

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

PATHOLOGY REPORT

Status: Final
Date: 16/01/2017
Type: Mortality

Submitter	Submission Details
Department of Conservation Kaikoura	Lab. Case/Spec ID: 54144 Submitter's Ref: H260 Date Submitted: 19/12/2016 Date Received: 22/12/2016 Previous Case ID: WMD Case/Spec ID: 7556/1
Animal Details	Epidemiology
Animal ID: H260 Animal Name: W17-01Ch Species: <i>Cephalorhynchus hectori hectori</i> Common Name: Hector's Dolphin Sex Class: Female Age Class: Adult 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		.024 m	14/01/2017	Adult
Dorsal Blubber Depth		mm	14/01/2017	Adult
Eye to Blowhole Length		.135 m	14/01/2017	Adult
Eye to Corner of Mouth Length		m	14/01/2017	Adult
Girth at Anus		.545 m	14/01/2017	Adult
Girth at Eye		.53 m	14/01/2017	Adult
Girth at Flippers		.735 m	14/01/2017	Adult
Girth at Navel		.81 m	14/01/2017	Adult
Height of Dorsal Fin		.09 m	14/01/2017	Adult
Lateral Blubber Depth		mm	14/01/2017	Adult
Length of Base of Dorsal Fin		.225 m	14/01/2017	Adult
Length of Flipper		.205 m	14/01/2017	Adult
Length of Flukes		.115 m	14/01/2017	Adult
Snout to Anus Length		m	14/01/2017	Adult
Snout to Corner of Mouth Length		.17 m	14/01/2017	Adult
Snout to Genital Slit Length		.985 m	14/01/2017	Adult
Snout to Origin of Dorsal Fin Length		.675 m	14/01/2017	Adult

Snout to Origin of Flipper Length	.345 m	14/01/2017	Adult
Total Length	1.405 m	14/01/2017	Adult
Ventral Blubber Depth	mm	14/01/2017	Adult
Width of Flipper	.078 m	14/01/2017	Adult
Width of Flukes	m	14/01/2017	Adult
Weight	33 kg	14/01/2017	Adult

DIAGNOSIS

Final diagnosis (post histology, culture and molecular typing); Tuberculosis

COMMENTS

The preliminary diagnosis for this dolphin after gross post mortem was a tumour of the lymphoid system. However, histology, culture and molecular typing have confirmed that this dolphin had tuberculosis. The organism that was identified has a similar genetic typing pattern to the isolates of *M. pinnipedii* that we have found in seals and sea lions from New Zealand waters. I have not found any existing reports of tuberculosis in cetaceans, so this is an extremely unusual case. The implications for other Hector's dolphins are unclear, but we will monitor any future necropsy cases for this infection.

ANIMAL HISTORY

Found dead at Harnett's Creek, Old Beach Rd, Kaikoura. Helicoptered out to Renwick. Halls informed us they would not take the dolphin unless it was frozen.

GROSS PATHOLOGY

This adult female dolphin was received frozen. It was in poor post mortem condition, with extensive but superficial scavenging, along with widespread 'sunburn' damage (desiccation and cracking of the skin). The blubber was beginning to liquefy and the right eye had been completely scavenged. There was a post-mortem full thickness penetrating wound into the thoracic cavity, likely caused by scavenging birds, with removal of the apex of the heart. The tail stock had been amputated post mortem, presumably by the DOC field officer in order to make packaging easier. The teeth were in good condition (not worn).

The dolphin was in poor body condition, with concavity of the dorsal neck and marked atrophy of epaxial muscles. The subcutaneous lymph nodes of the neck were markedly enlarged and firm. On cut surface these were diffusely pale, with multifocal opaque white flecks.

The thoracic and abdominal cavities contained abundant red-tinged slightly thick turbid fluid (freeze-thaw artefact, plus possible thoracic and abdominal effusion). Thoracic and abdominal lymph nodes were enlarged up to 10x normal size, with cut surfaces either being diffusely pale or expanded by multifocal pale nodules. The lungs had occasional 1-2mm gritty foci (parasite granulomas). The stomach contained low numbers of nematodes and Braunina cestodes, with no identifiable prey items. The liver was markedly autolysed.

The uterus was enlarged 4-5 X normal diameter with linear striations (evidence of a previous pregnancy). The mucosal surface was coated with thick tan fluid. The ovaries were inactive.

HISTOPATHOLOGY

Histological examination of lymph nodes and lungs from this dolphin showed multiple granulomas with very large numbers of intralesional acid fast organisms.

BACTERIOLOGY

Culture of lymph node tissue: *Mycobacterium tuberculosis* complex organism. The was further identified as *Mycobacterium pinnipedii* by molecular typing.

Pathologist:

Assistant(s):