

# The University of Texas Medical Branch at Galveston



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March 1, 1994

Graham Worthy, Ph.D  
Texas Marine Mammal Stranding Network  
4700 Avenue U  
Galveston, Texas 77550

RE: PO 275

Dear Dr. Worthy;

This will report to you my findings in the case of the Tursiops referenced above. My opinion is based on the gross necropsy and the study of histologic materials collected during that examination. A summary of the gross necropsy is attached.

This animal's findings were most unusual. The major finding was internal hydrocephalus. Hydrocephalus, or enlargement of the ventricular system can occur because of obstruction of the flow of spinal fluid, or because the brain has shrunk as a result of injury or inflammation. In this animal, the brain had shrunk following injury, since we could find no obstruction, and, because there is a well established, chronic meningitis or inflammation of the meninges. We were not able to demonstrate an organism. This animal also has arthritic fusion of the atlanto-occipital joint, and fusion of a flipper joint. An extremely large protozoan was found in an incipient abscess in a lymph node of the neck. The same protozoan was present in pus in a bronchus, which appeared to have been aspirated from a different site, since there was no accompanying inflammation.

This animal also had a very deep ulcer in the first (squamous) chamber of the stomach. The cause for this was not evident.

Unfortunately, bacterial cultures are not available on this animal. The entire process could be explained by a septic focus of the atlanto-occipital joint that eroded into the nearby meninges and set up chronic inflammation in that location. This is not an easy explanation for the hydrocephalus, which must have been developing for some time.

This animal was very wasted, and obviously ill and incapacitated for some time. It is easy to attribute stranding to chronic disease. It is hard to imagine how this animal survived as long as it did.

I will be doing additional studies on this animal to determine, if I can how long this process has been going on. I want to do additional studies on the bones of

this dolphin to see if the atlanto-occipital joint can be unequivocally identified as a locus of infection.

This seems clearly to be an instance of stranding in association with natural disease. I find no evidence of human interaction in this case.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Cowan".

Daniel F. Cowan, M.D.  
Professor of Pathology

Dolphin autopsy.

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PO 275                      Tursiops truncatus 22 cm female.  
                                    Weight 80.6 KG  
                                    Age     years (#GLG)

Animal was recovered dead, Code 2, from 3 miles north of FWS beach access road on Matagorda Island NWR, Matagorda Island, Aransas NWR.

(Not present for the examination) Animal was very emaciated. Several pinpoint skin lesions were collected. The left scapular joint was fused, the atlas was fused to the skull, the right lung was congested, lungworms were found in the right lung. Spinal fluid poured out of the brain, which then sagged.

Examination of the brain after fixation (DFC and Pier-Luigi DiPatre) Moderate communicating hydrocephalus. Detailed examination of the ventricular system and aqueduct didn't reveal an obstruction. "Hydrocephalus ex vacuo" or from brain atrophy, rather than obstruction.