

I.D.#: _____
(Stranding Reference)

Sea Turtle Necropsy Report

Observer's Name _____

Species (codes) Loggerhead (CC) Green (CM) Leatherback (DC) Hawksbill (EI)
 Kemp's Ridley (LK) Olive Ridley (LO) Unknown (UN)

Estimated age class hatchling post hatchling juvenile adult other

Date found _____ Time found _____ (international time - i.e. 9:00, 21:00)

Stranding Location Latitude _____
Longitude _____

Descriptive Location (include state, county and specific locality) _____

FOUND DEAD _____ FOUND ALIVE _____

FOR TURTLES FOUND ALIVE:

Clinical Condition: _____

Physical Exam Findings: _____

Treatment: _____

Manner of Death: Spontaneous Euthanized Accidental/ traumatic Unknown

Date died _____ Time died _____

Euthanasia method _____

Necropsy date _____

Necropsy time _____

Necropsy Condition Code 1 (Fresh dead) Code 2 (Moderately decomposed)
 Code 3 (Severely decomposed) Code 4 (Dried carcass)
 Code 5 (Skeleton)

Person(s) conducting necropsy _____

Other Information _____

Measurements

Taken with calipers

SCL: notch-tip _____ cm / inches

SCL: notch-notch _____ cm / inches

SCL: tip-tip _____ cm / inches

Straight Width _____ cm / inches

Head Width _____ cm / inches

Plastron Length _____ cm / inches

Taken with flexible tape

CCL: notch-tip _____ cm / inches

CCL: notch-notch _____ cm / inches

CCL: tip-tip _____ cm / inches

Curved width _____ cm / inches

Circumference _____ cm / inches

Body Depth _____ cm / inches

Sea Turtle Necropsy Sample Checklist

Test Sample	Histo ^a	Parasite	Bact/ Fung ^b	Viro/ Sero ^c	Chem Tox. ^d	Bio- Tox. ^e	Life hist. ^f	Storage Location	Sample Distribution (where & when sent)
Code 1									
Carapace	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>		
Plastron	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>		
Skin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Head/skull	<input type="checkbox"/>						<input type="checkbox"/>		
Bone/joint.....	<input type="checkbox"/>						<input type="checkbox"/>		
Muscle	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>		
Trachea	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>					
Lung	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Thyroid	<input type="checkbox"/>								
Parathyroid	<input type="checkbox"/>								
Thymus	<input type="checkbox"/>			<input type="checkbox"/>					
Heart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Heart Vessels	<input type="checkbox"/>	<input type="checkbox"/>							
Spleen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>			
Blood		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Bone Marrow	<input type="checkbox"/>								
Oral Cavity	<input type="checkbox"/>								
Tongue	<input type="checkbox"/>								
Esophagus	<input type="checkbox"/>	<input type="checkbox"/>							
Coelomic cavity fluid	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Liver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Gallbladder	<input type="checkbox"/>	<input type="checkbox"/>							
Bile			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Stomach	<input type="checkbox"/>	<input type="checkbox"/>							
Stomach CONTENTS ..	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Pancreas	<input type="checkbox"/>								
Intestine/SMALL	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					
Intestine/LARGE	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>					
Intestinal CONTENTS ..	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			
Cloaca	<input type="checkbox"/>								
Adrenals	<input type="checkbox"/>								
Kidney	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Urinary bladder	<input type="checkbox"/>	<input type="checkbox"/>							
Urine.....			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Gonads, ducts	<input type="checkbox"/>				<input type="checkbox"/>		<input type="checkbox"/>		
Fat	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			
Brain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>		

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Sea Turtle Necropsy Sample Checklist

Sample	Test	Histo ^a	Parasite	Bact/ Fung ^b	Viro/ Sero ^c	Chem Tox. ^d	Bio- tox. ^e	Life hist. ^f	Storage Location	Sample Distribution
Code 2-3										
Carapace								<input type="checkbox"/>		
Plastron								<input type="checkbox"/>		
Head/skull								<input type="checkbox"/>		
Bone								<input type="checkbox"/>		
Stomach CONTENTS ..								<input type="checkbox"/>		
Code 4-5										
Carapace								<input type="checkbox"/>		
Plastron								<input type="checkbox"/>		
Head/skull								<input type="checkbox"/>		
Bone								<input type="checkbox"/>		

Adapted from Sample Necropsy Report in Marine Mammals Ashore: A Field Guide for Strandings (from Geraci and Lounsbury, 1993)

Sample Storage Chronology (Storage technique, freeze-thaw cycles (times), where tissues were sent, etc.)

What was done? _____ Date _____

Ancillary diagnostics:

- Photos Radiographs/X-ray Other Imaging _____

Where taken / stored?

Blood*: Green top tube - lithium heparin - for complete blood count

Red Top tube - no anticoagulant -for biochemicals

blood film

Tissue Samples and Fluids: Chemistry Bacteriology Virology

Mycology Other _____

Cytology/Impression smears: fixed unfixed

What / Where analyzed? _____ Date _____

I.D.#: _____

Stored samples: Foreign bodies: Bullet Stomach contents Monofilament
 Hooks Tar Balloon Plastic Other _____

Where stored? _____

Sea Turtle Necropsy Report

EXTERNAL EXAM

Ab=Abnormal NF=No Findings NE=Not Examined

Descriptions-include color, number, size, distribution , texture of lesions

Carapace Ab NF NE

Trauma

Propeller wound Puncture wounds Missing scutes Bites Tumors

Description/additional comments:

Carapace Epibiota Ab NF NE

Epibiota types Sponges Barnacle Polychaetes
 Goose barnacles Leeches Amphipod
 Bryozoans Other _____

Description/additional comments:

Plastron Ab NF NE

Trauma

Propeller wound Puncture wounds Missing scutes Bites Tumors

Plastron Marrow Ab NF NE

Description/additional comments:

Plastron Epibiota Ab NF NE :

Epibiota types Sponges Barnacle Polychaetes
 Goose barnacles Leeches Amphipod
 Bryozoans Other _____

Description/additional comments

Integument (Skin) Ab NF NE

Trauma

Sloughing Necrosis Net wounds Fishing line/rope Tumors
 Propeller wounds Other _____

Region: Head Neck Front Flippers Rear flippers Tail

Description/additional comments:

Integument Epibiota Ab NF NE:

Epibiota types Sponges Barnacle Polychaetes
 Goose barnacles Leeches Amphipod
 Bryozoans Other _____

Description/additional comments

RESPIRATORY SYSTEM

Trachea/Bronchi Ab NF NE

Abnormal Tissue: Trachea Bronchi

Characteristics:

Mucosa: White Vessels congested with blood
 Hemorrhage Ulcers

Trauma: Punctures Lacerations

Fluid: Serous Mucoid Purulent

Fluid or foam:

Color: _____

Parasites (SAVE): _____ Number

Description/additional comments:

Lungs Ab NF NE

Characteristics:

Color:

Lesion location: Left Right Both
 Cranial Caudal Dorsal
 Ventral Middle

Distribution: Diffuse Focal Multifocal

Severity: Mild Moderate Severe

Description/additional comments:

ENDOCRINE SYSTEM

Thyroid Ab NF NE :

Characteristics: Normal Enlarged Atrophied Friable

Dimensions: _____ cm (l) x cm (w) x cm (h)

Weight: _____ gm

Description/additional comments

Parathyroid(s) Ab NF NE

If unable to find, save lining over left thymus

Characteristics: Normal Enlarged Atrophied

Dimension(s): _____ cm (l) x cm (w) x cm (h)

Weight: _____ gm

Description/additional comments:

Adrenal gland(s) Ab NF NE

Normal Enlarged Atrophied

Dimensions: _____ cm (l) x cm (w) x cm (h)

Weight: _____ gm

Description/additional comments:

CARDIOVASCULAR SYSTEM

Pericardial sac Ab NF NE
Fluid amount: _____ ml
Color: _____ **Viscosity:** _____
Characteristics:
 Clear Cloudy/flocculent material Blood tinged Hemorrhage
 Blood clots Adhesions Plaques Caseous material
Description/additional comments:

Pulmonary arteries Ab NF NE **& Aorta**
Characteristics:
 Thrombi Plaques Ruptures
 Parasites (Trematodes--SAVE) _____ Number, _____ Size
Description/additional comments:

Atria Ab NF NE
 Left Right Both
Characteristics:
 Flaccid Stiff Thickened Dilated
 Hemorrhage Pale areas Parasites
Dimensions (cm (l) x cm (w) x cm (h)): _____ left, _____ right
Thickness of wall: right _____ cm, left _____ cm
Color: Surface: _____ Lumen: _____
Description/additional comments:

Ventricle Ab NF NE
Characteristics:
Dimensions: _____ cm (l) x cm (w) x cm (h)
Thickness of wall _____ cm
Weight _____ gm
 Abscess/granulomas Masses Scars (fibrosis) Friable
Color: _____
Description/additional comments:

I.D.#: _____

LYMPHOID SYSTEM

Spleen Ab NF NE

Characteristics: Enlarged Atrophied Friable

Dimensions: _____ cm (l) x cm (w) x cm (h)

Weight: _____ gm

Abscesses/granulomas Masses Scars (fibrosis) Friable

Color: _____

Description/additional comments:

Thymus Ab NF NE

Characteristics: Enlarged Atrophied Friable

Color: _____

Description/additional comments:

GASTROINTESTINAL SYSTEM

Liver Ab NF NE

Characteristics:

Dimensions: _____ cm (l) x cm (w) x cm (h)

Weight: _____ gm (or lbs/oz)

Color: _____

Types of Lesions: Abscesses/granulomas Cysts Masses
 Congestion Fibrosis Necrosis

Severity of Lesions: Slight Mild Moderate Severe

Other: Fatty (greasy) Friable Cirrhotic Fractured

Parasites (SAVE): _____ Number

Description/additional comments:

Gall Bladder Ab NF NE

Bile: amount _____ ml

Characteristics: thick thin

Color: serosa: _____ mucosa: _____ bile: _____

Diameter _____ cm

Types of Lesions: Abscesses/granulomas Cysts Masses
 Congestion Fibrosis Necrosis

Other: Friable Stones Gritty material

Parasites (SAVE): _____ Number

Description/additional comments:

Oral Cavity & Pharynx Ab NF NE

Characteristics:

- Ulcers Fluid Vomitus
 Congestion Parasites Barnacles
 Broken beak Mandible Maxilla
 Foreign bodies _____

Description/additional comments:

Esophagus Ab NF NE

Characteristics:

- Dilated Constricted Perforated
 Fluid filled Foreign bodies _____ (SAVE)
 Parasites (SAVE) _____ Number
 Other _____

- Mucosa:** Congested Hemorrhagic Ulcers
 Necrosis Thickened Blunted papilla*
 Film on surface of mucosa

Color: mucosa: _____ **serosa:** _____

*Common in green sea turtles

Description/additional comments:

Stomach Ab NF NE

Characteristics:

- Clotted blood Thickened Ruptures/laceration
 Volvulus (twist) Erosions
Ulcers: Mild Moderate Severe
 Focal Multifocal Focally-extensive
 Extensive
Color: mucosa _____ **serosa:** _____ **contents:** _____
Contents: Empty Fluid Dilated with gas
 Mucus Sand Rocks
 Other: _____ Foreign bodies _____ (SAVE)
Food: Fish Bivalves Crustaceans
 Cephalopods Gastropods Other _____
 Undigested Partially digested Digested
Parasites: Yes No
 <50 >50

Description/additional comments:

Mesentery Ab NF NE **I.D.#:** _____

Characteristics:

- Hemorrhage Clotted blood Masses
 Parasites (trematodes in mesenteric arteries)-SAVE _____ Number

Description/additional comments:

Pancreas Ab NF NE

Characteristics:

- Loss of lobulation Necrotic Edema Inflamed

Color: _____

Description/additional comments:

Small Intestine Ab NF NE

Characteristics: Empty Bile Digesta

- Other _____ Foreign bodies _____ (SAVE)

Parasites (SAVE): _____ Number

Color: mucosa _____ serosa: _____ contents: _____

- Torsion/volvulus Perforation Masses Abscesses

- Constrictions Diverticula Ulcers (#) _____

Pseudomembrane

Description/additional comments:

Colon Ab NF NE

Characteristics:

- Torsion/volvulus Perforation Masses Abscesses

- Constrictions Empty Feces

- Fresh blood Tarry Other _____

- Ulcers (#) _____ Pseudomembrane

Parasites (SAVE): _____ Number

Color: mucosa _____ serosa: _____ contents: _____

Description/additional comments:

URINARY TRACT

Kidneys Ab NF NE

Characteristics:
 Dimensions R _____ cm (l) x cm (w) x cm (h)
 Dimensions L _____ cm (l) x cm (w) x cm (h)
Cortex color: _____
Medulla color: _____

Lesions:

<input type="checkbox"/> Dilated with blood	<input type="checkbox"/> Hemorrhage	<input type="checkbox"/> Clotted blood
<input type="checkbox"/> Abscesses/granulomas	<input type="checkbox"/> Parasites	<input type="checkbox"/> Cysts
<input type="checkbox"/> Dilated with urine	<input type="checkbox"/> Masses	<input type="checkbox"/> Calculi
<input type="checkbox"/> Congestion	<input type="checkbox"/> Necrosis (focal, multifocal, diffuse)	

Left weight _____ gm
Right weight _____ gm

Description/additional comments:

Ureters Ab NF NE

Characteristics:
 Dilated Strictures Granulomas Calculi (SAVE)
 Bilaterally symmetrical: Yes No

Description/additional comments:

Urethra Ab NF NE

Characteristics:
 Patent: Yes No
 Lesion: Ulcers Calculi Strictures

Description/additional comments:

Urinary bladder Ab NF NE

Characteristics:
 Empty Dilated Thickened Tumors

Color: mucosa: _____ **urine:** _____

Mucosa: Hemorrhagic Ulcerated
 Masses Plaques Necrotic

Urine: amount _____ ml Consistency: _____

Gritty material Clear Cloudy/flocculent material Blood tinged

Parasites: Yes(SAVE) No
 <5 5-20 >20

urinalysis strip (dip stick):

Description/additional comments:

I.D.#: _____

REPRODUCTIVE

Gonads <input type="checkbox"/> Ab <input type="checkbox"/> NF <input type="checkbox"/> NE
Characteristics:
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female
Maturity: <input type="checkbox"/> Mature <input type="checkbox"/> Immature
<input type="checkbox"/> Enlarged <input type="checkbox"/> Involted <input type="checkbox"/> Masses <input type="checkbox"/> Follicles
<input type="checkbox"/> Necrotic
Description/additional comments:

Oviduct <input type="checkbox"/> Ab <input type="checkbox"/> NF <input type="checkbox"/> NE
Characteristics:
<input type="checkbox"/> Enlarged <input type="checkbox"/> Dilated with fluid <input type="checkbox"/> Hemorrhagic <input type="checkbox"/> Friable
<input type="checkbox"/> Tumors <input type="checkbox"/> Masses <input type="checkbox"/> Mucus <input type="checkbox"/> Eggs
Description/additional comments:

NERVOUS SYSTEM

Dura mater and Inside calvarium <input type="checkbox"/> Ab <input type="checkbox"/> NF <input type="checkbox"/> NE
Characteristics:
<input type="checkbox"/> Hemorrhage <input type="checkbox"/> Clotted blood <input type="checkbox"/> Abscesses/Granulomas
Description/additional comments:

Central Nervous System <input type="checkbox"/> Ab <input type="checkbox"/> NF <input type="checkbox"/>
Cerebral Spinal Fluid (CSF): _____ml color: _____
Spinal Cord Fluid (SCF): _____ml color: _____
Characteristics: (denote location of change in comments)
<input type="checkbox"/> Distended red vessels <input type="checkbox"/> Abscesses/Granulomas <input type="checkbox"/> Clotted blood
<input type="checkbox"/> Hemorrhage <input type="checkbox"/> Asymmetry <input type="checkbox"/> Edema <input type="checkbox"/> Black nodules
Lesions: <input type="checkbox"/> Brain <input type="checkbox"/> Spinal Cord _____(location) <input type="checkbox"/> Pituitary <input type="checkbox"/> Meninges
Weight: brain _____gm pituitary _____gm
NE Description/additional comments:

Peripheral Nervous System <input type="checkbox"/> Ab <input type="checkbox"/> NF <input type="checkbox"/> NE Axillary nerve:
Other (s): _____
Characteristics:
<input type="checkbox"/> Granulomas <input type="checkbox"/> Hemorrhage <input type="checkbox"/> Asymmetry <input type="checkbox"/> Edema
Description/additional comments:

Other:

Internal Auditory Meatus: Ab NF NE

TERMS

- ABSCCESS-A circumscribed collection of pus in an acute or chronic localized infection.
- ADHESIONS-The process of adhering or uniting two surfaces with fibrous bands.
- CALCULI-Plural for concretions composed of salts of inorganic or organic acids or other material.
- CALVARIA-skull cap; roof of the skull.
- CASEOUS-A form of necrosis in which the necrotic tissue resembles cheese.
- CIRRHOTIC-Progressive liver disease characterized by scarring and shrinking tissue.
- CONGESTION-Presence of an abnormally large amount of fluid in the vessels or passages of a part or organ.
- CONSTRICTION (STRICTURE)-Binding or contraction of a part.
- CYST-An abnormal sac containing gas, fluid, or a semisolid material.
- DIFFUSE-Involving the majority or all of the structure. General distribution.
- DIVERTICULA-A pouch or sac opening from a tubular or sacular organ, such as the gut or bladder.
- EDEMA-An accumulation of an excessive amount of watery fluid in cells, tissues, or serous cavities.
- EROSIONS-A shallow ulcer limited to superficial tissue layers.
- FIBROUS-Tissue composed of slender threads or filaments. Extracellular filamentous structures such as collagenic or elastic connective tissue.
- FLACCID-Relaxed; flabby; without tone.
- FLOCCULENT-Flaky material.
- FOCAL-A single point of involvement.
- FOCALLY-EXTENSIVE-Comprised of many lesion foci or points spreading over the surface of an organ.
- FOLLICLES-Spheroid cell aggregations in the ovary.
- FRACTURE-A break or rupture especially as it relates to bone.
- FRIABLE-Easily torn when touched or manipulated.
- GELATINIZED- An accumulation of an excessive amount of watery fluid in cells or tissues.
- GRANULOMA-A circumscribed chronic localized infection containing necrotic tissue resembling cheese.
- HEMORRHAGIC-Relating to marked bleeding.
- INFLAMED-Abnormal swelling and redness.
- INVOLUTED-The turning inward of the edges of a part. The return of an enlarged organ, as the postpartum oviduct, to normal size.
- LACERATION-A wound made by tearing. A rent.
- LOBATION-The production of rounded projecting parts.
- MASSES-A lump or aggregation of coherent material.
- MUCOSA-The mucous membrane (tunica mucosa) of any organ (e.g. stomach lining).
- MUCOID-Material which resembles clear viscous secretions.
- MULTIFOCAL-Consisting of many lesion foci or points.
- NECROSIS*-Tissue damage. Can be focal, multifocal, focally extensive or diffuse (throughout the organ).
- *If the turtle condition is not class 1, then this can be confused with autolysis (postmortem tissue decay)
- PAPILLAE-Finger-like projections or elevations.
- PATENT-Open, unobstructed.
- PERFORATION (Punctures)-A hole pierced through a structure.
- PLAQUES-A patch or small differentiated area on a surface.
- PROLAPSE-protrusion of a part of viscus from normal orientation.
- PSEUDOMEMBRANE-False membrane covering and/ adherent to true surface.
- PURULENT-Inflammation characterized by pus.
- RUPTURE-Forcible tearing or breaking of a part.

I.D.#: _____

SCARRED-Fibrous tissue replacing normal tissues destroyed by injury or disease.

SEROSA-The serous membrane (tunica serosa) covering viscera.

SEROUS-Material that has a watery consistency.

TARRY STOOLS-Black thick feces which could indicate bleeding in the stomach or upper intestinal tract.

THROMBI-Blood clot which adheres to the wall of the blood vessel.

TUMOR- A lump or aggregation of coherent tissue which grows independent of surrounding structures.

ULCERS-A lesion on the skin or lining of the intestinal tract caused by superficial or deep loss of tissue, usually with necrosis and inflammation.

VOLVULUS-A twisting of the intestine causing obstruction.