

**Institute of Veterinary, Animal and Biomedical Sciences
Massey University**

PATHOLOGY REPORT

Status: Final
Date: 15/10/2013
Type: Mortality

Submitter	Submission Details
Craig Alexander Department of Conservation	Lab. Case/Spec ID: 50157 Submitter's Ref: H244 Date Submitted: 04/10/2013 Date Received: 04/10/2013 Previous Case ID: WMD Case/Spec ID: 7283/1
Animal Details	Epidemiology
Animal ID: H244 Animal Name: W13-18Ch Species: <i>Cephalorhynchus hectori hectori</i> Common Name: Hector's Dolphin Sex Class: Female Age Class: Juvenile Date Died:	Number Dead: Number at Risk: Number Sick: Number Submitted: 1

Growth and Development

Parameter	Result Description	Value	Date Measured	Age Group
Depth of Tail Notch		.02 m	15/10/2013	
Dorsal Blubber Depth		18 mm	15/10/2013	
Eye to Blowhole Length		.12 m	15/10/2013	
Eye to Corner of Mouth Length		.028 m	15/10/2013	
Girth at Anus		.645 m	15/10/2013	
Girth at Eye		.472 m	15/10/2013	
Girth at Flippers		.65 m	15/10/2013	
Girth at Navel		.685 m	15/10/2013	
Height of Dorsal Fin		.07 m	15/10/2013	
Lateral Blubber Depth		20 mm	15/10/2013	
Length of Base of Dorsal Fin		.15 m	15/10/2013	
Length of Flipper		.144 m	15/10/2013	
Length of Flukes		.09 m	15/10/2013	
Snout to Anus Length		.645 m	15/10/2013	
Snout to Corner of Mouth Length		.13 m	15/10/2013	
Snout to Genital Slit Length		.612 m	15/10/2013	
Snout to Origin of Dorsal Fin Length		.405 m	15/10/2013	

Snout to Origin of Flipper Length	.225 m	15/10/2013
Total Length	.86 m	15/10/2013
Ventral Blubber Depth	19 mm	15/10/2013
Width of Flipper	.06 m	15/10/2013
Width of Flukes	.272 m	15/10/2013
Weight	17.4 kg	15/10/2013

DIAGNOSIS

Severe heart disease with heart failure and pulmonary oedema

COMMENTS

This calf died of heart failure due to severe inflammation of the heart muscle. The microscopic appearance of the heart was quite unusual, and as far as I know nothing similar has been reported in marine mammals to date. Molecular testing for toxoplasmosis will be carried out, but the lesions weren't typical of this infection.

ANIMAL HISTORY

Found by a whitebaiter. Rolling in surf at high tide line.

GROSS PATHOLOGY

This young dolphin was in good body condition, and in very good post mortem condition. Lateral papillae were present on the tongue but there were no fetal whiskers or fetal folds. There was no evidence of scavenging, and there were no rake marks on the skin. No bruising was evident. A single laceration was present on the tail fluke. The teeth were unworn, although slightly loose in their sockets. There were numerous presumptive pox lesions over the skin, and two punctate 2mm diameter ulcers were present around the blowhole. There were also two ulcers on the tongue. Within the stomach there were numerous cestodes embedded in the mucosa. The stomach contents comprised a moderate amount of milky fluid, some grit and a few very small thin bones (likely fish bones). The abdominal cavity contained a moderate amount of translucent fluid, and a small amount of similar fluid was present in the thoracic cavity. The lungs were mottled red/white with very large numbers of gritty foci throughout. The airways contained a small amount of fluid but no foam. Within the heart muscle there were multifocal firm pale nodules that occasionally extended through the full thickness of the myocardium. Nodules were present in all cardiac chambers. The pericardial sac contained 5-10ml of red translucent fluid. The ovaries were small and smooth, and the oviducts narrow (immature).

HISTOPATHOLOGY

Histology summary.

1. Heart. Severe subacute multifocal to coalescing granulomatous and neutrophilic myocarditis
2. Lungs. Moderate parasitic granulomas and moderate diffuse pulmonary oedema
3. Tongue. Chronic focal ulceration

Pathologist: Wendi Roe

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