

Necropsy Report
Killer Whale (Orcinus-orca) Canuck
Age 4 yrs — SeaWorld of Florida

Name: Canuck (male) (aka- J24, J024)

Species: Killer Whale (Orcinus orca)

Source: wild capture, 03-12-1972, Carr Inlet, WA, USA, age: est. 2 yrs

Deceased: late afternoon, 12-01-1974, SeaWorld of Florida, age: est. 4 yrs

Reported cause of death (per NMFS MMIR data): Candidiasis

Necropsy info:

Diagnosis- AFIP- G. Migaki, DVM (1974):

1. Candidiasis, severe, extensive, buccal mucosa, blowhole, Atlantic killer whale (Orcinus orca), Cetacea, due to Candida albicans,
2. Leukocytic aggregates, plasma cells and lymphocytes, portal areas, moderate, liver.

Diagnosis- John G. Simpson, DVM (1974): Mycotic gastritis

Notes: Prior to reforms of the Marine Mammal Protection Act (MMPA) in 1994, holders of marine mammals for public display were required to submit necropsy reports (animal autopsy reports) for deceased animals, making the documents available to the public and scientific community. Presently, marine mammal parks in the U.S. are only required to provide a “cause of death” to the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) which maintains Marine Mammal Inventory Reports (MMIR). Details of marine mammal deaths are now a closely guarded secret at U.S. entertainment facilities.

The Orca Project acquired the following documents from the National Marine Fisheries Service (U.S.A) via the Freedom of Information Act for deaths that occurred prior to implementation of the 1994 MMPA changes.

For more information visit www.theorcaproject.com

Necropsy, Autopsy, Veterinarian, NOAA, NMFS, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, MMIR, Marine Mammal Inventory Report, MMPA, Marine Mammal Protection Act, Killer Whale, Orca, Shamu, Death, Die, SeaWorld, Orlando, Florida, Canuck

SEA WORLD, INC.

ORLANDO, FLORIDA

NECROPSY REPORT

PATH. NO.: SWF-001

ANIMAL NAME: CANUCK

I.D. NO.: KW-27

GENUS/SPECIES: Orcinus orca

SEX: M X F

DATE/TIME OF DEATH: December 1, 1974, late afternoon

DATE/TIME OF NECROPSY: December 1, 1974, late evening

CLINICAL HISTORY PRIOR TO DEATH:

For approximately four months prior to death, the animal had exhibited signs of weight loss, some grayish areas around the area entering the blowhole, grayish patches on the inside of the mouth and tongue around the teeth, and leading toward the digestive tract externally. Animal's attitude ranged from normal to depressed during this period of time, with much variation.

Other than a chronic but improving anemia, there was no particular significant change in any blood-related chemistry or examination carried out.

GROSS NECROPSY FINDINGS:

WEIGHT: _____ LENGTH: _____ GIRTH: _____

Skin: Normal color; some areas of sloughing, probably associated with lack of activity. No other external signs. The blubber layer is reduced in depth as a result of loss of weight, but is still significantly thick enough to provide protection from cold water, ranging approximately 4-8 inches in depth, depending on the area sampled. In reflecting the skin to the muscle layer underneath in the thoracic area, there is some anemic evidence in the muscular tissue, in that it is paler in color than normal.

Upon entering the thoracic cavity, the lungs appear to be normal grossly, although the down-side lung is somewhat congested as a result of blood and fluid settling in that lung. At the anterior dorsal aspect of the thoracic cavity, there are two large abscesses

padding the vertebral column, one abscess approximately 6" x 9", other about 12" x 9". They are on the level of about the 4th, 5th, and 6th thoracic vertebrae. They are outside the pleural cavity ventral to the vertebral column, probably the result of lymph node abscession. Cutting into the abscesses, we find cheesy exudates; these are cultured.

The cardiovascular system appears to be normal. The heart stopped in systole and there were no abnormalities seen.

Grossly, the gastrointestinal tract internally appears to be ulcerated throughout with light plaques in the centers of the ulcerations. It would appear grossly as though there is a mycotic type of infection in the intestinal tract based on past experience. The stomach and intestines show this throughout. There is severe exfoliation throughout the esophagus and stomach, with severe sloughing of the epithelial lining throughout. The small intestine wall seems to be thickened, with areas of petechial hemorrhage throughout, and some gross hemorrhage with clotting blood on the surface throughout the entire intestinal tract, along with the white plaques that would appear to be fungal in origin.

The liver appears somewhat anemic, possibly with thickened borders and a possibly thickened capsule. We will rely on histopathology for this. There is no evidence of parasites in the liver.

The spleen appears normal, although somewhat engorged with blood.

Diastinal lymph nodes appear to be slightly enlarged. These were samples for culture and histopathology.

The pancreas appears normal.

The mesenteric lymph nodes appear normal, with a milky or creamy substance that is very likely an early abscession.

Kidneys appear to be normal, with some small areas of hemorrhage which are probably agonal. Histopathology sample was taken.

Adrenal glands appear to be normal. Histopath taken.

Genitourinary tract other than the kidneys appears to be normal. There are no lesions anywhere in the urinary tract.

Peritoneal cavity is normal.

The eyes appear to be normal upon removal.

The air sacs when examined were full of a sloughing exudate from the surface of the lining of the air sacs. This included the lining of the blowhole, again reminding us of mycotic plaques.

There were no lesions seen in the brain.

PARASITES:

<u>ORGAN/TISSUE</u>	<u>STAGE</u>	<u>SPECIES</u>	<u>DESCRIPTION</u>
NONE SEEN			

CULTURES TAKEN:

<u>ORGAN/TISSUE</u>	<u>I.D.</u>
All organs cultured, including abscesses	

HISTO TAKEN:

- Abscesses
- Esophagus
- Stomach
- Intestinal Tract
- Liver
- Kidney
- Pancreas
- Adrenal Glands

DIAGNOSIS:

BY: _____

AFIP ACCESSION NUMBER: 1500927 SEQ#0

ANIMAL, CETACEA WHALE
SWF-00001-74 T

DR. EDWARD ASPER
SEA WORLD
7007 SEA WORLD DRIVE
ORLANDO, FLORIDA 32809

GM: kab
CFM-c

Dear Dr. Asper:

Thank you for contributing this interesting case to the Registry of Comparative Pathology. Your case number is SWF-00-1.

1. Candidiasis, severe, extensive, buccal mucosa, blowhole, Atlantic killer whale (*Orcinus orca*), Cetacea, due to Candida albicans.
2. Leukocytic aggregates, plasma cells and lymphocytes, portal areas, moderate, liver.

Comments: Numerous fungal organisms; Candida albicans, were easily found in the superficial portion of the mucosa of the mouth and blowhole. The organisms were best demonstrated in the sections stained with the PAS technique. In addition to the unflamatory and degenerative changes in the mucosa, large accumulations of plasma cells and lymphocytes were found in the superficial portion of the dermis. The other submitted organs were essentially normal except for the liver. Plasma cells and lymphocytes were found in nearly all of the portal areas with little or not degenerative changes in the hepatocytes. Such hepatic lesions are relatively common in microscopic findings in cetacean animals in our experience. Perhaps with the investigation of more cases, we will be able to determine their significance.

Microscopic slides will be sent to you under separate cover.

G. MIGAKI, D.V.M.
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Pathology

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JOHN G. SIMPSON, DVM
ANIMAL PATHOLOGY SERVICES

REPORT OF FINDINGS

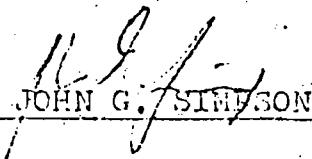
Species Orcinus orca SWF-00-1 Case Record No. 12-74:1950
Name Necropsy tissues Report Date 12-20-74
Address E.D. Asper Address Sea World, Florida
Address Sea World, Inc. Address _____

There is a plasmocytosis, most evident in liver sinusoids, lymph nodes, spleen, gastric submucosa, and to some extent, within lung interstitium.

The most significant finding is the presence of budding hyphae (PAS stain) in the ulcerated mucosa of what appears to be forestomach. Though culture is required to identify the fungus, Candida (Monilia) is a distinct possibility.

The plasma cells may be a reactive process secondary to the yeosis.

The most likely diagnosis here is mycotic gastritis. In disease of this sort, absolute confirmation of the fungus as a primary agent is uncertain. This is because Candida and other fungi are sometimes opportunists which invade previously weakened tissue.

Signed  JOHN G. SIMPSON DVM