

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

**PATHOLOGY REPORT**

**Status:** Final  
**Date:** 14/06/2013  
**Type:** Mortality

<p><b>Submitter</b></p> <p style="text-align: center;">Department of Conservation</p>	<p><b>Submission Details</b></p> <p>Lab. Case/Spec ID: <b>49657</b></p> <p>Submitter's Ref:</p> <p>Date Submitted:</p> <p>Date Received: <b>05/06/2013</b></p> <p>Previous Case ID:</p> <p>WMD Case/Spec ID: <b>6981/1</b></p>
<p><b>Animal Details</b></p> <p><b>Animal ID:</b></p> <p><b>Animal Name:</b> W13-11Ch</p> <p><b>Species:</b> <i>Cephalorhynchus hectori hectori</i></p> <p><b>Common Name:</b> Hector's Dolphin</p> <p><b>Sex Class:</b> Male</p> <p><b>Age Class:</b> Adult</p> <p><b>Date Died:</b></p>	<p><b>Epidemiology</b></p> <p>Number Dead:</p> <p>Number at Risk:</p> <p>Number Sick:</p> <p>Number Submitted: <b>1</b></p>

**Growth and Development**

Parameter	Result Description	Value	Date Measured	Age Group
Depth of Tail Notch		.016 m	06/06/2013	Adult
Dorsal Blubber Depth		10 mm	06/06/2013	Adult
Eye to Blowhole Length		.135 m	06/06/2013	Adult
Eye to Corner of Mouth Length		.035 m	06/06/2013	Adult
Girth at Anus		.595 m	06/06/2013	Adult
Girth at Eye		.52 m	06/06/2013	Adult
Girth at Flippers		.715 m	06/06/2013	Adult
Girth at Navel		.735 m	06/06/2013	Adult
Height of Dorsal Fin		.085 m	06/06/2013	Adult
Lateral Blubber Depth		10 mm	06/06/2013	Adult
Length of Base of Dorsal Fin		.186 m	06/06/2013	Adult
Length of Flipper		.188 m	06/06/2013	Adult
Length of Flukes		.105 m	06/06/2013	Adult
Snout to Anus Length		.822 m	06/06/2013	Adult
Snout to Corner of Mouth Length		.164 m	06/06/2013	Adult
Snout to Genital Slit Length		.772 m	06/06/2013	Adult
Snout to Origin of Dorsal Fin Length		.642 m	06/06/2013	Adult

Snout to Origin of Flipper Length	.298 m	06/06/2013	Adult
Total Length	1.285 m	06/06/2013	Adult
Ventral Blubber Depth	12 mm	06/06/2013	Adult
Width of Flipper	.08 m	06/06/2013	Adult
Width of Flukes	.345 m	06/06/2013	Adult
Weight	kg	06/06/2013	Adult

#### ANIMAL HISTORY

Beachcast.

#### GROSS PATHOLOGY

This male dolphin was moderately well preserved, with some degree of skin sloughing along with moderate decomposition of internal organs. The peri-orbital areas and genital areas had been scavenged, but tissue loss was not extensive.

The body condition was moderate, with a slightly pronounced neck and slight concavity of the dorsal muscles (evidence of weight loss). There were numerous rake marks and superficial skin lacerations, none of which were associated with bruising or haemorrhage. Low numbers of blubber cestodes were present in the inguinal blubber.

The lungs were dark red, with low numbers of scattered gritty foci (lungworm granulomas). No other abnormalities were evident within the thoracic cavity.

The stomach contained several copepods, low numbers of nematodes and a few stones, but no prey items. There were numerous stomach fluke attached to the mucosa. Both kidneys had multifocal areas of pale discoloration, with soft yellow material present in the renal crests of numerous renules. The bladder wall was irregularly thickened.

The brain had a single, pale, 1mm diameter firm lesion in the superficial cortex.

#### HISTOPATHOLOGY

Histology summary:

Kidney: Severe chronic lymphoplasmacytic interstitial nephritis with multifocal papillary necrosis and glomerulonephritis

Lung: Severe bronchointerstitial lymphoplasmacytic pneumonia with multifocal granulomas and intralesional nematodes

Liver: Mild multifocal lymphoplasmacytic periportal hepatitis with biliary proliferation and fibrosis

#### OTHER MICROBIOLOGY

CSF swab and aspirated blood/CSF saved in -80

#### DIAGNOSIS

1. Severe renal disease
2. Moderate to severe parasitism

#### COMMENTS

The lesions seen in the lungs and liver are most likely to have been caused by parasite infestation. The kidney changes are more unusual, although there are some areas of kidney damage that could have been caused by migrating parasites. All the changes seen had been going on for a period of weeks to months, and would explain the loss of body condition seen at gross post mortem.

This dolphin had no evidence of human-induced injury.

Pathologist:

Assistant(s):

Copy To: