

An Overview of Protected Species Commonly Found in the Gulf of Mexico

NOAA Fisheries Service
Southeast Regional Office
Protected Resources Division



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NOAA Fisheries Service is responsible for protecting the nation's living marine resources and their habitat.

What are protected species?

Any species under jurisdiction of NOAA Fisheries Service that is protected by either the Endangered Species Act (ESA) or the Marine Mammal Protection Act (MMPA). This includes threatened and endangered species, candidate species, and all marine mammals.



Definitions

PROTECTED SPECIES

Endangered Species: any species in danger of extinction throughout a significant portion of its range.

Threatened Species: any species likely to become endangered in the foreseeable future throughout a significant portion of its range.

Candidate Species: any species being considered for listing as threatened or endangered.

Species of Concern: any species that NOAA Fisheries Service has concerns regarding status and threats.



Marine Mammals: all marine mammals are protected from take (injury or harassment) under the MMPA regardless of status.

Threatened and endangered marine mammals are protected under both the ESA and MMPA.



There are **28 different species of marine mammals** known to occur in the Gulf of Mexico. All 28 species are protected under the MMPA and six are also listed as endangered under the ESA (sperm, sei, fin, blue, humpback and North Atlantic right whales).

Endangered Marine Mammals

Of the six ESA-listed whales, only endangered sperm whales are considered to commonly occur. There is a resident population of female sperm whales in the Gulf of Mexico, and whales with calves are sighted frequently.



Threatened and Endangered Sea Turtles

- Kemp's ridley sea turtles
- Hawksbill sea turtles
- Green sea turtles
- Loggerhead sea turtles
- Leatherback sea turtles

Threatened and Endangered Fish

- Gulf sturgeon
- Smalltooth sawfish



Gulf of Mexico

SPECIES OF CONCERN CANDIDATE SPECIES

Species of Concern

- Alabama Shad
- Dusky Shark
- Key silverside
- Largetooth Sawfish
- Mangrove Rivulus
- Nassau Grouper
- Night Shark
- Opossum Pipefish
- Saltmarsh Topminnow
- Speckled Hind
- Sand Tiger Shark
- Warsaw Grouper
- White Marlin

Candidate Species

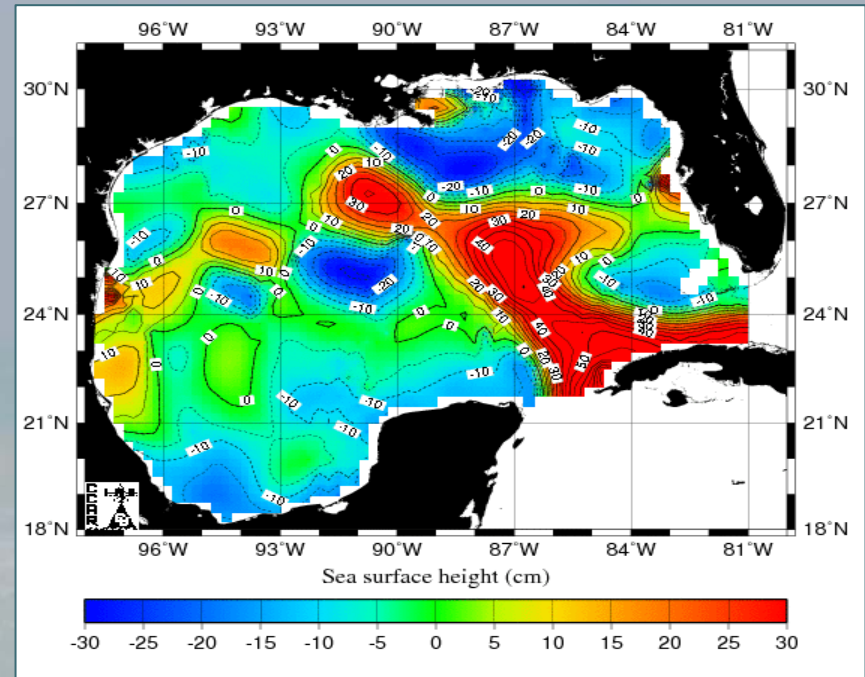
No candidate species are present in the Gulf of Mexico



Gulf of Mexico

ANIMAL DISTRIBUTION

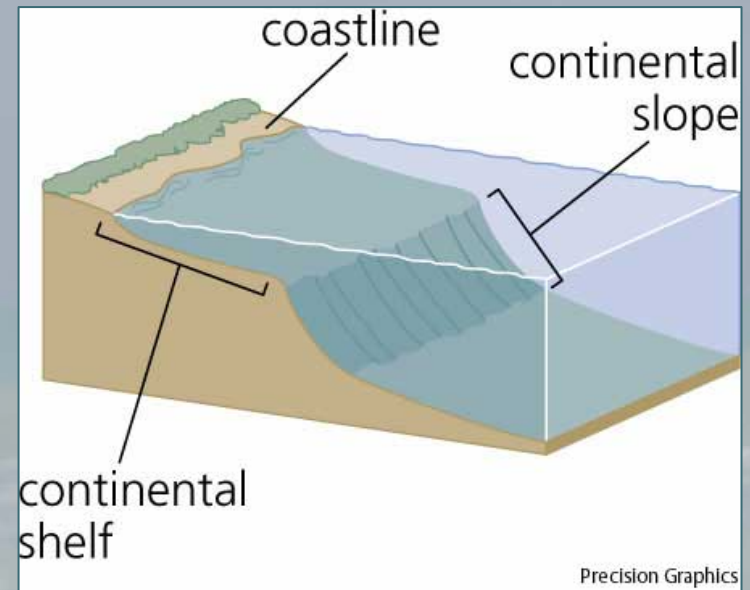
Animals are not randomly distributed in the oceans. Species inhabit areas that provide life-supporting needs such as shelter, feeding, and reproduction. Many species seasonally migrate or inhabit large home ranges to meet biological needs.



Sea surface height from satellite data. Sea surface height can indicate areas of upwelling and downwelling.

Oceanic features affect the distribution and abundance of protected species. Some important features include seafloor relief (e.g., shelf edges and canyons), water temperature, ocean currents (e.g., the Loop Current), and cyclonic and anti-cyclonic eddies.

The continental shelf extends seaward until it reaches a depth of approximately 200m. At the edge of the shelf, the seafloor descends down a slope to much greater water depths.



Protected species are often found near oceanographic features in the Gulf of Mexico. For example, areas of mixing and upwelling near the shelf edge, oceanic fronts, currents, and cyclonic eddies are all areas where many species find foraging opportunities or hunt their preferred prey.

Gulf of Mexico

NEARSHORE and OFFSHORE SPECIES



The Gulf of Mexico is home to a high diversity of organisms. Species may be generally grouped according to water depths where they most often occur.

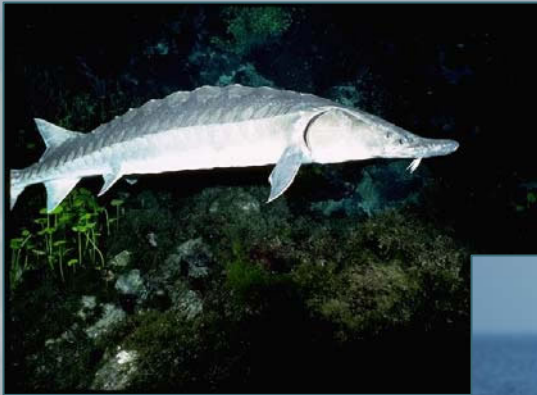
Nearshore = Estuarine waters to continental shelf edge (0m - 200m).

Offshore = Beyond shelf edge (> 200m).

Nearshore and offshore occurrences are approximations of distribution, and many species in the Gulf of Mexico may migrate between these areas during their life cycle or seasonally (e.g., for reproduction, water temperature, currents, and prey availability).



NEARSHORE SPECIES



Typically, *no threatened or endangered species of whales occur in the nearshore waters* over the continental shelf of the Gulf of Mexico.

Occasionally, North Atlantic right whales and humpback whales may be found in nearshore waters of the Gulf of Mexico, usually during the winter season. However, sightings of these species are relatively uncommon.

Of the 28 species of marine mammals known to occur in the Gulf of Mexico, *only three protected species of dolphins commonly occur in nearshore waters.*



Bottlenose dolphins inhabit the Gulf of Mexico year-round. They are blue-gray with lighter sides and bellies and have a robust body and head. This species is the most commonly observed dolphin in nearshore waters, and travel alone or in groups up to 20.



Atlantic spotted dolphins prefer tropical to warm-temperate waters over the continental shelf, edge, and upper reaches of the slope. These dolphins have variable spotting. They are very active at the surface and often breach while feeding. Group size is usually between 5-15.



Risso's dolphins are typically found around the continental shelf edge and steep upper sections of the slope (>100 m depths). They are light gray and often exhibit extensive scarring. These dolphins travel alone or in groups of >100, and may be observed with other species.

Endangered and Threatened Nearshore Species

SEA TURTLES

Loggerhead



threatened

Green



*threatened; Florida
nesting population is
endangered*

Kemp's ridely



endangered

Hawksbill



endangered

Sea turtles may be observed breathing, basking, swimming, or feeding at the surface. Sea turtles may migrate long distances and are able to dive to great depths.

Leatherback sea turtles (not pictured above) typically inhabit pelagic waters, but can also be found in nearshore waters during the nesting season while feeding on jellyfish concentrations, or in deep nearshore waters.

Endangered and Threatened Nearshore Species

SEA TURTLES



Nesting Kemp's ridley sea turtle

Nesting: between May and October,

Nests: several clutches (groups of eggs) each nesting season.

Eggs: Between 50-70 ping-pong ball-sized eggs are deposited in a nest cavity and buried with sand.

Hatching: Eggs hatch after 8-10 weeks of incubation.

Females return to lay eggs on the beach from which they hatched and swam offshore as hatchlings.

Generally, sea turtles are found in higher abundances in nearshore coastal waters off nesting beaches and foraging areas. Nearshore coastal areas are also important foraging habitats for juvenile sea turtles.



The *endangered* **smalltooth sawfish** inhabits coastal areas near mangroves and estuaries. Larger animals may be found further offshore. Sawfish have a long, flat snout edged with pairs of teeth used to locate, stun, and kill prey. They swim into schools of fish and thrash their saw from side to side, wounding and killing the fish which they then recover and eat. Smalltooth sawfish usually grow to about 18 feet in length and are related to sharks, skates, and rays.

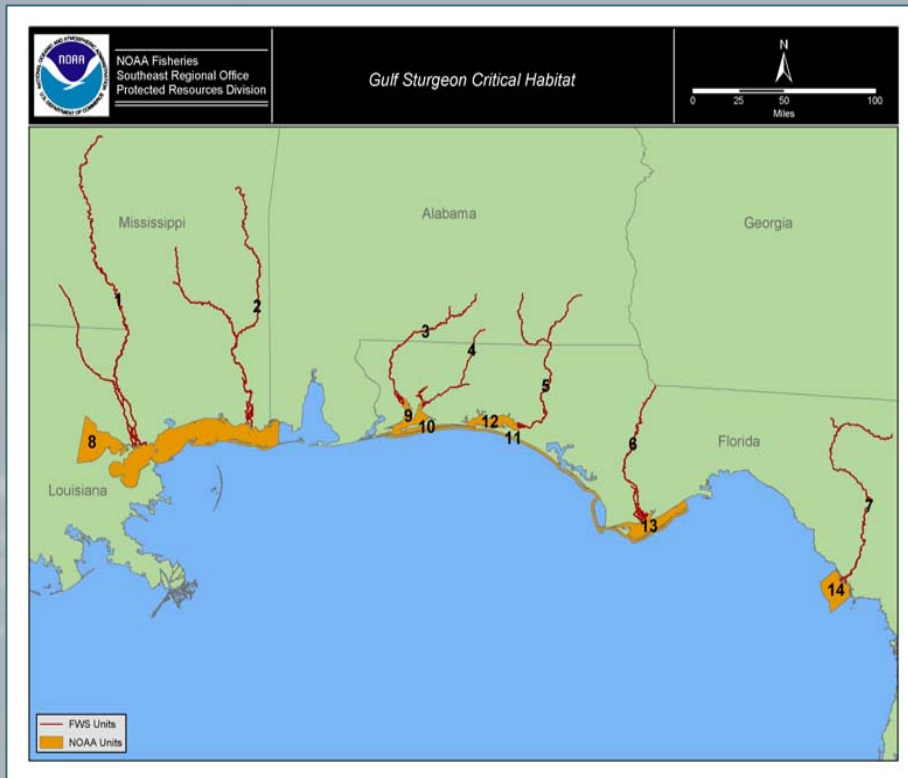


The **Gulf sturgeon** is a *threatened species*. This species represents one of the oldest lineages of living fish. They are an anadromous fish that migrates from marine habitats into freshwater rivers to spawn. They reside in rivers during summer and in marine environments during winter.

Gulf sturgeon have rows of armored plates along their sides and back, called scutes, and a vacuum-like mouth to forage on benthic invertebrates. Sturgeon are light colored to dark brown and have a white under-belly. They can grow to 8 feet in length and weigh 200 pounds.

Threatened Nearshore Species

GULF STURGEON



Areas shaded yellow are designated as Gulf sturgeon critical habitat.

The Endangered Species Act (ESA) requires the federal government to evaluate any potential *critical habitat* that exists for a species. Critical habitat is an area deemed essential to the conservation of a species.

For Gulf sturgeon many coastal waters east of the mouth of the Mississippi to the Suwannee River in Florida are designated critical habitat.

Threatened Nearshore Species

ELKHORN and STAGHORN CORALS

Elkhorn (*Acropora palmata*) and staghorn (*A. cervicornis*) corals are *threatened species*. These stony corals were once the most abundant and most important species on Caribbean coral reefs.



Elkhorn coral is the largest of all species of *Acropora*. Colonies are flattened to near round with frond-like branches. Branches typically radiate outward from a central trunk. Elkhorn coral generally grows in water 3 to 15 feet deep on the seaward face of the reef.



Staghorn coral colonies are antler-like with cylindrical, straight, or slightly curved branches. Staghorn coral typically grows in fore- and back-reef areas with water 15 to 45 feet deep.



Sand tiger sharks are a *species of concern*. They are light grey/brown in color and have a white belly with yellow blotches. They have two dorsal fins of similar size, a very short snout, and small eyes. They generally occupy the surf zone down to depths of about 25m. However, they may also be found in shallow bays, around coral reefs, and to depths of 200m on the continental shelf. They usually live near the bottom, but have been found throughout the water column. These sharks are primarily active at night, and travel alone or in small schools.



The **Nassau grouper** is a *species of concern* and can be found in coastal waters to depths of about 100m. Adults are generally found near shallow high-relief coral reefs and rocky bottoms to a depth of at least 90m. Juveniles are known to inhabit seagrass beds and areas around coral clumps covered with macroalgae. Nassau grouper are characterized by 5 dark brown vertical bars on a pale tan or gray body with black spots around the eyes.



The **Alabama shad** is a *species of concern*. It is a euryhaline, anadromous species that spawns in medium to large flowing rivers from the Mississippi River drainage to the Suwannee River, Florida.

Diagnostic characters of the Alabama shad are their upper jaw with a distinct median notch, and the number of gill rakers on the lower limb of the anterior gill arch (41-48). Alabama shad differ from other members of their family in the same area in that the lower jaw does not protrude beyond the upper jaw, black spots are present along the length of the lower jaw, and the dorsal fin lacks an elongate filament.

Nearshore Species of Concern

LARGETOOTH SAWFISH

The **Largetooth sawfish**, a *species of concern*, is generally a tropical marine and estuarine elasmobranch. All modern sawfishes appear in some respects to be more shark-like than ray-like, with only the trunk and especially the head ventrally flattened. The presence of a rostrum having laterally protruding teeth separates sawfishes from all other skates and rays.

Historical occurrences of largetooth sawfish in North America were much more limited than those of the related smalltooth sawfish and were strictly confined to shallow (< 33 feet or 10 m), near-shore, warm-temperate and tropical waters (>64-86 oF; 18-30oC), estuarine localities, partly enclosed lagoons, and similar situations.



Nearshore Species of Concern

SALTMARSH TOPMINNOW



The **saltmarsh topminnow** is a ***species of concern*** and is endemic to brackish water areas from Galveston Bay, Texas to Escambia Bay in the western panhandle of Florida.

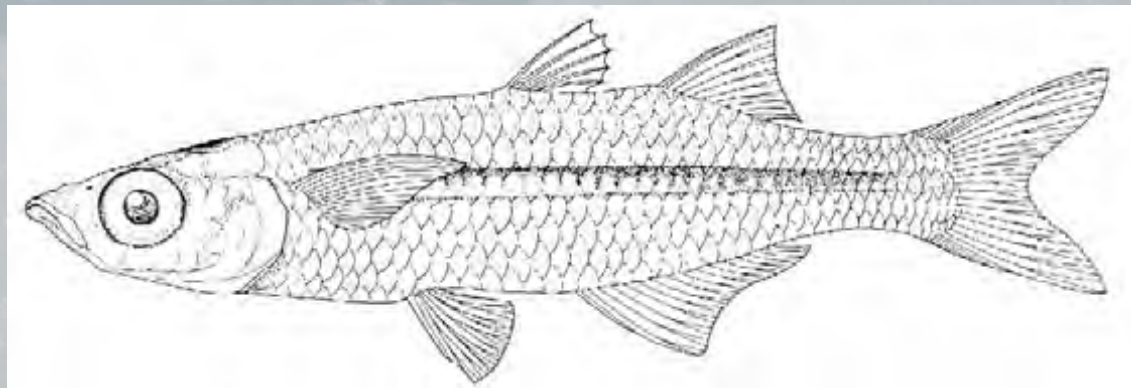
It is one of the smallest members of the topminnow/killifish family (Fundulidae), seldom exceeding 1.75 inches.

They have little color in life; there is cross-hatching on the back and sides that may be gray-green or fainter and 12 to 30 dark round spots are often arranged in rows along the midside of the body from above the pectoral fin to the base of the caudal fin.

The **Key silverside**, a **species of concern**, has a restricted distribution and is only found in the Florida Keys, from Key West north to Long Key.

The main habitat of Key silversides is tidal creek, lagoon, and pond waters of varying salinity (NatureServe 2006). Florida considers them members of the mangrove, pelagic, and subtidal unconsolidated marine/estuary sediment habitats.

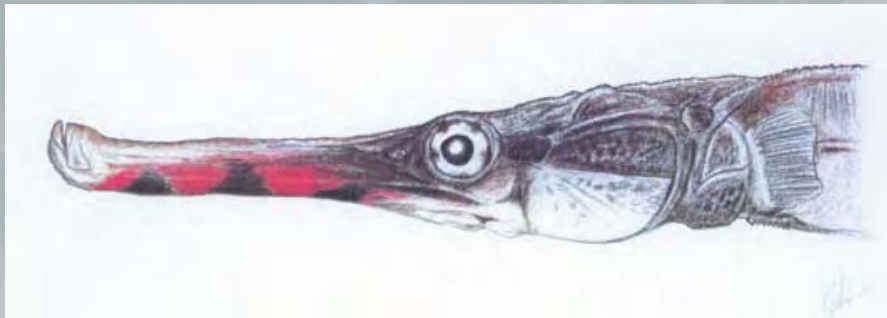
The key silverside is the smallest known species of *Menidia*; its maximum size is about 2 inches (53 mm).





Opossum pipefish are a *species of concern* and are a widespread species that spawn in low salinity areas of estuaries.

Year round captures indicating permanent populations only occur in southeastern Florida tributaries in the U.S., most notably in the Indian River Lagoon.



The color of the opossum pipefish is distinctive, especially in breeding adults, as seen in the picture.

Nearshore Species of Concern

MANGROVE RIVULUS

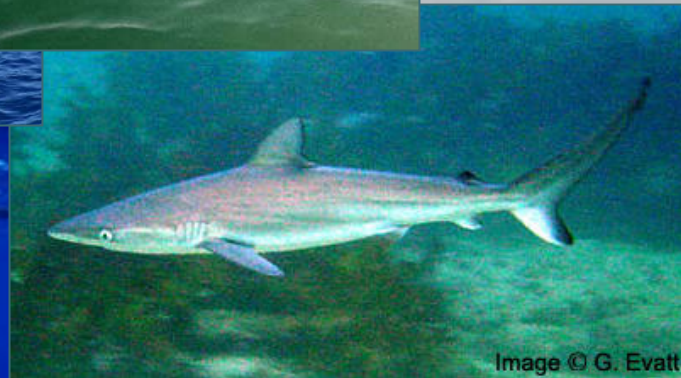


The mangrove rivulus, a ***species of concern***, has a long slender, dorsally flattened body and a rounded caudal fin. It is dark brown to green in coloration. The body may be mottled with small black dots and there may be a little orange coloration on body and fins.

The mangrove rivulus can be found from south-central Florida (where it is a species of concern) south through the West Indies to coastal areas of South America. It can also be found throughout the waters of Cuba, the Bahamas, Jamaica, and the Yucatan Peninsula.

Mangrove rivulus is one of a few known self-fertilizing hermaphrodites. They can also live out of water for up to 66 days.

OFFSHORE SPECIES





The *endangered* **leatherback sea turtle** is the only sea turtle with a soft leathery shell. They are the largest of the sea turtles, measuring 4 to 8 feet long and weighing 650 to 1,300 pounds. They can dive to great depths in search of jellyfish, which comprise their main diet.

Leatherbacks make long-distance migrations from feeding grounds to nesting beaches. They spend their entire lives in offshore waters, coming inshore only to mate and nest. They are often observed alone at sea, but adults sometimes congregate off nesting beaches or while feeding on concentrations of prey.



Sperm whales are *endangered* and found in offshore waters of the Gulf of Mexico (>200m). They typically dive deep for 40-45 minutes and rest at the surface for 8-10 minutes between dives. Their square-shaped head comprises a significant portion of their body length and they have a small dorsal fin. Sperm whales are often seen resting log-like at the surface. Females and young form small groups, and immature males often form bachelor groups.

Common Offshore Species

WHALES



Cuvier's beaked whales are elusive and rarely seen at the surface, which is why their population status is unknown. These whales vary in coloration from rusty-brown, dark gray, or tan. They prefer deep water, avoid shallow coastal areas, and are known to travel in groups of 2 to 7.



Bryde's whales (pronounced "BREW-days") are perhaps the only baleen whale that regularly inhabit the Gulf of Mexico. This species has been regularly sighted in the northeastern Gulf of Mexico and may be found elsewhere seaward of the shelf edge. They have dark gray, slender bodies and long ventral throat grooves. They travel alone or in small groups.

Common Offshore Species

DOLPHINS



Pantropical spotted dolphins occur along the continental slope. Juveniles are gray, spotting as they age. These dolphins are extremely active, frequently breaching the surface as they travel. Group sizes range from a few to 1000s.



Rough-toothed dolphins are deep-water dolphins. They have cone-shaped heads and large pointed flippers. These dolphins are fast swimmers and sometimes breach with a low, arc-shape at the surface. They travel in groups of 10s to 100s.



Clymene dolphins are found seaward of the continental shelf edge. They are tri-colored with a dark gray back, gray sides, and a white belly. They are often observed in groups of up to 50. They are frequently observed making full spins when breaching at the surface.

Other Offshore Species of Marine Mammals In The Gulf Of Mexico Include...

- pygmy sperm whale
- dwarf sperm whale
- melon-headed whale
- pygmy killer whale
- false killer whale
- short-finned pilot whale
- Fraser's dolphin
- Atlantic spotted dolphin
- spinner dolphin
- striped dolphin
- bottlenose dolphin
- killer whale (orca)
- Blainville's beaked whale
- Sowerby's beaked whale
- Gervais' beaked whale
- minke whale



Other Species of Concern

SHARKS



Dusky sharks are a *species of concern* and can be found from the surf zone to offshore depths of about 400m. These sharks are bluish gray with white on the belly. They have a long pointed snout, long pectoral fins, and a low ridge between the dorsal fins. Juvenile dusky sharks form large feeding schools or aggregations.



Night sharks are a *species of concern* and are typically found near the continental shelf edge in depths between 275m and 365m during the day, and 185m at night. They have a very long, pointed snout, large green eyes, and two small dorsal fins. They are usually observed traveling in schools.

Other Species of Concern

GROUPEL



Warsaw groupers are a *species of concern*. They are deep-water groupers that inhabit reefs on the continental shelf break, in waters 76-219m deep. Color varies from reddish brown or brownish grey to almost black, with dull reddish grey on the belly. Mature animals are usually found on rough, rocky bottoms in depths of 55 to 525m; juveniles are occasionally seen on jetties and shallow-water reefs.



The **speckled hind** is a *species of concern* and is classified as a deep-water grouper: adults inhabit offshore rocky bottoms usually in depths of 60 and 120m. Their reddish-brown head, body, and fins are flecked with tiny white spots.

Other Species of Concern

WHITE MARLIN



White marlin, a *species of concern*, are large, elongated fish with a large upper jaw that forms a spear which is round in cross-section.

They are dark blue to chocolate-brown in color dorsally, brownish-silvery-white laterally, and silvery white ventrally. White marlin are found in offshore waters throughout the tropical and temperate Atlantic Ocean and adjacent seas and are considered species of concern in the Western Atlantic.

Gulf of Mexico

PROTECTED SPECIES



Protected species inhabit nearly all marine environments from the shallow waters of estuaries to the deep ocean. Because many human activities occur in these same areas, it is important that each of us remembers to always be an active steward of the marine environment and help protect our living marine resources.

Through science and conservation programs with our partners, NOAA Fisheries Service continues to maintain sustainable populations and protect the ecosystems upon which these species depend.

For a complete list of protected species in the Gulf of Mexico and additional information about these species, please visit the NMFS Southeast Regional Office Web site at:

<http://sero.nmfs.noaa.gov/pr/protres.htm>

or

<http://www.nmfs.noaa.gov/pr>

