

# Pathology Report

Submitter Ref.: H303	Date Sent:	Accession No.: 60839
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To: [REDACTED]  
Department of Conservation  
Invercargill

Report Sent: 20/06/2022

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Species: Cetacean	Breed: Hector's Dolphin		
Age: Adult	Sex: Male		
Owner:	Type: Post Mortem		
ID: H303	Prev. Accn.:		
Submitted:	At Risk:	Affected:	Dead:

## History

Observed at Tiwai Beach on 16th April; response to collect on 20th April. Frozen on site and sent to Massey on 9/5/22

## Gross Findings

This dolphin was received frozen and was thawed prior to necropsy. The dolphin was in poor body condition, with a pronounced neck and concave epaxial muscle profile.

Weight = 30.7kg; standard length = 1275

There was moderate sloughing of the full skin thickness over a large proportion of the body, with mild/moderate scavenging of body orifices. Both eyes were missing, and the sockets contained numerous small pebbles. The teeth were moderately worn, with several missing. There were no net marks or impressions evident on the remaining skin surface.

The lungs were dark red and partially collapsed.

The stomach contained 4 small pebbles. There was multifocal ulceration of the gastric glandular mucosa, with thickened, proliferative tissue surrounding each ulcer, affecting approximately 20% of the mucosal surface. No prey items were detected. The distal intestinal contents were grey and watery.

Summed testicular weight (without epididymis) = 149g.

## Histopathology

All sections show moderate to marked freeze-thaw artefact. The lungs are particularly difficult to interpret. There are multifocal areas that could represent necrosis with haemorrhage and fibrin, but the extent of artefact makes it impossible to be certain.

## Microbiology

Toxoplasma PCR:

- rep529 qPCR

lung - mod/high peak (positive)

liver - low peak (suspect)

tongue - negative

- B1 PCR (lung) - negative

## Diagnosis

Open (possible pneumonia)

## Comments

This dolphin was in poor body condition, indicating that it had not been foraging normally for some time. On histology there are some areas in the lungs that could represent damage from a disease process, although it is impossible to be certain about this because of tissue artefact.

The possibility of Toxoplasma as a cause of these lung lesions was investigated using immunohistochemistry:

results of this testing were negative, indicating that this dolphin did not die of toxoplasmosis.

Tissues from this dolphin were also tested for Toxoplasma by PCR (molecular testing) as part of routine surveillance. Lung tissue was positive but this could not be confirmed by sequencing. Based on consideration of the molecular, histological and immunohistochemical findings it is likely that this dolphin had a latent Toxoplasma infection (where the parasite is present in low numbers but not causing active disease).

Date: 17/06/2022	Pathologists: [REDACTED]
Students:	