

Florida Fish and Wildlife Conservation Commission

Fish and Wildlife Research Institute

These fast-swimming coastal fishes are a challenge to catch and, as a result, are coveted by Florida anglers; the pompano has the added enticement of being a popular dinner entree. The two species are remarkably similar in appearance but very different in size as adults—a situation that confuses many anglers who, thinking they have reeled in a world-record-size pompano, are disappointed to learn that they have actually hooked a permit, and a small one at that.

POMPANO & PERMIT

Quick, Silver Duo

whereas permit weighing 40 pounds are common. The body of a juvenile permit is deeper than that of a pompano of similar length; also, the anal fin of the juvenile permit is orange. As permit grow, their body depth decreases in relation to their length, and fin coloration changes from orange to yellow, making them look like huge

pompano. The best way to distinguish between these species is to count the dorsal and anal fin rays. Pompano have more (see table on page 2).

Florida pompano (*Trachinotus carolinus*) have a deep, thin, silvery body with a greenish gray back, which slopes gradually to a rounded head with a blunt snout and small mouth. In dark waters, pompano may have a gold tinge on the throat, belly, and fins. Six short spines are located in front of an elongated dorsal fin, which is set low on the fish's back and is matched by a slightly shorter anal fin underneath. The first few soft rays of these fins are elongated, followed by a narrow band of soft rays that lead to the deeply forked V-shaped tail. The dorsal fin has 22 to 27 soft rays; the anal fin has 20 to 23 rays. The fins of pompano may be yellow. Florida pompano may reach 25 inches and 8 pounds.

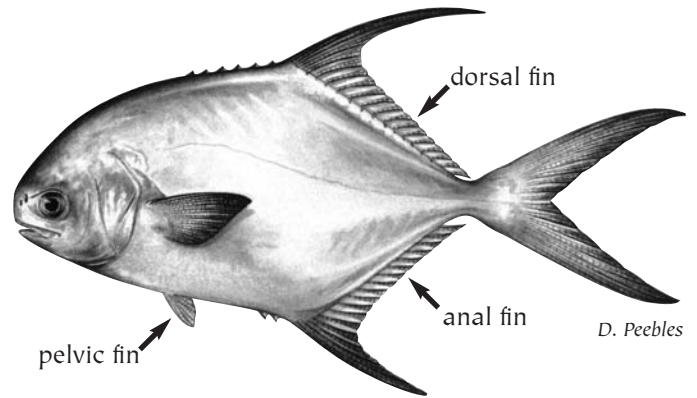
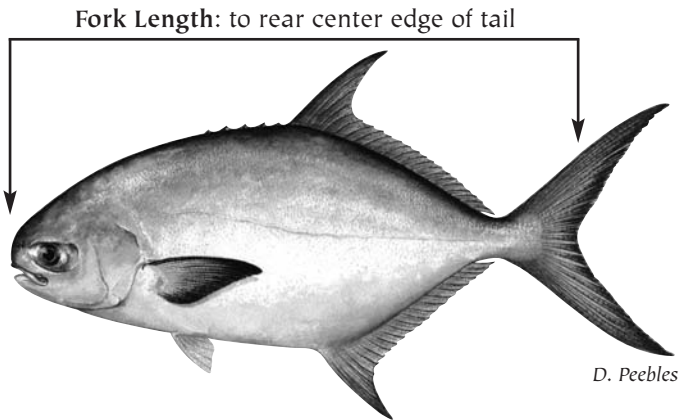
Description

Pompano and permit are members of the jack family, *Carangidae*, which includes about 140 species worldwide. Jacks are characterized by their silvery, thin bodies and deeply forked tail fins. Many have elongated dorsal fins. Florida relatives of the pompano and permit include palometa, crevalle jack, yellow jack, lookdown, amberjack, and a variety of scads.

Because pompano and permit are very similar in appearance, anglers often confuse them. Adult pompano and permit can be distinguished from each other by their size. Pompano rarely grow larger than seven pounds,

AT A GLANCE	Scientific name	<i>Trachinotus carolinus</i> and <i>Trachinotus falcatus</i>
	Size	Pompano to 25 inches and 8 pounds; permit to 59 inches and 79 pounds
	Range	Tropical and warm-temperate seas from Massachusetts to Brazil
	Status	The state imposes bag and size limits on catches of Florida pompano and permit





Pompano

Common to 6 pounds; may reach 8 pounds

Fish in dark waters show yellow on throat, pelvic and anal fins

22 to 27 soft rays in dorsal fin

20 to 23 soft rays in anal fin

Have no teeth on tongue at any size

Up to 18" fork length, 25" total length

Permit

Common to 40 pounds; may reach 79 pounds

Fish in dark waters show orange or golden tints around breast and anal fin

17 to 21 soft rays in dorsal fin

16 to 19 soft rays in anal fin

Small permit have teeth on tongue

Up to 48" fork length, 59" total length

The body of the permit (*Trachinotus falcatus*) is silvery, with a dark or iridescent blue back. In dark waters, orange or even golden tints on larger specimens may be visible around the breast. The dorsal fin of the permit has 17 to 21 rays; the anal fin has 16 to 19 rays. Many adult permit have a large circular black splotch on their sides, behind the base of the pectoral fin. Young permit have bright orange pelvic and anal fins, as well as small teeth on the tongue. Permit may grow to 59 inches and 79 pounds.

Both pompano and permit have distinctive plates at the back of the mouth that help them crush the hard-shelled crustaceans and mollusks they eat.

Range and Habitat

Pompano and permit inhabit tropical and warm-temperate seas. While rare north of Chesapeake Bay, both can be found from Massachusetts to Argentina, although the pompano is absent from the clear waters of the Bahamas and other Caribbean islands.

Pompano are coastal fish and are generally found

in schools along sandy beaches, around inlets, and in brackish bays and estuaries, where they inhabit oyster bars and seagrass beds. They tolerate a wide range of environmental variables, including cold temperatures, low dissolved-oxygen levels, and low salinities—as long as the changes occur gradually. Although typically a shallow-water species, they have been found in waters up to 130 feet deep.

FAST FACT

Schools of pompano can often be seen skipping along the surface of the water day and night. Although the reason for this behavior is unclear, scientists suspect it might be a mechanism to escape danger.

Permit are found offshore over wrecks, oil platforms, and artificial reefs, and inshore on grass and sand flats, and in deep channels and holes. They are most abundant in south Florida, but small specimens have been collected in every coastal county.



Both pompano and permit migrate. Pompano appear to move north in the spring and south in the winter, as reflected in the spring and fall “run” observed in the fishery. This migration may be in response to changes in water temperature. In some coastal counties, pompano can be found year-round. Permit are found in north and central Florida in the warmer months and are found in south Florida throughout the year. Further details of their migratory movements are unknown.

Life History

Much more information has been gathered on the life cycle of pompano than on that of permit, probably because pompano has been a species of interest to aquaculturists as a food product. However, many unanswered questions remain regarding the biology and behavior of both species.

Pompano are believed to spawn in offshore waters from spring through fall, with a peak in April and May and a smaller peak in September. In the Keys, spawning may occur all year, as small pompano can be observed in the surf zone year-round. Along the Atlantic coast, they apparently spawn near the Gulf Stream. Female pompano are estimated to produce from 133,000 to 800,000 eggs per season. Along the Gulf coast, pompano larvae have been collected from 5 to 15 miles offshore of Tampa Bay.

The length of the larval phase for pompano is unknown, as is the mechanism by which they reach nursery areas. Scientists do know that the larvae move into waters along sandy beaches, usually into the surf zone. They remain in the turbid surf zone until they are about 5 to 6 inches long, and then they may head either offshore in schools to deeper waters or south to warmer waters. While some schools of palm-sized pompano have been observed in the mouths of estuaries in the fall, generally all have moved out of the surf zone by late fall. Juvenile pompano grow about an inch a month, usually reaching a length of 10 or 11 inches by their first birthday.

Both male and female pompano reach sexual maturity at about one year of age; however, some females may not be sexually mature until they are three years old. Females are slightly larger than males of the same age. The maximum age documented for a pompano in Florida is seven years.

Juvenile pompano forage on burrowing worms, insect larvae, and coquina clams. Adults eat a variety of mollusks and crustaceans, as well as smaller fish. Adult and juvenile permit consume a diet similar to that of pompano: adults eat mollusks and crabs, and juveniles eat benthic invertebrates such as worms and mollusks.

Permit, both males and females, mature at about three years old and, at that time, are about 18 inches long. Growth is rapid until age five when, at about 25 inches, it slows down. Spawning occurs primarily in the early summer then again in the fall.

In a recent study of permit in Tampa Bay and the Florida Keys, the oldest individual was 23 years of age; the longest was 35 inches.

Economic Importance

Pompano are a lucrative target for commercial fishermen. Commercial landings exceeded 600,000 pounds in 1994 but dropped by nearly 40 percent, to 387,000 pounds, in 1995—the first year of a ban on the use of entangling-type nets within three miles of shore on the Gulf coast and one mile on the Atlantic coast. Since then, landings have fluctuated but have never reached the harvest totals seen before the net ban.

While commercial landings have been decreasing, recreational harvests have been increasing. Recreational anglers landed 514,000 pounds of pompano in 2004, up from the 32,000 to 142,000 pounds per year reported by anglers in the 1980s. Harvest estimates from the 1980s are considered less reliable mainly because a relatively small number of recreational angler interviews were conducted.

In the late 1990s, recognizing the need for additional state involvement, the Florida Fish and Wildlife Conservation Commission (FWC) became involved in the Marine Recreational Fishery Statistics Survey (MRFSS) when offered the opportunity to lead the collection of Florida’s recreational harvest data. Since then, recreational harvest estimates for pompano have become more reliable because FWC biologists have been able to increase the number of interviews conducted, expand field sampler training, and improve the quality of the data. Anglers have also been more receptive to working with FWC biologists, which has contributed substantially to the reliability of these data.

Unlike the commercial fishery, which historically



landed the majority of its pompano on the Gulf coast, the recreational fishery is focused on the east coast, from Volusia to Martin counties, and especially in the Cape Canaveral area. Most of the recreational catch is composed of pompano from 9 to 14 inches long.

In 2004, landings of permit exceeded 130,000 pounds; 92% of this catch came from the Gulf coast. The permit recreational fishery is concentrated in south Florida. In the middle and lower Keys, permit are an important component of the economically valuable charter fishing industry that operates in the Everglades and near the fertile seagrass flats of the Keys back country.

Increased concern over the status of pompano populations, especially on the Gulf coast, as well as new findings about the length of pompano at sexual maturity, led state fisheries managers in January 2004 to impose more stringent restrictions on the recreational harvest of pompano. Since correctly identifying pompano and permit is difficult at small sizes, the two species are managed together. The 2004 regulations established a minimum size limit of 11 inches fork length for all harvest of pompano and permit, and an aggregate recreational bag limit of six fish daily per person for pompano and permit. Furthermore, new regulations effective July 2005 limit the number of pompano or permit exceeding 20 inches fork length to one per person per day, with a maximum of two of these species, in any combination, per vessel per day. This regulation applies in both state and federal waters.*

*Fishing regulations may change annually. Contact the FWC Division of Law Enforcement for information about current regulations. You can also view the current saltwater fishing regulations at the Web site for the FWC Division of Marine Fisheries Management, located at <http://MyFWC.com/marine>

Fishing Tips

Anglers can catch pompano by fishing from bridges and piers at the mouths of inlets and bays and by casting into the surf off beaches. Many anglers use sand fleas, fiddler crabs, or jigs to entice pompano to bite.

Permit are a cagey quarry that can be caught in seagrass meadows and around wrecks and coral reefs. Crabs are their preferred bait, and they are usually disinterested in artificial flies or lures.

FAST FACT

Fishing guides say permit are more difficult to catch than tarpon, bonefish, or any other prized sport fish that inhabit the tranquil flats of the Florida Keys.

Research



Researchers at the Florida Fish and Wildlife Commission's Fish and Wildlife Research Institute (FWRI) in St. Petersburg recently completed a life-history study of Florida pompano and did a similar study of permit in 1999.

Fishing license revenue and the Federal Sport Fish Restoration Program supported these studies. The Sport Fish Restoration Program is a "user pays/user benefits" system funded by a tax on sales of recreational fishing equipment and boat fuel. The Program supplies three dollars for every one dollar provided by the State for projects that improve fishing and boating opportunities. FWRI scientists will continue to study these species in order to further understand their life history and assess population changes.



June 2005



Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute
100 8th Avenue SE, St. Petersburg, FL 33701 • (727) 896-8626 • <http://research.MyFWC.com>