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: 25572

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

Location: Ewa Beach DateCollected: 4/22/2018 Area: Honolulu DateSubmitted: 4/23/2018 State: Hawaii DateReceived: 4/23/2018 United States DateExamined: 4/23/2018 Country:

SPECIMENS SUBMITTED: Carcass-Fresh

History: This turtle was found stranded near Kapilina Homes in the Ewa Beach area on

22 April 2018. It was collected and taken to IRC for evaluation and humanely euthanized due to a poor prognosis. The MTBAP stranding ID is

4/22/18C.

Findings: Accession 1-green turtle immature female in poor body condition.

Significant gross findings included multiple tumors on the eyes, skin, cloaca, and jaw hinge, and glottis along with abscesses in carapace bone.

Final diagnosis: Accession 1-Fibropapillomatosis.

Comments: Gross lesions pointed to fibropapillomatosis as cause of stranding.

Management: Continued efforts to develop a serological test for herpesvirus

associated with FP to better understand epidemiology of this disease.

Report Date (mm/dd/yyyy): 7/26/2018 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.

WILDLIFE HEALTH CENTER NATIONAL NECROPSY REPORT

Date Examined:

Prosector:

Pathologist:

4/23/2018

T. M. Work

T. M. Work

Submitter Name:

Dr. Todd Jones 25572 Case:

National Oceanic and Atmospheric Accession: Date Collected: 4/22/2018

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818 United States

Signalment-Morphometrics-History

CONDITION: (Poor) POSTMORTEM:(Excellent) EUTHANASIA:(Lethal injection)

TAG TYPE: (Reference Number) TAG NO.: (4/22/18C)

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

MORPHOMETRICS: Weight carcass (21 kg), Straight carapace length (57.4 cm).

COLLECTION-SITE: (Ewa Beach) AREA: (Honolulu) STATE: (Hawaii) COUNTRY: (United States)

HISTORY: This turtle was found stranded near Kapilina Homes in the Ewa Beach area on 22 April 2018. It was collected and taken to IRC for evaluation and humanely euthanized due to a poor prognosis. The MTBAP stranding ID is 4/22/18C.

External/Internal

EXTERNAL: There are 19 external tumors: 4 on the left front flipper, 3 each on the neck and right hind flipper, 2 on each eye, and 1 each on the right front flipper, left hind flipper, cloaca, each jaw hinge, and two tumors in the glottis.

INTERNAL: There is an abscess in the bone on the underside of the left dorsal scute and a smaller bone abscess is found cranial. The bladder contains nine trematodes.

PRELIMINARY DIAGNOSIS: Fibropapilloma.

Samples

SECIMENS RECEIVED: Carcass-Fresh.

Laboratory Results

HEMATOLOGY: Hematocrit-22%, TotalSolids-2.4 g/dl (4/23/2018).

COMMENTS: Gross lesions pointed to fibropapillomatosis as cause of stranding.

Final Diagnosis (in order of importance)

Diagnosis PoqoT Morpho Etiol Funct Link 1. Fibropapillomatosis (T01000)(M76810)() () (

Diagnostic findings may not be published without the knowledge and consent of the pathologist. Milt Code: (Infectious disease)

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: 25574

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

DateCollected: 03/12/2018 Location: Puako Hawaii Area: DateSubmitted: 4/23/2018 State: Hawaii DateReceived: 4/23/2018 United States DateExamined: 4/23/2018 Country:

SPECIMENS SUBMITTED: Tissue-Fixed formalin

History: This turtle was found with fishing line entanglement injuries in a Puako tidepool on Big Island on 12 March 2018. It was shipped to Oahu and surgery was performed to remove the right front flipper which was severely severed by fishing line. The turtle was released on 22 March at Sand Island Beach Park. Formalin-fixed tissues from the amputated flipper were submitted to HFS for histology. Identification: Stranding date - 3/12/18A, LHF pit tag - 0402162820, RHF pit tag - 0402162727.

Findings: Accession 1-green turtle immature unknown sex in unknown body condition.

Histology revealed abundant connective tissues with necrosis and lymphoid infiltrates.

Final diagnosis: Accession 1-Entanglement.

Comments: Microscopically, it appeared that the mass on the flipper was scar tissue.

Management:

Report Date (mm/dd/yyyy): 7/26/2018 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.

NATIONAL WILDLIFE HEALTH CENTER NECROPSY REPORT

Submitter Name:

Dr. Todd Jones 25574 Case:

National Oceanic and Atmospheric Accession:

Administration

Date Collected: 03/12/2018 1845 Wasp Blvd Bldg 176 Date Examined: 4/23/2018 Honolulu, Hawaii 96818 Prosector: T. M. Work United States T. M. Work Pathologist:

Signalment-Morphometrics-History

CONDITION: (Unknown) POSTMORTEM: (Unknown) EUTHANASIA:(Not euthanized)

TAG TYPE: (Reference Number) TAG NO.: (3/12/18A)

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

MORPHOMETRICS: Weight carcass (19 kg), Straight carapace length (50.5 cm).

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

HISTORY: This turtle was found with fishing line entanglement injuries in a Puako tidepool on Big Island on 12 March 2018. It was shipped to Oahu and surgery was performed to remove the right front flipper which was severely severed by fishing line. The turtle was released on 22 March at Sand Island Beach Park. Formalinfixed tissues from the amputated flipper were submitted to HFS for histology. Identification: Stranding date - 3/12/18A, LHF pit tag - 0402162820, RHF pit tag -0402162727.

External/Internal

EXTERNAL:

INTERNAL:

PRELIMINARY DIAGNOSIS: Fishing line entanglement.

Samples

SECIMENS RECEIVED: Tissue-Fixed formalin.

HISTO: Skin (A); Skin (B); Skin (C).

Laboratory Results

HISTOPATHOLOGY

Skin: Tumor stroma consists of collagen fibers and sparse fibroblasts. Diffuse areas of the stroma manifest coagulation necrosis associated with clumps of basophilic rods and infiltrates of red cells. Unaffected skin has prominent dermal lymphoid infiltrates.

COMMENTS: Microscopically, it appeared that the mass on the flipper was scar tissue.

Final Diagnosis (in order of importance) Topog Morpho Etiol Diagnosis Funct Dis 1. Entanglement) () () ()(D82200)()

Diagnostic findings may not be published without the knowledge and consent of the pathologist.

Milt Code: (Other)

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: 25575

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

Kaiaka Bay Beach Park DateCollected: Location: 4/23/2018 Honolulu Area: DateSubmitted: 4/24/2018 State: Hawaii DateReceived: 4/24/2018 United States DateExamined: 4/24/2018 Country:

SPECIMENS SUBMITTED: Carcass-Fresh

History: This turtle originally stranded on 20 April 2018 at Kaiaka Bay Beach Park near Haleiwa. It returned to the water, but stranded again on 23 April and was collected and taken to IRC for evaluation. Due to a large glottal tumor and a poor prognosis, the animal was humanely euthanized on 24

April. The MTBAP stranding identification is 4/20/18B.

Findings: Accession 1-green turtle immature female in fair body condition.

Significant gross findings included mutliple tumors on the skin, eye, jaw

hinges, and glottis with leech eggs on the plastron.

Final diagnosis: Accession 1-Fibropapillomatosis.

Comments: Gross findings pointed to fibropapillomatosis as cause of stranding.

Management: Continued efforts to develop a serological test for herpesvirus

associated with FP to better understand epidemiology of this disease.

Report Date (mm/dd/yyyy): 7/26/2018 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.

NATIONAL WILDLIFE HEALTH CENTER NECROPSY REPORT

Submitter Name:

Dr. Todd Jones 25575 Case:

National Oceanic and Atmospheric Accession: Date Collected: 4/23/2018

Administration

1845 Wasp Blvd Bldg 176 Date Examined: 4/24/2018 Honolulu, Hawaii 96818 Prosector: T. M. Work United States T. M. Work Pathologist:

POSTMORTEM:(Excellent) CONDITION: (Fair) EUTHANASIA:(Lethal injection)

Signalment-Morphometrics-History

TAG TYPE: (Reference Number) TAG NO.: (4/20/18B)

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

MORPHOMETRICS: Weight carcass (12.7 kg), Straight carapace length (46.3 cm).

COLLECTION-SITE: (Kaiaka Bay Beach Park) AREA: (Honolulu) STATE: (Hawaii)

COUNTRY: (United States)

HISTORY: This turtle originally stranded on 20 April 2018 at Kaiaka Bay Beach Park near Haleiwa. It returned to the water, but stranded again on 23 April and was collected and taken to IRC for evaluation. Due to a large glottal tumor and a poor prognosis, the animal was humanely euthanized on 24 April. The MTBAP stranding identification is 4/20/18B.

External/Internal

EXTERNAL: There are 39 external tumors: 10 on the neck, 7 on the left front flipper, 6 on the right front flipper, 4 on each hind flipper, 2 on each eye, and 1 each on the cloaca, right head, each jaw hinge, and a large tumor in the glottis. There are leech eggs on the plastron.

INTERNAL: One bladder trematode is found.

PRELIMINARY DIAGNOSIS: Fibropapilloma.

Samples

SECIMENS RECEIVED: Carcass-Fresh.

Laboratory Results

COMMENTS: Gross findings pointed to fibropapillomatosis as cause of stranding.

Final Diagnosis (in order of importance)

Diagnosis Topog Morpho Etiol Funct Dis Link (T01000)(M76810)(1. Fibropapillomatosis) () () ()

Diagnostic findings may not be published without the knowledge and consent of the pathologist. Milt Code: (Infectious disease)

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: 25576

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

Location: Laniakea DateCollected: 4/24/2018 Area: Honolulu DateSubmitted: 4/25/2018 State: Hawaii DateReceived: 4/25/2018 United States 4/25/2018 DateExamined: Country:

SPECIMENS SUBMITTED: Carcass-Fresh

History: This animal was found stranded near a Laniakea on 24 April 2018 and was picked up and taken to IRC for evaluation. Due to a poor prognosis, the animal was humanely euthanized the following day. The MTBAP stranding ID

is 4/24/18B.

Findings: Accession 1-green turtle immature male in poor body condition.

Significant gross findings included multiple tumors on the skin and eyes

and an internal tumor in the kidney classified as a fibroma.

Final diagnosis: Accession 1-Fibropapillomatosis.

Comments: Gross and microscopic lesions pointed to fibropapillomatosis as cause of

stranding.

Management: Continued efforts to develop a serological test for herpesvirus

associated with FP to better understand epidemiology of this disease.

Report Date (mm/dd/yyyy): 7/26/2018 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.

WILDLIFE HEALTH CENTER NATIONAL NECROPSY REPORT

Submitter Name:

Dr. Todd Jones 25576 Case:

National Oceanic and Atmospheric Accession: Date Collected: 4/24/2018

Administration

1845 Wasp Blvd Bldg 176 Date Examined: 4/25/2018 Honolulu, Hawaii 96818 Prosector: T. M. Work United States T. M. Work Pathologist:

Signalment-Morphometrics-History

POSTMORTEM:(Excellent) EUTHANASIA:(Lethal injection) CONDITION: (Poor)

TAG TYPE: (Reference Number) TAG NO.: (4/24/18B)

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

MORPHOMETRICS: Weight carcass (5.9 kg), Straight carapace length (37.8 cm).

COLLECTION-SITE: (Laniakea) AREA: (Honolulu) STATE: (Hawaii) COUNTRY: (United States)

HISTORY: This animal was found stranded near Laniakea on 24 April 2018 and was picked up and taken to IRC for evaluation. Due to a poor prognosis, the animal was humanely euthanized the following day. The MTBAP stranding ID is 4/24/18B.

External/Internal

EXTERNAL: There are 7 external tumors: 2 each on the left front flipper and neck and 1 on the right front flipper and each eye.

INTERNAL: There is a 2 cm tumor on the right kidney. The intestines contain a large number of trematode eggs.

PRELIMINARY DIAGNOSIS: Fibropapilloma.

Samples

SECIMENS RECEIVED: Carcass-Fresh.

HISTO: Kidney (A); Skin, Kidney (B); Skin (C).

Laboratory Results

HEMATOLOGY: Hematocrit-30%, TotalSolids-2.2 g/dl (4/25/2018).

HISTOPATHOLOGY

Skin: Diffusely, tumor consists of collagenous stroma with plump pleomorphic fibroblasts. Diffuse areas of tumors manifest coagulation necrosis or hemorrhage. Tumors are overlaid by orthokeratotic hyperkeratotic epidermis.

Kidney: Tumor consists of collagenous stroma with sparse fibroblasts that interdigitates with tubules and contains pleomorphic cysts lined by columnar epithelium.

COMMENTS: Gross and microscopic lesions pointed to fibropapillomatosis as cause of stranding.

Final Diagnosis (in order of importance)
Diagnosis Topog Morpho Etiol Funct Dis Link
1. Fibropapillomatosis (T01000)(M76810)()()()()()
Diagnostic findings may not be published without the knowledge and consent of the pathologist.

Milt Code: (Infectious disease)

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: 25581

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

DateCollected: 5/3/2018 Location: Haleiwa Boat Harbor Honolulu Area: DateSubmitted: 5/4/2018 State: Hawaii DateReceived: 5/4/2018 United States DateExamined: 5/4/2018 Country:

SPECIMENS SUBMITTED: Carcass-Fresh

History: This turtle was found stranded in Haleiwa Boat Harbor on 3 May 2018. It was taken to IRC for evaluation and the decision was made to humanely euthanize due to a poor prognosis. The MTBAP stranding date is 5/3/18.

Findings: Accession 1-green turtle immature male in good body condition.

Significant gross findings included multiple tumors on the skin, eyes, jaw hinge and glottis. The glottal tumor partially occluded the trachea leading to lung hyperinflamtion. Extensive scarring and inflammation was seen in fascia of muscle of left front flipper.

Final diagnosis: Accession 1-Fibropapillomatosis.

Comments: Necropsy pointed to fibropapillomatosis complicated by fishing line entanglement as cause of stranding.

Management: Continued efforts to develop a serological test for herpesvirus associated with FP to better understand epidemiology of this disease.

Report Date (mm/dd/yyyy): 7/26/2018 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.

NATIONAL WILDLIFE HEALTH CENTER NECROPSY REPORT

Submitter Name:

Dr. Todd Jones 25581 Case:

National Oceanic and Atmospheric Accession:

Administration

Date Collected: 5/3/2018 1845 Wasp Blvd Bldg 176 Date Examined: 5/4/2018 Honolulu, Hawaii 96818 Prosector: T. M. Work United States T. M. Work Pathologist:

Signalment-Morphometrics-History

EUTHANASIA:(Lethal injection) CONDITION: (Good) POSTMORTEM: (Excellent)

TAG TYPE: (Reference Number) TAG NO.: (5/3/18)

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

MORPHOMETRICS: Weight carcass (9.8 kg), Straight carapace length (47.3 cm).

COLLECTION-SITE: (Haleiwa Boat Harbor) AREA: (Honolulu) STATE: (Hawaii) COUNTRY: (United

States)

HISTORY: This turtle was found stranded in Haleiwa Boat Harbor on 3 May 2018. It was taken to IRC for evaluation and the decision was made to humanely euthanize due to a poor prognosis. The MTBAP stranding date is 5/3/18.

External/Internal

EXTERNAL: The carapace and dorsal surfaces are covered in ulva and enteromorpha algae. Fishing line is wrapped around the left front flipper and a small hook is found in the left jaw hinge tumor. There are 11 external tumors: 2 on the left hind flipper and each eye and 1 on the left front flipper, right hind flipper, right front flipper, and each jaw hinge.

INTERNAL: There is a large 6X4 cm ball-valve glottal tumor causing hyperinflation of the lungs. There is an area of fibrin and scars in the fascia surrounding the left front flipper. Two trematodes are found in the bladder.

PRELIMINARY DIAGNOSIS: Fibropapilloma.

Samples

SECIMENS RECEIVED: Carcass-Fresh.

HISTO: Skeletal muscle (A).

Laboratory Results

HEMATOLOGY: Hematocrit-23%, TotalSolids-3.6 g/dl (5/4/2018).

HISTOPATHOLOGY

Skeletal muscle: Diffuse areas of fibrosis with mixed infiltrates of mononuclears and granulocytes surround cores of eosinophilic debris lined by giant cells.

COMMENTS: Necropsy pointed to fibropapillomatosis complicated by fishing line entanglement as cause of stranding.

Final Diagnosis (in order of importance) Diagnosis Etiol Funct Dis Link Topog Morpho 1. Fibropapillomatosis (T01000)(M76810)() () ()(AW) 2. Entanglement) () () ()(D82200)() Diagnostic findings may not be published without the knowledge and consent of the pathologist. Milt Code: (Infectious disease)

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: 25583

Submitter Name: Species submitted (n):

Dr. Todd Jones Turtle: Green (1)

National Oceanic and Atmospheric

Administration

1845 Wasp Blvd Bldg 176 Honolulu, Hawaii 96818

United States

Location: Onekahakaha Beach Park DateCollected: 5/05/2018 Hawaii Area: DateSubmitted: 5/9/2018 Hawaii State: DateReceived: 5/9/2018 United States DateExamined: 5/9/2018 Country:

SPECIMENS SUBMITTED: Carcass-Chilled

History: This turtle was found dead, mutilated, and floating upside down in a tidepool at Onekahakaha Beach Park on 5 May 2018. The front flippers had been removed - one was found nearby along the tide line. Conservation

officers were notified. The MTBAP stranding date is 5/5/18A.

Findings: Accession 1-green turtle adult female in excellent body condition.

Significant gross findings included clotted blood in the mouth and traumatic disarticulation of both front flippers with associated

bleeding. The neck was also perforated with a cut trachea and associated

hemorrhage.

Final diagnosis: Accession 1-Trauma.

Comments: Gross lesions pointed to man-made trauma (butchering) as cause of death.

Based on pale color of internal organs, it is likely the animal bled out.

It appears that attempts were made to kill the animal by stabbing the neck

and severing the trachea.

Management: This case has been referred to NOAA and State of Hawaii DLNR Law

enforcement.

Report Date (mm/dd/yyyy): 7/26/2018 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.

NATIONAL WILDLIFE HEALTH CENTER NECROPSY REPORT

Submitter Name:

Dr. Todd Jones 25583 Case:

National Oceanic and Atmospheric Accession: Date Collected: 5/05/2018

Administration 1845 Wasp Blvd Bldg 176

Date Examined: 5/9/2018 Honolulu, Hawaii 96818 Prosector: T. M. Work United States T. M. Work Pathologist:

Signalment-Morphometrics-History

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

TAG TYPE: (Reference Number) TAG NO.: (5/5/18A)

SPECIES: (Turtle: Green) AGE: (Adult) SEX: (Female)

MORPHOMETRICS: Weight carcass (64 kg), Straight carapace length (75.8 cm).

COLLECTION-SITE: (Onekahakaha Beach Park) AREA: (Hawaii) STATE: (Hawaii)

COUNTRY: (United States)

HISTORY: This turtle was found dead, mutilated, and floating upside down in a tidepool at Onekahakaha Beach Park on 5 May 2018. The front flippers had been removed - one was found nearby along the tide line. Conservation officers were notified. The MTBAP stranding date is 5/5/18A.

External/Internal

EXTERNAL: There is clotted blood on the plastron and in the mouth. Feces are coming out of the cloaca. Both front flippers are disarticulated at the scapular-humeral joint and there is associated hemorrhage in the adjoining skeletal muscle. There is a 5 cm long cross-section gash on the ventral neck with subcutaneous hemorrhage. The trachea is severed with clotted blood in the lumen. There is severe gular hemorrhage. There is a 2X1 cm gash into the left neck bone with associated hemorrhage.

INTERNAL: The heart appears pale. The gut is full of amansia. There is clotted blood in the left lung bronchus.

PRELIMINARY DIAGNOSIS: Butchered carcass.

Samples

SECIMENS RECEIVED: Carcass-Chilled.

HISTO: Skeletal muscle, Heart (A); Spleen, Heart (B); Lung (C); Liver, Kidney (D).

Laboratory Results

HISTOPATHOLOGY

Spleen: Diffusely, there are regions of brown pigment deposition.

All other Organs: No remarkable lesions are seen.

COMMENTS: Gross lesions pointed to man-made trauma (butchering) as cause of death. Based on pale color of internal organs, it is likely animal bled out. It appears

that attempts were made to kill the animal by stabbing the neck and severing the trachea.