

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

Manatee ID: CBC1201 Capture ID: TBC078 Assessed by: de Wit  
 Animal Name: Rm70 Date: 14 Dec '12 Gender:  M /  F  
 Total length: 260 cm Weight: 790 kg ( lb) Capture Method: land-based boat set  
 Location: OUC Event: HA/FPL tags Air temp: 21.5 °C F Water temp: 22 °C F  
 Time notes: Initiated 11:34 Net Out 11:35 On Deck 11:41 Start Evaluation 11:54  
 First blood sample ~12:00 Follow-up blood sample - Release 12:33

<b>BODY CONDITION</b>	Score:	1	2	<input checked="" type="radio"/> 3	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)

<b>ACTIVITY</b>	At Capture	<input checked="" type="radio"/> High / Medium / Low
	During Work-up	Active / <input checked="" type="radio"/> Calm / Lethargic

Comments:

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>34.9</u> °C F	Respiratory rate <u>5-10</u> per 5 min.
		Heart rate <u>48-68</u> per 1 min.

Body temp. support:  Y /  N method: Shade / Tent / Heater / Blanket / Water

<b>HEAD</b>	Describe any abnormalities or NGL (no gross lesions)
Nares	NGL
Eyes	bloody discharge in mucus @ eye
Ears	NGL

<b>INTEGUMENT</b>	Cold stress: Lesions? <input checked="" type="radio"/> Y / <input type="radio"/> N	Score? Head: <u>0</u> Trunk: <u>1</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		G, L G, L

B = Bleaching	Thickened epidermis?	Y / <input checked="" type="radio"/> N
G = Gray mottling	Cobblestone epidermis?	Y / <input checked="" type="radio"/> N
S = Skin sloughing	Watercraft scars?	<input checked="" type="radio"/> Y / <input type="radio"/> N
A = Abscess	Watercraft wounds?	Y / <input checked="" type="radio"/> N number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<input checked="" type="radio"/> Y / <input type="radio"/> N v. thin brown
	Other epibiota?	no

Flippers: (Describe abnormalities or else NGL)  
few superficial cs lesions

Fluke: (Describe abnormalities or else NGL)  
superficial circular, pitted lesions, scattered

Comments: cs lesions scattered circular & short linear ~ 4 linear healing lesions on mid-body dorsum, does not look watercraft-related

CBC1201

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: —							
O <sub>2</sub> supplementation: <input checked="" type="checkbox"/> Yes / No				CO <sub>2</sub> monitoring: <input checked="" type="checkbox"/> Yes / No			
<b>I-stat results</b>		Initial	Follow-up			Initial	Follow-up
(CG8 electrolyte results on I-stat sheet)	Time:	12:18					
	Temp:	34.8					
	R rate:				HCO <sub>3</sub> :	26.9	
	pH:	7.20	7.23		TCO <sub>2</sub> :	29	
	PO <sub>2</sub> :	103	90		sO <sub>2</sub> :	96	
	PCO <sub>2</sub> :	67.9	61.7		Lact.:	14.77	
	BE <sub>ecf</sub> :	-1			Gluc.:	100	
Comments: (note water use to stimulate resp. rate) —							
<b>REPRODUCTION</b>	Lactating?	Y / <del>N</del>		N/A			
	Vulva swollen?	<del>Y</del> / N					
Comments:							
<b>EXCRETA</b>	Feces?	<input checked="" type="checkbox"/> Y / N	description:				
	Urine?	<input checked="" type="checkbox"/> Y / N	description:				
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
Good-looking male, minor signs of cold exposure. Blood CBC, chemistry, SAA unremarkable.							

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

Manatee ID: CPBC1202 Capture ID: TBC079 Assessed by: de Wit  
 Animal Name: LASSO Date: 14 Dec 12 Gender: M / F  
 Total length: 269 cm Weight: 868 kg / lb Capture Method: land-based boat set  
 Location: OUC Event: HA/FPL tags Air temp: 21.5 °C / F Water temp: 21.9 °C / F  
 Time notes: Initiated 13:04 Net Out 13:06 On Deck 13:11 Start Evaluation 13:21  
 First blood sample 13:26 Follow-up blood sample - Release 14:13

<b>BODY CONDITION</b>	Score:	1	2	<u>3</u>	4	5
		Emaciated	Thin	Normal	Fat	Obese
	Peanut shaped head?	<u>Y</u> / N	Ribs visible?	Y / <u>N</u>		
	Ventrum:	<u>Rounded</u> / Flat / Concave / Ventral Folds				
Comments:	(note areas, degree of weight loss) <u>peduncle is thin, probably muscle atrophy assoc. w/ bone growth</u>					

<b>ACTIVITY</b>	At Capture	High / <u>Medium</u> / Low
	During Work-up	Active / <u>Calm</u> / Lethargic
Comments:		

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>33.3</u> °C / F	Respiratory rate <u>4-8</u> per 5 min.
		Heart rate <u>48-60</u> per 1 min.
Body temp. support:	<u>Y</u> / N method: Shade / Tent / Heater / <u>Blanket</u> / Water <u>only @ the end of HA.</u>	

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <u>Y</u> / <u>N</u>	Score? Head: <u>0</u> Trunk: <u>0</u> Fluke: <u>0</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		
B = Bleaching	Thickened epidermis? <u>Y</u> / <u>N</u>	
G = Gray mottling	Cobblestone epidermis? <u>Y</u> / <u>N</u>	<u>few patches on ventrum</u>
S = Skin sloughing	Watercraft scars? <u>Y</u> / <u>N</u>	
A = Abscess	Watercraft wounds? <u>Y</u> / <u>N</u>	number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat? <u>Y</u> / <u>N</u>	<u>thin brown</u>
	Other epibiota?	

Flippers: (Describe abnormalities or else NGL)  
NGL

Fluke: (Describe abnormalities or else NGL)  
NGL

Comments: Large firm nump on caudal L dorsum  
∅ 49.2 x 43 cm

<b>RESPIRATORY</b>	Depth of respirations	superficial / <u>deep bi-lateral</u> / deep uni-lateral																	
	Inspiration pattern	<u>single</u> / double																	
	Symmetry of body	symmetric / <u>asymmetric</u>																	
Auscultation: —																			
O <sub>2</sub> supplementation: <u>Yes</u> / No				CO <sub>2</sub> monitoring: <u>Yes</u> / No															
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up													
(CG8 electrolyte results on I-stat sheet)	Time:	11:55																	
	Temp:	33.2																	
	R rate:			HCO <sub>3</sub> :	32.4														
	pH:	7.229	7.20	TCO <sub>2</sub> :	35														
	PO <sub>2</sub> :	110	99	sO <sub>2</sub> :	97														
	PCO <sub>2</sub> :	27.6	65.7	Lact.:	7.2														
	BEecf:	5		Gluc.:	54	Confirm → glucometer													
<b>Comments:</b> (note water use to stimulate resp. rate) breaths appeared slightly more shallow at time of weighing, approx 1/2 hour into assessment. Assoc. w/ quivering of dorsal nose region. 57 mg/dL																			
<b>REPRODUCTION</b>	Lactating?	Y / <u>N</u>		N/A	dorsal nose region.														
	Vulva swollen?	Y / <u>N</u>																	
Comments:																			
<b>EXCRETA</b>	Feces?	<u>Y</u> / N	description:																
	Urine?	<u>Y</u> / N	description:																
<b>DIAGNOSTIC SAMPLES COLLECTED</b>																			
<b>MEDICATIONS ADMINISTERED</b>																			
<b>COMMENTS</b>																			
Front in great condition, caudal half deformed - hump from chronic injury, and less developed muscle in peduncle. Small fluke. Caudal body appears too short compared to front (size flippers, head)																			
Known photo-ID Tm since 1991, brought into rehab in 2006 "Lasso" SWFTm 0610																			
<table border="1"> <tr> <td>279 TL 409 kg</td> <td>29 Sept 06</td> <td>284 400 kg</td> </tr> <tr> <td>2006</td> <td></td> <td>cm</td> </tr> <tr> <td>21 April - rescue @</td> <td></td> <td>release.</td> </tr> <tr> <td colspan="3">Titusville Municipal Marine</td> </tr> </table>								279 TL 409 kg	29 Sept 06	284 400 kg	2006		cm	21 April - rescue @		release.	Titusville Municipal Marine		
279 TL 409 kg	29 Sept 06	284 400 kg																	
2006		cm																	
21 April - rescue @		release.																	
Titusville Municipal Marine																			
otherwise, skin looks great. Only Tm from this capture day (1 out of 6) without lesions. Weighed a few kg less than in 2006, so constant on weight, but measured 10cm shorter. Error? or is hump growth affecting TL?																			

Blood CBC, chemistry, SAA unremarkable.

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

Manatee ID: CBC1203 Capture ID: TBC080 Assessed by: de Wit  
 Animal Name: South Leaf Date: 14 Dec 12 Gender: (M) / F  
 Total length: 271 cm Weight: 928 kg / (lb) Capture Method: land-based boat set  
 Location: CUC Event: HA/FPL tags Air temp: 22° (C) F Water temp: 22° (C) F  
 Time notes: Initiated \_\_\_\_\_ Net Out 13:45 On Deck 13:59 Start Evaluation 14:10  
 First blood sample 14:18 Follow-up blood sample - Release 14:48

<b>BODY CONDITION</b>	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)					

<b>ACTIVITY</b>	At Capture	<u>(High)</u> / Medium / Low
	During Work-up	Active / <u>(Calm)</u> / Lethargic
Comments:		

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>34</u> (°C) / F	Respiratory rate <u>4-6</u> per 5 min.
		Heart rate <u>76-80</u> per 1 min.
Body temp. support:	Y / <u>(N)</u> method: Shade / Tent / Heater / Blanket / Water	

<b>HEAD</b>	Describe any abnormalities or NGL (no gross lesions)	
Nares	NGL but some clear viscous fluid exuding	
Eyes	NGL from both nares	
Ears	NGL	

<b>INTEGUMENT</b>	Cold stress: Lesions? <u>(Y)</u> / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>0</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>6-9*</u> <u>9</u>
B = Bleaching	Thickened epidermis? Y / <u>(N)</u>	*epidermis on head v. light color, but not in a spotted pattern.
G = Gray mottling	Cobblestone epidermis? Y / <u>(N)</u>	
S = Skin sloughing	Watercraft scars? <u>(Y)</u> / N	
A = Abscess	Watercraft wounds? Y / <u>(N)</u>	number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat? <u>(Y)</u> / N	thin green
	Other epibiota?	few small barnacles fluke

Flippers: (Describe abnormalities or else NGL)  
 NGL but are v. light grey - slight bleaching?

Fluke: (Describe abnormalities or else NGL)  
 NGL some abrasions due to capture.

Comments: few small linear lesions on body, healing w/ granulation tissue. CS mottling is very mild

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: _____							
O <sub>2</sub> supplementation: <input checked="" type="radio"/> Yes / No				CO <sub>2</sub> monitoring: <input checked="" type="radio"/> Yes / No			
<b>I-stat results</b>		Initial		Follow-up			
(CG8 electrolyte results on I-stat sheet)	Time:	2:42					
	Temp:	34.0					
	R rate:					HCO <sub>3</sub> :	29.2
	pH:	7.22	7.26			TCO <sub>2</sub> :	29.2
	PO <sub>2</sub> :	62	62.5			sO <sub>2</sub> :	85
	PCO <sub>2</sub> :	70.7	62			Lact.:	10.95
	BE <sub>ecf</sub> :	2	2			Gluc.:	69
Comments: (note water use to stimulate resp. rate)							
<b>REPRODUCTION</b>	Lactating?	Y / N		N/A			
	Vulva swollen?	Y / N					
Comments:							
<b>EXCRETA</b>	Feces?	Y / <input checked="" type="radio"/> N		description:			
	Urine?	<input checked="" type="radio"/> Y / N		description:			
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
fluid / nasal swab cytology / culture							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
Great-looking male, cold exposure lesions almost not significant. Blood CBC, chemistry, SAA unremarkable.							

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**EXFOLIATIVE CYTOLOGY REPORT**  
University of Florida Aquatic Animal Health Program

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REPORT DATE: January 22, 2013  
COLLECTION DATE: December 14, 2012

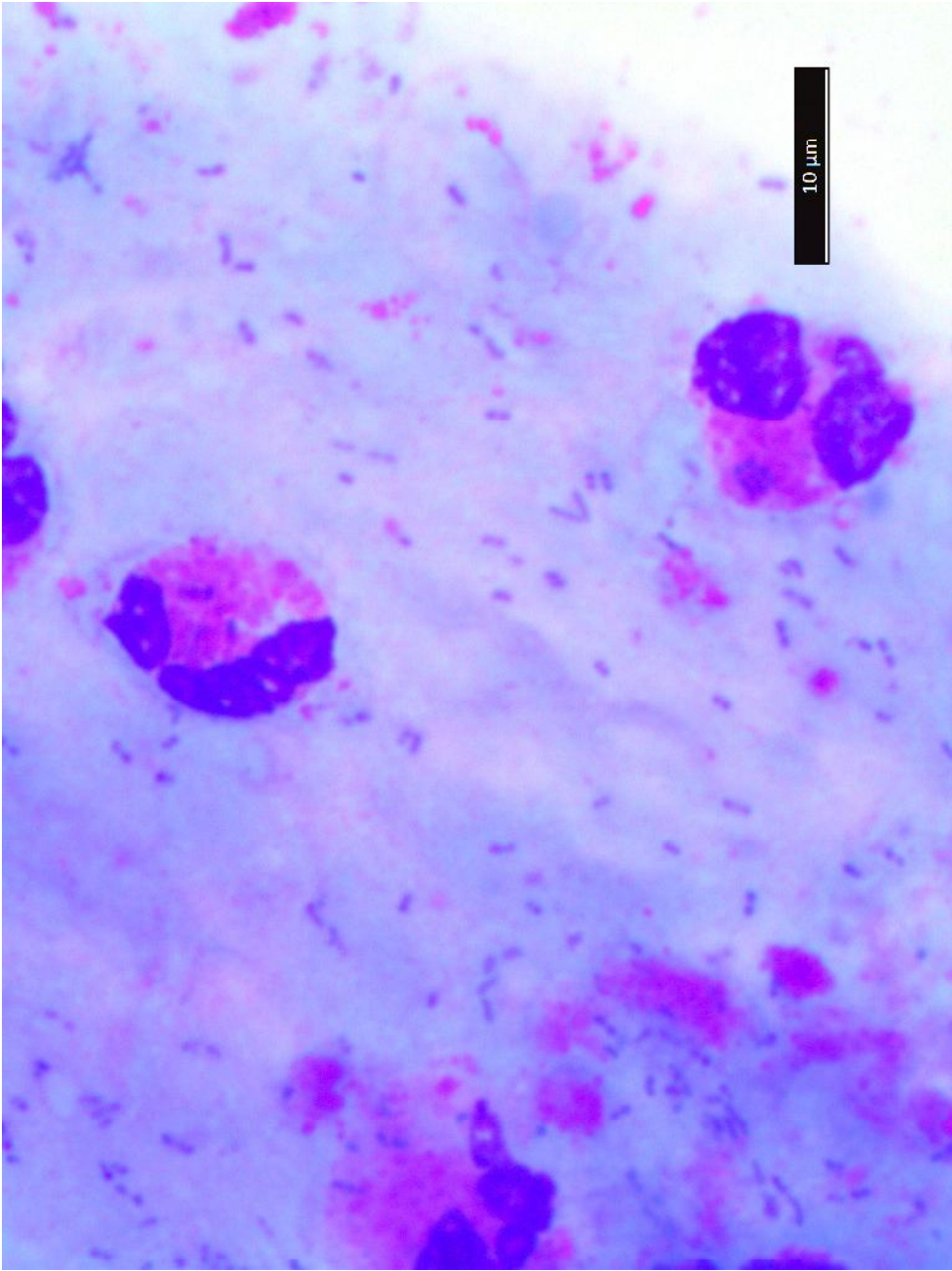
ANIMAL ID: *Trichechus manatus latirostris* "CBC12-03"  
LAB#: 13-37.nd  
SPECIMEN: Direct smears of nasal discharge (4 slides: 3WG; 1 GMS)

The direct smear preparation is moderately cellular, well preserved and not hemodilute on a pale basophilic background that contains a large amount of deeply basophilic, amorphous material suggestive of mucinous origin, few pleomorphic diatoms and a mildly to moderately cellular, mixed bacterial population composed of cocci, diplococci, coccobacilli and small slender bacilli. A moderately cellular inflammatory cell population is present and mainly composed of mature heterophils, a few of which contain intracytoplasmic, mixed bacteria. Lesser moderately reactive macrophages and rare eosinophils are also observed. Infrequent well-differentiated squamous epithelial cells are noted individually and in variably sized aggregates. Most of these squames contain a small number of golden-brown melanin pigment granules. A low number of algae are also seen (GMS positive). No yeast, fungus, parasites or neoplastic cells are identified.

**INTERPRETATION:** Mild to moderate mixed rhinitis with heterophilic predominance and local mixed bacterial sepsis.  
Presence of a moderately cellular, mixed bacterial population.  
Increased mucus.

**COMMENT:** Cultures and sensitivities may be helpful to further identify the microorganisms involved, if clinically warranted. Low numbers of diatoms and algae have been described as normal findings in nasal swab cytologies of healthy captive and wild manatees.

Nicole I. Stacy, DVM, DrMedVet



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

Manatee ID: CBC1204 Capture ID: TBC081 Assessed by: de Wit  
 Animal Name: Salada Date: 14 Dec '12 Gender: M /  F  
 Total length: 258 cm Weight: 936 kg /  lb Capture Method: land based boat set  
 Location: OUC Event: HA/FPL tags Air temp: 23.8 °C / F Water temp: 21.9 °C / F  
 Time notes: Initiated 15:11 Net Out 15:18 On Deck 15:21 Start Evaluation 15:32  
 First blood sample 15:38 Follow-up blood sample \_\_\_\_\_ Release 16:10

<b>BODY CONDITION</b>	Score:	1	2	<input checked="" type="radio"/> 3	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)					

<b>ACTIVITY</b>	At Capture	<input checked="" type="radio"/> High / Medium / Low
	During Work-up	Active / <input checked="" type="radio"/> Calm / Lethargic
Comments:		

<b>THR SUMMARY</b>	Oral temperature <u>34.4</u> °C / F	Respiratory rate <u>7-8</u> per 5 min.
(see THR sheet)		Heart rate <u>60</u> per 1 min.
Body temp. support:	Y / <input checked="" type="radio"/> N method: Shade / Tent / Heater / Blanket / Water	

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <input checked="" type="radio"/> Y / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>0</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>g</u> <u>6, 15</u> <u>g, 15</u>
B = Bleaching	Thickened epidermis? Y / <input checked="" type="radio"/> N	
G = Gray mottling	Cobblestone epidermis? Y / <input checked="" type="radio"/> N	
S = Skin sloughing	Watercraft scars? <input checked="" type="radio"/> Y / N	
A = Abscess	Watercraft wounds? Y / <input checked="" type="radio"/> N	number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat? <input checked="" type="radio"/> Y / N	<u>thin brown, green</u>
	Other epibiota?	<u>few small barnacles on body</u>

Flippers: (Describe abnormalities or else NGL)  
Slightly bleached, and scattered CS lesions

Fluke: (Describe abnormalities or else NGL)  
NGL except for some net abrasions

Comments:  
few small lesions on body, appear to be healing but pitted appearance of some suggestive of cold exposure

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: —							
O <sub>2</sub> supplementation: Yes / No				CO <sub>2</sub> monitoring: Yes / No			
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up	
(CG8 electrolyte results on I-stat sheet)	Time:	4:03					
	Temp:	33.9					
	R rate:				HCO <sub>3</sub> :	32.4	
	pH:	7.14	7.18		TCO <sub>2</sub> :	35	
	PO <sub>2</sub> :	33	26		sO <sub>2</sub> :	43	
	PCO <sub>2</sub> :	95.1	83		Lact.:	12.29	
	BE <sub>ecf</sub> :	3	3		Gluc.:	63	
Comments: (note water use to stimulate resp. rate)							
<b>REPRODUCTION</b>	Lactating?	Y	(N)				
	Vulva swollen?	Y	(N)				
Comments:							
<b>EXCRETA</b>	Feces?	(Y)	/ N	description:	moist, well-digested, sl fibrous, light green		
	Urine?	Y	(N)	description:			
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
nose swab for cytology, culture							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
Good-looking female w/ mild signs of cold exposure Blood CBC, chemistry, SAA unremarkable.							

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**EXFOLIATIVE CYTOLOGY REPORT**  
University of Florida Aquatic Animal Health Program

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REPORT DATE: January 22, 2013  
COLLECTION DATE: December 14, 2012  
  
ANIMAL ID: *Trichechus manatus latirostris* "CBC12-04"  
LAB#: 13-38.nd  
SPECIMEN: Direct smears of nasal swabs (4 slides: 3 WG; 1 GMS)

A highly cellular, well preserved and minimally hemodilute direct smear is present on a moderately basophilic background that contains a large amount of amorphous, moderately to deeply basophilic material suggestive of mucinous origin, few pleomorphic diatoms and a moderately cellular, heterogenous bacterial population composed of small and medium, slender bacilli. A highly cellular inflammatory cell population is frequently entrapped in mucinous material and mainly composed of mature heterophils that rarely contain intracytoplasmic bacilli. Few moderately to highly vacuolated macrophages and small well-differentiated lymphocytes are also present. A moderate number of squamous epithelial cells are noted individually and in variably sized, dense clumps. They exhibit moderate anisocytosis and anisokaryosis and a moderately increased nuclear to cytoplasmic ratio. These cells are oval or polygonal with distinct cytoplasmic borders and abundant pale basophilic, keratinized and occasionally pigmented cytoplasm. They have a single round nucleus with finely stippled chromatin. No yeast, fungus, parasites or neoplastic cells are identified.

**INTERPRETATION:** Moderate to marked suppurative rhinitis with local mixed bacterial sepsis and mild lymphocytic component.  
Presence of occasional small and medium slender bacilli.  
Increased mucus.  
Moderate squamous cell hyperplasia.

**COMMENT:** The lymphocytic component indicates chronicity of the inflammatory process. Cultures and sensitivities will be helpful for further identification of the microorganisms involved, if clinically warranted. Low numbers of diatoms have been described as a normal cytologic finding in nasal swabs of healthy captive and wild manatees.

Nicole I. Stacy, DVM, DrMedVet

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

Manatee ID: CBC1205 Capture ID: TBC082 Assessed by: de Wit  
 Animal Name: Kate Date: 14 Dec 12 Gender:  M /  F  
 Total length: 262 cm Weight: 812 kg / 1800 lb Capture Method: land-based boat net  
 Location: OUC Event: HA / PPL tags Air temp: 21 °C / F Water temp: 21.9 °C / F  
 Time notes: Initiated 15:35 Net Out 16:04 On Deck 16:12 Start Evaluation 16:24  
 First blood sample ? Follow-up blood sample \_\_\_\_\_ Release 17:12

**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)  
3+ slight dip midline

**ACTIVITY** At Capture High / Medium / Low

During Work-up Active / Calm / Lethargic

Comments:

**THR SUMMARY** Oral temperature 33.3 °C / F Respiratory rate 6-8 per 5 min.

(see THR sheet) Heart rate 60 per 1 min.

Body temp. support:  Y /  N method: Shade / Tent / Heater / Blanket / Water last 15 min

**HEAD** Describe any abnormalities or NGL (no gross lesions)

Nares NGL

Eyes NGL

Ears NGL

**INTEGUMENT** Cold stress: Lesions?  Y /  N Score? Head: 1 Trunk: 1 Fluke: 1

CS Location: Nose Lips Other Head Flippers Trunk Fluke

CS Appearance: 6 6, 1s 6, 1s 6, 1s

B = Bleaching Thickened epidermis? Y /  N

G = Gray mottling Cobblestone epidermis? Y /  N

S = Skin sloughing Watercraft scars? Y / N

A = Abscess Watercraft wounds? Y /  N number:

L = Lesion, superficial - stage of healing

Ld = Lesion, deep - appearance superficial / penetrating / both

Lu = Lesion, ulcerating Algal mat?  Y /  N thin brown

Other epibiota?

Flippers: (Describe abnormalities or else NGL)  
some bleaching and minor lesions

Fluke: (Describe abnormalities or else NGL)  
some bleaching. small lesions

Comments:

CBC1205

<b>RESPIRATORY</b>	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: _____							
O <sub>2</sub> supplementation: <u>Yes</u> / No				CO <sub>2</sub> monitoring: <u>Yes</u> / No			
<b>I-stat results</b>		Initial	Follow-up			Initial	Follow-up
(CG8 electrolyte results on I-stat sheet)	Time:	<u>5:15</u>	<u>5:15</u>				
	Temp:	<u>33.3</u>					
	R rate:				HCO <sub>3</sub> :	<u>15.5</u>	<u>22.7</u>
	pH:	<u>7.02</u> <del>8</del>	<u>7.02</u>	<del>7.06</del>	TCO <sub>2</sub> :	<u>17</u>	<u>25</u>
	PO <sub>2</sub> :	<u>110</u>	<u>43</u>	<u>33</u>	sO <sub>2</sub> :	<u>95</u>	<u>49</u>
	PCO <sub>2</sub> :	<u>59.4</u>	<u>86.9</u>	<u>73.9</u>	Lact.:	<u>720.0</u>	<u>15.45</u>
	BE <sub>ecf</sub> :	<u>-15</u>	<u>-8</u>		Gluc.:		
Comments: (note water use to stimulate resp. rate)							
<b>REPRODUCTION</b>	Lactating?	<u>Y</u> / N		<u>NIA</u>			
	Vulva swollen?	<u>Y</u> / N					
Comments:							
<b>EXCRETA</b>	Feces?	<u>Y</u> / N	description:		<u>moist, well digested, light green, brown</u>		
	Urine?	Y / <u>N</u>	description:				
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
<p>Manatee in good condition, mild signs of cold exposure in skin. Caught in one set w/ CBC1206</p> <p>Blood CBC, chemistry, SAA unremarkable</p>							

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

Manatee ID: CBC1206 Capture ID: TBC083 Assessed by: de Wit  
 Animal Name: Kelp Date: 14 Dec 12 Gender:  M / F  
 Total length: 261 cm Weight: 874 kg/lb Capture Method: land-based boat jet  
 Location: OUC Event: HA/FPL tags Air temp: 21° C/F Water temp: 21.9° C/F  
 Time notes: Initiated 15:35 Net Out 16:04 On Deck 16:12 Start Evaluation 16:20  
 First blood sample 16:25 Follow-up blood sample - Release 16:57

<b>BODY CONDITION</b>	Score:	1	2	<input checked="" type="radio"/> 3	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) <u>3+, slight dip in midline</u>					

<b>ACTIVITY</b>	At Capture	<input checked="" type="radio"/> High / Medium / Low
	During Work-up	Active / <input checked="" type="radio"/> Calm / Lethargic
Comments:		

<b>THR SUMMARY</b>	Oral temperature <u>34.7°</u> C/F	Respiratory rate <u>6-12</u> per 5 min.
(see THR sheet)		Heart rate <u>60</u> per 1 min.
Body temp. support:	Y / <input checked="" type="radio"/> N method: Shade / Tent / Heater / Blanket / Water	

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <input checked="" type="radio"/> Y / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>b</u> <u>b.l.s</u> <u>b.l.s</u> <u>b.l.s</u>
B = Bleaching	Thickened epidermis? <input checked="" type="radio"/> Y / N	<u>slightly on fluke margin</u>
G = Gray mottling	Cobblestone epidermis? Y / <input checked="" type="radio"/> N	
S = Skin sloughing	Watercraft scars? <input checked="" type="radio"/> Y / N	
A = Abscess	Watercraft wounds? Y / <input checked="" type="radio"/> N	number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat? <input checked="" type="radio"/> Y / N	<u>thin brown</u>
	Other epibiota?	

Flippers:	(Describe abnormalities or else NGL) <u>some bleaching &amp; small lesions</u>
Fluke:	(Describe abnormalities or else NGL) <u>some bleaching &amp; small lesions</u>

Comments: CS lesions mostly circular & pitted, few linear

CBC1206

<b>RESPIRATORY</b>	Depth of respirations	superficial / <u>deep</u> bi-lateral / deep uni-lateral				
	Inspiration pattern	<u>single</u> / double				
	Symmetry of body	<u>symmetric</u> / asymmetric				
Auscultation: <u>—</u>						
O <sub>2</sub> supplementation: <u>Yes</u> / No				CO <sub>2</sub> monitoring: <u>Yes</u> / No		
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up
(CG8 electrolyte results on I-stat sheet)	Time:	<u>✗</u>				
	Temp:					
	R rate:			HCO <sub>3</sub> :		
	pH:			TCO <sub>2</sub> :		
	PO <sub>2</sub> :			sO <sub>2</sub> :		
	PCO <sub>2</sub> :			Lact.:		
	BE <sub>ecf</sub> :			Gluc.:		
Comments: (note water use to stimulate resp. rate) <u>* I-stat sample collected (P)</u>						
<b>REPRODUCTION</b>	Lactating?	<u>Y</u> / N		N/A		
	Vulva swollen?	<u>Y</u> / N				
Comments:						
<b>EXCRETA</b>	Feces?	<u>Y</u> / N	description:	<u>moist, well-digested, green-brown</u>		
	Urine?	<u>Y</u> / N	description:	<u>clear</u>		
<b>DIAGNOSTIC SAMPLES COLLECTED</b>						
<b>MEDICATIONS ADMINISTERED</b>						
<b>COMMENTS</b>						
<p>Good looking manatee, minor lesions of cold exposure. Caught in one set w/ CBC1205</p> <p>Blood CBC, chemistry, SAA unremarkable</p>						

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

Manatee ID: CBC1207 Capture ID: TBC084 Assessed by: dewit  
 Animal Name: Godium Date: 15 Dec 12 Gender: (M) / F  
 Total length: 278 cm Weight: 928 kg/(lb) Capture Method: open water  
 Location: OUC Event: HA/FPL tags Air temp: 20.5°C/F Water temp: 20.1°C/F  
 Time notes: Initiated ? Net Out 10:16 On Deck 10:21 Start Evaluation 10:46  
 First blood sample 11:52 Follow-up blood sample - Release 11:34

<b>BODY CONDITION</b>	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)

<b>ACTIVITY</b>	At Capture	High / Medium / <u>(Low)</u>	<i>was actively working</i>
	During Work-up	Active / <u>(Calm)</u> / Lethargic	<i>lead's bag, but flared when pulled on board</i>

Comments:

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>32.2</u> (°C) / F	Respiratory rate <u>5-7</u> per 5 min.
		Heart rate <u>60</u> per 1 min.

Body temp. support: (Y) / N method: (Shade) / (Tent) / Heater / Blanket / Water

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <u>(Y)</u> / N			Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>1</u>			
	CS Location:	Nose	Lips	Other Head	Flippers	Trunk	Fluke
	CS Appearance:			<u>6</u>	<u>6</u>	<u>6,LS</u>	<u>6,LS</u>

B = Bleaching	Thickened epidermis?	Y / <u>(N)</u>	
G = Gray mottling	Cobblestone epidermis?	Y / <u>(N)</u>	
S = Skin sloughing	Watercraft scars?	<u>(Y)</u> / N	
A = Abscess	Watercraft wounds?	Y / <u>(N)</u>	number:
L = Lesion, superficial	- stage of healing		
Ld = Lesion, deep	- appearance		superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<u>(Y)</u> / N	<i>thin brown</i>
	Other epibiota?		<i>few barnacles</i>

Flippers: (Describe abnormalities or else NGL)  
*bleached epidermis*

Fluke: (Describe abnormalities or else NGL)  
*1 firm swelling ø 4cm w/pit in center*

Comments: *CS lesions = mostly bleaching, with a few pitted lesions scattered over body*

<b>RESPIRATORY</b>	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: _____							
O <sub>2</sub> supplementation: <u>Yes</u> / No				CO <sub>2</sub> monitoring: <u>Yes</u> / No			
<b>I-stat results</b>		Initial	Follow-up			Initial	Follow-up
(CG8 electrolyte results on I-stat sheet)	Time:	11:06					
	Temp:	33.1					
	R rate:				HCO <sub>3</sub> :	31.4	
	pH:	7.31			TCO <sub>2</sub> :	34	
	PO <sub>2</sub> :	48			sO <sub>2</sub> :	67	
	PCO <sub>2</sub> :	94.4			Lact.:	13.99	
	BEecf:	2			Gluc.:	92	
Comments: (note water use to stimulate resp. rate) water-induced respirations							
<b>REPRODUCTION</b>	Lactating?	<u>Y</u> / N		N/A			
	Vulva swollen?	<u>Y</u> / N					
Comments:							
<b>EXCRETA</b>	Feces?	<u>Y</u> / N	description: moist, well-digested, sl. fibrous, light green-brown				
	Urine?	Y / <u>N</u>	description:				
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
<p>Good looking male w/ mild signs of cold exposure.</p> <p>Blood gases: lactate ↑, some metabolic acidosis</p> <p>Blood CBC, chemistry, SAA mostly unremarkable, AST slightly ↑, but other liver enzymes within ref. Probably not significant clinically.</p>							

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

Manatee ID: CBC1208 Capture ID: TBC085 Assessed by: do WIT  
 Animal Name: Bean Date: 15 Dec 12 Gender: M / F  
 Total length: 238 cm Weight: 610 kg (lb) Capture Method: land-based boat set  
 Location: OUC Event: HA/FPL tags Air temp: 20.5°C F Water temp: 20.6°C F  
 Time notes: Initiated - Net Out 11:01 On Deck 11:04 Start Evaluation 11:16  
 First blood sample 11:25 Follow-up blood sample - Release 11:56

<b>BODY CONDITION</b>	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)

<b>ACTIVITY</b>	At Capture	High / <u>Medium</u> / Low
	During Work-up	Active / <u>Calm</u> / Lethargic

Comments:

<b>THR SUMMARY</b> (see THR sheet)	Oral temperature <u>35.3</u> °C / F	Respiratory rate <u>5-7</u> per 5 min.
		Heart rate <u>64-72</u> per 1 min.

Body temp. support: Y / N method: Shade / Tent / Heater / Blanket / Water

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <u>Y</u> / N	Score? Head: <u>1</u> Trunk: <u>0</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>g-v. mild on sides</u> L

B = Bleaching	Thickened epidermis?	<u>Y</u> / <u>N</u>
G = Gray mottling	Cobblestone epidermis?	<u>Y</u> / <u>N</u>
S = Skin sloughing	Watercraft scars?	<u>Y</u> / N
A = Abscess	Watercraft wounds?	<u>Y</u> / <u>N</u>
L = Lesion, superficial	- stage of healing	number:
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<u>Y</u> / N <u>thin brown</u>
	Other epibiota?	

Flippers: (Describe abnormalities or else NGL)  
NGL

Fluke: (Describe abnormalities or else NGL)  
few small lesions

Comments: few healing lesions on body, not sure if cs related

<b>RESPIRATORY</b>	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: <u>—</u>							
O <sub>2</sub> supplementation: <u>Yes</u> / No				CO <sub>2</sub> monitoring: <u>Yes</u> / No			
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up	
(CG8 electrolyte results on I-stat sheet)	Time:	11:47					
	Temp:	35.3					
	R rate:			HCO <sub>3</sub> :	39.6		
	pH:	7.25	7.27	TCO <sub>2</sub> :	42		
	PO <sub>2</sub> :	54	48	sO <sub>2</sub> :	79		
	PCO <sub>2</sub> :	90.1	83.7	Lact.:	1.54		
	BE <sub>ecf</sub> :	12		Gluc.:	84		
Comments: (note water use to stimulate resp. rate) <i>water-induced respirations</i>							
<b>REPRODUCTION</b>	Lactating?	Y / <u>N</u>					
	Vulva swollen?	Y / <u>N</u>					
Comments:							
<b>EXCRETA</b>	Feces?	<u>Y</u> / N	description: moist, well-digested, light green-brown				
	Urine?	<u>Y</u> / N	description:				
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
<p><i>Good-looking female, cold stress lesions not significant</i></p> <p><i>Blood CBC, chemistry, SAA mostly unremarkable.</i></p>							

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

Manatee ID: CBC1209 Capture ID: TBC086 Assessed by: de Wit  
 Animal Name: Bloomer Date: 15 Dec 12 Gender: M /  F  
 Total length: 280 cm Weight: 932 kg /  lb Capture Method: land-based boat net  
 Location: OUC Event: HA/FPL tags Air temp: 20.5 °C / F Water temp: 20.6 °C / F  
 Time notes: Initiated - Net Out 11:55 On Deck 11:59 Start Evaluation 12:11  
 First blood sample 12:19 Follow-up blood sample - Release 12:55

<b>BODY CONDITION</b>	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) (cor skin) fat roll on caudal head see also fat measurements					

<b>ACTIVITY</b>	At Capture	<input checked="" type="radio"/> High / Medium / Low
	During Work-up	Active / <input checked="" type="radio"/> Calm / Lethargic
Comments:		

<b>THR SUMMARY</b>	Oral temperature <u>34.8</u> °C / F	Respiratory rate <u>5-8</u> per 5 min.
(see THR sheet)		Heart rate <u>60</u> per 1 min.
Body temp. support:	<input checked="" type="radio"/> Y / N method: <input checked="" type="radio"/> Shade / <input checked="" type="radio"/> Tent / Heater / Blanket / Water	

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <input checked="" type="radio"/> Y / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>b,ls</u> <u>b,ls</u> <u>b,ls</u> <u>b,ls</u>
B = Bleaching	Thickened epidermis? Y / <input checked="" type="radio"/> N	
G = Gray mottling	Cobblestone epidermis? Y / <input checked="" type="radio"/> N	
S = Skin sloughing	Watercraft scars? <input checked="" type="radio"/> Y / N	
A = Abscess	Watercraft wounds? Y / <input checked="" type="radio"/> N	number:
L = Lesion, superficial	- stage of healing	
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat? <input checked="" type="radio"/> Y / N	<u>thin brown</u>
	Other epibiota?	<u>few barnacles</u>

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

Fluke: (Describe abnormalities or else NGL)  
some bleaching, small lesions

Comments:

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: —							
O <sub>2</sub> supplementation: Yes / No				CO <sub>2</sub> monitoring: Yes / No			
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up	
(CG8 electrolyte results on I-stat sheet)	Time:	17:38					
	Temp:						
	R rate:				HCO <sub>3</sub> :	35.7	
	pH:	7.16	7.19		TCO <sub>2</sub> :	39	
	PO <sub>2</sub> :	92.5	38		sO <sub>2</sub> :	64	
	PCO <sub>2</sub> :	98.5	89.5		Lact.:	9.02	
	BE <sub>ecf</sub> :	7			Gluc.:	72	
Comments: (note water use to stimulate resp. rate) water-induced respirations							
<b>REPRODUCTION</b>	Lactating?	Y / (N)					
	Vulva swollen?	Y / (N)					
Comments:							
<b>EXCRETA</b>	Feces?	Y / (N) description:					
	Urine?	Y / (N) description:					
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
Female in very good conditions, but some signs of cold exposure. Blood CBC, chemistry, SAA mostly unremarkable.							

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

Manatee ID: CBC1210 Capture ID: TBC087 Assessed by: de Wit  
 Animal Name: Slowgrass Date: 15 Dec 12 Gender: M / (F)  
 Total length: 258 cm Weight: 772 kg / (lb) Capture Method: land-based boat  
 Location: OUC Event: HA/FPL tags Air temp: 21.6 (C)F Water temp: 20.8 (C)F  
 Time notes: Initiated - Net Out 12:24 On Deck 12:29 Start Evaluation 12:40  
 First blood sample 12:49 Follow-up blood sample \_\_\_\_\_ Release 13:21

<b>BODY CONDITION</b>	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)

<b>ACTIVITY</b>	At Capture	High / <u>(Medium)</u> / Low
	During Work-up	Active / <u>(Calm)</u> / Lethargic

Comments:

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>34.1</u> <u>(C)</u> F	Respiratory rate <u>5-8</u> per 5 min.
		Heart rate <u>52-80</u> per 1 min.

Body temp. support: Y / N method: (Shade) / (Tent) / Heater / Blanket / Water

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <u>(Y)</u> / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>b</u> <u>b,ls</u> <u>b,ls</u> <u>b,ls</u>

B = Bleaching	Thickened epidermis?	Y / <u>(N)</u>	
G = Gray mottling	Cobblestone epidermis?	Y / <u>(N)</u>	
S = Skin sloughing	Watercraft scars?	<u>(Y)</u> / N	
A = Abscess	Watercraft wounds?	Y / <u>(N)</u>	number:
L = Lesion, superficial	- stage of healing		
Ld = Lesion, deep	- appearance		superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<u>(Y)</u> / N	<u>moderate brown</u>
	Other epibiota?		

Flippers: (Describe abnormalities or else NGL)  
bleached epidermis, feels bit spongy

Fluke: (Describe abnormalities or else NGL)  
mostly lesions (scattered), bleached spots among fluke margin

Comments: lesions on body mostly along lateral aspects



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

Manatee ID: CB31211 Capture ID: TB3088 Assessed by: de Wit  
 Animal Name: Dagrass Date: 15 Dec 12 Gender:  M / F  
 Total length: 249 cm Weight: 636 kg /  lb Capture Method: open water  
 Location: OUC Event: HAY FPL tags Air temp: 22.2°C / F Water temp: 21.2°C / F  
 Time notes: Initiated - Net Out 14:01 On Deck 14:04 Start Evaluation 14:26  
 First blood sample 14:31 Follow-up blood sample - Release 15:11

<b>BODY CONDITION</b>	Score:	1	2	<input checked="" type="radio"/> 3	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)  
3T, has slight dip in midline

<b>ACTIVITY</b>	At Capture	High	<input checked="" type="radio"/> Medium	Low
	During Work-up	Active	<input checked="" type="radio"/> Calm	Lethargic

Comments:

<b>THR SUMMARY</b> <i>(see THR sheet)</i>	Oral temperature <u>32</u> (°C) / F	Respiratory rate <u>4-9</u> per 5 min.
		Heart rate <u>60-72</u> per 1 min.

Body temp. support:  Y / N method:  Shade /  Tent / Heater / Blanket / Water

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

<b>INTEGUMENT</b>	Cold stress: Lesions? <input checked="" type="radio"/> Y / N	Score? Head: <u>1</u> Trunk: <u>1</u> Fluke: <u>1</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>b</u> <u>b,ls</u> <u>b,ls</u> <u>b,ls</u>

B = Bleaching	Thickened epidermis?	Y / <input checked="" type="radio"/> N
G = Gray mottling	Cobblestone epidermis?	Y / <input checked="" type="radio"/> N
S = Skin sloughing	Watercraft scars?	<input checked="" type="radio"/> Y / N
A = Abscess	Watercraft wounds?	Y / <input checked="" type="radio"/> N
L = Lesion, superficial	- stage of healing	number:
Ld = Lesion, deep	- appearance	superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<input checked="" type="radio"/> Y / N
	Other epibiota?	<u>thin brown</u>

Flippers: (Describe abnormalities or else NGL)  
bleaching, CS lesions superficial, capture abrasions on L

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

Comments: CS lesions on body circular & linear, some ulcerating w/ necrotic material & thickened, fringed margins. Bleached spots all over body, some w/ pitted centers

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: ~							
O <sub>2</sub> supplementation: Yes / No				CO <sub>2</sub> monitoring: Yes / No			
<b>I-stat results</b>		Initial	Follow-up		Initial	Follow-up	
(CG8 electrolyte results on I-stat sheet)	Time:	2:48					
	Temp:						
	R rate:			HCO <sub>3</sub> :	31.4		
	pH:	7.243 - 7.277		TCO <sub>2</sub> :	34		
	PO <sub>2</sub> :	60 50		sO <sub>2</sub> :	84		
	PCO <sub>2</sub> :	72.7 65.2		Lact.:	10.46		
	BE <sub>ecf</sub> :	4		Gluc.:	85		
Comments: (note water use to stimulate resp. rate) water-induced respirations							
<b>REPRODUCTION</b>	Lactating?	Y / N		N/A			
	Vulva swollen?	Y / N					
Comments:							
<b>EXCRETA</b>	Feces?	Y / N		description:	moist, well-digested, light brown		
	Urine?	Y / N		description:	clear		
<b>DIAGNOSTIC SAMPLES COLLECTED</b>							
<b>MEDICATIONS ADMINISTERED</b>							
<b>COMMENTS</b>							
Manatee in good condition, but significant, mild signs of cold exposure							
Blood CBC, chemistry, SAA mostly unremarkable.							

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

Manatee ID: CBC1212 Capture ID: TBC089 Assessed by: de Wit  
 Animal Name: Talon Date: 15 Dec 12 Gender: M /  F  
 Total length: 301 cm Weight: 1254 kg /  lb Capture Method: open-water  
 Location: OUC Event: HA/FPL tags Air temp: 23.4 °C/F Water temp: 21 °C/F  
 Time notes: Initiated - Net Out 14:37 On Deck 14:43 Start Evaluation 14:59  
 First blood sample 15:01 Follow-up blood sample - Release 15:40

BODY CONDITION	Score:	1	2	3	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)					

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

**THR SUMMARY** Oral temperature 32.9 °C/F Respiratory rate 10 per 5 min.  
 (see THR sheet) Heart rate 56-66 per 1 min.

Body temp. support:	Y / <input checked="" type="radio"/> N method: Shade / Tent / Heater / Blanket / Water
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HEAD		Describe any abnormalities or NGL (no gross lesions)
Abrasion <input checked="" type="radio"/> - deep muzzle from net	Nares	NGL <input checked="" type="radio"/> side of head, dorsal to ear,
	Eyes	NGL circular lesion w/ hyperplasia of
	Ears	NGL epidermis, does not look cold-related

INTEGUMENT	Cold stress: Lesions? <input checked="" type="radio"/> Y / N	Score? Head: <u>0</u> Trunk: <u>1</u> Fluke: <u>0</u>
CS Location:	Nose Lips Other Head	Flippers Trunk Fluke
CS Appearance:		<u>b</u>

B = Bleaching	Thickened epidermis?	Y / <input checked="" type="radio"/> N	
G = Gray mottling	Cobblestone epidermis?	Y / <input checked="" type="radio"/> N	
S = Skin sloughing	Watercraft scars?	<input checked="" type="radio"/> Y / N	
A = Abscess	Watercraft wounds?	Y / <input checked="" type="radio"/> N	number:
L = Lesion, superficial	- stage of healing		
Ld = Lesion, deep	- appearance		superficial / penetrating / both
Lu = Lesion, ulcerating	Algal mat?	<input checked="" type="radio"/> Y / N	thin brown
	Other epibiota?		few barnacles ventrum

Flippers: (Describe abnormalities or else NGL)  
 NGL but abrasions from net, & one nail torn on  flipper

Fluke: (Describe abnormalities or else NGL)  
 NGL

Comments:

<b>RESPIRATORY</b>	Depth of respirations	superficial / deep bi-lateral / deep uni-lateral					
	Inspiration pattern	single / double					
	Symmetry of body	symmetric / asymmetric					
Auscultation: —							
O <sub>2</sub> supplementation: Yes / No			CO <sub>2</sub> monitoring: Yes / No				
<b>I-stat results</b>		Initial	Follow-up			Initial	Follow-up
(CG8 electrolyte results on I-stat sheet)	Time:	3:06					
	Temp:	34.5					
	R rate:				HCO <sub>3</sub> :	21.4	
	pH:	7.059	7.091		TCO <sub>2</sub> :	24	
	PO <sub>2</sub> :	113	99		sO <sub>2</sub> :	95	
	PCO <sub>2</sub> :	75.7	67.8		Lact.:	720.0	
	BEecf:	-9			Gluc.:	105	
Comments: (note water use to stimulate resp. rate)							

<b>REPRODUCTION</b>	Lactating?	Y / (N)
	Vulva swollen?	Y / (N)
Comments:		

<b>EXCRETA</b>	Feces? (Y) / N	description:	moist, well-digested, light brown
	Urine? Y / (N)	description:	

**DIAGNOSTIC SAMPLES COLLECTED**  
 biopsy of lesion on @ head - histology & frozen

**MEDICATIONS ADMINISTERED**

**COMMENTS**  
 Great-looking female, w/minor lesions of cold-exposure, not significant. Lot of resistance @ capture, resulting in abrasions & very high lactate; pH ↓, metabolic acidosis. Respirations ↑, probably compensating.  
 Blood CBC, chemistry, SAA unremarkable.  
 Histopath of lesion @ head: hyperkeratosis, hyperplasia, pustular dermatitis - probably local irritation & scarring

## NECROPSY REPORT FINAL REPORT

Field ID: CBC12-12  
Alternate Field ID:  
Accession Number: CBC 12-12 Lesion 12-15-2012  
Species: Trichecus latirostris manatus  
Date: 12/15/2012  
Location: FL  
Sex, Age Class: UNK, UNKNOWN  
TL: cm  
WT: kg  
Body Condition: Good  
Condition at Investigation: Alive  
Carcass Disposition/Post-Mortem Interval: N/A

### HISTORY

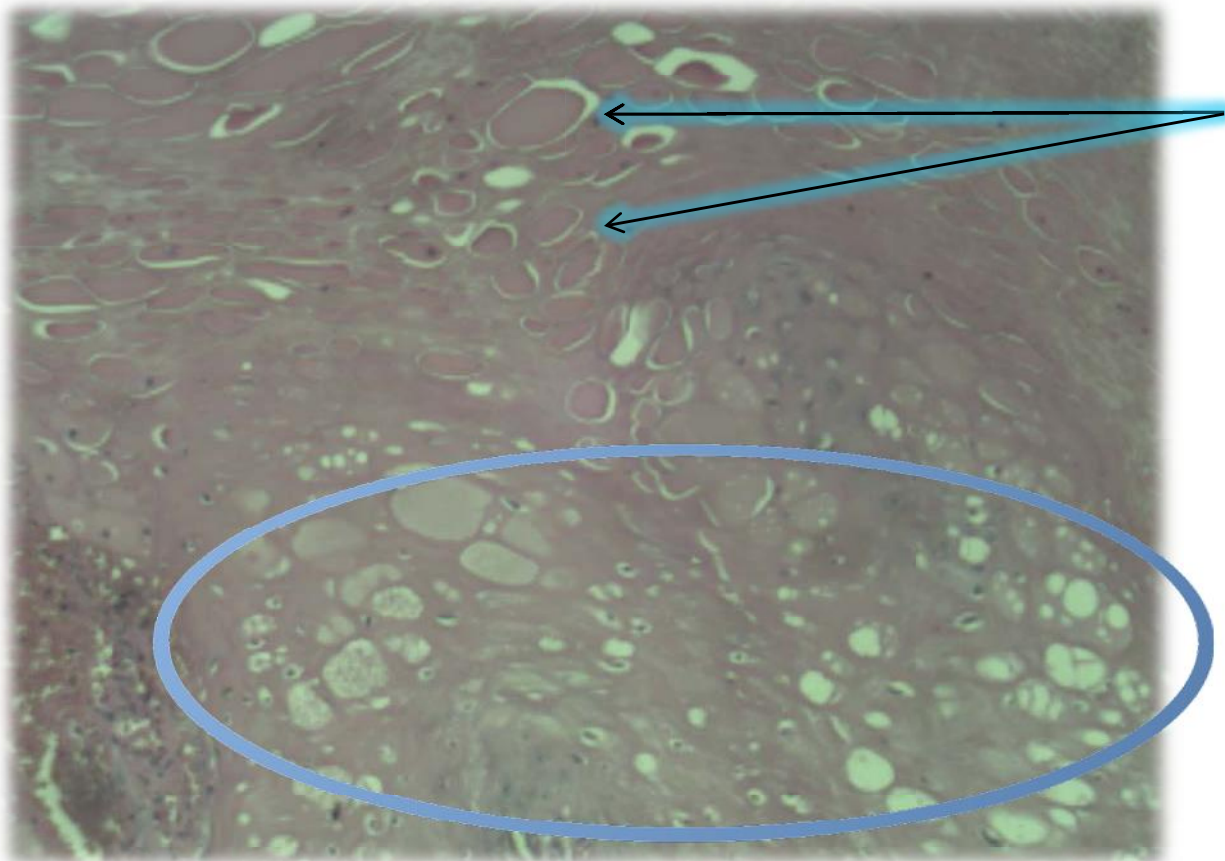
Findings include: CBC1212 was an adult female captured for our tagging study over the weekend. The biopsy is from a lesion on the side of the head/neck area.. A raised, slightly verrucose to fringed, circular lesion caudal to the ear. (E-mail from M. deWit, 12/20/2012).

### MICROSCOPIC DESCRIPTION

Received 21 Dec 2012 from UF is one H& E slide.

***Tissue Preservation: Good***

Skin: Four sections of skin are examined and consist of epidermis and superficial papillary dermis. There is a dense layer of retained stratum externum. Within this region, there is focally extensive hydropic swelling of epithelial cells which contain an eosinophilic fluid with few clear vacuoles. Additionally, there are small clusters of degenerate heterophils. Focally, the underlying stratum intermedium is characterized by hydropic degeneration of epithelial cells and individual epithelial necrosis. There is mild epithelial hyperplasia. Within the papillary dermis, there is a sprinkling of perivascular lymphocytes and plasma cells. Endothelial cells are plump and reactive.



*There is swelling and necrosis of epithelial cells within the stratum intermedium (circle). In the external epithelial layers, epithelial cells are swollen and contain granular to vacuolated eosinophilic fluid (arrow).*

**The following tissues have no significant histological findings:**

### **MORPHOLOGIC DIAGNOSES**

#### Integumentary System

#### Skin:

1. Hyperkeratosis, pustular dermatitis, and mild epithelial hyperplasia, diffuse with epithelial hydropic degeneration and individual keratinocyte necrosis.
2. Dermatitis, lymphoplasmacytic, multifocal, mild with mild endothelial reactivity.

### **INTERPRETATIVE SUMMARY**

Hyperkeratosis
Pustular dermatitis

Primary Diagnostic Category: **Undetermined**

Findings from this biopsy of a verrucous mass indicate epidermal changes including hyperkeratosis, intracorneal pustules, and epithelial hyperplasia. The cause was not determined, but would include infectious or localized trauma; the pattern was similar to, but not as severe as cold stress lesions. Viral inclusions were not observed and there was no koilocytosis which can be observed with papillomavirus infection and has been observed in captive and free-ranging manatees.<sup>1</sup> The lesion was solitary. This does not rule out viral infection and PCR is suggested if there is a need to rule this out as part of population health monitoring.

There was inflammation in the superficial epithelium. No infectious agents (e.g. bacteria, algae) were present within the pustules or on the surface of the epithelium. The deeper dermis was not in the section; any dermal response, e.g. fibrosis/fibroplasia cannot be assessed. There was mild inflammation in the papillary dermis.

<b>RECOMMENDED/PENDING TESTS-PATHOLOGIST</b>
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TEST	PURPOSE	SITE	RESULT

DATE:

12/26/2012

REPORTING PATHOLOGIST:

David S. Rotstein, DVM, MPVM, DACVP

<sup>1</sup> Woodruff, RA et al. 2005. Molecular identification of a papillomavirus from cutaneous lesions of captive and free-ranging Florida manatees. 41: 437-441.