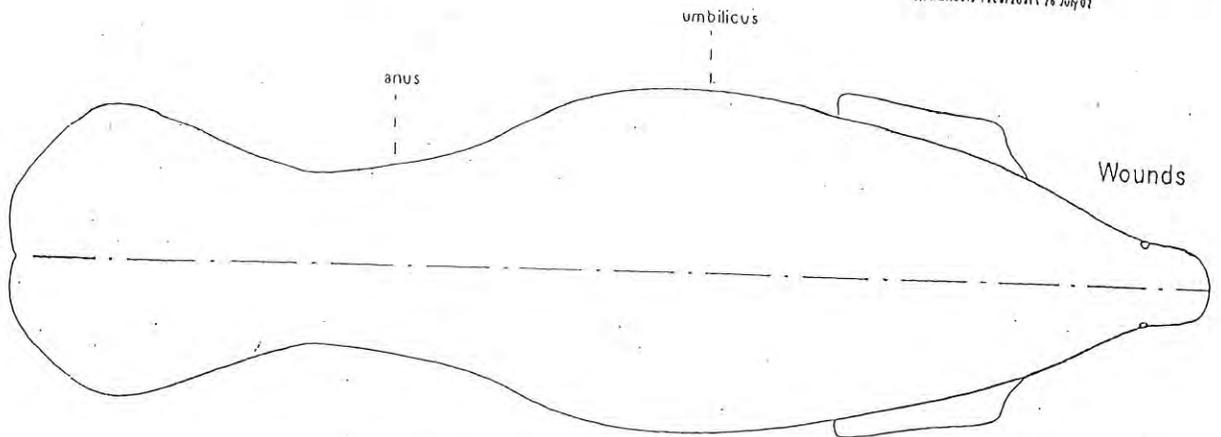
NECROPSY CONDUCTED BY N/A

REPORT FILED BY Metcalf

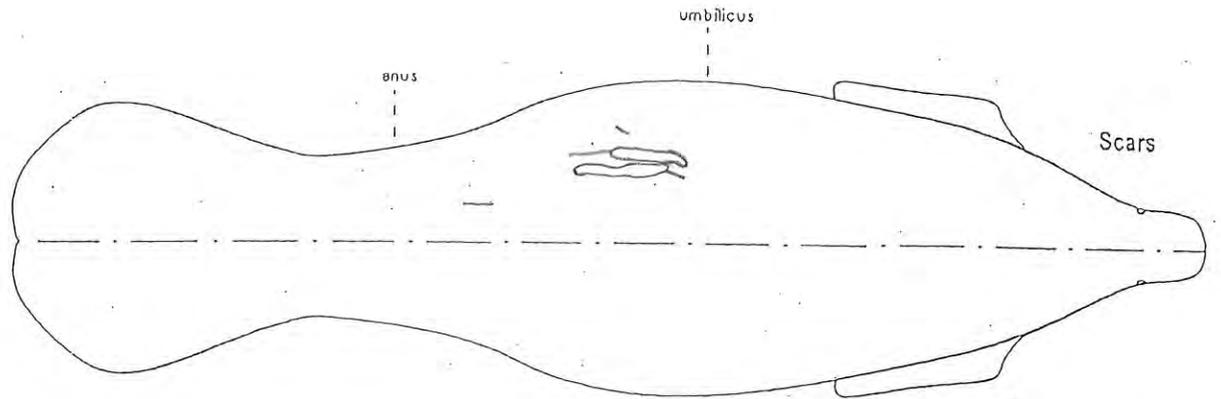
Date 24 FEB 2021

Field I.D. MEC21177

C1 Manuals 1 Scar Data 26 July 02



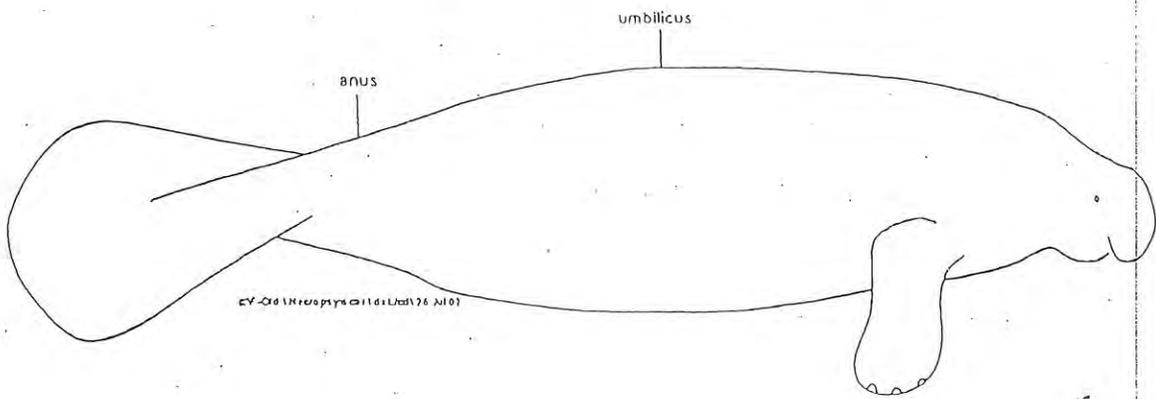
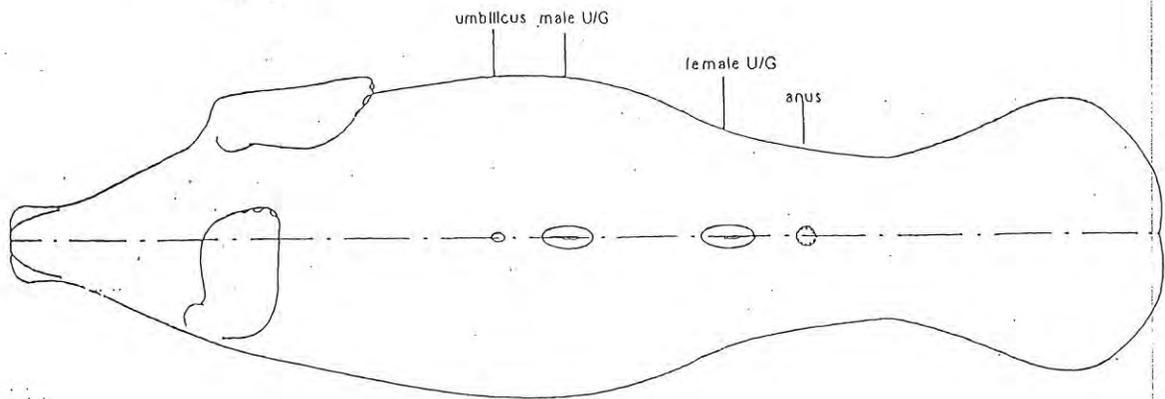
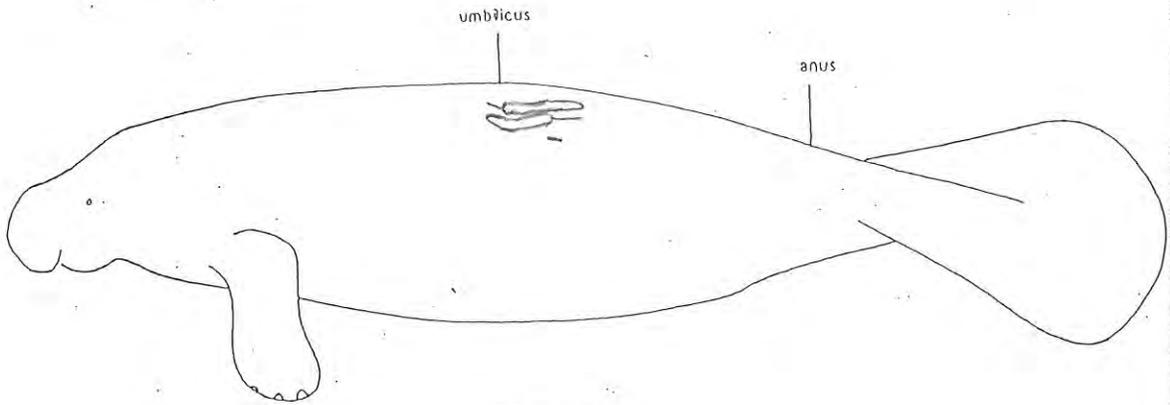
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



CMM

FIELD I.D.

MEC21M7
24 FEB 2021



CV-06 1/16/01

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21178
Date of Report: 2021-Feb-24
Filed By: FWC EC Field Station

FWC Case # 3426 **FWC Region:** NE

Sex: Female **Length:** 156 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-24 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Feb-25 **By:** FWC-CMM,FWC Intern-K. Lawson
DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Sebastian, beached approximately 140 m ESE of 8580 U.S. 1.

CONDITION: Confirmed; Not Necropsied
PROBABLE CAUSE OF DEATH: Verified; Not Necropsied
EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	156 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21178

RECOVERY DATE 25 February 2021

GENDER Female **TL** 156 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Verified; Not Necropsied

HISTORY **24 February 2021**, at 1732 hrs, FWC on-call biologist-Brandon L. Bassett (BLB) received a text alert from FWC NE Dispatch- Orlando regarding a dead manatee in Indian River, Micco, Brevard County. FWC case number 3426 was assigned. The complainant, Christine (321-805-0027), described a back up, deceased manatee beached on shore. At 1814 hrs, BLB received photo verification and forwarded the information to the EC field station. **25 February**, at 1036 hrs, FWC biologist-Carley M. Metcalf (CMM) and FWC intern-Kylie C. Lawson (K. Lawson) arrived at the reported location. At 1115 hrs, CMM and K. Lawson finished an external work up. The remains were left on site.

EXTERNAL Approximately 80% of the epidermis was present but sloughing. There was bleaching at the face, flippers, and axilla. There was a thin, light brown algal mat on the ventral and lateral aspects. There was a moderate infestation of barnacles on the ventral fluke. There were copepods on the ventral fluke. There was cobblestone-like epidermis on the dorsal and lateral aspects. There were multiple, linear lesions on the dorsal and lateral aspects. There were signs of scavenging at the left axilla on the dorsal aspect. No watercraft-related wounds or scars were observed. Genetics sample was collected. PIT tag scan was negative.

PHOTOGRAPHS 2021-02-25_FWC049_4661 through 4676

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21179
Date of Report: 2021-Feb-24
Filed By: FWC EC Field Station

FWC Case # 3438 **FWC Region:** NE

Sex: Male **Length:** 312 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-24 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-25 **By:** FWC-SMW,AKN

DATE NECROPSIED: 2021-Feb-25 **By:** FWC-SMW,AKN

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: Oak Hill, grounded approximately 65 m SE of 255 Golden Bay Boulevard.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics. Fecal sample.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	312 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21179
RECOVERY DATE 25 February 2021
GENDER Male **TL** 312 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 25 February 2021
CONDITION Badly Decomposed

HISTORY **24 February 2021**, at 0716 hrs, FWC on-call biologist-Brandon Bassett (BLB) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3369 was assigned. The complainant, Dean (407-832-7624), reported a large manatee carcass drifting with the current. BLB received a picture of the floating carcass and updated location until 1816 hrs. **25 February**, at 0748 hrs, BLB received an additional text alert from Dispatch regarding MEC21179. FWC case number 3438 was assigned. FWC staff arrived at the Riverbreeze boat ramp at 1045 hrs, recovered MEC21181 and MEC21179 by 1145 hrs, and towed both carcasses to a remote location. A field necropsy was completed by 1420 hrs.

EXTERNAL Approximately 60% of the epidermis was present and sloughing. The ventral dermis was slightly sunburnt. The carcass was dorsoventrally flattened due to decomposition. The eyes were bulging due to decomposition. There was a moderate amount of watery, red tinged fluid and a small amount of dead trematodes exuding from the nares. There was a healing watercraft-related wound series from the nuchal region to the cranial left lateral aspect. The pattern consisted of a small superficial linear wound (#1) transverse across the nuchal region, four parallel wounds (#2-5) caudal and perpendicular to wound #1 along the cranial dorsolateral aspect, and one transverse linear wound (#6) across the cranial left lateral aspect caudal to wound (#5). Wounds #1-4 and #6 penetrated the dermis and wound #5 was superficial. A minimum of 8 well-healed scar patterns was observed on the dorsal and lateral aspects. The fluke margin had two well-healed mutilation between the 3 and 4 o'clock positions. There was a scavenging rent at the urogenital opening. There was a thin brown and green algal mat on the dorsal and lateral aspects. A PIT scan was negative. A genetics sample was collected.

ABDOMINAL There was a moderate amount of serous, red tinged abdominal and mesenteric fat. There was a small amount of gassy, serous, red tinged omental fat.

STOMACH The stomach was distended with gas and contained approximately 650 mL of slightly viscous, cloudy, flocculent, tan to pink fluid. The mucosa was autolyzed. No parasites were observed.

DUODENUM The duodenum contained approximately 75 mL of flocculent, slightly viscous, tan to pink fluid. The mucosa was autolyzed. No parasites were observed.

JEJUNUM & ILEUM The small intestine was distended with gas. The proximal small intestine contained a small amount of watery, tan to pink fluid. The distal small intestine was empty of contents. The mucosa was unremarkable throughout. No parasites were observed throughout.

CECUM The cecum contained approximately 600 mL of moist, seedy, stringy, moderately digested, tan to dark green digesta mixed with green stained sand. The mucosa was unremarkable. No parasites were observed.

COLON The proximal most 50 cm of the colon contained moist, poorly formed, poorly digested, seedy, fibrous, leafy, yellow to brown digesta. The remaining proximal colon was mostly empty with intermittent sections of moist, well formed, moderately digested, stringy, fibrous, green to brown feces that were thin in diameter. The mid colon was mostly empty with intermittent sections of moist, moderately formed, well digested, slightly stringy, brown feces. The distal colon contained slightly moist, well formed, well digested, homogenous, brown feces that were thin in diameter. The mucosa was sloughing throughout. No parasites were

observed throughout.

PANCREAS The pancreas was soft and friable. Serosal and cut surfaces were tan.

SPLEEN The spleen was soft. Serosal surfaces of the spleen were mottled grey and black. Cut surfaces were dark red to black.

LIVER The liver was soft, and the margins were rounded. Serosal surfaces were dark brown. Cut surfaces were dark red.

GALLBLADDER The gallbladder contained approximately 3 mL of slightly viscous, golden yellow bile. The mucosa was bile stained.

REPRODUCTIVE The reproductive organs contained a small amount of serous red tinged fat. The testes were large, soft, friable, and gassy. There was no fluid on the cut surfaces of the epididymides or seminal vesicles.

KIDNEYS The kidneys were soft, and there was not perirenal fat observed. Serosal surfaces were purple. On cut surfaces, the cortices were brown to purple, and the medullae were red to brown. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained approximately 50 mL of translucent, red tinged urine. The mucosa was unremarkable.

HEART There was a small amount of serous, red tinged epicardial fat. The right atrium contained an approximately 200 mL chicken fat clot. Otherwise, all valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were torn due to decomposition. Both lungs were soft and friable. Serosal surfaces were tan to purple. Cut surfaces were pink. The airways contained a moderate amount of red tinged fluid and there was a mild infection of dead trematodes. The mucosa was unremarkable.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER The muscle was serous on cut surfaces. The tissue underlying the watercraft healing wound was grossly unremarkable.

PHOTOGRAPHS 2021-02-25_FWC050_1792 through 1852

COMMENTS A fecal sample was collected for IRL feeding ecology study.

SIGNIFICANT FINDINGS

- Depleted serous fats
- Serous musculature
- Mostly empty GI
- Healing watercraft wound series
- Soft and friable internal organs

PROBABLE CAUSE OF DEATH Natural; Other

NECROPSY CONDUCTED BY

Sara M. Wappes
Ana K. Nader

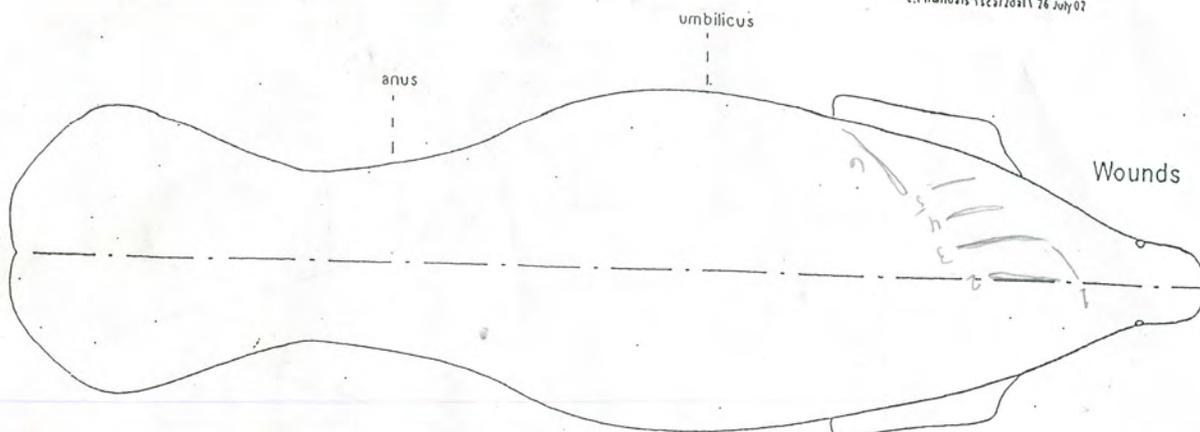
REPORT FILED BY Nader / Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

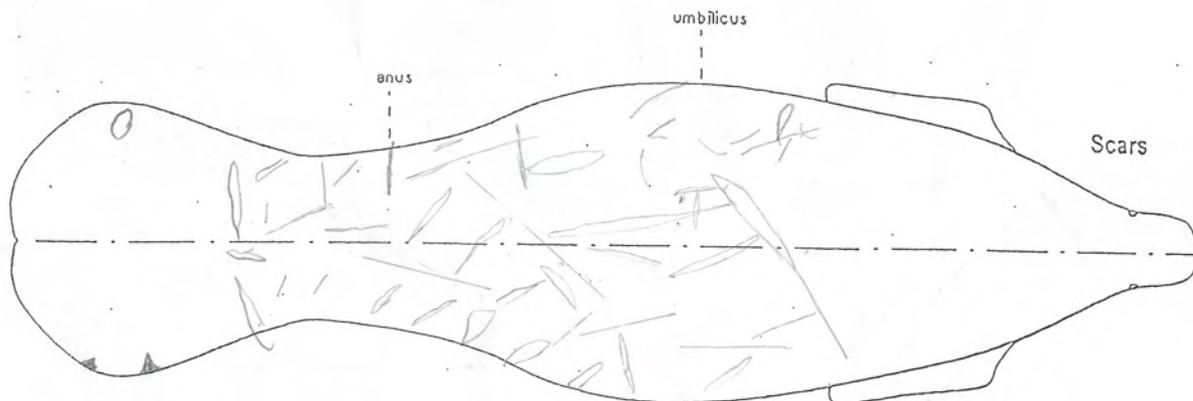
Date 25 FEB 2021

Field I.D. NEC21179

c:\Manuals\Scar2dat1 26 July 02

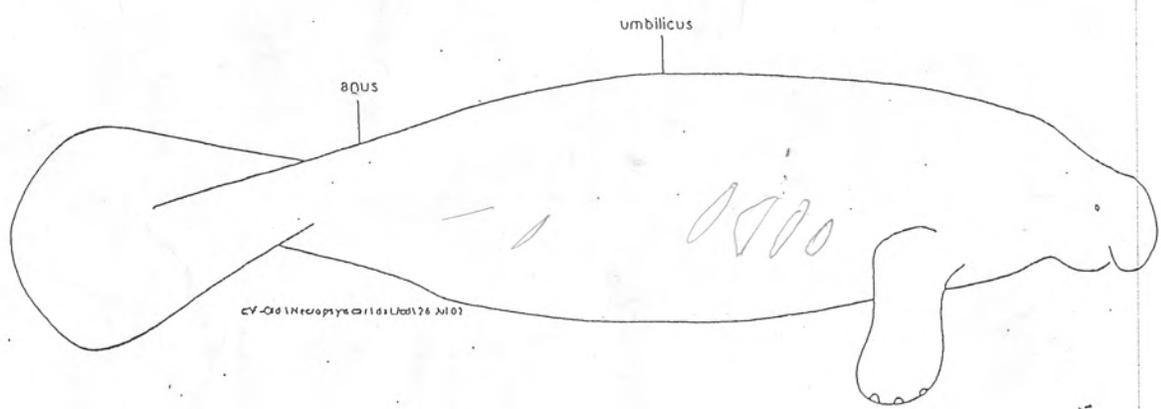
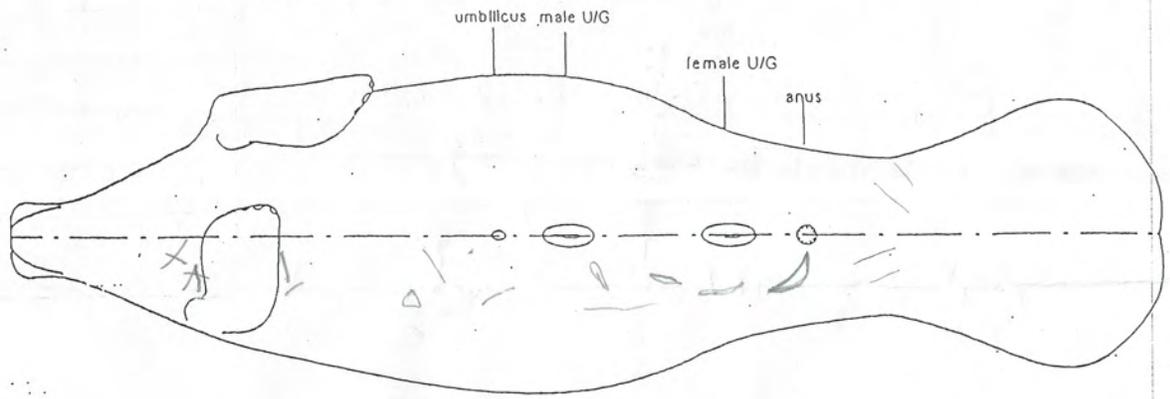
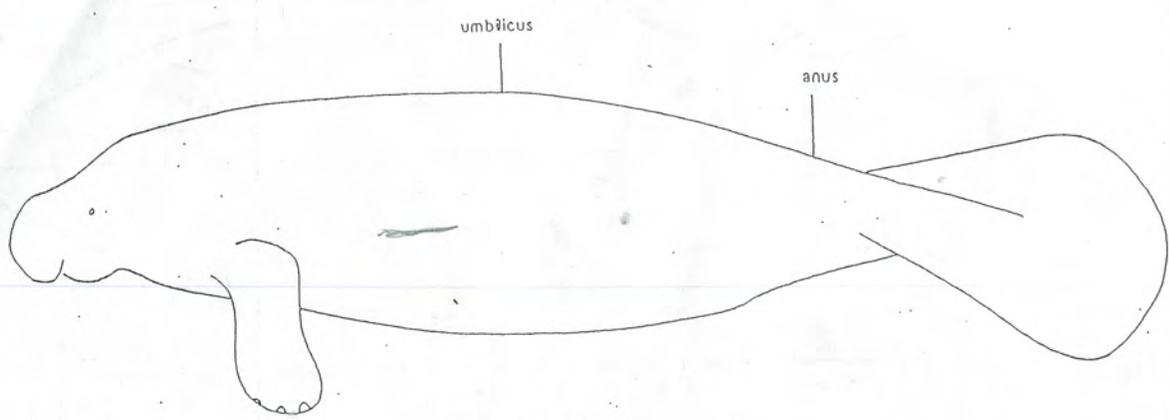


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	7.0	16.0	18.0	13.5	10.5	26.0														
Width	0.3	1.0	0.8	0.8	0.2	1.0														
Depth	0.1	0.4	0.3	0.4	NA	0.3														
Distance		11.0	10.5	10.0																



AKC

FIELD I.D. MEC21179



CV-06 1 Neurophysyca 161 Uadl 26 Jul 07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21180
Date of Report: 2021-Feb-25
Filed By: FWC EC Field Station

FWC Case # 3443 **FWC Region:** NE

Sex: Male **Length:** 320 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-26 **By:** FWC-CMM,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Sykes Creek

Locality description: Merritt Island, floating approximately 20 m ESE of 260 Madrid Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Ventral, Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	320 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21180
RECOVERY DATE 26 February 2021
GENDER Male **TL** 320 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **25 February 2021**, at 0818 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in Sykes Creek, Merritt Island, Brevard County. FWC case number 3443 was assigned. The complainant, Cheyana (407-222-0357), stated that the carcass was fresh. At 0825 hrs, SMW received a verification photo. After necropsying MEC21179 and MEC21181, SMW and FWC biologist-Ana Nader (AKN) arrived at Cape Crossing boat ramp at 1655 hrs, launched the ECFL Key West, located the carcass at 1738 hrs, and secured the carcass at the Sea Ray Basin boat ramp at 1812 hrs. **26 February**, after recovering MEC21184, AKN and FWC biologist-Carley Metcalf arrived at Sea Ray Basin at 1045 hrs and loaded the carcass (and MEC21182) by 1155 hrs. After recovering MEC21183, all carcasses were transported to the Brevard County landfill. A partial external work up was completed by 1715 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL From verification photos: There was a moderate brown algal mat on the left lateral aspect. Only the ventral aspect was examined. Approximately 80% of the ventral epidermis was present and sloughing. There was a moderate infestation of barnacles. There was a well-healed triangular tail mutilation on the trailing edge of the fluke at the 3 o'clock position. PIT tag scan was not performed. A genetics sample was collected.

PHOTOGRAPHS 2021-02-25_PUBLIC_ECFL_1137 through 1138; 2021-02-25_PUBLIC_ECFL_2879; 2021-02-26_FWC049_4715 through 4716

COMMENTS Due to numerous factors but mainly Brevard landfill closely time a full external workup was not completed. Only ventral photos and a genetics sample were completed.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

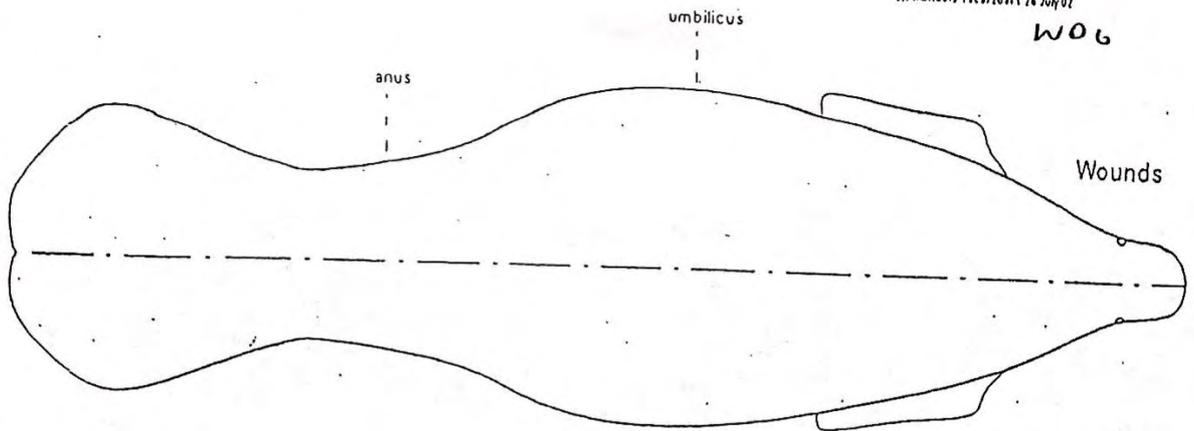
REPORT FILED BY Greer

Date 26 FEB 2021

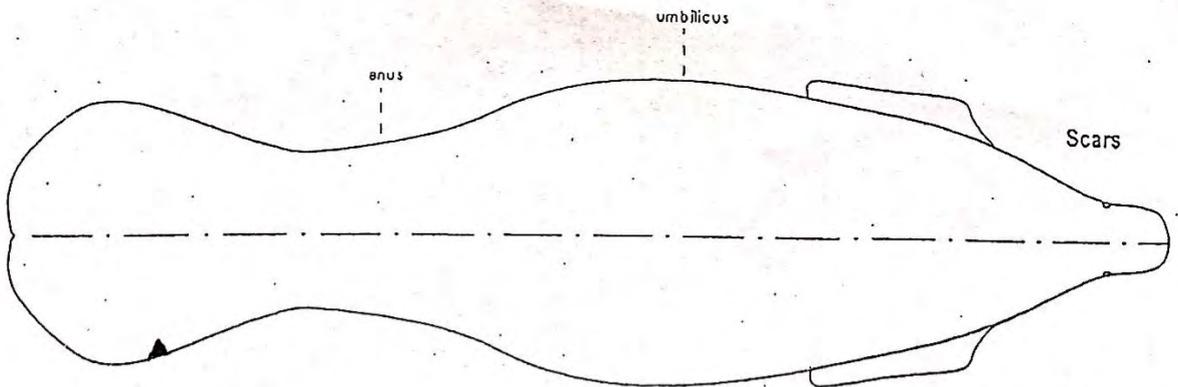
Field I.D. MEC21185

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W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet, Sep 2002

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21181
Date of Report: 2021-Feb-25
Filed By: FWC EC Field Station

FWC Case # 3454 **FWC Region:** NE

Sex: Male **Length:** 195 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-25 **By:** FWC-SMW,AKN

DATE NECROPSIED: 2021-Feb-25 **By:** FWC-SMW,AKN

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: Oak Hill, floating approximately 165 m NE of 315 River Road.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Emaciated; Longitudinal folds; Serous fat(s); Parasitic enteritis; Congestion.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics. Stomach contents, feces.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	195 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21181

RECOVERY DATE 25 February 2021

GENDER Male **TL** 195 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE 25 February 2021

CONDITION Moderately Decomposed

HISTORY 25 February 2021, at 1009 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in Indian River North, Oak Hill, Volusia County. FWC case number 3454 was assigned. The complainant, Peggy (407-668-2529), made an unverified report of a small carcass behind her residence. FWC staff launched at the Riverbreeze boat ramp at 1045 hrs, arrived at the carcass' location at 1122 hrs, recovered MEC21179 by 1145 hrs, and towed both carcasses to a remote location. A field necropsy was completed by 1514 hrs.

EXTERNAL All of the epidermis was present and sloughing. There was a scant amount of red tinged fluid exuding from the nares. The carcass had a peanut shaped head, was dorsoventrally flattened, and had longitudinal folds on the ventrum due to emaciation. The epidermis of the axillae and head region was bleached. A few pitted cold stress lesions were observed on the pectoral flippers and ventral aspect. There was a thick brown algal mat on the dorsal and lateral aspects. No watercraft-related scars or wounds were observed. A PIT tag scan negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous, light yellow to red tinged abdominal fat with diffuse areas of moderate congestion. There was a small amount of serous, red tinged omental and mesenteric fat. The parietal peritoneum had wide longitudinal areas of severe congestion.

STOMACH The stomach contained approximately 800 mL of wet, well chewed, stringy, fibrous, tan to green ingesta. The ingesta was coated with a thick layer of viscous, white mucus. The mucosa had diffuse areas that were stained brown to purple. No parasites were observed.

DUODENUM The duodenum contained approximately 125 mL of moist, well chewed, stringy, leafy, fibrous, tan, light green, and green ingesta. The mucosa had multifocal, irregularly shaped, slightly raised, yellow stained areas. No parasites were observed.

JEJUNUM & ILEUM The small intestine was distended with gas and the mesenteries were moderately congested. The proximal and mid small intestine contained a scant amount of viscous, tan to light pink fluid mixed with a scant amount of well chewed dark green vegetation. The most cranial 20 cm of the mid small intestine had a small amount of moist, fibrous, stringy, well chewed, green ingesta mixed with viscous, light orange fluid. The distal small intestine contained a moderate amount of stringy, fibrous, well chewed, green and dark green ingesta. The mucosa was tan to light pink throughout. There was a mild infection of pinpoint trematodes embedded in the walls of the small intestine throughout. The walls of the small intestine had pronounced Peyer's patches and a small amount of raised, rugose, grey stained nodules throughout.

CECUM The cecum was distended with gas. The cecum contained approximately 600 mL of moist, moderately digested, stringy, fibrous, tan, light orange, and green digesta. The mucosa was stained gray and sloughing in sheets. No parasites were observed.

COLON The colon mesentery was moderately congested. The proximal colon contained an abundant amount of moist, well digested, poorly formed, fibrous, stringy, dark green digesta. The mid colon contained an abundant amount of watery, fibrous, well digested, poorly formed, homogenous, dark green feces. The distal colon contained a moderate amount of dry, fibrous, well digested, moderately formed, homogenous, crumbly, dark green feces. No parasites were observed throughout. The mucosa was sloughing throughout.

PANCREAS The pancreas was soft. Serosal and cut surfaces were tan.

SPLEEN The spleen was firm. Serosal surfaces of the spleen were mottled grey and black. Cut surfaces were dark red to purple.

LIVER The liver was firm, and the margins were rounded. Serosal surfaces were red to dark brown. Cut surfaces were red.

GALLBLADDER The gallbladder contained approximately 5 mL of viscous, yellow bile. The mucosa was bile stained.

REPRODUCTIVE The reproductive organs contained a small amount of serous fat. The testes and seminal vesicles were small. There was no fluid on the cut surfaces of the epididymides or seminal vesicles.

KIDNEYS No perirenal fat was observed. The kidneys were firm. Serosal surfaces were tan to pink. On cut surfaces, the cortices were tan to pink, and the medullae were red. The corticomedullary boundaries were distinct.

URINARY BLADDER The urinary bladder contained approximately 10 mL of watery, pale yellow urine. The mucosa was unremarkable.

HEART The heart had a scant amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right pleural cavity contained approximately 1 L of watery, red-tinged fluid. The left pleural cavity contained approximately 900 mL of watery, red-tinged fluid. The parietal pleura of both lungs had black specks. Serosal surfaces of both lungs were light pink, and cut surfaces were pink to red. Primary airways contained a moderate amount of watery, red-tinged fluid. The mucosa was unremarkable. No parasites were observed.

HEAD & NECK REGIONS There was a small amount of sediment in the trachea.

SKELETON NVL.

OTHER

PHOTOGRAPHS 2021-02-25_FWC050_1822 through 1866

COMMENTS A fecal and stomach sample were collected for IRL feeding ecology study.

SIGNIFICANT FINDINGS

- Emaciated body condition
- Bleached epidermis
- Cold stress lesions
- Congested fats, peritoneum, mesenteries
- Red-tinged fluid exuded from the nares
- Fluid in pleural cavities and airways
- Sediment in trachea
- Specks in parietal pleura
- Mild parasitic enteritis
- Dry, crumbly feces

PROBABLE CAUSE OF DEATH

Natural; Cold Stress

NECROPSY CONDUCTED BY

Sara M. Wappes

Ana K. Nader

REPORT FILED BY Nader / Wappes

PRELIMINARY DATA.

FINDINGS MAY BE ADDED OR

DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21182
Date of Report: 2021-Feb-25
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 335 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-25 **By:** Citizen to FWC-CMM

DATE COLLECTED: 2021-Feb-26 **By:** FWC-CMM,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Barge Canal

Locality description: Merritt Island, floating approximately 220 m N of 2595 Sykes Creek Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	335 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21182

RECOVERY DATE 26 February 2021

GENDER Female **TL** 335 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **25 February 2021**, at 1027 hrs, FWC biologist-Carley Metcalf (CMM) received a phone call from a previous complainant regarding a manatee carcass in the Barge Canal, Merritt Island, Brevard County. An FWC case number was not assigned. The complainant, Lewis Pavlovich (989-392-5006), described a deceased manatee floating in the Sea Ray basin. At 1428 hrs, CMM received photo verification. At 1530 hrs, CMM and FWC intern-K. Lawson arrived at the reported location. CMM launched a kayak, retrieved the manatee and it was secured to the dock at 1600s hrs. **26 February**, after recovering MEC21184, FWC biologist- Ana K. Nader and CMM arrived at Sea Ray Basin at 1045 hrs and loaded the carcass (and MEC21180) by 1155 hrs. After recovering MEC21183, all carcasses were transported to the Brevard County landfill. A partial external work up was completed by 1715 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL From verification photo the epidermis on the ventral aspect was all present and the carcass was slightly distended with gas. Only the dorsal aspect was examined. Approximately 10% of the epidermis on the dorsal aspect was present and sloughing. A minimum of two well-healed watercraft-related scar series were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-25_PUBLIC_ECFL_1134; 2021-02-26_FWC049_4717 through 4718

COMMENTS Due to numerous factors but mainly Brevard landfill closely time a full external workup was not completed. Only dorsal photos, PIT tag scan and a genetics sample were completed.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

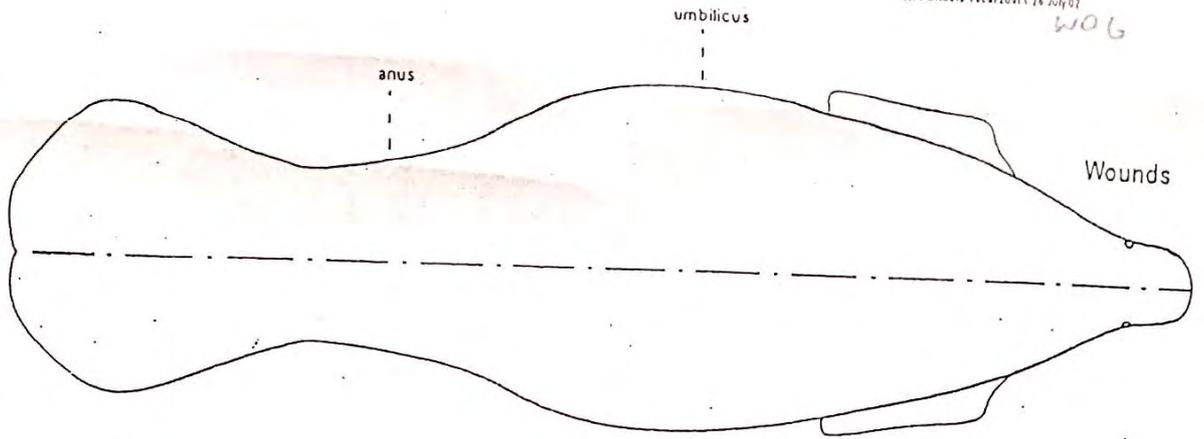
REPORT FILED BY Metcalf/Greer

Date 26 FEB 2021

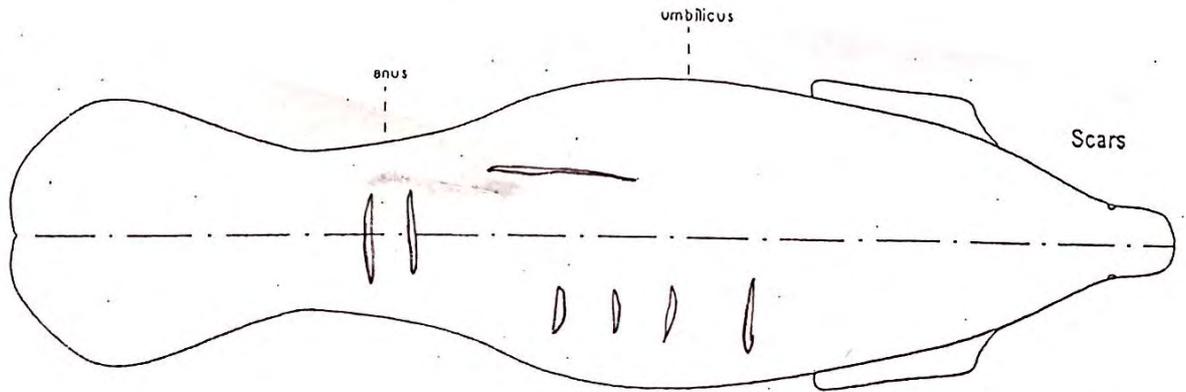
Field I.D. MFC21132

c:\Manuals\Scar2001\26 July 02

W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet Sep 2002

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21183
Date of Report: 2021-Feb-25
Filed By: FWC EC Field Station

FWC Case # 3514 **FWC Region:** NE

Sex: Male **Length:** 290 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-25 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-26 **By:** FWC-CMM,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: Oak Hill, floating 45 m WNW of 290 H H Burch Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Fluke, Cranial. Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	290 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21183

RECOVERY DATE 26 February 2021

GENDER Male **TL** 290 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **25 February 2021**, at 1831 hrs, FWC biologist-Brandon Bassett (BLB) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River North, Oak Hill, Volusia County. FWC case number 3514 was assigned. The complainant, Patrick (410-949-7997), reported a possibly dead manatee south of the River Breeze boat ramp. The complainant watched the manatee for 45 minutes and the manatee did not move or breathe. At 2032 hrs, BLB received inconclusive photos from the complainant and forwarded the information to the EC field station. A possible response was planned for the following day to collect the carcass and transport to the Marine Mammal Pathology Lab in St. Petersburg. **26 February 2021**, at approximately 1000 hrs, FWC biologist-Carley Metcalf (CMM) called the complainant and he notified her the manatee was still in the same location. At 1245 hrs, CMM and FWC-biologist Ana Nader (AKN) arrived at the boat ramp and launched a kayak. At 1300 hrs, CMM confirmed the carcass visually and towed the carcass to the River breeze boat ramp. At 1330 hrs, CMM and AKN loaded the carcass via Ezy Lift. AKN contacted FWC mortality coordinator-Martine DeWit who instructed the team to take the carcass to the Brevard County Landfill because the carcass would no longer be fresh by the time it reached MMPL. The carcass was transported to the landfill with MEC21180, MEC21182, and MEC21184, all collected earlier that day. At approximately 1700 hrs, a partial external workup was completed at the Brevard County Landfill by FWC-biologist-William D. Greer. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 90% of the epidermis was present but sloughing. There was bleaching at the axilla. Red, watery fluid exuded from the nares. There was a thin, brown to green algal mat on the left lateral aspect and a thin, brown algal mat on the dorsal aspect. No watercraft-related wounds were observed. Genetics sample was taken. PIT tag scan was negative.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Partial external work up due to time shortage

PROBABLE CAUSE OF DEATH

Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf/K. Lawson

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21184
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3521 **FWC Region:** NE

Sex: Male **Length:** 198 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-26 **By:** FWC-CMM,AKN

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 70 m ESE of 1163 N Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	198 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21184

RECOVERY DATE 26 February 2021

GENDER Male **TL** 198 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 26 February 2021, at 0725 hrs, FWC biologist-Nadia Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3531 was assigned. The complainant, Victoria Jones (321-431-3395), reported a four to five-foot-long, freshly deceased manatee behind her residence. The complainant advised biologists that one to two people could lift the carcass. At 0803 hrs, NJG received verification photos and forwarded the information to the EC field station. At 0940 hrs, FWC biologist-Carley Metcalf (CMM) and FWC-biologist Ana Nader (AKN) arrived at the location. At 1028 hrs, CMM towed the carcass by hand to a better location for collection. CMM, AKN and the complainant loaded the carcass by hand. The carcass was transported to the Brevard County Landfill after MEC21180, MEC21182, and MEC21183 were collected later that day. At 1620 hrs, CMM completed an external workup. The remains were disposed of at the Brevard County Landfill.

EXTERNAL Approximately 75% of the epidermis was present but sloughing. The carcass had a slightly peanut-shaped head. The axilla, face and trailing edge of the tail were bleached. There was a thin, green algal mat on the lateral aspects and the dorsal fluke. There was a thin, brown algal mat on the dorsal aspect, caudal ventral aspect, and ventral peduncle. There were multiple, linear lesions on the right lateral aspect. No watercraft-related wounds or scars were observed. Genetics sample was taken. PIT tag scan was negative.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf/K. Lawson

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21185
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3663 **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Mosquito Lagoon

Locality description: Oak Hill, beached approximately 695 m NNE of 446 E Halifax Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21185

RECOVERY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 February 2021**, at 0926 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Mosquito Lagoon, Oak Hill, Volusia County. FWC case number 3541 was assigned. The complainant, Donald Beck (570-236-8543), described a dead manatee on the eastern side of an island chain across from the reported address, in the most southern cove. At 0932 hrs, CMM received photo verification. Due to a heavy case load, a response was not planned. **27 February**, at 1223 hrs, CMM received a text alert from Dispatch regarding a dead manatee in the Mosquito Lagoon, Oak Hill, Volusia County. FWC case number 3663 was assigned. The complainant, Patricia Sutton (386-576-4376), described a beached, six-foot-long, dead manatee on the eastern side of the island chain. No photos were available for verification. Based on the location and size description, it was concluded to be the same carcass reported the previous day (CR 3541). The remains were left on site.

EXTERNAL Based on the complainant photo, almost all epidermis was present but sloughing on the dorsal aspect. There was a thick, green to brown algal mat on the dorsal aspect. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21186
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3546 **FWC Region:** NE

Sex: Female **Length:** 300 cm (estimated) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 50 m E of 3841 North Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 292cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21186

RECOVERY DATE 01 March 2021

GENDER Female **TL** 292; 300 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 February 2021**, at 1030 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3546 was assigned. The complainant, Robert Redfern (407-921-6791), stated there was a deceased seven-foot manatee belly up behind his home. At 1037 hrs, CMM received a photo from the complainant verifying the carcass. Due to other carcass responses and a dolphin entanglement rescue no staff were available to respond. **01 March**, at 0910 hrs, FWC biologists- William D. Greer (WDG) and Christine M. Fontaine (CMF) arrived at the Port St. John boat ramp and launched the ECFL Key West. After collecting and doing external workups on MEC21189 and MEC21197. At 1152 hrs, WDG and CMF secured the carcass to the ECFL Key West. After collecting MEC21190, MEC21198 and MEC21202 all four carcasses were towed to a remote location where an external work up was completed by 1432. The remains were left on site.

EXTERNAL No epidermis was present. The carcass was dorsoventrally flattened due to decomposition. There were multiple decompositional rents on the dorsal and ventral aspects. There was a superficial series of 14 healing wounds on the left dorsal aspect. There was a minimum of one well-healed watercraft-related scar series on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-26_PUBLIC_ECFL_1332; 2021-03-01_FWC049_4755 through 4770

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

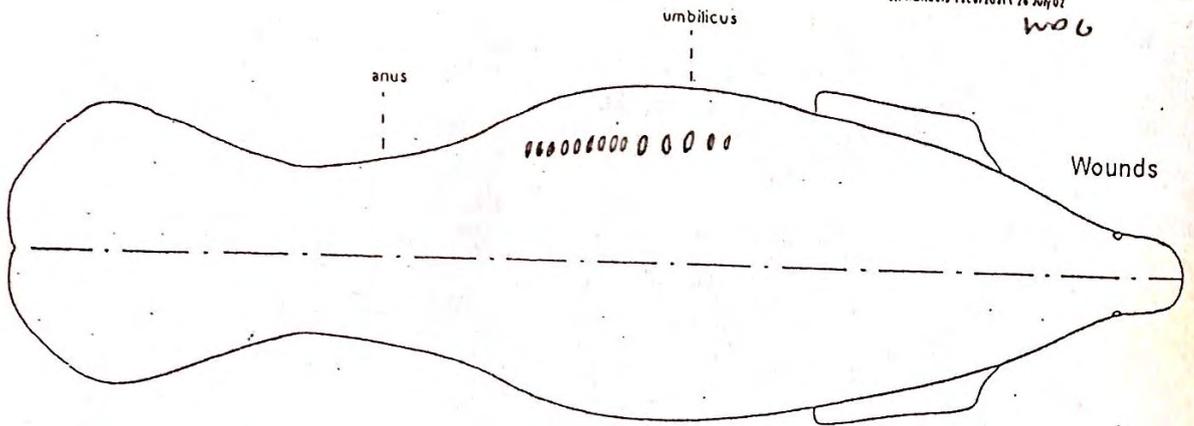
REPORT FILED BY Greer

Date 01 March 2021

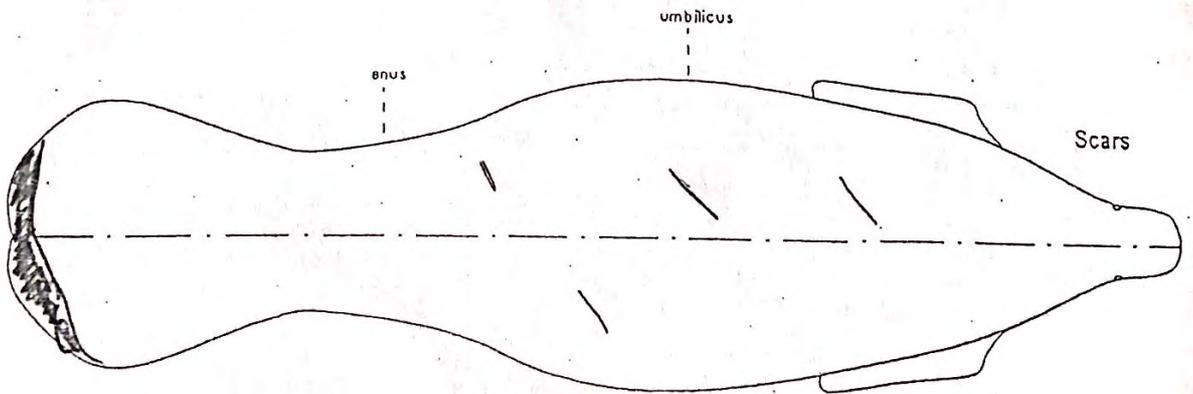
Field I.D. MCC21106

CSI Manuals 1/10/2011 26 July 02

W06



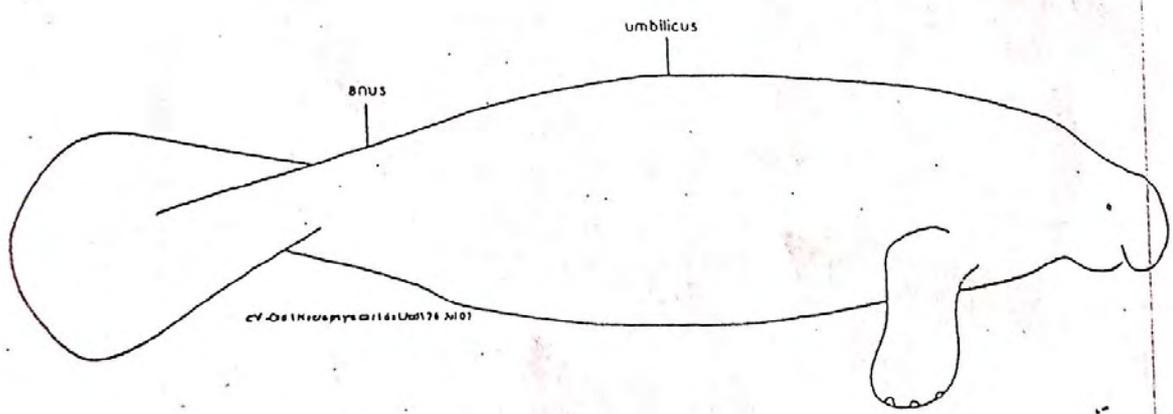
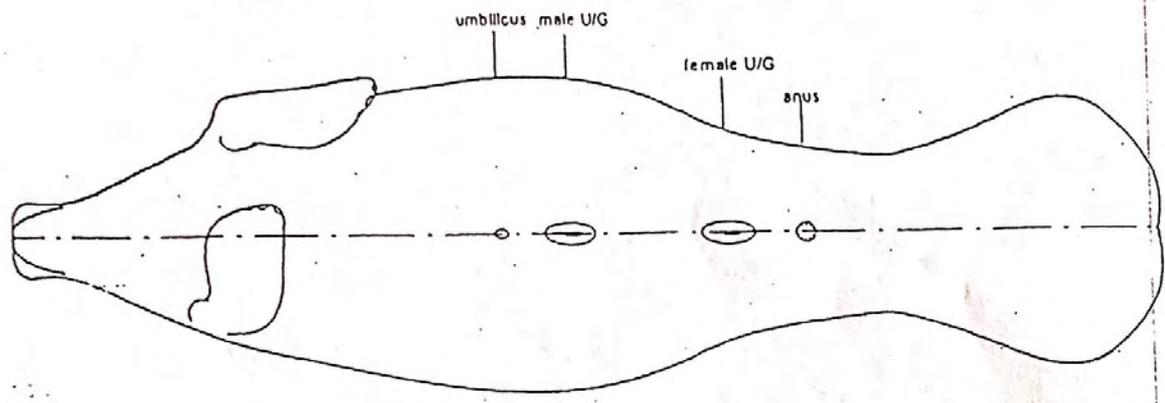
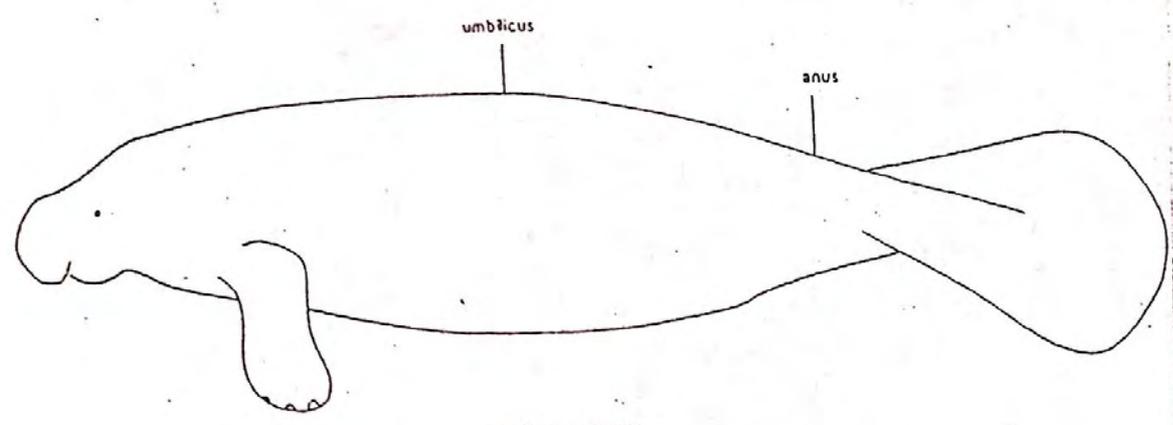
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Length																				
Width																				
Depth																				
Distance																				



MISSING
DUE TO
DECOMP.

Scar Data sheet, Sep 2002

FIELD I.D. MEC21186



cf. *Osteichthys* sp. 16. 1978. 101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21187
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3554 **FWC Region:** NE

Sex: Unknown **Length:** 150 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Mosquito Lagoon

Locality description: Oak Hill, grounded approximately 3.7 km ENE of 263 Golden Bay Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied;

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21187

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 150 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 26 February 2021, at 1107hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Mosquito Lagoon, Oak Hill, Volusia County. FWC case number 3554 was assigned. The complainant, Valerie (904-210-7859), described a four to five-foot-long, dead manatee in the Canaveral National Seashore on the Mosquito Lagoon side. At 1202 hrs, CMM received photo verification. Due to a heavy case load, a response was not planned. The remains were left on site.

EXTERNAL Based on the complainant photo, almost all epidermis was present but sloughing. There was a thick, green to brown algal mat on the dorsal and right lateral aspects. No watercraft related wounds or scars were observed. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-26_PUBLIC_ECFL_1333 through 1334

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists through photographs

PROBABLE CAUSE OF DEATH Perinatal; Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21188
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3695 **FWC Region:** NE

Sex: Female **Length:** 200 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: Oak Hill, floating approximately 25 m NNW of 168 Indian Creek Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	200 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21188

RECOVERY DATE 27 February 2021

GENDER Female **TL** 200 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **25 February 2021**, at 1833 hrs, FWC biologist-Brandon Bassett (BLB) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3507 was assigned. The complainant, David (386-717-7009), reported a dead manatee and did not have any photos for verification. At 2038 hrs, BLB forwarded the information to the EC field station. **26 February**, at 1107 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from Dispatch regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3553 was assigned. The complainant, William (386-748-5698), reported a four to five-foot-long manatee that appeared to be freshly deceased under a dock at his residence. At 1204 hrs, the complainant sent photos to CMM for verification. Due to a heavy case load, a response was not planned. **27 February**, at 0730 hrs, FWC biologist-Nadia Gordon (NJG) received a text alert from Dispatch regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3632 was assigned. The complainant, Kathy Smith (386-345-3453), reported a dead manatee, but did not have photos for verification. At 0748 hrs, NJG forwarded the information to the EC field station. CMM contacted the complainant from the previous day and he reported the manatee was no longer under his dock and he had not seen it since he had reported it. At 1600 hrs, the complainant from CR 3632 called CMM informing her they had located and secured the manatee to their dock and wanted to know if they should tow it out of the canal. CMM said this would be fine and requested photos and a location of where they would leave the manatee. At 1630 hrs, CMM received a text alert from Dispatch regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3695 was assigned. The complainant, Kay Filing (330-671-3348), reported a dead manatee floating north in Bisset Bay. At 1640 hrs, CMM received confirmation from the previous complainant the manatee was towed out the canal. At 1644 hrs, CMM received photo and location verification that this was the same manatee that was just towed to Bisset Bay. The remains were left on site.

EXTERNAL Based on complainants' photos, almost all of the epidermis was present but sloughing. The flippers and face were bleached. No watercraft related wounds or scars were observed. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-26_PUBLIC_ECFL_1358 through 1336; 2021-02-27_PUBLIC_ECFL_1356 through 1360

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf/Lawson

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21189
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3786 **FWC Region:** NE

Sex: Male **Length:** 280 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 125 m NNE of 100 Bellewood Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial. Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 267cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	280 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21189

RECOVERY DATE 01 March 2021

GENDER Male **TL** 267; 280 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 February 2021**, at 0732 hrs, FWC biologist-Nadia Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding an injured manatee in the Indian River, Titusville, Brevard County. FWC case number 3534 was assigned. The complainant, Pat Horschel (321-427-3292), stated he wasn't sure if it was a manatee or turtle and was too far away for photos or to provide details. At 1113 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from Dispatch regarding a manatee carcass in the Indian River, Titusville, Brevard County. FWC case number 3555 was assigned. The complainant, Rita Elkins (RE) (321-537-4090), stated it was far away but she estimated it to be four feet long. At 1235 hrs, CMM received a photo from RE confirming the carcass. Due to the carcass still floating no response was made. **27 February**, at 1305 hrs, CMM received a text and photo from a citizen regarding the same manatee carcass. No FWC case number was assigned. The complainant, Yvonne (321-474-6965), stated the manatee was grounded on rocks behind a campground and the skin was peeling. Based on the condition of the carcass and the location it was determined to be the same carcass. **28 February**, at 1837 hrs, NJG received a text alert from Dispatch regarding the same manatee carcass. FWC case number 3786 was assigned. The complainant, Steffi (407-760-1351), stated the carcass was dorsum up and against the rocks behind a campground. At 1849 hrs, NJG received a photo from Steffi confirming the carcass and passed the information to ECFL staff. Based on the condition of the carcass and its location it was determined to be the same carcass. **01 March**, at 910 hrs, FWC biologists- William D. Greer (WDG) and Christine M. Fontaine (CMF) arrived at the Port St. John boat ramp and launched the ECFL Key West. After collecting MEC21197. At 1021 hrs, WDG and CMF secured the carcass to the ECFL Key West and towed the carcasses to a remote location where an external work up was completed by 1110. The remains were left on site.

EXTERNAL Approximately 40% of the epidermis was present and sloughing. The carcass was slightly dorsoventrally flattened due to decomposition. There was a moderate brown and green algal mat on the dorsal aspect. There was a minimum of three well-healed watercraft-related scar series on the dorsal aspect. There was a rounded tail mutilation from the 4 to 5 o'clock positions on the trailing edge of the fluke. There was a squared tail mutilation from the 7 to 9 o'clock position on the trailing edge of the fluke. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-26_PUBLIC_ECFL_1337 through 1338; 2021-02-27_PUBLIC_ECFL_1345; 2021-03-01_FWC049_4722 through 4739

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologist

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

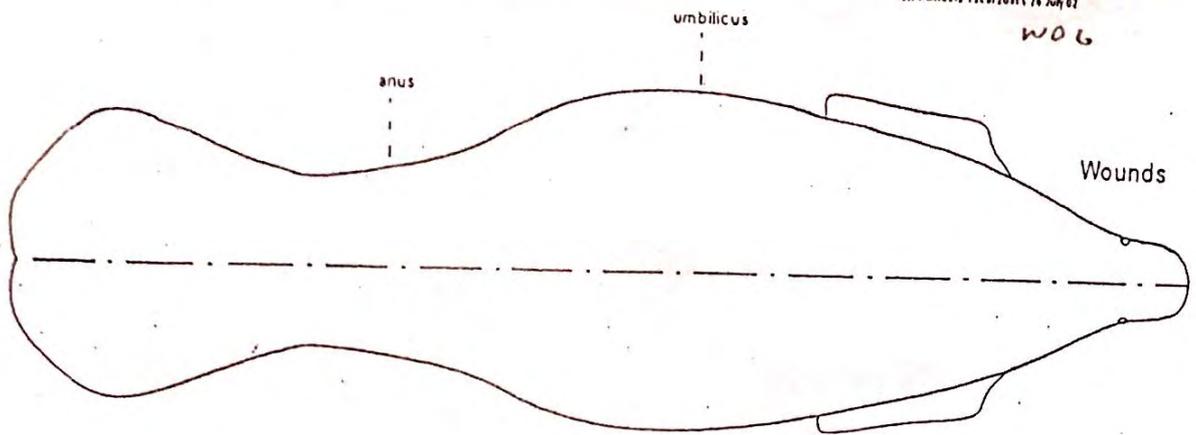
REPORT FILED BY Greer

Date 01 MARCH 2021

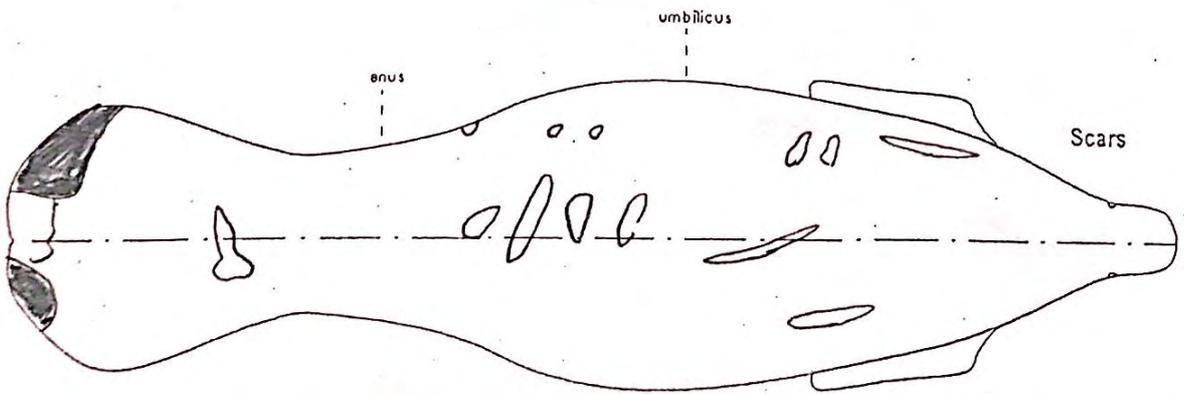
Field I.D. MEC21189

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W06



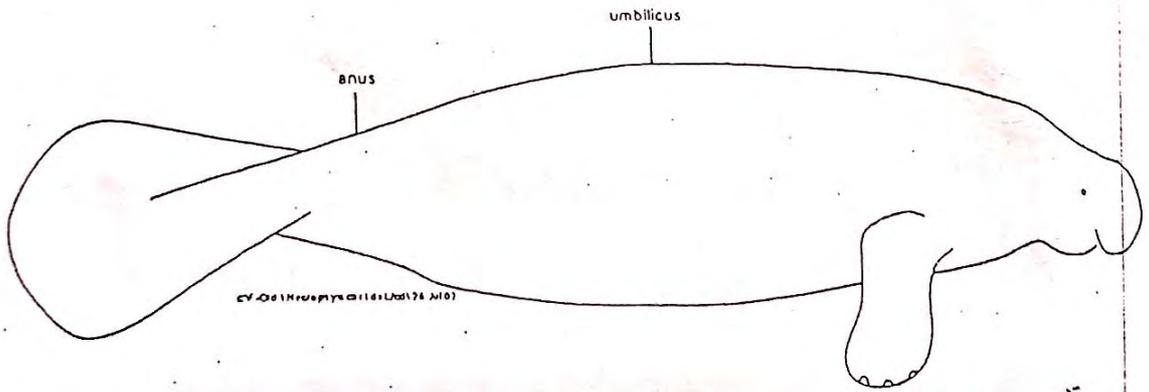
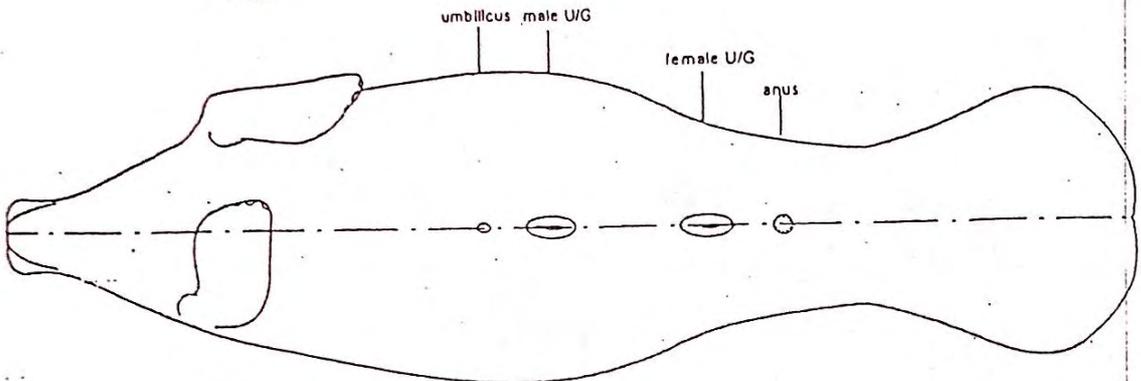
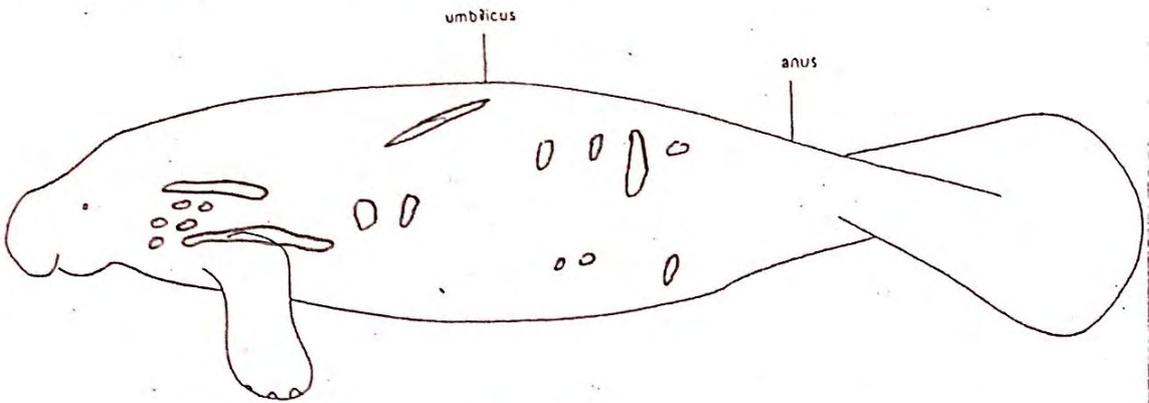
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet Sep 2002

FIELD I.D.

MEC21199



CV-061K100P17501161U0176 M101

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21190
Date of Report: 2021-Feb-26
Filed By: FWC EC Field Station

FWC Case # 3656 **FWC Region:** NE

Sex: Female **Length:** 300 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian Rivwer

Locality description: Cocoa, grounded approximately 45 m NE of 4920 North Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 296cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	300 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21190

RECOVERY DATE 01 March 2021

GENDER Female **TL** 296; 300 (est) **cm WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 February 2021**, at 1527 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Merritt Island, Brevard County. FWC case number 3591 was assigned. The complainant, Aaron (321-432-7727), stated there was a seven to eight foot manatee carcass free floating. At 1529 hrs, CMM received a photo from the complainant confirming the carcass. Due to the time of day and that the carcass was free floating no response was attempted. **27 February**, at 1113 hours, CMM received a text alert from Dispatch regarding the same manatee carcass. FWC case number 3656 was assigned. The complainant, Mike Denning (321-403-0656), stated there was a six to seven foot manatee carcass free floating near his home. At 1124 hrs, CMM received a photo from the complainant and based on location and carcass condition determined it was the same carcass. The complainant called back later and said the carcass was grounded and was not moving. At 1400 hrs, CMM arrived at the carcass location to complete an external workup and move to a secluded location. Due to weather CMM was unable to complete an external workup and secured the carcass to a tree in a vacant lot. **01 March**, at 0910 hrs, FWC biologists- William D. Greer (WDG) and Christine M. Fontaine (CMF) arrived at the Port St. John boat ramp and launched the ECFL Key West. After collecting and doing external workups on MEC21189 and MEC21197. At 1246 hrs, WDG and CMF secured the carcass to the ECFL Key West. After collecting MEC21186, MEC21198 and MEC21202 all four carcasses were towed to a remote location where an external work up was completed by 1432. The remains were left on site.

EXTERNAL Less than 10% of the epidermis was present and sloughing. The carcass was dorsoventrally flattened due to decomposition. There were decompositional rents present throughout the ventrum. There were three wounds dorsal to the left flipper with clean and sharp edges that penetrated to the body cavity, loose bone (likely scapula) was protruding from the largest wound (wound #3). The wounds were not measured due to decomposition. There was a minimum of four well-healed watercraft-related scar series on the dorsal aspect and one on the ventral peduncle and fluke. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-02-26_PUBLIC_ECFL_1339 through 1342; 2021-02-27_FWC049_4719 through 4721; 2021-03-01_FWC049_4812 through 4831

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists
- Penetrating wounds

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

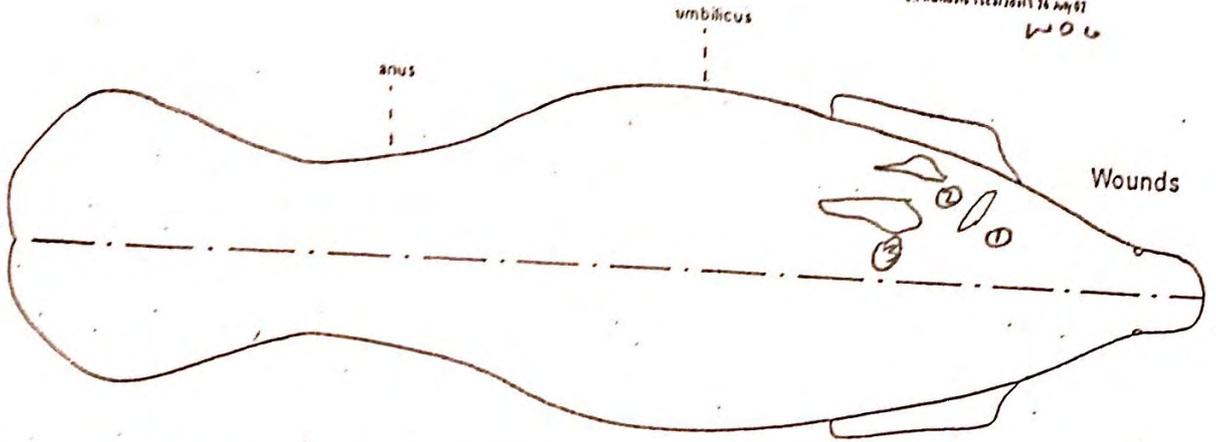
N/A

REPORT FILED BY Greer

Date 01 MAR 2021

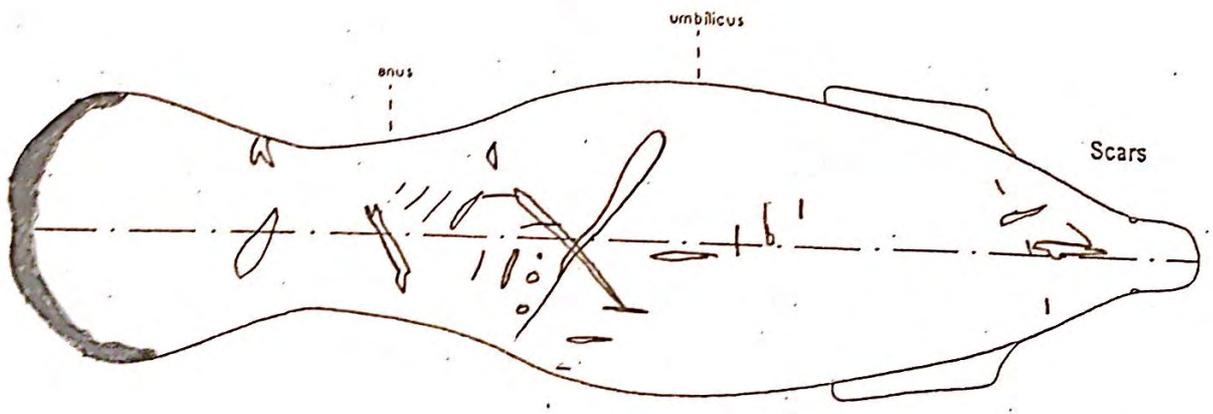
Field I.D. M6C21190

CS Mammals Scar/Dat 13 24 July 01
W06



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

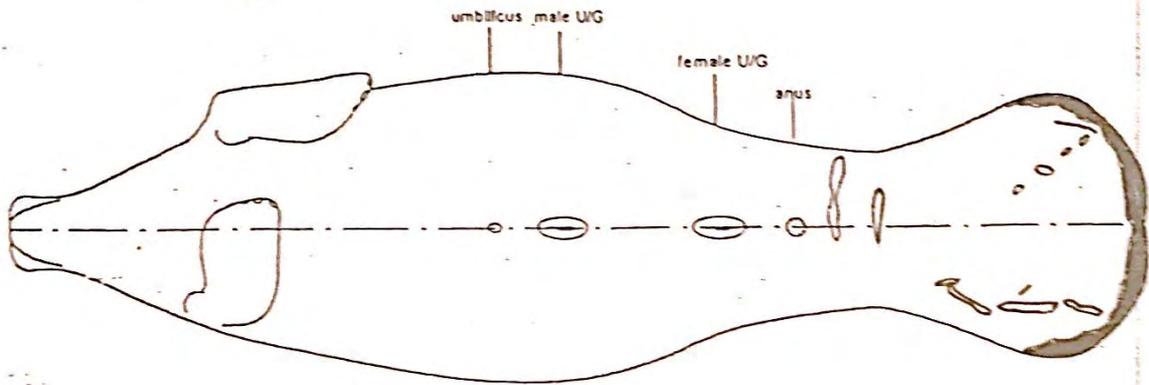
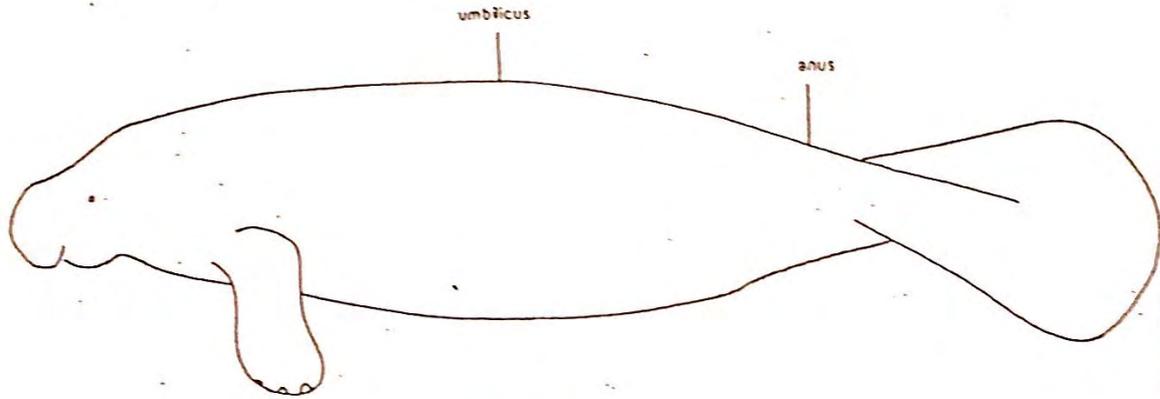
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DUE TO
DECOM P



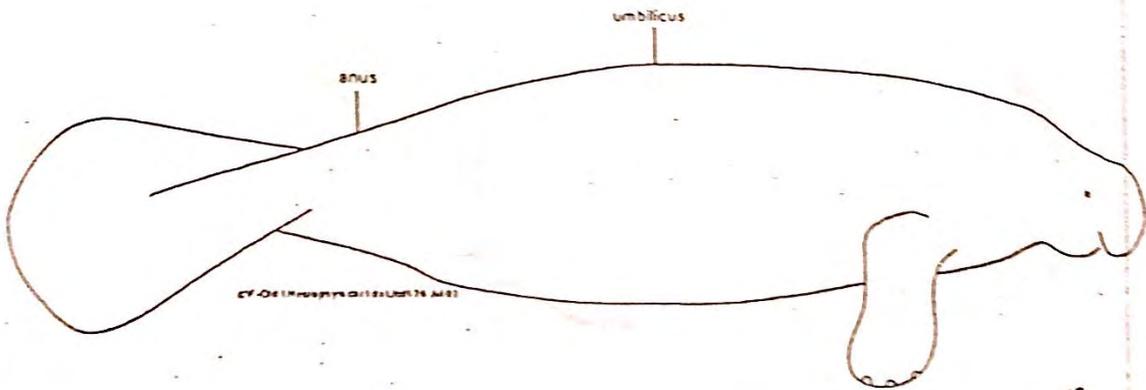
Scar Dat sht, Sep 2002

FIELD I.D.

MECC1190



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due to
decomp



CV-06 (Husky) 0118 (L) 076 (M) 01

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21191
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC-NJG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, floating approximately 580 m NE of 101 Manth Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21191

RECOVERY DATE 01 March 2021

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **27 February 2021**, at 0909 hrs, FWC biologist-Carley Metcalf (CMM) received a text and photo from FWC biologist- Nadia Gordon (NJG) regarding a previous complainant reporting a manatee carcass in the Indian River, Titusville, Brevard County. An FWC case number was not assigned. The complainant, Paul (321-427-3292), reported there was a badly decomposed carcass near the south side of the OUC power plant. At 0932 hrs, the complainant sent the location of the carcass to NJG and NJG forwarded this information to CMM. Due to a heavy case load, a response was not planned. **01 March 2021**, FWC biologist-William Greer (WDG) and FWC biologist-Christine Fontaine (CMF) arrived on location at 1000 hrs in the ECFL Key West. The carcass was heavily decomposed and in a remote location. An external workup was not completed. The remains were left on site.

EXTERNAL Based on complainant photos, approximately 20% of the epidermis was present but sloughing on the ventral aspect. The carcass was distended with gas. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21192
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # 3737 **FWC Region:** NE

Sex: Unknown **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Mosquito Lagoon

Locality description: Oak Hill, floating approximately 4.9 m NE of the intersection between Kennedy Parkway and Taylor Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21192

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **27 February 2021**, at 0927 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Mosquito Lagoon, Oak Hill, Volusia County. FWC case number 3637 was assigned. The complainant, name not given (386-212-7850), reported a five to six foot long manatee that was touched and did not illicit any response. The complainant advised biologists would need a boat to access the carcass at this location. At 0932 hrs, the complainant sent a video to CMM for verification. Based on the video, the carcass appeared larger. Due to a heavy case load, a response was not planned. The remains were left on site.

EXTERNAL Based on complainant video, all epidermis was present on the dorsal aspect. PIT tag was scan not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

•

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21193
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # 3641 **FWC Region:** NE

Sex: Unknown **Length:** 245 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Mims, beached approximately 5.2 km ENE of 3075 Hammock Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	245 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21193

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 245 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 27 February 2021, at 0938 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River, Mims, Brevard County. FWC case number 3641 was assigned. The complainant, John Sasala (321-458-4076), described a grounded manatee with its left side out the water, located in Marsh Bay. At 0944 hrs, CMM received photo verification. Due to a heavy case load, a response was not planned. The remains were left on site.

EXTERNAL Based on complainant photo, all epidermis was present on the dorsal aspect. There was bleaching at the face. A thin, green algal mat was present on the left dorsal aspect and a thick, brown algal mat was present on the dorsal and right lateral aspects. No watercraft-related wounds or scars were observed on the right dorsolateral aspect. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-2-_ECFL_PUBLIC_02

COMMENTS

SIGNIFICANT FINDINGS

•

PROBABLE CAUSE OF DEATH

Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Metcalf

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21194
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # 3682 **FWC Region:** NE

Sex: Unknown **Length:** 275 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Haulover Canal

Locality description: Allenhurst, grounded approximately 350 m NNE of Bairs Cove boat ramp.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	275 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21194

RECOVERY DATE N/A

GENDER Undetermined **TL** 275 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **27 February 2021**, at 1457 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Haulover Canal, Allenhurst, Brevard County. FWC case number 3682 was assigned. The complainant, Rita Sherman (321-544-4491), stated that the carcass was five feet long with its skin starting to slough. At 1503 hrs, CMM received a verification photo. Due to level of decomposition and high carcass load, no response was planned. The remains were left on site. **02 March**, at 2113 hrs, FWC on-call biologist-Nadia Gordon (NJG) received a text alert from Dispatch regarding a manatee carcass in Haulover Canal. FWC case number 3919 was assigned. The complainant, Danielle (386-262-0568), was unable to be reached until the following morning, but stated that it was an adult manatee. **03 March**, at 1104 hrs, NJG received a verification video. At 1855 hrs, NJG received an additional report of this carcass from Dispatch. FWC case number 3968 was assigned. The complainant, Jessica (207-406-0096), stated that the carcass was a large adult and badly decomposed.

EXTERNAL Based on complainant photos, approximately 10% of the epidermis of the ventrum was present but sloughing. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-27_PUBLIC_ECFL_1348; 2021-03-02_PUBLIC_ECFL_01; 2021-03-03_PUBLIC_ECFL_01 through 03

COMMENTS

SIGNIFICANT FINDINGS

- Verified by photograph

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21195
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # 3691 **FWC Region:** NE

Sex: Male **Length:** 216 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-03 **By:** MMPL-CMF,FWC LE

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Sebastian, floating approximately 40 m ESE of 11190 US Hwy 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial. Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	216 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21195
RECOVERY DATE 03 March 2021
GENDER Male **TL** 216 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **27 February 2021**, at 1559hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Sebastian, Brevard County. FWC case number 3691 was assigned. The complainant, Ellen Salvaggio (321-446-7586), reported a manatee carcass behind her residence. At 1612 hrs CMM received photo confirmation. **03 March 2021**, at 1243 hrs FWC biologist-Christine Fontaine (CMF) and FWC LE officers Josh Mock and Seth Loeffler arrived at the carcass. The animal was towed to a fringe island and external work-up was completed at 1315.

EXTERNAL From photographs: All epidermis missing. The carcass was dorsoventrally flattened due to decomposition. A portion of the fluke at 4 o'clock was missing due to an old scar and decomposition. The umbilicus, anus and urogenital opening were scavenged. There was advanced decomposition to the flippers and head. No scars or wounds observed.

PHOTOGRAPHS 2021-02-27_PUBLIC_ECFL_1351-54; 2021-03-03_FWC050_1879-88

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY C.Fontaine

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21196
Date of Report: 2021-Feb-27
Filed By: FWC EC Field Station

FWC Case # 3697 **FWC Region:** NE

Sex: Unknown **Length:** 218 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-03 **By:** MMPL-CMF,FWC LE

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Palm Bay, beached approximately 60 m E of 5075 Dixie Highway NE.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial. Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	218 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21196
RECOVERY DATE 03 March 2021
GENDER Male **TL** 218 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **27 February 2021**, at 1648hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Palm Bay, Brevard County. FWC case number 3699 was assigned. The complainant, Jerry Dasson (321-733-0372), reported a dead manatee behind his residence. At 1652 hrs confirmation photos were sent to CMM. **03 March 2021**, at 1025 hours FWC biologist-Christine Fontaine (CMF) and FWC LE officers Josh Mock and Seth Loeffler launched an LE boat from the Christianson's boat ramp, arriving at the animal at 1100 hrs. The animal was towed to a remote location and a work-up was completed at 1145 hrs.

EXTERNAL From photographs: All epidermis missing. The carcass was dorsoventrally flattened due to decomposition. The ends of both flippers and muzzle were eroded due to decomposition. Anal opening was scavenged. No wounds observed.

PHOTOGRAPHS 2021-02-27_PUBLIC_ECFL_1349; 2021-03-03_FWC050_1867-78

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY C. Fontaine

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21197
Date of Report: 2021-Feb-28
Filed By: FWC EC Field Station

FWC Case # 3730 **FWC Region:** NE

Sex: Female **Length:** 285 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-28 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 40 m ESE of 6460 North Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 280cm.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	285 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21197

RECOVERY DATE 01 March 2021

GENDER Female **TL** 280; 285 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **28 February 2021**, at 0954 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3730 was assigned. The complainant, Bob Richards (650-279-8086), stated that the carcass was beached belly up behind his house. At 0959 hrs, SMW received a verification photo. **01 March**, at 0910 hrs, FWC biologists-William Greer (WDG) and Christine Fontaine (CMF) arrived at Port St. John boat ramp and launched the ECFL Key West. WDG and CMF secured the carcass to the Key West at 0936 hrs, towed it and MEC21189 to nearby remote shoreline, and completed an external work up by 1100 hrs. The remains were left on site.

EXTERNAL Approximately 30% of the epidermis was present but sunburnt and sloughing. The carcass was distended with gas. There were rents due to decomposition and/or scavenging at the anus, urogenital opening, and left flipper. The dermis of the dorsum and the fluke margin was eroded. There was a minimum of two well-healed, watercraft-related scar series on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-03-01_FWC049_4740 through 4754

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

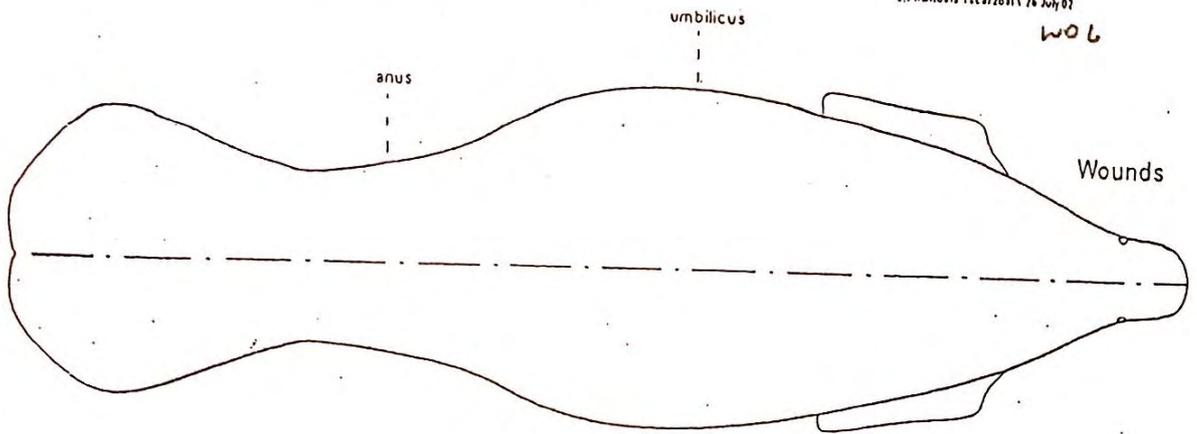
REPORT FILED BY Wappes/Greer

Date 01 MAR 2021

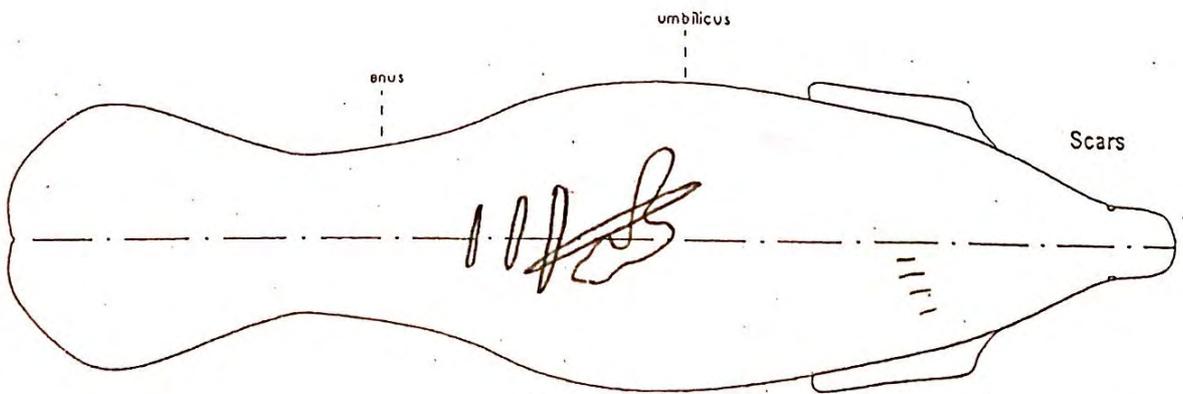
Field I.D. MCC2197

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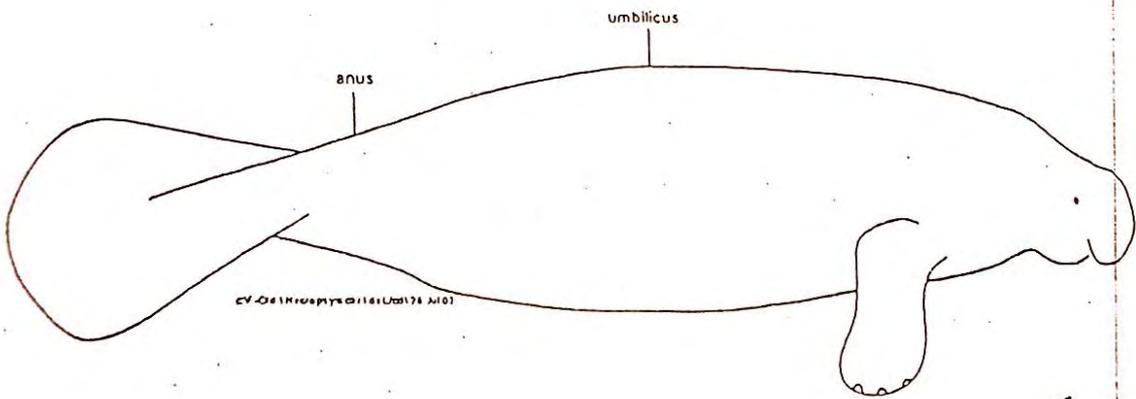
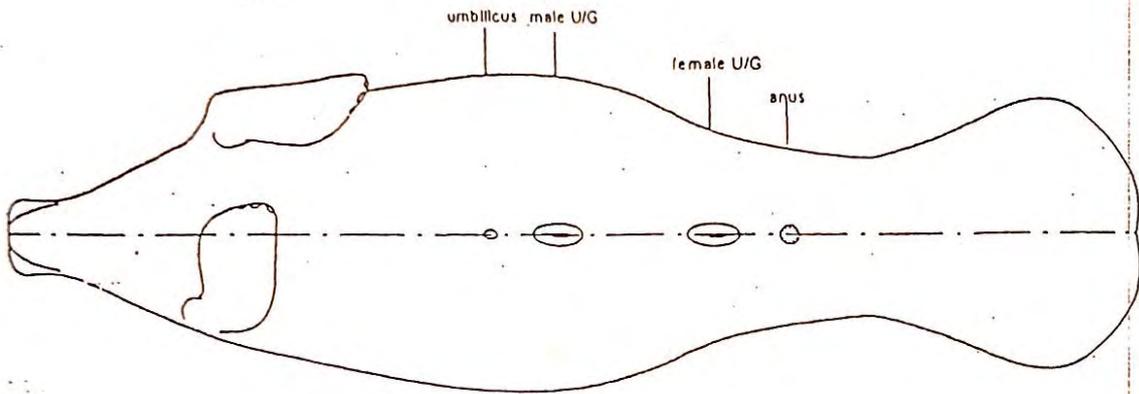
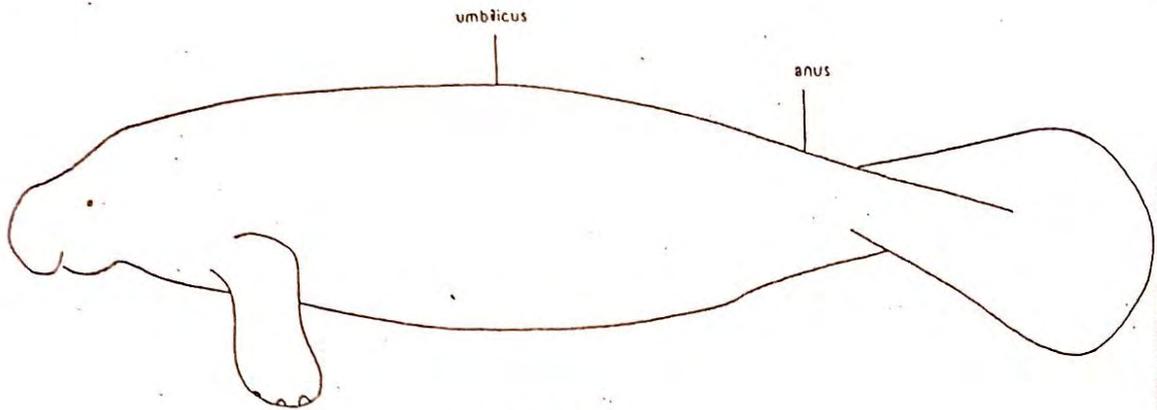
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet Sep 2002

FIELD I.D.

MCC21197



CV-06111909/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21198
Date of Report: 2021-Feb-28
Filed By: FWC EC Field Station

FWC Case # 3726 **FWC Region:** NE

Sex: Male **Length:** 310 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-28 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 35 m NNE of 4428 North Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Actual length of remains was 299cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	310 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21198

RECOVERY DATE 01 March 2021

GENDER Male **TL** 299; 310 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **28 February 2021**, at 0809 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3726 was assigned. The complainant, Steven Igeneri (413-923-4243), stated that the carcass was belly up and large. At 0857 hrs, SMW received a verification photo. **01 March**, FWC biologists-William Greer (WDG) and Christine Fontaine (CMF) arrived at the Port St. John boat ramp at 0910 hrs and launched the ECFL Key West. After collecting and completing external work ups for MEC21197 and MEC21189, WDG and CMF secured MEC21198 to the Key West at 1225 hrs and towed the carcass (and MEC21186, MEC21190, and MEC21202) to nearby remote shoreline. An external work up was completed by 1435 hrs. The remains were left on site.

EXTERNAL Almost all the epidermis was missing. The carcass was dorsoventrally flattened due to decomposition. There were rents due to decomposition and/or scavenging on the ventrum. The fluke margin was eroded. The actual length of the remains was 299 cm. The fluke appeared to have one large, distinct, well-healed mutilation between the 2 and 6 o'clock positions. There was a minimum of three well-healed, watercraft-related scar series on the dorsal aspect. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-03-01_FWC049_4771 through 4791

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

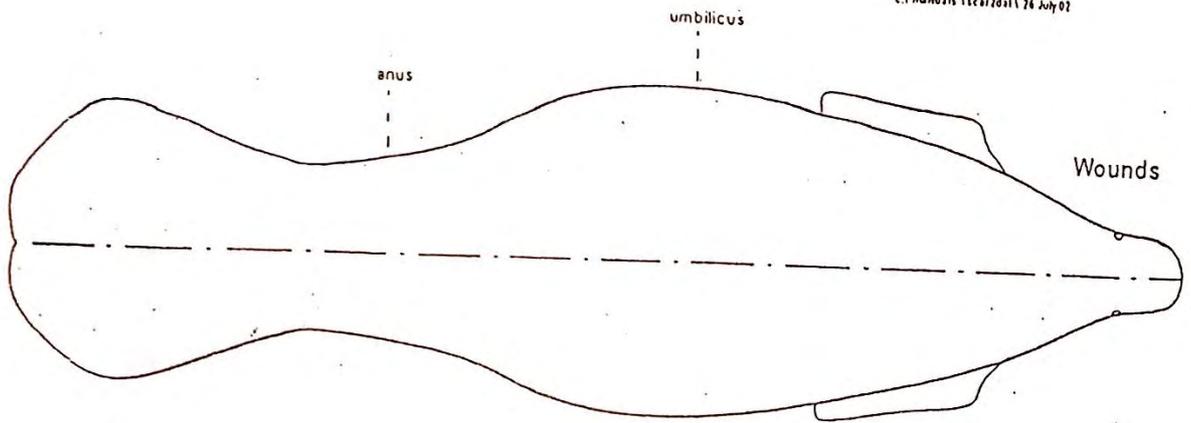
N/A

REPORT FILED BY Wappes/Greer

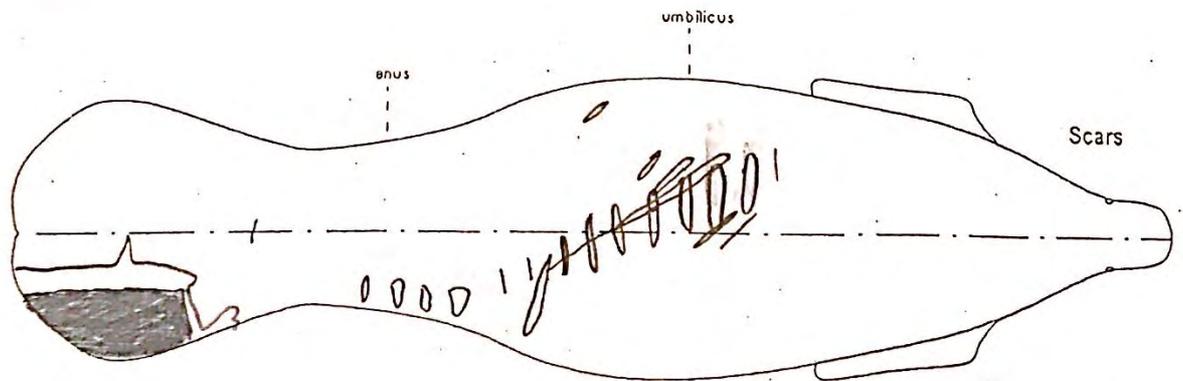
Date 21 MAR 2021

Field I.D. MEC21198

© Manuals & Scar Data 26 July 02

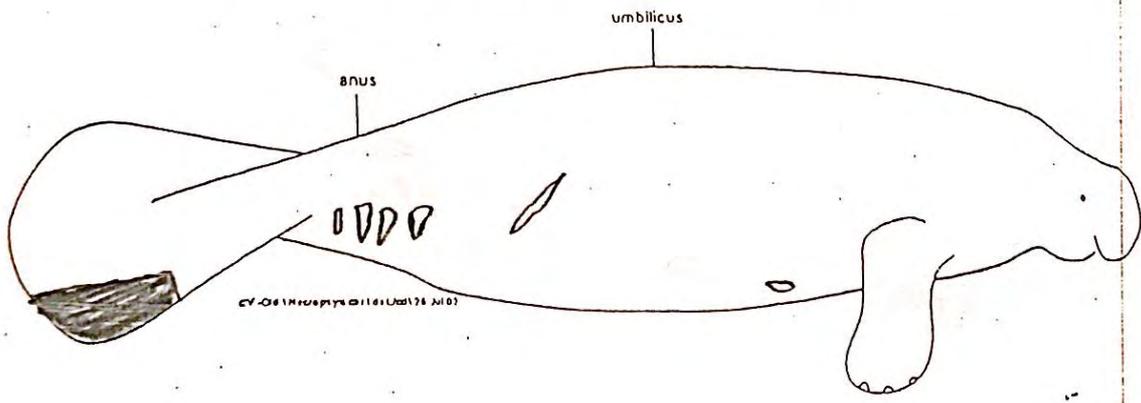
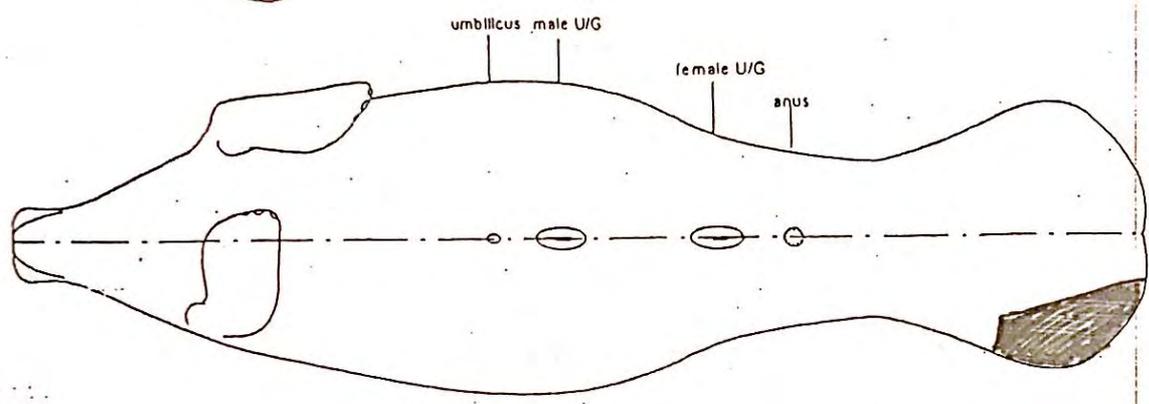
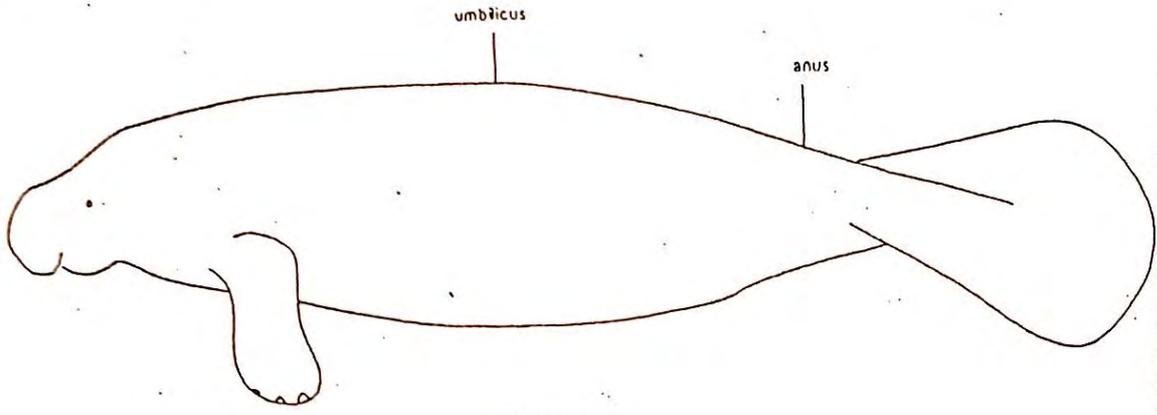


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet, Sep 2002

FIELD I.D. MEC21198



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21199
Date of Report: 2021-Feb-28
Filed By: FWC EC Field Station

FWC Case # 3759 **FWC Region:** NE

Sex: Unknown **Length:** 245 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-28 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Indian River **Longitude:** W

Waterway: Indian River

Locality description: Vero Beach, floating approximately 530 m E of 330 E Forest Trail.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	245 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21199

RECOVERY DATE N/A

GENDER Undetermined **TL** 245 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 28 February 2021, at 1225 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Vero Beach, Indian River County. FWC case number 3759 was assigned. The complainant, Ryan Hines (517-230-0613), stated that the carcass was in the NW corner of Crawford Creek. At 1232 hrs, SMW received a verification photo. Based on state of decomposition, location in remote area, and high carcass load, no response was planned. The remains were left on site.

EXTERNAL Based on complainant photos, all of the epidermis was missing. The dermis was sunburnt. The carcass was dorsoventrally flattened due to decomposition. The face, fluke margin, and peduncle were eroded. There were signs of scavenging. No watercraft-related wounds or scars were observed. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-28_PUBLIC_ECFL_01 through 06

COMMENTS

SIGNIFICANT FINDINGS

- Verified by photographs

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21200
Date of Report: 2021-Feb-23
Filed By: FWC EC Field Station

FWC Case # 3350 **FWC Region:** NE

Sex: Male **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-23 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Crane Creek

Locality description: Melbourne, floating approximately 40 m N of 2222 S Harbor City Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21200

RECOVERY DATE N/A

GENDER Male **TL** 180 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 23 February 2021, at 1619 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in Crane Creek, Melbourne, Brevard County. FWC case number 3350 was assigned. The complainant, Tim Cross (908-625-3879), stated that the carcass was a juvenile and approximately 5 feet long. At 1816 hrs, SMW received a verification photo. Due to the state of decomposition and high carcass load, no response was planned. The remains were left on site.

EXTERNAL Based on complainant photos all of the epidermis was missing. The dermis was sunburnt. The carcass was dorsoventrally flattened due to decomposition. The GI tract protruded out of rent due to decomposition and/or scavenging at the urogenital opening. PIT tag scan was not performed.

PHOTOGRAPHS 2021-02-23_PUBLIC_ECFL_3186 through 3187

COMMENTS

SIGNIFICANT FINDINGS

- Verified by photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21201
Date of Report: 2021-Mar-01
Filed By: FWC EC Field Station

FWC Case # 3850 **FWC Region:** NE

Sex: Male **Length:** 215 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-01 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-02 **By:** VCMMST-Chad Murch

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: Oak Hill, floating approximately 75 m WNW of 290 HH Burch Road.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21201

RECOVERY DATE 02 March 2021

GENDER Male **TL** 215 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **01 March 2021**, at 1049 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River North, Oak Hill, Volusia County. FWC case number 3818 was assigned. The complainant, Sheila Strickland (386-566-9732), stated that the carcass was fresh and back up and that she had no photos of it. At 1155 hrs, Volusia County Marine Mammal Stranding Team-Chad Murch (CM) arrived at the carcass location and verified that the carcass was badly decomposed and belly up. SMW requested Volusia County assistance in towing the carcass to a remote location. At 1605 hrs, SMW received a text alert from FWC NE Dispatch-Orlando regarding the same dead manatee in Indian River North, Oak Hill. FWC case number 3850 was assigned. The complainant, William Pinkous (815-981-0376), stated that the carcass was discolored. **02 March**, at 1039 hrs, CM notified SMW that he had relocated the carcass to a nearby remote canal. The remains were left on site.

EXTERNAL Based on photos, all of the epidermis was missing. The carcass was slightly distended with gas. There were signs of scavenging. PIT tag scan was not performed.

PHOTOGRAPHS 2021-03-01_PUBLIC_ECFL_01; 2021-03-02_PUBLIC_ECFL_1128 through 1129

COMMENTS

SIGNIFICANT FINDINGS

- Verified by partner organization

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Wappes

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21202
Date of Report: 2021-Mar-01
Filed By: FWC EC Field Station

FWC Case # **FWC Region:** NE

Sex: Female **Length:** 316 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE COLLECTED: 2021-Mar-01 **By:** FWC-WDG,MMPL-CMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Cocoa, grounded approximately 55m E of 4355 North Indian River Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	316 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21202
RECOVERY DATE 01 March 2021
GENDER Female **TL** 316 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **01 March 2021**, at 0910 hrs, FWC biologists-Bill Greer (WDG) and Christine Fontaine (CMF) arrived at Port St. John boat ramp and launched the ECFL Key West to recover MEC21186, MEC21189, MEC21190, MEC21197 and MEC21198. At 1216 hrs, WDG located an additional carcass in the Indian River, Cocoa, Brevard County. WDG and CMF secured the carcass to the Key West at 1220 hrs, towed to a remote location (along with MEC21186, MEC21190, and MEC21198), and completed an external work up by 1432 hrs. The remains were left on site. At 1543 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3847 was assigned. The complainant, Alan Bukis, stated that he had seen the manatee at 1100 hrs, was at work now, but would take a picture when he returned home. Based on location, SMW thought it was likely MEC21202. At 1752 hrs, the complainant notified SMW that the carcass was no longer there.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. Watery, red fluid exuded from the nares. The carcass was distended with gas. There was a moderate green algal mat on the right lateral aspect. There was a mild infestation of barnacles on the dorsal fluke. There was a minimum of five well healed, watercraft-related scar series on the dorsal aspect and fluke. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-03-01_FWC049_4792 through 4811

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

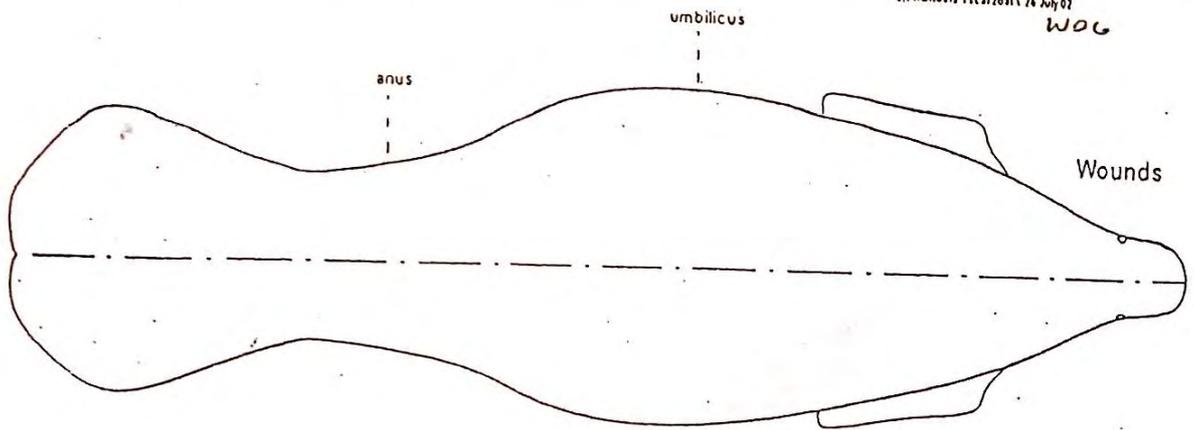
REPORT FILED BY Wappes/Greer

Date 01 MAR 2021

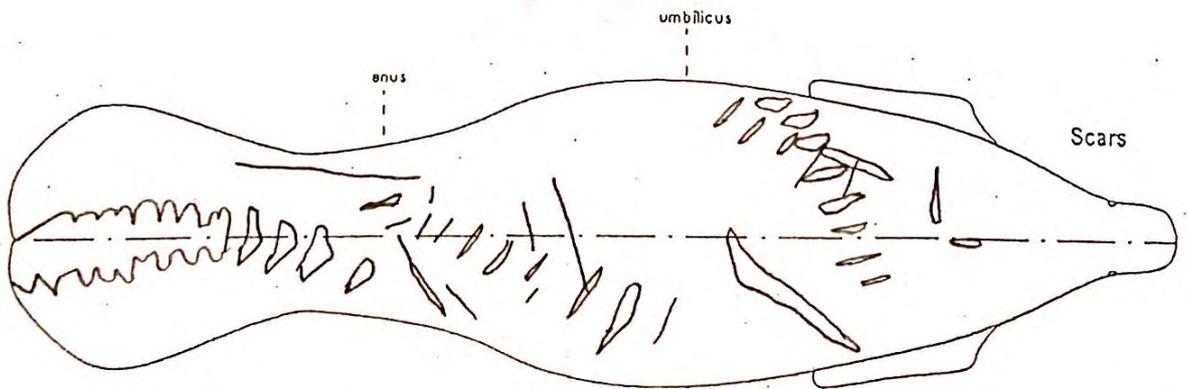
Field I.D. MEC21202

CSI Manuals 1 Scar Data 26 July 02

WOG



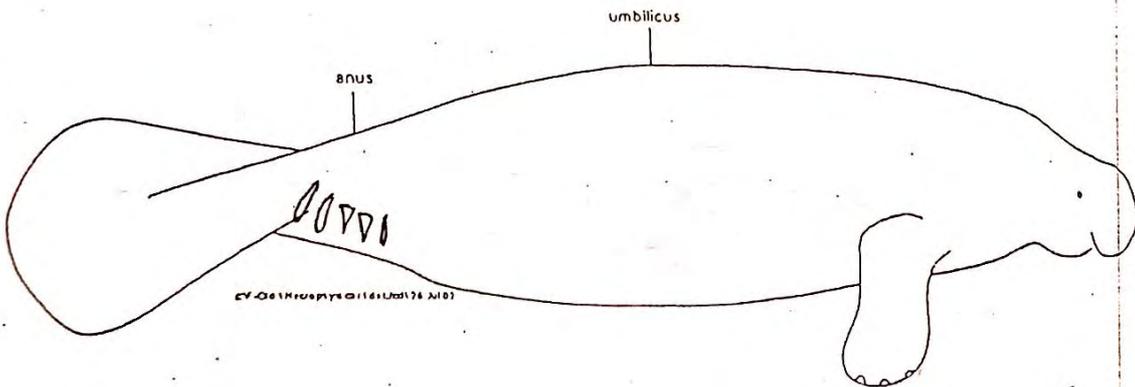
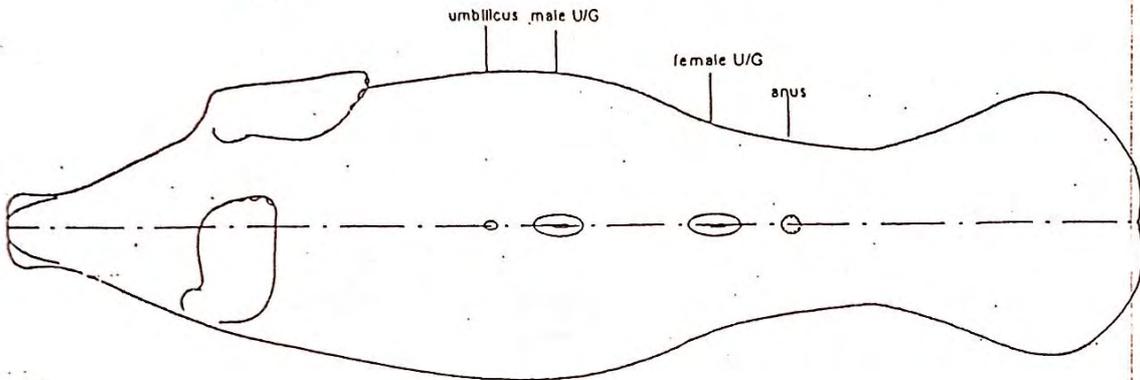
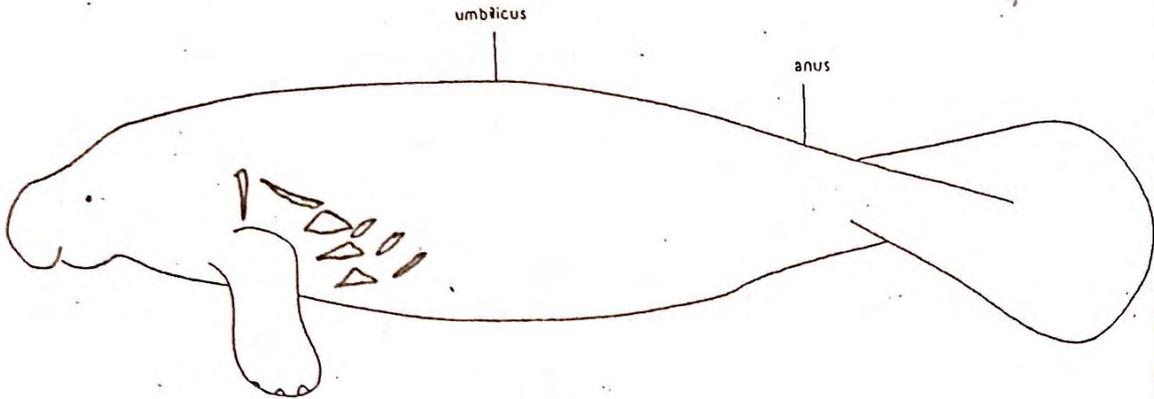
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Scar Data sheet Sep 2002

FIELD I.D.

MCC 21202



CV-061800pysa (16x) Uni 76 Jul 07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21203
Date of Report: 2021-Mar-03
Filed By: FWC EC Field Station

FWC Case # 3929 **FWC Region:** NE

Sex: Female **Length:** 318 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-03 **By:** FWC-SMW,CMM

DATE NECROPSIED: 2021-Mar-03 **By:** FWC-SMW,CMM

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 1.3 km ESE of 2035 Parrish Road.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Undetermined: Too Decomposed

EXPLAIN: Autolyzed and/or missing internal organs. Serous fat(s); Dry, hard feces; Crumbly feces.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics. Stomach contents, feces.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Uterine Scar. A field necropsy was performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	318 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21203
RECOVERY DATE 03 March 2021
GENDER Female **TL** 318 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 03 March 2021
CONDITION Badly Decomposed

HISTORY 03 March 2021, at 0840 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Titusville, Brevard County. FWC case number 3929 was assigned. The complainant, Mr. Flutes (407-968-8054), stated that the carcass was belly up and intact with its skin starting to peel. SMW and FWC biologist-Carley Metcalf arrived at the Nasa Railroad bridge at 1035 hrs, verified the carcass at 1052 hrs, and completed a field necropsy by 1220 hrs. The remains were left on site.

EXTERNAL Approximately 25% of the epidermis was present but sloughing. The carcass was distended with gas. There were eight well healed, watercraft-related scar series on the dorsal aspect and one well healed, watercraft-related scar series on the head. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal fat. There was a moderate amount of serous and gassy mesenteric fat. There was a small amount of serous and gassy omental fat.

STOMACH The stomach contained 3.7 L of moist, moderately chewed, leafy, stringy, brown digesta mixed with yellow and red macroalgae. No parasites were observed. The mucosa was autolyzed. There was a diffuse brown to red coloration of the stomach wall.

DUODENUM The duodenum contained 500 mL of moist, moderately chewed, leafy, stringy, brown digesta mixed with yellow and red macroalgae and a small amount of watery, gray fluid. The mucosa was autolyzed. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained a small amount of viscous gray fluid. The mid small intestine was mostly empty with intermittent sections of moist, moderately formed, poorly chewed, leafy, stringy, yellow to brown ingesta. The distal small intestine contained moist, moderately formed, poorly chewed, leafy, stringy, yellow to brown ingesta. The mucosa was autolyzed. No parasites were grossly observed.

CECUM The cecum contained 3 L of moist, poorly digested, leafy, stringy, yellow to green digesta mixed with yellow macroalgae and dark brown to black vegetation (see photo). The mucosa was autolyzed. No parasites were observed.

COLON The distal-most portion of the colon contained dry, crumbly, well digested, poorly formed, stringy brown feces. The proximal portion of the distal colon contained slightly moist, well digested, well formed, stringy brown feces. The distal portion of the mid-colon contained very moist, well digested, poorly formed, stringy brown feces mixed with red and yellow macroalgae. The proximal portion of the mid colon contained slightly moist, moderately digested, moderately formed, stringy, leafy brown feces mixed with red and yellow macroalgae. The distal portion of the proximal colon contained moist, poorly digested, poorly formed, stringy, leafy, green feces mixed with red and yellow macroalgae. The mid portion of the proximal colon contained moist, moderately digested, well formed, extremely stringy, leafy brown feces mixed with red and yellow macroalgae and dark brown to black vegetation. The proximal-most portion of the colon contained moist, moderately digested, well formed, stringy, leafy brown to green feces mixed with red and yellow macroalgae. There was a 16 x 4 cm long piece of gray duct tape in the contents of the proximal colon (see photo). The mucosa of the proximal colon was sloughing. The mucosa of the mid and distal colon was autolyzed. No parasites were grossly observed.

PANCREAS The pancreas was soft and gassy. The pancreas was gray on serosal surfaces and pink on cut surfaces.

SPLEEN The spleen was mottled gray to black on serosal surfaces and gray on cut surfaces.

LIVER The liver was soft, friable, and autolyzed.

GALLBLADDER The gallbladder was empty of contents. The mucosa was stained yellow to black.

REPRODUCTIVE There was a moderate amount of serous reproductive fat. The reproductive organs were soft and friable. The uterus was contracted. The uterine horns were distended with gas. The left uterine horn contained a scar. Both ovaries contained numerous fluid-filled follicles (maximum diameter 0.8 cm).

KIDNEYS The perirenal fat was rendered. The kidneys were soft. Both kidneys were brown on serosal surfaces. On cut surfaces, the cortices of the left kidney were gray to brown and the medullae were red. The corticomedullary boundaries of the left kidney were mostly distinct. On cut surfaces, the cortices of the right kidney dark red and the medullae were dark red. The corticomedullary boundaries of the right kidney were indistinct.

URINARY BLADDER The urinary bladder contained 50 mL of watery, pink to red tinged urine. The mucosa was gassy.

HEART The epicardial fat was rendered. The heart was soft. The valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were torn due to decomposition. Both lungs were soft, friable, and autolyzed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER

PHOTOGRAPHS 2021-03-03_FWC049_4832 through 4872

COMMENTS A fecal and stomach sample were collected for IRL feeding ecology study.

SIGNIFICANT FINDINGS

- Serous fats
- Autolyzed internal organs
- Macroalgae in GI tract
- Duct tape in colon

PROBABLE CAUSE OF DEATH Undetermined; Too Decomposed

NECROPSY CONDUCTED BY

Sara M. Wappes
Carley M. Metcalf

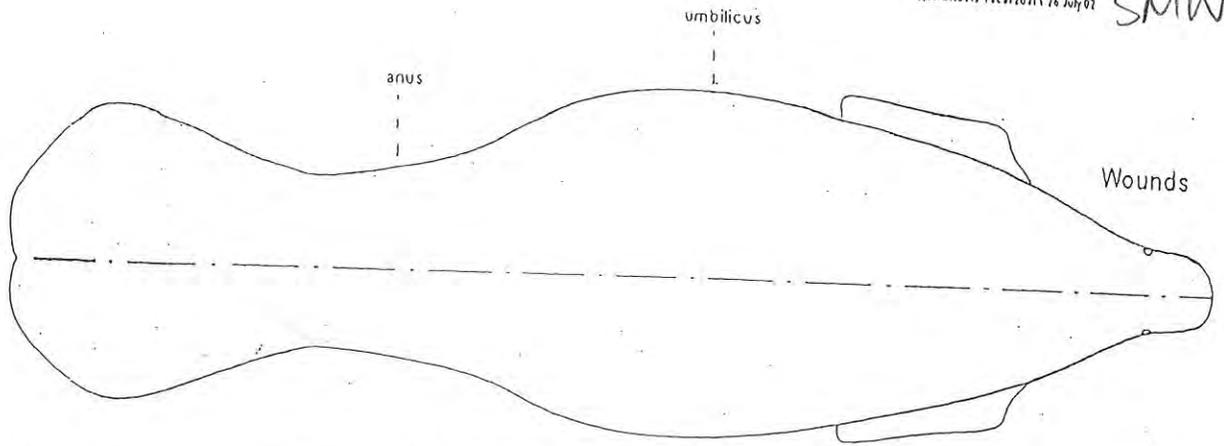
REPORT FILED BY Wappes/Metcalf

Date 03 MAR 2021

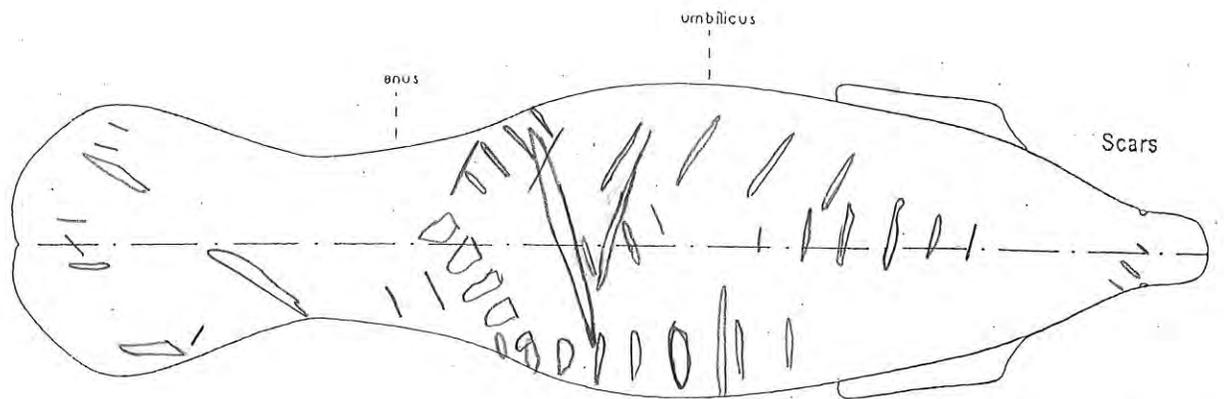
Field I.D. MEC21203

© 1 March 1997/2011 26 July 02

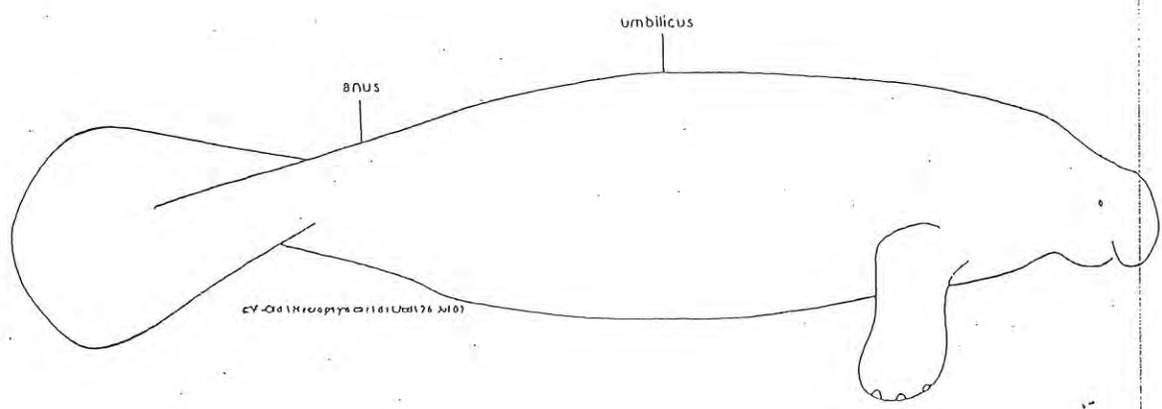
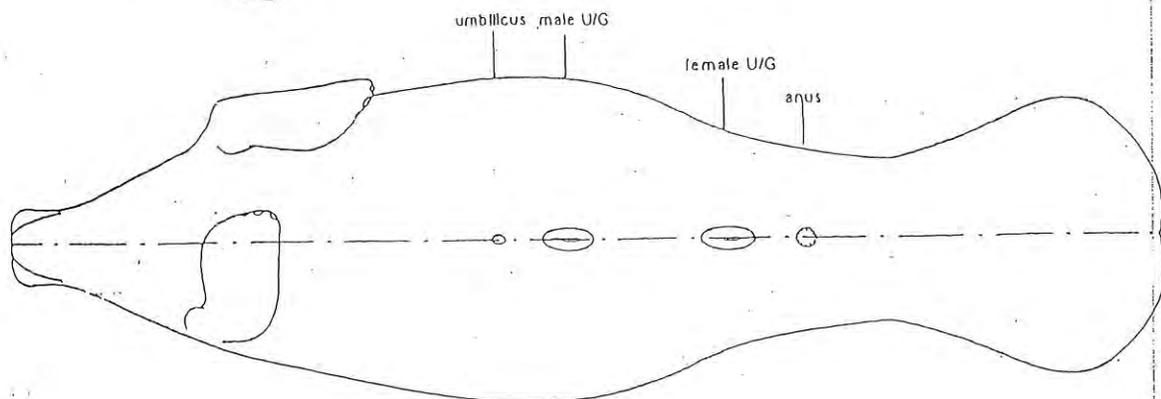
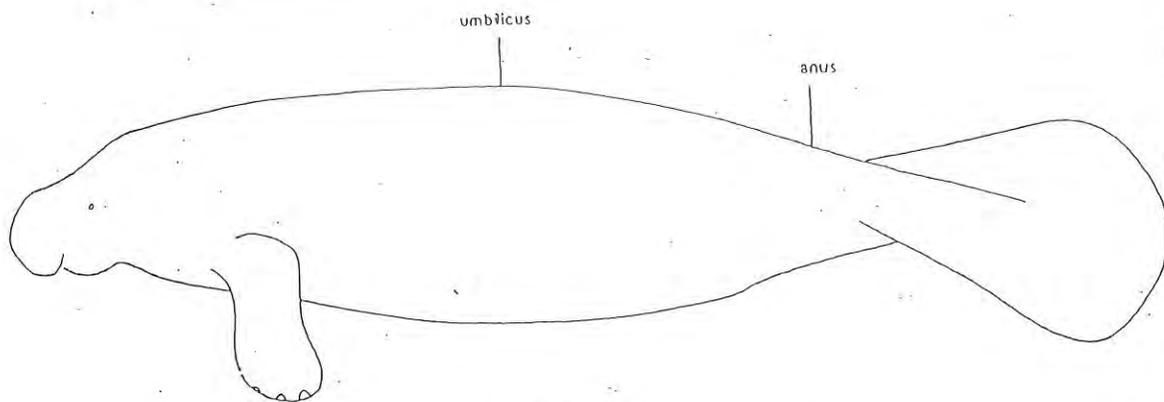
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



CV-001 (Kroepys 0116) Umbil 26 Jul 07

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21204
Date of Report: 2021-Mar-03
Filed By: FWC EC Field Station

FWC Case # 3947 **FWC Region:** NE

Sex: Female **Length:** 336 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-03 **By:** Citizen to FWC NE Dispatch
DATE COLLECTED: 2021-Mar-04 **By:** FWC-SMW,MMPL-CMF,FWC Intern-K. Lawson
DATE NECROPSIED: 2021-Mar-04 **By:** FWC-SMW,MMPL-CMF,FWC Intern-K. Lawson

LOCATION: State: FL **Latitude:** N
County: Brevard **Longitude:** W
Waterway: Indian River

Locality description: Cocoa, grounded approximately 75 m W of 4640 Brentwood Drive.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Autolyzed and/or missing internal organs. Serous fat(s); Depleted fat(s); Empty GI tract.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics. Feces.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Uterine Scar. A field necropsy was performed. Known as MIPS ID BC308, TBC012, "Heike", first sighted on 13 Feb 1980 at the Indian River OUC/Reliant power plant.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	336 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21204
RECOVERY DATE 04 March 2021
GENDER Female **TL** 336 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 04 March 2021
CONDITION Badly Decomposed

HISTORY **03 March 2021**, at 1208 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Cocoa, Brevard County. FWC case number 3947 was assigned. The complainant, David Sharp (321-917-0553), reported a dead manatee behind his home. The manatee was verified via photo at 1213 hrs. At 1530 hrs FWC biologist-Christine Fontaine (CMF) and FWC LE officer Seth Loeffler located the animal and secured the carcass at the OUC boat ramp at 1615 hrs for retrieval the next day. **04 March**, CMF, SMW and FWC intern-Kylie Lawson arrived at OUC boat ramp at 1035 hrs, loaded the carcass via U-trailer at 1051 hrs, and transported the carcass to the Brevard County landfill. A necropsy was completed at 1300 hrs. The remains were disposed of at the Brevard County landfill.

EXTERNAL Approximately 30% of the epidermis was present and sloughing. The cranial dermis of the ventrum was sunburnt. A moderate amount of bloody fluid exuded from the nares. The carcass was distended with gas. There was cobblestone-like epidermis on the dorsal fluke and ventrum. There was a thick brown algal mat on the remaining epidermis of the left lateral aspect. There were mites on the ventral fluke. No watercraft-related wounds were observed. There was a minimum of 11 well healed, watercraft-related scar series on the dorsal aspect and fluke. The fluke margin had six large, distinct, well-healed mutilations between the 3 and 8 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal fat. There was a moderate amount of gassy omental fat. There was an abundant amount of serous and gassy mesenteric fat.

STOMACH The stomach contained 25 mL of viscous, grey to tan fluid. The mucosa was unremarkable. No parasites were observed. Mucosa autolyzed throughout.

DUODENUM The stomach contained 250 mL of viscous, grey to tan fluid. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine was empty. The mid small intestine had scant watery, yellow fluid. The distal small intestine had scant viscous, gray fluid. No parasites were grossly observed. The mucosa was autolyzed throughout.

CECUM The cecum contained 800 mL of moist, partially digested, fibrous, stringy, and leafy orange to brown digesta. No parasites observed. The mucosa was autolyzed.

COLON The proximal colon contained a moderate amount of moist, moderately formed, poorly digested, stringy, fibrous, leafy dark orange to brown feces. The mid colon contained a moderate amount of moist, well-formed, moderately digested, very stringy yellow to brown feces. The distal colon contained a moderate amount of moist, well-formed well digested, stringy brown feces. No parasites observed throughout. The mucosa was autolyzed throughout.

PANCREAS The pancreas was soft, friable, autolyzed

SPLEEN The spleen was soft, friable, autolyzed.

LIVER The liver was soft, friable, autolyzed

Commented [FC1]: Is this true??

Commented [WS2R1]: yes

GALLBLADDER The gallbladder had a scant amount of slightly viscous golden yellow to orange bile. Mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. Both uterine horns had uterine scars. Uterine horns and uterus were contracted. Ovaries were autolyzed.

KIDNEYS There was scant perirenal fat. The kidneys were pink to brown on serosal surfaces. On cut surfaces, the cortices were pink to brown and the medullae were red. The corticomedullary boundaries were mostly indistinct and some had a black line.

URINARY BLADDER The bladder contained 50 ml of flocculent, pink-tinted urine. The mucosa was gassy.

HEART There was scant epicardial fat. The valves and chambers of the heart were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were torn due to decomposition. The right lung was soft, friable and autolyzed. The left lung was soft and friable. The serosal surface was light pink to purple and the cut surfaces were red. The airway disintegrated upon cutting. The mucosa was unremarkable. No parasites were observed.

HEAD & NECK REGIONS The mucosa of the trachea was tan.

SKELETON NVL

OTHER

PHOTOGRAPHS 2021-03-04_FWC050_1889 through 1930

COMMENTS A fecal sample was collected for the IRL feeding ecology study.

SIGNIFICANT FINDINGS

- Mostly serous and depleted fats
 - Empty upper GI tract
 - Autolyzed internal organs
-

PROBABLE CAUSE OF DEATH Natural

NECROPSY CONDUCTED BY

Sara M. Wappes
Christine M. Fontaine
Kylie C. Lawson (Intern)

REPORT FILED BY C. Fontaine

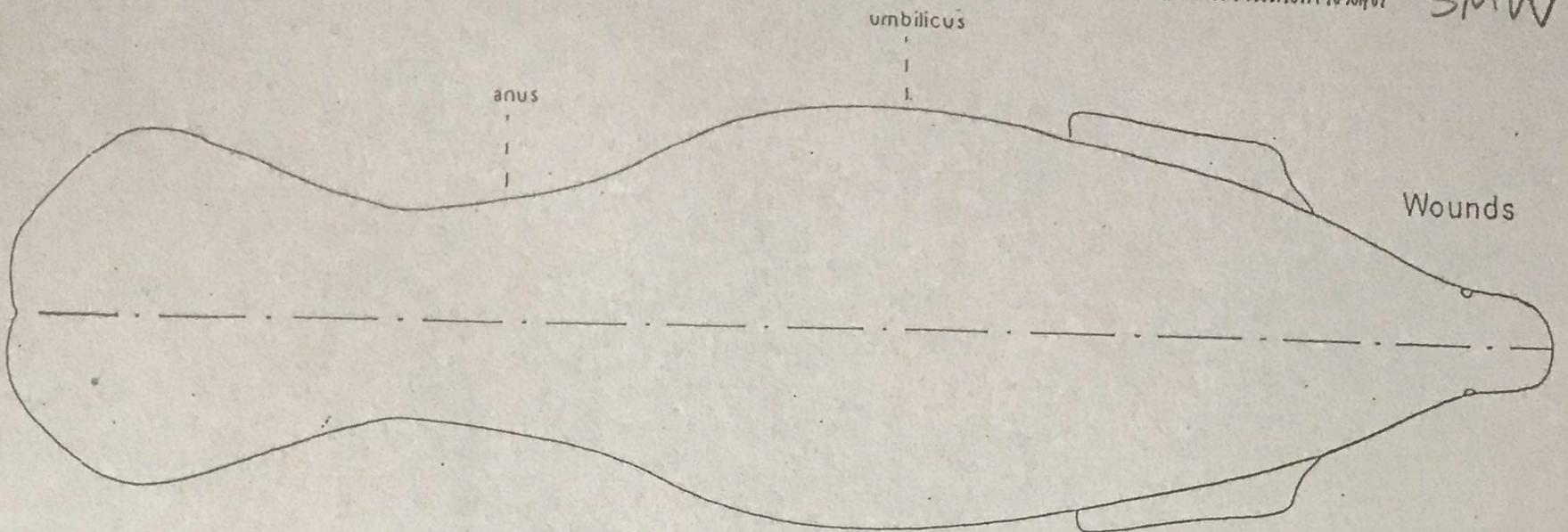
PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Date 04 MAR 2021

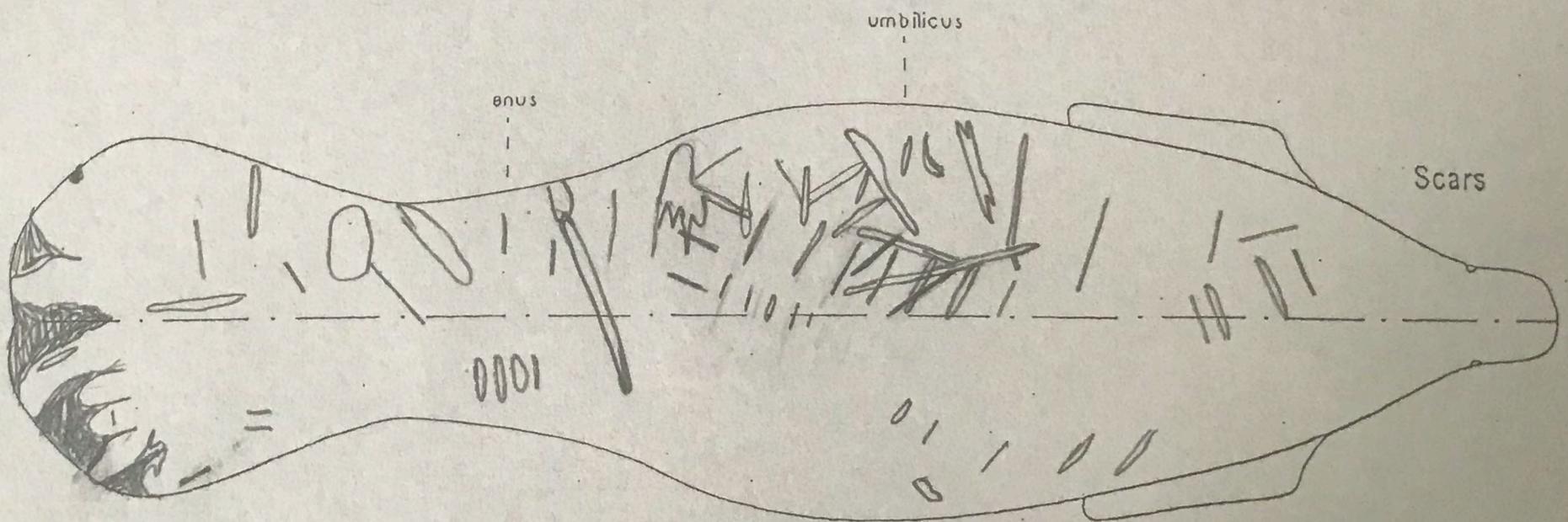
Field I.D. MEC21204

© Manuals & Scar Data 26 July 02

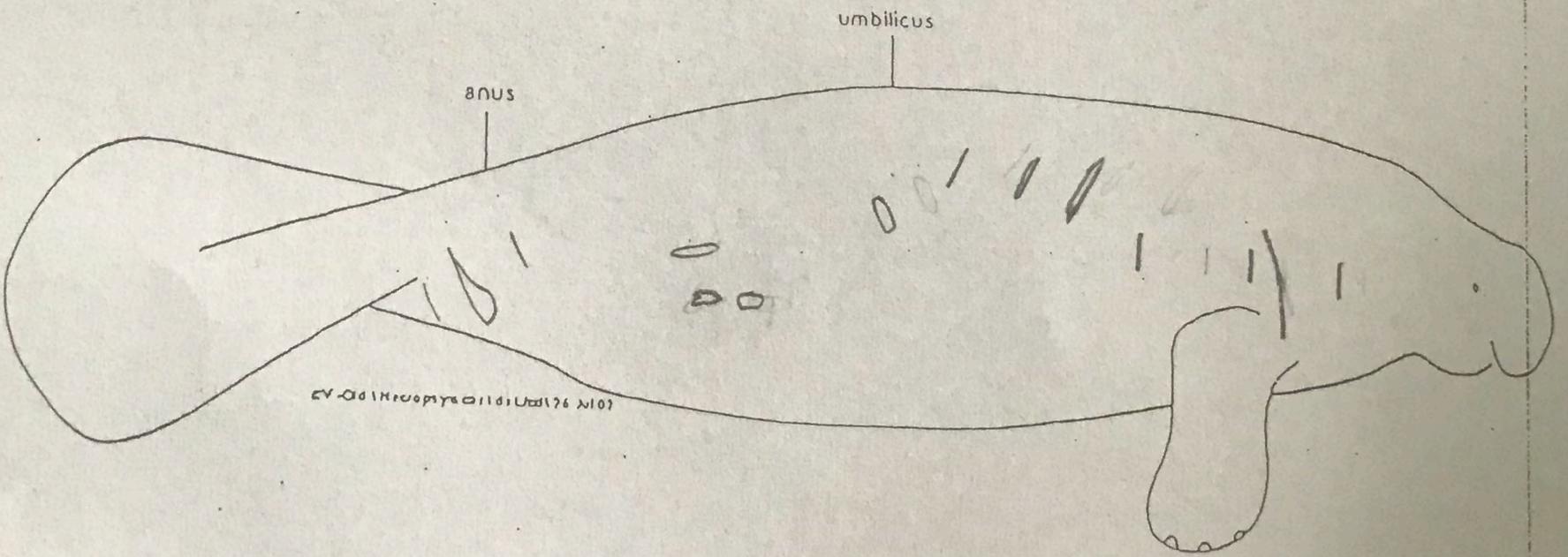
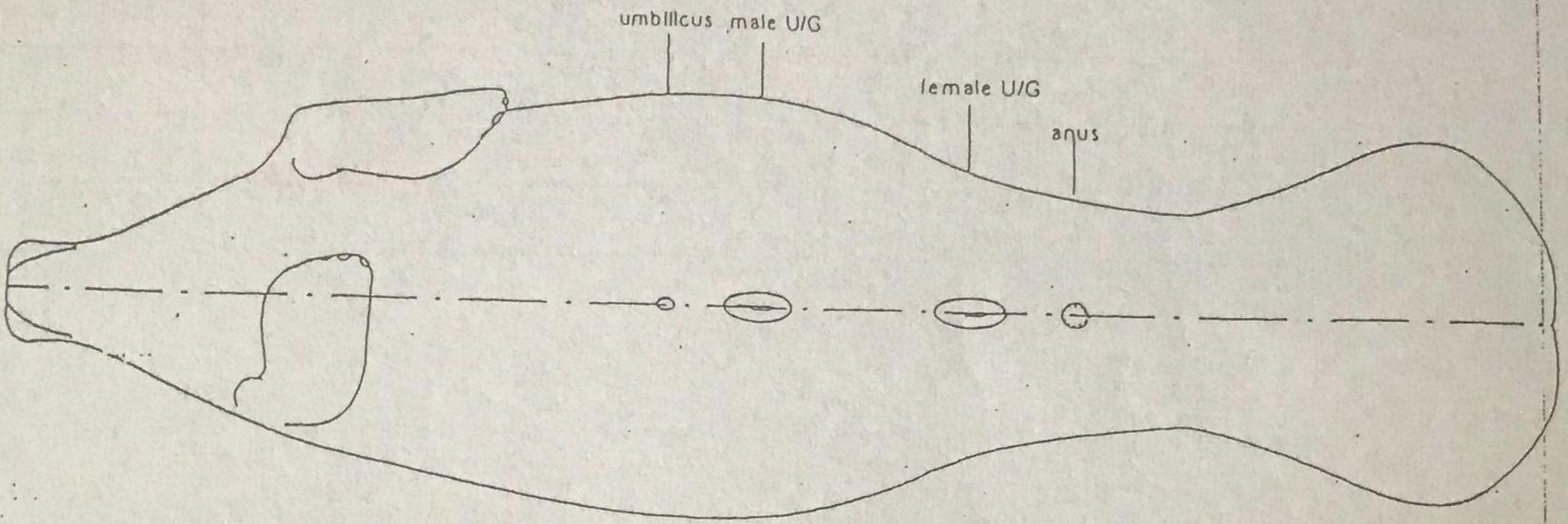
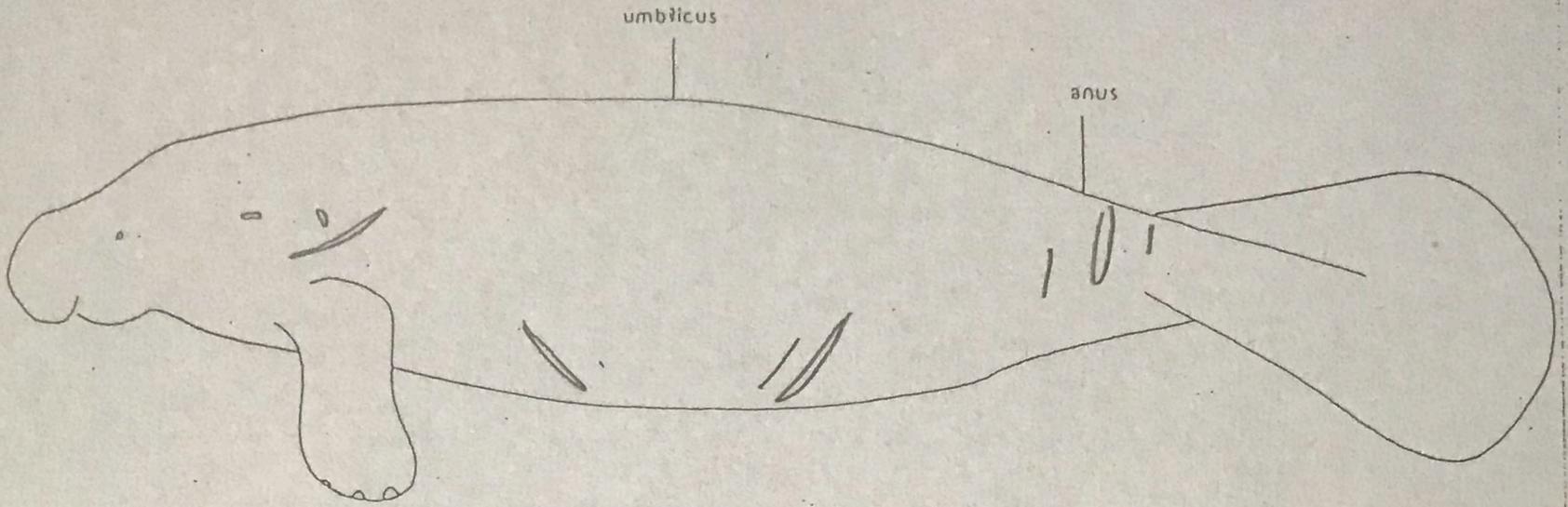
SMW



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. MEC21204



CV-061Kruopysa01161Ud176 N107

Bassett, Brandon

From: Rood, Kari
Sent: Thursday, March 11, 2021 10:00 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MEC21204=BC308

MEC21204=BC308. This animal is also known as TBC012 and Heike.

Carcass location: Indian River, Cocoa
Female

First sighted 2/13/1980 at Indian River OUC/Reliant Power Plant
Tagged 11/17/1987 in Indian River, Banana Creek
Last sighted 6/5/2018 in Indian River, Haulover Canal

Verifiers: SMW 3/7/21 & KAH 3/11/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21205
Date of Report: 2021-Mar-04
Filed By: FWC EC Field Station

FWC Case # 3998 **FWC Region:** NE

Sex: Unknown **Length:** 320 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-04 **By:** FWC-CMM,ISM-KKB

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Palm Bay, floating approximately 85 m NE of 3360 Dixie Highway Northeast.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. The actual length of the remains was 314cm.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	320 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA.
 FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21205

RECOVERY DATE 04 March 2021

GENDER Undetermined **TL** 314; 320 (est) **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **04 March 2021**, at 1116 hrs, FWC biologist-Sara Wappes (SMW) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Indian River in Palm Bay, Brevard County. FWC case number 3998 was assigned. The complainant, Kate (321-725-7775), described a dead manatee floating behind the Marine Resources Council in Palm Bay. At 1125 hrs, SMW received photo verification. At 1300 hrs, FWC biologist-Carley Metcalf (CMM) and FWC biologist-Kristy Brightwell (KB) arrived at the reported location. CMM hand-towed the carcass to a portion of remote shoreline. At 1415 hrs, CMM and KB completed an external work up. The remains were left on site.

EXTERNAL Less than 10% of epidermis was present. The carcass was dorsoventrally flattened due to decomposition. The ventral dermis was missing due to scavenging and/or decomposition. The vertebral column and the rib cage were visible. There was evidence of shark scavenging along the lateral aspects and peduncle. The margins and large portions of the dorsal and ventral aspects of the fluke were eroded. The head was decomposed. There was a minimum of six well-healed, watercraft-related scar series on the dorsal and lateral aspects. There were two possible wounds or heavily eroded scars on the dorsal aspect (wounds #1 and #2). A genetics sample was collected. PIT tag scan was performed over remaining dermis and scan was negative.

OTHER

PHOTOGRAPHS 2021-03-04_FWC049_4875 through 4903

COMMENTS The total length was estimated due to severe scavenging of head and luxation of skull bones. Skeleton was inspected for fractures, but none were found. All bones were luxated.

SIGNIFICANT FINDINGS

- Verified by FWC biologists

PROBABLE CAUSE OF DEATH Undetermined; Not Necropsied

NECROPSY CONDUCTED BY

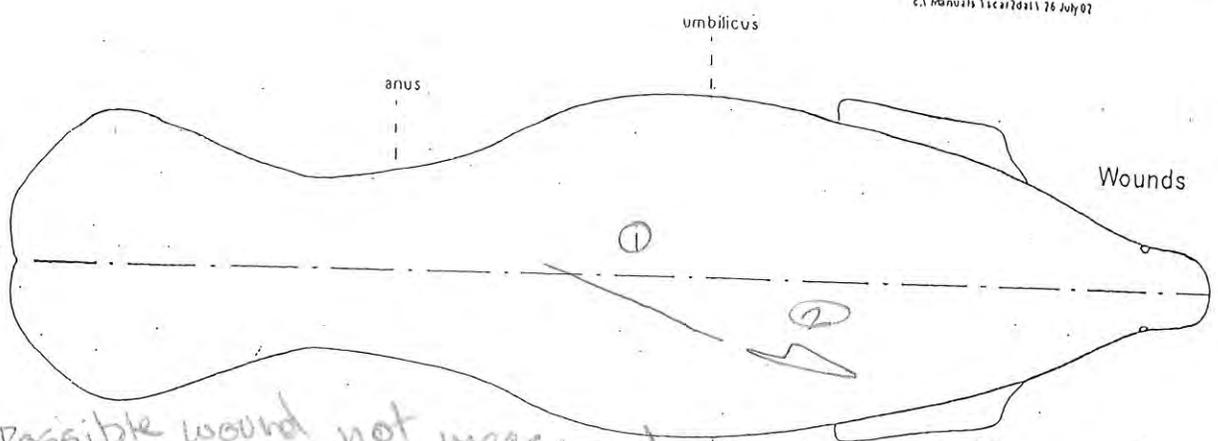
N/A

REPORT FILED BY Metcalf

Date 04 MAR 2021

Field I.D. MEC21205

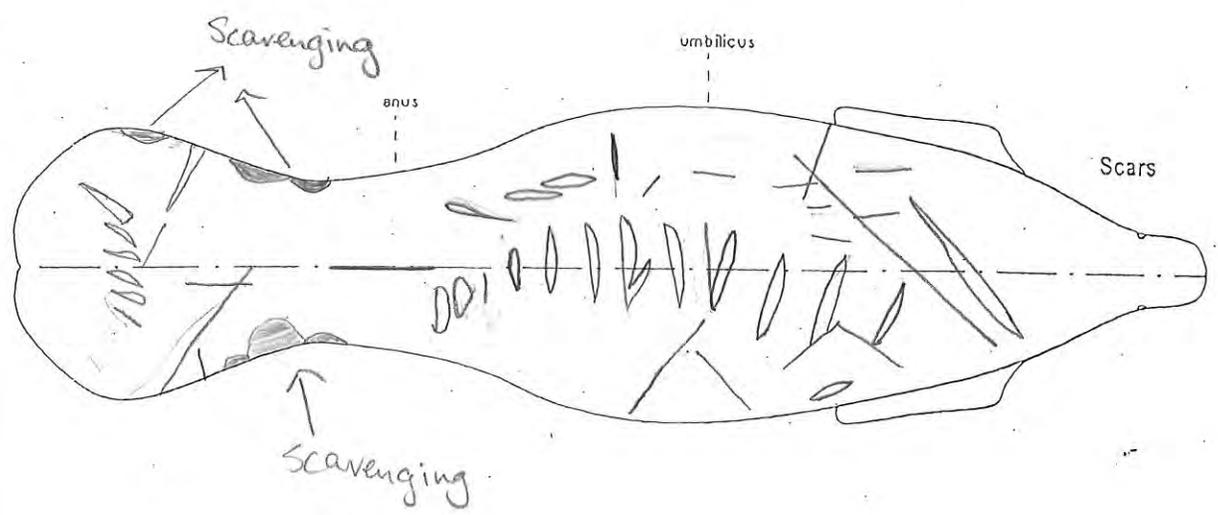
CSI Manuals 13car2011 26 July 02



Possible wound not measured (heavily eroded)

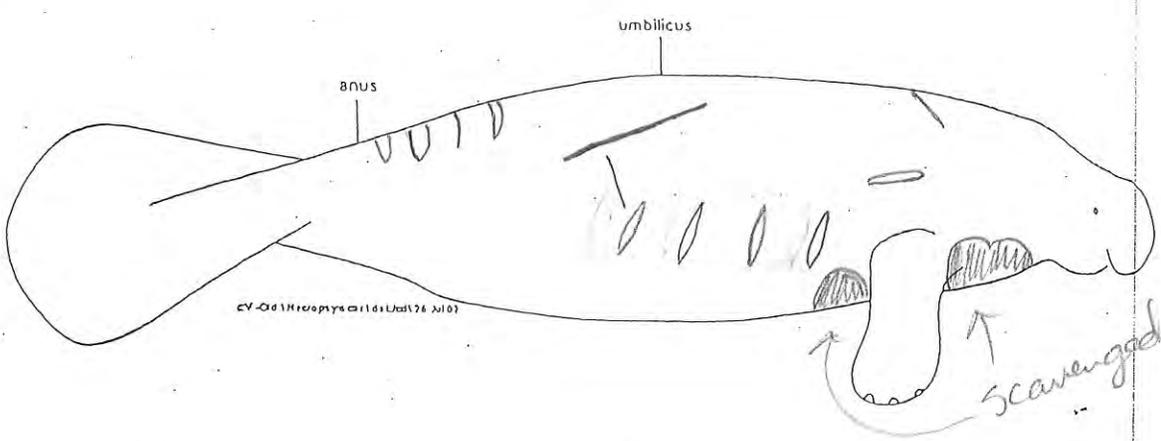
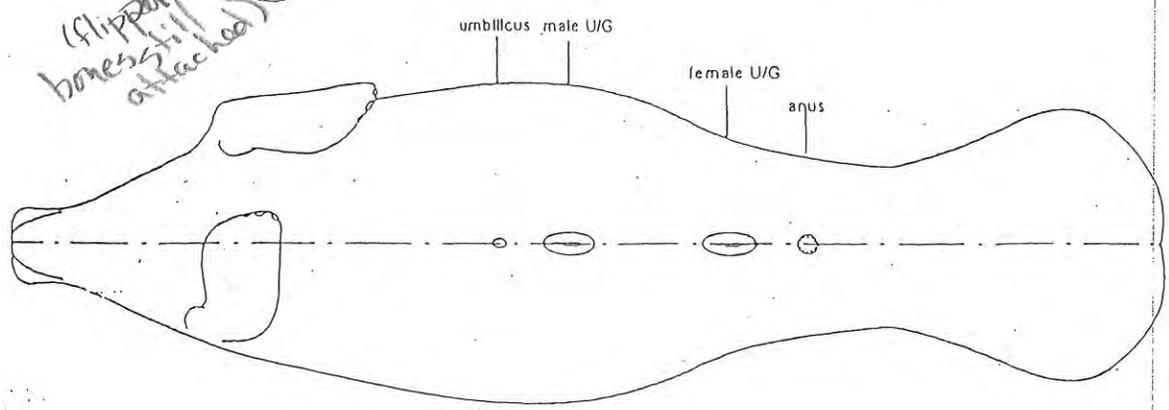
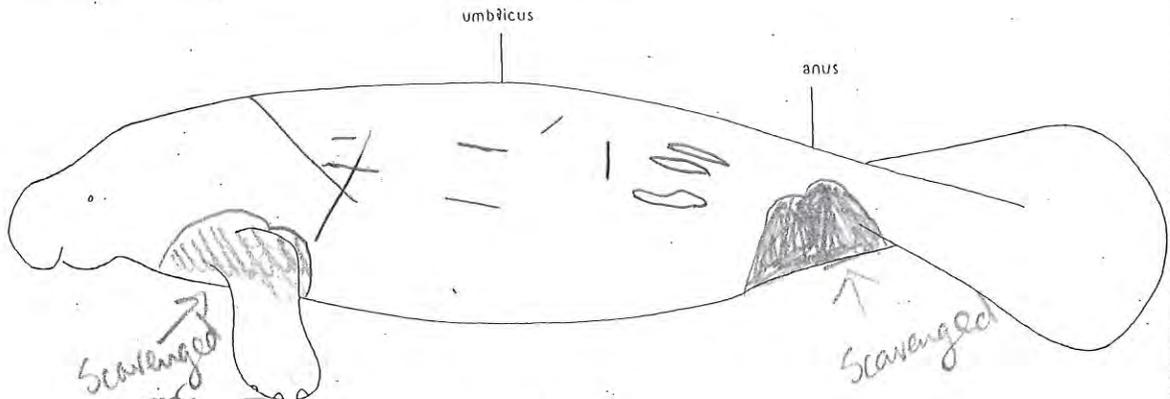
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Length																					
Width																					
Depth																					
Distance																					

CM



FIELD I.D.

MEC21205
04 MAR 2021



CV-001Hrcapys 01161 Lat 76 Jul 01

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____

PREGNANT: _____

UTERINE SCAR: _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MEC21206
Date of Report: 2021-Mar-04
Filed By: FWC EC Field Station

FWC Case # 4027 **FWC Region:** NE

Sex: Female **Length:** 278 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-04 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Mar-05 **By:** FWC-CMM,FWC LE

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Brevard **Longitude:** W

Waterway: Indian River

Locality description: Titusville, grounded approximately 80 m ENE of 1200 Riverside Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial.

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC EC Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	278 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MEC21206

RECOVERY DATE 05 March 2021

GENDER Female **TL** 278 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **04 March 2021**, at 1619 hrs, FWC biologist-Carley Metcalf (CMM) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River, Titusville, Brevard County. FWC case number 4027 was assigned. The complainant, Dale Nichols (321-246-3216), described a possibly injured manatee with a white gash he was looking at through binoculars behind his residence. At 1715 hrs, CMM received photo verification the manatee was deceased. A response was planned for the following day. **05 March**, at 0922 hrs, CMM and FWC LE Officer-Seth Loeffler (SL) left the Titusville Marina on an FWC LE boat and arrived at the reported residence at 0948 hrs. The carcass was towed to remote shoreline and an external work up was completed at 1140 hrs. The remains were left on site.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. The carcass was distended with gas. Red, watery fluid exuded from the nares. There was an orange substance on the ventral aspect and right flipper. It was linearly concentrated in some areas but diffuse in others, smooth in texture, and only came off when scratched. There was one watercraft related wound series on the right dorsal aspect (wound #1-10). Wound #2 and wound #3 penetrated the dermis. There was one, linear, superficial wound on the ventral aspect (wound #11). A minimum of eight well healed, watercraft related scar series were observed on the dorsal and lateral aspects. There were two sharp, triangular, tail mutilations at the two o' clock and three o' clock position. There were two rounded tail mutilations between the seven o' clock and eight o' clock positions. A genetics sample was collected. PIT tag scan was negative.

PHOTOGRAPHS 2021-03-05_FWC049_4904 through 4928

COMMENTS

SIGNIFICANT FINDINGS

- Verified by FWC biologists through photos

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

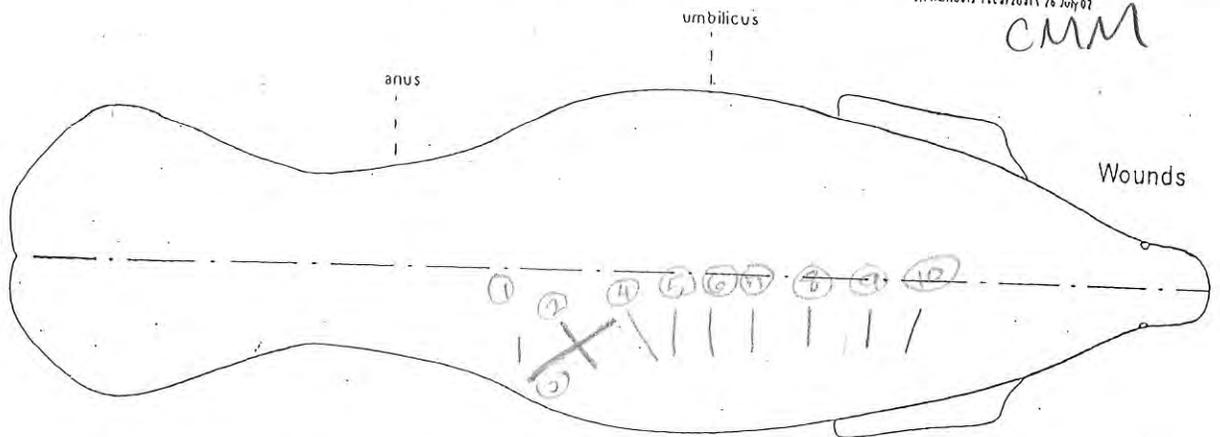
REPORT FILED BY Metcalf

Date 05 MAR 2021

Field I.D. MEC21206

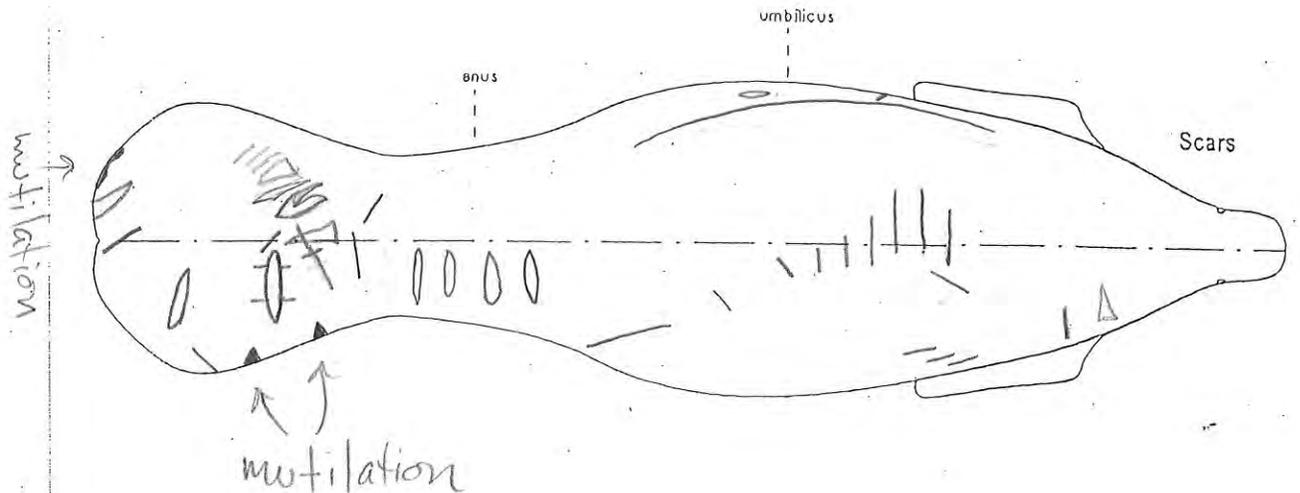
c:\Manuals\Scar2011 26 July 02

CMM



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length	6.0	14.1	26.0	12.0	8.5	8.3	9.5	8.1	8.6	8.7	12.0									
Width	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1									
Depth	0.01	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1									
Distance	15.3		11.5	12.5	11.1	14.4	12.5	13.3	13.0											

wound #11 found on ventrum



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21003
Date of Report: 2021-Jan-03
Filed By: FWC NE Field Station

FWC Case # 0491 **FWC Region:** NE

Sex: Female **Length:** 192 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-03 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-09 **By:** FWC-KAT

DATE NECROPSIED: 2021-Jan-09 **By:** FWC-KAT

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Tomoka River

Locality description: Ormond Beach, floating approximately 170 m NE of 1021 Shockney Drive.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Bleached epidermis; Depleted fat(s); Relatively empty GI tract; Dry, hard feces; Wet lung(s).

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Also FWC case numbers 0184, 0407, 0423, 0463, and 0468.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	192 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21003

RECOVERY DATE 09 January 2021

GENDER Female **TL** 192 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 09 January 2021

CONDITION Badly Decomposed

HISTORY **03 January 2021**, at 1640 hrs, FWC biologist-Allison C. Burns (ACP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Tomoka River, Ormond Beach, Volusia County. FWC case number 0184 was assigned. The complainant, Nicholas Craig (386-682-9816), was on the water and went back to the carcass to get pictures and coordinates that he sent ACP at 1649 hrs. **08 January**, at 0839 hrs, FWC biologist-Kyanna A. Tamborini (KAT) received a text alert from Dispatch regarding the same dead manatee. FWC case number 0423 was assigned. The complainant, Jennifer Peterson (386-804-3536), advised that the carcass had drifted near the Tomoka Estates Boat Ramp and sent a photo. At 1058 hrs, KAT called Dispatch to request assistance with towing the carcass to a remote location. At 1224 hrs, Dispatch advised that LE was unavailable to assist for the day. At 1659 hrs, KAT received a second text alert from Dispatch. FWC case number 0463 was assigned. The complainant, Mark McGrath (386-214-5445), advised that the carcass was not in the way of the boat ramp. At 1730 hrs, KAT received a third text alert from Dispatch. FWC case number 0468 was assigned. The complainant, Kristin Occhiogrosso (386-341-9029), advised that the carcass was behind her residence. KAT asked her to call the following morning if the carcass was still there. **09 January**, at 0823 hrs, KAT received a text alert from Dispatch regarding the carcass. FWC case number 0491 was assigned. The complainant, Bert Eddy (386-527-1275), advised that the carcass was floating in the canal across from her residence. KAT mobilized to the Tomoka Estates Boat Ramp after the complainant informed KAT that her husband could tow the carcass to the boat ramp. KAT arrived at the boat ramp at 1025 hrs, loaded the carcass into the Ezy-lift truck at 1045 hrs, and transported it to Buck Island in Jacksonville. A field necropsy was completed at 1445 hrs.

EXTERNAL Approximately 35% of the epidermis was present but sloughing. The carcass was distended with gas. Both eyes were bulging due to decomposition. Red-tinged fluid exuded from the nares. Several healing linear lesions and well-healed linear scars were observed. The epidermis in the axillae was bleached and thickened. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of abdominal fat, a small amount of gassy mesenteric fat, and scant omental fat.

STOMACH The stomach contained approximately 100 mL of viscous, gelatinous, brown to green fluid mixed with a scant amount of fibrous, brown to yellow pieces on ingesta. The mucosa was sloughing. No parasites were observed.

DUODENUM The duodenum contained a scant amount of cloudy, dark green fluid. The mucosa was autolyzed. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained a small amount of brown to gray fluid. The mid and distal small intestine were empty of contents. The mucosa was sloughing. No parasites were grossly observed.

CECUM The cecum contained approximately 200 mL of moist, well-chewed, homogeneous, black digesta. The mucosa was autolyzed. No parasites were observed.

COLON The proximal colon contained slightly moist, hard, fibrous, well-formed, well-digested, black to green feces. The mid colon contained dry, hard, well-formed, fibrous, dark green to yellow feces. The distal colon contained dry, hard, brown to orange feces. The mucosa was sloughing throughout. No parasites were

observed.

PANCREAS The pancreas was gassy. Serosal surfaces were pink and cut surfaces were off-white.

SPLEEN The spleen was black on serosal and cut surfaces.

LIVER The liver was soft, friable, and autolyzed.

GALLBLADDER The gallbladder contained a scant amount of dark orange to green bile. The mucosa was stained dark orange.

REPRODUCTIVE The uterine horns were small in diameter. There was a scant amount of gelatinous, red-tinged fluid in both the uterine horns.

KIDNEYS There was a small amount of perirenal fat. The kidneys were soft, friable, and autolyzed.

URINARY BLADDER The urinary bladder contained a scant amount of red-tinged urine. The mucosa was off-white with gray specks.

HEART There was scant, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The lungs were gassy. Serosal surfaces were dark gray to pink and cut surfaces were red and wet. The primary airways were clear. No parasites were observed.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Bleached epidermis
- Depleted fat
- Relatively empty GI tract
- Dry, hard feces
- Wet lungs

PROBABLE CAUSE OF DEATH Natural; Cold Stress

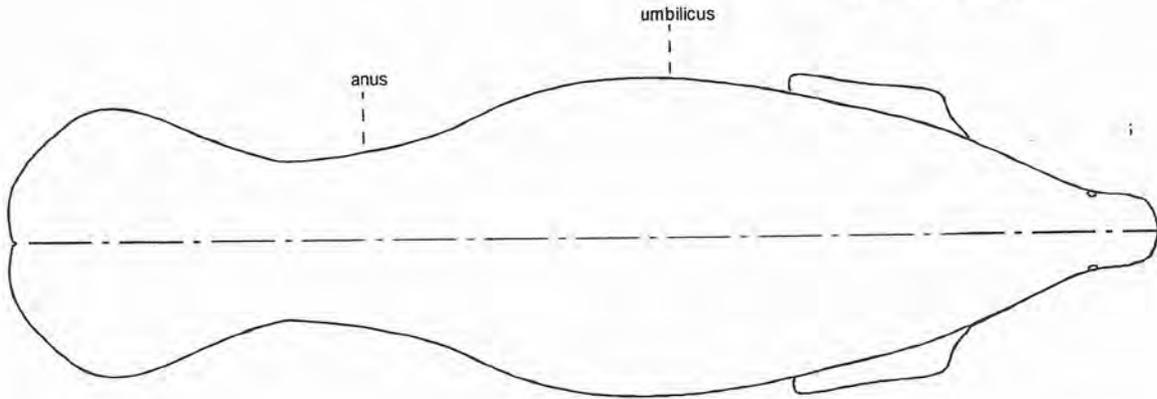
NECROPSY CONDUCTED BY Kyanna A. Tamborini

REPORT FILED BY Burns / Tamborini

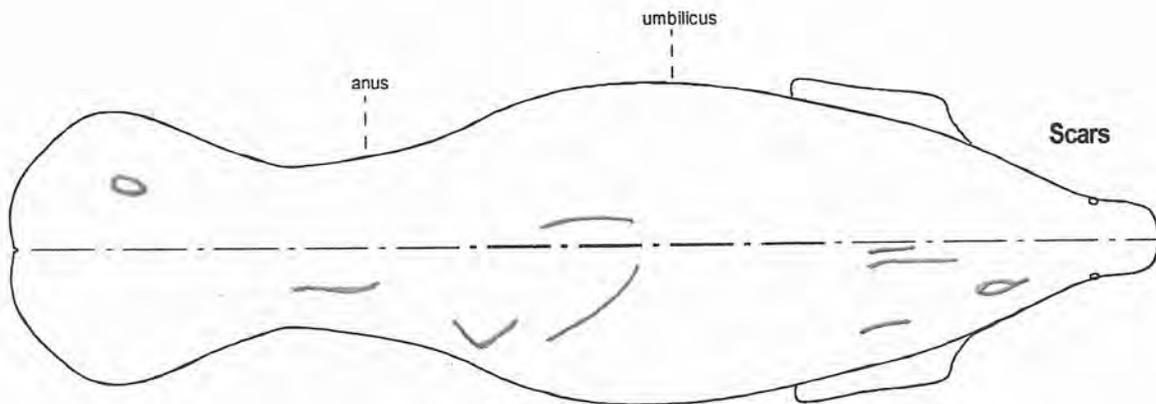
Date 09 Jan 2021

Field I.D. MNE21003

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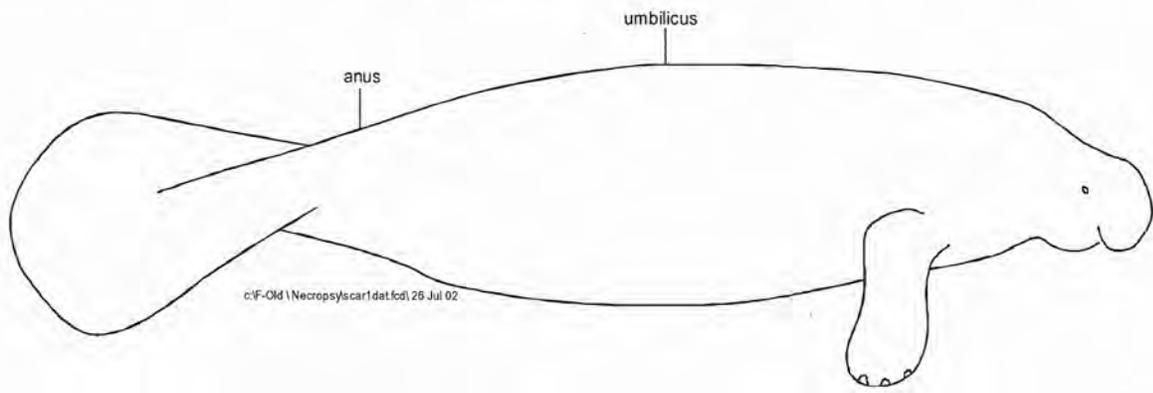
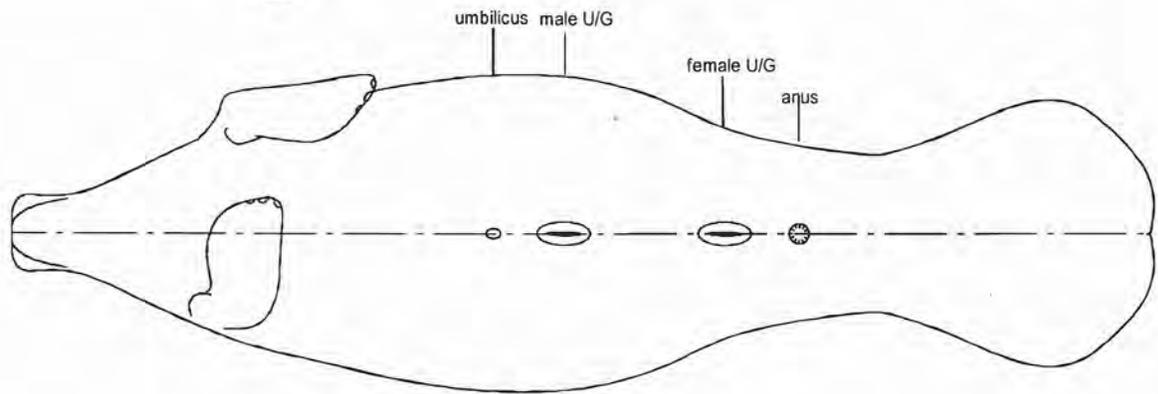
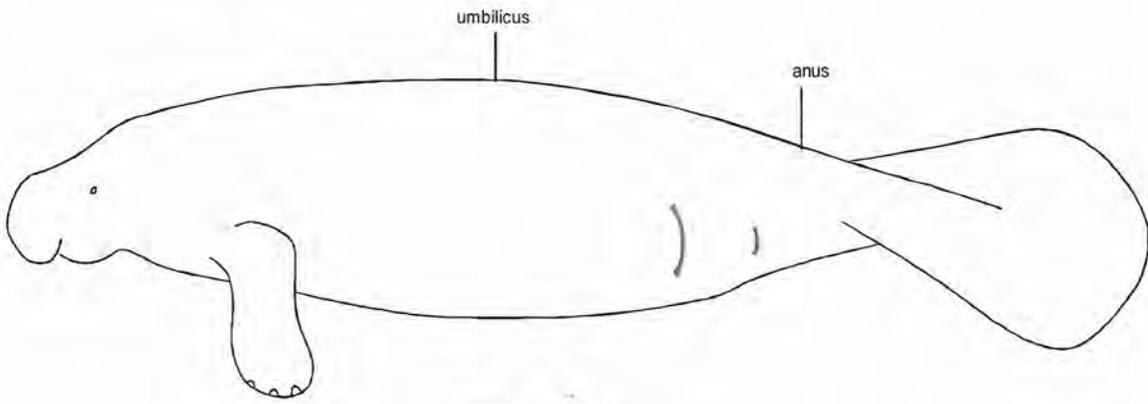


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Female
192 cm

FIELD I.D. MNE21003



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21007
Date of Report: 2021-Jan-27
Filed By: FWC NE Field Station

FWC Case # 1552 **FWC Region:** NE

Sex: Male **Length:** 280 cm (estimated-1) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-27 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Jan-27 **By:** FWC-ACP

DATE NECROPSIED: 2021-Jan-28 **By:** FWC-NJG,ACP

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Tomoka River

Locality description: Ormond Beach, floating approximately 50 m S of 1066 Shockney Drive.

CONDITION: Moderately Decomposed

PROBABLE CAUSE OF DEATH: Natural: Cold Stress

EXPLAIN: Cobblestone-like epidermis; Bleached epidermis; Serous fat(s); Bloody lung(s); Wet lung(s); Crumbly feces; Dry feces; Congested urinary bladder mucosa; Fluid in pleural cavities, abdominal cavity; Bloody kidneys, liver; Sediment in airways; Fluid-filled duodenum; Specks GI serosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Plastic in colon. Known as MIPS ID RB367, first sighted on 12 Jan 1982 at Riviera Beach power plant.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	280 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21007

RECOVERY DATE 27 January 2021

GENDER Male **TL** 280 cm (est) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE 28 January 2021

CONDITION Moderately Decomposed

HISTORY 27 January 2021, at 1022 hrs, FWC biologist-Allison C. Burns (ACP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Tomoka River, Ormond Beach, Volusia County. FWC case number 1552 was assigned. The complainant, Donna Smith (386-672-3902), advised that the carcass was floating. ACP contacted Chad Murch with Volusia County Marine Mammal Stranding Team for assistance in securing the carcass. ACP mobilized to the Tomoka Estates boat ramp by 1430 hrs. The carcass was loaded and transported to the NE Field Station where it was stored overnight pending necropsy. 28 January, ACP, FWC biologist-Nadia J. Gordon, and FWC volunteer-Steve Trosell transported the carcass to Buck Island in Jacksonville. A field necropsy was completed at 1500 hrs.

EXTERNAL Almost all of the epidermis was present but sloughing. Red-tinged fluid exuded from the nares. There was a thin green algal mat on the dorsum. Cobblestone-like epidermis was present on the dorsum. The epidermis was bleached at the axillae. A minimum of six well-healed watercraft-related scar patterns was observed. Most of the peduncle was missing due to a large, well-healed mutilation. Actual length of the remains was 250 cm. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal fat and moderate omental and mesenteric fat. There was 1.5 L of red-tinged fluid in the abdominal cavity. There were pink and black fibrin-like tags on the stomach and duodenum serosa.

STOMACH The stomach contained approximately 2.0 L of moist, fibrous, green to brown ingesta. The ingesta were coated in white mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained approximately 300 mL of gray fluid. The mucosa was gray. No parasites were observed.

JEJUNUM & ILEUM The proximal and mid small intestine contained a moderate amount of gray fluid. The distal small intestine contained a moderate amount of dark yellow fluid. The mucosa was unremarkable. No parasites were grossly observed.

CECUM The cecum contained approximately 2.6 L of dry, fibrous, moderately digested, orange to brown digesta mixed with brown pieces of seeds. The mucosa was sloughing. No parasites were observed.

COLON The proximal colon contained dry, fibrous, well-formed, brown feces. There was an 11 x 30 cm piece of gray plastic bag and a 7 x 10 cm piece of thick clear plastic in the contents. The distal colon contained dry, fibrous, crumbly, brown feces. The mucosa was sloughing throughout. There were patches of congestion in the wall. No parasites were observed throughout.

PANCREAS The pancreas was gassy. Serosal and cut surfaces were pink.

SPLEEN The spleen was firm. Serosal surfaces were mottled black and tan, and cut surfaces were dark purple to black.

LIVER The margins of the liver were rounded. The liver was firm. Serosal surfaces were green to brown and cut surfaces were dark red and bloody.

GALLBLADDER The gallbladder contained approximately 50 mL of dark yellow to orange bile. The mucosa was stained yellow.

REPRODUCTIVE There was moderate, gassy reproductive fat. The seminal vesicles were large and contained a large amount of tan fluid. The testes were large. No fluid was observed on cut surfaces of the deferent ducts.

KIDNEYS There was a small amount of serous perirenal fat. The kidneys were red-brown. On cut surfaces of the left kidney, the cortices were red and the medullae were tan to red. On cut surfaces of the right kidney, the cortices were dark purple and the medullae were tan to red. Cut surfaces of both kidneys were bloody. The corticomedullary boundaries were distinct. There was a red to dark red line at some of the corticomedullary boundaries.

URINARY BLADDER The urinary bladder contained 2.75 mL of cloudy, yellow urine. The mucosa was severely congested.

HEART There was moderate, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left pleural cavity contained approximately 500 mL of red-tinged fluid. The right pleural cavity contained approximately 2.8 L of red-tinged fluid. The left lung was light purple to green on serosal surfaces and red and slightly bloody on cut surfaces. The primary airway contained one piece of mucus. The right lung was pink on serosal surfaces and red, wet, and slightly bloody on cut surfaces. The primary airway contained a scant amount of viscous, red mucus and sandy, gritty, brown contents.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Bleached, cobblestone-like epidermis
- Serous fat
- Fluid in pleural cavities, abdominal cavity
- Bloody, wet lungs
- Bloody kidneys, liver
- Sediment in airways
- Congested urinary bladder mucosa
- Fluid-filled duodenum
- Dry, crumbly feces
- Specks GI serosa
- Plastic in colon

PROBABLE CAUSE OF DEATH

Natural; Cold Stress

Commented [BB1]: Maybe check water temps

NECROPSY CONDUCTED BY

Nadia J. Gordon

Allison C. Burns
Steve Trosell (FWC volunteer)

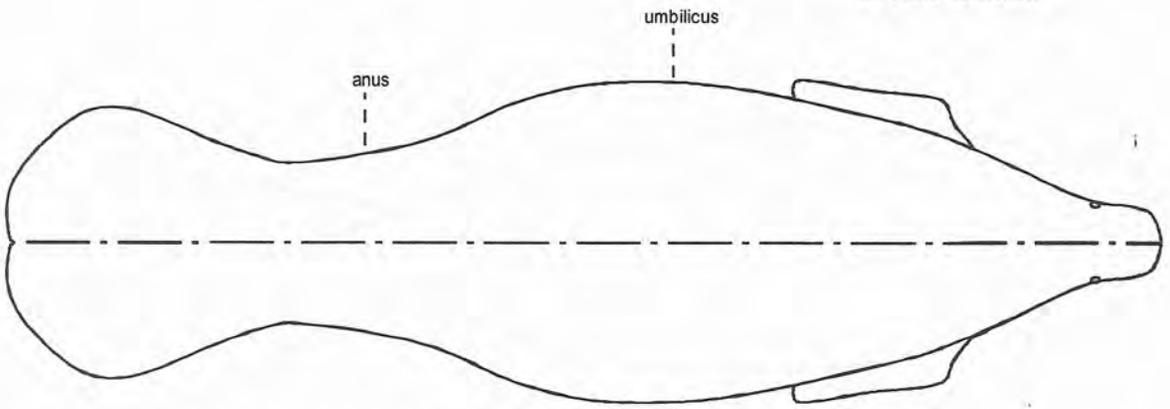
REPORT FILED BY Tamborini / Burns

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

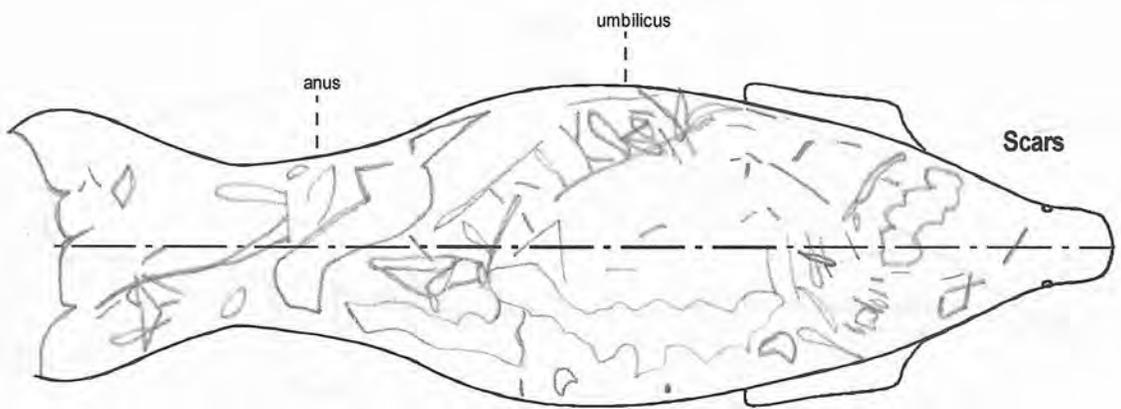
Date 28 Jan 2021

Field I.D. MNE21007

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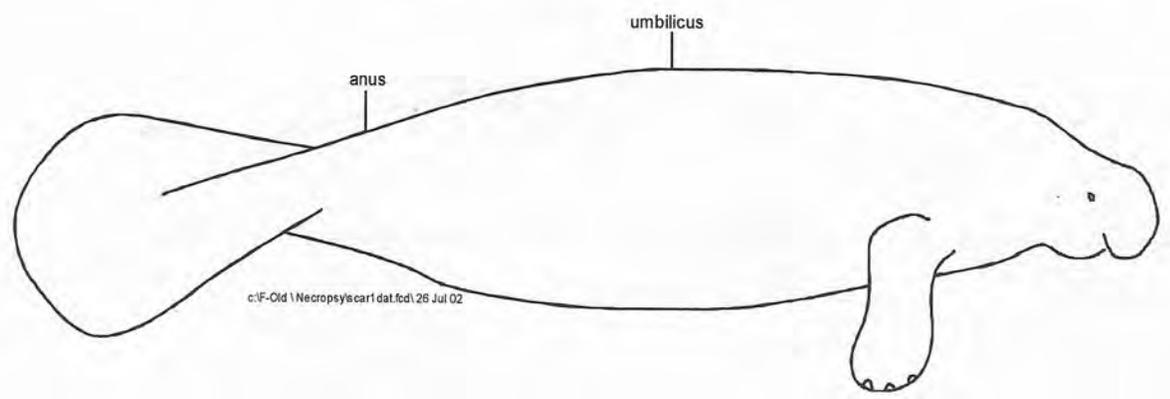
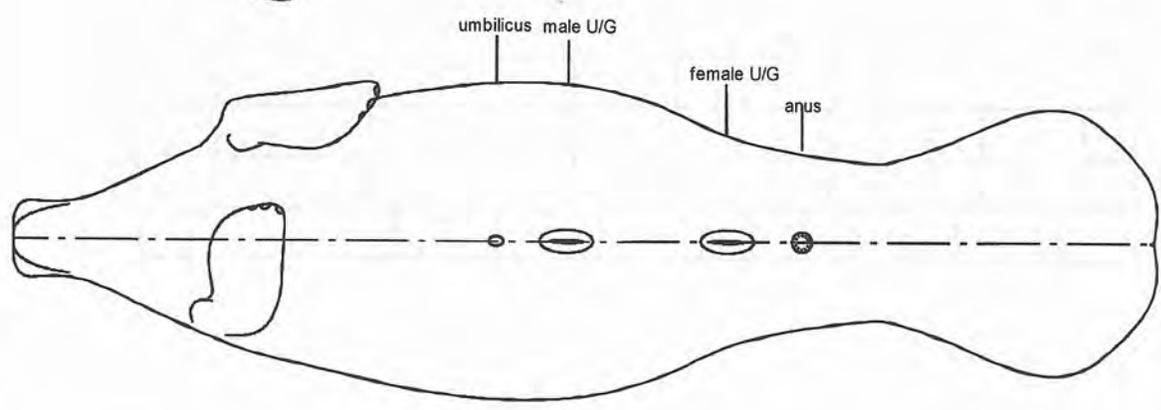
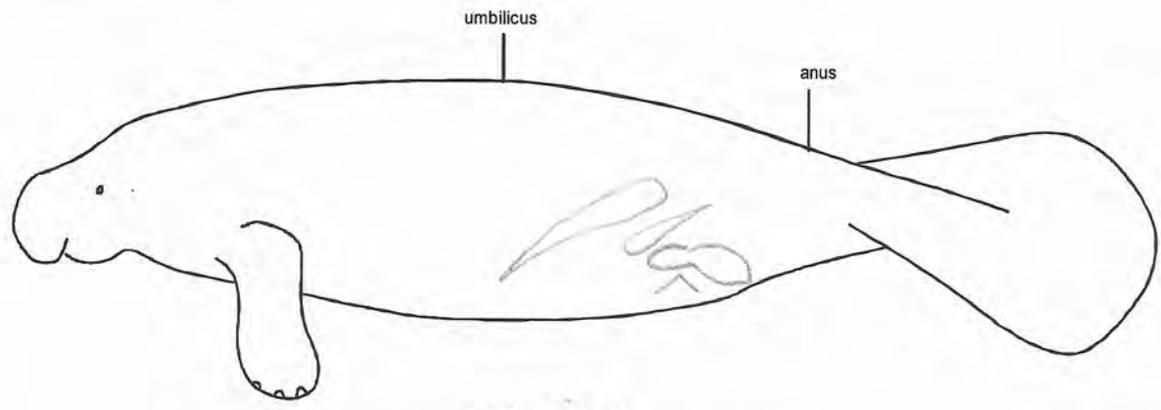


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



Male

FIELD I.D. MNE 21007



Bassett, Brandon

From: Rood, Kari
Sent: Sunday, February 28, 2021 2:32 PM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: MNE21007=RB367

MNE21007=RB367

Carcass location: Tomoka River, Ormond Beach
Male

First sighted 1/12/82 at Riviera Beach Power Plant
Last sighted 1/24/17 at Harbor Branch Oceanographic Institute (St. Lucie County)
USGS should be able to provide a complete sighting history if needed.

Verifiers: MARTZ & KAH – 2/28/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21008
Date of Report: 2021-Feb-01
Filed By: FWC NE Field Station

FWC Case # 1914 **FWC Region:** NE

Sex: Male **Length:** 285 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-01 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: 2021-Feb-03 **By:** FWC-ACP

DATE NECROPSIED: 2021-Feb-04 **By:** FWC-NJG,ACP

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Halifax River

Locality description: Ormond Beach, beached approximately 140 m W of 2704 John Anderson Drive.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Peanut-shaped head; Depleted fat(s); Serous fat(s); Relatively empty GI tract; Bloody lung(s); Wet lung(s); Bloody kidneys; Fluid in pleural cavities; Congested GI mucosa; Sand in feces; Black specks parietal pleura, lung serosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC NE Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Monofilament in small intestine. Cold stress lesions; Also FWC case number 1848. Adhered lung. Scavenging.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	285 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:
 Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21008
RECOVERY DATE 03 February 2021
GENDER Male **TL** 285 cm **WT** N/T kg

SPECIES *T. manatus latirostris*
NECROPSY DATE 04 February 2021
CONDITION Badly Decomposed

HISTORY **01 February 2021**, at 1005 hrs, FWC biologist-Allison C. Burns (ACP) received a text alert from FWC NE Dispatch-Orlando regarding a dead manatee in the Halifax River, Ormond Beach, Volusia County. FWC case number 1848 was assigned. The complainant, David Angle (717-443-1018), reported the manatee was on its dorsum on the west bank and provided a photo. Due to a planned rescue, carcass recovery was postponed. **02 February**, FWC Officer-Seth Wingard responded but was unable to tow the carcass off the beach with his small boat. ACP requested assistance from Volusia County Marine Mammal Stranding Team (VCMMSST). At 2022 hrs, FWC on-call biologist-Amber R. Howell received a text alert from Dispatch regarding the same manatee. FWC case number 1914 was assigned. The complainant, Jim Hogan, left no contact number but said it was in the same spot. **03 February**, VCMMSST-Jennifer Winters responded and secured the carcass at 1546 hrs. ACP arrived at the boat ramp at 1600 hrs. The carcass was loaded at 1637 hrs and transported to the NE Field Station arriving at 1809 hrs. **04 February**, ACP and FWC biologist-Nadia J. Gordon transported the carcass to Buck Island in Jacksonville. A field necropsy was completed at 1053 hrs.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. The carcass was dorsoventrally flattened and had a slight peanut-shaped head. The left eye was missing due to decomposition and/or scavenging. The remaining ventral epidermis was thickened and bleached. Raised cold stress-like lesions were present on the dorsal and ventral fluke. There was a rent at the urogenital opening. A minimum of six well-healed watercraft-related scar patterns was observed. PIT tag scan was negative. A genetics sample was collected.

Commented [BB1]: I'm not sure that I'm seeing this.

ABDOMINAL There was a large amount of water (from the river) in the abdominal cavity that entered through the urogenital opening. There was a small amount of serous abdominal fat. There was moderate mesenteric fat. There was a small amount of omental fat.

STOMACH The stomach contained approximately 300 mL of viscous, tan mucus. The mucosa was unremarkable. No parasites were observed.

DUODENUM The duodenum contained approximately less than 75 mL of tan fluid. The mucosa had areas of black discoloration. No parasites were observed.

JEJUNUM & ILEUM Only a small piece of the proximal small intestine remained which were empty of contents. There were three pieces of clear, thick monofilament line (21.5 cm, 13.5 cm (with a knot), and 11.5 cm (with a knot at the end)). No parasites were observed.

CECUM The cecum contained approximately 275 mL of wet, fibrous, red-brown and yellow digesta mixed with dark green fluid. The mucosa was congested. No parasites were observed.

COLON Only the proximal-most and distal one-third of the colon was present. The remaining proximal colon contained a small amount of moist, fibrous, poorly formed, well-digested, dark green feces mixed with dark gray sediment. The remaining distal colon contained moist, fibrous, well-formed, moderately digested, green feces mixed with sand and seed pieces. The mucosa was sloughing in some areas and had areas of congestion. No parasites were observed.

PANCREAS The pancreas was green on serosal surfaces and pink on cut surfaces.

SPLEEN The spleen was firm. Serosal and cut surfaces were dark gray to black.

LIVER The liver was soft, friable, and autolyzed.

GALLBLADDER The gallbladder contained approximately 10 mL of orange bile. The mucosa was stained orange.

REPRODUCTIVE There was a small amount of gassy reproductive fat. The seminal vesicles were moderate in size and contained a small amount of tan fluid. The testes were moderate in size.

KIDNEYS There was a small amount of gassy perirenal fat. The right kidney was red to purple on serosal surfaces. The left kidney was light red on serosal surfaces. Cut surfaces of both kidneys were dark red to black and bloody. The corticomedullary boundaries were indistinct.

URINARY BLADDER The urinary bladder contained approximately 100 mL of pink urine. The mucosa was unremarkable.

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. There were black specks on the parietal pleura and left lung serosa. The left pleural cavity contained approximately 1.0 L of red-tinged fluid. The right pleural cavity contained approximately 1.25 L of red-tinged fluid. The lungs were gray to pink on serosal surfaces and dark red, wet, and bloody on cut surfaces. There was a small amount of red fluid in the primary airways. No parasites were observed. The caudal aspect of the right lung was adhered to the pleural cavity.

HEAD & NECK REGIONS NVL.

SKELETON NVL.

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Peanut-shaped head
 - Depleted, serous fat
 - Relatively empty GI tract
 - Congested GI mucosa
 - Sediment in feces
 - Bloody kidneys
 - Bloody, wet lungs
 - Fluid in pleural cavities
 - Black specks parietal pleura, lung serosa
 - Cold stress lesions
 - Adhered lung
 - Monofilament in small intestine
 - Scavenging
-

PROBABLE CAUSE OF DEATH Natural; Other

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

NECROPSY CONDUCTED BY

Nadia J. Gordon
Allison C. Burns

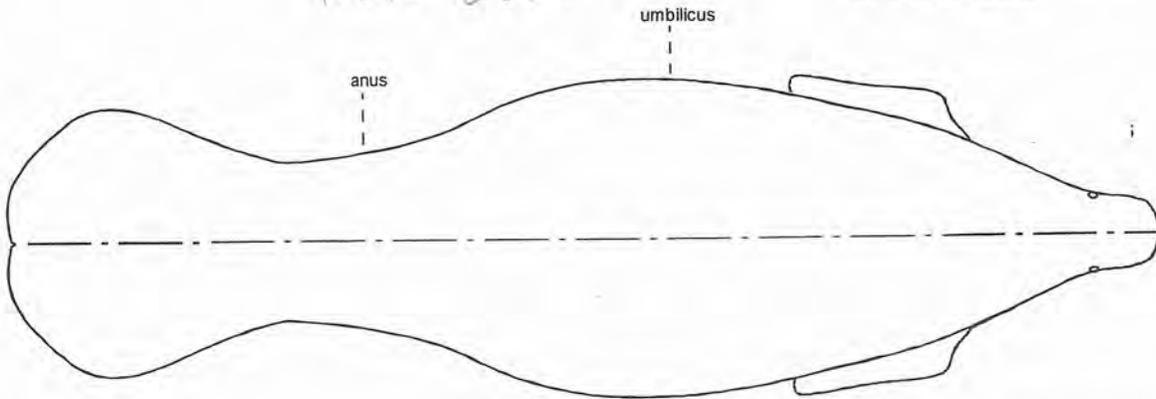
REPORT FILED BY Tamborini / Burns

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

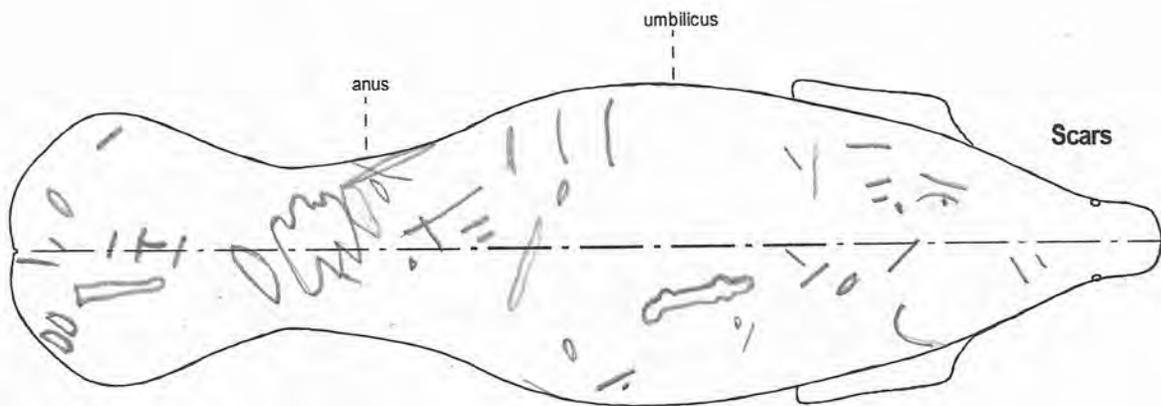
Date 04 Feb 2021
male 285 cm

Field I.D. MNF21008

c:\Manuals\scar2dat\1 26 July02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				

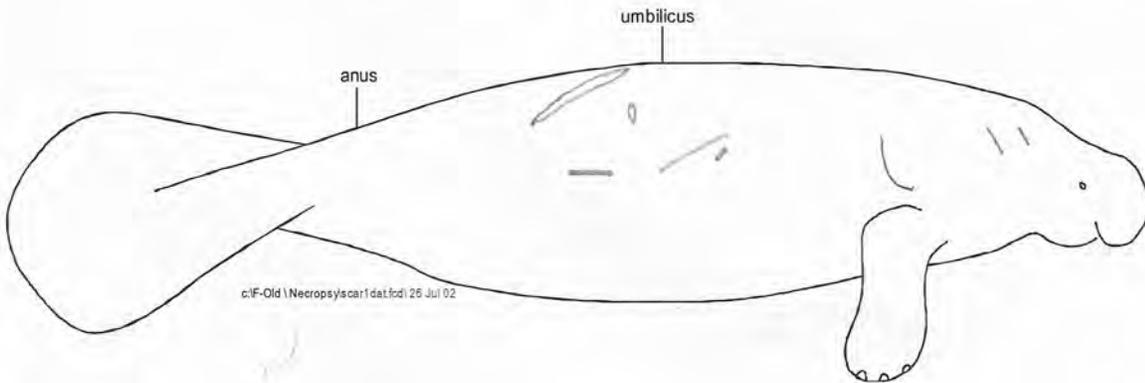
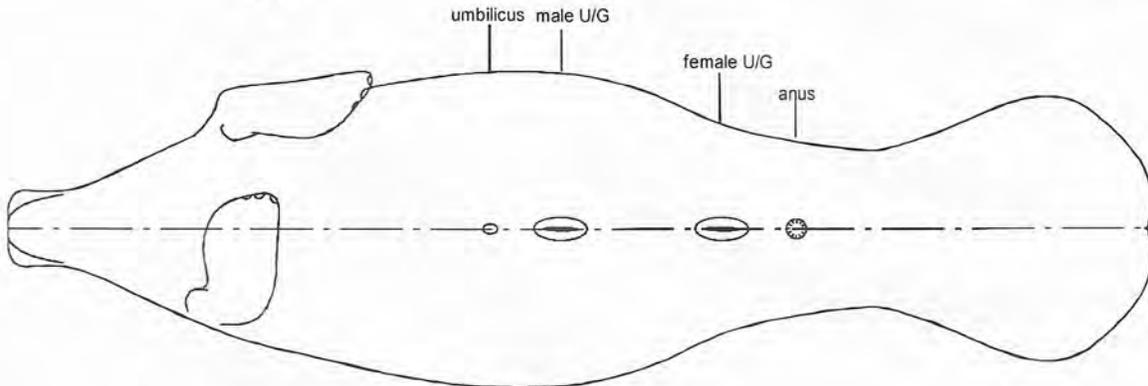
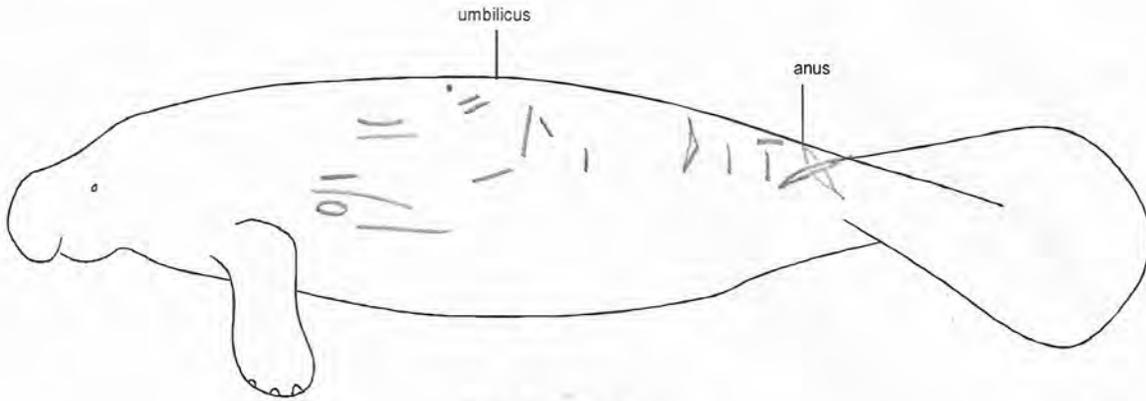


04 Feb 2021

FIELD I.D.

MNF 21008

male 285 cm



MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21012
Date of Report: 2021-Feb-11
Filed By: FWC NE Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 150 cm (estimated-2) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to VCMMST to FWC-NJG

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Ponce de Leon Cut

Locality description: New Smyrna Beach, beached approximately 255 m NNE of 133 Cunningham Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Fetal folds; Verified through photographs and VCMMST volunteer.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Scavenging. Carcass was measured ventrum-up in centimeters.

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Lat/Long	

MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21012 **SPECIES** *T. manatus latirostris*
RECOVERY DATE N/A **NECROPSY DATE** N/A
GENDER Male **TL** 150 cm (est) **WT** N/T kg **CONDITION** Confirmed; Not Necropsied

Commented [BB1]: Reported as 151 cm, I rounded down. Let me know what you think.

HISTORY 11 February 2021, at 1456 hrs, FWC biologist-Nadia J. Gordon (NJG) received a text from Volusia County Marine Mammal Stranding Team-Chad Murch regarding a dead manatee calf in Ponce de Leon Cut, New Smyrna Beach, Volusia County. He had received a report of a dolphin but upon arriving, it was the manatee carcass. He measured it ventrum-up in centimeters, took photos, and sent coordinates. Due to the small size and advanced stage of decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs - Approximately 20% of the ventral epidermis was present but sloughing. There was a rent at the urogenital opening and anus due to decomposition and/or scavenging. The muzzle was eroded due to decomposition. A few transverse folds were present on the ventrum.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs and VCMMST volunteer
- Fetal folds
- Scavenging

PROBABLE CAUSE OF DEATH Perinatal; Verified (Not Necropsied)

NECROPSY CONDUCTED BY N/A

REPORT FILED BY Burns

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21017
Date of Report: 2021-Feb-26
Filed By: FWC NE Field Station

FWC Case # 3609 **FWC Region:** NE

Sex: Unknown **Length:** 180 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-26 **By:** Citizen to FWC NE Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Indian River North

Locality description: New Smyrna Beach, floating approximately 120 W of 99 Lincoln Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photograph.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	180 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21017

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 180 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 26 February 2021, at 1800 hrs, FWC biologist-Nadia Gordon (NJG) received a text alert from FWC NE Dispatch-Orlando regarding a manatee carcass in the Indian River North, New Smyrna Beach, Volusia County. FWC case number 3609 was assigned. The complainant, Shawn Coughlin (386-847-0760), advised it was free floating north of the North Causeway Bridge and sent photos with coordinates. Due to another carcass recovery, this carcass was not recovered or necropsied.

EXTERNAL From photograph - All of the ventral epidermis was present.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY - Tamborini

PRELIMINARY DATA:

FINDINGS MAY BE ADDED OR

DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MNE21018
Date of Report: 2021-Mar-03
Filed By: FWC NE Field Station

FWC Case # **FWC Region:** NE

Sex: Male **Length:** 189 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-03 **By:** Citizen to Marine Science Center to VCCMST-Debbie Wright

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Volusia **Longitude:** W

Waterway: Halifax River

Locality description: Port Orange, floating 20 m W of 3948 South Peninsula Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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PRELIMINARY DATA: FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	189 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MNE21018

RECOVERY DATE

GENDER Male **TL** 184 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE

CONDITION Confirmed; not necropsied

HISTORY **03 March 2021**, at 1235 hrs, FWC biologist-Allison C. Burns (ACP) received a text from Volusia County Marine Mammal Stranding Team (VCCMST)-Debbie Wright (DW) about a dead manatee calf in Halifax River, Port Orange, Volusia County. The complainant, Robert (386-275-5267), had called the Marine Science Center who passed his info to DW. At 1246 hrs, ACP received a verification photo from the complainant and he offered to tow it to a secluded spot on an island he owns. ACP requested that he wait until someone with VCCMST could come measure it and get photos and asked DW for volunteer assistance. At 1330 hrs, VCCMST-Brittney Hoyt arrived at the site, measured the carcass ventrum up, and took photos. ACB notified the complainant that he could tow it and the carcass was left verified, not necropsied.

EXTERNAL Most of the epidermis was remaining. There was a thin brown algal mat on the lateral aspects. There were lateral ventral folds.

ABDOMINAL

STOMACH

DUODENUM

JEJUNUM & ILEUM

CECUM

COLON

PANCREAS

SPLEEN

LIVER

GALLBLADDER

REPRODUCTIVE

KIDNEYS

URINARY BLADDER

HEART

RESPIRATORY SYSTEM

HEAD & NECK REGIONS

SKELETON

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

OTHER

PHOTOGRAPHS 2021-03-03_PUBLIC_01, 02; 2021-03-03_FWCVOL_01, 02.

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH Undetermined: not necropsied.

NECROPSY CONDUCTED BY

REPORT FILED BY Burns

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21011
Date of Report: 2021-Jan-05
Filed By: FWC SE Field Station

FWC Case # 0425 **FWC Region:** SO-A

Sex: Male **Length:** 238 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-05 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Jan-08 **By:** FWC-BMF

DATE NECROPSIED: 2021-Jan-08 **By:** FWC-BMF

LOCATION: State: FL **Latitude:** N
County: Martin **Longitude:** W

Waterway: South Fork St. Lucie River

Locality description: Stuart, floating approximately 45 m NE of 2425 SW Hideaway Lane.

CONDITION: Badly Decomposed

PROBABLE CAUSE OF DEATH: Undetermined: Too Decomposed

EXPLAIN: The advanced stage of decomposition did not permit a causal factor to be determined. Autolyzed and/or missing internal organs. Skin lesions; Relatively empty GI tract; Crumbly feces; Dry feces.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal.

MATERIALS COLLECTED:
Genetics, ELISA toxicology samples.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan positive (Left: 00-0783-D88F; Right: 00-07AC-94EA). A field necropsy was performed. Known as REC1702, SWFTm1701b, SWFTm18136b, "Baca", rescued as an orphan calf on 09 January 2017 and released on 07 March 2019. Tracking belt attached. Also FWC case number 0405.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	238 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21011

RECOVERY DATE 08 January 2021

GENDER Male **TL** 238 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 08 January 2021

CONDITION Badly Decomposed

HISTORY **05 January 2021**, at 1642 hrs, FWC biologist-Amber Howell (ARH) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Stuart, Martin County. FWC case number 0405 was assigned. The complainant, Jay Martin (860-216-8944), stated that there was a back-up manatee under the dock that smelled bad. He didn't get too close or watch very long, so ARH requested photos which were received by 1654 hrs and confirmed it was a carcass. Due to time of day, no response was available. **06 January**, since it was only two miles from the gym ARH goes to, ARH arrived by 0700 hrs and attempted to relocate the carcass to a more secluded location, but it was wedged between a seawall, dock, and boat engine. ARH informed a resident that it may be able to float under the dock at low tide but for the time being, ARH could not move or flip the carcass unless the boat was moved. At 0922 hrs, ARH received a text alert from Dispatch regarding the same carcass. FWC case number 0425 was assigned. The complainant, Pat Shank (613-620-3127), stated that the carcass was floating off the dock but may become beached on a sandbar with low tide. Photo verification was received by 0925 hrs. ARH explained current workload and that staff could respond to move it if the carcass did not drift out at low tide or residents wanted it moved out of the boat basin, and Pat agreed to keep ARH updated if the carcass was still there in the afternoon. **08 January**, at 0829 hrs, ARH received a call from Pat who stated that the manatee was still behind his residence. After towing and securing MSE21015, FWC biologist-Blake Faucett (BMF) arrived at the carcass at 1300 hrs. When external workup was started, BMF noted the manatee had a tracking belt attached. The carcass was kayaked to a shallow area near the mangroves by 1555 hrs, and a field necropsy was completed by 1645 hrs. The remains were left on site to decompose.

EXTERNAL Approximately 40% of the epidermis was present but sloughing. There was a fresh watercraft-related wound series that extended from the left aspect of the head to the right cranial lateral aspect. The series consisted of four superficial, mostly triangular wounds (wounds#1-4). There was a linear watercraft-related wound on the right cranial lateral aspect (wound #5) that transected wound #4. The watercraft wounds had areas of blue discoloration. There were two linear, parallel indentation marks on the ventrum near the urogenital opening. Linear lesions were observed on the ventral fluke. The flippers and muzzle were eroded due to decomposition. There were small barnacles present on the remaining ventral fluke epidermis. There was a tracking belt present around the base of the fluke. Two large, well-healed irregular scars were present on the dorsum and left lateral aspect. PIT tag scan was positive (Left: 00-0783-D88F; Right: 00-07AC-94EA), known as REC1702, SWFTm1701b, SWFTm18136b, "Baca", rescued as an orphan calf on 09 January 2017 and released on 07 March 2019. A genetics sample was collected.

ABDOMINAL The abdominal, mesenteric, and omental fat was rendered.

STOMACH The stomach contained 150 mL of moist, fibrous, leafy, moderately chewed, tan, brown, and green ingesta. There were pieces of moderately chewed mangrove root in the contents. The mucosa was autolyzed. No parasites were observed. An ELISA toxicology sample was collected.

DUODENUM The duodenum was torn open and empty of contents. The mucosa was autolyzed. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine was empty of contents. The distal small intestine contained a small amount of wet, stringy, poorly chewed, green and brown ingesta. The mucosa was autolyzed. No parasites were grossly observed throughout.

Commented [BB1]: I'm not convinced

CECUM The cecum contained 50 mL of moist, fibrous, leafy, moderately digested, green and brown ingesta. The mucosa was autolyzed. There was a scant infection of dead trematodes.

COLON The proximal colon contained a small amount of moist, fibrous, stringy, moderately digested, well-formed, dark brown feces. The distal colon contained a small amount of dry, crumbly, fibrous, well-digested, moderately formed, dark green to dark brown feces (see photo). The mucosa was autolyzed throughout. No parasites were observed throughout.

PANCREAS The pancreas was liquified.

SPLEEN The spleen was soft, friable, and autolyzed.

LIVER The liver was soft, friable, and autolyzed. An ELISA toxicology sample was collected.

GALLBLADDER The gallbladder was empty of contents. The mucosa was bile-stained.

REPRODUCTIVE The testes were gassy and moderate in size. The rest of the reproductive organs were liquified. No fluid was expressed on cut surfaces of the testes.

KIDNEYS The kidneys were soft, friable, and autolyzed. An ELISA toxicology sample was collected.

URINARY BLADDER The urinary bladder contained a scant amount of red-tinged urine. The mucosa was autolyzed.

HEART The heart was soft, friable, and autolyzed.

RESPIRATORY SYSTEM Both hemidiaphragms were torn due to decomposition. The lungs were liquified. The airways were clear. The mucosa was tan. No parasites were observed. An ELISA toxicology sample was collected.

HEAD & NECK REGIONS The tissue on the head was discolored pink deep to wound #1 (see photo). The trachea was clear. The mucosa was tan. No parasites were observed.

SKELETON NVL.

OTHER The tissue was discolored dark red deep to wounds #2 - 5 (see photo).

COMMENTS

SIGNIFICANT FINDINGS

- Autolyzed internal organs
- Skin lesions
- Relatively empty GI tract
- Dry, crumbly feces
- Tracking belt
- PIT tag positive, REC1702, SWFTm1701b, SWFTm18136b, "Baca"

PROBABLE CAUSE OF DEATH Undetermined; Too Decomposed

NECROPSY CONDUCTED BY

Blake M. Faucett

Alexa Herrendorf (FWC intern)

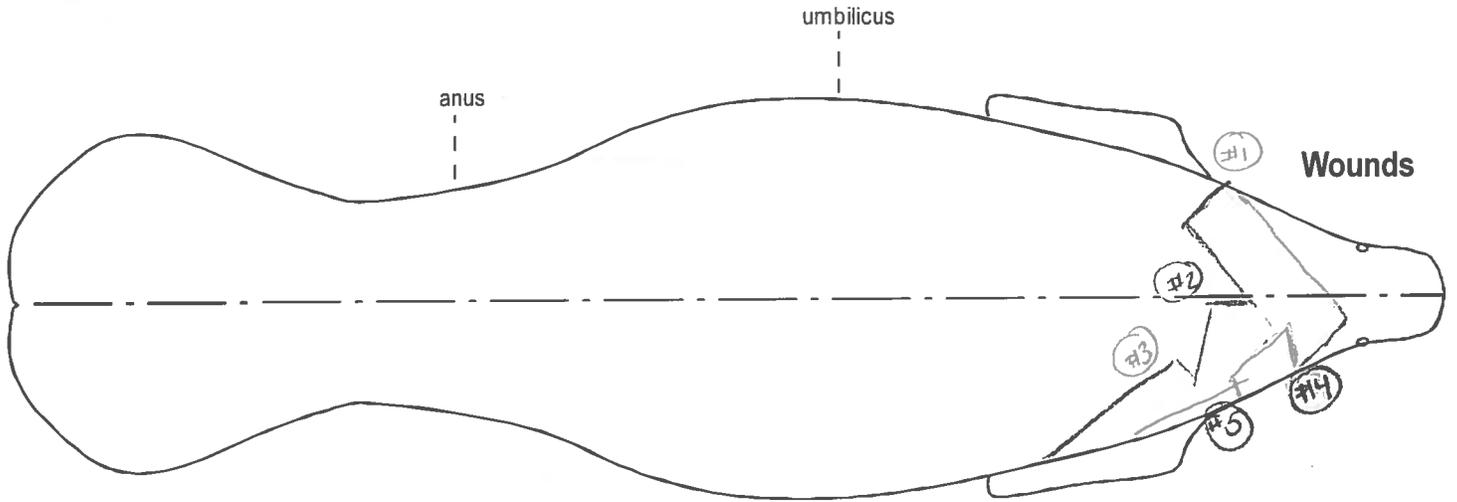
REPORT FILED BY Faucett

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

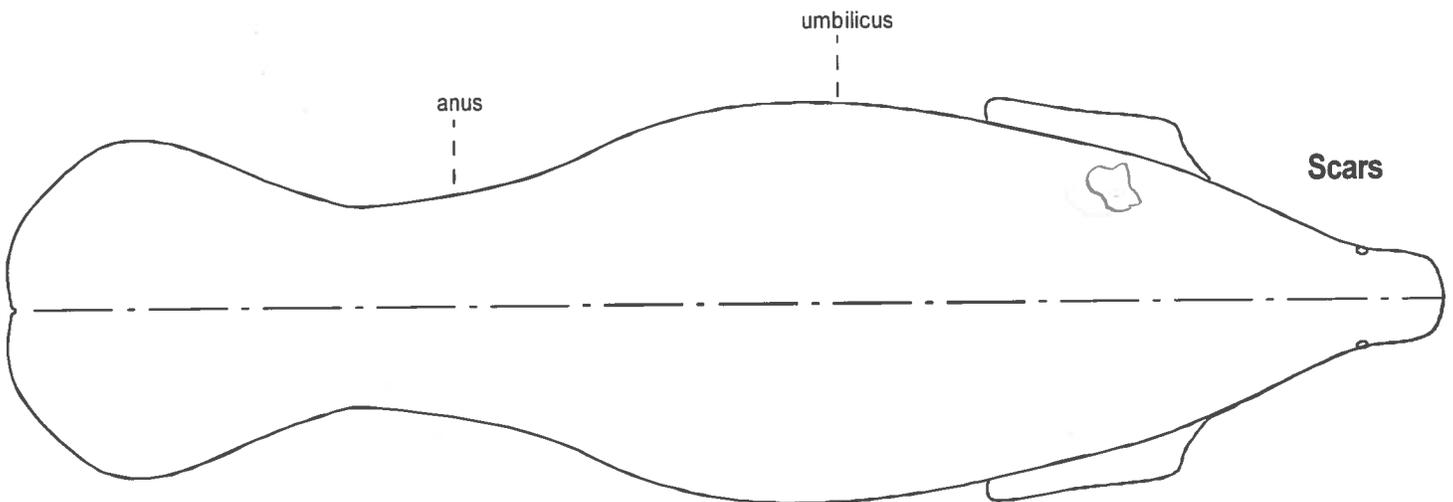
Date 08 JAN 2021

Field I.D. MSEZ1011

c:\Manuals\scar2dat\ 26 July 02

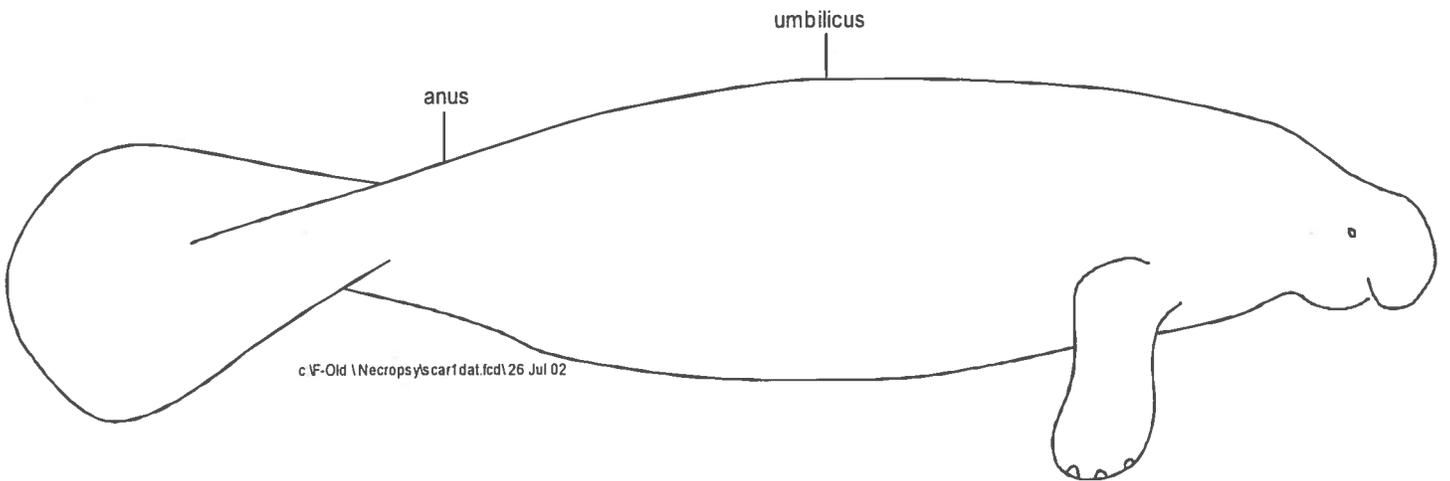
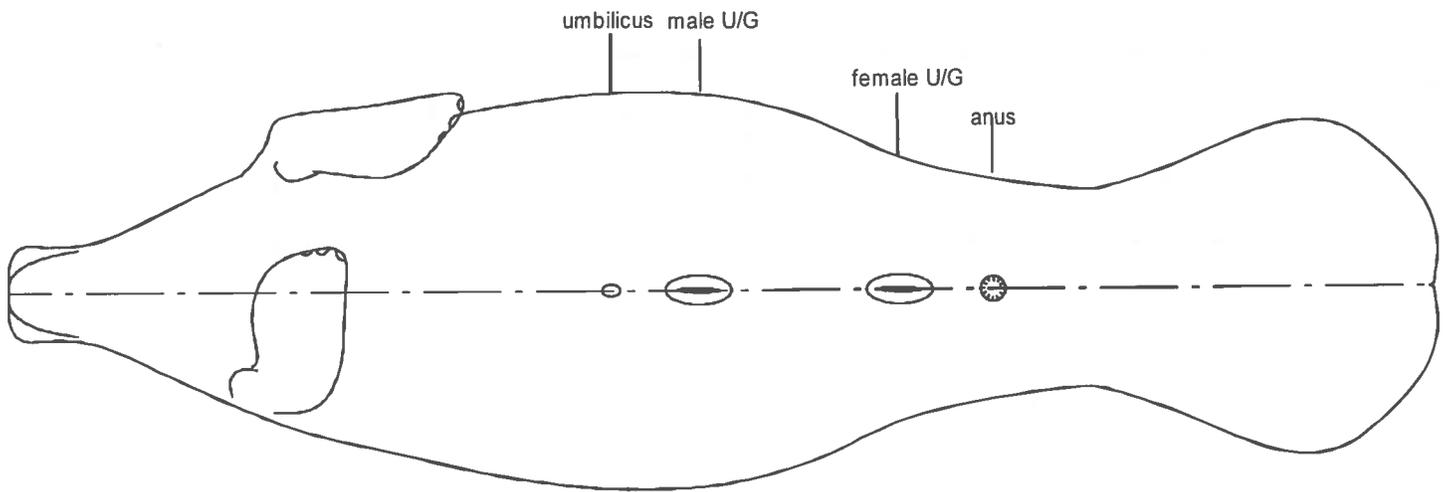
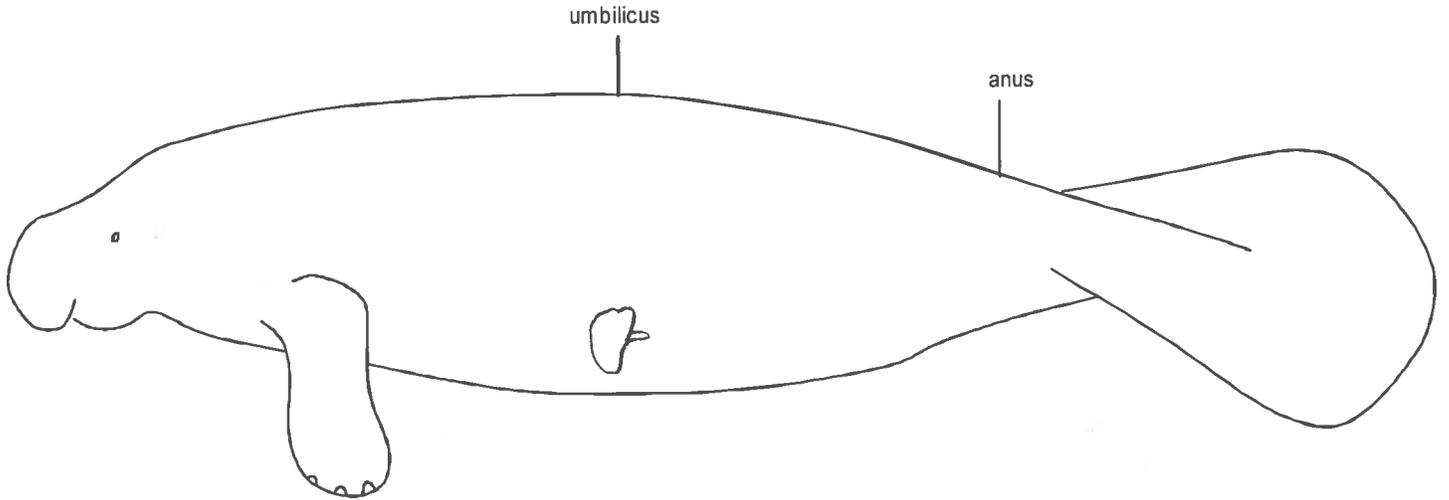


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



BMF over
→

FIELD I.D. MSEZ1011



c:\F-Old \Necropsy\scar1\dat.fcd\26 Jul 02

BMA

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21018
Date of Report: 2021-Jan-10
Filed By: FWC SE Field Station

FWC Case # 1075 **FWC Region:** SO-A

Sex: Unknown **Length:** 191 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-10 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Jan-16 **By:** FWC intern-J. Wheatley

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N
County: Martin **Longitude:** W

Waterway: North Forth St. Lucie River

Locality description: Stuart, beached approximately 350 m SW of 675 NW Flagler Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through complainant photographs and FWC intern.

PHOTOGRAPHS TAKEN: Ventral.

MATERIALS COLLECTED:

Genetics.

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL: FWC SE Field Station pending distribution.

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed. Also FWC case number 0779. Scavenging.

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Lat/Long	

MORPHOMETRICS:

Total length:	191 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21018
RECOVERY DATE N/A
GENDER Female **TL** 191 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **10 January 2021**, at 1501 hrs, FWC biologist-Austin Peek (AP) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Stuart, Martin County. FWC case number 0779 was assigned. The complainant, Rob Jenkins (678-764-8877), stated that there was a large badly decomposed manatee beached on a bank of the St. Lucie River. GPS coordinates and photos were received by 1519 hrs. Due to the advanced stage of decomposition, no plans were made to recover or necropsy the carcass. **14 January**, at 1151 hrs, FWC intern-Alexa Herrendorf received a text alert from Dispatch regarding a dead manatee near the Stuart Hospital in Stuart, Martin County. FWC case number 1075 was assigned. The complainant, Norman (772-223-5741), stated that there was a dead manatee on the rocks east of the helicopter pad. Photo verification and a GPS location were received at 1208 hrs. The photo was not clear enough to confirm it was a dead manatee, and based on pending workload, no response was available to confirm it. **16 January**, FWC intern-Jordan Wheatley arrived at the carcass at 1134 hrs. Ventral photos were taken, but Jordan could not flip the carcass for dorsal photos. The manatee was initially believed to be a new carcass. When Jordan arrived back at the lab, photos on 10 January were matched to Jordan's photos, and it was confirmed to be MSE21018. The remains were left on site to decompose.

EXTERNAL From photographs - All of the ventral epidermis was missing. Small portions of the GI tract protruded from the umbilicus. There were multiple rents from scavenging and/or decomposition on the ventrum. The fluke was severely eroded due to decomposition. PIT tag scan was not performed. A genetics sample was collected.

COMMENTS The photo label on 16 January has the incorrect carcass number (MSE21025).

SIGNIFICANT FINDINGS

- Verified through complainant photographs and FWC intern
- Scavenging

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Peek / Faucett

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21041
Date of Report: 2021-Jan-24
Filed By: FWC SE Field Station

FWC Case # 1949 **FWC Region:** SO-A

Sex: Unknown **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-24 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: St. Lucie Inlet

Locality description: Stuart, floating directly behind 6968 SE Harbor Circle.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21041

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215 **cm** (est) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY 24 January 2021, at 1415 hrs, FWC biologist-Austin Peek (AP) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Stuart, Martin County. FWC case number 1949 was assigned. The complainant, Nick (772-215-2551), stated that there was a dead manatee floating under mangroves off the St. Lucie Inlet. Due to the advanced state of decomposition and location, the carcass was not recovered or necropsied.

EXTERNAL From photograph - Approximately 80% of the ventral epidermis was present but sloughing.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY - Peek

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21043
Date of Report: 2021-Jan-25
Filed By: FWC SE Field Station

FWC Case # 2005 **FWC Region:** SO-A

Sex: Male **Length:** 215 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-25 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: St. Lucie **Longitude:** W

Waterway: Taylor Creek

Locality description: Ft. Pierce, floating approximately 60 m SSW of 1800 N US Highway 1.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21043

RECOVERY DATE N/A

GENDER Male **TL** 215 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 25 January 2021, at 0809 hrs, FWC intern-Jordan Wheatley received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Taylor Creek, St. Lucie County. FWC case number 2005 was assigned. The complainant, Justin (772-801-1970), stated that he saw a belly-up manatee while driving over the bridge at Taylor Creek. No photos were available. Jordan called the Harbor Branch Oceanographic Institute (HBOI) hotline to request assistance with verifying the carcass. HBOI-Brittany Baldrice agreed to respond. At 0853 hrs, Brittany confirmed the carcass and sent GPS location and photo verification. Due to location and advanced level of decomposition, the carcass was not recovered or necropsied.

EXTERNAL From photographs - All of the ventral epidermis was missing. The carcass was distended with gas.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Howell

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21046
Date of Report: 2021-Jan-26
Filed By: FWC SE Field Station

FWC Case # 2131 **FWC Region:** SO-A

Sex: Female **Length:** 175 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Jan-26 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Jan-27 **By:** FWC Intern-J. Wheatley

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: St. Lucie River

Locality description: Jensen Beach, beached approximately 100 m S of 30 NW Alice Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Cobblestone-like epidermis; Verified through complainant photograph and FWC intern. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	175 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21046

RECOVERY DATE 27 January 2021

GENDER Female **TL** 175 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **26 January 2021**, at 1212 hrs, FWC biologist-Blake Faucett (BMF) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in the St. Lucie River, Martin County. FWC case number 2131 was assigned. The complainant, Alice (772-341-4536), stated that a small dead manatee has washed up on the rocks behind her property. Photo verification was received by 1218 hrs. Due to a rescue in progress, BMF advised they would not be able to get to it right away and asked if the complainant could call back if it was still there the next morning, and she was agreed. **27 January**, at 1430 hrs, Alice informed BMF that the carcass was still on her beach and wanted to know when somebody could come remove it. FWC intern-Jordan Wheatley arrived at 1530 hrs and performed an external workup. The carcass was moved and secured in a secluded location nearby to decompose.

EXTERNAL Approximately 10% of the epidermis was present but sloughing. Decompositional fluid exuded from the nares. The carcass was distended with gas. There was a thick brown and green algal mat present on the dorsum in the initial complainant's photo. Cobblestone-like epidermis was observed on the dorsum in the initial complainant's photo. PIT tag scan was negative. A genetics sample was collected.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through complainant photograph and FWC intern
- Cobblestone-like epidermis

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Howell

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21063
Date of Report: 2021-Feb-04
Filed By: FWC SE Field Station

FWC Case # 2897 FWC Region: SO-A

Sex: Female Length: 256 cm Weight: Not Taken kg

DATE REPORTED: 2021-Feb-04 By: Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Feb-04 By: FWC-BMF

DATE NECROPSIED: 2021-Feb-04 By: FWC-BMF

LOCATION: State: FL Latitude: N

County: St. Lucie Longitude: W

Waterway: Indian River

Locality description: Ft. Pierce, grounded approximately 30 m NE of 1508 S Indian River Dr

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Flat ventrum; Depleted fat(s); Serous fat(s); Dry, hard feces; Wet lung(s); Swollen, heavy lungs; Empty colon; Discolored GI mucosa; Froth, fluid in airways; Fluid in pleural cavities; Congested mesenteries, parietal pleura, hemidiaphragms, urinary bladder-, tracheal mucosa.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Lesions, Scrape).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Peanut-shaped head; Skin scrapes. Grounded dorsum-up.

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Necropsy Report	
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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	256 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21063

RECOVERY DATE 04 February 2021

GENDER Female **TL** 256 cm **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE 04 February 2021

CONDITION Fresh

HISTORY 04 February 2021, at 0842 hrs, FWC biologist-Amber Howell (ARH) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Fort Pierce, St. Lucie County. FWC case number 2897 was assigned. The complainant, Tom (772-233-3568), stated that there was a dead manatee beached on the west side of the Indian River behind his residence. Photo verification was received showing the manatee grounded dorsum-up by 0858 hrs. ARH passed information to FWC biologist-Blake Faucett (BMF) for response. BMF arrived at the carcass at 1330 hrs. A field necropsy was completed by 1530 hrs. The remains were secured to nearby mangroves.

EXTERNAL All of the epidermis was present. The carcass was slightly dorsoventrally flattened and had a peanut-shaped head. The ventrum was flat. A thin, brown and green algal mat was observed. There was a bloody scrape on the right cranial lateral aspect. Several circular and linear cold stress lesions were observed on the lateral aspects. There was a circular impression mark on the chin. A minimum of six well-healed watercraft-related scar patterns was observed. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, omental, and mesenteric fat. The mesenteries were moderately congested.

STOMACH The stomach contained 2.5 L of moist, fibrous, stringy, moderately chewed, green and tan ingesta. The ingesta were coated in a thick layer of viscous, white mucus. The mucosa had an ulcerous area that was discolored red. No parasites were observed.

DUODENUM The duodenum contained 1.5 L of wet, fibrous, stringy, moderately chewed, green and tan ingesta. The mucosa had areas of black discoloration. No parasites were observed.

JEJUNUM & ILEUM The proximal small intestine contained a small amount of tan paste. The distal small intestine contained a small amount of moist, fibrous, stringy, moderately chewed, green and tan ingesta. The mucosa was rugose and discolored grey throughout. No parasites were grossly observed.

CECUM The cecum contained 2 L of moist, fibrous, stringy, moderately digested, green and tan digesta. The mucosa was sloughing with black discoloration. There was a mild infection of dead trematodes.

COLON Some sections of the proximal colon were contracted and empty of contents and other sections contained a small amount of moist, fibrous, stringy, moderately digested, moderately formed, green feces. The mucosa was rugose with black discoloration. The distal colon contained a small amount of dry, crumbly, fibrous, leafy, stringy, moderately digested, poorly formed, brown and green feces. The mucosa had regions of pink discoloration. No parasites were observed throughout.

PANCREAS The pancreas was firm. Serosal and cut surfaces were tan.

SPLEEN The spleen was firm. Serosal surfaces were mottled purple and grey, and cut surfaces were dark red.

LIVER The liver was firm. The margins of the liver were sharp. Serosal surfaces were dark blue and cut surfaces were dark brown.

GALLBLADDER The gallbladder contained 15 mL of viscous, golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The uterine horns were contracted. No uterine scars were observed. The ovaries contained <20 follicles including a few corpora hemorrhagica.

KIDNEYS There was a small amount of serous perirenal fat. Serosal surfaces were dark blue. On cut surfaces, the cortices were dark pink and the medullae were dark red. The corticomedullary boundaries were distinct.

URINARY BLADDER There was black discoloration on the serosal surfaces. The urinary bladder contained 50 mL of clear, light yellow urine. The mucosa was severely congested (see photo).

HEART There was a small amount of serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact and slightly congested. Each pleural cavity contained 1.5 L of watery, tan fluid. The parietal pleura was slightly congested. The lungs were swollen and heavy. Serosal surfaces were light pink to light purple and cut surfaces were dark red and very wet. The airways contained an abundant amount of white froth and light red-tinged fluid (see photos). The mucosa was tan. No parasites were observed.

HEAD & NECK REGIONS There was a small amount of white froth in the trachea. The tracheal mucosa was moderately congested.

SKELETON NVL

OTHER

COMMENTS

SIGNIFICANT FINDINGS

- Peanut-shaped head
 - Flat ventrum
 - Depleted, serous fat
 - Empty colon
 - Dry, hard feces
 - Discolored GI mucosa
 - Wet, heavy, swollen lungs
 - Froth, fluid in airways
 - Fluid pleural cavities
 - Congested mesenteries, parietal pleura, hemidiaphragm, urinary bladder-, tracheal mucosa
 - Cold stress lesions
 - Skin scrapes
 - Grounded dorsum-up
-

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

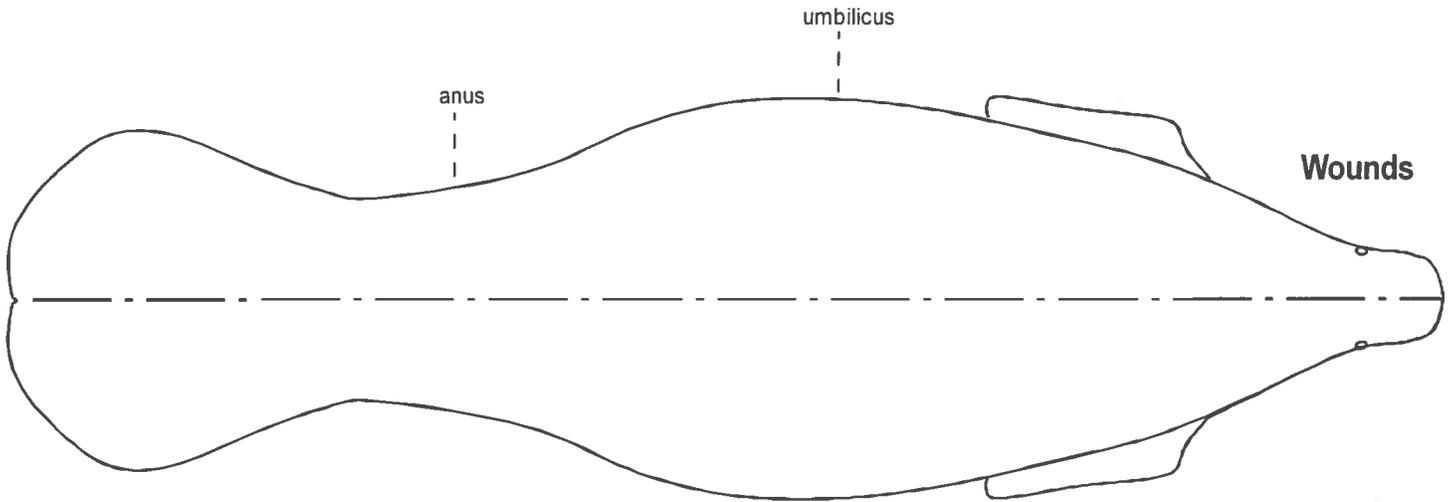
Blake M. Faucett
Chelsea R. Cameron (FWC intern)

REPORT FILED BY Howell

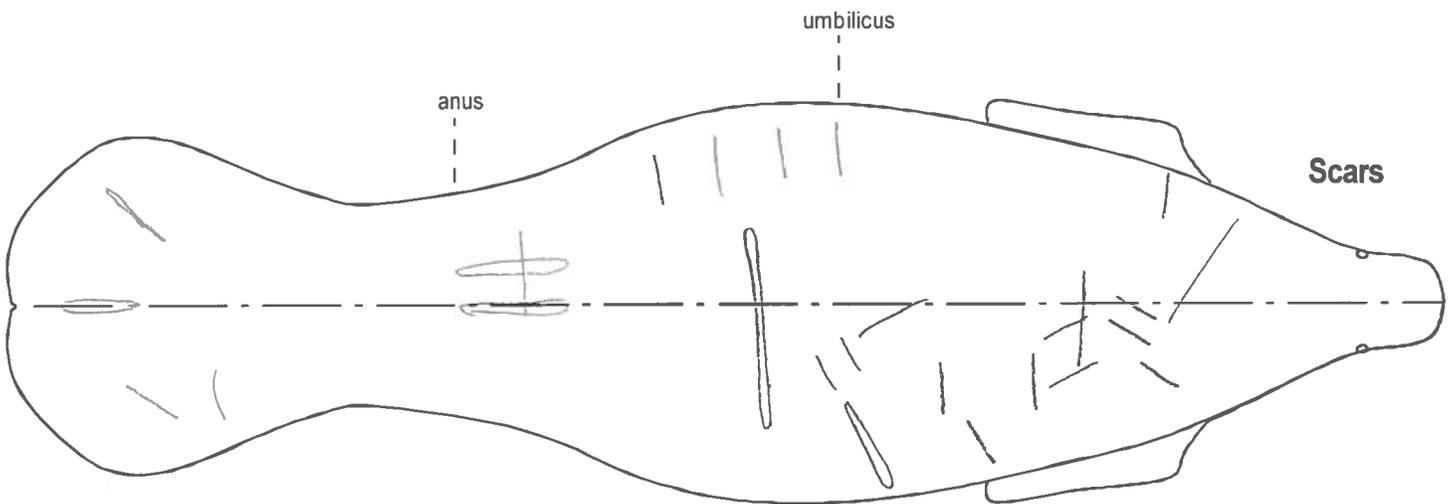
Date 04 Feb 2021

Field I.D. MSE21063

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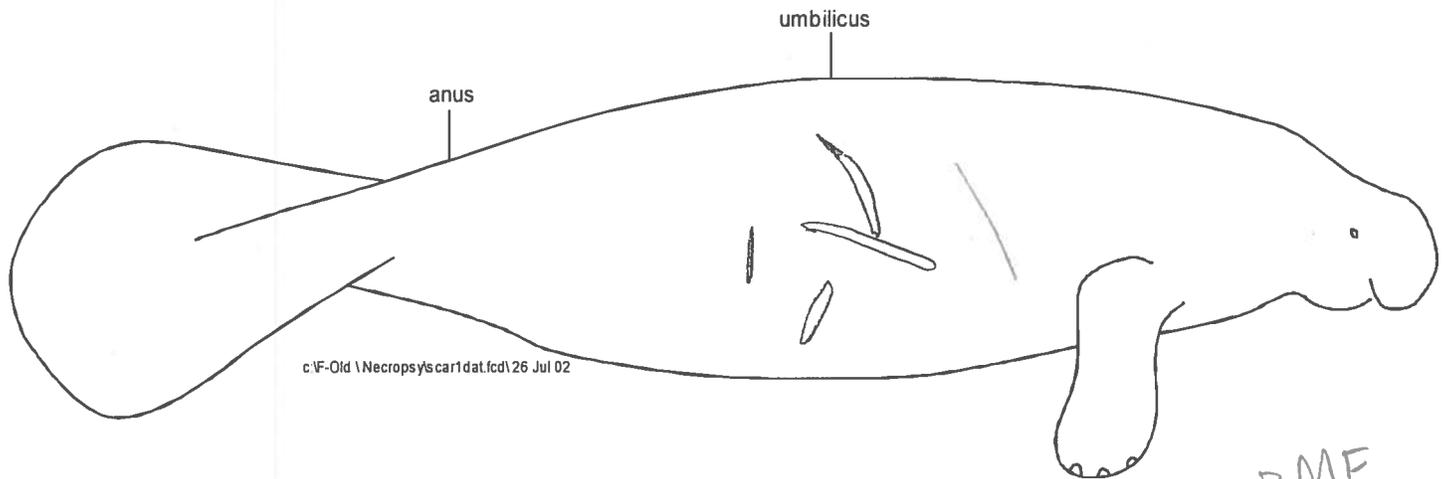
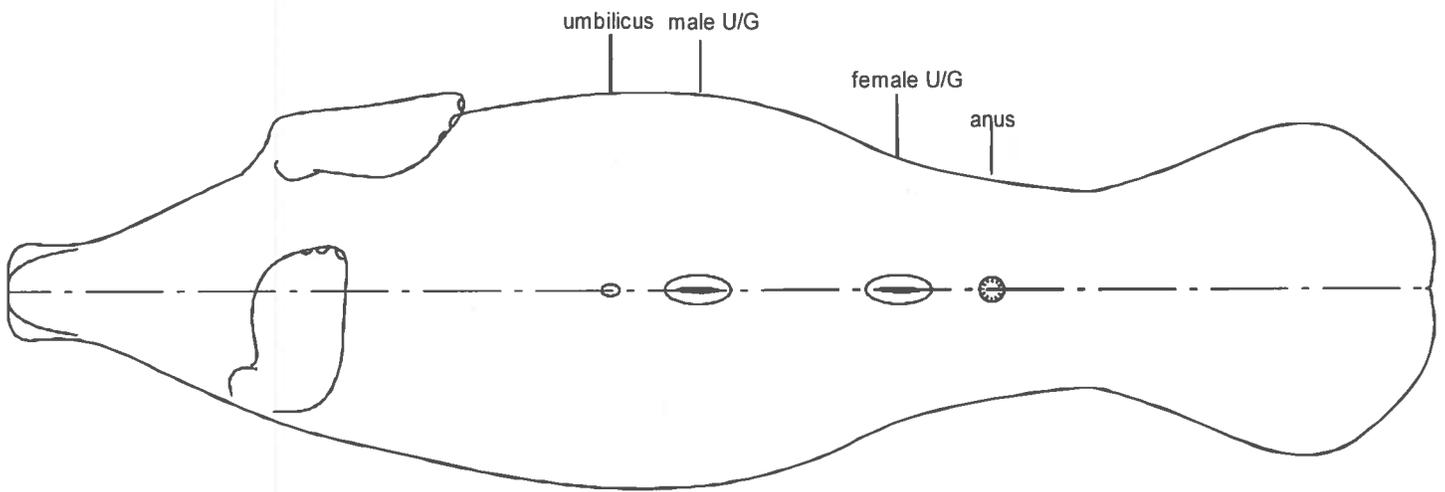
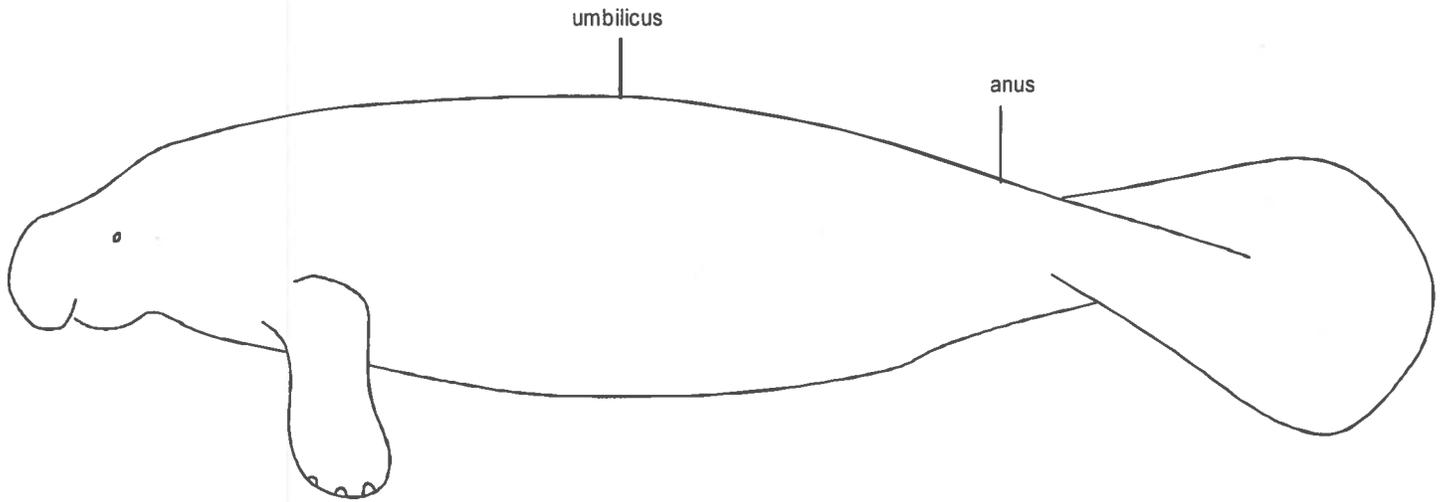


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



over →
BMF

FIELD I.D. MSE21063



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BMF

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21069
Date of Report: 2021-Feb-06
Filed By: FWC SE Field Station

FWC Case # 3068 **FWC Region:** SO-A

Sex: Male **Length:** 220 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-06 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Feb-06 **By:** FWC-BMF

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Great Pocket

Locality description: Stuart, grounded approximately 135 m NE of 5567 SE Reef Way.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Healing watercraft wound(s); Cold stress lesions; Thick algal mat. Verified through complainant photographs and FWC biologist. External work-up performed, but necropsy not conducted.

PHOTOGRAPHS TAKEN: Dorsal, Fluke.

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	220 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21069

RECOVERY DATE 06 February 2021

GENDER Male **TL** 220 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 06 February 2021, at 1020 hrs, FWC biologist-Amber Howell (ARH) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Stuart, Martin County. FWC case number 3068 was assigned. The complainant, Dawn (561-756-0283), stated that there was a dead manatee beached on a sandbar behind her house. She had attempted to call the day before when she thought it was beached alive, but nobody responded. ARH confirmed no calls were received by biologists. Photo verification was received by 1030 hrs. ARH passed the information to FWC biologist-Blake Faucett (BMF) to respond. BMF and FWC intern-Chelsea Cameron arrived at 1420 hrs. A necropsy was planned but due to incoming rain, just an external workup was completed. The carcass was kayaked off the sandbar and secured in mangroves in a secluded location to decompose.

EXTERNAL All of the epidermis was present. The carcass was thin. There was a thick brown algal mat on the dorsal and lateral aspects. Numerous circular and linear cold stress lesions were present on the axilla and lateral and ventral aspects. There was a healing watercraft-related wound pattern on the mid left lateral aspect which consisted of a long linear wound and at least three parallel propeller wounds caudal and perpendicular to the long linear wound. There were a few well-healed watercraft-related scars were observed, but due to the incoming rain cell, they were not highlighted or photographed. PIT tag scan was negative. A genetics sample was collected.

COMMENTS External work-up performed, but necropsy not conducted.

SIGNIFICANT FINDINGS

- Verified through photographs and FWC biologist
- Healing watercraft wounds
- Cold stress lesions
- Thick algal mat

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Howell

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21070
Date of Report: 2021-Feb-06
Filed By: FWC SE Field Station

FWC Case # **FWC Region:** SO-A

Sex: Female **Length:** 200 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-06 **By:** Harbor Branch staff to FWC-ARH

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: St. Lucie **Longitude:** W

Waterway: Harbor Branch Channel

Locality description: Fort Pierce, floating approximately 495 m NE of the Harbor Branch Oceanographic Institute boat ramp.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN: Verified through photographs.

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	200 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21070

RECOVERY DATE N/A

GENDER Female **TL** 200 **cm** (est) **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **06 February 2021**, at 1215 hrs, FWC biologist-Amber Howell (ARH) received a screenshot text from Harbor Branch (HBOI)-Steve Burton of information he had received regarding a dead manatee in the Harbor Branch Channel, Ft. Pierce, St. Lucie County. ARH passed the screenshot to FWC biologist-Blake Faucett (BMF) since there was a phone number in the text. BMF called the complainant, Brandon (561-632-9810), who stated he saw a dead manatee with vultures on it near the shoreline. BMF contacted the HBOI hotline and Wendy Marks replied that she could go verify the carcass. Wendy sent photos, a length estimate, gender, and coordinates by 1313 hrs. Wendy secured the carcass to the shoreline to decompose.

EXTERNAL From photographs - Approximately 20% of the ventral epidermis was present but sloughing. The left flipper and muzzle were eroded due to decomposition.

COMMENTS

SIGNIFICANT FINDINGS

- Verified through photographs

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

N/A

REPORT FILED BY Howell

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21087
Date of Report: 2021-Feb-09
Filed By: FWC SE Field Station

FWC Case # 3412 **FWC Region:** SO-A

Sex: Male **Length:** 150 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Willoughby Creek

Locality description: Stuart, floating 45m ENE of 2686 SE St. Lucie Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Perinatal (<= 150 cm)

EXPLAIN: Verified; Not Necropsied;

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	150 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21087

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Male **TL** 150 **cm** (est.) **WT** N/T **kg**

CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1633 hrs, FWC intern- Jordan Wheatley received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Willoughby Creek, Stuart, Martin County. FWC case number 3412 was assigned. The complainant, Christine (503-780-3216), stated the carcass was belly up floating south of the Indian Street Bridge. Photo verification was received by 1640 hrs. **15 February**, at 1012 hrs, FWC biologist- Amber Howell (ARH) received a text alert from Dispatch regarding the same dead manatee. FWC case number 3907 was assigned. The complainant, Patricia (772-284-0307), stated the carcass had washed up under her dock in Willoughby Creek and vultures were all over her dock. Photo verification was received. ARH requested FWC LE assist with relocating the carcass. At 1115 hrs, FWC- Officer Paul Godward arrived to the carcass, towed it out of the creek, and secured it to a plastic pole in the water in a secluded location to decompose naturally.

EXTERNAL From initial photo: All of the epidermis on the ventrum was present. There was bleached epidermis on the ventral fluke and axilla. There were cold stress lesions on the ventral neck, axilla, left lateral aspect, and ventrum. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH

Perinatal; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21092
Date of Report: 2021-Feb-10
Filed By: FWC SE Field Station

FWC Case # **FWC Region:** SO-A

Sex: Unknown **Length:** 275 cm (estimated-4) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-10 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: St. Lucie **Longitude:** W

Waterway: St. Lucie Cut

Locality description: Fort Pierce, grounded 365 m NW of 601 N Causeway Drive.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	275 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21092

RECOVERY DATE N/A

GENDER Undetermined **TL** 275cm (est.) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 10 February 2021, at 1835 hrs, FWC biologist- Amber Howell (ARH) noticed she had a Facebook message from 1643 hrs from Manatee Observation and Education Center staff member- Meredith that they received a call about a dead manatee in Ft Pierce, St. Lucie County. No FWC case number was assigned. The complainant, Larry (574-527-0681), stated at 1625 hrs, he observed a large, badly decomposed carcass just on the other side of the drawbridge from Little Jim Bait shop and Stan Blum boat ramp. Photo verification and a screenshot of the location was received by 1848 hrs. Due to level of decomposition, the carcass was left to decompose naturally.

EXTERNAL Approximately 20% of the epidermis on the ventrum was present but sloughing. The ventrum was sunbaked. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

•

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21094
Date of Report: 2021-Feb-11
Filed By: FWC SE Field Station

FWC Case # **FWC Region:** SO-A

Sex: Female **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-11 **By:** Citizen to FWC-ARH

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: St. Lucie Inlet

Locality description: Stuart, floating approximately 35 m SSE of 7020 SE Harbor Circle.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21094

RECOVERY DATE N/A

GENDER Female **TL** 215cm (est.) **WT** N/T kg

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY 11 February 2021, at 1032 hrs, FWC biologist- Amber Howell (ARH) received a text from FWRI Fisheries biologist- Sarah Webb that her friend had located a dead manatee near the St Lucie Inlet, Stuart, Martin County. No FWC case number was assigned. Photo verification and coordinates were received in the text. ARH passed the information to FWC intern- Jordan Wheatley since ARH was on a conference call and in the field. Jordan contacted the complainant, Tyler (772-342-6727), who stated there was a large dead manatee floating belly up with the skin starting to peel. At 1400 hrs, Jordan received a text alert from FWC SO Dispatch- Palm Beach regarding two dead manatees near the St Lucie Inlet. FWC case number 3573 was assigned. The complainant, Dustin (772-260-3967), and second complainant Derek (772-486-0429), stated one carcass was on the north side and the other carcass (MSE21100) on the south side once you get inside the inlet. Photo verification of both were received. At 1440 hrs, ARH received a call from Martin County Sheriff's- Deputy Mike Joseph that a boat flagged him down and he was with this carcass on the north side of the inlet. Due to the carcass being too close to the rocks for him to approach by boat, he was unable to move it. Additional photos and GPS were received by 1447 hrs.

EXTERNAL From photo: approximately 75% of the epidermis was present on the ventrum but sloughing. The carcass was distended with gas. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21100
Date of Report: 2021-Feb-09
Filed By: FWC SE Field Station

FWC Case # 3573 **FWC Region:** SO-A

Sex: Unknown **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-09 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: St. Lucie Inlet

Locality description: Stuart, beached 570 m ENE of 3650 SE Bowsprit Court.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21100
RECOVERY DATE N/A
GENDER Undetermined **TL** 215 **cm** (est.) **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY **09 February 2021**, at 1854 hrs, FWC on call biologist- Denise Boyd (DMB) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee on the south side of the St Lucie Inlet, Stuart, Martin County. FWC case number 3431 was assigned. The complainant, Charles (772-341-8879), did not answer or return the call, but stated it was on the shoreline up on rocks. **11 February**, At 1400 hrs, FWC Intern- Jordan Wheatley received a text alert from Dispatch regarding two dead manatees near the St Lucie Inlet. FWC case number 3573 was assigned. The complainant, Dustin (772-260-3967), and second complainant Derek (772-486-0429), stated one carcass was on the north side (MSE21094) and the other carcass on the south side once you get inside the inlet. Photo verification of both were received. At 1455 hrs after verifying MSE21094, Martin County Sheriff's- Deputy Mike Joseph verified this carcass but due to it being beached on rocks he was unable to move it. Additional photos and GPS were received by 1456 hrs.

EXTERNAL Approximately 20% of the epidermis was present but sloughing. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21114
Date of Report: 2021-Feb-23
Filed By: FWC SE Field Station

FWC Case # 4577 **FWC Region:** SO-A

Sex: Male **Length:** 309 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-23 **By:** Citizen to FWC SO Dispatch

DATE COLLECTED: 2021-Feb-23 **By:** FWC-BMF,ARH

DATE NECROPSIED: 2021-Feb-23 **By:** FWC-BMF,ARH

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Indian River

Locality description: Stuart, grounded approximately 40 m SSW of 322 NE Edgewater Drive.

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Depleted fat(s); Serous fat(s); Relatively empty GI tract; Wet lung(s); Heavy, swollen lungs; Fluid in pleural cavities.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Scrapes).

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. A field necropsy was performed. Monofilament in mouth. Twine in mouth. Cold stress lesions.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	309 cm	Fluke base:	78 cm	Girth at axillae:	180 cm
Snout to anus:	200 cm	Fluke width:	74 cm		
Snout to U/G:	130 cm	Girth at fluke base:	96 cm		
Snout to umbilicus:	114 cm	Girth at anus:	137 cm		
Flipper width:	19 cm	Girth at umbilicus:	147 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fluid in seminal vesicles.

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21114

RECOVERY DATE 23 February 2021

GENDER Male **TL** 309 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE 23 February 2021

CONDITION Fresh

HISTORY 23 February 2021, at 1014 hrs, FWC biologist- Amber Howell (ARH) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in the Indian River, Stuart, Martin County. FWC case number 4577 was assigned. The complainant, John (302-650-7714), stated there was a back up manatee in shallow water near the mangroves that was unresponsive when he approached it. No photos were available. ARH passed information to FWC biologist- Blake Faucett (BMF) to see if she could respond to verify. BMF arrived at 1150 hrs and confirmed the manatee was dead. BMF and ARH completed a field necropsy by 1435 hrs. The remains were secured in mangroves in a secluded location to decompose naturally.

EXTERNAL All of the epidermis was present. The carcass was thin. A moderate amount of bloody fluid and air bubbles exuded from the nares. There were areas that appeared to be wounds or impressions on the caudal dorsum and dorsal fluke. The carcass had a thin green and thin brown algal mat present. A few small, linear cold stress lesions were present. There was one small tail notch at the 5 o'clock aspect. There were a minimum of x well healed, watercraft-related scar patterns. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There were moderate serous abdominal, omental, and mesenteric fats. The mesenteries of the stomach and duodenum were severely congested with red banding and black specks (see photo). The mesenteries were moderately congested.

STOMACH The stomach was contracted and contained 250mL of tan fluid mixed with thick, viscous, white mucus (see photo). The mucosa was discolored blue and red with ulcerous regions (see photo). No parasites were observed.

DUODENUM The duodenum contained 150mL of tan fluid (see photo). The mucosa was sloughing with regions of dark blue to black discoloration (see photo). No parasites were observed.

JEJUNUM & ILEUM The proximal small intestines were empty of contents. The mucosa had regions of red discoloration (see photo). The distal small intestines were contracted and contained a small amount of light-yellow to tan paste (see photo). The mucosa was slightly discolored red. No parasites were grossly observed throughout.

CECUM The cecum contained 1.5L of moist, fibrous, leafy, stringy, moderately digested, dark green digesta with well chewed pieces of pink, tan, and orange algae (see photo). The mucosa was discolored blue. No parasites were observed. There was a 14cm piece of clear, 40lb test diameter monofilament in the cecum-colon juncture.

COLON The proximal most 30cm contained a moderate amount of moist, fibrous, leafy, stringy, moderately digested, moderately formed, dark green digesta with well chewed pieces of pink, tan, and orange algae (see photo). The mucosa was rugose and discolored dark green (see photo). The remainder of the proximal colon contained a small amount of moist, fibrous, leafy, stringy, poorly digested, well formed, green feces with partially digested tan and red leaves (see photo). The mucosa was rugose and tan. The mid and distal colon had regions that were contracted and empty and regions that were enlarged and inflated with gas (see photo). The non-contracted or inflated regions of the mid colon contained a small amount of dry, leafy, woody, moderately digested, well formed, tan to light brown feces with poorly digested orange and tan leaves (see photo). The mucosa was rugose and light pink to tan in the mid colon. The non-contracted or inflated regions of the distal colon contained a small amount of dry, woody, straw-like, moderately digested, well formed, tan to light brown

feces mixed with red and brown acorn fragments. The distal colon mucosa was sloughing with regions of red discoloration (see photo).

PANCREAS The pancreas was firm. Serosal surfaces were light pink and cut surfaces were tan.

SPLEEN The spleen was firm. Serosal surfaces were mottled pale tan and pale purple. Serosal surfaces were dark pink.

LIVER The liver was firm. Liver margins were sharp. The liver was blue to purple on serosal surfaces and brown on cut surfaces.

GALLBLADDER The gallbladder contained 10mL of viscous, dark yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was moderate, serous reproductive fat. The reproductive organs were large in size. A moderate amount of watery, tan fluid was expressed on cut surfaces of the seminal vesicles.

KIDNEYS There was a small amount of serous perirenal fat. The kidneys were firm. Serosal surfaces were red. On cut surfaces the cortices were red and the medullae were dark red. The corticomedullary boundaries were mostly indistinct.

URINARY BLADDER The urinary bladder contained 50mL of clear, light yellow urine. The mucosa was moderately congested.

HEART There was small, serous epicardial fat. Valves and chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The right pleural cavity contained 2.5L and the left pleural cavity contained 3L of watery, dark red fluid (see photo). There were black specks on the parietal pleura (see photos). The lungs were swollen and heavy. Serosal surfaces were light pink and cut surfaces were dark pink and very wet (see photo). Primary and secondary airways contained a small amount of watery, red tinged fluid. The mucosa was tan. No parasites were observed.

HEAD & NECK REGIONS There were a couple blades of poorly chewed seagrass and several poorly chewed roots, a piece (37cm) of clear, 20lb test diameter monofilament, and two pieces (13, 33cm) of braided, tan twine in the mouth (see photo).

SKELETON NVL.

OTHER There was an inflated, blue discolored region of the mesenteric tissue surrounding the cecum lymph nodes (4.0 x 5.5cm, see photo). When cut into, there was a scant amount of watery, tan fluid. The tissue was discolored blue with pitted red and tan lesions (see photo).

PHOTOGRAPHS 2021-02-23_FWC043_5639 through 5708

COMMENTS

SIGNIFICANT FINDINGS

- Thin
- Depleted, serous fats
- Relatively empty upper GI tract
- Fluid in pleural cavities

- Wet lungs
- Inflated, discolored region in the mesenteric tissue
- Discolored, contracted GI mucosa
- Monofilament, twine in mouth, cecum

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Amber R. Howell
Blake M. Faucett

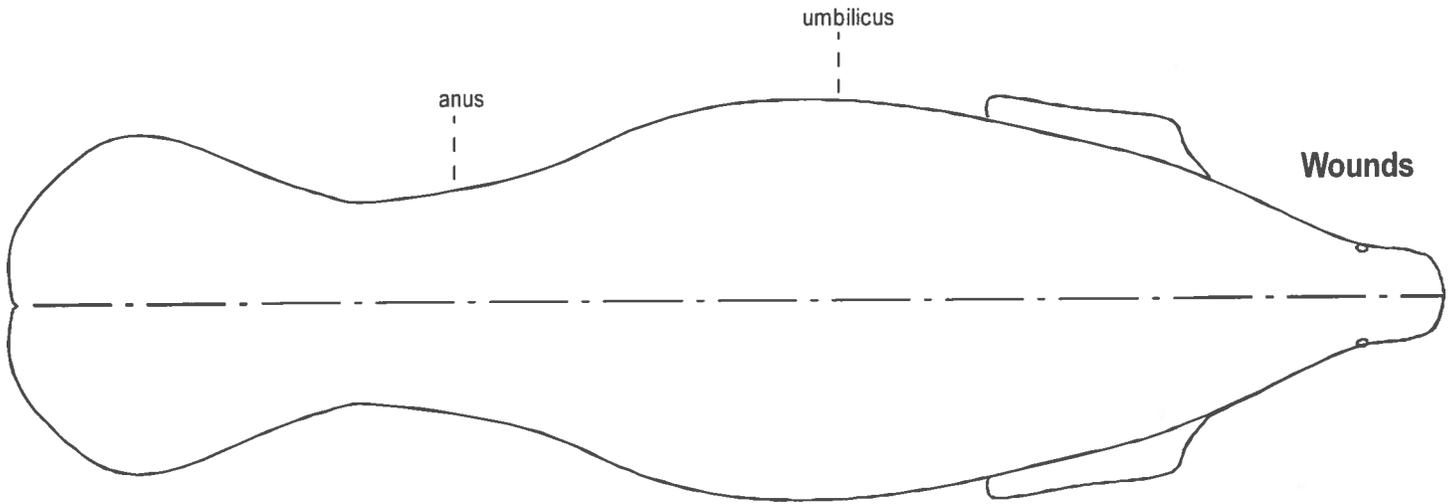
REPORT FILED BY Howell

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

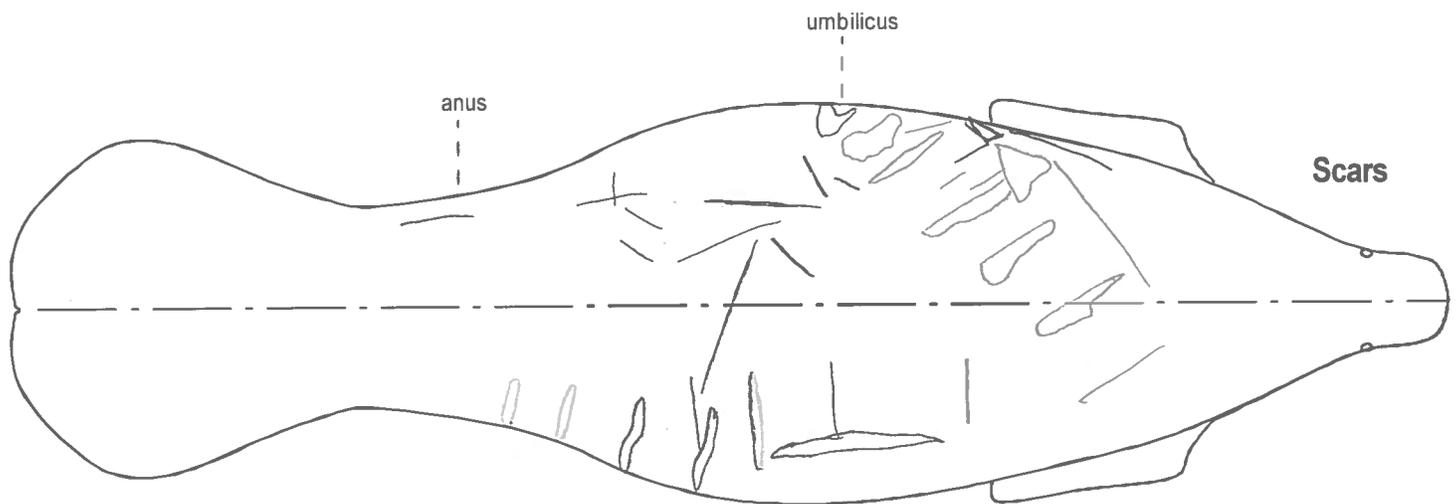
Date 23 Feb 2021

Field I.D. MSE21114

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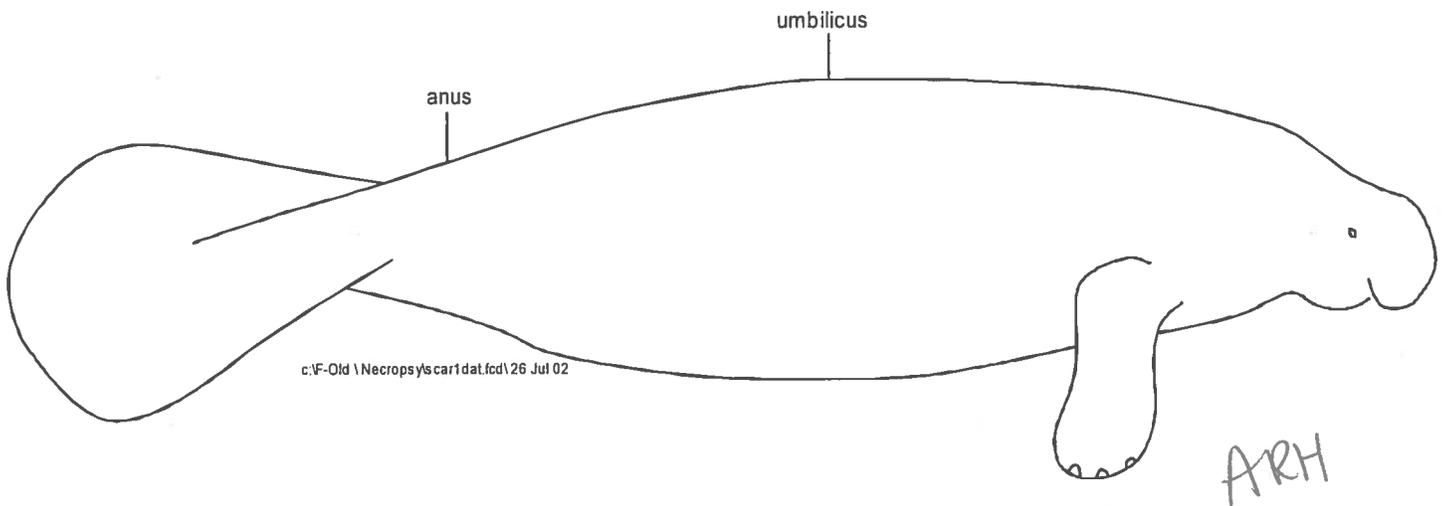
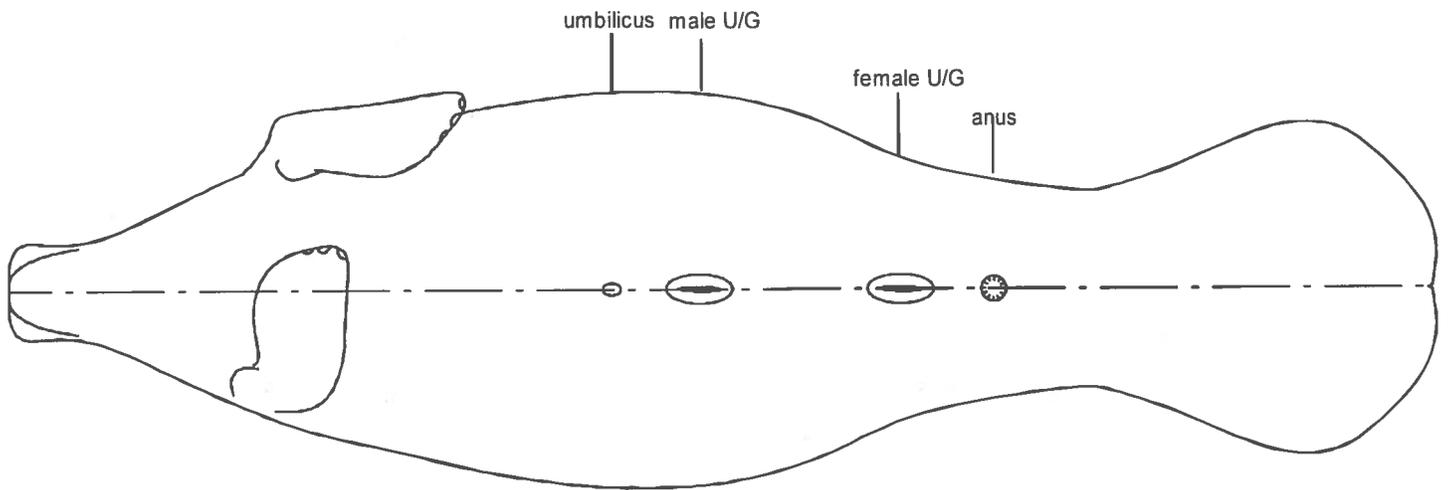
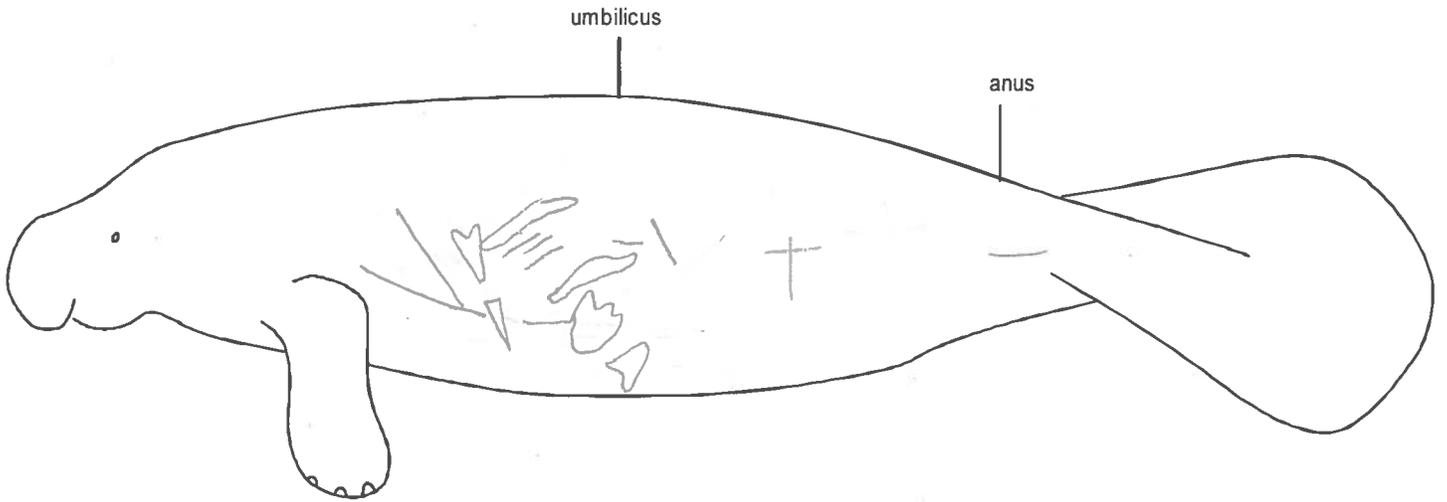


Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



ARH
over →

FIELD I.D. MSE21114



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ARH

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

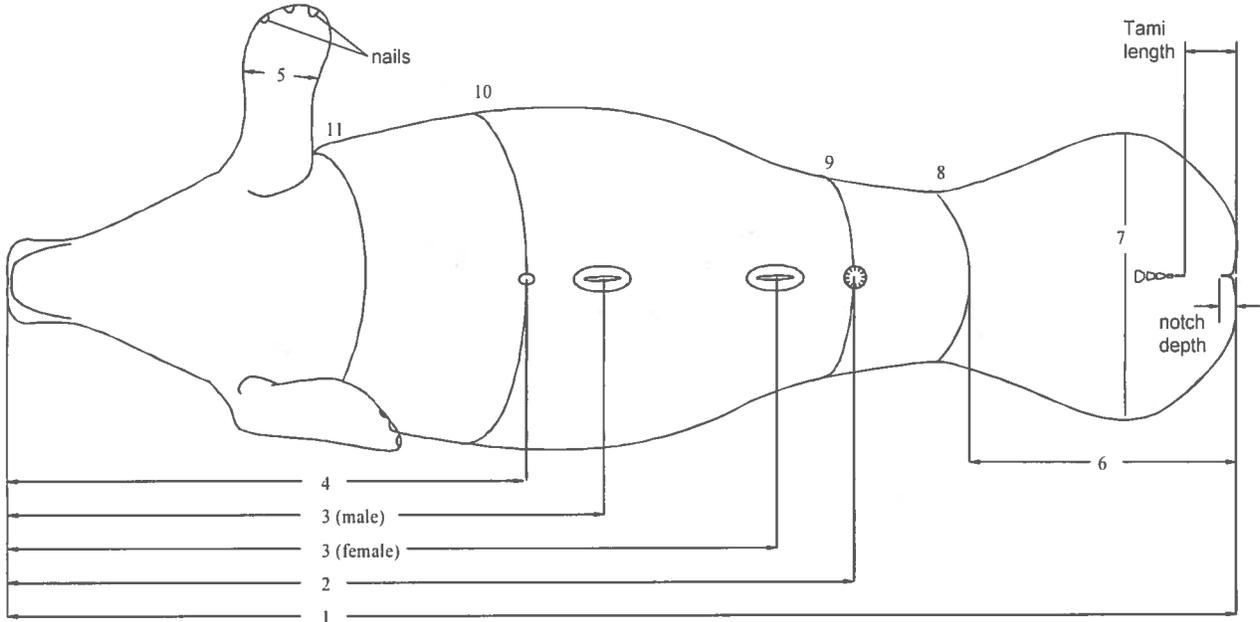
Left side: _____ Right side: _____

REMARKS: _____

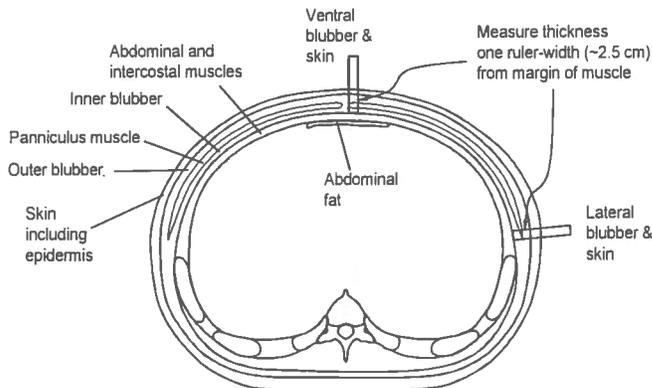
Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only. USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|--|---------------------------------------|--------------------------------------|
| 1. Total length <u>309</u> cm | 6. Fluke base <u>78</u> cm | 11. *Girth at axillae <u>180</u> cm |
| 2. Snout to anus -C <u>200</u> cm | 7. Fluke width <u>74</u> cm | (Depth of notch _____ cm) |
| 3. Snout to U/G -C <u>130</u> cm | 8. *Girth at fluke base <u>96</u> cm | (Tami In _____ cm) |
| 4. Snout to umbilicus -C <u>114</u> cm | 9. *Girth at anus <u>137</u> cm | |
| 5. Flipper width <u>19</u> cm | 10. *Girth at umbilicus <u>147</u> cm | (Nail count: R <u>4</u> L <u>4</u>) |



Skin and Blubber (cm).	Ventral	Lateral	(Epidermis _____ cm)
Skin.....	_____ cm	_____ cm	(Abdominal fat _____ cm)
Outer blubber.....	_____ cm	_____ cm	
Inner blubber.....	_____ cm	_____ cm	



Mammary dimensions R: x x cm L: x x cm
 Lactating: R: Y/N L: Y/N
 Placental Scaring: R/L: x x cm
 Pregnant: Y/N - Fetus length cm Fetus gender M/F Fetus weight kg
 Gonads: R: x x cm; kg; L: x x cm; kg
 Sperm: in testes Y/N; in epididymes Y/N Method: visual/microscope slide
 Fluid in seminal vesicles Y/N; if yes, then vesicle dimensions R: x x cm L: x x cm

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21118
Date of Report: 2021-Feb-24
Filed By: FWC SE Field Station

FWC Case # 4673 **FWC Region:** SO-A

Sex: Unknown **Length:** 170 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-24 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Negro Cove

Locality description: Stuart, beached approximately 260 m NW of 260 SE Macarthur Boulevard.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

Page 1&2	
Necropsy Report	
Lat/Long	

MORPHOMETRICS:

Total length:	170 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21118
RECOVERY DATE N/A
GENDER Undetermined **TL** 170 **cm** (est.) **WT** N/T **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE N/A
CONDITION Confirmed; Not Necropsied

HISTORY 24 February 2021, at 0936 hrs, FWC biologist-Blake Faucett (BMF) received a text alert from FWC SO Dispatch-Palm Beach regarding a dead manatee in Negro Cove, Stuart, Martin County. FWC case number 4673 was assigned. The complainant, Ted (954-465-4805), stated there was a dead manatee with vultures on top of it near the mangroves. No photos were available, and Ted was no longer in the area. BMF requested FWC LE assistance for verification. At 1245 hrs, BMF received a call from FWC-Officer Matt Pecko who stated he located the carcass. Photo verification and GPS coordinates were received at 1253 hrs. Due to the level of decomposition and secluded area, the carcass was left verified, not necropsied.

EXTERNAL All of the ventral epidermis was missing. The exposed dermis was sunbaked. There were scavenging rents on the ventrum.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Faucett

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** _____ **Undetermined** _____ **Not Necropsied** _____
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21127
Date of Report: 2021-Feb-28
Filed By: FWC SE Field Station

FWC Case # 5145 **FWC Region:** SO-A

Sex: Female **Length:** 308 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-28 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: 2021-Mar-01 **By:** FWC-AP

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Willoughby Creek

Locality description: Stuart, floating

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Scar, Other (Wounds.). Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative. Known as MIPS ID PE281, first sighted on 09 Jan 2002 at Port Everglades power plant.

Page 1&2	
Necropsy Report	
Lat/Long	

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	308 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21127

RECOVERY DATE 01 March 2021

GENDER Female **TL** 308 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **28 February 2021**, at 1140 hrs, FWC biologist-Austin Peek (AP) received a text alert from FWC SO Dispatch-Palm Beach regarding a manatee carcass in the Willoughby Creek, Stuart, Martin County. FWC case number 5069 was assigned. The complainant, Kenan (305-491-2013), reported a dead manatee floating behind their residence. Photo verification received by 1149 hrs. AP requested FWC LE and Martin County SO for assistance but was advised no marine units were available until later that evening. No Officers ended up making it out to this call. **01 March**, at 0915 hrs, FWC biologist- Amber Howell (ARH) received a text alert from Dispatch regarding the same carcass. FWC case number 5145 was assigned. The complainant, Sandy (772-341-3700), reported the carcass was in mangroves fully enclosed inside of her half circle dock. ARH requested FWC LE assistance. By 1100 hrs, FWC- Officer Matt Pecko and FWC- Officer Eric Rogers contacted ARH and a plan was made for AP to meet them in order to access the carcass. AP arrived to the carcass by 1204 hrs to get it out from the dock for LE to access. The carcass was then towed to a secluded location where AP completed external workup by 1319 hrs. The carcass was secured on site to decompose naturally.

EXTERNAL Approximately 15% of the epidermis was present but sloughing. Bloody fluid exuded from the nares. There was a healing wound series on the peduncle and dorsal aspect of the fluke. The carcass was scavenged on the right ventral neck. There was a minimum of five well healed, watercraft-related scar patterns observed. PIT tag scan was negative. A genetics sample was collected.

OTHER

PHOTOGRAPHS 2021-03-01_FWC043_6010 through 6024

COMMENTS

SIGNIFICANT FINDINGS

•

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

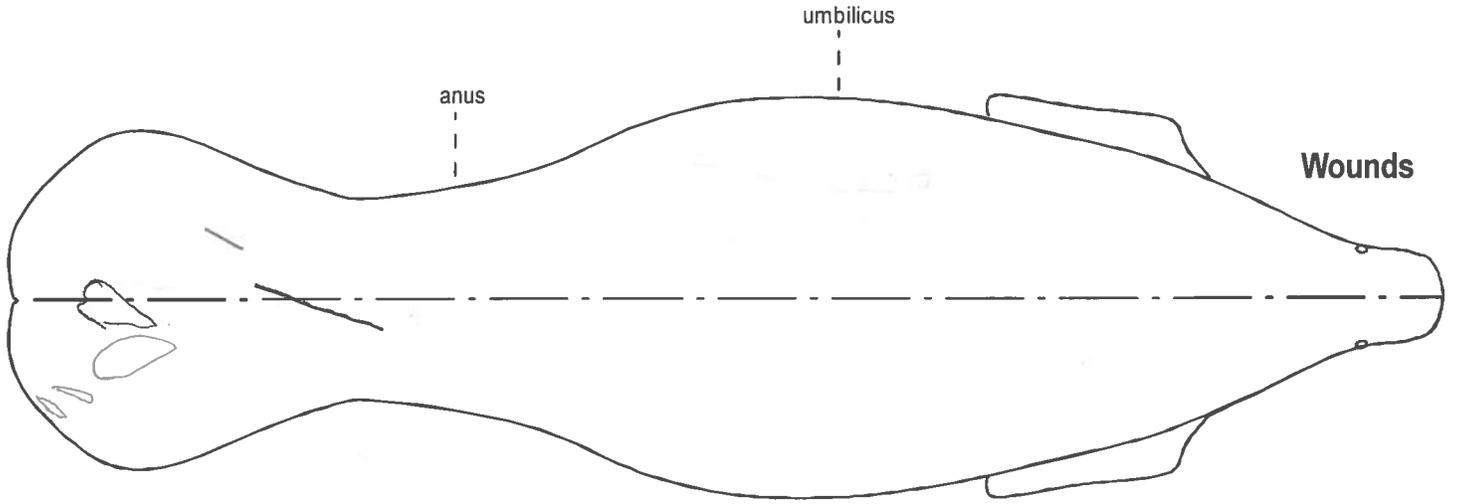
NECROPSY CONDUCTED BY

REPORT FILED BY Peek

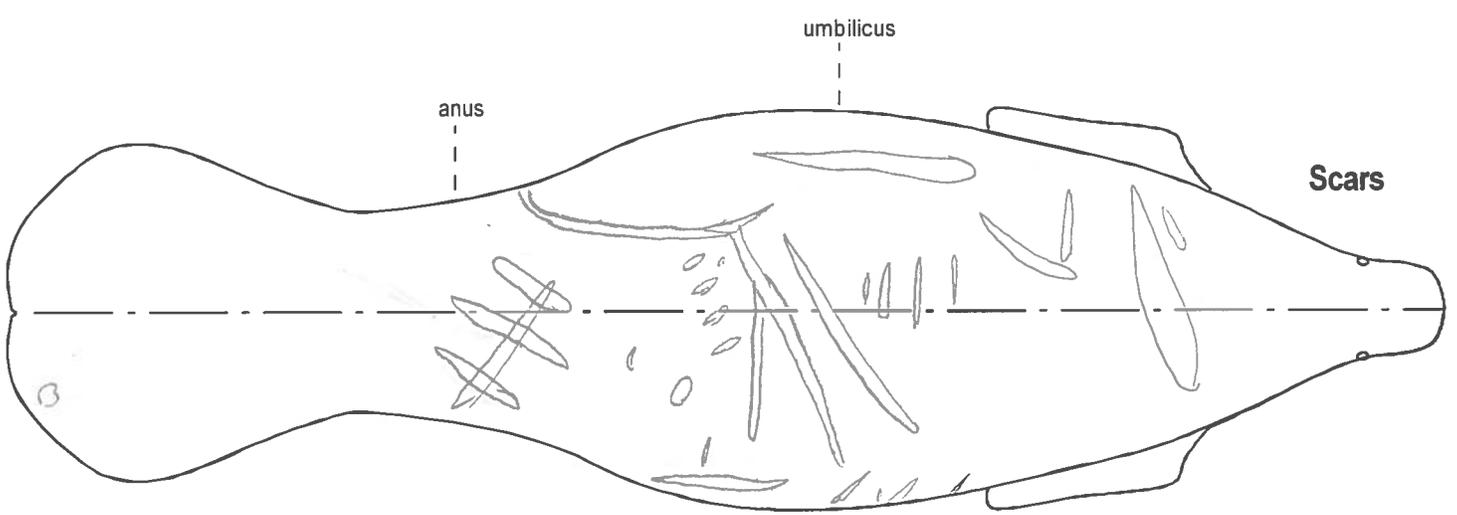
Date 01 March 2021

Field I.D. MSE21127

c:\Manuals\scar2dat\ 26 July 02



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



AP

Bassett, Brandon

From: Rood, Kari
Sent: Monday, March 15, 2021 8:41 AM
To: Howell, Amber; amy_teague@usgs.gov; Barbeau, Brittany; Barlas, Margie; Bassett, Brandon; Boyd, Denise; Burns, Allison; Davidson, Emily; Deutsch, Chip; deWit, Martine; Edwards, Holly; Faucett, Blake; Fontaine, Christine; Garrett, Andy; Gordon, Nadia; Greer, Bill; Herring, Hada; Honaker, Allison; Jennifer H. Johnson; Johnson, Jennifer; Martz, Meg; Metcalf, Carley; Nader, Ana; Panike, Anna; Peek, Austin; Schubert, Molly; sheri@mote.org; Tamborini, Kyanna; Tennant, Sean; Wappes, Sara; Whitcomb, Tara
Subject: PE281=MSE21127

PE281=MSE21127

Carcass location: Willoughby Creek, Stuart
Female

First sighted 1/9/02 at Port Everglades Power Plant
Last sighted 12/11/17 at Indian River FPL Canaveral Power Plant
USGS should be able to provide a complete sighting history if needed.

Verifiers: MARTZ 3/14/21 & KAH 3/15/21

Sighting records are not to be used without permission from FWC, MML, and/or USGS, as appropriate.

Kari A. Rood
Manatee Photo-identification
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
100 8th Avenue S.E.
St. Petersburg, FL 33701

Direct line: (727) 502-4737
Main line: (727) 896-8626
Kari.Rood@MyFWC.com
<http://MyFWC.com>
<http://MyFWC.com/research/>

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21129
Date of Report: 2021-Feb-28
Filed By: FWC SE Field Station

FWC Case # 5127 **FWC Region:** SO-A

Sex: Unknown **Length:** 215 cm (estimated-3) **Weight:** Not Taken kg

DATE REPORTED: 2021-Feb-28 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: **By:**

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: St. Lucie **Longitude:** W

Waterway: Taylor Creek

Locality description: Ft. Pierce, grounded 625 m NE of 1401 N 2nd Street.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Verification Photo(s)

MATERIALS COLLECTED:

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

DISPOSITION OF MATERIAL:

ADDITIONAL DATA:

REMARKS:

PIT tag scan not performed.

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Necropsy Report	
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MORPHOMETRICS:

Total length:	215 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosis Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21129

SPECIES *T. manatus latirostris*

RECOVERY DATE N/A

NECROPSY DATE N/A

GENDER Undetermined **TL** 215cm (est.) **WT** N/T kg

CONDITION Confirmed; Not Necropsied

HISTORY **01 March 2021**, at 0604hrs, FWC biologist-Amber Howell (ARH) received a text alert from FWC FWC SO Dispatch-Palm Beach regarding a manatee carcass in the Taylor Creek, Ft Pierce, St. Lucie County. FWC case number 5127 was assigned. The complainant, Rhonda (786-284-2053), sent an email via Tip@myfwc.com at 1446 on 28 February 2021 stating she called the FWC hotline the day before but never got a response from anybody and the dead manatee was still at Harbor Pointe Park. ARH left a voicemail at 0750 hrs, sent an email at 0815 hrs, and attempted to call again at 0950 hrs when Rhonda answered to advise she was no longer there and did not take any photos. Based on location given, ARH contacted FWC LE for assistance with verification. At 1108 hrs, FWC- Officer James Payne arrived to the carcass and sent photo verification and GPS coordinates. Due to level of decomposition and secluded location, the carcass was left to decompose naturally.

EXTERNAL The ventral and lateral aspects were missing due to scavenging. Epidermis was present on the fluke but sloughing. PIT tag scan was not performed.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: MSE21132
Date of Report: 2021-Mar-02
Filed By: FWC SE Field Station

FWC Case # **FWC Region:** SO-A

Sex: Male **Length:** 196 cm **Weight:** Not Taken kg

DATE REPORTED: 2021-Mar-02 **By:** Citizen to FWC SO-A Dispatch

DATE COLLECTED: 2021-Mar-03 **By:** FWC Intern-C. Cameron

DATE NECROPSIED: **By:**

LOCATION: State: FL **Latitude:** N

County: Martin **Longitude:** W

Waterway: Willoughby Creek

Locality description: Stuart, floating 65 m NE of 2647 SE Golden Gate Avenue.

CONDITION: Confirmed; Not Necropsied

PROBABLE CAUSE OF DEATH: Verified; Not Necropsied

EXPLAIN:

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Fluke, Cranial, Other (Wounds.). Verification Photo(s)

MATERIALS COLLECTED:
Genetics.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

REMARKS:

PIT tag scan negative.

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PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	196 cm	Fluke base:	cm	Girth at axillae:	cm
Snout to anus:	cm	Fluke width:	cm		
Snout to U/G:	cm	Girth at fluke base:	cm		
Snout to umbilicus:	cm	Girth at anus:	cm		
Flipper width:	cm	Girth at umbilicus:	cm	Nail count: R:	L:

	Ventral	Lateral		
Skin Thickness:	cm	cm		
Outer Blubber Thickness:	cm	cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	cm	cm	Epidermis Thickness:	cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right		
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. MSE21132

RECOVERY DATE 03 March 2021

GENDER Male **TL** 196 **cm** **WT** N/T **kg**

SPECIES *T. manatus latirostris*

NECROPSY DATE N/A

CONDITION Confirmed; Not Necropsied

HISTORY **02 March 2021**, at 1347hrs, FWC biologist-Amber Howell (ARH) received a text from a resident at one of the Photo ID sites that there was a manatee carcass in the Willoughby Creek, Stuart, Martin County. No FWC case number was assigned. The complainant, Ben (917-716-6347), provided a photo with the text stating the carcass was in the mangroves. At 1623 hrs, ARH received a text from another resident, Trish (610-405-7738), with a photo stating the carcass was in the mangroves off the docks. At 1746 hrs, ARH received a text from another resident, Carol (215-588-8746), with a photo stating the carcass was in the mangroves. Due to staff being on numerous rescues all day, a plan was created to respond the following morning to move the carcass. **03 March**, FWC intern- Chelsea Cameron arrived to the carcass at 0916 hrs, completed external workup, and kayaked it to a secluded location away from the resident's docks by 1012 hrs.

EXTERNAL Approximately 25% of the epidermis was present but sloughing. There was one penetrating propeller series consisting of five wounds on the dorsal left lateral aspect of the peduncle extending to the tip of the fluke. No watercraft-related scars were observed. PIT tag scan was negative. A genetics sample was collected.

PHOTOGRAPHS 2021-03-03_FWC044_6433 through 6449

COMMENTS

SIGNIFICANT FINDINGS

PROBABLE CAUSE OF DEATH

Verified; Not Necropsied

NECROPSY CONDUCTED BY

REPORT FILED BY Howell

MMPL, FWRI, Florida Fish and Wildlife Conservation Commission **Field ID #** _____
3700 54th Ave. South, St. Petersburg, FL, 33711; (727) 893-2904

FWC Case # _____ **FWC District:** _____
Sex: _____ **Length (cm):** _____ **Est** _____ **Confidence** _____ **Weight (kg)** _____
Date reported: _____ **By:** _____
Date collected: _____ **By:** _____
Date necropsied: _____ **By:** _____

LOCATION INFORMATION: **State:** _____ **County:** _____ **Waterway:** _____
Latitude: N _____ **Longitude:** W _____
Locality description: _____

Carcass Orientation: _____

CONDITION:

PROBABLE CAUSE OF DEATH:

Human related: _____ Watercraft Collision: _____
Flood Gate/Canal Lock: _____ Structure ID/Name (if applicable) _____
Other _____
Perinatal (≤150 cm): **Natural** **Undetermined** **Not Necropsied**
Natural: _____ Cold Stress _____ Other (includes Red Tide) _____
Undetermined: _____ Too Decomposed _____ Other _____ Not Necropsied _____
Explain: _____

PHOTOGRAPHS:

Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site
Verification photograph Other _____

MTLS COLLECTED:

Genetics Earbone Skull Partial Skeleton Complete Skeleton Histology Other _____

Archive Tox: Stomach Liver Kidney Blubber Lower Jaw Other _____
ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other _____
Genetics Box # _____

LACTATING: _____ **PREGNANT:** _____ **UTERINE SCAR:** _____

UTERINE HORNS: _____

ADDITIONAL DATA:

External measurements Wound measurements Perinatal evaluation Organ weights
Rescue Report/Map Other _____

PIT TAG Scan:

Left side: _____ Right side: _____

REMARKS: _____

Estimated length confidence options: 1 - Carcass remains measured. 2 - Estimated by staff on site or unofficial measurement by partners. 3 - Photo reference point w/ complainant/officer estimate. 4 - No photo reference point and/or complainant/officer estimate. 5 - No photo available and officer/partner estimate.

Report of a Dead Manatee

Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute
Marine Mammal Pathobiology Laboratory
3700 54th Avenue South St. Petersburg, FL 33711 (727) 893-2904

Field ID #: SWFTm2114b
Date of Report: 2021-Feb-19
Filed By: FWC MMPL

FWC Case # FWC Region: NE

Sex: Female Length: 321 cm Weight: 512.0 kg

DATE REPORTED: 2021-Feb-19 By: SWF-Bob Wagner to MMPL-AJG

DATE COLLECTED: 2021-Feb-19 By: MMPL-SMT

DATE NECROPSIED: 2021-Feb-20 By: MMPL-MdW,BDB,SMT

LOCATION: State: FL Latitude: N

County: Brevard Longitude: W

Waterway: Indian River

Locality description: Port St. John, in the FPL warm water discharge,

CONDITION: Fresh

PROBABLE CAUSE OF DEATH: Natural: Other

EXPLAIN: Emaciated; Depleted fat(s); Serous fat(s); Serous muscle; Wet lung(s); Relatively empty GI tract; Dark line kidney(s); Cobblestone-like epidermis; Asymmetric carcass; Lung bulla, hemorrhage; Frothy lungs; Fluid, mucus, froth airways; Fluid pleural cavities; Congested mesenteries, meninges, hemidiaphragms, GI wall, urinary bladder mucosa, neck tissue, fat; Petechiae, ecchymoses, mesentery, duodenum serosa, hemidiaphragm; Bloody kidneys; Dark red ascites; Vegetation in mouth; Specks abdominal fat.

PHOTOGRAPHS TAKEN: Dorsal, Ventral, Lateral, Scar, Fluke, Cranial, Internal, Other (Ventral lesion, Wrinkled ventrum).

MATERIALS COLLECTED:

Genetics, Histology- 80 samples: liver, lung, kidney, brain, muscle, fat, feces. Burgess samples: feces.

DISPOSITION OF MATERIAL: FWC MMPL.

ADDITIONAL DATA:

Rescue report.

REMARKS:

PIT tag scan negative. Uterine Scar. Died on 19 Feb 2021. Died in facility. Monofilament in colon. Plastic bag in colon. See rescue report REC2109., rescued on 18 Feb 2021 for emaciation and sideways positive bouyance. Straight length dorsum up was 314cm.

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Necropsy Report	
Lat/Long	

PRELIMINARY DATA
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MORPHOMETRICS:

Total length:	321 cm	Fluke base:	102 cm	Girth at axillae:	164 cm
Snout to anus:	205 cm	Fluke width:	83 cm		
Snout to U/G:	189 cm	Girth at fluke base:	114 cm		
Snout to umbilicus:	115 cm	Girth at anus:	153 cm		
Flipper width:	19 cm	Girth at umbilicus:	215 cm	Nail count: R: 4	L: 4

	Ventral	Lateral		
Skin Thickness:	1.6 cm	2.8 cm		
Outer Blubber Thickness:	1.3 cm	0.2 cm	Abdominal Fat Thickness:	cm
Inner Blubber Thickness:	0.6 cm	0.4 cm	Epidermis Thickness:	0.1 cm

Perinatal:	Ductus Arteriosus Diameter:	cm
	Left Pulmonary Artery Diameter:	cm
	Right Pulmonary Artery Diameter:	cm

Uterine Scarring Measurements:

Side	Circumference (cm)	Width (cm)
Right	8.2	5.2
Right		
Left		
Left		

Male Reproductive:

Fetus 1: Sex: Report?:

Length:
Weight:
Samples Taken:

Fetus 2: Sex: Report?:

Length:
Weight:
Samples Taken:

Brevetoxin Results:

Tissue	Concentration	Units
Liver		ng/g
Stomach Contents		ng/g
Kidney		ng/g
Lung		ng/g
Urine		ng/mL

Other Brevetoxin Results:

PRELIMINARY DATA. FINDINGS MAY BE ADDED OR DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. SWFTm2114b

SPECIES *T. manatus latirostris*

RECOVERY DATE

NECROPSY DATE

GENDER TL cm WT kg

CONDITION

HISTORY 19 February 2021, at approximately 1100 hrs, FWC veterinarian-Martine de Wit received a call from SeaWorld Orlando staff informing her that REC2109/SWFTm2114b had died. At approximately 1300 hrs, FWC biologist-Sean Tennant (SMT) departed from the ECFL with a carcass trailer and arrived at SeaWorld Orlando at 1455 hrs. The carcass was loaded by 1520 hrs, and transported to the MMPL, arriving at approximately 1830 hrs due to heavy traffic.

EXTERNAL

ABDOMINAL

STOMACH

DUODENUM

JEJUNUM & ILEUM

CECUM

COLON

PANCREAS

SPLEEN

LIVER

GALLBLADDER

REPRODUCTIVE

KIDNEYS

URINARY BLADDER

HEART

RESPIRATORY SYSTEM

HEAD & NECK REGIONS

SKELETON

OTHER

PHOTOGRAPHS

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

COMMENTS

SIGNIFICANT FINDINGS

-

PROBABLE CAUSE OF DEATH

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Andrew J. Garrett
Brandon L. Bassett
Anna L. Panike
Brittany Barbeau
Tara D. Whitcomb
Sean M. Tennant
Christine M. Fontaine

REPORT FILED BY

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

MARINE MAMMAL NECROPSY REPORT FORM

FIELD I.D. SWFTm2114b
RECOVERY DATE 19 February 2021
GENDER Female **TL** 321 **cm** **WT** 517 **kg**

SPECIES *T. manatus latirostris*
NECROPSY DATE 20 February 2021
CONDITION Fresh

HISTORY

EXTERNAL All of the epidermis was present. The carcass was dorsoventrally flattened due to emaciation. A moderate amount of viscous pink mucus and dead trematodes exuded from the nares. The carcass was distended on the right side. The epidermis had thin flaky cobblestone-like patches. There was a thin green and brown algal mat on the dorsal aspect. The ventrum was flat and had longitudinal folds. There was a minimum of x well-healed watercraft-related scar patterns on the dorsal aspect. The fluke margin had several well-healed mutilations between the 3 and 8 o'clock positions. PIT tag scan was negative. A genetics sample was collected.

ABDOMINAL There was a small amount of serous abdominal, mesenteric, and omental fat. The abdominal fat had black specks. The cranial abdominal fat was very gassy. The abdomen contained 400 mL of watery dark red fluid.

STOMACH The stomach was distended with gas and contained 2.5 L of watery green fluid and 0.5 L of wet, well-chewed, leafy, green to yellow vegetation. The mucosa had a few patches of mild congestion in the minor curvature and was otherwise pink. No parasites were observed.

DUODENUM The dorsal serosal surface of the duodenum which contacted the hemidiaphragm was severely congested. The duodenum contained 500 mL of watery green fluid and approximately 250 mL of wet, well-chewed, leafy, green to yellow vegetation. The mucosa was unremarkable. No parasites were observed.

JEJUNUM & ILEUM The mesentery was moderately congested and had diffuse petechiae. The proximal most one meter contained a large amount of light brown fluid. The remainder of the small contained a scant of light brown fluid. The mucosa was sloughing. No parasites were grossly observed.

CECUM The cecum was contracted and contained 50 mL of moist, well-digested, pasty, dark green digesta. The mucosa was sloughing. No parasites were observed.

COLON The mesentery was severely congested and had petechiae. Most of the colon was contracted and the proximal colon had a few gas-distended regions. The mid- and proximal colon were empty of contents. The distal colon contained a scant amount of moist, well-digested, pasty, moderately formed, sticky, olive green feces. There were one 10 x 6 cm piece of plastic bag and a 5 x 9 cm nest of 40 lb test diameter clear monofilament line in the most distal feces. The mucosa was unremarkable throughout. A few dead trematodes were observed in the proximal colon.

PANCREAS The pancreas was dark pink on serosal surfaces and pink on cut surfaces.

SPLEEN The spleen was dark purple to black on serosal surfaces, and red on cut surfaces.

LIVER The liver was firm. The margins were rounded. The serosal surfaces were dark grey to dark purple, and the cut surfaces were brown.

GALLBLADDER The gallbladder contained 200 mL of golden yellow bile. The mucosa was bile-stained.

REPRODUCTIVE There was a small amount of serous reproductive fat. The uterus was contracted. The

mucosa was red. The right horn had a scar (5.2 cm wide x 8.2 cm circumference). The ovaries had numerous corpora albicantia and a few small fluid-filled follicles and corpora hemorrhagica.

KIDNEYS There was a small amount of gassy, severely congested perirenal fat with petechiae. The kidneys were purple to dark pink on serosal surfaces. The cut surfaces were bloody. The cortices were light red and the medullae tan to dark red and gritty. The corticomedullary boundaries were distinct and some had a dark red band.

URINARY BLADDER The bladder was contracted and empty of contents. The mucosa was mildly congested.

HEART There was scant serous epicardial fat. The AV valves were opaque. Chambers were unremarkable.

RESPIRATORY SYSTEM Both hemidiaphragms were intact. The left pleural cavity contained 250 mL and the right pleural cavity contained 500 mL of watery red fluid. The right hemidiaphragm was taut. The caudal half of the abdominal aspect of the right hemidiaphragm had streaks of severe congestion, ecchymoses and petechiae. The cranial and caudal tips of the right lung were light pink on serosal and cut surfaces. The cut surfaces were wet and frothy. The mid three quarters of the right lung were swollen and dark red to purple on serosal surfaces. The dorsal aspect was coated with flat, adhered blood clots. The cut surface of this portion was a large cavity filled with air, bloody fluid and blood clots. The cavity was coated with firm tan to grey tissue and resolving blood clots. The surrounding lung parenchyma was firm, fibrotic, hemorrhagic, wet, and pink, tan and red. The left lung was light pink, tan and light purple on serosal surfaces, and wet, frothy, and light pink to red on cut surfaces. Both lung airways contained a large amount of tan froth, fluid, and mucus. The mucosa was pink. No parasites were observed. The parietal pleura was severely congested at the rib heads of the left pleural cavity.

HEAD & NECK REGIONS The muscle was moderately congested and had regions of petechiae. The nares contained viscous red mucus. The trachea contained a moderate amount of white froth. The mucosa was light pink. There were a few poorly chewed pieces of vegetation in the mouth. The meninges were moderately congested.

SKELETON NVL.

OTHER The muscle and connective tissue was slightly serous, and some portions were slightly gassy. The cortex:medulla ratio of the adrenal glands was 2:1.

PHOTOGRAPHS

COMMENTS

SIGNIFICANT FINDINGS

- Emaciated
- Asymmetric carcass
- Depleted, serous fat
- Serous tissue
- Lung bulla, hemorrhage
- Wet, frothy lungs
- Fluid, mucus, froth airways
- Fluid pleural cavities
- Relatively empty GI tract
- Congested mesenteries, meninges, hemidiaphragm, GI wall, urinary bladder mucosa, neck tissue, fat

- Petechiae, ecchymoses mesentery, duodenum serosa, hemidiaphragm
- Bloody kidneys
- Dark line kidneys
- Dark red ascites
- Vegetation in mouth
- Gassy abdominal fat
- Cobblestone-like epidermis
- Specks abdominal fat
- Plastic bag, monofilament nest in feces
- Uterine scar

PROBABLE CAUSE OF DEATH

Natural; Other

NECROPSY CONDUCTED BY

Martine de Wit, DVM
Brittany D. Barbeau
Sean M. Tennant

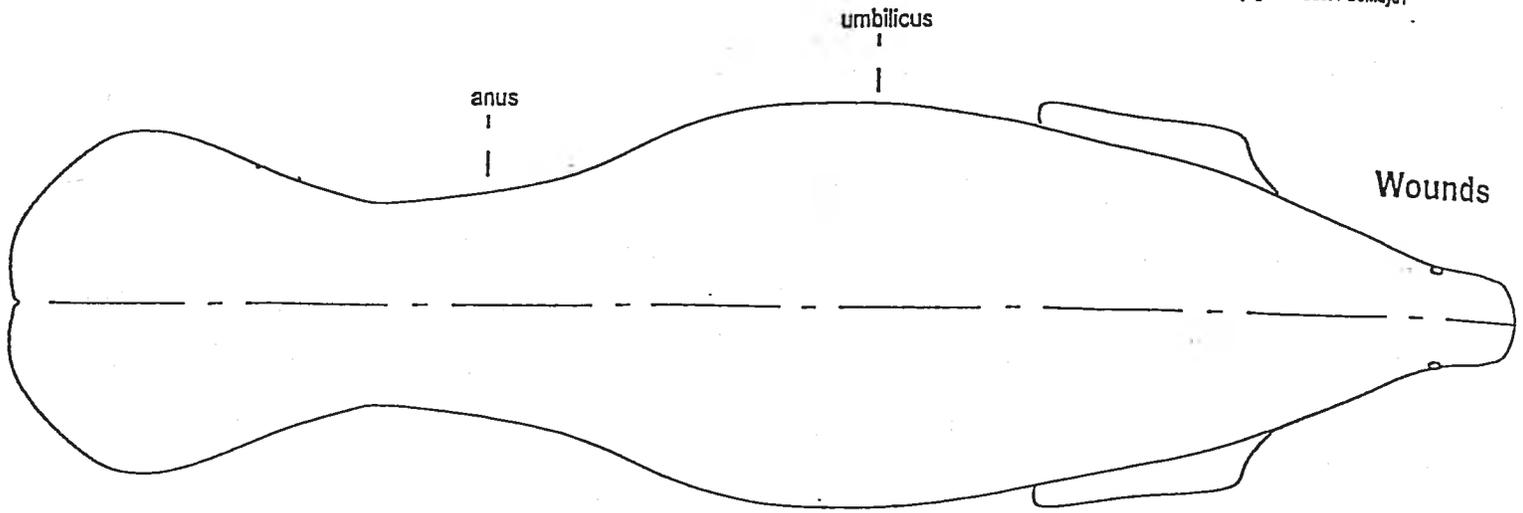
REPORT FILED BY de Wit

PRELIMINARY DATA.
FINDINGS MAY BE ADDED OR
DELETED AFTER REVIEW AND CAUSE OF DEATH MAY CHANGE

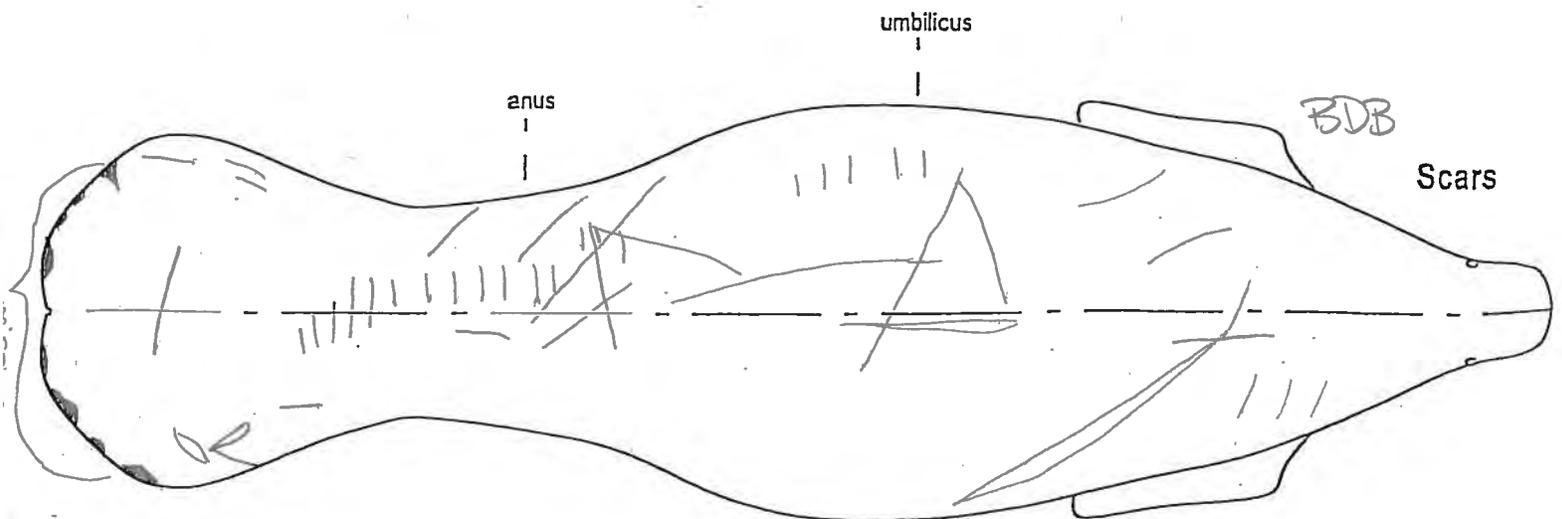
Date 20 Feb 2021

Field I.D. SWFTm2114b

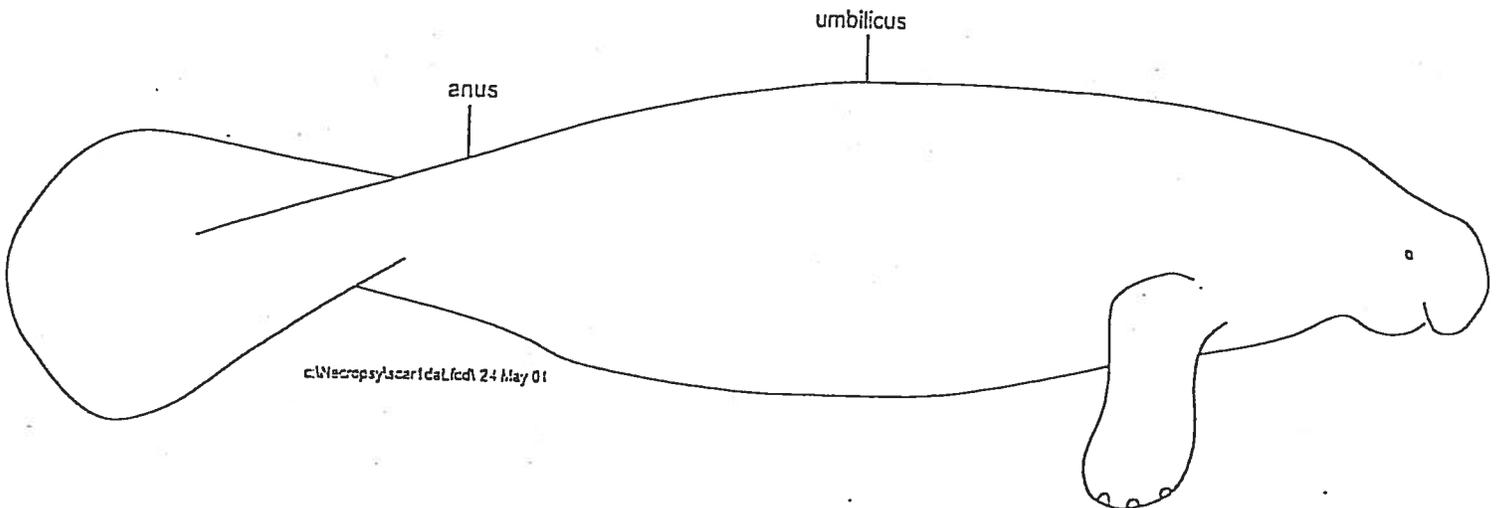
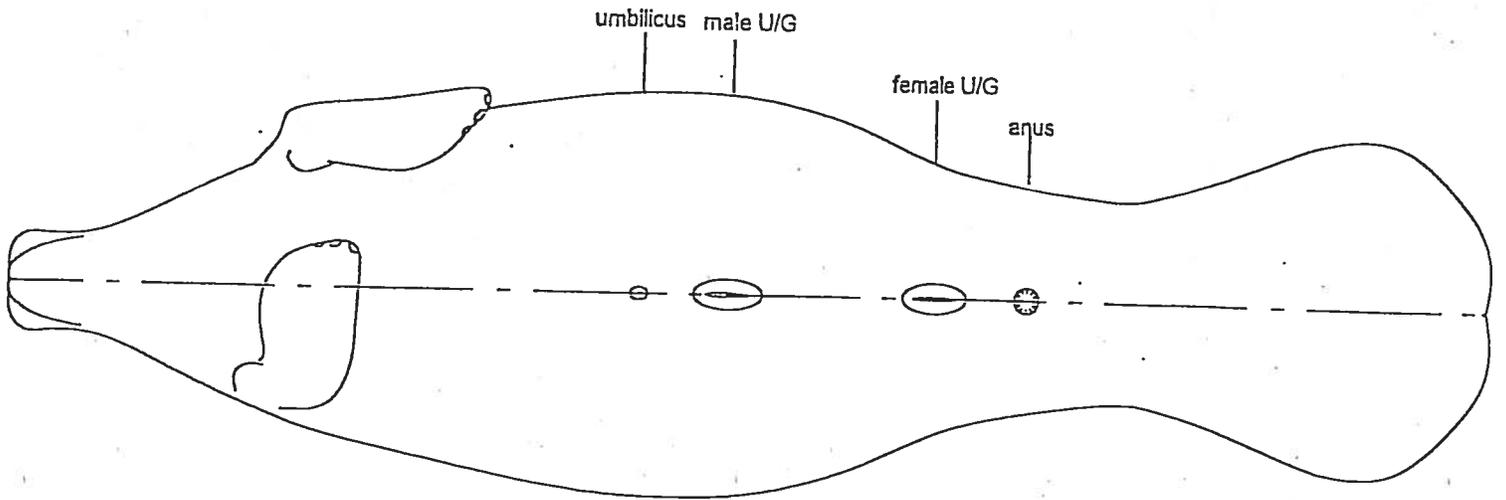
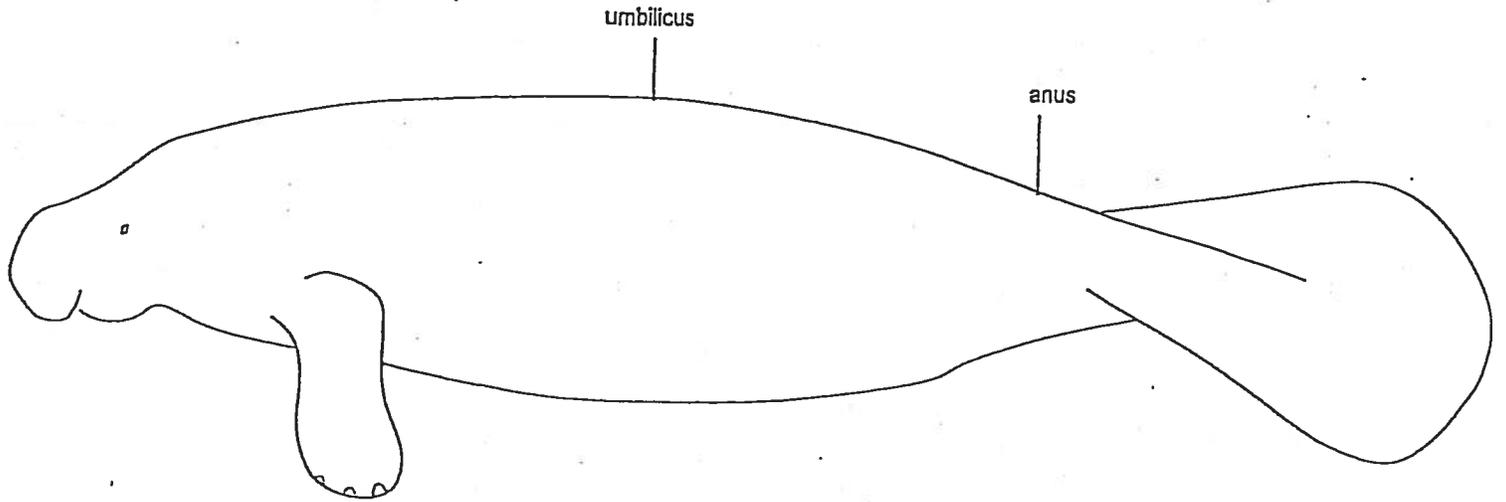
e:\D-Old\1 Necropsy\1 scar2dat\1 30May01



Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Length																				
Width																				
Depth																				
Distance																				



FIELD I.D. _____



FWC Case # _____ FWC District: _____
Sex: M F / Undetermined Length: 321 cm (estimated _____) Weight 1130 kg.
Date reported: 19 Feb 2021 By: SWE - Bob Wagner
Date collected: 19 Feb 2021 By: SMT
Date necropsied: 20 Feb 2021 By: Mdlw, BDB, SMT

LOCATION: State: FL () County: _____ Waterway: _____
Latitude: _____ N Longitude: _____ W
Locality description: _____

CONDITION: Fresh - Moderate - Bad - Dried carcass/loose bones - Confirmed; not recovered

PROBABLE CAUSE OF DEATH:

Human related: (1) Watercraft Collision: Impact - Propeller - Both - Sharp (Acute - Chronic)
(2) Flood Gate/Canal Lock: Structure ID/Name _____
(3) Other human
(4) Perinatal (≤150 cm): Natural - Undetermined
Natural: (5) Cold Stress - (6) Other natural (includes Red Tide)
Undetermined: (7) Not Recovered - (8) Too Decomposed - (9) Other
Explain: _____

PHOTOGRAPHS: Dorsal Ventral R. Lateral L. Lateral Scars Fluke Cranial Internal Site Other

MTLS COLLECTED: Genetics Earbone - Partial Skeleton - Complete Skeleton -

Histology Other feces Lit Burgess

Archive Tox: Stomach - Liver - Kidney - Fat - Lower Jaw - Other

-80° ELISA Tox: Stomach Liver Lung Urine Kidney (if no urine) Other brain, muscle, fat
Genetics Box # 101 feces

Female reproductive findings or N/A

LACTATING Yes No UNK PREGNANT Yes No UNK UTERINE SCAR Yes No UNK

UTERINE HORNS: Small diameter - Contracted Distended - UNK

ADDITIONAL DATA: External measurements - Wound measurements - Perinatal evaluation

Organ weights Rescue Report/Map - Other _____

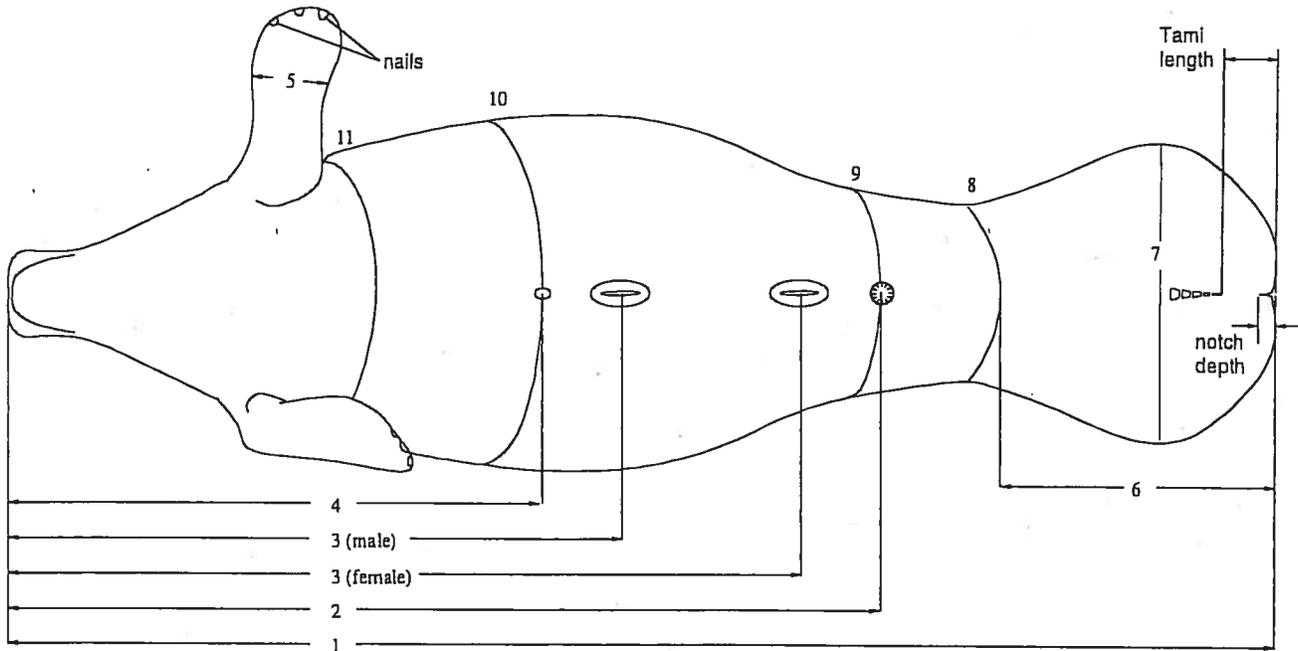
PIT TAG Scan Negative; Positive (Left _____ - _____ - _____) (Right _____ - _____ - _____); N/T

REMARKS: SL dorsum up 31.4 cm

Morphometrics: All measurements are straight-line, unless indicated by an asterisk (*). Measure to center of openings marked with C below. Record girths* and flipper lengths on fresh (non-bloated) carcasses only.

USE METRIC SYSTEM FOR ALL MEASUREMENTS. Measurement in parenthesis are optional.

- | | | |
|--|---------------------------------------|--------------------------------------|
| 1. Total length <u>321</u> cm | 6. Fluke base <u>102</u> cm | 11. *Girth at axillae <u>164</u> cm |
| 2. Snout to anus -C <u>205</u> cm | 7. Fluke width <u>83</u> cm | |
| 3. Snout to U/G -C <u>189</u> cm | 8.*Girth at fluke base <u>114</u> cm | |
| 4. Snout to umbilicus -C <u>115</u> cm | 9. * Girth at anus <u>153</u> cm | |
| 5. Flipper width <u>19</u> cm | 10. *Girth at umbilicus <u>215</u> cm | (Nail count: L <u>4</u> R <u>4</u>) |



Skin and Blubber (cm).	Ventral	Lateral	
Skin.....	<u>1.10</u> cm	<u>2.8</u> cm	(Epidermis <u>0.1</u> cm)
Outer fat.....	<u>1.3</u> cm	<u>0.2</u> cm	(Abdominal fat <u>NT</u> cm)
Inner fat.....	<u>0.60</u> cm	<u>0.4</u> cm	(serous)

