DIAGNOSTIC CASE REPORT

U. S. GEOLOGICAL SURVEY-BIOLOGICAL RESOURCES DIVISION NATIONAL WILDLIFE HEALTH CENTER-HONOLULU FIELD STATION P. O. BOX 50167, 300 ALA MOANA BLVD., Rm. 8-132 HONOLULU, HAWAII 96850

Tel: 808-792-9520, Fax: 792-9596, Email: thierry_work@usgs.gov

Case Number: 25111

Submitter Name: Species submitted (n):

Turtle: Green (1)

Mr. John Gorman Maui Ocean Center 192 Maalaea Rd

Wailuku, Hawaii 96793

United States

DateCollected: Location: 10/17/2014 Lahaina 10/22/2014 Area: Maui DateSubmitted: Hawaii DateReceived: 10/23/2014 State: Country: United States DateExamined: 10/23/2014

SPECIMENS SUBMITTED: Carcass-Frozen

History: This animal was released from the Maui Ocean Center on 11 August 2014. was found dead on Launiupoko Beach Park (Lahaina) on 17 October 2014. Identification: Pit tags RHF - 47097B4936, LHF - 4A0F68321E, ARGOS satellite tag #141158, Mototool E on right carapace, Niele. Measurements taken prior to release: weight 32.3 lbs, SCL - 46.6cm, SCW - 37.1cm, CCL - $48.5 \, \text{cm}$, $CCW - 42.5 \, \text{cm}$.

Findings: Accession 1-green turtle immature male in excellent body condition. On necropsy, the fat stores in this animal were excessive with massive lipid in the liver. There was a hole in the skin of the left neck but no associated bleeding suggesting it to be post-mortem. There was bleeding into the right pectoral muscles. The intestines had massive inflammation and bleeding of the mucosa. Microscopy revealed massive inflammation and necrosis of small intestinal mucosa, inflammation of the heart associated with bacteria, and scattered trematode eggs in multiple organs.

Final diagnosis: Accession 1-Hemorrhagic enteritis.

Comments: This animal was bordering on obese, and the cause of death was massive inflammation of intestines the cause of which could not be confirmed. This likely led to disseminated bacterial infection. The cause of the hole in the left neck is unknown.

Management: The amount of fat stores in this animal were unusually large, and it is not clear whether this was from captivity or acquired in the wild. The frozen tissues complicated our abilities to see fine details on microscopy, but we did not see evidence of infectious agents as cause of intestinal inflammation.

Report Date (mm/dd/yyyy): 12/9/2014 Necropy report: Enclosed

Copies of this report sent to:

If you have questions regarding this case, contact Thierry M. Work MS, DVM, MPVM at 808-792-9520. Include above Case Number. Diagnostic findings may not be used for publication without the pathologist's knowledge and consent.

NOTE: Information in this report supersedes any information from previous reports regarding this case

NATIONAL WILDLIFE HEALTH CENTER NECROPSY REPORT

Submitter Name:

Mr. John Gorman Maui Ocean Center 192 Maalaea Rd Wailuku, Hawaii 96793 United States Case: 25111 Accession: 1 Date Collected: 10/17/2014

Date Examined: 10/23/2014
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

CONDITION: (Excellent) POSTMORTEM: (Fair) EUTHANASIA: (Not euthanized)

TAG TYPE: (Other band) TAG NO.: (4A0F68321E)

SPECIES: (Turtle: Green) AGE: (Immature) SEX: (Male)

MORPHOMETRICS: Weight carcass (13.4 kg), Straight carapace length (46.6 cm), Straight carapace width (37.6 cm), Straight plastron length (37.4 cm), Notch length (46.3 cm).

COLLECTION-SITE: (Lahaina) AREA: (Maui) STATE: (Hawaii) COUNTRY: (United States)

HISTORY: This animal was released from the Maui Ocean Center on 11 August 2014. It was found dead on Launiupoko Beach Park (Lahaina) on 17 October 2014. Identification: Pit tags RHF - 47097B4936, LHF - 4A0F68321E, ARGOS satellite tag #141158, Mototool E on right carapace, Niele. Measurements taken prior to release: weight 32.3 lbs, SCL - 46.6cm, SCW - 37.1cm, CCL - 48.5cm, CCW - 42.5cm.

External/Internal

EXTERNAL: There is a 3 cm hole in the left neck and a 1 cm hole below. There is some bruising around the hole but no hemorrhage. There are three 0.5 cm holes on the ventral right flipper.

INTERNAL: There is abundant body fat with dorsum fat measuring 3 cm thick. There is hemorrhage on the cranial right front flipper musculature. There is a lot of blood in the body cavity. The musculature is pale. There is hemorrhage on the right neck musculature. Fat oozes from the liver. The kidneys are pale. There is catarrhal enteritis in the small and large intestines. Mucous plugs are in the intestinal lumen.

PRELIMINARY DIAGNOSIS: Enteritis.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Brain (A); Skeletal muscle (B); Heart (C); Kidney (D); Spleen, Intestine (E); Lung (F); Intestine (G); Skin (H); Intestine small (I); Intestine small (J); Intestine small (K); Intestine small (L); Intestine small (M).

Laboratory Results

HISTOPATHOLOGY

Spleen: Large numbers of trematode eggs either singly or in clusters are present.

Intestine: Mucosa is ablated and localized submucosal infiltrates of mononuclears are present (E). Mucus plug (G) consists of necrotic debris and clumps of treamtode

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eggs. In another section (I-J)), moderate numbers of treamtode eggs are withim muscularis, and lumen contains cores of eosinophilic debris. In another section (K-L), intact mucosa has prominent granulocytic infiltrates

Kidney: Moderate numbers of trematode eggs either singly or in clusters are present.

Heart: Clusters of granulocytes infiltrate among myocardial cells. In some cases, these are associated with cell debris and clumps of what appear to be basophilic rods.

Skeletal muscle: Large areas of myofibers are effaced by red cells. Occasional perivascular mononuclear infiltrates are present.

All other Organs: No remarkable lesions are seen.

COMMENTS: This animal was bordering on obese, and the cause of death was massive inflammation of intestines the cause of which could not be confirmed. This likely led to disseminated bacterial infection.

Final Diagnosis (in order of importance)
Diagnosis Topog Morpho Etiol Funct Dis Link

1. Hemorrhagic enteritis (T50500)(M40600)()()()()()()()
Diagnostic findings may not be published without the knowledge and consent of the pathologist.

Milt Code: (Other)