Biology of Red Drum
By Mark Fisher

Red drum (*Sciaenops ocellatus*) is one of 18 species of the family Sciaenidae found along the Texas Gulf coast. Red drum occur in the western Atlantic from New Jersey to Vera Cruz, Mexico, with centers of abundance off North Carolina and along the western Gulf of Mexico. Their strong fighting ability and excellent flavor has made them one of the most popular game fish among saltwater anglers.

Other names include red fish, channel bass, puppy drum (smaller specimens), rat reds (smaller specimens), bull reds (larger specimens), tambour rouge (Cajun French) and corvinon ocelado (Spanish).

Red drum, like other sciaenids, are estuarine-dependent. They are fall spawners, beginning when water temperatures drop below 85° F, with peaks from mid-September through October. Spawning peaks also coincide with new or full moon phases. Spawning occurs in high salinity nearshore and inshore waters close to barrier island passes and channels. Males produce low frequency sounds during courtship by vibrating specialized drumming muscles through the air bladder. Spawning occurs between dusk and midnight, and fertilization is external, by broadcast of milt and roe into the water column.

Eggs are buoyant in salinities above 25 ‰ and hatch within 24 hours. Hatching rates are poor below 10 ‰. After hatching, larvae are carried by tidal currents into the inside waters of bays and estuaries, where they tend to seek grassy quiet coves, tidal flats and lagoons where vegetation protects them from predators and currents, and where they can avoid rough waters until they are strong enough to swim actively. Muddy bottoms are the preferred substrate, and growth is about 0.5 mm/day. Larvae feed primarily on copepods and other zooplankton.

Juveniles and adults tolerate wide ranges in salinity and temperature, and have been found in temperatures ranging from 35 to 95° F and salinities from < 1 ‰ to 45 ‰. Death generally occurs when exposed to temperatures 40° F or below for several days.

This is a long-lived species with some individuals surviving up to 40 years. Growth is extremely rapid until about age 5, and then slows markedly. There are no growth or size differences between males and females. They can attain an average of 12 inches at the end of their first year, and reach 22, 28, 30, and 31+ inches in successive years, although growth is extremely variable. In females, sexual maturity begins at the end of the third year, and all are mature by age 6. Males mature at smaller sizes than females, with maturity beginning at age 1 and all are mature by age 3.

Virtually all red drum in Texas estuaries are < 5 years of age. Fall migration to the Gulf begins as early as age 2, and they tend to remain in the Gulf after their first spawn. Offshore adults can form large schools (up to 250,000 individuals) near the surface, often under schools of jacks or other fishes. Inshore juveniles are also often found in schools, but large individuals living in shallow inshore waters are typically solitary.

In estuaries, red drum are roaming predators closely associated with the bottom and shorelines. Smaller fish generally eat smaller food items, but three main groups, (shrimp, crabs and fish) are eaten by all size classes. Fish are consumed more frequently than crabs or shrimp, and are typically more prevalent in their diet during winter and spring months, particularly menhaden. Shrimp are consumed more frequently in the spring, summer and fall, probably due to their seasonal abundance. Other fish species commonly eaten include anchovies, mullet, and tonguefish.

Red drum feed indiscriminately on the bottom or in the water column on seasonally abundant prey. When bottom feeding, they tilt their mouth downward and dig while supporting themselves with their pelvic fins. In this posture, their tail will protrude above the surface of shallow water, and anglers often search for "tailing reds" while fishing.

The state record was caught off the Sabine Pass jetty on January 30, 2000 and it was 59.5 pounds and 54.25 inches in length.