

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

PATHOLOGY REPORT

Status: Final
Date: 17/12/2014
Type: Mortality

Submitter	Submission Details
Department of Conservation Christchurch	Lab. Case/Spec ID: 51579 Submitter's Ref: H252 Date Submitted: 17/12/2014 Date Received: 17/12/2014 Previous Case ID: WMD Case/Spec ID: 7475/1
Animal Details	Epidemiology
Animal ID: H252 Animal Name: W14-28Ch Species: <i>Cephalorhynchus hectori hectori</i> Common Name: Hector's Dolphin Sex Class: Male 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	17/12/2014	Juvenile
Dorsal Blubber Depth		19 mm	17/12/2014	Juvenile
Eye to Blowhole Length		.12 m	17/12/2014	Juvenile
Eye to Corner of Mouth Length		.035 m	17/12/2014	Juvenile
Girth at Anus		.395 m	17/12/2014	Juvenile
Girth at Eye		.455 m	17/12/2014	Juvenile
Girth at Flippers		.555 m	17/12/2014	Juvenile
Girth at Navel		.57 m	17/12/2014	Juvenile
Height of Dorsal Fin		.08 m	17/12/2014	Juvenile
Lateral Blubber Depth		15 mm	17/12/2014	Juvenile
Length of Base of Dorsal Fin		.14 m	17/12/2014	Juvenile
Length of Flipper		.14 m	17/12/2014	Juvenile
Length of Flukes		.09 m	17/12/2014	Juvenile
Snout to Anus Length		.57 m	17/12/2014	Juvenile
Snout to Corner of Mouth Length		.132 m	17/12/2014	Juvenile
Snout to Genital Slit Length		.62 m	17/12/2014	Juvenile
Snout to Origin of Dorsal Fin Length		.44 m	17/12/2014	Juvenile

Snout to Origin of Flipper Length	.24 m	17/12/2014	Juvenile
Total Length	.87 m	17/12/2014	Juvenile
Ventral Blubber Depth	15 mm	17/12/2014	Juvenile
Width of Flipper	.06 m	17/12/2014	Juvenile
Width of Flukes	.288 m	17/12/2014	Juvenile
Weight	13.6 kg	17/12/2014	Juvenile

DIAGNOSIS

Vertebral scoliosis (twisted spine) with muscle atrophy

COMMENTS

The severe deformity of the spine could have been either congenital or the result of a fracture. Further dissection and imaging studies will be carried out to try to clarify this. While this spinal deformity was not the direct cause of death, the severe muscle wasting and poor body condition indicate that this dolphin was not able to swim normally, and may have ultimately starved to death.

ANIMAL HISTORY

Reported at 6.30am, found dead on beach at South Brighton surf club.

GROSS PATHOLOGY

This young dolphin was in very fresh post mortem condition with no scavenging and no skin slippage. Its body condition was poor, with an extremely prominent neck and spinal column indicating loss of muscle mass. The dorsal fin was not folded, there were no fetal folds and no fetal whiskers, and all teeth were erupted. Lateral papillae were present on the lung. These features are consistent with an age of < 1 year old, supported by the measured total length.

At the level of the lumbar area there were bilateral bony projections of the vertebral column, one about 10cm cranial to the other. Deep dissection showed these to be deviations of the vertebrae into a Z-shape when viewed on a ventrodorsal plane (i.e. when looking down onto the dolphin from above). The muscle overlying these projections was necrotic, and the deep aspect of the blubber over the projection on the right side of the dolphin was discoloured yellow/orange. There was extremely marked atrophy of the lumbar muscles.

All compartments of the stomach contained tan to brown turbid fluid with sand particles. There was no milk, and no evidence of recent prey ingestion. The distal intestine contained watery to mucoid yellow/green material. The glandular compartments of the stomach were almost entirely coated with attached *Braunina cordiformis* cestodes. There were several areas of black discoloration of the mucosa. The liver was friable and slightly pale.

The lungs were well inflated with no palpable parasite granulomas. There was no fluid or froth in the airways.