

#### SALTWATER FISHES www.dnr.sc.gov



#### A Message From SC DNR: Catch and Release... Fishing for the Future

The largest game fish are often the most valuable in terms of their ability to produce offspring. The contribution of one large female fish to the future of a stock can exceed the contribution made by many smaller female fish. It is not always possible to identify which large fish are females, so err on the side of the conservation. and focus on ensuring the healthy release of the fish. After all, we owe it to the resource. www.dnr.sc.gov www.saltwaterfising.sc.gov

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#### South Carolina Department of Natural Resources

#### The South Carolina Department of Natural Resources has information to help you learn more about marine resources.

#### Other useful numbers:

Marine Resources Division	(843) 953-9300	Buy a License 24 Hours	1-866-714-3611
Coastal Law Enforcement	(843) 953-9307	Boating/Hunter Education	1-800-277-4301
Operation Game Thief/ Coast Watch	1-800-922-5431	Marine Mammal Stranding	1-800-922-5431
Boat Titling/Licensing	(843) 953-9301	Report the Recapture of a Tagged Fish:	1-888-824-7472

#### Measuring Your Fish

#### How to Properly Measure a Saltwater Fish

TL=total length measure: From the closed mouth (snout) to the tip of the tail fin when pinched together. It is a straight line measure, not over the curvature of the body. FL=fork length measure: From the tip of the closed mouth (snout) to the center of the fork of the tail. It is a straight line measure, not over the curvature of the body.



#### How to use this guide

This identification guide provides a quick reference for marine fish that are most often encountered by South Carolina saltwater sport fishermen. To facilitate identification, species are grouped by family so that similar-looking fish will be found in close proximity to one another. Anglers can identify a fish by matching it to the color drawings provided in the identification sheets. Key identifying characters as well as those characters that distinguish each fish from similar looking species are presented. Each species' page includes information on the common size range encountered by anglers fishing in South Carolina and adjacent Federal waters and their approximate maximum total length in inches. Common and maximum sizes for fish species presented in this guide are intended only as a rough estimation. For precise lengths, scientific publications should be consulted. The distribution, habitat, effective angling methods, and food quality are also provided.



#### **COMMON NAME** Scientific name

#### **Basic fish information**

Fish are vertebrates, which means they have a backbone. They are cold-blooded and well-suited for living in water. Many adaptations allow a fish to survive in the water, some of which include:

- **Gills:** Fish use gills to breathe in the water. Water is forced over the gills, which then pick up oxygen from the water and dispose of carbon dioxide and other wastes.
- **Slime** Fish are covered with a layer of mucus that helps protect the fish from disease. Always minimize fish handling to protect the slime layer for fish you plan to release.
- **Fins:** Fish use fins as a means for locomotion. The caudal fin provides momentum, the pectoral fins help with direction, and other fins help with stability in the water.
- **Eyes:** Fish can detect colors and see for short distances. They use vision to escape predators and locate food.
- **Taste:** Some fish have taste buds not only in their mouths, but also on the outside of their head and on their fins. Many fish, such as catfish, have a well-developed sense of taste.
- **Smell:** Fish use their sense of smell to locate food and to assist them in migrating. They have nares, which contain olfactory organs that allow them to differentiate chemicals in the water.
- **Touch:** Fish experience a sense of touch.
- **Hearing:** Fish have inner ear bones called otoliths, which allow them to sense vibrations or sounds. Scientists can use an otolith to determine the age of a fish.
- Lateral Fish have a lateral line that acts as their "sixth sense." The lateral line contains sensory pores that can detect pressure changes around them in the water. This allows the fish an additional mechanism to locate food and escape predators.

#### **Basic Fish Terminology**

- adipose eyelid skin-like covering on eye, may cover entire or only part of eye
- adipose fin a fleshy projection, fin-like but without rays, found behind dorsal fins in primitive fishes
- anadromous saltwater fish that ascend freshwater streams to spawn
- anal fin single fin on the median line of the body just behind anus or vent
- anterior situated toward the front; opposite of posterior
- barbel a fleshy projection in the form of a thread or flap, usually found on head, chin, or around mouth or nostrils
- benthic pertaining to or dwelling on the bottom
- catadramous fish that descend from freshwater streams to the sea to spawn
- caudal pertaining to the tail region, posterior
- caudal fin unpaired fin at posterior end of body, commonly called the tail fin
- caudal peduncle body region behind the anal and dorsal fins, and just forward of caudal fin
- claspers modified pelvic fins of sharks and skates that serve as male reproductive organs
- ctenoid scale scales bearing tiny spines on posterior edge that are rough to the touch
- depth greatest vertical measurement of a fish's body
- dorsal fin unpaired median fin on back, sometimes partially or completely divided
- finlets small, free, fin-like projections behind the dorsal and anal fins
- fork length distance from the tip of the snout to the fork of the tail
- gills respiratory organs covered by an operculum in bony fishes
- gill rakers stiff projections on the inner or anterior surfaces of the gill arch that are used for straining food
- girth greatest body diameter
- heterocercal tail upper lobe of caudal fin much larger than lower, characteristically seen in sharks
- homocercal tail lobes of caudal fin nearly equal, vertebral column does not extend along upper margin of the fin

ichthyology - the scientific study of fishes

keel - a ridge, or elevated line, present on the body of many fish and sharks

lateral line - a series of pores that form a line along the sides of the body, sensory in function

littoral - pertaining to or dwelling along the shore

**nictitating membrane** – a thin, transparent flap that can be moved over the eye, also referred to as the third eyelid of sharks and skates

ocellus - an eye-like, dark spot surrounded by lighter pigment on the body or fins

operculum – a bony flap that covers the gills

**oviparity** – a mode of reproduction where the female shark lays eggs in the form of egg cases, which they attach to algae or corals; embryo development occurs outside the female's body

**ovoviviparity** – a mode of reproduction where fertilized eggs develop within the body of the female; the embryos do not receive direct nourishment from the mother other than the initial investment of the egg production

pectoral fins - paired fins located just behind the gill openings

pelagic - pertaining to or dwelling in or on the surface of open water

pelvic fins - paired fins located behind and/or below the pectoral fins, also called ventral fins

posterior - situated toward the rear of the animal; opposite of anterior

spiracle - a small opening on the head or neck of some sharks and skates

total length - the distance from the tip of the snout to the posterior edge of the tail fin

vent - posterior opening of the digestive tract

**viviparity** – a mode of shark reproduction where fertilized eggs hatch and develop within the body of the female; the female shark provides nourishment for the embryos as they develop inside of her

#### **Basic Fish Terminology**





- A. NAPE
- Β. INTERORBITAL
- C. EYE
- D. NOSTRILS
- E. PREMAXILLARY
- MANDIBLE F.
- G. PREOPERCLE
- H. INTEROPERCLE
- BRANCHIOSTERGALS SUBOPERCLE I.
- J.
- K. OPERCLE

#### MOUTH TYPE





Terminal

Sub-terminal



Inferior



Superior



TAIL TYPE



## STURGEONS



### ATLANTIC STURGEON

Acipenser oxyrhynchus

Habitat:	Atlantic sturgeon occur from New York to Florida. This is an anadromous species.
Identifying Key Characteristics:	Head and body covered with bony plates or shields, one row along midline of back, two rows on each side of body and two rows of plates posterior to dorsal and anal fins. Head with an extended snout and a spiracle (a small opening behind eyes). Inferior protractible mouth proceeded by four conspicuous barbels. Anal fin with 23 to 30 rays. Tail fin asymmetrical with upper half fleshy and much larger than lower fin.
Distinguishing Characteristics of Similar Species:	The dorsal plates of the shortnose sturgeon are widely spaced. Plates usually do not occur posterior to dorsal fin, and either a single row or no rows occur posterior to anal fin. Anal fin has 19 to 22 rays, and snout is short and rounded (except in juveniles). Shortnose sturgeon are much smaller, rarely exceeding 36 inches.
Average Size:	125 pounds, 72 inches
Approximate Maximum Size:	811 pounds, 168 inches
Food Habits:	Atlantic sturgeon feed on a variety of bottom-dwelling organisms including insects, clams, mussels, crabs, and other crustaceans, as well as small fish and some plant material.
Spawning Habits:	These fish are anadromous, spawning every 3-5 years in the spring from April to May.
Angling:	The Atlantic sturgeon fishery is closed in state and federal waters. It is unlawful for anyone to catch, buy, sell, or ship Atlantic sturgeon caught in U.S. waters at any time. Atlantic sturgeon are rarely taken by hook and line. Historically, fisheries have been conducted with gill nets.
Food Quality:	Not applicable.

## TARPONS



#### **LADYFISH** Elops saurus

Habitat:	Ladyfish are inshore species that prefer bays, estuaries, tidal pools and canals, and occasionally enter freshwater.
Identifying Key Characteristics:	Body long and slender with small scales covering the entire body, which is sliver in color. Mouth terminal, tail deeply forked.
Distinguishing Characteristics of Similar species:	This fish has the appearance of a small tarpon. Tarpon have a greatly extended last dorsal fin ray that is filamentous, and the body has very large scales.
Average Size:	2-3 pounds, 18-24 inches
Approximate Maximum Size:	6 pounds, 36 inches
Food Habits:	Adult ladyfish feed mainly on fish and crustaceans. Schools are often seen pursuing food near the surface.
Spawning Habits:	Although ladyfish form large schools close to shore, spawning occurs offshore.
Angling:	These fish are caught either by trolling or by casting with both natural and artificial baits. They are known for their fighting and jumping ability on light tackle.
Food Quality:	Poor. Ladyfish are very bony and not generally eaten.
Misc.:	The Ladyfish is also known as the tenpounder.

## TARPONS

# Megalops atlanticus

Habitat:	Tarpon avoid colder water and are most abundant in estuaries and inshore waters. However, they are also found in coastal freshwater lakes and rivers, offshore marine waters, and occasionally around reefs.
Identifying Key Characteristics:	Body moderately deep with large scales, lower jaw projecting. Origin of the dorsal fin near the mid-point of the body, last dorsal fin ray filamentous and very long.
Distinguishing Characteristics of Similar Species:	Ladyfish are similar in overall appearance but much smaller than tarpon, reaching only four to six pounds. The last dorsal ray is not filamentous or longer than the anterior rays. There are 1 00 to 1 20 scales along the lateral line compared to only 40 to 48 in the tarpon.
Average Size:	40-50 pounds, 40-60 inches
Approximate Maximum Size:	150 pounds, 96 inches
Food Habits:	Tarpon often travel in schools and are opportunistic eaters, feeding on a variety of fish and crabs.
Spawning Habits:	Tarpon begin gathering together in May and June in staging areas near the coast where schools swim in a circular, rotating motion. This behavior is known as a "daisy chain" and may be an activity that prepares the fish for spawning. The actual departure to offshore spawning areas is most likely related to lunar phases and tides.
Angling:	Tarpon are known as a hard fighting game fish that often leap out of the water when hooked.
Food Quality:	Poor. Tarpon are not generally eaten.
Misc.:	The tarpon can survive in a variety of habitats and salinities and can even gulp air for extended periods when oxygen concentrations are low in the water.

### EELS

## AMERICAN EEL

Anquilla rostrata

Habitat:	American eel are catadromous and occur in estuaries and shallow coastal waters.
Identifying Key Characteristics:	Body elongated, rounded in cross section and covered with small elliptical scales that are embedded firmly in the skin. Mouth terminal, the lower jaw slightly projecting, teeth minute, set in bands in both jaws and in a patch on roof of mouth. Pectoral fins well developed, moderate in size, pelvic fins absent.
Distinguishing Characteristics of Similar Species:	There are several eel species (conger, moray, shrimp, snake and cusk) that occur in marine waters off South Carolina. The American eel may be distinguished from other eels by the presence of small, embedded scales, the lower jaw extending well beyond the upper jaw, and the origin of the dorsal fin being far behind well-developed pectoral fins.
Average Size:	1/2-3 pounds, 18-30 inches
Approximate Maximum Size:	10 pounds, 36 inches
Food Habits:	American eel feed on fish, clams, and crabs in saltwater, and on fish, insects, worms, and other invertebrates in freshwater.
Spawning Habits:	American eel are catadromous and spawn in one area of the Sargasso Sea. After hatching, the larval eels, called "elvers," or "glass eels," travel into the upper reaches of freshwater streams. They live six to eight years in freshwater before becoming mature and returning to the Sargasso Sea to spawn.
Angling:	These fish are caught incidentally while bottom fishing for other species using live or cut baits.
Food Quality:	Good. These fish are not frequently eaten in the United States. However, the closely related European eel is considered a delicacy in Europe.

## HERRINGS

#### **AMERICAN SHAD**

Alosa sapidissima

Habitat:	American shad are distributed along the Atlantic coast from Canada to central Florida. These fish are anadromous.
Identifying Key Characteristics:	Body compressed, its depth variable and increases with size, belly with scutes forming a distinct keel. Back bluish green with metallic luster fading to silver on sides, dark spot on shoulder followed by several more spots, fins pale green. Dorsal fin base slightly anterior to center point of body. Upper jaw with a distinct median notch, teeth present in jaws.Gill rakers number 59 to 73 on lower limb of anterior gill arch. Membranes surrounding internal organs pale.
Distinguishing Characteristics of Similar Species:	The back of the blueback herring is dark blue, and the fins are slightly yellow to greenish. The gill rakers are slender, and there are 45 to 51 on lower limb of anterior gill arch. The membranes surrounding internal organs are black. The hickory shad has obscure spots on its sides behind a dark spot on shoulder and usually narrow dark lines on upper part of body. Gill rakers number 18 to 23 on lower limb of anterior gill arch. The membranes surrounding internal organs are place. Menhaden have enlarged pre-dorsal scales on both sides of the middle of the back and 7 pelvic rays compared to 9 in Alosa species.
Average Size:	4 pounds, 16-20 inches
Approximate Maximum Size:	12 pounds, 24 inches
Food Habits:	American shad are filter feeders, straining water through their gill rakers, and feeding on small crustaceans, algae, and insects.
Spawning Habits:	American shad are anadromous. They spawn in the spring, usually in March and April, as water temperatures approach 55° F. Adults may travel hundreds of miles upstream before spawning. Young fish remain in the lower reaches of rivers and in estuarine waters until they have grown large and old enough to return to the ocean.
Angling:	These fish are plankton feeders; however, they are often thought of as game fish. They are taken on hook and line with artificial lures known as shad darts.
Food Quality:	Excellent. This fish has many small bones. The roe is considered a delicacy and is featured by many lowcountry restaurants.

American Shad

## HERRINGS

#### **BLUEBACK HERRING**

Alosa aestivalis

Habitat:	These fish range from Novia Scotia to Florida and frequently travel in large schools.
Identifying Key Characteristics:	Body moderately compressed, belly with scutes forming a distinct keel. Back dark blue, fins slightly yellow to greenish. Dorsal fin near center point of body. Upper jaw with a distinct median notch and minute teeth. Gill rakers slender, 41 to 51 on lower limb of anterior gill arch. Membranes surrounding internal organs black.
Distinguishing Characteristics of Similar Species:	The hickory shad has fewer gill rakers on lower limb of the anterior gill arch (18 to 23), and the membranes surrounding the internal organs are pale. American shad have many more gill rakers (59 to 73) on the lower limb, and the membranes surrounding the internal organs are also pale. Menhaden have enlarged predorsal scales on both sides of the midline of the back.
Average Size:	1/3 pound, 10-12 inches
Approximate Maximum Size:	1 pound, 14 inches
Food Habits:	Blueback herring are filter feeders, straining water through their gills and feeding on small crustaceans, algae, and insects.
Spawning Habits:	Blueback herring are anadromous. They spawn during spring, usually in March and April, as water temperatures begin to warm. Young fish remain in the lower reaches of rivers and in estuarine waters until they have grown strong enough to return to the ocean.
Angling:	These fish are not normally targeted by recreational fishermen and are infrequently taken on a baited hook. They are used as fishing bait and are also harvested commercially for crab bait.
Food Quality:	Poor. These fish are not generally eaten fresh, but rather, they are usually pickled and smoked.

## HERRINGS

#### **THREADFIN SHAD**

Dorosoma petenense

Habitat:	The threadfin shad inhabits larger rivers and reservoirs primarily, but it is also found in brackish water.
Identifying Key Characteristics:	The threadfin shad has bluish gray on its upper side that fades into a silver side and bell. There is a prominent purple to black spot on the upper side of the body just beyond the perculum or gill flap. The caudal fin tends to be yellow. A distinguishingly long dorsal fin ray occurs at the back of the dorsal fin.
Distinguishing Characteristics of Similar Species:	American shad are considerably larger and have small spots along the upper side of the body. The gizzard shad has a downward pointing mouth and a very blunt snout.
Average Size:	1 ounce, 2-3 inches
Approximate Maximum Size:	3 ounces
Food Habits:	Microscopic plants and animals by filter feeding with their gill rakers which function like a strainer catching food.
Spawning Habits:	Threadfin shad spawn from April to July in shallow shoreline areas, between dawn to sunrise over submerged plants or other objects. The eggs sink and stick to various substrates until they hatch.
Angling:	Threadfin shad are used primarily as bait by anglers fishing for larger species. They can be caught using sabiki rigs.
Food Quality:	Poor

## **TOADFISHES & LIZARDFISHES**

### >>>> OYSTER TOADFISH

Opsanus tau

Habitat:	The toadfish is primarily an inshore, bottom-dwelling species, inhabiting rocky bottoms and reefs, jetties, and wrecks. They frequently live among litter and can tolerate polluted water.
Identifying Key Characteristics:	Body scaleless, color variable, usually brown with orange to yellow mottling and a white belly. Head broad and flattened with many barbels and fleshy flaps. Mouth large with short, stubby teeth. Eyes on top of head directed upward.
Distinguishing Characteristics of Similar Species:	The similar looking leopard toadfish found in deeper offshore waters has a mottled belly.
Average Size:	1 -2 pounds, 8-12 inches
Approximate Maximum Size:	4 pounds, 15 ounces; 14 inches
Food Habits:	Toadfish consume incidental vegetation as well as crabs, anemones, clams, shrimp, sea urchins, and small fish.
Spawning Habits:	After the female toadfish lays her eggs, the male guards the nest and wards off predators while eggs are incubating (about 3 weeks). While both sexes are known for the grunting sound they make when caught or threatened, males produce a loud foghorn sound to attract females during spawning.
Angling:	These fish are caught incidentally while fishing for other bottom fish. They will bite any type of live or cut baits.
Food Quality:	Poor. These fish are not normally eaten.
Misc.:	They must be handled with care because of their strong jaws and the stiff spines in their fins.

## **TOADFISHES & LIZARDFISHES**



#### **INSHORE LIZARDFISH**

Synodus foetens

Habitat:	Inshore lizardfish occur in inshore waters and frequently enter brackish waters.
Identifying Key Characteristics:	Long, cylindrical body that is brownish with a green tint, often with some mottling and spots, belly white. Adipose fin present. Mouth with numerous, large teeth.
Distinguishing Characteristics of Similar Species:	The large teeth, adipose fin and long, cylindrical body separate lizardfish from other types of fish. Several species of lizardfish may be encountered in South Carolina offshore waters, but the inshore lizardfish is the only typical inshore resident.
Average Size:	2 pounds, 10-14 inches
Approximate Maximum Size:	2-3 pounds, 16 inches
Food Habits:	Lizardfish are voracious carnivores that are capable of burying themselves in sediment where they lie in wait for small fish.
Spawning Habits:	Spawning occurs throughout the year in open water. Newly hatched larvae are found near the surface of the open ocean.
Angling:	These fish are taken primarily by bottom fishing with live and cut baits in coastal and inshore waters.
Food Quality:	Poor. These fish are not generally eaten in the U.S.

Inshore Lizardfish

## TEMPERATE BASSES

## STRIPED BASS

600000

Morone saxatilis

Habitat:	While found in the major freshwater rivers in South Carolina, striped bass are also common along coastal inshore environments and tidal tributaries, but they never range more than a few miles offshore. They are often found around piers, jetties, tide pools, rips, flats, and rocks.
Identifying Key Characteristics:	Body moderately elongated in young becoming stouter in adults. Seven or eight dark horizontal stripes form scale rows on upper sides, area between eyes not scaled. Two dorsal fins present, the first spiny and the second soft-rayed. Anal fin with three strong spines and seven to 13 soft rays. Mouth terminal, teeth small, two tooth patches on tongue, lower jaw projecting slightly. Tail fin moderately forked.
Distinguishing Characteristics of Similar Species:	White, yellow and hybrid striped bass are not generally encountered in marine or estuarine waters. White bass are silvery with faint, horizontal stripes on the sides of the body, and there is only one tooth patch on tongue. Hybrid bass have two tooth patches on tongue and seven or eight broken horizontal stripes above lateral line.
Average Size:	5-10 pounds, 18-36 inches
Approximate Maximum Size:	78 pounds, 60 inches
Food Habits:	Striped bass are voracious and opportunistic feeders that prey heavily on small fish.
Spawning Habits:	Spawning occurs in fresh or slightly brackish waters where the current is strong enough to keep the eggs suspended and when the water temperature is between 50 and 73° F. Females may release 180,000 to 4.5 million eggs, depending on size. When mating, several smaller males accompany each female. The spawning fish swim near the surface of the water, turning on their side and rolling and splashing (sometimes called a "rock fight"). Semi-buoyant eggs are released and then float with the current until hatching.
Angling:	The striped bass is South Carolina's state fish. It is caught both in fresh and estuarine waters by a wide variety of methods, including trolling, jigging, bait fishing, surf casting and fly-fishing. Both natural and artificial baits are effective.
Food Quality:	Excellent. The white, flaky flesh of striped bass freezes well and may be prepared numerous ways.

Striped Bass

## TEMPERATE BASSES

### WHITE PERCH

Morone americana

Habitat:	White perch occur in brackish waters from Canada to South Carolina.
Identifying Key Characteristics:	Body deep and compressed, silvery in color, young have faint longitudinal stripes. Spinous and soft dorsal fins connected. The second anal spine nearly as long as the third spine.
Distinguishing Characteristics of Similar Species:	Small striped bass may be separated by seven or eight dark, horizontal stripes on sides. The first and second dorsal fins are slightly separated, and the second spine of the anal fin is shorter than the third spine. Most other similar species have either three opercular spines, or only two anal fin spines, or a tail fin that is not forked.
Average Size:	3/4 pound, 8 to 10 inches
Approximate Maximum Size:	4 pounds, 12 ounces; 12 inches
Food Habits:	White perch feed on a variety of small fish, insects, crustaceans, and other invertebrates.
Spawning Habits:	During the spring, April through June, white perch migrate from estuarine waters into freshwater streams to spawn. A female may spawn as many as 300,000 eggs, which are immediately fertilized by male fish. Depending on the water temperature, these eggs will hatch in as little as 30 hours to as long as six days.
Angling:	These fish are caught on or near the bottom, while fishing with most types of live or cut baits.
Food Quality:	Excellent. White, flaky flesh that may be broiled or fried.

### SEA BASSES



### BANK SEA BASS

Centropristis ocyurus

Habitat:	Bank sea bass are found offshore in waters from 50-500 feet and typically associate with hard-bottom areas.
Identifying Key Characteristics:	Body color light, sides with three horizontal rows of black blotches, numerous blue and yellow stripes and spots on head, fins and forward part of body, middle tail ray and dorsal spines with jet black spots.
Distinguishing Characteristics of Similar Species:	Rock seabass have long fleshy filaments coming off the dorsal spines. Black seabass have a dark body, nearly black.
Average Size:	1/2 - 1 pound, 6-8 inches
Approximate Maximum Size:	10.5 inches
Food Habits:	The bank sea bass is an opportunistic carnivore that uses its large mouth to swallow crabs, shrimp, brittle stars, callico scallops and small fish.
Spawning Habits:	Nearly all individuals of this species begin life as females and change to males as they age and grow. Collections suggest that fertile females spawn offshore in the early spring, usually for the first time when they are 2 or 3 years old.
Angling:	Can be caught on the bottom using squid, live baits, or cut bait. They are a common bycatch when fishing for snapper and grouper.
Food Quality:	Good

### SEA BASSES

### BLACK SEA BASS

Centropristis striata
Habitat:	The black sea bass is a bottom-dwelling species found around wrecks, reefs, piers, and jetties, as well as over beds of shells and rock. They prefer warmer waters, living offshore in winter and moving inshore during the spring.
Identifying Key Characteristics:	Body color very dark. Preopercle finely serrated without a strong spine or spiny lobe, opercle with three flat spines. Dorsal fin single, notched with 10 spines and 11 soft rays. Tail fin rounded, often with a single upper ray elongated in adults.
Distinguishing Characteristics of Similar Species:	The body color of the bank sea bass is light with three horizontal rows of black blotches on the sides as well as numerous blue and yellow stripes. Spots are present on the head, fins and forward part of body. Dorsal spines and middle ray of tail fin have jet black spots. Rock sea bass also have a light body color with seven brownish bars on the upper sides, a yellowish band across the anal fin, and long, fleshy filaments on the dorsal spines. A distinct black spot is present at the base of the last three dorsal spines.
Average Size:	1 -3 pounds, 10-12 inches
Approximate Maximum Size:	9 pounds, 18 inches
Food Habits:	Black sea bass feed on clams, shrimp, worms, crabs, and small fish.
Spawning Habits:	Spawning occurs in March through May. Black sea bass are hermaphroditic, beginning their lives as females and later developing into males.
Angling:	Still and drift fishing on or near the bottom with squid and live and cut baits are effective methods of catching these fish. They often voraciously attack a baited hook.
Food Quality:	Excellent. Black sea bass have white, firm (but flaky) flesh that is a favorite of many fishermen.

#### **ROCK SEA BASS**

Centropristis philadelphica

Habitat:	Rock sea bass are found over sandy and muddy bottoms in 30 to 60 feet of water, primarily in estuaries.
Identifying Key Characteristics:	Body color light, seven brownish bars on upper sides, yellowish band across anal fin. Dorsal spines with long, fleshy filaments, distinct black spot at base of last three dorsal spines.
Distinguishing Characteristics of Similar Species:	Black sea bass have a dark body color, nearly black, and are dark blue between eyes (breeding males). The median fins are uniform in color, and the tail fin of adults has a single, elongated, upper ray. The body color of the bank sea bass is light, and the sides have three horizontal rows of black blotches with numerous blue and yellow stripes and spots on the head. The fins and forward part of body, middle ray of tail fin, and dorsal spines have jet black spots.
Average Size:	1-2 pounds, 6-8 inches
Approximate Maximum Size:	3 pounds, 10 inches
Food Habits:	Rock sea bass feed on small fish, shrimp, crabs, and other small crustaceans.
Spawning Habits:	Rock sea bass spawn in early spring from January through March. Eggs are deposited in the open waters or on the sea floor.
Angling:	Still and drift fishing on or near the bottom with squid and live and cut baits are effective methods of catching these fish.
Food Quality:	Good.

## Mycteroperca microlepis

Habitat:	Young gag can be found in estuaries, while adults usually inhabit offshore areas around rocky ledges, undercuts, and reefs.
Identifying Key Characteristics:	Body color gray with dark gray squarish blotches. Preopercle angulated and slightly notched with a distinct lobe at the angle, opercle with three flat spines, middle one the largest, rays of vertical fins not prolonged. Anal fin with three spines and 11 soft rays.
Distinguishing Characteristics of Similar Species:	Scamp have well-separated spots on sides of head and body, and rays of vertical fins are greatly prolonged. Speckled hind, red grouper, warsaw grouper and snowy grouper all have seven to nine soft anal fin rays and a more robust body that is deepest at origin of dorsal fin.
Average Size:	10-15 pounds, 30-36 inches
Approximate Maximum Size:	80 pounds, 48 inches
Food Habits:	Adults prefer such fish as sardines, porgies, snapper and grunts, as well as crabs, shrimp, and squid. Young gag feed mainly on crustaceans found in shallow waters.
Spawning Habits:	Gag spawn in February and March. A single female may lay more than one million eggs.
Angling:	These fish are frequently taken with live and cut baits fished around natural rocky outcroppings, artificial reefs, and other irregular bottoms.
Food Quality:	Excellent. White, flaky flesh makes gag one of the most desirable fish for grilling, frying, or broiling.



#### **ROCK HIND**

Epinephelus adscensionis

Found in rocky and coral reef areas, usually in shallow water.
The rock hind is mostly brown or tan in background color. Has spots similar to those of the red hind, but also is marked by large, dark blotches on the upper sides usually two, but often more.
The speckled hind has light spots on a dark background.
1-2 pounds, 12-14 inches
16 inches
Rock hind eat fish, crabs, shrimp and mollusks found along the bottom.
Rock hind begin life as females, and as they mature become males. Spawning takes place from March through July.
These fish are taken with live or cut bait fished on the bottom around natural rocky outcroppings, artificial reefs, and other irregular bottoms.
Excellent



Habitat:	Scamp prefer complex structures near reefs, jetties, pilings and wrecks at depths of up to $300$ feet.
Identifying Key Characteristics:	Body color light brownish-gray with small, well-separated spots resembling cat paws, and a yellow coloration on jaws. Preopercle angulated with a marked notch above the angle followed below by a prominent serrated lobe, opercle with three flat spines, middle one the largest. Rays of caudal and anal fins greatly prolonged. Anal fin with three spines and 11 soft rays.
Distinguishing Characteristics of Similar Species:	Gag do not have well-separated, distinct spots on body, and the rays of the vertical fins are not prolonged. Speckled hind, red grouper, warsaw grouper, and snowy grouper all have seven to nine soft anal fin rays, and more robust bodies that are deepest at origin of dorsal fin.
Average Size:	8-10 pounds, 18-24 inches
Approximate Maximum Size:	29 pounds, 38 inches
Food Habits:	Little is known about the feeding habits of scamp, except that they are ambush hunters and feed on small fish, squid, octopus, shrimp, and crabs.
Spawning Habits:	Scamp spawn from February to August in very large groups over reefs, and wrecks. The eggs are scattered over open water.
Angling:	Scamp are caught by fishing over rocky and live bottoms and around wrecks and artificial reefs. Still and drift fishing on or near the bottom with squid and live and cut baits are effective.
Food Quality:	Excellent. Scamp have white, flaky but firm flesh.

### SPECKLED HIND

Epinephelus drummondhayi

Habitat:	Preferring warm waters with temperatures from 60 to $85^{\circ}$ F, the speckled hind can be found around rocky ledges and sea mounts with good currents.
Identifying Key Characteristics:	Body color reddish-brown, fading to bluish-purple on underside. Fins, head and body covered with small, creamy white spots. Scales very rough to the touch. Dorsal fin single with 11 spines, its spiny and soft parts separated by a shallow notch. Anal fin with three spines and nine soft rays.
Distinguishing Characteristics of Similar Species:	Young yellowedge grouper have only a few white spots that are arranged in regular rows and a dark spot anterior to the tail fin. Adults do not have light spots on body or fins. Young warsaw grouper have a few white spots, and adults have no white spots and 10 dorsal spines. Red grouper and snowy grouper have a pattern of vertical bars on the sides of the body and no white spots. Gag and scamp have a more elongated body and 11 soft anal spines.
Average Size:	5 pounds, 16-20 inches
Approximate Maximum Size:	30 pounds, 42 inches
Food Habits:	Speckled hind feed by opening their mouths and extending their gill covers to quickly draw in a current of water, forcing the prey to be inhaled and swallowed whole. This species favors fish, crabs, shrimp, and mollusks found along the bottom.
Spawning Habits:	Speckled hind begin life as females, and as they mature, they become males. Females reach sexual maturity around four to five years of age. Spawning occurs from July through September in offshore waters.
Angling:	Speckled hind frequently are taken by bottom fishing around natural rocky outcroppings, artificial reefs, and other irregular bottoms with live and cut baits.
Food Quality:	Excellent. White, flaky flesh makes these fish most desirable for grilling, frying, or broiling.
Misc.:	The speckled hind is so named because of the large number of white spots on its head, body and fins.

#### WARSAW GROUPER

Epinephelus nigritus

Habitat:	Warsaw grouper are a deep water species occurring in 120 to over 1000 feet of water and can usually be found over rough, rocky bottoms, deep ledges, and drop-offs. Young warsaw are frequently found around jetties, natural reefs, and other nearshore structures.
Identifying Key Characteristics:	Body dark reddish-brown to almost black, fading to dull reddish-gray below. Dorsal fins rounded with 10 spines, the second spine much larger than the third, and the membrane is deeply notched. Anal fin rounded with three spines and nine soft rays.
Distinguishing Characteristics of Similar Species:	All other groupers, except the red grouper, have nine or 11 dorsal spines. Red grouper have angular fins, a third dorsal spine longer than the second, and the membrane is not notched. Snowy grouper have a spiny dorsal fin with a black margin. Gag and scamp have more elongated bodies with 11 soft anal fin rays.
Average Size:	30 to 80 pounds
Approximate Maximum Size:	More than 500 pounds, 60 inches
Food Habits:	It is believed that these fish do not actively search for food but lie in wait ambushing their prey. They prefer to feed on fish, crustaceans, and even juvenile sea turtles.
Spawning Habits:	As with other groupers, Warsaw grouper change sex, transforming from female to male fish as they get older. During spawning, eggs and sperm are released into the water at the same time. A female may shed from $1.5$ million to 5 million eggs in a spawn and can spawn several times during a season.
Angling:	Warsaw grouper are caught bottom fishing over live bottoms and rocky outcroppings. A heavy rod baited with live or cut bait, such as squid, is effective.
Food Quality:	Excellent. White, flaky and firm flesh.

### TILEFISH



1919-1911

#### TILEFISH

Lopholatilus chamaeleonticeps

Habitat:	Tilefish occur from Nova Scotia to Florida and throughout most of the Gulf of Mexico. These fish are found in deep water (over 1,000 feet) on muddy bottoms, where they reside in burrows, or on irregular bottoms.
Identifying Key Characteristics:	Body elongated, back and upper sides bluish-green becoming yellow or rose on lower sides, head tinged in red, numerous irregular yellow and white spots over body and fins. Pre-dorsal ridge developed into a fleshy flap in front of dorsal fin. Dorsal fin with seven spines and 14 or 15 rays.
Distinguishing Characteristics of Similar Species:	Blueline tilefish have a pre-dorsal ridge but no fleshy flap in front of dorsal fin. The dorsal fin has seven spines and 25 rays, and the anal fin has one spine and 23 rays. The preoperculum is serrated. Sand tilefish do not have a mid-dorsal ridge or a fleshy flap in front of dorsal fin, and the preopercle margin is smooth. The dorsal fin has four or five spines and 54 to 60 rays, and the anal fin has one spine and 48 to 55 rays.
Average Size:	5-10 pounds, 18-24 inches
Approximate Maximum Size:	35 pounds, 48 inches
Food Habits:	Tilefish feed primarily on shrimp and crabs, but will also eat fish, squid, and bivalves.
Spawning Habits:	Tilefish spawn during the summer in deep offshore waters around 600 feet. Tilefish are a slow-growing and long-lived fish; however, little is known about their spawning habits or age of maturity.
Angling:	Tilefish are seldom fished recreationally because they reside at extreme depths.
Food Quality:	Excellent.

## BLUEFISHES



## Pomatomus saltatrix

Habitat:	Bluefish are typically found in shallow coastal waters traveling in schools.
Identifying Key Characteristics:	Body compressed, back greenish-blue, side and belly silvery, head large. Mouth terminal, jaw teeth prominent and in a single row. Two dorsal fins, first short and low with seven or eight spines, the second long with one spine and 23 to 28 rays. Tail fin forked.
Distinguishing Characteristics of Similar Species:	No other species is of similar appearance.
Average Size:	3 pounds, 10-20 inches
Approximate Maximum Size:	31 pounds, 38 inches
Food Habits:	Bluefish are extremely voracious and even cannibalistic. They are known to target schools of menhaden, mackerel, and herring and will hold feeding frenzies, tearing through schools of small fish.
Spawning Habits:	Spawning occurs mainly in the summer when bluefish migrate out to open seas. Eggs are released and drift along with plankton on the surface, hatching about two days after fertilization.
Angling:	These fish are known to bite anything. Fishing methods include trolling and casting live and dead baits from boats, piers, and the shore.
Food quality:	Good. Bluefish quickly become soft and do not freeze or keep well.

## COBIAS



Habitat:	Cobia can be found in shallow continental shelf waters, and often congregate along reefs and around buoys, pilings, wrecks, anchored boats, and other stationary or floating objects. They are also found over mud, gravel, and sand bottoms, as well as natural and artificial reefs at depths of up to 60 feet.
Identifying Key Characteristics:	Body elongated, back and sides dark brown with two sharply defined silvery bands, belly yellowish. Head broad and depressed. Mouth large and terminal. First dorsal fin with seven to nine short and strong isolated spines not connected by a membrane, second dorsal long with 27 to 33 rays. Upper lobe of tail fin longer than lower lobe.
Distinguishing Characteristics of Similar Species:	Sharksuckers (remora) are very similar to young cobia but may be distinguished by the presence of an adhesive disc on top of the head.
Average Size:	15 pounds, 30-48 inches
Approximate Maximum Size:	150 pounds, 60 inches
Food Habits:	Cobia feed mostly on crustaceans, particularly shrimp and crabs, as well as eels, squid, and various small fish found in shallow coastal waters.
Spawning Habits:	It is believed that cobia spawn in offshore waters between April and May.
Angling:	These are strong, hard-hitting game fish that frequently make numerous runs. They are caught trolling, bottom fishing, jigging and casting live baits and lures. Effective live baits include soft and hard crabs, eels, squid, and small fish.
Food quality:	Excellent. Cobia have white, solid flesh, considered by many to be one of the best tasting saltwater fish.
Misc.:	This species is the only member of the cobia family.

#### JACKS



#### ALMACO JACK

Seriola rivoliana

Habitat:	Found in offshore waters around reefs and other live bottom areas.
Identifying Key Characteristics:	Almaco jacks have conspicuously long lobes on the second dorsal and anal fins. The body and lower fins are generally dark brown or dark blueish green, and the lower sides and belly are lighter, sometimes having a lavender or brassy tint.
Distinguishing Characteristics of Similar Species:	The greater amberjack lacks the long lobes on the dorsal fin, and its body shape is more slender.
Average Size:	20 pounds, 12-24 inches
Approximate Maximum Size:	55 pounds, 38 inches
Food Habits:	Feed on fish, crabs, and squid.
Spawning Habits:	Spawn offshore from March through June.
Angling:	Frequently caught bottom fishing with live baits.
Food Quality:	Fair





#### **BANDED RUDDERFISH**

Seriola zonata

Habitat:	Banded rudderfish are found nearshore and offshore over hard bottom, generally in shallower water than other amberjacks; young associated with weed lines or floating debris and may follow sharks and other large fish.
Identifying Key Characteristics:	Fish less than 11 inches long have a dark band from eye to first dorsal fin and six prominent bars on body; larger fish are bluish, greenish, or brown; soft dorsal base about twice the length of the anal fin; tail-lobe white tipped.
Distinguishing Characteristics of Similar Species:	Banded rudderfish are often mistaken for juvenile greater amberjack. Greater amberjack have a broader maxilla (jaw) and the tooth patch on the roof of the mouth is less triangular.
Average Size:	4-8 pounds, 16-24 inches
Approximate Maximum Size:	12 pounds, 26.5 inches
Food Habits:	Known to feed on fish and shrimp.
Spawning Habits:	Little is known about the spawning habits of banded rudderfish.
Angling:	Can be caught on live or cut bait or artificials. Usually caught incidentally when fishing for other snapper-grouper species.
Food Quality:	Fair
	Banded Rudderfish





# CREVALLE JACK

Habitat:	Crevalle jack can tolerate a wide range of salinities. They inhabit coastal brackish waters, and may go up rivers. They are regularly found over inshore reefs, and in harbors and protected bays from May through October and are common in depths up to 130 feet.
Identifying Key Characteristics:	Body greenish to bluish above and silvery-white below. Juveniles often have five dark bars on body. Fins yellowish with a large, oval, black spot on the pectoral fins. Chest lacks scales except for a small patch in front of the pelvic fins. First rays of second dorsal fin and anal fin greatly elongated.
Distinguishing Characteristics	
of Similar Species:	Other jacks and similar looking fish lack the rounded, dark spot on the pectoral fins.
Average Size:	3-5 pounds, 18-24 inches
Approximate Maximum Size:	55 pounds, 40 inches
Food Habits:	This species is known as a ravenous predator, feeding on shrimp and other invertebrates, as well as smaller fish. They will often corner a school of fish or will chase prey onto beaches and against seawalls.
Spawning Habits:	Spawning occurs offshore from March through September.
Angling:	These very fast-swimming fish are known for their strength and fighting ability. They are caught by casting and trolling with natural or artificial lures.
Food Quality:	Poor. These fish are not considered a good eating fish. Larger fish frequently contain parasitic worms.



#### FLORIDA POMPANO

Trachinotus carolinus

Habitat:	Florida pompano are abundant in and throughout shallow coastal inshore waters over sand and shell bottoms from June through October.
Identifying Key Characteristics:	Body deep and laterally compressed, back grayish-blue fading into yellow on lower sides, belly white, scales very small. Teeth very small, none on tongue. Six small spines in front of dorsal fin. Dorsal fin with one spine followed by $22$ to $27$ soft rays. Two spines in front of anal fin. Anal fin with one spine and $20$ to $24$ soft rays.
Distinguishing Characteristics of Similar Species:	The permit has fewer soft rays in the anal fin (16 to 19 compared to 20 to 24). The almaco jack and rudderfish have caudal peduncle grooves and relatively short anal fin bases. The soft dorsal and anal fins of the leatherjacket are followed by 10 or more semidetached finlets.
Average Size:	1 -3 pounds, 10-14 inches
Approximate Maximum Size:	7 pounds, 18 inches
Food Habits:	The pompano feeds on mollusks, crustaceans, other invertebrates, and small fish.
Spawning Habits:	Spawning occurs offshore between March and September.
Angling:	Florida pompano are caught on light tackle in the surf along beaches, in shallow waters, and around inlets.
Food Quality:	Excellent. These fish have white, firm flesh that may be fried, broiled or grilled.



#### **GREATER AMBERJACK**

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Seriola dumerili

Habitat:	Greater amberjack are found mostly in offshore waters and at considerable depths, as well as around offshore reefs, wrecks, buoys, and other near-bottom structures.
Identifying Key Characteristics:	Back and upper sides usually bluishbrown to olive, sides and belly lighter. Usually, a dark strip runs through the eye to the dorsal fin origin, and an amber stripe runs from the eye along the middle of the body. Individuals over 12 inches have 11 to 19 gill rakers on the lower limb of the first arch. Deep grooves occur (top and bottom) in front of tail fin.
Distinguishing Characteristics of Similar Species:	The almaco jack is of similar appearance, but its head is more pointed, and its body is deeper. The front lobes of the dorsal fin and anal fin are deeply sickle-shaped. Lesser amberjack have more gill rakers, 23 to 26, on the lower limb of the first arch. The rainbow runner has a two-rayed finlet posterior to its dorsal and anal fins.
Average Size:	15 pounds, 34-40 inches
Approximate Maximum Size:	155 pounds, 60 inches
Food Habits:	Greater amberjacks feed on fish, crabs, and squid.
Spawning Habits:	Greater amberjacks spawn offshore from March through June.
Angling:	These fish are top quality game fish known as hard fighters. They are frequently caught trolling near the surface with artificial lures or bottom fishing with live bait.
Food Quality:	Good. Larger fish may contain parasites (particularly in tail region). In tropical areas, these fish are suspected of causing ciguatera poisoning.

## DOLPHINS

# Coryphaena hippurus

Habitat:	Dolphins inhabit the open ocean and are usually found close to the surface where they cluster around floating objects, especially buoys, driftwood, and seaweed.
Identifying Key Characteristics:	Color variable, including brilliant and metallic yellows, blues and greens with deep blue spots over body and golden blotches running beside the dorsal fin. Single dorsal fin extends from above the eye almost to the tail fin. Mature males (called bull dolphin) have a very blunt forehead, and females have a gently sloping forehead.
Distinguishing Characteristics of Similar Species:	Pompano dolphin are caught much less frequently and can be distinguished only by the number of fin rays (48 to 55) in their dorsal fins (compared to the 55 to 65 rays in the dolphin), and by the shape of the tooth patch on the upper surface of the tongue.
Average Size:	5-15 pounds, 24-40 inches
Approximate Maximum Size:	88 pounds, 60 inches
Food Habits:	Foraging on whatever is most abundant, dolphins feed in pairs, small packs and schools.
Spawning Habits:	Spawning begins in spring or early summer and lasts several months. Dolphins are prolific spawners and grow very rapidly.
Angling:	Known for their hard-hitting and aerial gymnastics when hooked, dolphin are one of the most sought after of all marine fish both as a sport fish and as a delicious food fish. Dolphins are taken primarily by trolling natural and artificial surface baits but are also frequently taken by casting and by live bait fishing.
Food Quality:	Excellent. Dolphins are considered by many to be one of the best tasting saltwater fish.
Misc.:	Dolphins are often marketed as Mahimahi.

## SNAPPERS

#### GRAY SNAPPER Lutjanus griseus

Habitat:	Juvenile gray snapper can be found inshore in tidal creeks. Adults are generally found near shore or offshore near rocky reefs.
Identifying Key Characteristics:	Body color highly changeable, back and upper sides dark gray to gray-green, often dark olive with a reddish tinge, may be blotched. No dark spots on body, often orange to rusty dots on center of scales on sides. No scales on upper side of head, snout or jaw. Outer pair of canine teeth in upper jaw much larger than lower canines, tooth patch on roof of mouth anchorshaped. Dorsal fin has 10 spines and 14 rays.
Distinguishing Characteristics of Similar Species:	Cubera snapper have equally well developed, strong canine teeth in both jaws, and the tooth patch on roof of mouth is triangular. Mutton snapper have a conspicuous dark spot on sides below dorsal fin. Lane snapper have a conspicuous spot on sides below dorsal fin, and tooth patch on roof of mouth is anchor-shaped.
Average Size:	2-5 pounds, 12-22 inches
Approximate Maximum Size:	1 6 pounds, 36 inches
Food Habits:	Feeds mostly on crustaceans and small fish, primarily at night.
Spawning Habits:	For the gray snapper, spawning occurs from June through August. Individual snappers may spawn multiple times during the course of the reproductive season. Gray snapper spawn in aggregations during the time surrounding the full moon.
Angling:	They are taken by hook and line fishing on or near the bottom with live and cut baits.
Food quality:	Excellent.

#### SNAPPERS

## Lutjanus campechanus

Habitat:	Red snapper favor rocky bottoms at depths of 60 to 400 feet.
Identifying Key Characteristics:	Body deep, head comparatively large. Back and upper sides scarlet to brick red. Iris of eye red. Tooth patch on roof of mouth anchor-shaped and welldeveloped. Dorsal fin with 10 spines and 14 rays. Anal fin angulated with three spines and nine rays.
Distinguishing Characteristics of Similar Species:	The silk snapper has a pink to red body color, and the iris of eye is yellow. There are eight anal fin rays. The mutton snapper has olive-green back, upper sides and upper tail fin. Two blue stripes are present on snout and cheek, and a dark spot appears below the soft portion of dorsal fin. Tooth patch on roof of mouth is chevron-shaped. The wenchman's back and upper sides are pink to rose. The head region between eyes is flat, and the tooth patch on roof of mouth is chevron-shaped. The dorsal fin has 10 or 11 rays. Coloration of the vermilion snapper is bright to light red. The tooth patch on the roof of mouth is rhomboid-shaped, and there are 12 or 13 spines and 10 or 11 soft rays in the dorsal fin.
Average Size:	8-20 pounds, 22-26 inches
Approximate Maximum Size:	50 pounds, 40 inches
Food Habits:	As opportunistic bottom feeders, red snapper prey on fish, shrimp, crabs, and worms.
Spawning Habits:	Spawning occurs from June through October.
Angling:	These are hard-hitting fish that are primarily caught on slow-moving or still baits such as squid or cut bait.
Food quality:	Excellent. Red snapper are one of the most sought after fishes due to their food quality.

#### SNAPPERS

### SILK SNAPPER

Lutjanus vivanus
Habitat:	Silk snapper are found along rocky ledges, mostly at depths between 150 and 800 feet.
Identifying Key Characteristics:	Back and upper sides pink to red, lower sides and belly lighter, with silver reflections. Body covered with very fine, undulating, yellow lines. Fins mostly reddish, except pectorals, which are pale yellow. Iris of eye yellow. Tooth patch on roof of mouth anchor-shaped. Dorsal fin with 10 spines and 13 or 14 rays. Anal fin angulated with eight rays. Tail fin moderately forked.
Distinguishing Characteristics of Similar Species:	Red snapper have nine anal rays, and the back and upper sides are deep red. The iris of the eye is red. Mutton snapper have olive green back, upper sides and upper tail fin lobe. Two blue, oblique stripes are present on the snout and cheek. Iris of eye is red, and the tooth patch on roof of mouth is chevron-shaped. Vermilion snapper have vermilion colored back and upper sides. The dorsal fin has 12 or 13 spines and 10 or 11 rays, and the tooth patch on roof of mouth is rhomboid-shaped.
Average Size:	3-5 pounds, 12-18 inches
Approximate Maximum Size:	1 8 pounds, 30 inches
Food Habits:	The silk snapper is a carnivore that feeds on shrimp, crabs, gastropods, and cephalopods.
Spawning Habits:	Spawning occurs year-round. The eggs are released into the open sea where they are not guarded.
Angling:	Hook and line fishing on or near the bottom with live and cut baits is effective.
Food Quality:	Excellent. These fish have been suspected of causing ciguatera poisoning in the tropics.

### SNAPPERS



#### **VERMILION SNAPPER**

Rhomboplites aurorubens

Habitat:	Vermilion snapper can be found in warm waters along irregular, reef-like bottoms.
Identifying Key Characteristics:	Back and upper sides vermilion in color, lower sides and belly silvery with a reddish tinge. Faint dark lines running forward and down from dorsal fin base, narrow horizontal golden streaks below lateral line. Lower jaw projects slightly beyond the upper jaw, posterior extension of anchor-shaped tooth patch on roof of mouth very broad. Dorsal fin with 12 to 13 weak spines and 10 to 11 rays. Tail forked.
Distinguishing Characteristics of Similar Species:	None of the other snappers have a similar color pattern and all have less than $12 \ \rm dorsal$ fin spines.
Average Size:	Less than 1 pound, 8-14 inches
Approximate Maximum Size:	7 pounds, 20 inches
Food Habits:	This species forages high in the water column on crustaceans, squid, and small fish.
Spawning Habits:	Spawning occurs from April through September and may occur several times during the season.
Angling:	These fish are taken by hook and line fishing on or near the bottom with live and cut baits.
Food Quality:	Excellent.

Vermilion Snapper

# TRIPLETAILS



# Lobotes surinamensis

Habitat:	The tripletail inhabits coastal waters and commonly enters muddy estuaries in depths of up to 20 feet. Tripletail can swim or float on their side among floating objects.
Identifying Key Characteristics:	A deep-bodied fish with rounded, symmetrical dorsal and anal fins which extend far back on the body so that the fish appears to have a three-lobed tail. Body color yellow-brown to dark brown with scattered spots and mottling. Mouth superior with no teeth on roof of mouth.
Distinguishing Characteristics of Similar Species:	Because of the three-lobed tail, no other fish in the area has a similar appearance.
Average Size:	Less than 20 pounds, 10-18 inches
Approximate Maximum Size:	50 pounds, 36 inches
Food Habits:	The tripletail feeds on herring, menhaden, anchovies, and eels, as well as shrimp, crabs, and squid.
Spawning Habits:	Spawning occurs in spring and summer.
Angling:	These fish are known for their strength. They are caught on both natural baits such as live and dead shrimp, as well as artificial lures.
Food Quality:	Excellent.
Misc.:	The tripletail gets its name from its second dorsal and anal fins, which extend far back on the body so that the fish appears to have three tails.

# GRUNTS

# **PIGFISH** Orthopristis chrysoptera

Habitat:	Pigfish can be found in coastal waters over sand and mud bottoms. They are schooling fish and mostly nocturnal.
Identifying Key Characteristics:	Body color blue above, silvery below, each scale with a blue center and bronze edges, sides of head and back with yellow to orange-brown stripes and markings. Dorsal fin with 12-13 spines and 15-16 soft rays. Anal fin with three spines and 13 rays.
Distinguishing Characteristics of Similar Species:	The white grunt has eight or nine anal rays and numerous longitudinal blue and yellow stripes on the head and anterior portion of body. The tomtate has nine anal rays and a dark brown or black spot at base of tail fin. The inside of the mouth of both fish is bright red.
Average Size:	1 /2 pound, 6-8 inches
Approximate Maximum Size:	2 pounds, 12 inche
Food Habits:	Pigfish are bottom feeders that prefer to forage on crustaceans, worms, and small fish.
Spawning Habits:	Spawning occurs inshore in spring and early summer.
Angling:	These fish are mainly taken with light tackle using minnows, small jigs, grubs, and worms while fishing for other types of fish. Pigfish are frequently used as bait for other fish.
Food Quality:	Fair. Due to their small size, pigfish are usually released or used for bait.

# GRUNTS

#### **TOMTATE** Haemulon aurolineatum

Habitat:	Preferred habitat is rough bottom areas, which are scattered over the otherwise smooth plain of the continental shelf. Tomtates are seldom in waters less than 54°F.
Identifying Key Characteristics:	One of the smallest of the grunts, the tomtate is silver white all over with a yellow-brown stripe running the length of the body and ending as a black blotch at the base of the caudal fin. This spot is also evident in most juvenile grunts, and may be lost by older fish. The inside of its mouth is bright red.
Distinguishing Characteristics of Similar Species:	The white grunt has a darker background body color and distinct blue lines that go from the mouth to the edge of the gill plate.
Average Size:	1/2 pound, 6-8 inches
Approximate Maximum Size:	1 pound, 12 inches
Food Habits:	Tomtates feed on small, bottom-dwelling invertebrates.
Spawning Habits:	Spawning takes place in the spring. Females may mature when as small as 5.5 inches and males as small as 6.5 inches, and all fish over the age of 5 are capable of reproducing.
Angling:	The tomtate is not highly regarded by fishermen, however it is an important food for larger fish-eating reef fishes.
Food Quality:	Fair

## GRUNTS

# Haemulon plumieri

Habitat:	White grunt can typically be found in 60 to 80 feet of water. They are schooling fish and are often located along the edges of reefs and at the base of structures.
Identifying Key Characteristics:	Body oblong and laterally compressed, color grayish to bluish with numerous longitudinal blue and yellow stripes on the head and anterior portion of body. Margin of each scale bronze. Inside of mouth bright red.
Distinguishing Characteristics of Similar Species:	Adult white grunts are the only grunts with blue stripes on the head and equally sized scales above and below the lateral line.
Average Size:	1 pound, 8-14 inches
Approximate Maximum Size:	8 pounds, 18 inches
Food Habits:	White grunt are bottom feeders that root in the sand and bottom matter near reefs. They feed on worms, shrimp, crabs, mollusks, and small fish.
Spawning Habits:	Spawning occurs in the late spring and summer.
Angling:	White grunt are taken frequently while bottom fishing with live and cut baits over natural and artificial reefs.
Food Quality:	Good. The firm, white flesh of these fish keeps well on ice.

### **KNOBBED PORGY**

Calamus nodosus

Habitat:	Knobbed porgies prefer to live near the sea floor at depths of 90 to 180 feet, over reefs, ledges, and wrecks.
Identifying Key Characteristics:	Body rosy-silver, center of each scale light iridescent blue, snout purplish with bronze spots, and an iridescent blue stripe below eye. Body oval in shape, upper head profile very steep. Caninelike teeth of about equal size located in both jaws, two rows of molar-like teeth in lower jaw and three rows in upper jaw positioned laterally with an irregular inner series of teeth.
Distinguishing Characteristics of Similar Species:	The whitebone porgy does not have an irregular inner series of teeth. The jolthead porgy has cheeks that are brassy with no blue markings, and the head profile is not as steep.
Average Size:	4 pounds, 10-16 inches
Approximate Maximum Size:	6 pounds, 24 inches
Food Habits:	The knobbed porgy can consume a variety of prey because they are fast enough to catch small fish and have powerful teeth that can crush shells. They prefer bottom-dwelling creatures such as snails, crabs, sea urchins, starfish, clams, and barnacles.
Spawning Habits:	Spawning occurs from April through July, with the peak season from May through June. Females lay thousands of eggs, which are scattered in open water and not guarded.
Angling:	Knobbed porgy are often taken while fishing over natural and artificial reefs with natural baits such as squid, and live and cut fish.
Food Quality:	Good.

# Lagodon rhomboides

Habitat:	Pinfish are a coastal and inshore species that travel in schools, often over rocky bottoms and around docks and pilings. They may also enter brackish water or freshwater.
Identifying Key Characteristics:	Body silver, bluish-silver on sides with six dark, diffused vertical bars separated by yellow longitudinal stripes with a dark spot near the origin of the lateral line. Anal fin yellow with a broad, light blue margin. Posterior nostril oval-shaped. Eight broad, incisor-like teeth are present in both jaws, which are forward-directed and deeply notched.
Distinguishing Characteristics of Similar Species:	Deeply notched incisor-like teeth coupled with the dark spot near the origin of the lateral line separate this species from other similar species.
Average Size:	1 /4 - 1/2 pound, 6-8 inches
Approximate Maximum Size:	2 pounds, 10 inches
Food Habits:	Pinfish feed on crustaceans, mollusks, worms, and occasionally small fish.
Spawning Habits:	During the winter, pinfish move out of coastal waters into offshore waters to spawn.
Angling:	Known as bait stealers, these fish are generally not targeted by fishermen but are taken regularly and used for bait.
Food Quality:	Fair. These fish are infrequently kept unless for bait because of their small size.
Misc.:	Pinfish are named for the small spines on their fins that stick fingers and hands just like pins or needles.

# RED PORGY Pagrus pagrus

Habitat:	Red porgy are found along the continental shelf of North and South America.
Identifying Key Characteristics:	Back and upper sides pinkish-silver with an indistinct yellow spot on each scale of the upper half of the body, lower sides and belly with reddish tints, a wedge of yellow between eyes and some yellow on snout and upper lip. Pectoral fin pink and tail fin pink with bright red margin. Posterior nostril oval to oblong and larger than the anterior pore. Canine-like teeth in anterior position of both jaws, four in upper and six in lower, two rows of molar-like teeth on each side. Dorsal fin with 12 spines and 10 soft rays.
Distinguishing Characteristics of Similar Species:	The knobbed and whitebone porgy's posterior nostrils are slit-like. The body colors of scup and sheepshead are not pink. Sheepshead have anterior teeth that are broad and flattened.
Average Size:	8-10 pounds, 10-15 inches
Approximate Maximum Size:	17 pounds, 18 inches
Food Habits:	Red porgy are carnivorous bottom feeders that travel in schools, migrating to find food. They prefer crustaceans, mollusks, and small fish.
Spawning Habits:	Red porgy are hermaphroditic, beginning life as a female, then developing into males. Spawning occurs in late winter and early spring.
Angling:	These fish are often caught over natural and artificial reefs with natural baits such as squid, and live and cut fish.
Food quality:	Good.



Habitat:	Scup are a schooling species common in offshore waters in winter at depths ranging from 200 to $600\ feet.$
Identifying Key Characteristics:	Body deep, color silver with no dark markings. Front teeth strongly flattened, narrow, in close-set bands, teeth in outer band a little enlarged, compressed and narrower at base, two rows of molar-like teeth positioned laterally in upper and lower jaws. Dorsal fin with 12 spines preceded by one forward directed spine, and 12 soft rays.
Distinguishing Characteristics of Similar Species:	The body color of the red porgy is pink, and the anterior teeth in both jaws are canine-like, with two rows of molar-like teeth positioned laterally. The knobbed porgy has a posterior nostril that is slitlike. The anterior teeth in both jaws are canine-like, and the upper jaw has three rows of molar-like teeth. The body color of the sheepshead is gray with five or six dark, vertical bars, eight broad, incisor-like teeth in each jaw, and several molar-like teeth. The pinfish has deeply notched, incisor-like teeth and a dark spot near the origin of the lateral line.
Average Size:	1 /2 pound, 6-8 inches
Approximate Maximum Size:	4 pounds, 14 inches
Food Habits:	Scup feed primarily on crabs, shrimp, worms, sand dollars, snails, and young squid although they will sometimes eat small fish. Scup usually browse and nibble over hard bottoms.
Spawning Habits:	Spawning occurs from May through August. Eggs are small and buoyant and hatch within two days.
Angling:	Scup are caught still and drift fishing on or near the bottom with squid and live and cut baits.
Food Quality:	Good.

### SHEEPSHEAD

Archosargus probatocephalus

Habitat:	Sheepshead frequent bays and estuaries and areas along the shoreline throughout the year. They commonly enter brackish water in coastal rivers and prefer obstructions such as pilings, piers, and rocks.
Identifying Key Characteristics:	Body nearly oval in shape, gray in color with five or six dark vertical bars and one on nape, no dark spot near origin of lateral line. Four broad, incisor-like teeth on each side of the jaw, their edges straight or only slightly notched, several molar-like teeth present. Dorsal fin has 12 spines and 11 soft rays, second anal spine very strong.
Distinguishing Characteristics of Similar Species:	The black drum has 10 to 13 pairs of small barbels along the inner edges of the lower jaw, and the mouth is inferior and lacks molar-like teeth. Body scales are large.
Average Size:	1 pound, 10-16 inches
Approximate Maximum Size:	21 pounds, 24 inche
Food Habits:	Sheepshead consume mollusks and crustaceans, often traveling in schools. They are browsing feeders that forage around pilings and may be located around jetties, over rocky bottoms, and in other places where they can find oysters and mussels.
Spawning Habits:	Sheepshead spawn in early spring. Adults migrate to offshore waters to spawn. Females may produce $1,100$ to $250,000$ eggs per spawning event. The eggs are buoyant and hatch within $30$ hours.
Angling:	Sheepshead are caught almost exclusively by still fishing with fiddler crabs, mussels, and shrimp around structures such as rock jetties, pilings, and reefs. These fish do not attack the bait but nibble and gently mouth it, requiring the angler to anticipate when to set the hook.
Food Quality:	Excellent.

### ATLANTIC CROAKER

Micropogonias undulatus

Habitat:	The Atlantic croaker is a bottom dwelling, estuarine-dependent fish that becomes oceanic during spawning. They prefer mud, sand and shell bottoms, as well as areas around rocks, jetties, piers, and bridges.
Identifying Key Characteristics:	Body pinkish-silver, back and upper sides with pattern of vertical bars composed of irregular black spots. Chin with five pores and three to five pairs of small barbels along inner edges of lower jaw.
Distinguishing Characteristics of Similar Species:	Black drum have 10 to 13 pairs of barbels on chin. Other similar species do not have barbels on chin or oblique dark streaks on back and sides.
Average Size:	1 1 /2 pounds, 8-14 inches
Approximate Maximum Size:	5 pounds, 24 inches
Food Habits:	Adult croaker feed on detritus as well as larger invertebrates and fish. Sensory barbels allow the Atlantic croaker to find food on the bottom.
Spawning Habits:	Spawning occurs at sea in winter and spring (November is the peak month) when croaker migrate to deeper, warmer waters.
Angling:	Atlantic croaker are caught by bottom fishing with live and cut baits fished on or near the bottom.
Food quality:	Excellent.
Misc.:	The common name "croaker" is derived from the deep croaking noises made when the fish contracts specialized muscles against its swim bladder. The resonant sound is amplified and can be heard from quite a distance.



#### **BLACK DRUM** Pogonias cromis

Habitat:	Black drum are inshore bottom fish. They favor sandy bottoms in salt or brackish waters near jetties, breakwaters, bridges, pier pilings, clam and oyster beds, channels, estuaries, bays, high marsh areas, and shorelines. They are common in all inshore and shallow coastal waters year round, but are most abundant February through July.
Identifying Key Characteristics:	Deep-bodied fish, silvery-gray in color. Young fish with four or five black vertical bars on sides that disappear with age. Body scales large and comblike, lateral line extending to hind margin of tail fin. Mouth inferior and nearly horizontal. Chin with 10 to 13 pairs of small barbels along inner edges of lower jaw.
Distinguishing Characteristics of Similar Species:	Red drum have distinct, ocellated spots near tail fin and do not have barbels on chin. Atlantic croaker are smaller fish with dark, oblique streaks on upper sides and three to five pairs of chin barbels. Sheepshead have a nearly oval body, eight broad, incisor-like teeth, and no barbels on chin.
Average Size:	5-10 pounds, 14-24 inches
Approximate Maximum Size:	11 3 pounds, 50 inches
Food Habits:	Black drum feed on crustaceans and mollusks with a preference for blue crabs, shrimp, oysters, and squid. They locate food with their chin barbels and crush and grind shells with their teeth.
Spawning Habits:	Adults school and migrate in the spring to bay and river mouths for the spawning season.
Angling:	Black drum frequently are caught by bottom fishing around natural, rocky outcroppings, artificial reefs, and other irregular bottoms with live and cut baits including crabs, clams, mussels, and shrimp.
Food quality:	Good. Smaller fish (less than 20 pounds) are of good quality. Larger fish may be coarse, and they frequently contain parasites.
Misc.:	This is the largest member of the drum family. Their drumming noise is voluntary and associated with locating and attracting mates.

### SOUTHERN KINGFISH

Menticirrhus americanus

Habitat:	Found year-round, but scarce during the winter months, kingfish are abundant in inlets and shallow coastal waters, and common along beaches.
Identifying Key Characteristics:	Back and sides are silvery gray with seven or eight vertical, oblique, dark bars; belly white. Margins of fins dark, anal and tail fins often yellowish, anal fin with one spine. Mouth small and inferior with teeth in small broad bands in both jaws. Chin with a single, short, rigid barbel.
Distinguishing Characteristics of Similar Species:	The gulf kingfish does not have dark sidebars. Other similar species do not have a chin barbel and have more than one anal fin spine.
Average Size:	1 /2 -1 pound, 6-10 inches
Approximate Maximum Size:	3 pounds, 12 inches
Food Habits:	Like other members of the drum family, the kingfish uses a chin barbel to probe the bottom for worms, crabs, and shrimp.
Spawning Habits:	Southern kingfish spawn from April to August when the females scatter their eggs offshore.
Angling:	Southern kingfish are caught primarily surf fishing with live and cut baits including worms, shrimp, clams, fish.
Food quality:	Excellent. Southern kingfish are often pan-fried.
Misc.:	The southern kingfish is also known as whiting.





Habitat:	Red drum are abundant in all inshore and shallow coastal waters year-round, but are most abundant in May through October. They can tolerate saltwater as well as freshwater and prefer sand and mud bottoms.
Identifying Key Characteristics:	Body iridescent silvery-gray with a copper cast, darker above. One or more ocellated spots present on upper sides from below soft portion of the dorsal fin to the base of the tail fin. Mouth inferior, nearly horizontal, teeth set in bands in both jaws.
Distinguishing Characteristics of Similar Species:	Other croakers and drums do not have large black spots on tail or on upper sides.
Average Size:	2-5 pounds, 12-24 inches
Approximate Maximum Size:	94 pounds, 60 inches
Food Habits:	This bottom fish uses its senses of sight and touch and its down-turned mouth to forage near the bottom. In shallow water, the red drum can often be seen browsing head-down with its tail slightly out of water (this is called "tailing"). In summer and fall, adults feed on crabs, shrimp, and small fish. During the spring, they feed on menhaden, mullet, pinfish, spot, Atlantic croaker, and flounder.
Spawning Habits:	Red drum spawn in the fall. Shortly before spawning, males change color and become dark red or bright bluish gray above the lateral line. Hours before mating, both males and females chase and butt each other while drumming loudly.
Angling:	Young red drum (3 to 15 pounds) are taken by drift or still fishing on the bottom and by fly- fishing on flats. Favorite baits include shrimp, mud minnows, jigs, plugs, spoons, and streamer flies. Older and larger red drum are taken from the beach just past the breakers with live and cut baits.
Food Quality:	Excellent. Fish less than 10 pounds are excellent. Larger fish may be coarse, of poor quality, and frequently contain parasites.
Misc.:	The red drum is also known as the redfish or channel bass.

#### SILVER PERCH Bairdiella chrysoura

Habitat:	Silver perch are inshore fish and are most common in bays, tidal creeks, small rivers, and inlets near estuaries.
Identifying Key Characteristics:	Body moderately deep and compressed. Back grayish-green in color fading to silver or white on sides and belly, faint, longitudinal, dotted lines present on sides. Anal and tail fins tinged in yellow. Mouth terminal. Preopercular with a few strong spines. Tail fin truncate.
Distinguishing Characteristics of Similar Species:	Similar species either do not have a terminal mouth, or they lack spines on the preopercular margin. Seatrout have two large canine teeth in upper jaw. Atlantic croaker have barbels on chin.
Average Size:	Less than $1/2$ pound, 6-8 inches
Approximate Maximum Size:	1 pound, 12 inches
Food Habits:	Silver perch favor crustaceans, worms, and small fish.
Spawning Habits:	Spawning occurs inshore during April and May.
Angling:	These fish are usually caught on or near the bottom while still fishing with live and cut natural baits such as fish, clams, shrimp, and worms.
Food Quality:	Good. Silver perch are often pan-fried.



Habitat:	Spot can be found in estuaries and coastal saltwater, generally roaming over sandy and muddy bottoms.
Identifying Key Characteristics:	Body silver with 12 to 15 oblique dark streaks extending to below lateral line. A dark blotch about the size of the eye located behind the upper end of the gill slit. Mouth small and inferior.
Distinguishing Characteristics of Similar Species:	Body coloration and the lack of chin barbels make this fish easy to separate from similar species.
Average Size:	1 /2 pound, 6-8 inches
Approximate Maximum Size:	2 pounds, 10 inches
Food Habits:	Spot feed on small crustaceans, detritus, worms, and small fish.
Spawning Habits:	Spot spawn at sea in fall and winter.
Angling:	Spot are taken from coastal fishing piers particularly during the fall months when larger adults migrate from northern areas. These fish are often caught near the bottom with shrimp, clams, and cut bait.
Food Quality:	Excellent. Spot are generally pan-fried.





### SPOTTED SEATROUT

Cynoscion nebulosus

Habitat:	Spotted seatrout are an inshore, bottom-dwelling species inhabiting shallow bays, estuaries, and rivers. They are most abundant in September through July.
Identifying Key Characteristics:	Dark gray above with bluish reflections and numerous round black spots irregularly scattered on back and sides, also extending to soft part of dorsal and tail fins. Two large, canine-like teeth at tip of upper jaw, remaining teeth small, and those in lower jaw gradually increasing in size posteriorly. Chin without barbels or pores. Anterior dorsal fin with nine or 10 spines and second dorsal with one spine and 25 to 28 rays, soft portion of dorsal fin without scales.
Distinguishing Characteristics of Similar Species:	The weakfish has small dark spots on back and sides that form faint, irregular, oblique streaks along the scale row. Up to one-third of the soft portion of the dorsal fin is covered with small scales. The banded drum has a shorter body with dark vertical bars. The mouth and up to one-third of the soft portion of the dorsal fin is covered with small scales. The mouth is strongly oblique, and second anal spine is strong.
Average Size:	1 -2 pounds, 12-20 inches
Approximate Maximum Size:	15 pounds, 36 inches
Food Habits:	Spotted seatrout are predatory, feeding primarily on shrimp and small fish, but also consuming mullet, menhaden, and silversides.
Spawning Habits:	Spawning occurs at night in coastal bays, sounds, and estuaries and around barrier islands from May through August.
Angling:	Spotted seatrout are taken by trolling, jigging, surfcasting, and fly-fishing with both natural and artificial baits. Live shrimp is the best bait.
Food Quality:	Excellent.




Habitat:	Weakfish prefer sandy bottoms. They are found in shallow waters along shores and in large bays and estuaries including salt marsh creeks and sometimes in river mouths.
Identifying Key Characteristics:	Body greenish above and silvery below, back and sides with many small, irregular, black spots forming oblique wavy streaks on sides. Fins yellow with the pelvic and anal fins brighter yellow. Mouth large and superior with two large, canine-like teeth at the tip of the upper jaw. No chin barbels or pores.
Distinguishing Characteristics of Similar Species:	Spotted seatrout have dark spots on back and upper sides that are much larger and more distinct, and they do not form streaks. The fins are charcoal in color.
Average Size:	1-2 pounds, 10-15 inches
Approximate Maximum Size:	18 pounds, 32 inches
Food Habits:	Weakfish are omnivorous, feeding on crabs, shrimp, and other crustaceans, as well as mollusks and small fish such as herring and menhaden. Weakfish forage at different depths and levels and are able to adapt to local food conditions.
Spawning Habits:	Spawning occurs nearshore and in estuaries along the coast from May though October. The released eggs drift along the surface and hatch within two days.
Angling:	These fish are taken by casting, jigging, or still fishing with natural or artificial baits.
Food Quality:	Excellent. The flesh is soft and has a tendency to spoil quickly.
Misc.:	Weakfish are so named because of the ease with which a hook tears from their mouths.

## SPADEFISH



## ATLANTIC SPADEFISH



Chaetodipterus faber

Habitat:	Atlantic spadefish can be found from May through November in oceanic waters nearshore. They are abundant in shallow coastal waters, from sandy beaches to reefs and harbors, and are often found in large schools close to natural or man-made structures. Young Atlantic spadefish can be found swimming at an angle, even parallel to the surface, to disguise themselves as debris.
Identifying Key Characteristics:	Body almost as deep as long, body color varies from grayish to yellowish with four to six dark vertical bars. Mouth very small. Anal, tail and second dorsal fins pointed.
Distinguishing Characteristics of Similar Species:	Black drum have body scales that are large. The mouth is inferior and nearly horizontal, and the chin has 10 to 13 pairs of small barbels along inner edges of lower jaw. Sheepshead have a nearly oval body shape that is gray in color with five or six dark, vertical bars. There are four broad, incisor-like teeth on each side of the jaw with their edges straight or only slightly notched. Several molar-like teeth are present.
Average Size:	6 pounds, 12-18 inches
Approximate Maximum Size:	20 pounds, 36 inches
Food Habits:	The spadefish is a bottom feeder, preferring shellfish, crustaceans, worms, mollusks, and jellyfish.
Spawning Habits:	Spawning occurs in spring and summer.
Angling:	These fish are known for their strong fighting ability. They are often caught using a small gold hook baited with pieces of clam, shrimp, or cannon ball jellyfish.
Food Quality:	Excellent. These fish have firm white flesh that has a delicate flavor.
Misc.:	Spadefish possess such strong schooling behavior that an entire school may follow a hooked fish.

## BARRACUDAS

### **GREAT BARRACUDA**

Sphyraena barracuda

Habitat:	Young great barracuda live in inshore areas, while adults are found from inshore channels to the open ocean. They are found in bays, inlets, and coastal rivers where saltwater and freshwater meet, as well as around reefs, wrecks, piers, and sandy or grassy flats. They prefer shallow areas and appear to move inshore in summer and offshore in fall and winter.
Identifying Key Characteristics:	Body elongated, steel gray above with dark bars on upper sides and several inky blotches of various sizes and position on posterior portion of lower sides. Large head with a long, pointed snout. Mouth superior with strong, pointed teeth of unequal size in both jaws. Area between eyes flat to concave.
Distinguishing Characteristics of Similar Species:	No other barracuda has inky blotcheson sides.
Average Size:	5-20 pounds, 24-36 inches
Approximate Maximum Size:	85 pounds, 72 inches
Food Habits:	The great barracuda is carnivorous and is attracted to shiny objects or flashes as well as movement. They feed by sight rather than by smell.
Spawning Habits:	Spawning is prompted by increased water temperature. Mating occurs between late spring and early fall when water temperature is above 70 $^\circ\text{F.}$
Angling:	These fish are frequently caught by offshore anglers with plugs, spoons, or natural and artificial baits.
Food Quality:	Good. These fish are generally not eaten because they are suspected of causing ciguatera poisoning in tropical areas.
Misc.:	The great barracuda is potentially dangerous to swimmers because of its tendency to strike at flashing objects and its characteristically large teeth.

## WRASSES

Contractor

# Lachnolaimus maximus

Male

Habitat:	Hogfish are most commonly associated with reefs and rocky outcroppings.
Identifying Key Characteristics:	Body pink, reddish-brown or port wine in color with scales on back edged in yellow and a black spot at rear of dorsal fin. Dorsal profile of head rather deep. Large canine teeth on upper and lower jaws. Dorsal fin continuous with 14 spines of which the first three are extended into long filaments.
Distinguishing Characteristics of Similar Species:	Nothing occurs in area that is of similar appearance.
Average Size:	8-10 pounds, 20-30 inches
Approximate Maximum Size:	19 pounds, 40 inches
Food Habits:	The hogfish feeds on small fish, shellfish, and crustaceans.
Spawning Habits:	Spawning takes place from May through July.
Angling:	These fish are caught both in open water areas and on natural and artificial reefs, primarily on or near the bottom. They feed on mollusks, crabs, and sea urchins, but baits such as live and dead squid, shrimp, and fish are effective.
Food Quality:	Excellent.

## MACKERELS



## ATLANTIC BONITO

Sarda sarda

Habitat:	Atlantic bonito frequent both brackish water and saltwater. They are a schooling and migratory species.
Identifying Key Characteristics:	Back and upper sides bluish-green with nine to 12 oblique, dark, wavy lines. Lower sides and belly silver. Upper jaw extends to posterior margin of eye. Dorsal fins almost united.
Distinguishing Characteristics of Similar Species:	The upper jaws of all similar fishes do not extend to posterior margin of eye. Little tunny have wavy lines on upper back.
Average Size:	2-10 pounds, 18-25 inches
Approximate Maximum Size:	1 8 pounds, 36 inches
Food Habits:	Adult Atlantic bonito prey on small schooling fish and will also eat squid, mackerel, menhaden, anchovies, silversides, and shrimp. They can be cannibalistic.
Spawning Habits:	Spawning occurs in coastal waters from January through July. The female will release 450,000 to 6 million eggs, depending on her size.
Angling:	These fish are mainly taken off South Carolina during the spring months by trolling artificial and live baits near the surface.
Food Quality:	Excellent.
	Atlantic Bonito

## MACKERELS



## **KING MACKEREL**

Scomberomorus cavalla

Habitat:	King mackerel are primarily an openwater, migratory species, preferring warm waters. They are often found around wrecks, buoys, reefs, ocean piers, inlets, and other areas where food is abundant, but they tend to avoid highly turbid waters.
Identifying Key Characteristics:	Back iridescent bluish-green, sides silver, first dorsal fin lightly and uniformly pigmented with 14 to 16 spines. Lateral line abruptly curves downward below second dorsal fin. Snout much shorter than rest of head, maxilla exposed becoming vertical behind posterior margin of eye.
Distinguishing Characteristics of Similar Species:	Lateral line of Spanish mackerel does not abruptly curve downward under second dorsal fin. First dorsal fin has 17 to 19 spines, and the anterior portion of the first dorsal fin is black. Cero have spots and one or two longitudinal stripes on sides, and the pectoral fins are covered with scales. Wahoo have 24 to 26 spines in the first dorsal fin. The snout is as long as the rest of the head, and there are numerous vertical stripes on sides of body.
Average Size:	6-10 pounds, 24-42 inches
Approximate Maximum Size:	90 pounds, 60 inches
Food Habits:	Mackerel feed mainly on fish, as well as on a smaller quantity of shrimp and squid.
Spawning Habits:	Mackerel spawn from April through November, and activity peaks in late summer and early fall. A large female may spawn 1 to 2.5 million eggs.
Angling:	King mackerel are taken primarily by trolling and drift fishing with naturalbaits and artificial lures. They are occasionally taken very close to shore from fishing piers.
Food Quality:	Excellent.

## MACKERELS

### **SPANISH MACKEREL**

Scomberomorus maculatus

Habitat:	Spanish mackerel are abundant in coastal waters from April through October. They prefer open water but are sometimes found over deep rocky areas and reefs as well as in shallow water estuaries. They form large, fast-moving schools that migrate great distances along the shore, staying in waters with temperatures above 68 °F.
Identifying Key Characteristics:	Back bluish-green, sides silver with numerous yellow to bronze spots and no streaks, anterior portion of the first dorsal black. Lateral line gradually curving down toward caudal peduncle. Two scarcely separated dorsal fins, first dorsal fin with 17 to 19 spines.
Distinguishing Characteristics of Similar Species:	King mackerel have a lateral line that abruptly curves downward under second dorsal fin. The first dorsal fin has 14 to 16 spines and is uniformly dusky gray in color. Young king mackerel have yellowish-bronze spots similar to adult Spanish mackerel. Cero have spots and one or two longitudinal stripes on sides, and the pectoral fins are covered with scales. Wahoo have 24 to 26 spines in the first dorsal fin, a snout as long as rest of head, and numerous vertical stripes on the sides of its body.
Average Size:	2-3 pounds, 12-20 inches
Approximate Maximum Size:	1 3 pounds, 24 inches
Food Habits:	Spanish mackerel feed on small fish, shrimp, and squid.
Spawning Habits:	Spanish mackerel spawn offshore from April through September where females release between $500,000$ and $1.5$ million eggs.
Angling:	These fish are taken primarily by trolling and drift fishing with natural baits and artificial lures. They are regularly taken very close to shore from fishing piers.
Food Quality:	Excellent.

Spanish Mackerel 119



## **BLACKFIN TUNA**

Thunnus atlanticus

Habitat:	Blackfin tuna are a pelagic, schooling fish found in warm waters.
Identifying Key Characteristics:	Body dark metallic blue on back, lower sides silvery-gray and belly milky white. Second dorsal and anal fins dark with a silver luster, finlets uniformly dark with only a trace of yellow, may have white edges. Pectoral fins long, about 30 percent of fork length.
Distinguishing Characteristics of Similar Species:	Albacore have pectoral fins that reach beyond the anal fin, and the tail fin has a white margin. Bigeye tuna have no makings on upper or lower body and pectoral fins that reach the origin of the second dorsal fin. Finlets are yellow with black margin. Bluefin tuna have a first dorsal fin that is either yellow or blue, a second dorsal fin that is reddishbrown, and an anal fin and finlets that are dusky yellow edged in black. Pectoral fins are very short, less than 80 percent of head length. Yellowfin tuna have bright yellow dorsal and anal fins, and dorsal and anal finlets are bright yellow with black margins. The body usually has 20 broken, nearly identical lines.
Average Size:	10-30 pounds, 24-30 inches
Approximate Maximum Size:	45 pounds, 36 inches
Food Habits:	This species consumes small fish, crustaceans, and plankton, often feeds near the surface, and frequently forms large mixed schools with skipjacks.
Spawning Habits:	Spawning occurs well offshore from April to November.
Angling:	Blackfin tuna are known to be excellent light-tackle gamefish. They are taken primarily by trolling natural and artificial baits near the surface.
Food Quality:	Excellent.



### **BLUEFIN TUNA** *Thunnus thynnus*

Habitat:	Bluefin tuna can be found offshore in temperate waters.
Identifying Key Characteristics:	Back dark blue or black, lower sides and belly silvery marked with gray spots and bands. First dorsal fin either yellow or blue, second dorsal reddish-brown, anal fin and finlets dusky yellow edged in black. Pectoral fins very short, less than 80 percent of head length, do not reach the posterior margin of the second dorsal fin.
Distinguishing Characteristics of Similar Species:	Albacore have pectoral fins that reach beyond the anal fin, and the tail fin has a white margin. Bigeye tuna have no markings on upper or lower body and pectoral fins that reach the origin of the second dorsal fin. Finlets are yellow with black margin. Blackfin tuna have a second dorsal fin and anal fin that are dark with a silver luster. Finlets are uniformly dark with a trace of yellow and may have white edges. Pectoral fins reach origin of second dorsal fin. Yellowfin tuna have bright yellow dorsal and anal fins, and dorsal and anal finlets are bright yellow with black margins. The body usually has 20 broken, nearly identical lines.
Average Size:	300-1000 pounds, 16 -79 inches
Approximate Maximum Size:	1500 pounds, 120 inches
Food Habits:	The bluefin tuna's diet consists of squid, eels, and crustaceans, as well as schooling fish such as mackerel, flyingfish, herring, whiting, and mullet. They are schooling fish and congregate by size, swimming either single file (soldier formation) or in an arc (hunter formation).
Spawning Habits:	During spawning, a large female may release 25 million or more eggs.
Angling:	Bluefin tuna are taken still fishing and trolling with live and artificial baits. They are known for their strength, speed, and tremendous size.
Food Quality:	Excellent. Bluefin tuna are known for their flavorful flesh. They are the largest member of the mackerel family, having enormous commercial value, especially in large sizes. The largest price paid for a single Atlantic bluefin to date was US \$90,000 at the Tokyo market, making this species the most economically valuable wild animal on the planet.
Misc.:	Bluefin are endothermic and able to maintain their body temperature up to 18 °F above the surrounding water, which makes them tremendously adapted to temperate and cold waters. They also retain 98 percent of muscular heat, may have the highest metabolism of any known fish, and are among the fastest and most wide-ranging animals on earth. When hunted or hunting, they can accelerate to 50 miles per hour.



# Euthynnus alletteratus

Habitat:	Little tunny are not as migratory as other tuna species and can be found regularly in inshore waters as well as offshore. They are usually in large schools.
Identifying Key Characteristics:	Back bluish-green with scattering of dark spots resembling fingerprints between the pectoral and pelvic fins, wavy, worm-like markings in a well-defined area above the lateral line and posterior to the middle of the dorsal fin. Two dorsal fins separated by a narrow space, first dorsal fin much higher anteriorly than second dorsal fin, followed by a series of eight finlets.
Distinguishing Characteristics of Similar Species:	No other tunas have similar body markings.
Average Size:	5-15 pounds, 18-24 inches
Approximate Maximum Size:	35 pounds, 36 inches
Food Habits:	Little tunny feed on squid, crustaceans, fish larvae, and large numbers of smaller fish, especially herring.
Spawning Habits:	Spawning occurs from April through November.
Angling:	Little tunny are caught by trolling and casting with both natural and artificial baits. They are often located by watching for birds feeding near the surface.
Food Quality:	Poor. The flesh of these fish is very dark and strongly flavored.
	Little Tunny
	125



## SKIPJACK TUNA

Katsuwonus pelamis

Habitat:	Skipjack tuna are typically found in deep coastal and oceanic waters and can form schools composed of 50,000 or more fish.
Identifying Key Characteristics:	Body elongated, rounded, and lacks scales, except along lateral line. Back purplish-blue, lower sides and belly silver with four to six conspicuous, longitudinal, dark stripes. Two dorsal fins separated by a small interspace followed by seven to nine finlets. Distinctive caudal keels.
Distinguishing Characteristics	
of Similar Species:	Bonito have longitudinal stripes on back. Other tuna do not have longitudinal stripes.
Average Size:	5-15 pounds, 16-20 inches
Approximate Maximum Size:	45 pounds, 36 inches
Food Habits:	Skipjack feed near the surface and have a diet consisting of herring, squid, small mackerel, bonito, shrimp, and crustaceans.
Spawning Habits:	Spawning occurs from spring into early fall.
Angling:	As these fish feed near the surface on small fish, they are often located by watching for feeding birds. These fish are caught by trolling and casting with both natural and artificial baits.
Food Quality:	Excellent. These fish are sold both fresh and canned.





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### **YELLOWFIN TUNA** Thunnus albacares

#### 128

Habitat:	Yellowfin tuna prefer deep, warm, temperate oceanic waters, but have been known to come fairly close to shore when there are warm currents.
Identifying Key Characteristics:	Back dark blue with 20 broken, nearly vertical lines on belly. Dorsal and anal fins bright yellow, dorsal and anal finlets bright yellow with black margins. Two dorsal fins separated only by a narrow space. Large specimens with very long second dorsal and anal fins.
Distinguishing Characteristics of Similar Species:	Albacore have pectoral fins that reach beyond the anal fin, and the tail fin has a white margin. Bigeye tuna have no markings on upper or lower body, pectoral fins that reach the origin of the second dorsal fin, and yellow finlets with black margins. Bluefin tuna have a first dorsal fin that is either yellow or blue, a second dorsal fin that is reddish-brown, and an anal fin and finlets that are dusky yellow edged in black. Pectoral fins are very short, less than 80 percent of head length. Blackfin tuna have a second dorsal fin and anal fin that are dark with a silver luster. Finlets are uniformly dark with a trace of yellow and may have white edges. Pectoral fins reach origin of second dorsal fin.
Average Size:	Less than 100 pounds, 30-40 inches
Approximate Maximum Size:	400 pounds, 72 inches
Food Habits:	The yellowfin's diet depends largely on local abundance, and includes flyingfish, other small fish, squid, and crustaceans.
Spawning Habits:	Spawning occurs throughout the year and peaks during the summer months.
Angling:	These fish are caught primarily trolling with strip baits, artificial baits, and live baits such as small fish and squid. Chumming is effective.
Food quality:	Excellent.

Yellowfin Tuna 129

## WAHOO



# Acanthocybium solandri

Habitat:	Wahoo gather around banks and pinnacles and can be occasionally found around wrecks and deeper reefs where smaller fish are abundant.
Identifying Key Characteristics:	Body very elongated, back iridescent bluish-green with numerous dark vertical bars extending below the lateral line. Snout about as long as the rest of the head with very strong cone-shaped teeth. First dorsal fin with 24 to 26 spines.
Distinguishing Characteristics of Similar Species:	King mackerel have a much shorter snout and no regular vertical bars extending below the lateral line.
Average Size:	10-30 pounds, 36-48 inches
Approximate Maximum Size:	160 pounds, 60 inches
Food Habits:	Wahoo feed on porcupinefish, flyingfish, herring, scad, laternfish, small mackerel and tuna, as well as squid.
Spawning Habits:	Spawning takes place from June through August. A single female may release up to six million eggs in each spawning season.
Angling:	Wahoo are known for their fast swimming, strong fighting, and jumping ability. They are generally taken while trolling, live bait fishing, and kite fishing for other offshore species.
Food Quality:	Excellent. Wahoo have white, firm flesh considered by many anglers to be one of the best tasting of all fish.
Misc.:	Wahoo were originally plentiful off the Hawaiian island of Oahu, once commonly spelled "Wahoo," which accounts for the fish's name.

### SWORDFISH Xiphias gladius

Habitat:	Swordfish are found in tropical and subtropical waters throughout the world's oceans and are highly migratory. They frequent oceanic and continental shelf waters from the surface to the deep submarine canyons, often exceeding 3,000 feet in depth.
Identifying Key Characteristics:	Body rounded, back and upper sides brownish black, lower sides and belly light brown. Snout ends in a long, flattened sword. Scales absent in adults. Single, strong, lateral keel present on each side of caudal peduncle. Pelvic fins absent.
Distinguishing Characteristics of Similar Species:	The bills of other billfish are rounded in cross section, not flattened. Pelvic fins are present in other species and there are two keels on each side of the caudal peduncle.
Average Size:	75 pounds, 68 inches
Approximate Maximum Size:	1 ,200 pounds, 170 inches
Food Habits:	Adult swordfish are opportunistic feeders and are reported to utilize their bill to kill or stun their prey. They feed on squid, fish, and crustaceans.
Spawning Habits:	Swordfish spawn near the surface of tropical and subtropical waters in late fall and winter. Immature fish remain in the tropics for the first few years and then migrate northward.
Angling:	Swordfish are caught primarily at night by deep-drifting natural baits, such as squid. Many fisherman consider the landing of a swordfish as the highest achievement in fishing.
Food Quality:	Excellent. Considered by many to be one of the best tasting saltwater fish.

# Makaira nigricans

Habitat:	Blue marlin prefer deeper, offshore waters, usually near underwater structures such as canyons, drop-offs, and ridges.
Identifying Key Characteristics:	Body dark blue above, lighter below, with dark vertical stripes along sides. Body covered with densely imbedded scales ending in one or two long acute spines. Height of anterior portion of first dorsal fin less than body depth, lateral line complex but inconspicuous and hard to see in large specimens. Anus close to origin of first anal fin.
Distinguishing Characteristics of Similar Species:	Sailfish have a first dorsal fin that is sail-like, and height is much greater than body depth. They are covered with numerous black spots. The pelvic fins are very long, reaching almost to anus, and the lateral line is single, not reticulated. The anterior portion of the white marlin's first dorsal fin is nearly equal in height to body depth, and the tips of the first dorsal, first anal, and pectoral fins are rounded. The lateral line is single, not reticulated. Longbill spearfish have a first dorsal fin that is slightly higher than the body depth, and the posterior part of fin is also high throughout length. The anus is placed well in front of origin of first anal fin. Lateral line is single and prominent.
Average Size:	1 50-400 pounds, 70-100 inches . (fork length)
Approximate Maximum Size:	1 400 pounds, 120 inches (fork length)
Food Habits:	Blue marlin feed on squid and fish such as tuna and mackerel. They are solitary and hence do not form schools.
Spawning Habits:	Spawning occurs in the open sea.
Angling:	Blue marlin are one of the most highly sought after game fish. They are known for their fighting ability, tail walking, and other acrobatics. These fish are caught both by trolling with natural and artificial baits and by live bait fishing.
Food Quality:	Good. Blue marlin are often smoked but generally released alive by anglers.

# SAILFISH Istiophorus platypterus

Habitat:	Sailfish are typically found in warm offshore waters.
Identifying Key Characteristics:	Body dark blue above to silver below, covered with sparsely imbedded scales having blunt points. Lateral line simple and conspicuous. First dorsal fin saillike, considerably higher than body depth throughout most of its length, membrane blue-black, covered with many small black spots. Pelvic fins very long, almost reaching to anus, with one spine and two soft rays. Anus close to origin of first anal fin.
Distinguishing Characteristics of Similar Species:	White marlin, blue marlin and longbill spearfish do not have a sail-like dorsal fin. The pelvic fins of white marlin and longbill spearfish are much shorter. The anus of the longbill spearfish is well in front of the first anal fin. The blue marlin have a complex but inconspicuous lateral line.
Average Size:	45 pounds, 40-50 inches (fork length)
Approximate Maximum Size:	141 pounds, 80 inches (fork length)
Food Habits:	Sailfish feed on squid, octopus, mackerel, tuna, jacks, and herring.
Spawning Habits:	Sailfish spawn in the open ocean. Their eggs float with plankton until hatching.
Angling:	This is one of the most highly sought after of all game fish, known for its fighting ability, tail walking, and other acrobatics. These fish are caught both by trolling natural and artificial baits and by live bait fishing.
Food Quality:	Good. Atlantic sailfish are often smoked, but generally released alive. by anglers.

### WHITE MARLIN Tetrapturus albidus

Habitat:	White marlin usually favor warm, deep, blue waters, but frequently come closer to shore. They are the most frequently encountered marlin along the Atlantic coast.
Identifying Key Characteristics:	Body silvery, only slightly darker above than below, covered with densely imbedded scales ending in a single acute point. Lateral line single and visible. Height of anterior portion of first dorsal fin nearly equal to body depth, posterior fin long and low, tips of first dorsal, anal and pectoral fins rounded.
Distinguishing Characteristics of Similar Species:	Sailfish have a first dorsal fin that is sail-like, a height much greater than body depth, and very long pelvic fins reaching almost to anus. Anterior part of the blue marlin's dorsal fin is smaller in height than body depth. Lateral line system is complex, but inconspicuous. First dorsal fin of spearfish is not as low or posteriorly positioned. Anus is placed well in front of origin of first anal fin. Scales end in several points.
Average Size:	40-70 pounds, 48-60 inches (fork length)
Approximate Maximum Size:	181 pounds, 84 inches (fork length)
Food Habits:	White marlin are solitary, but do form small cooperative hunting groups where they herd baitfish. This species eats assorted fish and squid, generally consuming whatever is most abundant.
Spawning Habits:	Spawning occurs in the spring.
Angling:	These fish are taken by trolling artificial and natural baits and by live bait fishing.
Food Quality:	Good. White marlin is often smoked, but generally released alive by anglers.
Misc.:	The white marlin is the most frequently encountered marlin along the eastern U.S. coast.

White Marlin 139

## FLOUNDERS

## SOUTHERN FLOUNDER

Paralichthys lethostigma

Habitat:	Southern flounder are estuarinedependent bottom fish that commonly inhabit inshore channels, bay mouths, and estuaries year-round. They prefer sandy and live bottom areas around pilings, jetties, oyster bars, and in high current areas.
Identifying Key Characteristics:	Body olive-brown in color with diffuse dark spots and blotches, underside of body white. Both eyes located on upper side of body, space between eyes about as wide as eye diameter. Dorsal fin with 80 to 95 rays originating slightly in front of upper eye, pectoral fin with 11 to 13 rays, and anal fin with 63 to 74 rays.
Distinguishing Characteristics of Similar Species:	Summer flounder have five prominent, ocellated, dark spots on body in a double triangular pattern.
Average Size:	2-3 pounds, 16-20 inches
Approximate Maximum Size:	20 pounds, 36 inches
Food Habits:	The flounder will bury itself in the sand and wait to ambush prey. They feed on shrimp, crabs, and fish such as anchovies, mullet, menhaden, Atlantic croaker, and pinfish.
Spawning Habits:	Spawning occurs in offshore waters in late fall and early winter. Females typically release several hundred thousand eggs, which hatch and migrate into the estuaries and change from upright swimmers into left-eyed bottom-dwellers.
Angling:	These fish are taken while drift fishing or casting with natural baits such as mud minnows, strips of cut bait, and pieces of blue crab, or with artificial baits such as buck tails, small spoons, and spinners.
Food Quality:	Excellent. Southern flounder have white, firm flesh.
Misc.:	Southern flounder change their color to match different bottoms, allowing them to escape detection by predators and prey.

## FLOUNDERS

## SUMMER FLOUNDER

Paralichthys dentatus
Habitat:	Summer flounder are found in inshore and offshore waters on or near the sea bottom burrowing in the sandy substrate.
Identifying Key Characteristics:	Dorsoventrally flattened body with both eyes on left side of body; color varies with upper side assuming coloration of surrounding habitat. Five prominent ocellated spots on posterior portion of body forming two triangles. Dorsal fin originates at anterior portion of eye.
Distinguishing Characteristics of Similar Species:	The southern flounder has fewer gillrakers (10) compared the summer flounder (15). Southern flounder also lack the distinct ocellated spot pattern.
Average Size:	1.5 pounds, 14.7 inches.
Approximate Maximum Size:	SC State Record is 3 pounds, 8 ounces.
Food Habits:	Summer flounder lie in ambush and wait for their prey. They are quick and efficient predators with well-developed teeth allowing them to capture small fish, squid, sea worms, shrimp, and other crustaceans.
Spawning Habits:	Summer flounder usually begin to spawn at age two or three, at lengths of about 10 inches. Spawning occurs in the fall while the fish are moving offshore. Spawning migration is linked to sexual maturity, with the oldest and largest fish migrating first. As in their seasonal migrations, spawning summer flounder in the northern portion of the geographic range spawn and move offshore (depths of 120 to 600 feet) earlier than those in the southern part of the range. Larvae migrate to inshore coastal and estuarine areas from October to May. The larvae, or fry, move to bottom waters upon reaching the coast and spend their first year in bays and other inshore areas. At the end of their first year, some juveniles join the adult offshore migration.
Angling:	Caught using similar methods to those used for southern flounder. Taken while drift fishing or casting with natural baits such as mud minnows, strips of cut bait, and pieces of blue crab, or with artificial baits such as jigs, bucktails and spinners.
Food Quality:	Excellent

# TRIGGERFISH



# GRAY TRIGGERFISH

Balistes capriscus

Habitat:	Triggerfish live at depths below 32 feet and can be found near both artificial and natural reefs.
Identifying Key Characteristics:	Body grayish with green overtones and about three dark blotches or irregular bars across the back, and small bluish to purplish spots on the upper body. Soft dorsal and anal fins with spots tending to form rows. Body scales plate-like, without prominent keels or longitudinal ridges. Scales enlarged above the pectoral fin base and just behind the gill slit to form a flexible structure (a tympanum). Mouth very small and terminal, eight notched teeth in each jaw. Tail fin slightly prolonged above and below.
Distinguishing Characteristics of Similar Species:	Queen triggerfish have two broad, blue lines on cheek from above mouth to below the region in front of pectoral fin base. Tail fin is greatly prolonged both above and below. Filefish have minute body scales, a very large first dorsal spine with a minute second spine, and six or fewer teeth on the upper and lower jaws.
Average Size:	1 -3 pounds, 12-18 inches
Approximate Maximum Size:	3 pounds, 8 ounces; 24 inches
Food Habits:	Gray triggerfish are omnivores that use a set of powerful jaws to crush their prey. The adults favor crabs, sand dollars, and mollusks, while the young consume plankton.
Spawning Habits:	Spawning occurs from late spring into summer. The female releases up to 90,000 eggs in a nest near the bottom of a reef. The male or the female will guard the eggs and larvae against predators.
Angling:	Gray triggerfish are caught on live and cut baits fished on or near the bottom.
Food Quality:	Excellent.
Misc.:	This species is called the triggerfish because it has a locking mechanism in the first dorsal fin. A small second spine must be "triggered" to depress the long first spine.

Gray Triggerfish 145

# TRIGGERFISH



# **QUEEN TRIGGERFISH**

Balistes vetula

Habitat:	This species is found over rocky bottoms and often associated with reefs. It forms schools but may also be observed solitary over sandy and grassy habitats. The queen triggerfish lives at depths from 7-902 feet (2-275 m), however it is more commonly seen at 10-98 feet (3-30 m).
Identifying Key Characteristics:	Queen triggerfish have distinctive coloration of greenish to bluish gray along the back, orange- yellow on the lower portion of the head and abdomen, with two wide diagonal curved bright blue bands extending from the snout to below and in front of the pectoral fins. The lower band is continuous with a blue ring around the lips. There is also a broad blue bar across the caudal peduncle and blue sub-marginal bands in median fins.
Distinguishing Characteristics of Similar Species:	The gray triggerfish has no distinct body coloration.
Average Size:	2-4 pounds, 12-24 inches.
Approximate Maximum Size:	12 pounds
Food Habits:	Feeding primarily on benthic invertebrates, the queen triggerfish preys on sea urchins by creating water currents that overturns the urchin, making it vulnerable to predation by exposing the underside where the spines are short. It also feeds on macroalgae, bivalves, crabs, starfish, sea cucumbers, shrimp, and polychaetes. Feeding occurs during daylight hours. At night, they wedge themselves into crevices within the reef for protection from predation.
Spawning Habits:	Male queen triggerfish establish territories of approximately 33 feet (10 m) in diameter, attracting several females. Nests are built in the sand by moving fins rapidly or creating a current by blowing water with the mouth near the bottom to create sand bowls. The eggs are released into these bowls after a courtship ritual of which little is known. The mating pair fiercely defends the nest of fertilized eggs, even biting divers that approach too close. When the eggs hatch, the young disperse into the water currents. Reproduction occurs year-round, peaking in the fall and again in the winter.
Angling:	Queen triggerfish are caught on live or dead bait fished on the bottom.
Food Quality:	Excellent

Queen Triggerfish 147

# PUFFERS



## **NORTHERN PUFFER**

Sphoeroides maculatus

Habitat:	The northern puffer can be found in bays, estuaries, and protected coastal waters.
Identifying Key Characteristics:	Body gray to brown with black specks and a series of bar-like markings on the lower sides, covered with small spines. Capable of inflating body into round, ball shape. Head blunt. Mouth small with two teeth in the upper and lower jaws giving it a beak-like appearance.
Distinguishing Characteristics of Similar Species:	Other puffers in the region lack the black specks covering the body and exhibit different color patterns.
Average Size:	2-4 pounds, 8 -10 inches
Approximate Maximum Size:	6 pounds, 12 inches
Food Habits:	The diet of the northern puffer consists mainly of shellfish.
Spawning Habits:	Puffer spawn close to shore during the summer.
Angling:	Northern puffers are not considered a sport fish but are frequently taken on natural baits fished on the bottom.
Food Quality:	Excellent but risky. Northern puffer are reputably excellent but are not eaten frequently as the roe (eggs) and other organs are toxic. It is considered a delicacy in some countries.
Misc.:	The northern puffer is also known as the "sea squab."

### Acknowledgements

Some of the species' descriptions appearing in this guide have been taken from the AFO Species Identification Sheets for Fisheries Purposes, edited by W. Fisher (1978), Food and Agriculture Organization of the United Nations. Introductory materials have been taken from various South Carolina DNR publications. Color plates have been reproduced with permission of Mr. Duane Raver, Jr. Common names presented in this guide are those accepted by the American Fisheries Society, Common and Scientific Names of Fishes of the United States and Canada, Special Publication 20, fifth edition. Gratitude is expressed to Mrs. BeBe Harrison, Ms. Ginger DeHaven, Dr. Wendy Moore Brusca, Dr. Jack McGovern, Mr. Robert Wiggers, Mr. Don Hammond, Dr. Mark Collins, Dr. Charles Wenner, Dr.Charles Barans, Mr. David Whitaker, Mr. David Cupka, and Ms. Lesleigh Patton for reviewing the manuscript and offering many helpful suggestions. Photo credits: Photographs were provided by SCDNR staff including Mr. Scott Meister, Mr. Tim Snoots, Mr. Pearse Webster, Mr. Robert Wiggers, and Mr. Randy Gregory of NCDMF.

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### Saltwater Fishing: Rules and Regulations

The following laws pertain to recreational saltwater fishing, shrimping, crabbing and shellfishing. Individuals (age 16 and older) harvesting marine resources, including finfish, oysters, clams, shrimp and crab must purchase an annual, temporary or 3 Year Saltwater Recreational Fishing License – unless fishing on a licensed public fishing pier; fishing on a licensed charter vessel while underhire; using 3 or fewer drop nets, 3 or fewer fold up traps, or 3 or fewer handlines with no hooks and a single bait per line (chicken necking); or shrimp baiting (which requires a shrimp baiting license).

Fishing piers and chartered vessels charging a fee for fishing must purchase an annual Public Fishing Pier or Charter

Vessel license, respectively. Applications for Public Fishing Pier and Charter Vessel Licenses are available from the SCDNR office in Charleston.

Any person engaged in selling any fish or fishery product, including bait harvested in SC state waters, must first obtain

the appropriate license. Regulations concerning commercial saltwater fishing are provided with commercial licenses and are available through the Marine Resources Division at the address below.

For more information, contact: SCDNR Licensing, P.O. Box 12559, Charleston, SC 29422, 843-953-9301, http://www.dnr.sc.gov.

For federal fishery limits and regulations, contact: South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201, North Charleston, SC 29405, 843-571-4366, www.safmc.net.

To learn about the projects and programs that received support from the Saltwater Recreational Fishing License Program this fiscal year, visit *http://saltwaterfishing.sc.gov.* 

## **Angler Ethics**

It is important as an angler to practice good fishing ethics in order to protect the resource and help improve everyone's fishing experience.

#### Do your part to be a responsible sportsman by following these principles:

- Respect the law. Obey all fishing regulations and report violators by calling 1-800-922-5431.
- Respect the resource. Keep only those fish that are injured or those you intend to eat.
- Practice catch and release fishing.
- Respect the rights of landowners. Get permission to fish on their property first.
- Respect other anglers' territory or space. Treat them the way you would like to be treated.
- Respect the land. Leave no litter and take out what you take in. Leave your fishing area cleaner than you found it.
- Pass it on. Teach a child or a friend to fish.
- Support fisheries research and habitat protection.
- Join an organization that works to protect the resource and promotes responsible sportsmen conduct.

#### Safety

- Keep at least one rod's length between you and the next angler before, during and after you cast.
- Always look behind you and to the side before casting to prevent hooking power lines, trees, or a person.
- Wear sunglasses, sunscreen, bug spray and other protection from the natural elements.
- Always be aware of your surroundings and be on the alert for ant mounds and snakes. Avoid thick grassy areas where you can't see your feet.
- Be very careful around water and make sure you have a fishing buddy with you. If fishing from a boat or bank near deep water, always wear a life jacket or PFD (personal flotation device).

### **Catch & Release**

Currently, many fish species of popular game fish have legally mandated size and catch limits, requiring anglers to release undersized and over the limit fish. Many anglers voluntarily release their fish. If these fish are not released properly, their chance of survival is reduced.

Whether anglers choose to release fish or are required to do so by law, all released fish should be handled carefully to give the fish the best chance for survival.

When practicing catch and release fishing, you should do the following:

- Use barbless or circle hooks and needlenose pliers or forceps to reduce injury and handling time of the fish.
- Land the fish as quickly as possible to minimize the fish's fighting time.
- Use wet hands when handling a fish and minimize the fish's time out of the water.
- Never hold a fish by the gills.
- When returning a fish to the water, point the fish into the current or cradle it in your hands loosely under the water until the fish swims away on its own.
- If a fish is landed and the hook has been swallowed, cut the line as far down in the fish's mouth as possible. Do NOT pull the hook out!

### Catch & Keep

Most of the game fish species are excellent fare for the frying pan or grill. If fishing to keep, make sure you follow all rules and regulations with regards to size and catch limits. Keep only fish you will use and release the rest. Plan ahead and bring a proper storage container to put the fish on ice or in water. Get fish cleaned as soon as possible and enjoy! Bon appetite!







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