

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1101 Date: 14 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 257 cm Weight: 700 kg (lb) Capture Method: Open water
 Location: Reliant, Brevard Event: Research capture Air temp: - Water temp: ~20°C
 Time initiated: 12:20 Time restraint: 12:24 Time blood sampling: 13:04 Time release: 13:45
12:49 beach

BODY CONDITION	Score: 1 2 <u>3</u> 4 5
	Emaciated Thin <u>Normal</u> Fat Obese
	Peanut shaped head? Y / <u>(N)</u> Ribs visible? Y / <u>(N)</u>
	Ventrum: <u>Rounded</u> / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)

BEHAVIOR	At Capture	<u>(Active)</u> / Calm / Lethargic
	During Work-up	Active / <u>(Calm)</u> / Lethargic

Comments:

TPR SUMMARY	Oral temperature <u>34.1</u> °C / F	Respiratory rate <u>6-11</u> per 5 min.
		Heart rate <u>60</u> per 1 min.

Body heat support: Y (N) method:

HEAD	Describe any abnormalities or NGL (no gross lesions)	
	Nares	NGL
	Eyes	NGL
	Ears	NGL

Comments:

INTEGUMENT	Thickened epidermis? Y / <u>(N)</u>	<u>bleached spots, some assoc w/ pitted lesions on body & fluke</u>
	Cobblestone epidermis? Y / <u>(N)</u>	
Head: CS= <u>0</u> / -	Cold stress lesions? <u>(Y)</u> / N	<u>nose / lips / other head / (flippers) / (fluke) / (body)</u> <u>Bleaching</u> / <u>Gray mottling</u> / Skin sloughing Abscess Lesion: <u>superficial</u> / deep / ulcerating
Trunk: CS= <u>1</u> / <u>b, les</u>	- location	
Tail: CS= <u>1</u> / <u>b, les</u>	- appearance	
	Watercraft scars? <u>(Y)</u> / N	number: <u>fresh</u> <u>superficial</u> / penetrating / both
	Watercraft wounds? <u>(Y)</u> / N	
	- stage of healing	
	- appearance	
	Algal mat? Y / <u>(N)</u>	
	Other epibiota?	

Flippers: (Describe abnormalities or else NGL)
bleached epidermis w/ spongy structure mid (L) flipper mostly.

Fluke: (Describe abnormalities or else NGL)
Scattered pitted cold stress lesions

Comments: ~9 superficial propeller scrapes on caudal medial / left dorsum, hit during first capture attempt.

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: -

O₂ supplementation: yes

I-stat results	Time:		<u>before release</u>			<u>before release</u>
	Temp:	34°C	34.5°C			
	R rate:			HCO ₃ :	20.3	21.9
	pH:	<u>6.986</u> ^{6.953}	7.088 7.057	TCO ₂ :	23	
	PO ₂ :	136 152	70 82	sO ₂ :	97	89
	PCO ₂ :	810 91	69.8 77.8	Lact.:	720	720
	BE _{ecf} :	-12	-8	Gluc.:		124

Comments: (note water use to stimulate resp. rate)

water-induced respirations, but mostly breathing on his own.

Na 146 Ca 1.05
K 4.9

REPRODUCTION	Lactating? <u>X</u> / N
	Vulva swollen? <u>X</u> / N

Comments:

EXCRETA	Feces? <u>(Y)</u> / N description:
	Urine? <u>(Y)</u> / N description:

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	<u>oral, rectal</u>	<u>swab</u>
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

Vit E / Se i.m.

COMMENTS

Manatee in good condition. Mild CS lesions overall, but lesions on flippers (mainly L) look more severe (spongy).

Administered vit E / Se for injury. Tm. no signs that could indicate internal trauma underneath wounds during work-up.

Hematology, blood chemistry, SAA unremarkable. *

Follow-up: there were some complications w/ wound healing as winter progressed. wound appeared necrotic, slowly healing, and a new wound formed cranial to the first one. Possibly impact from same hit that was not immediately evident because epidermis stayed intact? Sub-epidermal trauma, blunt?

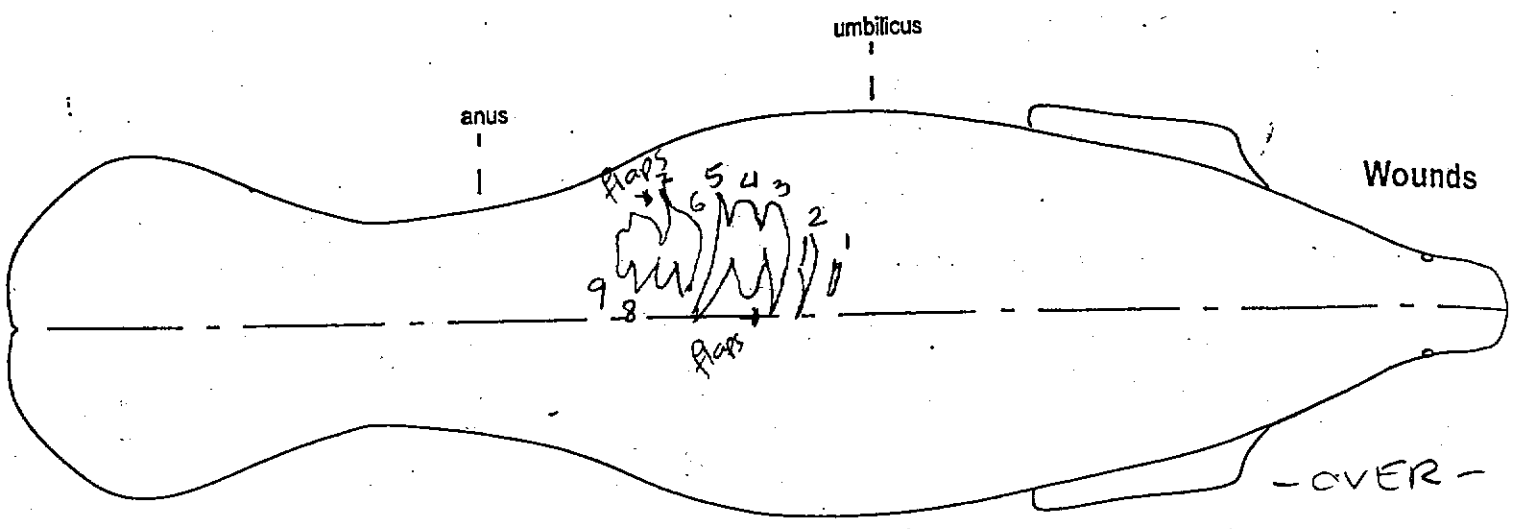
Manatee also kept CS lesions throughout winter.

* Istat values representative of long pursuit. Tm was followed & hit first, then followed again until set @ 12:20 pm.

Date 14 Dec 2011

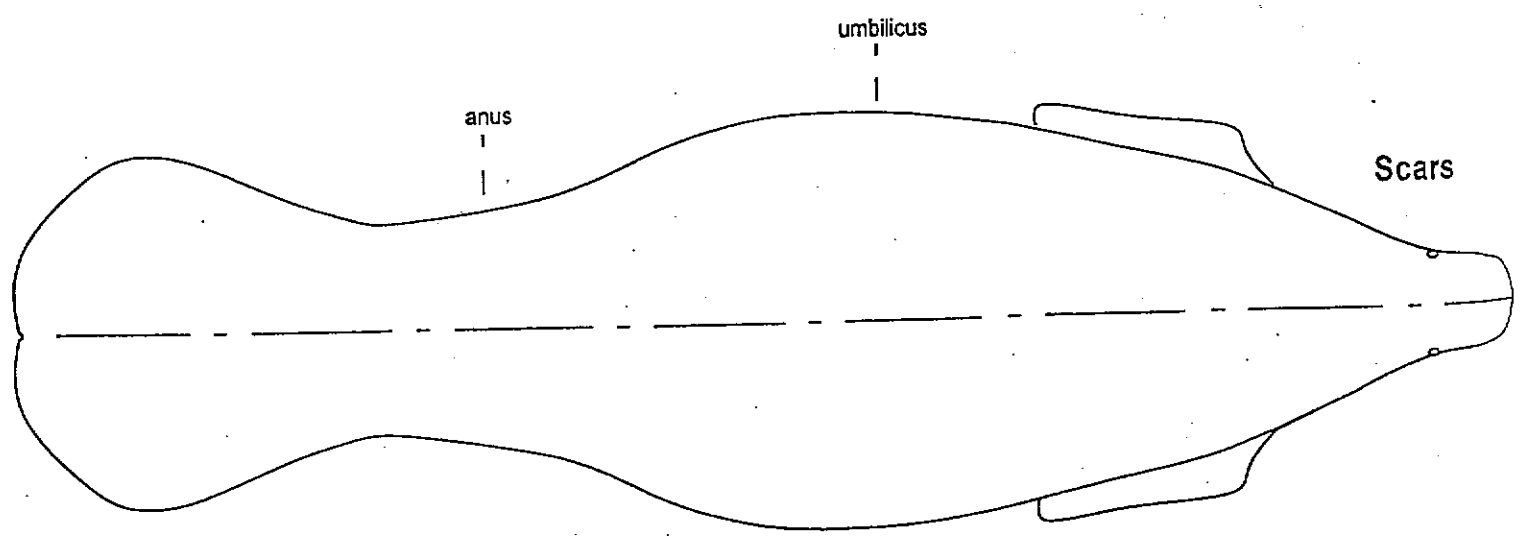
Field I.D. CBC1101

c:\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	7.0	10.0	14.0	13.0	16.0	9.5	7.5	11.5	6.5	12.7	12.0	6.0	4.0							
Width	0.6	1.5	2.1	3.0	1.6	3.0	2.0	4.0	1.3											
Depth																				
Distance	2.0	2.0	2.5	2.9	2.1	-	-			8.8	7.5	7.0								

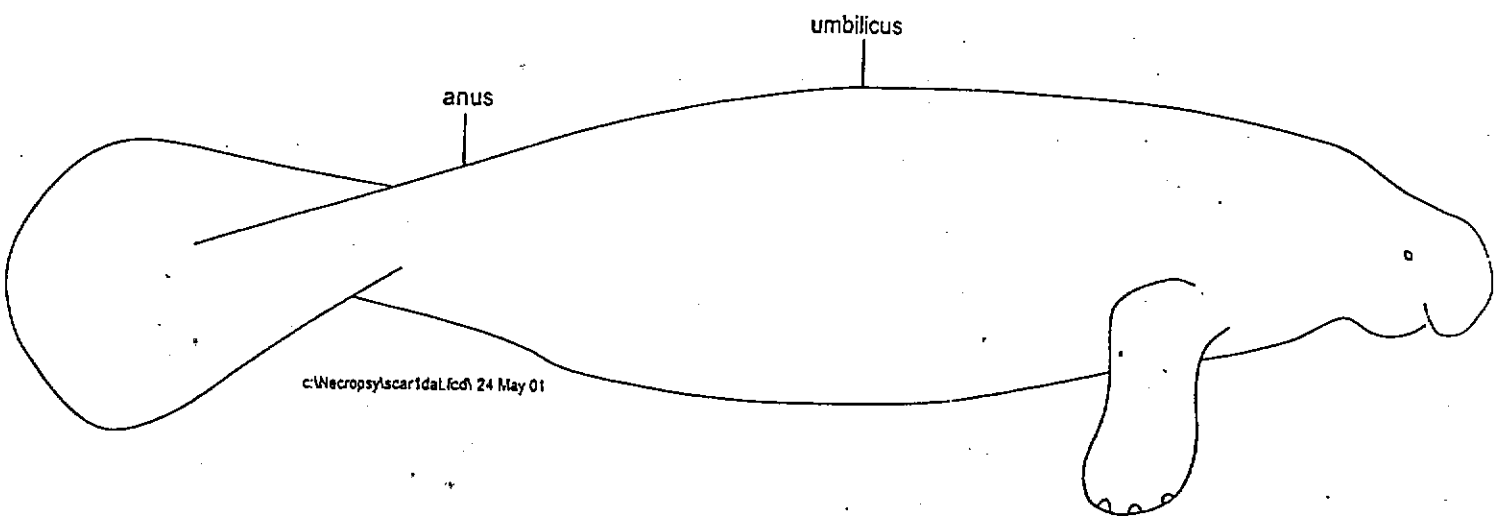
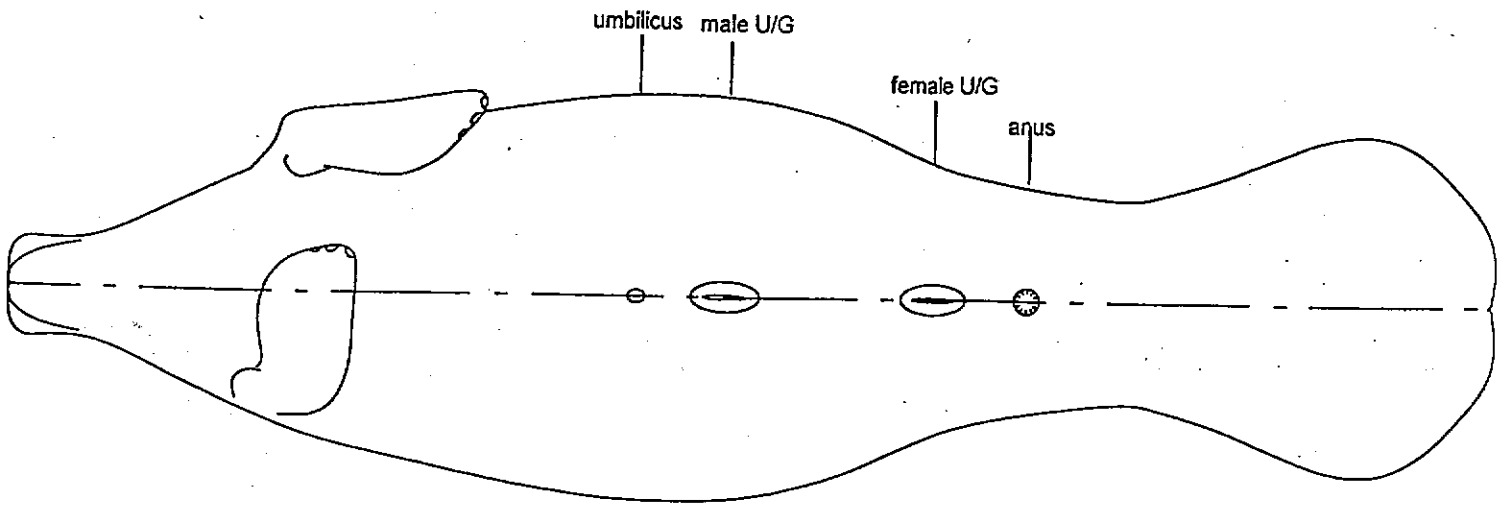
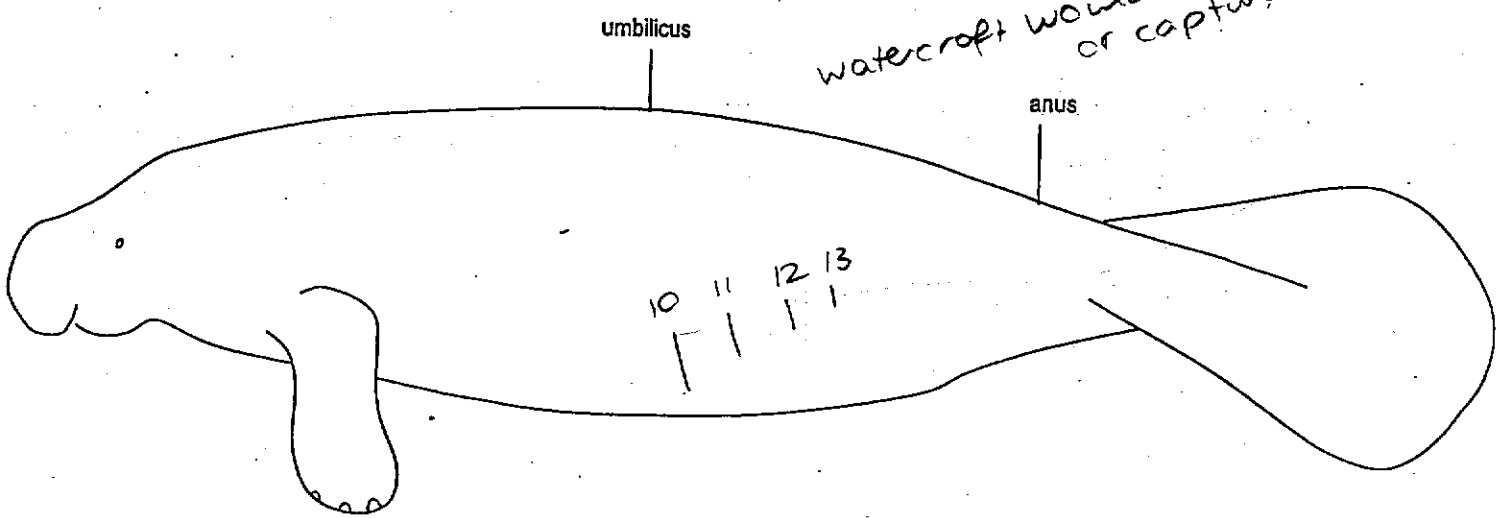
6+7 4.0 width
14.7 length



FIELD I.D.

CB31101

*watercraft wounds?
or capture-related*



West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1102 Date: 14 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: M / F
 Total length: 283 cm Weight: N/T kg / lb Capture Method: land set
 Location: NASA causeway Event: Research capture Air temp: — Water temp: ~20°C
 Time initiated: 15:42 Time restraint: 16:22 Time blood sampling: 16:24 Time release: 16:57

BODY CONDITION Score: 1 2 3 4 5
 Emaciated Thin Normal Fat Obese

Peanut shaped head? Y / N Ribs visible? Y / N

Ventrum: Rounded / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)

BEHAVIOR At Capture Active / Calm / Lethargic

During Work-up Active / Calm / Lethargic

Comments:

TPR SUMMARY Oral temperature N/T °C / F Respiratory rate 3-4 per 5 min.

Heart rate 56 per 1 min.

Body heat support: Y / N method:

HEAD Describe any abnormalities or NGL (no gross lesions)

Nares NGL

Eyes NGL

Ears NGL

Comments:

INTEGUMENT Thickened epidermis? Y / N

Cobblestone epidermis? Y / N bleached mottling face, head, cranial torso

Head: CS=1/6 Cold stress lesions? Y / N

Trunk: CS=1/6 - location nose / lips / other head / flippers / fluke / body

Tail: CS=0/— - appearance Bleaching / Gray mottling / Skin sloughing
 Abscess Lesion: superficial / deep / ulcerating

Watercraft scars? Y / N

Watercraft wounds? Y / N number:

- stage of healing

- appearance superficial / penetrating / both

Algal mat? Y / N thin green

Other epibiota? numerous barnacle scars

Flippers: (Describe abnormalities or else NGL)
Some bleaching

Fluke: (Describe abnormalities or else NGL)
NGL

Comments:

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: yes

I-stat results	Time:						
<u>N/T</u>	Temp:						
	R rate:				HCO ₃ :		
	pH:				TCO ₂ :		
	PO ₂ :				sO ₂ :		
	PCO ₂ :				Lact.:		
	BEecf:				Gluc.:		

Comments: (note water use to stimulate resp. rate)
mostly spontaneous, but also water-induced respirations

REPRODUCTION	Lactating? <u>Y</u> / N	<i>v. small amount of milk</i>
	Vulva swollen? <u>Y</u> / <u>N</u>	

Comments: _____

EXCRETA	Feces? <u>Y</u> / N description:	
	Urine? <u>Y</u> / <u>N</u> description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology		
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Manatee in good condition, cold exposure lesions are mild. caught w/ 4 other animals, calf & adult were let go from net before pulled on-shore. Assumed to be mother of calf CBC1103, but calf did not have any barnacle scars, and this manatee was not lactating much (but maybe calf just nursed). Later observed w/ calf. CBC, blood chemistry, SAA unremarkable.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1103 Date: 14 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 143 cm Weight: _____ kg / lb Capture Method: land-set
 Location: Nasa Cayway Event: Research captures Air temp: - Water temp: ~20°C
 Time initiated: 15:42 Time restraint: 16:22 Time blood sampling: 16:29 Time release: 16:58

BODY CONDITION	Score: 1 2 3 4 5
	Emaciated Thin Normal <u>Fat</u> Obese
	Peanut shaped head? Y / <u>(N)</u> Ribs visible? Y <u>(N)</u>
	Ventrum: <u>Rounded</u> / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)

BEHAVIOR	At Capture	<u>Active</u> / Calm / Lethargic
	During Work-up	Active / <u>Calm</u> / Lethargic

Comments:

TPR SUMMARY	Oral temperature <u>N/T</u> °C / F	Respiratory rate <u>4-6</u> per 5 min.
		Heart rate <u>80</u> per 1 min.

Body heat support: Y / (N) method:

HEAD		Describe any abnormalities or NGL (no gross lesions)
	Nares	<u>NGL</u>
	Eyes	<u>NGL</u>
	Ears	<u>NGL</u>

Comments:

INTEGUMENT	Thickened epidermis? <u>(Y)</u> / N	<u>all aspects</u>
	Cobblestone epidermis? Y / <u>(N)</u>	<u>mild on ventrum</u>
Head: CS= <u>1</u> / <u>les</u>	Cold stress lesions? <u>(Y)</u> / N	
Trunk: CS= <u>1</u> / <u>les</u>	- location	<u>nose</u> / lips / <u>other head</u> / <u>flippers</u> / fluke / body
Tail: CS= <u>0</u> / <u>-</u>	- appearance	<u>Bleaching</u> / Gray mottling / Skin sloughing Abscess Lesion: <u>superficial</u> / deep / ulcerating
	Watercraft scars? Y / <u>(N)</u>	
	Watercraft wounds? Y / <u>(N)</u>	number:
	- stage of healing	
	- appearance	<u>superficial</u> / penetrating / both
	Algal mat? <u>(Y)</u> / N	<u>thick brown</u>
	Other epibiota?	<u>no</u>

Flippers: (Describe abnormalities or else NGL)
Some ulcerating lesions

Fluke: (Describe abnormalities or else NGL)
NGL

Comments: small lesions assoc. w/ nares, larger lesion on (R) flipper healing lesions on body.

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: —

O₂ supplementation: yes

I-stat results	Time:						
	Temp:						
	R rate:				HCO ₃ :		
	pH:				TCO ₂ :		
	PO ₂ :				sO ₂ :		
	PCO ₂ :				Lact.:		
	BEeef:				Gluc.:		

Comments: (note water use to stimulate resp. rate)
water-induced respirations, lifts head up in air for breath. slight struggle opening nares → typical for small calf

REPRODUCTION	Lactating? <u>Y</u> / N
	Vulva swollen? <u>Y</u> / N

Comments:

EXCRETA	Feces? Y / <u>(N)</u> description:
	Urine? Y / <u>(N)</u> description:

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology		
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Calf in very good body condition (signs of exposure to cold (small lesions, some thickened epidermis)). Assumed to be calf of CBC1102, caught in one set w/4 other animals, released 1 calf and one adult from net before on land.

Blood: Triglyceride & cholesterol ↑, probably assoc. w/ nursing. SAA ↑↑. unsure about significance, hematology was unremarkable as lesions not severe enough to explain elevated SAA.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1104 Date: 14 Dec. 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 317 cm Weight: NIT kg / lb Capture Method: land-set
 Location: Nasa Causeway Event: Research Captures Air temp: - Water temp: ~20°C
 Time initiated: 15:42 Time restraint: 16:13 Time blood sampling: 16:38 Time release: 17:09

BODY CONDITION Score: 1 2 3 4 5
 Emaciated Thin Normal Fat Obese

Peanut shaped head? Y / (N) Ribs visible? Y / (N)

Ventrum: Rounded / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)
Slender on head, but very good body condition on body, w/dip in midline

BEHAVIOR At Capture (Active) / Calm / Lethargic

During Work-up Active / (Calm) / Lethargic

Comments:

TPR SUMMARY Oral temperature NIT °C / F Respiratory rate 3-7 per 5 min.

Heart rate NIT per 1 min.

Body heat support: Y (N) method:

HEAD Describe any abnormalities or NGL (no gross lesions)

Nares NGL

Eyes NGL

Ears NGL

Comments:

INTEGUMENT Thickened epidermis? (Y) / N

Cobblestone epidermis? (Y) / N all aspects, severe

Head: CS=0 / - Cold stress lesions? (Y) / N

Trunk: CS=0 / - - location nose / lips / other head / (flippers) / fluke / body

Tail: CS=0 / - - appearance Bleaching / Gray mottling / Skin sloughing

Abscess Lesion: superficial / deep / ulcerating

Watercraft scars? (Y) / N

Watercraft wounds? (Y) / N number:

- stage of healing

- appearance superficial / penetrating / both

Algal mat? (Y) / N

Other epibiota? thick brown

Flippers: (Describe abnormalities or else NGL)
bleached spots both flippers

Fluke: (Describe abnormalities or else NGL)

NGL

Comments:

RESPIRATORY	Depth of respirations	superficial / deep <u>bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: no

I-stat results	Time:						
	Temp:						
	R rate:				HCO ₃ :		
	pH:				TCO ₂ :		
	PO ₂ :				sO ₂ :		
	PCO ₂ :				Lact.:		
	BEecf:				Gluc.:		

Comments: (note water use to stimulate resp. rate)
some water-induced respirations, but breathes on his own.

REPRODUCTION	Lastating? <u>Y</u> / N	
	Vulva swollen? <u>Y</u> / N	

Comments: _____

EXCRETA	Feces? <u>Y</u> / N description:	
	Urine? <u>Y</u> / <u>N</u> description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology		
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Male in excellent body condition, but severe cobblestone-like epidermis. Caught in one land-set with 4 other animals (including CBC1102 & CBC1103).

CBC, blood chemistry, SAA unremarkable.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1105 Date: 15 Dec '11 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 251 cm Weight: 690 kg (lb) Capture Method: open-water
 Location: Reliant, Brevard Event: Research Captives Air temp: N/T Water temp: ~20°C
 Time initiated: 10:27 Time restraint: 10:32 Time blood sampling: 11:10 Time release: 11:47
beach 11:00

BODY CONDITION	Score: 1 2 <u>(3)</u> 4 5
	Emaciated Thin Normal Fat Obese
	Peanut shaped head? Y <u>(N)</u> Ribs visible? Y <u>(N)</u>
	Ventrum: <u>(Rounded)</u> / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)

BEHAVIOR	At Capture	<u>(Active)</u> / Calm / Lethargic
	During Work-up	Active / <u>(Calm)</u> / Lethargic

Comments:

TPR SUMMARY	Oral temperature <u>35.5</u> °C / F	Respiratory rate <u>3-6</u> per 5 min.
		Heart rate <u>57</u> per 1 min.

Body heat support: Y / (N) method:

HEAD	Describe any abnormalities or NGL (no gross lesions)	
	Nares	<u>NGL</u>
	Eyes	<u>NGL</u>
	Ears	<u>NGL</u>

Comments:

INTEGUMENT	Thickened epidermis? Y / <u>(N)</u>	
	Cobblestone epidermis? Y / <u>(N)</u>	
Head: CS= <u>1</u> / <u>6</u>	Cold stress lesions? <u>(Y)</u> / N	
Trunk: CS= <u>0</u> / <u>-</u>	- location	<u>(nose)</u> / <u>(lips)</u> / <u>(other head)</u> / <u>(flippers)</u> / fluke / body
Tail: CS= <u>0</u> / <u>-</u>	- appearance	<u>(Bleaching)</u> / Gray mottling / Skin sloughing Abscess Lesion: superficial / deep / ulcerating
	Watercraft scars? <u>(Y)</u> / N	
	Watercraft wounds? Y / <u>(N)</u>	number:
	- stage of healing	
	- appearance	superficial / penetrating / both
	Algal mat? <u>(Y)</u> / N	<u>thick brown</u>
	Other epibiota?	

Flippers: (Describe abnormalities or else NGL)
mild bleaching

Fluke: (Describe abnormalities or else NGL)
NGL

Comments:

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: yes

I-stat results	Time:						Na 148
	Temp:	35.4°C					K 5.5
	R rate:				HCO ₃ :	33.5 33.5	iCa 1.11
	pH:	7.182 7.18			TCO ₂ :	36 36	Hct 33
	PO ₂ :	73			sO ₂ :	91	Hb 11.2
	PCO ₂ :	87.3 87.3			Lact.:	5.13	
	BEecf:	5 5			Gluc.:	81	

Comments: (note water use to stimulate resp. rate)

REPRODUCTION	Lactating? <u>Y / N</u>	<u>N/A</u>
	Vulva swollen? <u>Y / N</u>	

Comments: _____

EXCRETA	Feces? <u>(Y)</u> / N description:	
	Urine? <u>(Y)</u> / N description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	oral, rectal swab	
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Manatee in good condition. Minor lesions (bleaching) associated w/ exposure to cold water.

CBC, blood chemistry, SAA unremarkable.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1106 Date: 15 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 297 cm Weight: 988 kg / (1b) Capture Method: open water
 Location: Reliant, Brevard Event: Research captures Air temp: - Water temp: 20°C
 Time initiated: 11:15 Time restraint: 11:19 Time blood sampling: 11:50 Time release: 12:34
beach 11:39

BODY CONDITION	Score: 1 2 <u>(3)</u> 4 5
	Emaciated Thin Normal Fat Obese
	Peanut shaped head? Y / <u>(N)</u> Ribs visible? Y / <u>(N)</u>
	Ventrum: <u>(Rounded)</u> / Flat / Concave / Ventral Folds
Comments: (note areas, degree of weight loss)	

BEHAVIOR	At Capture <u>(Active)</u> / Calm / Lethargic
	During Work-up Active / <u>(Calm)</u> / Lethargic
Comments:	

TPR SUMMARY	Oral temperature <u>32.6</u> (°C) F	Respiratory rate <u>5-9</u> per 5 min.
		Heart rate <u>54</u> per 1 min.
Body heat support:	Y / <u>(N)</u> method:	

HEAD	Describe any abnormalities or NGL (no gross lesions)	
Nares	NGL	
Eyes	NGL	
Ears	NGL	
Comments:		

INTEGUMENT	Thickened epidermis? Y / <u>(N)</u>	
	Cobblestone epidermis? Y / <u>(N)</u>	
Head: CS= <u>0</u> / <u>-</u>	Cold stress lesions? <u>(Y)</u> / N	<u>very mild, not significant</u>
Trunk: CS= <u>0</u> / <u>-</u>	- location	nose / lips / other head / flippers / fluke <u>(body)</u>
Tail: CS= <u>0</u> / <u>-</u>	- appearance	Bleaching / <u>(Gray mottling)</u> / Skin sloughing Abscess Lesion: superficial / deep / ulcerating
	Watercraft scars? <u>(Y)</u> / N	
	Watercraft wounds? Y / <u>(N)</u>	number:
	- stage of healing	
	- appearance	superficial / penetrating / both
	Algal mat? <u>(Y)</u> / N	thin brown
	Other epibiota?	few barnacles

Flippers: (Describe abnormalities or else NGL)
NGL

Fluke: (Describe abnormalities or else NGL)
NGL

Comments:

Manatee ID CBC1106

Manatee Name: _____

Date: 15 Dec 2011

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: yes

I-stat results	Time:						
	Temp:						NA 140
	R rate:		CD4		HCO ₃ :	29.8	30.6 K 5.9
	pH:	7.216	7.21		TCO ₂ :	32	33 iCa 0.98
	PO ₂ :	35	43		sO ₂ :	70	80 Hct 41
	PCO ₂ :	69.2	71.7		Lact.:		12.4 Hb 13.9
	BEecf:	1	2		Gluc.:	85	

Comments: (note water use to stimulate resp. rate)

most breaths on his own

REPRODUCTION	Lactating? <u>Y</u> / N
	Vulva swollen? <u>Y</u> / N

Comments: _____

EXCRETA	Feces? <u>(Y)</u> / N description:
	Urine? Y / <u>(N)</u> description:

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	<u>oral, rectal</u>	
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Manatee looks good; no significant cs lesions.

Blood CBC, chemistry, SAA unremarkable, except for slightly elevated Ht. could be sampling error, kidney values are ok.

↳ btw lower on I-Stat.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1107 Date: 15 DEC 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 211 cm Weight: 466 kg / (lb) Capture Method: open-water
 Location: Reliant, Brevard Event: Research capture Air temp: — Water temp: ~20°C
 Time initiated: 13:13 Time restraint: 13:22 Time blood sampling: 13:31 Time release: 14:12
L on beach

BODY CONDITION	Score:	1	2	3	<u>(4)</u>	5
		Emaciated	Thin	Normal	Fat	Obese
	Peanut shaped head?	Y / <u>(N)</u>			Ribs visible?	Y / <u>(N)</u>
	Ventrum:	<u>(Rounded)</u> / Flat / Concave / Ventral Folds				
Comments: (note areas, degree of weight loss)						

BEHAVIOR	At Capture	<u>(Active)</u> / Calm / Lethargic
	During Work-up	Active / <u>(Calm)</u> / Lethargic
Comments:		

TPR SUMMARY	Oral temperature <u>33.9</u> (°C) / F	Respiratory rate <u>4-8</u> per 5 min.
		Heart rate <u>68</u> per 1 min.
Body heat support:	Y / <u>(N)</u> method:	

HEAD		Describe any abnormalities or NGL (no gross lesions)
	Nares	<u>NGL</u>
	Eyes	<u>bloody discharge</u>
	Ears	<u>NGL</u>
Comments:		

INTEGUMENT	Thickened epidermis?	<u>(Y)</u> / N	<u>associated w/CS lesions</u>
	Cobblestone epidermis?	Y / <u>(N)</u>	
Head: CS= <u>1 / 6 les</u>	Cold stress lesions?	<u>(Y)</u> / N	
Trunk: CS= <u>1 / 6 les</u>	- location	<u>nose</u> / <u>(lips)</u> / <u>other head</u> / <u>(flippers)</u> / <u>(fluke)</u> / <u>(body)</u>	
Tail: CS= <u>1 / 6 les</u>	- appearance	<u>(Bleaching)</u> / Gray mottling / Skin sloughing Abscess Lesion: <u>(superficial)</u> / deep / ulcerating	
	Watercraft scars?	<u>(Y)</u> / N	
	Watercraft wounds?	Y / <u>(N)</u>	number:
	- stage of healing		
	- appearance		superficial / penetrating / both
	Algal mat?	<u>(Y)</u> / N	<u>thin brown</u>
	Other epibiota?		<u>no</u>

Flippers: (Describe abnormalities or else NGL)
bleaching, superficial lesions

Fluke: (Describe abnormalities or else NGL)
bleached spots, pitted lesions. Fluke margin - irregular, but well-healed, probably previous cold stress.

Comments:
bleached, grey spots on all body aspects, some associated with pitted & larger lesions
linear, ulcerating lesions on left side

Manatee ID CBC1107

Manatee Name: _____

Date: 15 Dec 2011

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: —O₂ supplementation: yes

I-stat results	Time:						
	Temp:		<u>33.3</u>				
	R rate:				HCO ₃ :	<u>24.7</u>	
	pH:		<u>7.104</u>		TCO ₂ :	<u>27</u>	
	PO ₂ :		<u>91</u>		sO ₂ :	<u>95</u>	
	PCO ₂ :		<u>74.6</u>		Lact.:	<u>16.71</u>	
	BEecf:		<u>-6</u>		Gluc.:		

Comments: (note water use to stimulate resp. rate)

REPRODUCTION	Lactating? <u>Y / N</u>	
	Vulva swollen? <u>Y / N</u>	

Comments:

EXCRETA	Feces? <u>Y / (N)</u> description:	
	Urine? <u>Y / (N)</u> description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	<u>oral, rectal</u>	
Tear film			Biopsy		

MEDICATIONS ADMINISTERED**COMMENTS**

Manatee is in great body condition. But significant lesions associated with cold exposure on all aspects. Blood CBC, chemistry, SAA mostly unremarkable. However, platelets are increased and appear clumped. It could be speculated that coagulation was affected by the significant cold stress lesions.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1108 Date: 15 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 264 cm Weight: 960 kg / (1b) Capture Method: open-water
 Location: Reliant, Brevard Event: Research Captives Air temp: - Water temp: ~20°C
 Time initiated: 13:43 Time restraint: 13:48 Time blood sampling: 14:14 Time release: 15:04
beach 14:04

BODY CONDITION	Score: 1 2 3 <u>(4)</u> 5
	Emaciated Thin Normal Fat Obese
	Peanut shaped head? Y / <u>(N)</u> Ribs visible? Y / <u>(N)</u>
	Ventrum: <u>(Rounded)</u> / Flat / Concave / Ventral Folds
Comments:	(note areas, degree of weight loss)

BEHAVIOR	At Capture	<u>(Active)</u> / Calm / Lethargic
	During Work-up	Active / <u>(Calm)</u> / Lethargic
Comments:		

TPR SUMMARY	Oral temperature <u>NIT</u> °C / F	Respiratory rate <u>4-8</u> per 5 min.
		Heart rate <u>68</u> per 1 min.
Body heat support:	Y / <u>(N)</u> method:	

HEAD	Describe any abnormalities or NGL (no gross lesions)	
Nares	<u>NGL</u>	
Eyes	<u>NGL</u>	
Ears	<u>NGL</u>	
Comments:		

INTEGUMENT	Thickened epidermis? Y / <u>(N)</u>	
	Cobblestone epidermis? Y / <u>(N)</u>	
Head: CS= <u>1</u> / <u>b</u>	Cold stress lesions? <u>(Y)</u> / N	<u>bleaching</u>
Trunk: CS= <u>0</u> / <u>-</u>	- location	nose / <u>(lips)</u> / other head / flippers / <u>(fluke)</u> / body
Tail: CS= <u>0</u> / <u>-</u>	- appearance	<u>(Bleaching)</u> / Gray mottling / Skin sloughing Abscess Lesion: <u>(superficial)</u> / deep / ulcerating
	Watercraft scars? <u>(Y)</u> / N	
	Watercraft wounds? Y / <u>(N)</u>	number:
	- stage of healing	
	- appearance	superficial / penetrating / both
	Algal mat? <u>(Y)</u> / N	thick brown
	Other epibiota?	no

Flippers: (Describe abnormalities or else NGL)
NGL

Fluke: (Describe abnormalities or else NGL)
ulcerating lesions of various shapes

Comments:
few lesions on body, more on fluke, uncertain if they are cold-related.

Manatee ID CBC1108

Manatee Name: _____

Date: 15 Dec 2011

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: —

O₂ supplementation: yes

I-stat results	Time:					
	Temp:		33.4			
	R rate:				HCO ₃ :	23.9
	pH:		7.199		TCO ₂ :	26
	PO ₂ :		99		sO ₂ :	97
	PCO ₂ :		58.5		Lact.:	12.80
	BEecf:		-5		Gluc.:	124

Comments: (note water use to stimulate resp. rate)

REPRODUCTION	Lactating?	<u>Y / N</u>
	Vulva swollen?	<u>Y / N</u>

Comments:

EXCRETA	Feces? Y / <u>(N)</u> description:	
	Urine? Y / <u>(N)</u> description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	<u>oral, rectal</u>	
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Great looking manatee. Some bleaching on face, minor. More lesions on fluke.

Blood CBC, chemistry, SAA unremarkable, except ↑ fibrinogen. Significance?

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1109 Date: 15 Dec 2011 Assessed by: de Wit
 Animal Name: Mondo Gender: M / F
 Total length: 295 cm Weight: 1346 kg (1lb) Capture Method: open-water
 Location: Reliant, Brevard Event: Research Captives Air temp: — Water temp: ~20°C
 Time initiated: 14:49 Time restraint: 14:53 Time blood sampling: 15:22 Time release: 16:00
15:17 beach

BODY CONDITION	Score: 1 2 3 <input checked="" type="radio"/> 4 5
	Emaciated Thin Normal Fat Obese
	Peanut shaped head? Y / <input checked="" type="radio"/> N Ribs visible? Y / <input checked="" type="radio"/> N
	Ventrum: <input checked="" type="radio"/> Rounded / Flat / Concave / Ventral Folds
Comments: (note areas, degree of weight loss)	

BEHAVIOR	At Capture	Active / <input checked="" type="radio"/> Calm / Lethargic
	During Work-up	Active / <input checked="" type="radio"/> Calm / Lethargic
Comments:		

TPR SUMMARY	Oral temperature <u>33.1</u> °C / F	Respiratory rate <u>4-5</u> per 5 min.
		Heart rate <u>70</u> per 1 min.
Body heat support:	Y / <input checked="" type="radio"/> N method:	

HEAD	Describe any abnormalities or NGL (no gross lesions)	
	Nares	NGL
	Eyes	NGL
	Ears	NGL
Comments:		

INTEGUMENT	Thickened epidermis? Y / <input checked="" type="radio"/> N		
	Cobblestone epidermis? Y / <input checked="" type="radio"/> N		
	Head: CS= <u>1</u> / <u>b</u>	Cold stress lesions? <input checked="" type="radio"/> Y / N	
	Trunk: CS= <u>1</u> / <u>b</u>	- location	<u>nose</u> / <u>lips</u> / <u>other head</u> / <u>flippers</u> / <u>fluke</u> / <u>body</u> ^{lesion}
	Tail: CS= <u>0</u> / <u>—</u>	- appearance	<u>Bleaching</u> / Gray mottling / Skin sloughing Abscess Lesion: superficial / deep / ulcerating
		Watercraft scars? <input checked="" type="radio"/> Y / N	
		Watercraft wounds? Y / <input checked="" type="radio"/> N	number:
		- stage of healing	
		- appearance	superficial / penetrating / both
		Algal mat? <input checked="" type="radio"/> Y / N	thick brown
		Other epibiota?	no

Flippers: (Describe abnormalities or else NGL)
bleached epidermis

Fluke: (Describe abnormalities or else NGL)
1 small ulcerating lesion

Comments: bleached spots on lateral aspects of body, and on ventrum

Manatee ID CBC1109

Manatee Name: Mondo

Date: 15 Dec 2011

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: -

O₂ supplementation: yes

I-stat results	Time:						
	Temp:		<u>31.7</u>				
	R rate:			HCO ₃ :	<u>35.9</u>	Na	<u>142</u>
	pH:		<u>7.31</u>	TCO ₂ :	<u>38</u>	K	<u>6</u>
	PO ₂ :		<u>46</u>	sO ₂ :	<u>73</u>	iCa	<u>1.16</u>
	PCO ₂ :		<u>76.3</u>	Lact.:	<u>3.12</u>	HCT	<u>37</u>
	BEecf:		<u>9</u>	Gluc.:	<u>88</u>	Hb	<u>12.6</u>

Comments: (note water use to stimulate resp. rate)
spontaneous respirations

REPRODUCTION	Lactating?	<u>Y</u> / <u>(N)</u>
	Vulva swollen?	<u>Y</u> / <u>(N)</u>

Comments:

EXCRETA	Feces?	<u>(Y)</u> / N	description:
	Urine?	<u>(Y)</u> / N	description:

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology	<u>oral, rectal</u>	
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

known manatee "Mondo", rescued for cold stress in January 2010. Mondo looks great, signs of cold exposure on face & flippers. Was by herself, and not lactating, no sign of "Tommy", born on was calm @ capture (consistent with I-stat blood gases)

Blood CBC, chemistry, SAA unremarkable.

[Mondo's release weight in Aug 2010 was 1440 lb; 290 cm SL]

* "Tommy's" carcass was found later in the winter of 2012, he was emaciated and may have been orphaned before the capture event.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1110 Date: 16 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 260 cm Weight: 820 kg (lb) Capture Method: open-water
 Location: Reliant, Brevard Event: Research captures Air temp: _____ Water temp: 20°C
 Time initiated: 10:02 Time restraint: 10:06 Time blood sampling: 10:28 Time release: 11:11
10:21 beach

BODY CONDITION Score: 1 2 3 (4) 5
 Emaciated Thin Normal Fat Obese

Peanut shaped head? Y / (N) Ribs visible? Y / (N)

Ventrum: (Rounded) / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)

BEHAVIOR At Capture (Active) / Calm / Lethargic

During Work-up Active / (Calm) / Lethargic

Comments:

TPR SUMMARY Oral temperature 33.5 (°C) / F Respiratory rate 4-6 per 5 min.

Heart rate 64 per 1 min.

Body heat support: Y / (N) method:

HEAD Describe any abnormalities or NGL (no gross lesions)

Nares NGL

Eyes some capture abrasions around (L) eye

Ears NGL

Comments:

INTEGUMENT Thickened epidermis? (Y) / N associated w/ healing lesions caudal

Cobblestone epidermis? Y / (N) dorsum & flukes

Head: CS=1 / b Cold stress lesions? (Y) / N

Trunk: CS=0 / - - location nose / lips / (other head) / (flippers) / fluke / body

Tail: CS=0 / - - appearance (Bleaching) / Gray mottling / Skin sloughing

Abscess Lesion: superficial / deep / ulcerating

Watercraft scars? (Y) / N

Watercraft wounds? Y / (N) number:

- stage of healing

- appearance superficial / penetrating / both

Algal mat? (Y) / N moderate brown

Other epibiota? no

Flippers: (Describe abnormalities or else NGL) bleached epidermis / previous cold stress

Fluke: (Describe abnormalities or else NGL) caudal fluke margin irregular but well-healed
2 small ulcerating lesions near 1 o'clock position, may not be cold-related.

Comments: lesions (linear) w/ thickened margins on caudal dorsum, probably not cold-related

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: yes

I-stat results	Time:	10:39					
	Temp:	39	34.1				
	R rate:				HCO ₃ :	25.9	
	pH:	6.973	7.008	7.0	TCO ₂ :	29	
	PO ₂ :	144.5	29		sO ₂ :	37	
	PCO ₂ :	111.7	98.4		Lact.:	5.12	
	BEecf:	-6			Gluc.:	86	

Comments: (note water use to stimulate resp. rate)
 spontaneous breaths mostly

REPRODUCTION	Lactating?	<u>Y</u> / N
	Vulva swollen?	<u>Y</u> / N

Comments: _____

EXCRETA	Feces? Y / <u>N</u> description:	
	Urine? Y / <u>N</u> description:	

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology		<u>oral, rectal</u>
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Great looking manatee, cold stress bleaching face & flippers.

Blood CBC, chemistry, SAA mostly unremarkable. Ht is slightly increased, probably not significant.

West Indian Manatee (*Trichechus manatus*) CLINICAL ASSESSMENT FORM

Manatee ID: CBC1111 Date: 16 Dec 2011 Assessed by: de Wit
 Animal Name: _____ Gender: (M) / F
 Total length: 290 cm Weight: 1130 kg / (1b) Capture Method: open-water
 Location: Reliant, Brevard Event: Research Captives Air temp: - Water temp: ~20°C
 Time initiated: 11:41 Time restraint: 11:47 Time blood sampling: 12:09 Time release: 12:41
beach 12:00

BODY CONDITION Score: 1 2 (3) 4 5
 Emaciated Thin Normal Fat Obese

Peanut shaped head? Y / (N) Ribs visible? Y / (N)

Ventrum: (Rounded) / Flat / Concave / Ventral Folds

Comments: (note areas, degree of weight loss)
condition between 3 & 4, mid-line muscle dip in small area of dorsum

BEHAVIOR At Capture (Active) / Calm / Lethargic

During Work-up Active / (Calm) / Lethargic

Comments:

TPR SUMMARY Oral temperature 32.6 (°C) / F Respiratory rate 4-8 per 5 min.

Heart rate 60 per 1 min.

Body heat support: Y / (N) method:

HEAD Describe any abnormalities or NGL (no gross lesions)

Nares NGL

Eyes NGL

Ears NGL

Comments:

INTEGUMENT Thickened epidermis? (Y) / N (mostly cobbles)

Cobblestone epidermis? (Y) / N all aspects

Head: CS=1 / b Cold stress lesions? (Y) / N

Trunk: CS=0 / - - location nose (lips) / (other head) / flippers / fluke / body

Tail: CS=0 / - - appearance (Bleaching) / Gray mottling / Skin sloughing
 Abscess Lesion: superficial / deep / ulcerating

Watercraft scars? (Y) / N

Watercraft wounds? Y / (N) number:

- stage of healing

- appearance superficial / penetrating / both

Algal mat? Y / (N)

Other epibiota? 1 barnacle on dorsum

Flippers: (Describe abnormalities or else NGL)

Cobblestone skin

Fluke: (Describe abnormalities or else NGL)

Cobblestone skin. Fluke margin irregular but well-healed, previous cold stress

Comments:
Draining hole (45mm) just caudal to umbilicus, surrounding area feels firm. few pitted lesions w/ thickened margins on body.

Manatee ID CBC1111

Manatee Name: _____

Date: 16 Dec 2011

RESPIRATORY	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral
	Inspiration pattern	<u>single</u> / double
	Symmetry of body	<u>symmetric</u> / asymmetric

Auscultation: _____

O₂ supplementation: yes

I-stat results	Time:				
	Temp:		32°		32°
	R rate:			HCO ₃ :	17.4
	pH:		7.065	TCO ₂ :	19
	PO ₂ :		64	sO ₂ :	90
	PCO ₂ :		56.1	Lact.:	13.7
	BE _{ecf} :		-14	Gluc.:	

Comments: (note water use to stimulate resp. rate)

water-induced respirations

REPRODUCTION	Lactating? <u>Y / N</u>
	Vulva swollen? <u>Y / N</u>

Comments: _____

EXCRETA	Feces? <u>Y</u> / <u>N</u> description:
	Urine? <u>Y</u> / <u>N</u> description:

Samples	Preservative	Purpose	Samples	Preservative	Purpose
Blood			Hairs		
Urine			Skin		
Feces			Parasites		
Milk			Microbiology		
Tear film			Biopsy		

MEDICATIONS ADMINISTERED

COMMENTS

Manatee in great body condition, but significant cobblestone epidermis on all aspects.

Blood CBC, chemistry, SAA unremarkable.