

# Spotted Sea Trout in Alabama

► Spotted sea trout (*Cynoscion nebulosus*) belong to the drum family Sciaenidae. Other common members of the drum family encountered in Alabama include the Atlantic croaker, southern king fish (ground mullet), black drum, and red drum. Spotted sea trout, also known as specks or speckled trout, are found in shallow coastal waters from Tampico, Mexico, through the Gulf of Mexico and up the East Coast to New York.

No spotted sea trout are harvested commercially in Alabama where they are designated as game fish. In 2019, Alabama harvests of all types (observed, reported, and released alive) totaled just under 1.2 million fish with about 75 percent being released alive. The recreational harvest in the Gulf of Mexico region is about 5.2 million fish during the same reporting period.

## Biology

Because spotted sea trout are found over such a wide geographical range, several aspects of their biology vary considerably. The following description is based on studies from the north-central Gulf of Mexico.

Spotted sea trout spawn from April to October. Within this time period, there are two spawning peaks: one in the spring and one later in the summer.

Spawning begins near sunset and lasts for several hours. Males congregate over grass, rubble, or shell areas near channels and in deeper passes near barrier islands where they produce drumming or knocking sounds to attract females. Contact among fish stimulates the release of sperm and eggs into the water where fertilization takes place.

Water temperature and salinity influence the location and time of spawning. Spawning is unlikely at water temperatures below 68 degrees F, and most spawning occurs at temperatures between 70 and 86 degrees F. Low salinities are not conducive to egg and larval survival, and spotted sea trout usually do not spawn in salinities below 7 to 10 parts per thousand. Most spawning occurs between 17 and 35 parts per thousand. For specks spawning in Mobile Bay, salinity may be a major factor. It is not unusual to have high river flows in April or May, which result in very low salinities in the bay. Some bay areas that are normally good spawning habitats may have salinities too low to support



spawning. Research from Louisiana indicates that under these low salinity conditions, specks move to higher salinity areas for spawning.

Females are capable of spawning for the first time when they reach 10 to 13 inches in length and are older than 1 year. They can spawn many times in a season, and reported frequencies range from every 3 to 5 days to every 16 to 21 days depending on the location and size of the fish. As a result, estimates of egg production are not precise. However, a 2-pound female spawning eight times in a season could produce a total of about three million eggs.

Individual fish show much variation in growth, and the long spawning season means that some fish are produced as early as April and others as late as September, making it difficult to associate the length of a fish with its age. In Alabama, male trout average 11.8 inches at 1 year, 13 inches at 2 years, 14 inches at 3 years, 16 inches at 4 years, and 17 inches at 5 years. Females average 13 inches at 1 year, 15.6 inches at 2 years, 17 inches at 3 years, 20 inches at 4 years, and 23 inches at 5 years. The largest reported female trout were 23 to 33 inches at 5 to 9 years of age.

Little is known about the behavior of recently hatched speckled trout, but they seem to move with the tides. As they reach ½ inch in size, they are found in or near submerged vegetation or other structures in the bays and bayous where they remain during the warm months. They move to deeper water in the winter.

Small specks feed on grass shrimp and copepods. As they grow larger, shrimp and small fish become more important in the diet. Adults feed on shrimp and larger fish; the larger specks seem to feed more on fish than shrimp.

Spotted sea trout are not considered migratory because they rarely move more than 30 miles. However, they do seem to move to deeper waters during the coldest weather and return to the shallow areas in the spring. Deep holes attract specks when water temperatures drop. Severe cold fronts have resulted in large numbers of spotted sea trout dying when some fish apparently could not reach warmer waters.

Specks also move in response to salinity changes. While they can be found in waters of very low salinities (2 parts per thousand) and very high salinities (greater than 45 parts per thousand), they seem to prefer moderate salinities of 10 to 25 parts per thousand.

## Fishing Success & Management

The Alabama state record for sea trout is 12 pounds 4 ounces; the International Game Fish Association (IGFA) all-tackle record fish was caught in Florida (1995) and weighed 17 pounds 7 ounces. The IGFA all tackle length world record, also caught in Florida (2015), measured 87 centimeters (34.25 inches) surpassing the 79-centimeter (31.1024-inch) record. Current Alabama recreational harvest regulations call for a slot off 15 to 22 inches (with one over allowed) and a total of six fish per person per day.

Spotted sea trout management is guided by socioeconomic conditions and a desire to achieve

sustainable yields. The Alabama State Legislature determined that it was in the best interest of the state to declare spotted sea trout a game fish. Game fish status means that specks caught from state waters cannot be bought or sold. However, fish legally caught under a commercial license from other states may be sold in Alabama when properly documented.

Sustainable yield is achieved through a combination of length and bag limits. Length limits protect fish until they are large enough to spawn at least once; smaller fish then grow to a larger size, which increases yield. Bag limits reduce the overall harvest of fish, leaving some for another year, and are related to fishing pressure and fish population size. As pressure (the number of anglers) increases, bag limits may need to be reduced.

A number of local guides and other experienced anglers encourage the release of larger spotted sea trout. Larger fish generally are females and the most productive members of the population.

## The Future

Spotted sea trout are resilient in the face of fishing pressure and catastrophic events, such as freezes, because they are highly productive (reproduce at an early age, produce eggs over several months, and produce high numbers of eggs). However, like any organism, specks need a healthy environment in which to thrive. Good water quality and habitats, such as submerged and emergent aquatic vegetation and oyster reefs, are key elements in sustaining spotted sea trout populations.

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