

Southern Flounder



Southern Flounder

(Paralichthys lethostigma)

Southern flounder have a flat body and fins without spines. The left ("top") side of the fish is an olive-brown color with dark and white spots resembling a sandy or muddy bottom; both of the flounder's eyes are on this side. During metamorphosis from larval to juvenile stages, the right eye migrates over the head, leaving the right side eyeless. This allows flounder to lay flat on the bottom and swim with both eyes looking upward.



© Diane Peebles

Spawning Season

Southern flounder spawning starts during October and November as temperatures cool. Mature southern flounder begin mass migrations from the estuary towards the waters of the Gulf of Mexico in the fall. This movement can be greatly accelerated by the passage of strong cold fronts. Spawning activity occurs offshore between November and January with a peak in December. Female southern flounder may spawn every three to seven days producing 14,000 to 68,000 eggs per spawning event. Spawning appears to be triggered by water temperatures below 59 degrees Fahrenheit, with daily spawning activity usually occurring during the morning hours. Female southern flounder return to the estuary between January and April after spawning.

Habitat

Range of the southern flounder extends from the coast of North Carolina to northern Mexico, excluding areas near the tip of Florida. Southern flounder generally prefer muddy bottoms within an estuary, but can occur in channels and bays near piers, pilings, and rock jetties. In Louisiana, southern flounder can be found from 100 miles up the Mississippi River in fresh water to offshore in the Gulf of Mexico. Southern flounder spend their first year after hatching in shallow, low-salinity estuaries and river waters. As southern flounder grow, they relocate to slightly deeper waters within inshore estuaries. After a southern flounder's first year of life, males mostly remain in offshore waters. Most southern flounder caught inshore consist of females.

Diet

With a flattened shape that allows them to become nearly invisible on the bottom, southern flounders are well adapted for ambushing quick-moving prey such as shrimp, mullet, anchovies, croakers, and gulf menhaden. Southern flounder feeding activity is highest when water temperatures are between 61 and 77 degrees Fahrenheit. Fish generally eat larger prey as they grow bigger; however, research indicates that southern flounder may simply eat higher numbers of small fish as they grow larger.



Age and Growth

Louisiana Department of Wildlife and Fisheries use "earstones", called otoliths, to calculate the age of fish. Biologists remove these hard structures from the skull of bony fish and cut them into small sections. In a process similar to ageing trees, biologists count the rings that are visible in the thinner otolith slices. Finfish age, length, and weight data are used by fishery managers to estimate growth rates, mortality rates, and population size. The chart shows that fish grow rapidly during the first few years of life and then growth begins to stabilize as they get older. Once fish reach maturity, energy is invested in reproduction rather than growth.



Male Growth Rate

| AGE (YEARS) | APPROX. AVERAGE LENGTH | APPROX. LENGTH RANGE |
|-------------|------------------------|----------------------|
| 1 | 8.5" | 7" - 10" |
| 2 | 11.5" | 9" - 14" |
| 3 | 12.5" | 10" - 15" |
| 4 | 13" | 10.5" - 15.5" |

LDWF Fish Management

Female Growth Rate

| AGE (YEARS) | APPROX. AVERAGE LENGTH | APPROX. LENGTH RANGE |
|-------------|------------------------|----------------------|
| 1 | 9" | 7" - 10.5" |
| 2 | 14" | 11" - 17" |
| 3 | 17" | 14" - 20.5" |
| 4 | 19" | 15" - 23" |
| 5 | 20" | 16" - 24" |
| 6 | 21" | 17" - 25" |
| 7+ | 21.5" | 17" - 26" |

LDWF Fish Management

Your purchase of fishing equipment and motor boat fuels supports Sport Fish Restoration and boating access facilities.

Louisiana Department of
Wildlife and Fisheries
Office of Fisheries
2000 Quail Drive
Baton Rouge, LA 70808
225-765-2800
www.wlf.louisiana.gov

This public document was published at a total cost of \$344.60. Five hundred copies of this public document were published and partially paid for by a Federal Aid in Sportfish Restoration Grant (F-136) from the U.S. Fish and Wildlife Service in this first printing at a cost of \$344.60. This document was published by the Louisiana Department of Wildlife and Fisheries, 2000 Quail Drive, Baton Rouge, LA 70808, to inform Louisiana residents and non-residents about the Sport Fish Restoration Program. This material was printed in accordance with standards for printing by state agencies.

Southern Flounder Quick Facts

The oldest male southern flounder recorded in Louisiana waters was four years of age and determined in a 2004 study by Fischer and Thompson.

The oldest female southern flounder recorded in Louisiana waters was eight years of age and determined in a 2004 study by Fischer and Thompson.

The longest male southern flounder aged by LDWF was 20.5 inches long and three years of age.

The longest female southern flounder aged by LDWF was 25 inches long and three years of age.

LDWF Contact Information

Recreational Fishing License
225-765-2887

Commercial License
225-765-2898

Boating Registration
225-765-2898

Lifetime License
225-765-2887

Enforcement
225-765-2989

Fish Tagging Program
225-763-5415