

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

PATHOLOGY REPORT

Status: Final
Date: 12/08/2014
Type: Mortality

Submitter	Submission Details
Department of Conservation Christchurch	Lab. Case/Spec ID: 51147 Submitter's Ref: H249 Date Submitted: 11/08/2014 Date Received: 11/08/2014 Previous Case ID: WMD Case/Spec ID: 7426/1
Animal Details	Epidemiology
Animal ID: H249 Animal Name: W14-21Ch Species: <i>Cephalorhynchus hectori hectori</i> Common Name: Hector's Dolphin Sex Class: Male Age Class: Adult Date Died:	Number Dead: 1 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	12/08/2014	
Dorsal Blubber Depth		28 mm	12/08/2014	
Eye to Blowhole Length		.145 m	12/08/2014	
Eye to Corner of Mouth Length		.03 m	12/08/2014	
Girth at Anus		.49 m	12/08/2014	
Girth at Eye		.505 m	12/08/2014	
Girth at Flippers		.77 m	12/08/2014	
Girth at Navel		.785 m	12/08/2014	
Height of Dorsal Fin		.09 m	12/08/2014	
Lateral Blubber Depth		25 mm	12/08/2014	
Length of Base of Dorsal Fin		.2 m	12/08/2014	
Length of Flipper		.2 m	12/08/2014	
Length of Flukes		.12 m	12/08/2014	
Snout to Anus Length		.85 m	12/08/2014	
Snout to Corner of Mouth Length		.145 m	12/08/2014	
Snout to Genital Slit Length		.75 m	12/08/2014	
Snout to Origin of Dorsal Fin Length		.54 m	12/08/2014	

Snout to Origin of Flipper Length	.265 m	12/08/2014
Total Length	1.26 m	12/08/2014
Ventral Blubber Depth	25 mm	12/08/2014
Width of Flipper	.08 m	12/08/2014
Width of Flukes	.42 m	12/08/2014
Weight	33 kg	12/08/2014

DIAGNOSIS

Open (unknown cause of death)
Chronic parasitism (lungs)

COMMENTS

None of the lesions seen grossly or histologically were severe enough to have been the cause of death. The dolphin had quite marked lungworm lesions, but this is fairly commonly seen in younger dolphins and does not usually cause disease unless complicated by other factors. The significance of the thrombus (blood clot) in the lung and the protein casts in the kidney tubules is difficult to determine. Tubular protein casts can be an indication of kidney disease, but this can't be confirmed in dead animals as it requires testing fresh blood samples to determine kidney function. The blood clot is an unusual finding, but the fact that only one was present means that it was unlikely to have caused any clinical disease.

There was no evidence of human involvement in the death of this dolphin.

ANIMAL HISTORY

Found on Scarborough beach at high tide line.

GROSS PATHOLOGY

This young male was in moderate body condition, with a slightly pronounced neck but good blubber coverage and muscle mass. The body was in a good state of preservation, with minimal skin sloughing. There was complete scavenging of the right eye and minimal scavenging around the anogenital orifice. There were multiple lacerations and numerous nicks along the trailing edge of the fluke, most of which were well healed. There was extensive white mottling of the left flank, consistent with scarring. There was no subcutaneous haemorrhage or bruising associated with any of the wounds. Multiple 'tattoo' lesions (pox virus) were present over both sides of the animal.

The oral cavity had numerous 1 - 3 mm diameter ulcerations over the back of the tongue and the soft palate. The teeth were in good condition. The stomach was empty except for a single fish eye. There were very few gastric parasites and no significant proliferation or erosion of the mucosa.

The lungs were well inflated, with minimal fluid in the lower airways and no foam or froth. Moderate numbers of lungworm were present in the terminal airways, and low numbers of small granulomas were scattered throughout the lung fields, with a few larger (up to 15 mm diameter) calcified granulomas.

The left pterygoid sinus contained a few irregular, red fragments 1 -2 mm long. These may have been fragments of mites, but this could not be confirmed on dissection microscopy.

No other significant gross lesions were present.

HISTOPATHOLOGY

Histology summary:

- testicular histology indicates mature male with inactive testes
- severe parasitic granulomas throughout lung, with multifocal interstitial fibrosis and mononuclear cell infiltration (severe chronic lungworm infection)
- multiple parasite granulomas in mesenteric lymph nodes
- numerous protein casts in renal tubules
- diffuse moderate hepatocellular vacuolation
- single large thrombus in pulmonary vessel