



Alaska Veterinary Pathology Services (AVPS)

Kathy Burek, D.V.M., M.S.
Diplomate, A.C.V.P.

23834 The Clearing Dr. / Eagle River, AK 99577

Ph: (907) 696-3704 / Fax (907) 696-3565 / Cell 242-2566 / Email: AVPS.KBH@gmail.com

NECROPSY

SPECIES: Humpback whale (*Megaptera novaeangliae*)

SEX: Male **AGE:** Subadult

ANIMAL ID/NAME: 2012163

CONTACT:

VETERINARIAN: Pam Tuomi

CLINIC: NMFS / MMHRSP / NOAA

ADDRESS: 1315 East-West Hwy. F/PR
Silver Spring, MD 20910
Ph: 3017132322
Fax: 3017130376

Email: Teri.Rowles@noaa.gov; Janet.Whaley@noaa.gov

PERMIT INFO. 932-1905-00/MA-009526 **PERMIT HOLDER:** MMHSRP

Human Interaction Forms: NO; Chain of custody forms: NO; Level A forms filled out: YES

CASE NUMBER: TBA

NECROPSY DATE: 7/24/2012

TRIM DATE: N/A

DATE FINAL: 11/14/13

PATHOLOGIST: KATHY BUREK

NUMBER OF BLOCKS:

PENDING:

GROSS DIAGNOSIS:

Broken rib, extensive predation by killer whale

BRIEF HISTORY: This Humpback whale (*Megaptera novaeangliae*) was stranded at Sunny Cove, Resurrection Bay, AK (59-51.113 ; 149-28.529). It was Code 3 to Code 4 with moderate to advanced decomposition. It was initially reported by: _____ Telephone number: _____ Date found: 7/23/2012; Date recovered: 7/23/2012; Necropsy Date: 7/24/2012. Prosectors included : Pam Tuomi as lead, assisted by: Rob Walton, Jill Prewitt, Terrill Efird, and Katie Royer
Contact info: pamt@alaskasealife.org
Weather info: Partly cloudy

There were two floating humpback whales reporting in Resurrection Bay around 7/23/2012. This whale was initially described as entangled in fishing gear but no gear was observed on the carcass. There were also two boat strikes reported in Resurrection Bay in the week previous to the necropsy.

MEASUREMENTS (cm unless indicated)

Baleen color : Grey and brown

Morph or tissue	Value	Unit
Straight length	820	cm

Morph or tissue	Value	Unit
Snout to eye	151	cm
Snout to Flipper insertion point	224	cm
Blubber thickness – Lateral axillary – w/skin	7.8	cm
Blubber thickness – Lateral axillary – w/o skin	7.2	cm
Snout to center of genital slit	511	cm
Snout to anus	591	cm
Fluke width – R	134	cm
Fluke width – L	135	cm
Fluke width	260	cm
Fluke depth	71	cm
Flipper length, trailing	182	cm
Flipper length, leading	217	cm
Flipper max width	47	cm

EXTERNAL EXAMINATION

CARCASS CLASSIFICATION:
Moderate to Poor

BODY CONDITION:
Good

GROSS NECROPSY FINDINGS:

<p><u>Physical Exam:</u> The humpback whale was on its dorsal surface with the blowhole and dorsal fin unavailable for sampling. The skin was missing from the lower mandible to the genital slit and the mandible was absent. The exposed area was white and tan in color. There were multiple rake marks on skin edges on the head and chest. Barnacles were present on the ventral surface along the midline and on the flippers.</p> <p>There were bilateral pouches lined with mucosa and hyperkeratotic plaque caudal to where the mandible would have been with large vascular stumps extending from the dorsal wall. The left pouch was bruised.</p>
<p><u>SQ:</u> There was a good amount of blubber present.</p>
<p><u>Body cavities :</u>Five to eight gallons of white semi-translucent pleural fluid flowed from the thorax when opened.</p>
<p><u>Musculoskeletal:</u> The muscles on the right side of the whale were pale. Muscles on the left costal arch were reddened and moist at the fascial layer beneath the blubber.</p> <p>There was an old 10cm long section of necrotic lumbar muscle severed caudal to the right kidney in the mesenteric wall. It was unclear if hemorrhage was present around the defect.</p> <p>There was blood-tinged fluid in the left shoulder joint.</p>

Ribs 2, 3, 4, and 9 were separated post-mortem at the cartilaginous joint 6in off the spine on the right side. Rib 8 on the right side was fractured and there was no recalcification present.
<u>Respiratory:</u> The lungs were heavily autolyzed and not discernible in the body cavity.
<u>Cardiovascular:</u> The heart was autolyzed but the valves appeared normal. No parasites were present.
<u>Lymphoid:</u> The axillary lymph node appeared whitened and the prescapular appeared WNL.
<u>Endocrine:</u> Not observed.
<u>Urinary:</u> The bladder was intact and full. The perineum was sloughed off the left kidney but the caudal pull was intact. Left kidney was lobular and tan-brown in color. No parasites were present. The right kidney was attached to the stomach and was necrotic.
<u>Liver:</u> Not present.
<u>Digestive:</u> The small intestine and stomach were scavenged. The stomach was full of sea water. Feces in colon were ruddy brown and speckled with black spots. No parasites were observed in the colon.
<u>Reproductive:</u> Both testicles were missing.

CARCASS DISPOSITION: Left on beach.

SAMPLES SUBMITTED IMMEDIATELY AND WHERE: None

ANCILLARY DIAGNOSTICS:

Photos Radiographs/X-ray Other Imaging _____

Where taken / stored? Rob Walton's camera

COMMENTS (CAUSE OF DEATH, INTERPRETATIONS): This young male humpback appeared to be in good condition at time of death. The major organs were heavily autolyzed or absent making COD unclear. The eighth rib on the right side was broken but it was unclear if the fracture had occurred pre or post mortem. There was no recalcification present at the break. This animal may have been involved in one of two boat strikes that were reported in Resurrection Bay in the week previous to the necropsy.

There was extensive killer whale predation on the carcass responsible for multiple rake marks and the removal of the lower mandible and much of the skin on the ventral surface. This predation could have occurred after the suspected boat strike, or may have been the sole source of trauma to the humpback.

HOW DID YOU TAKE YOUR TOXICOLOGY SAMPLES?:

Circle: Ziplocs / Foil / **Acetone-cleaned Foil** / Teflon / Whirlpak / I-Chem jars

Other _____ Rinsed tissues with: nothing

Type of gloves (circle): latex vinyl **powder-free nitrile**

SAMPLES COLLECTED:

Sample ID	Specific Sample	Sample -mass	Arch accession	Other ID number	Container Type	Purpose	Type of analysis	Date shipped out for analysis	Shipped to
Baleen	Jan Straley				Whirl-pak	DZ ARCHIVE			Jan Straley
Baleen	Jan Straley				Whirl-pak	DZ ARCHIVE			Jan Straley
Blubber		264.6			Whirl-pak	DZ			Chris Gabriel
Blubber	Chris Gabriele	1153.9			Whirl-pak	DZ ARCHIVE			Chris Gabriel
Blubber	Chris Gabriele	1151.4			Whirl-pak	DZ ARCHIVE			Chris Gabriel
Blubber					Foil / Whirlpak	HORMONES	Homone analysis	5/21/2013	UAF-hormones
Blubber	Lateral axilla				Foil / Whirlpak	POPs		6/18/2013	NWFSC - G. YLITALO
Bulla					Whirl-pak	DZ ARCHIVE			Chris Gabriel
Ear plug	Chris Gabriele				Jar	DZ ARCHIVE			Chris Gabriel
Ear plug	Chris Gabriele				Jar	DZ ARCHIVE			Chris Gabriel
Eye	Chris Gabriele				Whirl-pak	DZ ARCHIVE			Chris Gabriel
Feces					Whirl-pak	DZ ARCHIVE			
Feces					Whirl-pak	HABS			NWFSC - E. FRAME

Sample ID	Specific Sample	Sample -mass	Arch accession	Other ID number	Container Type	Purpose	Type of analysis	Date shipped out for analysis	Shipped to
Heart					Whirl-pak	Molecular	Protozoa I PCR		Mike Grigg - CDC
Heart			AF72972	159221	Cryovial 2 ml	UAM-ARCHIVE		10/2/2013	UAM
Kidney					Whirl-pak	HMs			DISCARD
Kidney		46.7			Foil / Whirlpak	TOX			DISCARD
Kidney			AF72972	159222	Cryovial 2 ml	UAM-ARCHIVE		10/2/2013	UAM
LN axillary					Whirl-pak	DZ ARCHIVE			DISCARD
LN Prescapular					Whirl-pak	DZ ARCHIVE			DISCARD
Muscle Pectoral		46.9				Molecular	Protozoa I PCR		Mike Grigg - CDC
Muscle Pectoral			AF72972	159223	Cryovial 2 ml	UAM-ARCHIVE		10/2/2013	UAM
OTHER barnacles for Chris Gabriele					Jar	DZ ARCHIVE			Chris Gabriel
Peritoneal fluid					Tube	DZ ARCHIVE			DISCARD
Peritoneal fluid					Tube	HABs			NWFSC - E. FRAME
Skin					Jar	GENETICS			SWFSC
Skin					Jar	GENETICS			SWFSC
Skin					Whirl-pak	DZ ARCHIVE			UAM
Skin	Chris Gabriele				Whirl-pak	GENETICS			Chris Gabriel
Skin	Jan Straley				Whirl-pak	GENETICS			Jan Straley