

**Offshore Whale Carcass
Evaluation**

Field #: **IFAW 09-033Eg** Vessel: USCG Tybee (110')

Catalog # **Eg 3103** Observers: Michael Moore,
(WHOI) Misty
Niemeyer (IFAW)
Brian Moore, (NMLC)

Sighting Record

Date	Time	Latitude	Longitude		Species:
Feb 25 2009	1320	41 27.3 N	68 44.9 W	NOAA aerial survey	<i>Eubalaena glacialis</i>
Feb 26 2009	1037	41 30.773 N	68 41.254 W	USCG Tybee	Sex: Female
Feb 26 2009	1415	41 36.2 N	68 39.00 W	Depart animal	Length: ~14m

Summary of Observations

No gear or propeller trauma evident. No shark predation. Bird peck marks above water line. No obvious cause of death.

Skin Sample: Yes
 Blubber Sample: Yes
 Muscle: Yes
 Incisions: Ventral belly only
 Blubber color: Creamy white. Some mid ventral sterna stratum red discoloration
 Photograph Frame #'s: DSC0761-1027
 Video: Eg 3103 MiniDV pole cam, IFAW surface video

History:

Tim Cole (NOAA NEFSC): 'a dead right was found at 13:16 local time Feb 25 2009 at position 41 27.32 and -68 44.9 and the carcass appeared fresh with no obvious evidence of human interaction visible from the air.'

Amy Knowlton (NEAq): 'based on a white belly pattern the animal was matched to #3103, a 2001 calf of #1703.'

Christin Kahn (NOAA NEFSC): 'last known sighting of EGNO 3103 (unconfirmed) was on May 30th 2008 (whale SSS) in the GSC.'

Katie Jackson (FWRI): '3103 was seen numerous times in the SEUS 07/08 season (paired with another adult female) and was never seen with a calf, but also was never seen in a SAG with other juvenile whales.'

Mendy Garron (NOAA NER): contacted USCG and initiated a request for support.

Examination:

Michael Moore (WHOI), Misty Niemeyer (IFAW) and Brian Moore (NMLC) departed USCG Woods Hole aboard the 110' USCG Cutter Tybee (Commanding Officer Blake Stockwell) at 0615, February 26 2009. The cutter was alongside the whale at 1015. Aerial video and digital stills were obtained. A RHIB was launched with two USCG personnel, and the science crew of 3. Still and digital above water images were obtained. A length estimate was 14 m – the tail was hanging vertically. A healed white scar was evident on the leading edge of the right flipper and on the dorsal aspect of the left flipper. Both axillae had broken skin along the armpit folds. This appeared to be post mortem and did not look like rope abrasion. A pole video camera survey was then undertaken of the underwater surfaces. No predators were observed. Transverse and longitudinal incisions were made on the ventral aspect. Mild red discoloration (likely postmortem) was observed in the middle blubber stratum 1m caudal to the left axilla. Muscle was greeny brown and gas filled. Attempts to enter the abdominal cavity were thwarted by the swells inducing the cut blubber edges to snap back and forth making it hard to cut deeper without tools and appendages being trapped. Initially these cuts were made from the bows of the boat, but this was not easy. Given the lack of predators the decision was made to make the cuts from the whale as to continue cutting from the RHIB was next to impossible with the 3' sea state. Indeed the biggest risk when cutting from the boat was from the flensing knife to the RHIB tubes. Cutting from the whale was infinitely easier than from the boat. A line was then passed around the left axilla, and back through an end eye, cinched tight, and then under (via the tail end to avoid fouling the mouth) and back over the whale to attach to the stern of the Tybee. The left axilla was on the leeward side. Thus the line drifted under the back as the animal drifted over it and was hooked up by a boat hook. Still and video images of the sides and back were then obtained as the whale was rolled. No abnormalities were observed on review of the resultant still

and video images. A tag supplied by Jim Manning (NOAA) was then attached using hose clamps and cord through the blubber. We departed the whale at ~1530 and were alongside Little Harbor, Woods Hole at 1945. The cutter transited at 25 knots. Review of stills and underwater video showed no abnormalities.

Discussion

Diagnosis: given past case diagnoses in this species, and the absence of propeller or gear trauma, the most likely cause of death of this animal was internal blunt trauma. No evidence for this was obtained.

Tow option: prior to departure the PI considered the option of towing with IFAW and NOAA personnel. Although the Newport Navy Yard (NUWC) boat ramp was potentially available with a Navy/NOAA MOU in hand, there is no good disposal plan. The option that had been discussed in the past was to use MAT Marine (then out of New Bedford, MA) to barge the waste 20nm South of Nomans Island. Two developments since that idea was formed made the PI reluctant to take that option: 1. A right whale carcass that was sighted at that spot some years ago subsequently washed up on Long Island, and 2) MAT Marine is out of business and they were the only local barge company that could be persuaded to consider doing the offshore disposal.

The at sea exam seems to have failed to reach a diagnosis for this animal. It was probably still towable when the cutter departed the scene although the ventral blubber cuts would have weakened the blubber envelope, which is the tow envelope. Weather forecast was then bad for the next 5 days. The lack of a good site to tow to and dispose from in the NE has been a chronic problem and remains an acute one.

Pole camera: the need to be upward looking made it very difficult to get good images of the animal that were not in strong shade, given the sunny day.

In summary the limitation of at sea exams is personified in this case. It is time to rethink this approach and aggressively seeks haul to locations in the Northeast US with concomitant disposal options.



DSC_0768 genital slit.JPG



A IMG_3013 Feb 25 09 NOAA Aerial.jpg



DSC_0777 left side.JPG



DSC_0765 right flipper.jpg

DSC_0795 right flipper.JPG



DSC_0785 caudal half.JPG



DSC_0809 right axilla.JPG



DSC_0792 right side.JPG



DSC_0909 R axilla close up.JPG



DSC_0813 left flipper.JPG



DSC_0954 blubber cut.JPG



DSC_0845 left flipper scar.JPG



DSC_1005 roll 3.JPG



DSC_1003 roll 1.JPG



DSC_1006 roll 4.JPG



DSC_1004 roll 2.JPG



DSC_1021 tag.jpg



DSC_1007 roll 5.JPG



left baleen.jpg



DSC_1008 roll 6.JPG





Peduncle.jpg



oral rete and baleen.jpg



Pole Cam dorsal peduncle.jpg



peduncle 2.jpg



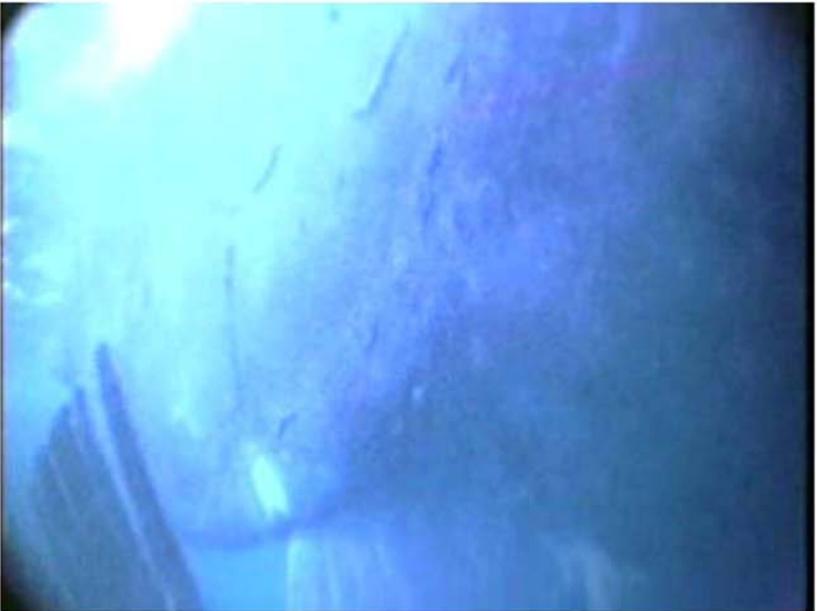
Pole Cam Dorsal thorax.jpg



right eye.jpg



right head.jpg

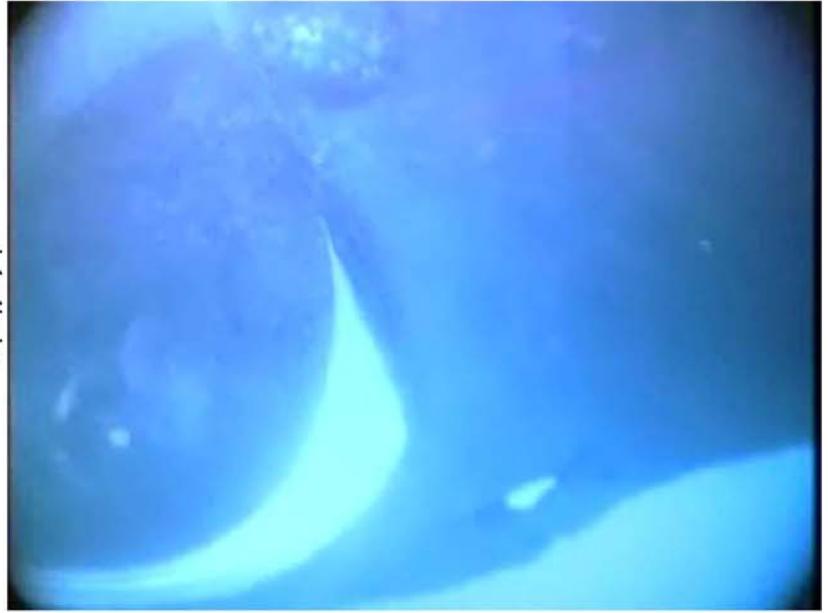


right lip mark.jpg

ventral peduncle.jpg



right lip.jpg

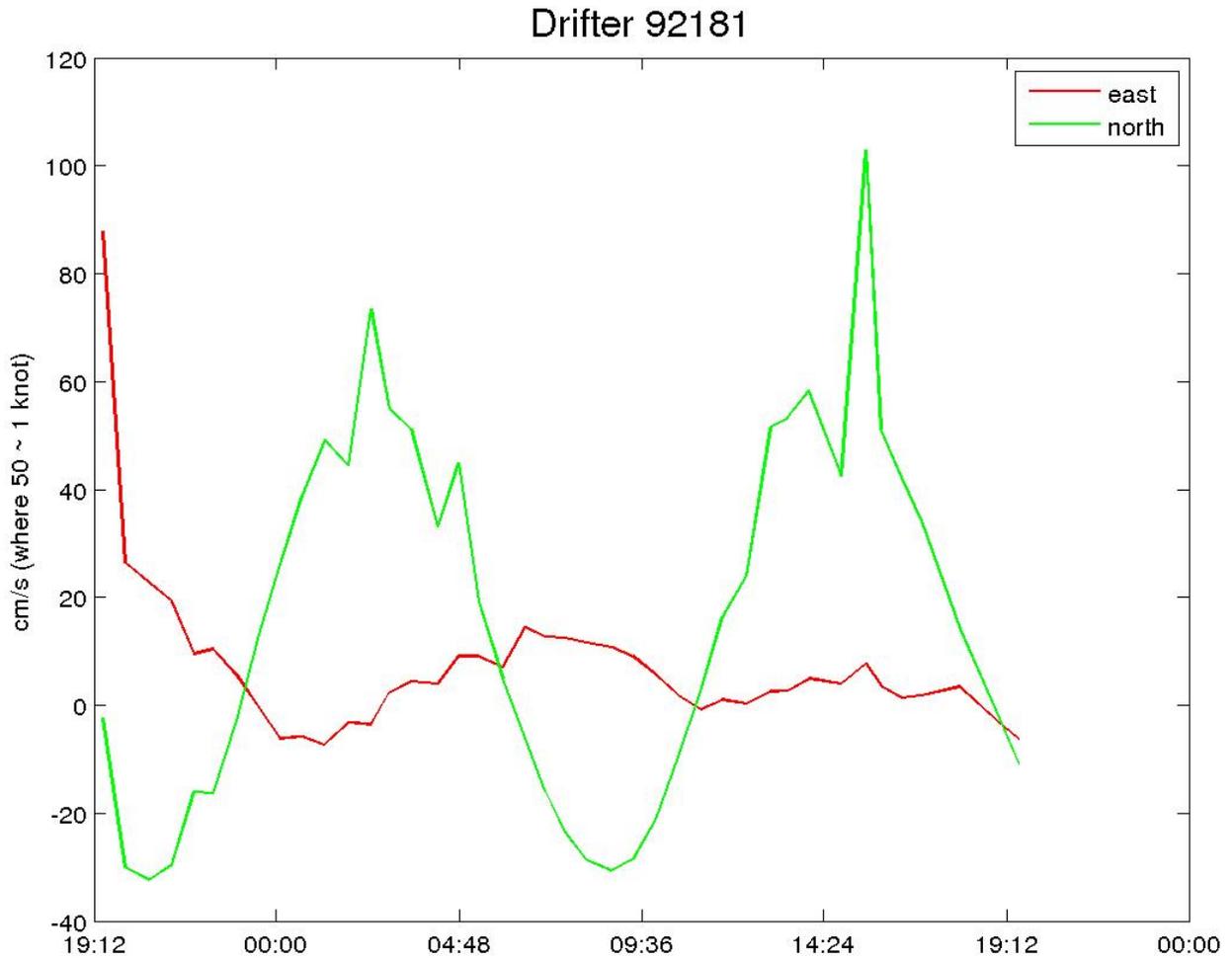


rostrum.jpg





Video frame grabs of Eg3103 being rolled over by the USCG Cutter Tybee.



Comments re tag: The tag ceased transmissions on the evening of Feb 27th. This coincided with a significant worsening of the sea state. It is likely that the attachment failed. Harpoon darts were supplied to attach the tag, but not used as it was unclear, given their blunt points, how these could penetrate the right whale blubber. This might have been possible if a slit had been cut down to the muscle. A tag in a float to tie to the flipper might be a better option.



Sighting EGN _o	Sighting Year	Sighting Month	Sighting Day	Sighting Letter	Latitude	Longitude	Observer Code	Area Code	Behaviors
3103	2000	12	21	D	30.47167	81.25333	NEA/A	FL	CALF W/MOM
3103	2001	1	10	H	30.605	81.17167	NEA/A	FL	CALF W/MOM
3103	2001	1	10	B	30.60833	81.17333	NEA/V	FL	CALF W/MOM
3103	2001	1	17	G	30.415	80.96667	OSS	FL	CALF W/MOM, WH BEL
3103	2001	1	29	D	30.52833	81.12333	NEA/V	FL	CALF W/MOM
3103	2001	2	6	B	30.84333	81.28667	NEA/V	GA	CALF W/MOM, DRT, SK
3103	2001	2	6	B	30.84833	81.27833	NEA/A	GA	CALF W/MOM
3103	2001	3	26	B	41.975	70.23333	PCCS/A	CCB	CALF W/MOM
3103	2001	3	29	B	41.98833	70.315	PCCS/S W	CCB	CALF W/MOM, CUR
3103	2001	4	4	E	41.81667	70.28333	PCCS/A	CCB	CALF W/MOM
3103	2001	4	5	C	41.785	70.28	PCCS/G	CCB	CALF W/MOM, NURS
3103	2001	4	10	I	41.855	70.245	PCCS/A	CCB	CALF W/MOM
3103	2001	4	11	I	41.90833	70.24333	PCCS/A	CCB	CALF W/MOM
3103	2001	4	11	E	41.88833	70.245	PCCS/S W	CCB	CALF W/MOM
3103	2001	4	16	D	41.80833	70.38667	PCCS/G	CCB	CALF W/MOM, CUR
3103	2001	4	17	P	41.78	70.42833	PCCS/A	CCB	CALF W/MOM
3103	2001	4	23	G	41.79333	70.27	PCCS/A	CCB	CALF W/MOM
3103	2001	4	23	C	41.95833	70.27667	PCCS/S W	CCB	CALF W/MOM
3103	2001	4	29	H	41.78833	70.33	PCCS/A	CCB	CALF W/MOM
3103	2001	5	18	#2	41.64667	69.25	NMFS/A	GSC	CALF W/MOM
3103	2001	6	6	V	41.36	68.86167	NMFS/A	GSC	
3103	2001	7	19	HH	44.55167	66.52667	NEA/N	BOF	
3103	2001	7	19	KK	44.555	66.52167	NEA/N	BOF	
3103	2001	7	28	P	44.60833	66.525	NEA/N	BOF	CALF W/MOM, ROLL
3103	2001	7	28	U	44.58833	66.525	NEA/N	BOF	CALF W/MOM
3103	2001	8	4	Y	44.57833	66.535	NEA/N	BOF	CALF W/MOM

3103	2001	8	8	C	44.64333	66.46167	NEA/N	BOF	CALF
3103	2001	8	8	L	44.68167	66.325	WHOI	BOF	ULTRSD, WH CHN
3103	2001	8	11	C	44.68333	66.455	NEA/N	BOF	CALF W/MOM
3103	2001	8	11	GG	44.645	66.38333	NEA/N	BOF	CALF
3103	2001	8	11	NN	44.665	66.37167	NEA/N	BOF	
3103	2001	8	12	P	44.68667	66.39167	DN*	BOF	CALF
3103	2001	8	14	B	44.62833	66.45167	NEA/N	BOF	CALF
3103	2001	8	14	H	44.59833	66.47667	NEA/N	BOF	CALF W/ OTHER(S)
3103	2001	8	14	S	44.585	66.465	SWFSC/ A	BOF	
3103	2001	8	15	HHH	44.56833	66.5	SWFSC/ A	BOF	
3103	2001	8	19	R	44.69833	66.35167	SWFSC/ A	BOF	
3103	2001	8	19	VV	44.69	66.32667	SWFSC/ A	BOF	CALF W/MOM CALF OF UNPH MOM
3103	2001	9	12	R	44.62	66.44	NEA/N	BOF	
3103	2001	9	12	V	44.62	66.43667	NEA/N	BOF	CALF W/MOM
3103	2001	9	12	E	44.625	66.42167	ECE	BOF	CALF
3103	2002	4	15	A	41.77667	70.555	PCCS	CCB	
3103	2002	8	8	C	44.64333	66.45	NEA/N	BOF	MOPN
3103	2002	8	8	1	44.665	66.42667	DN*	BOF	W/SUCTG
3103	2002	8	8	C	44.65167	66.44	WHOI/S P	BOF	W/SUCTG
3103	2002	8	9	K	44.59333	66.48333	NEA/N	BOF	
3103	2002	8	10	C	44.605	66.46	DN*	BOF	W/SUCTG
3103	2002	8	24	C	44.64167	66.47833	DN*	BOF	W/SUCTG
3103	2002	8	24	F	44.76167	66.40167	WHOI	BOF	SAG, ULTRSD
3103	2002	8	26	E	44.66167	66.47833	NEA/N	BOF	MUD, SAG
3103	2002	8	27	E	44.59167	66.51167	SWFSC/ A	BOF	
3103	2002	8	29	I	44.59	66.43833	SWFSC/ A	BOF	

3103	2002	8	29	JJJ	44.63333	66.41333	SWFSC/ A	BOF	
3103	2002	8	30	VV	44.59667	66.46167	SWFSC/ A	BOF	
3103	2002	9	1	L	44.66333	66.465	NEA/N	BOF	
3103	2002	9	1	R	44.66667	66.46333	NEA/N	BOF	DRT NO SMPL, SAG
3103	2002	9	7	II	44.58333	66.44667	WHOI	BOF	
3103	2003	5	15	D	41.74667	69.51667	PCCS/A	GSC	SAG
3103	2003	8	20	D	44.69167	66.49667	NEA/N	BOF	
3103	2003	8	25	G	44.58	66.555	NEA/N	BOF	
3103	2003	8	25	H	44.57167	66.53667	NEA/N	BOF	
3103	2003	8	29	G	44.6072	66.4357	DFO/LH	BOF	SAG
3103	2003	9	6	M	44.64333	66.43167	NEA/N	BOF	MOPN
3103	2003	9	6	S	44.65333	66.42833	NEA/N	BOF	WH BEL
3103	2003	9	12	N	44.635	66.38333	NEA/N	BOF	BOD CNT
3103	2003	9	12	S	44.63333	66.39	NEA/N	BOF	WH CHN
3103	2004	9	24	D	44.625	66.40333	NEA/N	BOF	
3103	2004	9	24	I	44.60667	66.42	NEA/N	BOF	
3103	2004	9	24	P	44.6	66.42167	NEA/N	BOF	SAG
3103	2004	9	24	U	44.60167	66.42167	NEA/N	BOF	SAG
3103	2005	2	7	F	30.25442	81.18563	FWRI/A	FL	SAG
3103	2005	2	13	LL	29.58735	81.09722	FWRI/A	FL	SAG
3103	2005	2	14	GG	30.08598	81.05812	FWRI/A	FL	SAG
3103	2005	2	16	#1	30.63167	80.87833	NEA/A	FL	SAG
3103	2005	2	19	K	30.15	81.25	FWRI/A	FL	SAG, WH CHN
3103	2005	2	19	B	30.13443	81.28443	FWRI/V	FL	SAG
3103	2005	2	20	F	30.1265	81.30617	FWRI/A	FL	SAG
3103	2005	2	21	C	30.0365	81.26833	FWRI/A	FL	SAG
3103	2005	2	22	F	30.15	81.23333	FWRI/A	FL	FCL, FEM, INTRO, SAG, WH BEL, WH CHN
3103	2005	7	13	U	41.37667	68.91116	NEFSC/ T	GSC	SKM FD
3103	2005	7	14	V	41.35817	68.87967	NEFSC/	GSC	WH CHN

							T		
3103	2005	9	28	Y	44.53947	66.4789	NEA/N	BOF	
3103	2005	10	3	Y	44.5994	66.4271	NEA/N	BOF	
3103	2006	2	25	B	32.2925	79.7405	WT/SC	SC	SAG, WH BEL, WH CHN
3103	2006	2	27	E	31.36233	80.77217	WT/GA	GA	FCL, FEM, SAG, WH BEL, WH CHN
3103	2006	3	5	M	31.85833	80.43066	WT/SC	GA	
3103	2006	3	30	B	42.30143	70.01295	PCCS/A	MB	BEL UP, FCL, FEM, SAG, WH BEL, WH CHN
3103	2006	8	3	B	44.60348	66.48296	NEA/N	BOF	
3103	2006	9	14	LL	43.08928	65.0102	NEA/G	RB	SAG
3103	2006	9	15	Q	42.97002	65.1176	NEA/G	RB	
3103	2006	9	15	AA	42.9676	65.1284	NEA/G	RB	WH CHN
3103	2006	11	1	C	45.08016	66.56016	NEFSC/ T	BOF	
3103	2007	1	22	P	43.45317	68.32933	NEFSC/ T	GOM	SAG, W/UNPH EG
3103	2007	3	1	E	42.14854	70.15842	PCCS/A	MB	WH CHN
3103	2007	4	7	S	42.07603	70.24123	PCCS/A	MB	SKM FD
3103	2007	4	11	U	41.89931	70.26736	PCCS/A	CCB	CO FD, ECH, LEAD, SUB FD
3103	2007	4	25	P	42.0443	70.27609	PCCS/A	CCB	SKM FD
3103	2007	4	26	PP	41.98116	70.21729	PCCS/A	CCB	SUB FD
3103	2007	7	24	T	41.59596	68.66834	NEFSC/ T	GSC	
3103	2007	11	17	B	34.11094	77.21801	UNCW	NC	WH CHN
3103	2007	12	2	A	32.69737	79.65408	WT/SC	SC	
3103	2007	12	4	D	31.87737	80.74655	WT/SC	GA	
3103	2008	1	6	D	30.4069	81.30128	NEA/A	FL	BODO
3103	2008	1	10	B	30.9232	81.14709	WT/GA	GA	WH CHN
3103	2008	1	22	O	30.47877	81.27052	FWRI/A	FL	
3103	2008	1	22	V	30.46508	81.25813	FWRI/A	FL	BOD CNT, ROLL
3103	2008	1	24	G	30.5775	81.21413	NEA/A	FL	LOG

3103	2008	1	29	B	30.22349	81.3293	FWRI/A	FL	LOG
3103	2008	2	3	G	30.06242	81.296	FWRI/A	FL	
3103	2008	2	5	A	30.3542	81.30439	NEA/A	FL	WH CHN
3103	2008	2	17	GG	30.5353	81.38198	NEA/A	FL	
3103	2008	2	21	J	31.8764	81.11326	WT/GA	GA	
3103	2008	2	25	X	31.2459	81.13109	NEA/A	GA	
3103	2008	3	1	C	31.19408	81.21242	WT/GA	GA	
3103	2008	3	2	P	31.55238	80.97208	WT/GA	GA	SAG
3103	2008	4	23	N	41.88833	70.32667	PCCS/A	CCB	CO FD, SFC TR, SUB FD, SUB TR
3103	2008	5	30	SSS	41.49401	69.04475	NEFSC/ T	GSC	

PROTOCOL FOR EXAMINING MARINE MAMMALS FOR SIGNS OF HUMAN INTERACTION

NEAq Eg #3103

Exam Information (fill in or circle most appropriate)

- 1 Field #: IFAW09-033Eg Species: E. glacialis
- 2 Examiner: H. Moore, B. Moore, M. Niemeyer Recorder: Niemeyer
- 3 Date of exam: 26 Feb 09 Condition code (at exam): 1 2 (3) 4 5 CBD
- 4 Preservation: alive (fresh) frozen frozen/thawed Body condition: emaciated (not emaciated) CBD
- 5 Documentation: (digital) print slide (video) Image disposition: IFAW/WAL
- 6 Integument: (normal) abnormal decomp/scaven % Skin missing: (10%) 10-25% 25-50% >50%

7 Explanation of terms:
 YES = I have examined the area and found signs of human interaction
 NO = I have examined the area did not find signs of human interaction
 CBD = I have examined the area and could not determine whether there were signs of human interaction (i.e. the part was missing, degraded, or signs were ambiguous)
 NE = did not examine the area
 NA = this animal doesn't normally have that part (i.e. seals have no dorsal, dolphins have no rear flippers)

WHOLE BODY EXAM		YES	NO	CBD	NE	NA	Image taken (Y or N)
8	Appendages removed / Mutilation (with instrument)		X				
9	Pelt removed / Mutilation (with instrument)		X				
10	Body sliced / Mutilation (with instrument)		X				
11	Gear/debris present on animal (includes tags)		X				
12	Gear retained (name & contact info in Comments)					X	
13	External pathology (pox, tumor lesion, abscess, other)		X				
14	Natural markings (scars, both sides, unusual pigmentation)	X					Y
15	HI lesions (teethy, gaff, gunshot, propeller, healed HI scar, brand)		X				

16 Predation/scavenger damage (circle all anatomical areas where damage hinders evaluation; numbers coincide with anatomical areas below): 17 18 19 20 21 22 23 24 (25) 26 27 28 29 30 NONE
 (Bird Pecking)

DETAILED EXAM OF ANATOMICAL AREAS	YES	NO	CBD	NE or NA	Type of Lesion						Origin of Lesion					Image taken?		
					impression / laceration	penetrating wound	healed HI scar	abrasion	other / CBD	twine / line	net	other / CBD	monofilament	multifilament	CBD		propeller	gunshot
17		X																Y
18		X																Y
19		X																Y
20		X																Y
21		X																Y
22		X																Y
23		X																Y
24		X																Y
25			X															Y
26		X																Y
27		X		X														NA
28				X														NA
29		X																Y
30																		Y

NEAq Eg#3103

Field #: IFAW09-033Eg

INTERNAL EXAM	YES	NO	Partial	CBD	Image taken	Detailed Info (circle all that apply)
31 Internal exam conducted		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Details in Comments section - use line number
32 Bruising/blunt trauma			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Details in Comments section - use line number
33 Skeleton examined		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Details in Comments section - use line number
34 Broken bones present			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Associated tissue reaction: YES NO CBD
35 GI tract examined (circle contents)		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		intact prey partially digested hard parts only debris/feather empty other
36 Lungs/bronchi examined		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Details in Comments section - use line number
37 Lung/bronchi contents			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		foth fluid air (color:)
38 Other pathologies noted			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Details in Comments section - use line number

39 Comments (note line number from left margin before each comment):

25 - Heavy scavenger damage on entire ventrum (bird pecking)

20 - Small healed scar of unknown origin on ~~ventral~~ mid-anterior ventral surface of the Right front flipper.

20/23 - post mortem skin sloughing on the ventral side of the axilla of both the Right and left front flippers.

31 - partial internal exam - cut into skin, blubber and muscle via transverse and longitudinal incisions on the mid-ventrum.

Blubber stratum had mild red discoloration, most likely post mortem.
22/26 - (animal was belly up, so the underside was difficult to see and document, underwater pole cam was used and the animal was rolled (using the cutter) and video and digital were taken. (It was very quiet).

40 Signs of Human Interaction Observed: YES NO CBD (transfer to Level A Datasheet)

41 Stranding Event History/Circumstances:

The NOAA aerial Survey team located and reported a dead female Eg around 1320 2/25/2009. NEAq ID'd the animal as 3103, a female born in 2001. ~~Plans~~ It was too far offshore to tow in. Plans were made to take a CG cutter out with H. Moore, B. Moore - H. Diemeyer to collect as many samples as possible and through documentation. Digital images, video and pole cam images were taken and the animal was rolled to get video and digital of dorsal side. No significant findings with the external examine and very partial examine.

42 FINAL HUMAN INTERACTION EVALUATION: If you circled YES above (#40), evaluate the external exam, necropsy, carcass condition and circumstances surrounding the stranding event to answer the question below.

How likely is it that the documented human interaction contributed to the stranding?

0: Uncertain (CBD) 1: Improbable 2: Suspect 3: Probable

43 Justification: