

Biology of Spanish Mackerel

By Mark Fisher

Spanish mackerel (*Scomberomorus maculatus*) belong to the Family Scombridae (tuna and mackerel family). This is a medium-sized streamlined fish with small scales, silvery sides and distinct brassy-yellow spots. The second dorsal and anal fins are followed by finlets, and the caudal fin is narrow and deeply forked. The caudal peduncle is rigid and keeled. The mouth has 24-32 sharp, interlocking teeth in each jaw. This species is distributed along the western Atlantic from Cape Cod to the Yucatan peninsula; below Yucatan the Brazilian mackerel, *S. brasiliensis*, which is similar but is slightly larger and has more, smaller spots, replaces it. The center of abundance is the Atlantic coast of Florida.

This is a fast-swimming migratory predator that forms schools of similar-sized individuals. Schools pass near the beach on their seasonal migration journeys, and sometimes enter high-salinity bays. There are three major migration routes: along the Texas-Mexico coast; along the northern Gulf and west coast of Florida; and along the Atlantic coast. Off Texas, spring migration occurs as schools move to the north and east, with high abundance from March to October with an August peak. Fall migration is back southward, beginning about September, with a wintering ground in the Campeche-Yucatan area. However, some fish are caught throughout the year, indicating some venture offshore during cold weather and do not migrate. This species favors water temperatures 20°C and higher.

Spawning occurs from May to October, with a peak from August to September. Spawning takes place in the inner shelf waters, often in the vicinity of barrier islands and passes at water depths of 12-18 m and salinities from 30-36 ‰. Fertilization is external, by broadcast of milt and roe into the water column. The eggs are buoyant and hatch in about 25 hours. Larvae occur most frequently offshore over the inner continental shelf in water depths of 5-13 m. Larvae feed on other fish larvae and eggs; growth is about 1 mm/day. Juveniles also feed on fish. Males mature earlier than females and reach sexual maturity by age 2 while females reach sexual maturity at age 3.

Growth rates between males and females differ, with females growing faster and larger than males. Maximum age is 11 years for females, and 9 years for males. Females can attain an average length of 17 inches at the end of their first year, and reaching about 21, 25, 27, 29, 30, 31, 32, and 33 inches in successive years. Males attain an average of 14 inches at the end of their first year, and reaching about 19, 22, 25, 28, 29, 30, 31 and 32 inches in successive years.

Spanish mackerel are swift voracious predators. They typically hunt in loose schools near the surface and feed on schooling prey, particularly anchovies, but also herrings, sardines, silversides, mullet, squid and shrimp. They feed in offshore waters along coastal areas, near barrier islands and passes, but will occasionally forage in the lower, saltier portions of bays and estuaries. Juveniles and smaller adults feed almost exclusively on anchovies, but larger adults are more opportunistic and also feed on larger, seasonally abundant prey, like herrings and juvenile jacks. Spanish mackerel are a major prey item of sharks and bottlenose dolphin. Fly anglers should use medium (#2 or #4) sparsely-tied shiny streamers with a fast retrieve to imitate fleeing baitfish. Shock tippets (~40#) are recommended because of their many sharp teeth.

The state record is 8.74 pounds and 34.5 inches, caught on August 15, 1976. The state fly rod record is 6.6 pounds and 30.88 inches, caught on July 29, 2007 with a Smartt Christmas minnow.