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December 7, 1992

Graham Worthy, Ph.D
Texas Marine Mammal Stranding Network
4700 Avenue U
Galveston, Texas 77551

RE: Tursiops SP 153

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 autopsy examination and study of histologic slides prepared from the tissues. A summary of the gross autopsy findings is attached. A detailed description of the histopathology is available.

The major findings in this animal were in the heart and lungs. The bronchi were heavily infested with nematodes, which is not unusual, but there were many more than usual in the respiratory tissue, where they provoked a severe, if localized inflammation. Bacterial colonies were plentiful. There was enough scarring and bronchial destruction to suggest that this was not a new problem for this animal. There was also minor scarring of the myocardium, which is not uncommon. Acute changes in the myocardium, including cytonecrosis and edema, were prominent. The vessels were normal. These myocardial changes occurred in the last day or two of life, and I suspect that they are caused by "stress", related to interaction suggested by the deep new rake marks, and other events of the last day or two.

This animal had several minor problems. While there were many flukes in the bile duct and pancreatic duct, there was little effect, except on the ducts, which were mildly inflamed. The Braunina in the stomach were not unusual, and did not appear to be significant. I suspect that there was chronic bilateral acoustic nerve and meningeal inflammation caused by worms in the air sinuses and around the ossicles. I am used to seing flukes in relation to the ossicles, but there were also nematodes, which is while not unprecedented, unusual in our dolphins.

In any event, I can find no reason to suspect human interaction related to this stranding. I would class it as a "natural" event, and attribute it to parasitic disease of the lungs, and probably of the acoustic apparatus.

Sincerely,

DFCowan

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

Dolphin autopsy. AFIP Contract specimen. February 16, 1992

SP 153 Tursiops truncatus 237 cm female.
Weight 169.0 KG
Age 19 years (#GLG)

Animal was recovered dead from inside Sea Rim State Park. Animal was floating dead, dragged onto the beach. A Code 2, but barely.

This animal externally appears to be in reasonably good condition. There are fresh rake marks and many "pin holes" on the dorsum. These look like bird shot holes, but no shot is found. These are assumed to be pox virus pits. The animal is lactating. There are a few small skin ulcers.

A few cc straw colored fluid is present in the peritoneal cavity.

Lungs are heavy, with worms, nodules, and pneumonic patches. Hilar and lung lymph nodes are pigmented; typical pattern of carbon pigment.

Heart has a 1 cm blotchy pale focus on the anterior wall, and patchy pallor of the anterior papillary muscle. There is a superficial pit/scar on the posterior surface of the left ventricle.

Liver has a prominent reticulated surface pattern with definite nodularity, but the internal tissue is not particularly fibrotic grossly. A vague dark nutmeg pattern is present. The bile duct is dilated and filled with dirty bile. Contains many flukes well up into the liver.

Pancreatic ducts are dilated, contain bile and flukes, similar to those in the liver. Pancreatic tissue is normal. Spleen is grossly normal.

Stomach contains many Braunina. Gut dilated and gassy. Lower intestinal tract within normal limits.

Adrenals congested and a bit autolysed.

Mammary- lactating. No abnormality on gross.

Uterine horns both dilated, with dark linings. Sampled the darker horn.

Brain: cerebellum is adherent to the dura at the point of exit of the statico-acoustic nerves, both sides. Cerebellum tears in taking the brain out. This is the first one to do so. The skull is thick and hard, almost 2x normal thickness.

Nasal sacs free of parasites, but air sinuses contain bloody fluid, many flukes and fine nematodes. Ossicles removed. To be x-rayed and cut.

Impression from gross examination: Pneumonitis, worm and bacterial: heart scars and acute myocardial degeneration. Possible hepaticfibrosis from fluke infestation. Possible cerebellar meningitis.