

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

**PATHOLOGY REPORT**

**Status:** Final  
**Date:** 14/05/2009  
**Type:** Mortality

| Submitter   | Submission Details  |
|---|---|
| Department of Conservation<br><br>Kaikoura  | Lab. Case/Spec ID: <b>43204</b><br><br>Date Submitted: 09/05/2009<br>Date Received: 09/05/2009<br>Previous Case ID:<br>WMD Case/Spec ID: 4815/1 |
| Animal Details  | Epidemiology  |
| .<br><b>Animal Name:</b> W09-05Ch<br><b>Species:</b> <i>Cephalorhynchus hectori hectori</i><br><b>Common Name:</b> Hector's Dolphin<br><b>Sex Class:</b> Male<br><b>Age Class:</b> Subadult<br><b>Date Died:</b> 09/05/2009 | Number Dead: 1<br>Number at Risk:<br>Number Sick:<br>Number Submitted: 1  |

**Growth and Development**

| Parameter                            | Result Description | Value  | Date Measured | Age Group |
|--------------------------------------|--------------------|--------|---------------|-----------|
| Depth of Tail Notch                  |                    | .027 m | 09/05/2009    | Subadult  |
| Dorsal Blubber Depth                 |                    | 18 mm  | 09/05/2009    | Subadult  |
| Eye to Blowhole Length               |                    | .125 m | 09/05/2009    | Subadult  |
| Eye to Corner of Mouth Length        |                    | .035 m | 09/05/2009    | Subadult  |
| Girth at Anus                        |                    | .475 m | 09/05/2009    | Subadult  |
| Girth at Eye                         |                    | .56 m  | 09/05/2009    | Subadult  |
| Girth at Flippers                    |                    | .77 m  | 09/05/2009    | Subadult  |
| Girth at Navel                       |                    | .84 m  | 09/05/2009    | Subadult  |
| Height of Dorsal Fin                 |                    | .075 m | 09/05/2009    | Subadult  |
| Lateral Blubber Depth                |                    | 15 mm  | 09/05/2009    | Subadult  |
| Length of Base of Dorsal Fin         |                    | .18 m  | 09/05/2009    | Subadult  |
| Length of Flipper                    |                    | .175 m | 09/05/2009    | Subadult  |
| Length of Flukes                     |                    | .11 m  | 09/05/2009    | Subadult  |
| Snout to Anus Length                 |                    | .895 m | 09/05/2009    | Subadult  |
| Snout to Corner of Mouth Length      |                    | .175 m | 09/05/2009    | Subadult  |
| Snout to Genital Slit Length         |                    | .765 m | 09/05/2009    | Subadult  |
| Snout to Origin of Dorsal Fin Length |                    | .59 m  | 09/05/2009    | Subadult  |

|                                   |        |            |          |
|-----------------------------------|--------|------------|----------|
| Snout to Origin of Flipper Length | .305 m | 09/05/2009 | Subadult |
| Total Length                      | 1.2 m  | 09/05/2009 | Subadult |
| Ventral Blubber Depth             | 15 mm  | 09/05/2009 | Subadult |
| Width of Flipper                  | .08 m  | 09/05/2009 | Subadult |
| Width of Flukes                   | .375 m | 09/05/2009 | Subadult |
| Weight                            | 43 kg  | 09/05/2009 | Subadult |

## DIAGNOSIS

Known bycatch

## COMMENTS

This young adult was in good body condition, with no evidence of chronic disease. The linear impressions on the snout are consistent with entanglement, as are the changes within the lung (areas of over-inflation of alveoli, with areas of congested lung tissue), indicating death by drowning/asphyxia. There was evidence of recent feeding in the form of chylous material in the intestinal lymphatics. The exact cause of the holes scattered over the body and penetrating into the blubber is not known, but the fact that many of these had haemorrhage within them shows that they were caused prior to death. Most of the holes occur within areas that appear to have sustained skin damage due to scavenging, which probably occurred while the animal was in the net. Crustaceans or small fish could have caused the shallow skin lesions, while spines of larger fish may have caused the holes.

## ANIMAL HISTORY

Caught by commercial fishing vessel.

## GROSS PATHOLOGY

The body was submitted wrapped in several layers of plastic within a cardboard transport container. It was in a very good state of preservation, and the body condition was assessed as good, with rounded body contours, good blubber depth and good muscle mass. Fresh unclotted blood was present over the whole carcass. There were clear linear impressions encircling the snout, and extending down over the lower mandible on the left. Full thickness lacerations were present on the skin at the forward edge of the left mandible and on the leading edge of the right fluke. Three rectangular full thickness skin defects were present. One was on the left corner of the mouth, one on the left chest wall and the other on the left tail fluke. All had haemorrhagic margins and were 5 - 10 mm long x 3 - 4 mm wide. The lids of both eyes were scavenged and bleeding. There were extensive superficial skin lesions scattered over the dorsal body and the right side, with a few on the ventral surface also. Within these areas were a large number (20-30) of 2mm diameter holes, many of which were filled with clotted or unclotted blood. Some of these holes extended as channels through the blubber. Several larger holes (5mm diameter) were present on the right flank, and there was an irregular, haemorrhagic 15mm skin defect on the ventrum. Several areas of rake marks were present over the flanks and dorsum, and a few serpiginous tracts (*Crassicauda* nematode lesions) were present on the flanks.

There were two ragged holes on the ventral surface of the tongue, both of which were covered with blood and had bruised tissue margins.

On flensing, there was a single area of subcutaneous bruising measuring 30 x 15 mm, within the superficial muscles of the back of the neck.

## THORACIC CAVITY

The thymus was well developed, indicating that this was a comparatively young animal. The lungs were hyperinflated, with patchy areas of dark red tissue (congested and oedematous) interspersed with paler areas (hyperinflated lobules). There was a small amount of foam in the small terminal airways, and small amounts of oedema fluid exuded from the bronchioles when the lungs were elevated. Low numbers of lungworm were present in small bronchioles, but no pulmonary granulomas were palpable.

There were three small smooth nodules within the mucosa adjacent to the goosbeak, just medial to the tonsil.

## ABDOMINAL CAVITY

The stomach contained palpable contents. It was tied off and frozen for analysis of ingested prey items. There were several fish bones in the distal oesophagus. The intestines contained normal digesta (soft yellow/brown material). A small amount of white fluid (chyle) was present within the lymphatics of the mesentery.

