Macroalgae (seaweed)

Habitat: Unlike seagrasses, algae do not have true roots, stems or flowers. Many types of algae attach to hard surfaces (rocks, shells) using holdfasts.

Prey: Algae are autotrophic--they produce their own food by using the sun's energy to convert carbon dioxide and water into oxygen and sugars in the process called photosynthesis.

Predators: Macroalgae are eaten by many herbivores (plant-eaters) including snails, sea urchins, and fish

Mangroves

Habitat: There are three types of mangroves found in Florida, red mangroves, black mangroves and white mangroves. Mangroves have the ability to thrive in waterlogged soils which may have salinities ranging from 0 - 90 ppt (fresh water to very, very salty). Mangroves are found from the intertidal coastal area into the immediate upland area.

Prey: Like all plants, mangroves produce their own food by photosynthesis

Predators: Consumers of mangroves in Florida include several species of crab and snails.

Marsh grass

Habitat: intertidal coastal areas in northern Florida. The salt marsh is one of the most productive ecosystems on Earth. Marshes protect the mainland from flooding, filter sediment and some pollutants from the water, and are home to many species of fish, shellfish and birds.

Prey: Marsh grass produce food by photosynthesis

Predators: Marsh periwinkles (snails) and crabs feed on the live grass. Many decomposers, like bacteria, feed on the decaying leaves.

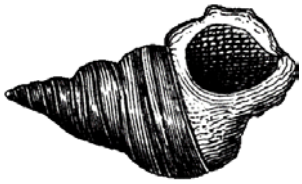
Phytoplankton

Habitat: Plankton are microscopic organisms that float freely with oceanic currents and in other bodies of water. Plankton is made up of tiny plants (called **phytoplankton**) and tiny animals (called **zooplankton**).

Prey: Phytoplankton are primary producers (also called autotrophs). As the base of the oceanic food web, they use chlorophyll to convert energy (from sunlight), inorganic chemicals (like nitrogen), and dissolved carbon dioxide gas into carbohydrates.

Predators: Many filter feeding organisms eat phytoplankton, including fish, clams and sponges

Snails

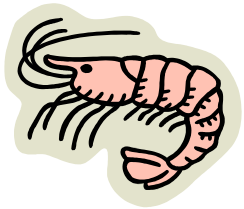


Habitat: Marsh periwinkles are very common in the salt marsh. During high tide, they crawl up cordgrass stalks to avoid predators. At low tide, they crawl down the stalks to feed.

Predators: blue crabs and red drum. Sea stars and sheepshead porgies often eat snails.

Prey: dead plants and other organic matter.

Shrimp



Habitat: Grass shrimp hide among the cordgrass at high tide. Because they're transparent, these shrimp blend right in. Other shrimp species, like white, brown and pink shrimp live in the open waters of the estuary and ocean.

Prey: Shrimp are scavengers. They help break down detritus, small bits of dead plants and animals, into even smaller bits which more animals can eat.

Predators: Many fish, whales and humans like to eat shrimp!

Manatees

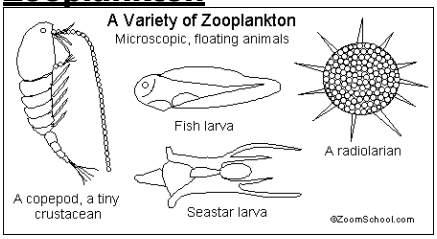
Endangered Species

Habitat: Warm coastal waters and rivers. Manatees cannot survive water colder than 46°F (8°C) and in winter move upriver to warm lakes or to the heated discharge from power plants

Prey: The Manatee browses on aquatic vegetation, particularly water hyacinth and hydrilla. An adult consumes 60 to 100 pounds (27–45 kg) of food per day.

Predators: Large sharks, alligators, crocodiles, and killer whales

Zooplankton



Habitat: Plankton float freely with oceanic currents and in other bodies of water.

Prey: Zooplankton are microscopic animals that eat other plankton.

Predators: Plankton is the first link in the marine food chain; it is eaten by many organisms, including mussels, fish, birds, and mammals (like baleen whales).

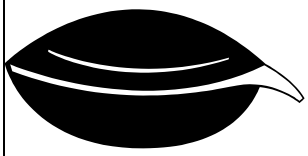
Oysters

Habitat: Oysters are commonly found in intertidal areas. Oysters are found attached to hard surfaces in water 10-40' (3-12 m) deep, especially in areas of low salinity.

Prey: Oysters feed on plankton (microscopic plants and animals present in the water).

Predators: Humans, some fish and snails, possible sea stars, octopus

Clams



Habitat: The hard clam, *Mercenaria mercenaria,* burrows shallowly in sediments of either mud or sand. It is among the most commercially important species of invertebrates. Clams prefer brackish to salty water.

Prey: Like other clams, it is a filter feeder, so it eats plankton out of the water

Predators: Clams are eaten by crabs, starfish, rays, octopus and other predators, including humans!

Mullet

Habitat:
Common in estuaries; also found in coastal oceans.

Prey: The striped mullet, *Mugil cephalus,* is a heterotroph (eats both plants and animals). Mullet shift from feeding primarily on small zooplankton, to feeding on detritus and algae as they get older.

Predators: Lizardfish, needlefish, crabs, etc. prey on juvenile *M. cephalus*. Larger mullet are subject to larger predators such as snook, snappers, barracuda, dolphins, etc.

Blue crab

Habitat: Blue crabs are very common in coastal bays and shallow waters of salt marshes. They may hide among salt marsh plants or in eel grass, or dig right into the soft mud.

Prey: Blue crabs prefer mollusks such as oysters and hard clams as their primary food sources, though older juveniles and adults sometimes incorporate some plant material such as green algae, eelgrass, and marsh grass into the diet.

Predators: The major fish predators on blue crabs include the Black Drum, Red Drum, the American Eel and the American Croaker

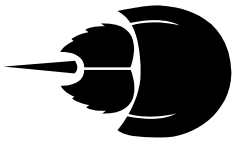
Fiddler crab

Habitat: This crab prefers a muddy habitat and frequently digs into mud banks along brackish and salty tidal marshes, sharing burrows with the Marsh Crab. The fiddler crab, *Uca pugilator*, is often recognized because the pincers of male crabs are greatly unequal in size, one very large, one small; (those of female crabs are small and equal in size).

Prey: Fiddler crabs are scavengers and feed on detritus

Predators: Birds, fish

Horseshoe crab



Habitat: The Horseshoe Crab lives in warm, shallow coastal waters on the sea floor. It is not really a crab; it is more closely related to arachnids (spiders and scorpions). The Horseshoe Crab first appeared about 500 million years ago (during the Ordovician Period), and has changed very little since.

Prey: The Horseshoe Crab eats sea worms and mollusks (like young clams). They find their prey while walking along the sea bed; they are predominantly nocturnal (most active at night).

Small fish

Habitat: Most small fish live in places where they can hide from predators, including salt marsh and mangrove areas.

Prey: Most small fish eat zooplankton, although some feed on detritus and plant material.

Predators: Small fish are eaten by larger fish

Shore birds

Habitat: Most wading birds nest in trees, but feed in shallow, marshy areas.

Prey: Most wading birds (including the herons and egrets) feed primarily on shrimp and small fish.

Predators: Many years ago, the great egret was hunted by humans, not for its meat but for its long white feathers which were used on women's hats.

Snook

Habitat: Freshwater to coastal waters

Prey: Snook can be considered carnivores (meat eaters), feeding primarily on other fish species and shrimp.

Predators: Snook are a popular food fish with humans.

Hammerhead shark

Habitat: Hammerhead sharks are usually found near the surface. Young hammerheads, bonnethead sharks (shown in picture) and blacktip sharks are commonly found in the intracoastal in St. Johns county.

Prey: Hammerheads feed on fishes and squids. They are known to attack their own kind as well as people.

Predators: Other hammerheads

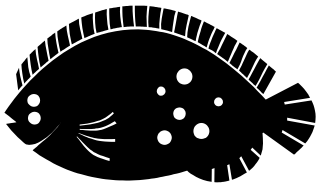
Stingray

Habitat: The Atlantic Stingray is distributed throughout shallow water habitats in the southeastern United States. Stingrays are common inhabitants of shallow estuaries, but also stray into freshwater areas.

Prey: The stingray diet is composed primarily of benthic invertebrates such as anemones, polychaete worms, amphipods, mysids (shrimp), isopods, bivalves (clams and oysters), and the calcified discs of brittlestars.

Predators: Humans cut disks out of the stingray "wings" to make fake scallops.

Flounder



Habitat: Flounders spawn offshore and juveniles move into the estuary, where they stay for about 2 years.

Prey: Southern flounder eat fish and shrimp

Predators: Humans

Squid

Habitat: Open waters

Prey: These fast-moving carnivores (meat-eaters) catch prey with their tentacles, then poison it with a bite from beak-like jaws. Adults eat voraciously, consuming a variety of crustacea and fish and even other squid.

Predators: Squid are also a food source for a variety of fish, marine mammals and birds. Some of the better-known predators are pilot whales, dolphins, shearwaters, fulmars, gannets, gulls, tunas, swordfish, haddock, cod, pollock and sharks.

Catfish

Habitat: Muddy bays

Prey: Catfish are distinguished by the presence of barbels, or "whiskers" and the lack of true scales. These barbels help the catfish find crabs, fish and shrimp.

Predators: Humans

Red drum (redfish)

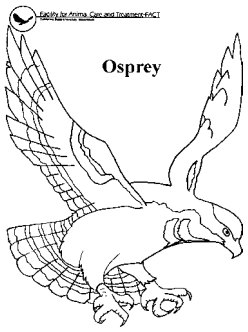
Habitat: Young red drum seem to prefer shorelines, shallow waters and seagrass beds. Immature red drum apparently stay within estuaries until they are about 3-6 years old.

Prey: Crustaceans (shrimp and crabs), fish and mollusks

Predators: Humans, other fish, sharks

(Picture by NOAA)

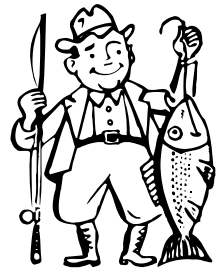
Osprey

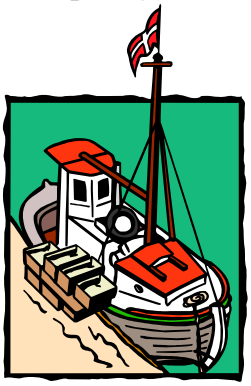


Habitat: Coastal fresh and saltwater areas.

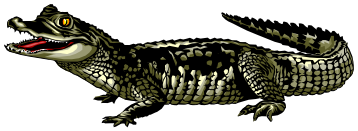
Prey: Ospreys search for fish by flying and hovering over the water, watching the surface below. When prey is sighted, an osprey dives steeply, its talons outspread, and splashes into the water. It quickly resurfaces and, if it has made a catch, flies off, adjusting the fish in its claws so that the head is pointed forward.

Humans





Alligator



Habitat: Alligators live in fresh and brackish marshes, ponds, lakes, rivers, swamps, bayous, and big spring runs. Alligators are important to the ecology of their habitat. During droughts they dig deep holes, or "dens," which provide water for the wildlife community.

Prey: Diet consists of rough fishes, small mammals, birds, turtles, snakes, frogs, and invertebrates.

Predators: Humans. Alligators have been relentlessly hunted for their hides and are much reduced in numbers. Under state and federal protection they are beginning to make a comeback in some areas.

Sea turtles

Habitat: Open water areas

Prey: Sea turtles may eat jellyfish, insects, oceanic snails, small fish, macroalgae and seagrasses.

Predators: Predation on nests by raccoons and to a lesser degree, feral (wild) pigs, cats and ghost crabs is an additional threat. In other regions of the world, predators include foxes, jaguars, ghost crabs and humans. Adult turtles may be eaten by humans and large fish predators like sharks.

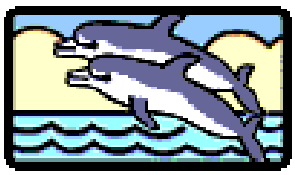
Raccoons

Habitat: wooded areas near freshwater streams or coastlines

Prey: Omnivorous (eating both meat and plants), the Common Raccoon eats grapes, nuts, berries, pawpaw, and black cherry; grubs, grasshoppers, and crickets; voles, deer mice, squirrels, and other small mammals; and bird eggs and nestlings, crayfish, frogs, worms, fish, dragonfly larvae, clams, turtles, and turtle eggs.

Predators: Foxes, Bobcats, Coyotes, owls, and humans

Dolphin



Habitat: Open waters of the estuary or ocean

Prey: primarily fish, however squid and shrimp are also eaten. Over 45 fish species are utilized as prey by bottlenose dolphins. Dolphins feed by swallowing prey species whole, or by breaking larger prey items into more manageable sizes by shaking or scraping them.

Predators: Large sharks such as tiger sharks, dusky sharks and bull sharks. The American alligator has also been observed to prey upon stranded dolphins, however, attacks by alligators are a rare occurrence.

Bacteria
Fungi

Bacteria and fungi play a very important, but often overlooked role in food webs. They are decomposers, which means that they take dead plant and animal matter and break it down chemically, releasing nutrients in dissolved form back into the environment.