DIAGNOSTIC CASE REPORT

U. S. GEOLOGICAL SURVEY-BIOLOGICAL RESOURCES DIVISION
NATIONAL WILDLIFE HEALTH CENTER-HONOLULU FIELD STATION
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Case Number: 17965

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Species submitted (n):

Turtle: Green (9)

SPECIMENS SUBMITTED: Carcass-Frozen

These turtles died over a 5 month period (Aug-Dec) in 2004. Nine turtles were shipped to Honolulu, HI where 7 underwent necropsy at the Honolulu Field Station. An addition 2 turtles were sent to Colorado State University Department of Pathology for examination. This report details findings from the 7 turtles necropsied at the HFS.

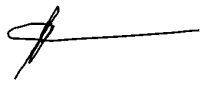
Acc	Date_Coll	Age	Sex	Diagnosis
1	09/14/2004	Immature	Male	Undetermined
2	03/00/2004	Immature	Female	Undetermined
3	04/01/2002	Immature	Female	Trauma suspect
4	11/00/2003	Immature	Male	Undetermined
5	10/27/2004	Immature	Unknown	Emaciation suspect
6	05/23/2004	Immature	Male	Emaciation suspect
7	05/06/2004	Immature	Male	Emaciation suspect
8	11/00/2003	Immature	Unknown	Not necropsied
9	11/00/2003	Immature	Unknown	Not necropsied

Comments: Animals 1, 5 and 6 had missing fragments of the trailing edge of the rear flippers suggesting that turtles were biting each other. This along with the fair to poor body condition and the trauma in one animal indicates that there are serious management issues for these captive turtles, starting with the fact that they are probably are being housed too densely or are not being fed sufficiently. No lesions indicative of cause of death were seen in 3 turtles. The smallest turtles all died either directly from or had bacterial infections secondary to massive infection with vascular flukes. It is difficult to tell from necropsy whether heavy parasite loads preceded or were a sequela to emaciation. Note that both turtles sent for necropsy to Colorado State University were diagnosed with severe parasitic granulomas as well (report separate).

Management: The management of these captive turtles needs to be carefully rethought. Consider either housing animals in lower densities or feeding them a diet that is appropriate to maintain body condition. Several facilities in the US have experience maintaining captive green turtles, even at high densities, with no loss of body condition. Proper feeding would also lessen chances of turtles biting each other in the rear flippers. Consider determining why one turtle had a traumatic amputation of the limb. Finally, if these turtles are being kept in a well-defined area, the presence of large numbers of vascular flukes indicates that the intermediate host for these parasites (probably a snail) is present in possibly high numbers. Given that the life cycle of vascular flukes in green turtles is unknown, this may be an opportunity to both identify the intermediate host and to implement appropriate management to reduce densities of this host in the lagoon and thus decrease chances of infections in captive turtles.

Report Date (mm/dd/yyyy): 7/1/2005 **Necropy report:** Available upon request

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 .

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 1
Date Collected: 09/14/2004
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(MARINE)

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

MORPHOMETRICS: Weight carcass (7727 g), Straight carapace length (38.2 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY: This animal is one of seven received from Tahiti that showed lack of energy and no appetite. Most died several days after not eating. This animal identified as Marine showed no eye reflex and died on 9-25-04. Body measurement: SCL-38.2.

External/Internal

EXTERNAL: The hind flippers are bitten on the trailing edges. There is unidentified animal flesh in the oral cavity.

INTERNAL: There adequate coelomic fat. The liver is firm, smooth, and homogenous purple-brown. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The lungs are spongy and homogenous pink. The tracheal lumen is smooth and tan. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan. The esophageal mucosa is smooth and homogenous tan. The stomach contains small amounts of Turbinaria algae. The small intestines are smooth and homogenous tan. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa and serosa, gonads, adrenal and thyroid glands, pancreas and superficial and cut surface of liver, heart, kidney, spleen, and lungs.

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Gland salt, Brain (A); Skeletal muscle, Liver, Spleen, Skin (B); Lung (C); Kidney (D); Heart (E); Intestine small (F).

Laboratory Results

HISTOPATHOLOGY

Brain: There are small numbers of trematode eggs associated with macrophages and giant cells.

Gland salt: There are small numbers of trematode eggs associated with macrophages and giant cells.

Spleen: The organ is moderately autolyzed, and there are moderate numbers of trematode eggs.

Liver: The organ is moderately autolyzed, and there are small numbers of trematode eggs.

Kidney: The organ is moderately autolyzed, and there are small numbers of trematode eggs.

Intestine small: There are scattered aggregate of trematode eggs within the serosa.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Moderate, focal, chronic, inflammation with trematode eggs, spleen, kidney, salt gland, kidney, liver, small intestines.

COMMENTS:No gross or microscopic lesions indicative of cause of death were seen.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Undetermined	(T00010)	( )	(E00040)	(FY3500)	( )	( )

Milt Code: (Open)

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 2
Date Collected: 03/00/2004
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(NEMO)

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

MORPHOMETRICS: Weight carcass (16364 g), Straight carapace length (49.5 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY: This animal is one of seven received from Tahiti that showed lack of energy and no appetite. Most died several days after not eating. This animal identified as Nemo was caught in fishing net and was brought to the center. It died in September 2004. Body measurement: SCL-49.5 cm.

External/Internal

EXTERNAL: There are moderate amounts of algae on the plastron and a healing laceration in the right inguinal area.

INTERNAL: There are moderate amounts of coelomic fat. The liver is firm, smooth, and homogenous purple-brown. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The lungs are spongy and homogenous pink. The tracheal lumen is smooth and tan. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The stomach contains small amounts of Turbinaria algae and leaves. The intestines are smooth and homogenous tan. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa and serosa, gonads, adrenal and thyroid glands, pancreas and superficial and cut surface of liver, heart, kidney, spleen, and lungs.

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Gland salt, Brain (A); Liver, Skin, Spleen (B); Lung (C); Kidney (D); Heart (E); Intestine small, Intestine large (F).

Laboratory Results

HISTOPATHOLOGY

Brain: There are small numbers of trematode eggs.

Gland salt: There are small numbers of trematode eggs.

Liver: The organ is moderately autolyzed, and there are small numbers of trematode eggs.

Spleen: The organ is moderately autolyzed, and there are moderate numbers of trematode eggs.

Skin: There is focal erosion of the skin characterized by replacement of epidermis with masses of eosinophilic debris.

Lung: Small numbers of trematode eggs are seen within the muscularis.

Kidney: The organ is moderately autolyzed, and there are small numbers of trematode eggs. All other tissues: No remarkable lesions are seen.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Moderate, focal, chronic, inflammation with trematode eggs, spleen, kidney, salt gland, kidney, lung, liver, small intestines.
2. Mild, focal, chronic, necrosis and inflammation, skin.

COMMENTS:No gross or microscopic lesions indicative of cause of death were seen.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Undetermined	(T00010)	( )	(E00040)	(FY3500)	( )	( )

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

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
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United States

Case: 17906
Accession: 3
Date Collected: 00/00/2004
Date Examined: 12/3/2004
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:() TAG NO.:()

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

MORPHOMETRICS: Weight carcass (7727 g), Straight carapace length (37.3 cm).

COLLECTION-SITE:(Le Meridien Hotel Bora Bora) AREA:(Tahiti) STATE:(Departement Outre Mer) COUNTRY:(France)

HISTORY: This animal was found dead in the lagoon of Le Meridien-Bora Bora in Tahiti and shipped to Honolulu for necropsy. Body measurements (cm): SCL-37.3, SCW-32.7, plastron length-30.5, notch length-36.9, CCL-40.0, CCW-37.0.

External/Internal

EXTERNAL: There are 3 mototool dots on the 3rd lateral left scute. The eyes are sunken.

INTERNAL: The liver is firm, smooth, and homogenous red-brown. The heart is firm, smooth, homogenous purple-pink and otherwise unremarkable. The lungs are spongy and homogenous red-pink. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The intestines are homogenous tan. No lesions are seen in the brain, musculoskeletal system, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa and serosa, gonads, adrenal and thyroid glands, pancreas and superficial and cut surface of liver, heart, kidney, spleen, and lungs.

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

LAB SPECIMENS: Kidney-Frozen, Liver-Frozen (Toxicology).

HISTO: Brain (A); Spleen, Lung (B); Kidney (C); Heart (D); Gland salt, Stomach, Thymus (E); Intestine small (F); Liver (G).

Laboratory Results

TOXICOLOGY: Levels of Poisoning syndrome, NOS in Kidney were ppm by HPLC (CVDL), Levels of Anticoagulant rodenticide, poisoning syndrome in Liver were ppm by HPLC (CVDL), Levels of Brodifacoum in Liver were ppm by HPLC (CVDL), Levels of Chlorophacinone in Liver were ppm by HPLC (CVDL), Levels of Diphacinone in Liver were ppm by HPLC (CVDL).

HISTOPATHOLOGY

Lung: There are small numbers of trematode eggs within smooth muscle wall.

Spleen: There are small numbers of trematode eggs.

Stomach: There are small numbers of trematode eggs within the lamina propria some of which are accompanied by macrophages.

Intestine small: There are small numbers of trematode eggs within the lamina propria some of which are accompanied by macrophages.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Mild, focal, chronic, inflammation with trematode eggs, small intestines, stomach, spleen, lung.

COMMENTS:No gross or microscopic lesions indicative of cause of death were seen. However, this must be qualified by the poor state of preservation of tissues that could have masked subtle lesion. There was no evidence of poisoning by paraquat or anticoagulant rodenticides.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Undetermined	(T00010)	( )	(E00040)	(FY3500)	( )	( )

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

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
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United States

Case: 17906
Accession: 4
Date Collected: 00/00/2004
Date Examined: 12/3/2004
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(SHARK)

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

COLLECTION-SITE:(Le Meridien Hotel Bora Bora) AREA:(Tahiti) STATE:(Departement Outre Mer) COUNTRY:(France)

HISTORY: Formalin-fixed tissues from this animal found dead in the lagoon of Le Meridien-Bora Bora in Tahiti were shipped to Honolulu for histopathological examination. Specimen identification: Tortue Shark.

External/Internal

EXTERNAL: No necropsy report.

INTERNAL: No necropsy report.

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Tissue-Fixed formalin.

HISTO: Liver (A); Esophagus (B); Esophagus (C).

Laboratory Results

HISTOPATHOLOGY

Esophagus: There are foci of mucosal necrosis and focal lymphoid infiltrate in the submucosa.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Mild, focal, necrosis and chronic inflammation, mucosa, esophagus.

COMMENTS:The liver section was markedly autolyzed precluding adequate histologic interpretation. No lesions indicative of cause of death were seen.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Undetermined	(T00010)	( )	(E00040)	(FY3500)	( )	( )

pathologist. Milt Code: (Open)

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
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United States

Case: 17965
Accession: 5
Date Collected: 10/27/2004
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:() TAG NO.:()

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

MORPHOMETRICS: Weight carcass (1545 g), Straight carapace length (22.9 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY: This animal is one of seven received from Tahiti that showed lack of energy and no appetite. Most died several days after not eating. This animal showed no eye reflex and died in December 2004. Body measurement: SCL-22.9 cm. Identification: white dot on 4th central scute.

External/Internal

EXTERNAL: The hind flippers are bitten on trailing edges. The animal is severely emaciated.

INTERNAL: There is marked atrophy of coelomic fat. The liver is firm, smooth, homogenous purple-brown, and appears enlarged. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The lungs are pink and contain scattered firm nodules granulomas. The tracheal lumen is smooth and tan. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The stomach contains a large amount of unidentified meat. The intestines are tan and the serosa contains large numbers of egg packets. The intestines are mostly empty. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa, adrenal and thyroid glands, pancreas and superficial and cut surface of heart, kidney, and spleen.

PRELIMINARY DIAGNOSIS: Pneumonia.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Intestine small, Lung (A); Lung (B); Liver, Heart (C); Kidney, Brain, Spleen (D).

Laboratory Results

HISTOPATHOLOGY

Lung: There are massive numbers of trematode eggs within the muscularis some of

which efface pulmonary architecture and are associated with eosinophilic debris. Within ediculae are accumulations of mononuclear cells. Several vessels are occluded by eosinophilic debris, masses of trematode eggs, and trematodes.

Heart: Large numbers of trematodes are seen within the lumen.

Kidney: Large numbers of trematode eggs are seen among proximal tubules.

Spleen: Small numbers of trematode eggs are seen.

Intestine small: There are large numbers of trematode eggs within the serosa.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Severe, diffuse, necrosis and inflammation associated with trematode eggs, lung.
2. Severe, diffuse, trematodiasis, heart, kidney, spleen, small intestines.

COMMENTS:Gross and microscopic lesions indicated this animal died from emaciation complicated by massive infection with vascular trematodes.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Emaciation suspect	( )	( )	( )	( )	(D10140)	( )
2. Vascular flukes	(T40000)	( )	(E46500)	( )	( )	( )
3. Septicemia suspect	( )	( )	( )	( )	(D00800)	( )

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

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 6
Date Collected: 05/23/2004
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(11)

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

MORPHOMETRICS: Weight carcass (1409 g), Straight carapace length (21.8 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY: This animal is one of seven received from Tahiti that showed lack of energy and no appetite. Most died several days after not eating. This animal showed decreased energy and low appetite starting mid October and died on 12-3-04. Body measurement: SCL-21.8 cm. Identification: 11 on first lateral left scute.

External/Internal

EXTERNAL: The hind flippers have multiple lacerations on the caudal edge indicating they were bitten. The animal is severely emaciated.

INTERNAL: There is marked atrophy of coelomic fat. The liver contains seven 1-3mm granulomas. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The right lung contains one 5 mm caseous granuloma. The tracheal lumen is smooth and tan. The spleen is firm, smooth, and homogenous red-brown. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The mid-small intestinal serosa contains multiple, firm, 1-3mm, beige nodules, and the intestines are empty. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa, gonads, adrenal and thyroid glands, pancreas and superficial and cut surface of heart, kidney, and spleen.

PRELIMINARY DIAGNOSIS: Pneumonia and hepatitis.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Lung (A); Lung, Liver (B); Spleen, Liver (C); Kidney, Heart (D); Intestine small (E); Brain (F).

Laboratory Results

HISTOPATHOLOGY

Lung: There are massive numbers of trematode eggs within the muscularis some of which efface pulmonary architecture and are associated with eosinophilic debris.

Within ediculae are accumulations of mononuclear cells. There is a large nidus of eosinophilic debris mixed with trematode eggs and surrounded by a connective tissue capsule.

Liver: There are scattered variably sized nidi of eosinophilic debris mixed with clumps of bacteria surrounded by giant cells and macrophages.

Intestine small: Within the submucosa are large numbers of trematode eggs. Large nidi of eosinophilic debris surrounded by giant cells and containing occasional trematode eggs are seen within the serosa.

Brain: Small numbers of trematode eggs are seen.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Severity, diffuse, chronic, inflammation and necrosis with trematode eggs, lung, small intestines.
2. Severe, focal, chronic, inflammation and necrosis with bacteria, liver.

COMMENTS:Gross and microscopic lesions indicated this animal died from emaciation complicated by massive infection with vascular trematodes.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Emaciation suspect	( )	( )	( )	( )	(D10140)	(AW)
2. Vascular flukes	(T40000)	( )	(E46500)	( )	( )	( )

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

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 7
Date Collected: 05/06/2004
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(NONE)

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

MORPHOMETRICS: Weight carcass (1273 g), Straight carapace length (20.9 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY: This animal is one of seven received from Tahiti that showed lack of energy and no appetite. Most died several days after not eating. This animal identified as None died on 8-16-04. Body measurement: SCL-20.9 cm. Identification: 13.

External/Internal

EXTERNAL: The animal is severely emaciated.

INTERNAL: There is marked atrophy of coelomic fat. The left liver lobe contains multiple 1-2mm yellow-white nodules. The heart is firm, smooth, homogenous red-pink and otherwise unremarkable. The left lung contains multiple firm 1-3 mm yellow-white nodules. The tracheal lumen is smooth and tan. The spleen contains two 2mm granulomas. The kidneys are firm, smooth, and homogenous brown. The brain is smooth, firm, and homogenous tan-pink. The esophageal mucosa is smooth and homogenous tan. The mid intestinal serosa contain numerous small (1-2 mm) dark nodular aggregates. The intestines are empty. No lesions are seen in the brain, pericardial sac, heart valves, tracheal lumen, gall bladder, gastrointestinal mucosa, gonads, adrenal and thyroid glands, pancreas and superficial and cut surface of heart and kidney.

PRELIMINARY DIAGNOSIS: Hepatitis and pneumonia.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

HISTO: Kidney, Brain (A); Spleen, Heart (B); Liver (C); Lung (D); Intestine small (E).

Laboratory Results

HISTOPATHOLOGY

Spleen: There are moderate numbers of trematode eggs. Near the edge is a large nidus of eosinophilic debris mixed with bacteria and surrounded by macrophages and giant cells.

Liver: There are scattered variably sized nidi of eosinophilic debris mixed with clumps of bacteria surrounded by giant cells and macrophages.

Lung: There are massive numbers of trematode eggs within the muscularis some of which efface pulmonary architecture and are associated with eosinophilic debris. Within ediculae are accumulations of mononuclear cells. There is a large nidus of eosinophilic debris mixed with trematode eggs and surrounded by a connective tissue capsule.

Intestine small: Within the submucosa are large numbers of trematode eggs. Large nidi of eosinophilic debris surrounded by giant cells and containing occasional trematode eggs are seen within the serosa.

All other Organs: No remarkable lesions are seen.

Morphologic Diagnosis:

1. Severity, diffuse, chronic, inflammation and necrosis with trematode eggs, lung, small intestines.
2. Severe, focal, chronic, inflammation and necrosis with bacteria, liver.

COMMENTS:Gross and microscopic lesions indicated this animal died from emaciation complicated by massive infection with vascular trematodes.

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Emaciation suspect	( )	( )	( )	( )	(D10140)	( )
2. Vascular flukes	(T40000)	( )	(E46500)	( )	( )	( )
3. Septicemia suspect	( )	( )	( )	( )	(D00800)	( )

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

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
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Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 8
Date Collected: 11/00/2003
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(PT41G)

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

MORPHOMETRICS: Weight carcass (9636 g), Straight carapace length (40.6 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY:

External/Internal

EXTERNAL:

INTERNAL:

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

Laboratory Results

COMMENTS:None

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Not necropsied	( )	( )	( )	(B00010)	( )	( )

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

Milt Code: (No code)

N A T I O N A L W I L D L I F E H E A L T H C E N T E R
N E C R O P S Y R E P O R T

Submitter Name:

Mr. George Balazs
National Oceanic and Atmospheric Administration
2570 Dole St
Honolulu, Hawaii 96822
United States

Case: 17965
Accession: 9
Date Collected: 11/00/2003
Date Examined: 4/26/2005
Prosector: T. M. Work
Pathologist: T. M. Work

Signalment-Morphometrics-History

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

TAG TYPE:(Reference number) TAG NO.:(16)

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

MORPHOMETRICS: Weight carcass (7273 g), Straight carapace length (38.2 cm).

COLLECTION-SITE:(Bora Bora) AREA:(Society Islands) STATE:(French Polynesia) COUNTRY:(France)

HISTORY:

External/Internal

EXTERNAL:

INTERNAL:

PRELIMINARY DIAGNOSIS: Undetermined.

Samples

SECIMENS RECEIVED: Carcass-Frozen.

Laboratory Results

COMMENTS:None

Final Diagnosis (in order of importance)

Diagnosis	Topog	Morpho	Etiol	Funct	Dis	Link
1. Not necropsied	( )	( )	( )	(B00010)	( )	( )

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

Milt Code: (No code)