Marine Biology
Lab Practical 2 Study Guide 1

Fish & Turtle Identification
Fish Identification
Blue Marlin

Family Istiophoridae, BILLFISHES

*Makaira nigricans*
Longbill Spearfish

Family Istiophoridae, BILLFISHES

Tetrapturus pfluegeri
Sailfish

Family Istiophoridae, BILLFISHES

*Istiophorus platypterus*
White Marlin

Family Istiophoridae, BILLFISHES

*Tetrapтерus albidus*
Bluefish

Family Pomatomidae, BLUEFISHES

*Pomatomus saltatrix*
Bonefish

Family Albulidae, BONEFISHES

*Albula vulpes*
Cobia (ling)

Family Rachycentridae, COBIA

*Rachycentron canadum*
Dolphin

Family Coryphaenidae, DOLPHINS

*Coryphaena hippurus*
Atlantic Croaker

Family Sciaenidae, DRUMS

*Micropogonias undulatus*
Black Drum

Family Sciaenidae, DRUMS

*Pogonias cromis*
Red Drum (redfish)

Family Sciaenidae, DRUMS

*Sciaenops ocellatus*
Sand Seatrout

Family Sciaenidae, DRUMS

*Cynoscion arenarius*
Silver Seatrout

Family Sciaenidae, DRUMS

*Cynoscion nothus*
Spotted Seatrout

Family Sciaenidae, DRUMS

*Cynoscion nebulosus*
Silver Perch (yellowtail)

Family Sciaenidae, DRUMS

*Bairdiella chrysoura*
Weakfish

Family Sciaenidae, DRUMS

*Cynoscion regalis*
Gulf Flounder

Family Bothidae, LEFTEYE FLOUNDERS

*Paralichthys albigutta*
Black Grouper

Family Serranidae, SEA BASSES AND Grouper

Mycteroperca bonaci
Gag

Family Serranidae, SEA BASSES AND GROPER

*Mycteroperca microlepis*
Jewfish (goliath grouper)

Family Serranidae, SEA BASSES AND GROPER

*Epinephelus itajara*
Nassau Grouper

Family Serranidae, SEA BASSES AND GROUPER

*Epinephelus striatus*
Red Grouper

Family Serranidae, SEA BASSES AND GROUPER

*Epinephelus morio*
Scamp

Family Serranidae, SEA BASSES AND GROUNDER

*Mycteroperca phenax*
Yellowfin Grouper

Family Serranidae, SEA BASSES AND GROUPER

*Mycteroperca venenosa*
Yellowmouth Grouper

Family Serranidae, SEA BASSES AND GROUPER

*Mycteroperca interstitialis*
Warsaw Grouper

Family Serranidae, SEA BASSES AND GROUPER

*Epinephelus nigritus*
Bank Sea Bass

Family Serranidae, SEA BASSES AND GROUPER

*Centropristis ocyurus*
Black Sea Bass

Family Serranidae, SEA BASSES AND GrouPER

Centropristis striata
Rock Sea Bass

Family Serranidae, SEA BASSES AND GROUPER

Centropristis philadelphica
White Grunt

Family Haemulidae, GRUNTS

*Haemulon plumieri*
American Shad

Family Clupeidae, HERRINGS

*Alosa sapidissima*
Almaco Jack

Family Carangidae, JACKS and POMPANOS

*Seriola rivoliana*
Banded Rudderfish

Family Carangidae, JACKS and POMPANOS

*Seriola zonata*
Blue Runner

Family Carangidae, JACKS and POMPANOS

*Caranx crysos*
Crevalle Jack

Family Carangidae, JACKS and POMPANOS

*Caranx hippos*
Greater Amberjack

Family Carangidae, JACKS and POMPANOS

*Seriola dumerili*
Lesser Amberjack

Family Carangidae, JACKS and POMPANOS

*Seriola fasciata*
Florida Pompano

Family Carangidae, JACKS and POMPANOS

*Trachinotus carolinus*
Palometa

Family Carangidae, JACKS and POMPANOS

*Trachinotus goodei*
Permit

Family Carangidae, JACKS and POMPANOS

*Trachinotus falcatus*
Yellowfin Tuna

Family Scombridae, MACKERELS and TUNAS

*Thunnus albacares*
Cero (cero mackerel)

Family Scombridae, MACKERELS and TUNAS

*Scomberomoros regalis*
King Mackerel

Family Scombridae, MACKERELS and TUNAS

_Scomberomorous cavalla_
Spanish Mackerel

Family Scombridae, MACKERELS and TUNAS

*Scomberomorus regalis*
Wahoo

Family Scombridae, MACKERELS and TUNAS

*Acanthocybium solanderi*
Fantail Mullet

Family Mugilidae, MULLETS

*Mugil gyrans*
Striped (Black) Mullet

Family Mugilidae, MULLETS

*Mugil cephalus*
Blackfin Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus buccanella*
Cubera Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus cyanopterus*
Dog Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus jocu*
Grey Snapper (mangrove snapper)

Family Lutjanidae, SNAPPERS

*Lutjanus griseus*
Lane Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus synagris*
Mahogany Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus mahogoni*
Mutton Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus analis*
Queen Snapper

Family Lutjanidae, SNAPPERS

*Etelis oculatus*
Red Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus campechanus*
Schoolmaster

Family Lutjanidae, SNAPPERS

*Lutjanus apodus*
Silk Snapper

Family Lutjanidae, SNAPPERS

*Lutjanus vivanus*
Vermilion Snapper

Family Lutjanidae, SNAPPERS

*Rhomboplites aurorubens*
Yellowtail Snapper

Family Lutjanidae, SNAPPERS

Ocyurus chrysurus
Fat Snook

Family Centropomidae, SNOOKS

Centropomus parallelus
Common Snook

Family Centropomidae, SNOOKS

Centropomus undecimali
Swordpine Snook

Family Centropomidae, SNOOKS

*Centropomus ensiferus*
Tarpon Snook

Family Centropomidae, SNOOKS

*Centropomus pectorinatus*
Atlantic Spadefish

Family Ephippidae, SPADEFISHES

*Chaetodipterus faber*
Swordfish

Family Xiphiidae, SWORDFISHES

*Xiphias gladius*
Tarpon

Family Elopidae, TARPONS

Megalops atlanticus
Ladyfish

Family Elopidae, TARPONS

Elops saurus
Sheepshead

Family Sparidae, PORGIES

*Archosargus probatocephalus*
Jolthead Porgy

Family Sparidae, PORGIES

*Calamus bajonado*
Knobbed Porgy

Family Sparidae, PORGIES

*Calamus nodosus*
Pinfish

Family Sparidae, PORGIES

*Lagodon rhomboides*
Red Porgy

Family Sparidae, PORGIES

*Pagrus pagrus*
Gulf (Atlantic) Sturgeon

Family Acipenseridae, STURGEONS

*Acipenser oxyrinchus desotoi*
Gray Triggerfish

Family Balistidae, TRIGGERFISH

*Balistes capriscus*
Tripletail

Family Lobotidae, TRIPLETAILS

Lobotes surinamensis
Hardhead Catfish

Family Ariidae, CATFISH

Arius felis
Gafftopsail Catfish

Family Ariidae, CATFISH

Bagre marinus
Southern Stingray

Family Dasyatidae, STINGRAYS

*Dasyatis americana*
Shortfin Mako

Family Lamnidae, MACKEREL SHARKS

*Isurus oxyrinchus*
Bonnethead Shark

Family Sphyrnidae, HAMMERHEAD SHARKS

*Sphyrna tiburo*
Scalloped Hammerhead

Family Sphyrnidae, HAMMERHEAD SHARKS

*Sphyrna tiburo*
Black Tip Shark

Family Carcharhinidae, REQUIEM SHARKS

*Carcharhinus limbatus*
Atlantic Sharpnose Shark

Family Carcharhinidae, REQUIEM SHARKS

Rhizoprionodon terraenovae
Sandbar Shark

Family Carcharhinidae, REQUIEM SHARKS

*Carcharhinus plumbeus*
Bull Shark

Family Carcharhinidae, REQUIEM SHARKS
*Carcharhinus leucas*

Commonly found off Volusia County Beaches
Black Tip Shark

Family Carcharhinidae, REQUIEM SHARKS
*Carcharhinus limbatus*

Commonly found off Volusia County Beaches
Nurse Shark

**Family Ginglymostomatidae, CARPET SHARKS**

*Ginglymostoma cirratum*

Commonly found off Volusia County Beaches
Black Drum

Family Sciaenidae, DRUMS
*Pogonias cromis*

Commonly found in Mangrove Swamps
Common Snook

Family Centropomidae, SNOOKS
Centropomus undecimali

Commonly found in Mangrove Swamps
Grey Snapper (mangrove snapper)

Family Lutjanidae, SNAPPERS
*Lutjanus griseus*

Commonly found in Mangrove Swamps
Turtle Identification
Loggerhead Sea Turtle
*Caretta caretta*

Loggerheads' jaws are adapted for crushing and grinding. Their diet consists primarily of crabs, molluscs, shrimps, jellyfish, and vegetation. Most common sea turtle in Volusia county.
Green sea turtles have finely serrated jaws adapted for a vegetarian diet of sea grasses and algae. As adults, these are the only herbivorous sea turtles. Green sea turtles are mainly carnivorous from hatching until juvenile size; they then progressively shift to an herbivorous diet. Second most common sea turtle in Volusia county.
Leatherback Sea Turtle

*Dermochelys coriacea*

Leatherbacks have delicate scissor-like jaws that would be damaged by anything other than their normal diet of jellyfish, tunicates, and other soft-bodied animals. The mouth cavity and throat are lined with *papillae* (spine-like projections) pointed backward to help them swallow soft foods. Third most common sea turtle in Volusia county. Largest of all sea turtles.
Kemp’s Ridley Sea Turtle

*Lepidochelys kempii*

Ridleys' jaws are adapted for crushing and grinding. Their diet consists primarily of crabs, molluscs, shrimps, jellyfish, and vegetation. Kemp’s Ridley sea turtles are the most endangered.
Hawksbill Sea Turtle

*Eretmochelys imbricata*

A hawksbill has a narrow head with jaws meeting at an acute angle, adapted for getting food from crevices in coral reefs. They eat sponges, tunicates, shrimps, and squids.
Flatback Sea Turtle

*Natator Depressus*

Flatback turtles are omnivores, feeding on a variety of prey including sea cucumbers, jellies, soft corals, shrimp, crabs, molluscs, fish, and seaweed. The flatback has the smallest distribution of all sea turtles species and only breeds and nests in Australia.
Olive Ridley Sea Turtle
*Lepidochelys olivacea*

The Olive Ridley’s diet includes crabs, shrimp, lobsters, jellyfish, mollusks, and tunicates, and algae. The Olive Ridley occurs worldwide in tropical and warm temperate ocean waters. The Olive Ridley occurs within the tropical regions of the Pacific, Atlantic, and Indian Oceans.
Turtle Facts

The sea turtle nesting season is May through October.

The majority of Volusia County turtle hatchlings are female.

Some of the things that commonly cause injuries to sea turtles include:
- Shark bites
- Fishing line
- Plastic bags

Sea turtle eggs have many predators including:
- Ants
- Ghost crabs
- Raccoons
- Birds

Oceanfront lights are harmful to sea turtles because they distract the turtles causing them to move away from the ocean.
Turtle Excluder Device (TED) is a device fitted to a net or modification that allows turtles to escape immediately after capture in the net.
Mosquito
Family: Culicidae

The mosquitoes are a family of small, midge-like flies. Although a few species are harmless or even useful to humanity, most are a nuisance because they consume blood from living vertebrates, including humans. The females of many species of mosquitoes are blood eating pests. In feeding on blood, some of them transmit extremely harmful human and livestock diseases, such as malaria. All mosquitoes have one common requirement--they need water to complete their life cycle. They can breed in almost any source of water.
Red Mangrove

Red mangroves generally are found closest to the water's edge and are distinguished easily from other mangroves by their prominent prop roots which extend into the water from higher up on the stem of the plant. Red mangroves have leaves which are somewhat larger and shinier than those of other mangroves. They are further distinguished by their fruits, or propagules, which are long and pencil-shaped. While these may resemble seed pods, they are actually embryonic root structures.
Black Mangrove

Black mangroves are found upland to the red mangroves, located at higher elevations, and are the most cold tolerant. The bark of this tree is dark which gives it the name black mangrove. "The leaves are shiny dark green on the top, oblong and pointed at the tip. The undersides of the leaves are a dull green color with short dense hairs-glands-which excrete salt the leaves serve as a back-up system for ridding the Black Mangrove of the salt that has not been excreted by the roots."
White Mangrove

The white mangroves are located at higher elevations than both the red and black mangroves. This type can also be identified by its leaves. The leaves are a light green color, approximately 3 inches in length, and are rounded at both ends. At the base of the leaves you will find two bumps called glands. The glands excrete the salt found in the water like a filtering system.
Shorebirds Common in Volusia County

- Sanderling
- Ruddy Turnstone
- American Oystercatcher
What is Imprinting?

Imprinting is the predisposition of young birds to form a strong emotional attachment with the first object they see, which is generally their mother. As a result the young birds will follow the parent around, learning to recognize other members of their species and picking up important life skills.

Young birds have been known to imprint on humans as shown in the picture to the right.
Injured birds can be dropped off 24 hours a day, 7 days a week.
Questions

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