



## Alaska Veterinary Pathology Services (AVPS)

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### BELUGA WHALE NECROPSY REPORT

**SPECIES:** Beluga whale (*Delphinapterus leucas*)

**SEX:** Male **AGE:** Adult (aged?)

**REPRO STATUS:** Mature

**ANIMAL ID/NAME:** DLBBN14-01; 2014165  
DL1406; 2014-CIB

**CONTACT:** Barbara Mahoney

**VETERINARIAN:** Kathy Burek

**CLINIC:** NMFS - ANCHORAGE

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**PERMIT NO.** 932-1905-01 / MA-009526-126-1 MMHSRP

Chain of custody forms: NO; Human interaction form no:

Level A form completed? Person filing the level A:

**CASE NUMBER:** TBA

**1<sup>st</sup> OBSERVED DATE:** 9/8/2014

**NECROPSY DATE:** 9/8/2014

**TRIM DATE:**

**DATE FINAL:**

**PATHOLOGIST:** KATHY BUREK

**NUMBER OF BLOCKS:** 0

**PENDING:**

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### GROSS DIAGNOSIS:

- 1.) Adult male stranded on turnagain arm. No obvious COD
- 2.) Lymphadenitis, Prescapular and mediastinal, granulomatous
- 3.) Pulmonary edema
- 4.) Marked post mortem hypostatic congestion, SQ and body cavities
- 5.) Parasitic granulomas, bilateral kidneys (*Crassicauda giliakiana*).
- 6.) Thyroid cyst / abscess

### BRIEF HISTORY:

This Adult (aged?), Male Beluga whale (*Delphinapterus leucas*), was stranded at Turnagain Arm, Anchorage, AK (60.985182; -149.531876) on 9/8/2014. It was reported by Trevor Scott. 907 244-7636 at around 9:55 Am. It was reported as alive when stranded, but it was evident that it had been dead awhile. . It was necropsied on 9/8/2014 and was not previously frozen. The carcass quality was Moderate. The necropsy was performed on the beach by KATHY BUREK assisted by Barbara Mahoney, Dylan Peterson, Sijo Smith, Natalie Rouse and Russ Andrews. At the time of the stranding, the weather was partly windy with 100% cloud cover, 50°F

### MEASUREMENTS

Morph or tissue	Description	Specific	Value	Unit
Blubber Thickness	From muscle / blubber to base of epithelium	LAX	125	mm
Blubber Thickness	From muscle / blubber to base of epithelium	VAX	153	mm
Blubber Thickness	From muscle / blubber to base of epithelium	DAX	87	mm
Blubber Thickness	From muscle / blubber to base of epithelium	bdf	112	mm
Fluke width			103	cm
Girth - Anal			150	cm
Girth-AX	Axillary girth		240	cm
kidney wt		R	2761	g
Skin thickness			9	mm
Snout to tail tip	Total Length		417	cm
Testes wt		L	951.1	g
Testes wt		R	892.2	g
thyroid wt	right		190.4	mm

### EXTERNAL EXAMINATION

<b>CARCASS CLASSIFICATION:</b>
Code 3 Fair (decomposed organs intact)
Previously frozen? was not

<b>BODY CONDITION:</b>
1 Robust

### GROSS NECROPSY FINDINGS:

Physical Exam; This animal had been dead awhile, was well distended with gas and releasing gas from the mouth (possible “breathing sound?”). The skin was still white and largely intact. There was leaking of blood from the eye, from the needle holes and some minimal bird scavenging around the eye. He was located left side up, head facing towards the water line.





There are a few old healed rake marks over the peduncle (probable intraspecific trauma) as well as some linear areas along the leading edge of the fluke (possible old entanglement wounds?)



SQ: The blubber layer was for the most part normal and was of abundant thickness. There was a linear to mottled dark red area of discoloration in the ventral axillary blubber layer (post mortem settling / or trauma).



And more extensive SQ hemorrhage / mottling between the pectoral fins and ventrally.



Body cavities: There was a large amount of serosanguineous fluid in both the pleural and peritoneal cavities (post mortem leakage of fluids). There was abundant fat in the body cavities.

Musculoskeletal: The muscles were very well developed with a large very well developed Epaxial muscles. The shoulder joint contained red-tinged fluid. There was a small hemorrhage in the left subscapular area and focally over the left side of the skull.



Respiratory: There was small drainage of serosanguineous fluid from the blowhole. The mucosa of the trachea was stained greyish red. There was abundant foam in the airways. Nodules (parasite reactions) were not evident on palpation of the lungs. Sinuses were all clear of exudates and parasites.

Cardiovascular: there was a moderate amount of serosanguineous pericardial fluid. The heart itself was WNL.

Lymphoid: The Prescapular lymph node was multinodular with multifocal areas of caseous material. Present on cut section. The caudal mediastinal LN was very similar (Lymphadenitis,

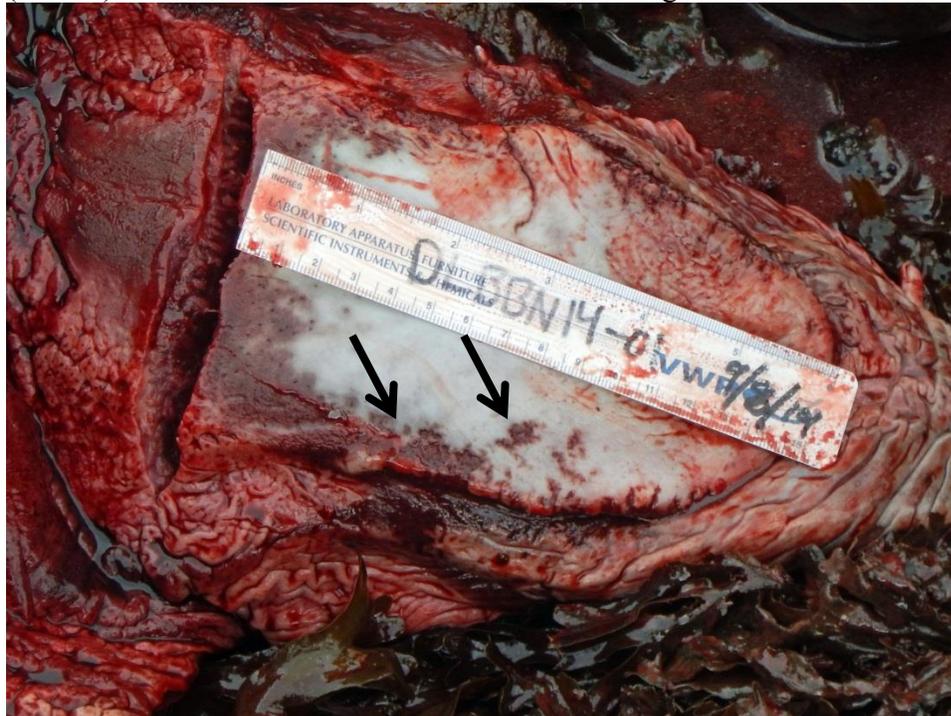
Prescapular and mediastinal).

Endocrine: The adrenal glands were autolyzed. The thyroid gland had a well-encapsulated, oval, 5 x 1.5 x 1.5 cm cyst filled with yellowish-green thick purulent material adjacent to it. The thyroid weighed 190.4 grams

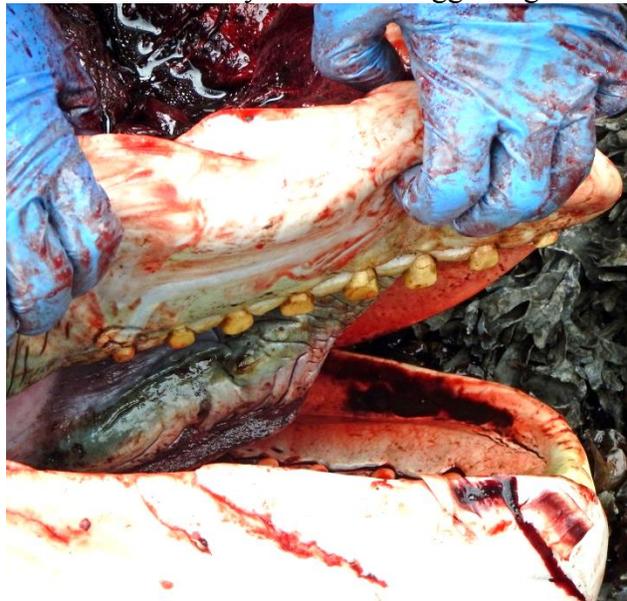
Urinary: The urinary bladder was full of clear light yellow urine. Both kidneys had small numbers of partially mineralized parasitic granulomas, which contained nematode parasites. The Right kidney weighed 2761 and had 8 parasitic granulomas. The left kidney weighed 6 lbs.

Liver: The liver was much autolyzed and was reduced to pasty brown material.

Digestive: On the tongue, there were multiple ulcerative or erosive lesions along the edges (arrows) with associated small amount of hemorrhage.

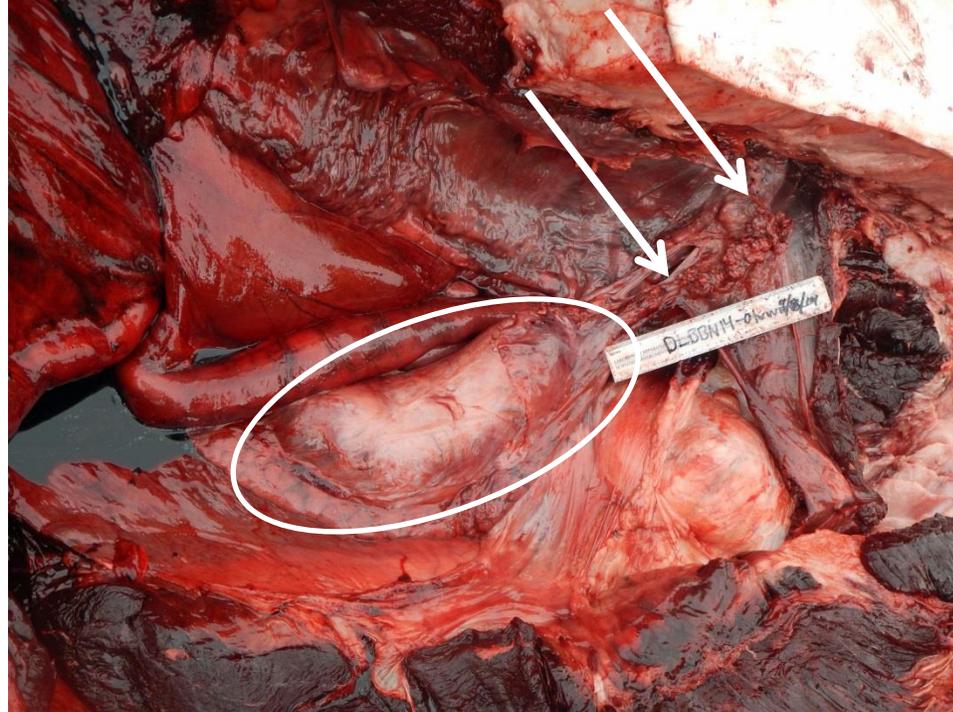


The teeth were very well worn suggesting an older individual.



The serosal surfaces of the GI tract were all discolored dark red (post mortem change). The duodenum and rest of the small intestine was empty. No parasites were seen in the sections examined. The colon had tiny embedded acanthocephalans.

Reproductive: The right testicle weighted 892.2 grams and the left (circled) 981.1 grams. There were irregular nodular granulomas along the outside of the epididymis (Arrows).



Nervous System: The brain was reduced to a soft paste.

**CARCASS DISPOSITION:** Left on the beach. Skeleton collected the next day by the Museum of the North Staff.

**COMMENTS :** An obvious cause of death was not determined for this animal. He was in very good body condition. There was some subcutaneous hemorrhage / settling on the mid ventral to right side which could also have been just post mortem hypostatic congestion. There were parasites in the kidneys to a mild degree and some parasitic granulomas adjacent to the testes (Incidental findings). Histopathology will be done.

**Method of Tox sample collection:** nitrile non-powdered gloves.

**SAMPLE DISPOSITION:**

Sample ID	Container Type	Sample Location	Sample Preserv	Purpose	Type of analysis	Analysis detail	Date shipped out for analysis	Shipped to
Acoustic Fat Pad	Whirlpak 18 oz	UAA	-40° C	LIFE HX				

Sample ID	Container Type	Sample Location	Sample Preserv	Purpose	Type of analysis	Analysis detail	Date shipped out for analysis	Shipped to
Aqueous humor	Cryovial 2 ml	UAA	-80° C	CLIN CHEMISTRY	Urea and BUN			
BH Bacte Swab	Cryovial 2 ml	UAA	-80° C	DZ				CANADA - S. RAVERTY
BH Bacte Swab	Cryovial 2 ml	UAA	-80° C	MICRO	BH Bacte flora			Athens Vet Diagnostic Lab
BH dry Swab	Cryovial 2 ml	UAA	-80° C	DZ				
BH dry Swab	Cryovial 2 ml	UAA	-80° C	DZ				
BH viral Swab	Cryovial 2 ml	UAA	Viral media	VIROLOGY	Viral culture			CANADA - O. NIELSEN
BH viral Swab	Cryovial 2 ml	UAA	Viral media	VIROLOGY	Influenza PCR			MIT - Runstadler lab
Blubber BDF	Whirlpak 18 oz	UAA	-40° C	TOX				
Blubber LAX	Foil / Whirlpak	UAA	-40° C	TOX	POPS			NWFSC - G. YLITALO
Blubber LAX	Whirlpak 18 oz	UAA	-40° C	AMMP	AMMTAP Archive?			AMMTAP
Blubber LAX	Whirlpak 18 oz	UAA	-40° C	AMMP	AMMTAP			AMMTAP
Colon	Whirlpak 4 oz	UAA	-40° C	DZ	Fecal pathogens			CANADA - S. RAVERTY
Fecal swab Bacte	Cary-Blair	UAA	-80° C	MICRO				
Fecal swab Bacte	Cary-Blair	UAA	-80° C	MICRO	Fecal flora			Athens Vet Diagnostic Lab
Fecal Swab Dry	Dry Swab	UAA	-80° C	DZ				
Fecal Swab Dry	Dry Swab	UAA	-80° C	DZ				
Fecal swab	Cryovial	UAA	Viral	VIROLOGY	viral			CANADA - O.

Sample ID	Container Type	Sample Location	Sample Preserv	Purpose	Type of analysis	Analysis detail	Date shipped out for analysis	Shipped to
VTM	2 ml		media	GY	culture			NIELSEN
Fecal swab VTM	Cryovial 2 ml	UAA	Viral media	VIROLO GY	influenza PCR			MIT - Runstadler lab
Feces	Cryovial 5 ml	UAA	-80° C	TOX	HABS			Greg Boyer
Feces	Cryovial 5 ml	UAA	-80° C	TOX				
genital Bacte Swab	Amies culturette	UAA	-80° C	MICRO				
genital Bacte Swab	Amies culturette	UAA	-80° C	MICRO	Aerobic culture			Athens Vet Diagnostic Lab
genital dry Swab	Dry Swab	UAA	-80° C	DZ				
genital dry Swab	Dry Swab	UAA	-80° C	Molecu lar	Herpes and papillom a PCR			UCDAVIS - WH
Heart	Whirl- pak 4 oz	UAA	-40° C	TOX				
Heart	Whirl- pak 4 oz	UAA	-40° C	PARASI T	protozoa I PCR			Mike Grigg - CDC
Heart	Cryovial 2 ml	UAA	-80° C	UAM- ARCHIV E				UAM
Jejunum	Whirl- pak 18 oz	UAA	-40° C	DZ				
Jejunum	Whirl- pak 18 oz	UAA	-40° C	DZ				
Kidney	Whirl- pak 4 oz	UAA	-40° C	DZ				
Kidney	Cryovial 2 ml	UAA	-80° C	UAM- ARCHIV E				UAM
Liver	Whirl- pak 18 oz	UAA	-40° C	TOX	Heavy metals, etc.			CANADA - S. RAVERTY

Sample ID	Container Type	Sample Location	Sample Preserv	Purpose	Type of analysis	Analysis detail	Date shipped out for analysis	Shipped to
Liver	Whirlpak 18 oz	UAA	-40° C	PARASIT	Protozoal PCR			Mike Grigg - CDC
Liver	Cryovial 2 ml	UAA	-80° C	UAM-ARCHIVE				UAM
LN colonic	Whirlpak 4 oz	UAA	-40° C	DZ				
LN Hilar	Whirlpak 4 oz	UAA	-40° C	DZ	Aerobic; PCR panel			CANADA - S. RAVERTY
LN Prescapular	Whirlpak 4 oz	UAA	-40° C	DZ				
LN tracheobronchial	Whirlpak 4 oz	UAA	-40° C	DZ				
Lung cranial	Whirlpak 4 oz	UAA	-40° C	DZ				
Lung middle	Whirlpak 4 oz	UAA	-40° C	DZ				
Lung - CdD	Whirlpak 4 oz	UAA	-40° C	DZ				
Mixed Tissues	Jar	AVPS	Rm Temp	HISTOPATH				HCS
Muscle Epaxial	Whirlpak 4 oz	UAA	-40° C	PARASIT	protozoal PCR			Mike Grigg - CDC
Muscle Epaxial	Cryovial 2 ml	UAA	-80° C	UAM-ARCHIVE				UAM
Muscle Sterno	Whirlpak 4 oz	UAA	-40° C	DZ				
OTHER thyroid cyst	Dry Swab	UAA	-80° C	DZ				
	Amies culturette	UAA	-80° C	MICRO	anaerobic and aerobic			Athens Vet Diagnostic Lab
	Dry Swab	UAA	-80° C	DZ				
	Cryovial 2 ml	UAA	-80° C	DZ				
Parasite	15 ml	UAA	100%	PARASIT	ID			M. Kinsella

Sample ID	Container Type	Sample Location	Sample Preservation	Purpose	Type of analysis	Analysis detail	Date shipped out for analysis	Shipped to
	conical tube		ETOH	T				
skeleton	box	SHIPPED		LIFE HX			9/10/2014	UAM
Skin	Whirlpak 4 oz	UAA	-40° C	DZ				
Skin	Cryovial 2 ml	UAA	DMSO	GENETICS				SWFSC
Skin	Cryovial 2 ml	UAA	DMSO	GENETICS				SWFSC
SKULL / HEAD	garbage bag	UAA	-40° C	LIFE HX			9/10/2014	UAM
Stomach	garbage bag	SHIPPED	-40° C	LIFE HX			9/10/2014	L. QUAKENBUSH
Tongue	Whirlpak 18 oz	UAA	-40° C	PARASIT	protozoa I PCR			Mike Grigg - CDC
Urine	Cryovial 5 ml	UAA	-80° C	TOX				
Urine	Cryovial 5 ml	UAA	-80° C	HABs	Boyer's lab?			Greg Boyer