

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

**PATHOLOGY REPORT**

**Status:** Final  
**Date:** 27/10/2011  
**Type:** Mortality

Submitter	Submission Details
Jim Fyfe Department of Conservation  Otago	Lab. Case/Spec ID:  Submitter's Ref: Date Submitted: 18/10/2011 Date Received: 18/10/2011 Previous Case ID: WMD Case/Spec ID:
Animal Details	Epidemiology
<b>Animal ID:</b> <b>Animal Name:</b> <b>Species:</b> <i>Cephalorhynchus hectori hectori</i> <b>Common Name:</b> Hector's Dolphin <b>Sex Class:</b> Female <b>Age Class:</b> Adult <b>Date Died:</b>	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		.027 m	27/10/2011	Adult
Dorsal Blubber Depth		21 mm	27/10/2011	Adult
Eye to Blowhole Length		.155 m	27/10/2011	Adult
Eye to Corner of Mouth Length		.036 m	27/10/2011	Adult
Girth at Anus		.528 m	27/10/2011	Adult
Girth at Eye		.57 m	27/10/2011	Adult
Girth at Flippers		.835 m	27/10/2011	Adult
Girth at Navel		.87 m	27/10/2011	Adult
Height of Dorsal Fin		.101 m	27/10/2011	Adult
Lateral Blubber Depth		15 mm	27/10/2011	Adult
Length of Base of Dorsal Fin		.246 m	27/10/2011	Adult
Length of Flipper		.21 m	27/10/2011	Adult
Length of Flukes		.155 m	27/10/2011	Adult
Snout to Anus Length		.99 m	27/10/2011	Adult
Snout to Corner of Mouth Length		.068 m	27/10/2011	Adult
Snout to Genital Slit Length		.93 m	27/10/2011	Adult
Snout to Origin of Dorsal Fin Length		.59 m	27/10/2011	Adult

Snout to Origin of Flipper Length	.355 m	27/10/2011	Adult
Total Length	1.34 m	27/10/2011	Adult
Ventral Blubber Depth	16 mm	27/10/2011	Adult
Width of Flipper	.085 m	27/10/2011	Adult
Width of Flukes	.39 m	27/10/2011	Adult
Weight	48 kg	27/10/2011	Adult

## DIAGNOSIS

1. Disseminated toxoplasmosis
2. Blunt head trauma

## COMMENTS

The damage to the lungs and liver, most likely caused by toxoplasma infection, was severe enough to have caused death. The trauma to the head was recent, and could have been sustained close to the time of death, possibly as a result of weakness and inco-ordination. Microscopic examination did not show any evidence of brain damage, so the trauma is unlikely to have been the sole cause of death.

## ANIMAL HISTORY

Carcass found by a whitebaiter on the evening of 17/10/11. Had been seen by another whitebaiter floating ashore that morning, and was bleeding from the mouth at that stage.

## GROSS PATHOLOGY

This adult female dolphin arrived chilled, and was in good post mortem condition with minimal skin sloughing and well preserved organs. Body condition was good. There were multiple superficial skin lacerations, several of which were old and well healed. Several sets of rake marks were present, and the periorbital tissue around the left eye and the skin of the tip of the rostrum were scavenged. There were no linear impressions. There was dark red/purple discolouration of the blubber overlying the right mandible. Flensing revealed bruising of the blubber covering approximately 75% of the right dorsal cranium, with a smaller focus (approx. 15%) on the left dorsal cranium. The body was covered in coarse sand and small pebbles, which were also present in the blow-hole and oral cavity.

The mammary gland was well developed but no milk was present. There was abundant (several hundred mls) red watery fluid in the abdominal and thoracic cavities. Several mesenteric and thoracic lymph nodes had 2-3mm foci of haemorrhage. There were multiple red and white flecks throughout the hepatic parenchyma. The lungs were dark red and heavy, with multiple ecchymotic haemorrhages over the pleural surfaces. There was clear fluid in the airways. Multiple pale gritty foci were scattered throughout the pulmonary parenchyma. No nematodes were found. There was a single pale, firm 3mm diameter nodule protruding from the epicardial surface of the right ventricle. The uterus was contracted with linear striations. The brain was removed for histology; no contusions were present.

## HISTOPATHOLOGY

Histo summary: There are areas of haemorrhage and necrosis in the liver and lung, with intralesional protozoal organisms. PCR and IHC for toxoplasma are pending.

Pathologist: