



LOUISIANA STONE CRABS

By
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In recent years, a small commercial recreational and fishery has developed for stone crabs in high-salinity bays across Louisiana. Stone crabs began to attract attention in the 1980s, when more of them began appearing in blue crab traps in coastal lakes and bays. In early 1985, LSU biologists conducted a study into the possibility of developing a fishery for them. Before that could occur, however, the great Christmas freeze of 1989 severely reduced the number of stone crabs in Louisiana's coastal waters. Since then, stone crab numbers have increased to more than before 1989. Modest numbers are landed in some parts of the state for sale in the wholesale trade or for retail sales directly to the public. In some areas, numbers are high enough for recreational crabbers to target.

The stone crab found in Louisiana is officially known as the Gulf stone crab, *Menippe adina*. It is very closely related to the Florida stone crab, *Menippe mercenaria*, but smaller, with some color differences. The Gulf stone crab has a dark brown body, compared to the tan or gray color of the Florida stone crab, and it doesn't have bands or stripes around its legs like the Florida stone crab. The ranges of the two species overlap in the area of Apalachee Bay, Florida, where they hybridize.

Gulf stone crabs seem to prefer slightly higher salinities than blue crabs, from full strength sea water at 35 parts per thousand (ppt) down to 10 ppt. They seem to prefer areas near or on oyster reefs, rock jetties or debris-cluttered bottoms, where they burrow in the mud for shelter, cold weather refuge and when molting their shell. During cold months, they seem to show a preference for deeper channels and passes. Research indicates that Gulf stone crabs can survive very low oxygen levels, at least for a day or so. Females seem to outnumber males, especially in deeper waters.

Mating is similar to that in the blue crab, taking place while the female is in the soft-shell stage, with the male cradling the female beneath him. A male will begin “guarding” a female before she molts and will continue to do so until her shell hardens. Mating seems to take place in the fall.

After mating, a female will deposit fertilized eggs on the “hairs” under her belly apron in a large mass called a “sponge”. Hatching occurs in 7-18 days, depending on water temperature. Females may spawn several times between March and September with peak spawning occurring from May through July. After hatching, Gulf stone crab larvae go through seven stages before they resemble the adults. During most of this time, they are planktonic, meaning that they are free-floating, at the mercy of the currents and tides.

Once they settle to the bottom, the young stone crabs have a wide diet of oysters, mussels, barnacles, snails, clams, worms, jellyfish, blue crabs, hermit crabs and plant matter. Shellfish of all kinds are staple foods of adults, with oysters being a major food item. Feeding is highest on spat and small oysters, but larger Gulf stone crabs eat oysters of all sizes. It has been estimated that they consume an average 219 oysters per year and they may be more destructive to both spat and adult oysters than the oyster drill (conch).

Growth is fairly slow. Some females are mature enough to spawn by age two, and by age three, only 30% are mature. By seven years old, almost all the females are mature. Only the claws on stone crabs are harvested, but claw removal does slow their growth rate. Stone crabs have a large crusher claw and a smaller pincher claw. Both can be harvested if they meet the minimum propodus (claw) size limit of 2 3/4 inches. Claws on males are more slender and longer than females and will produce legal claws at a smaller size than on females.

Louisiana law provides that only legal stone crab claws can be set on shore from a vessel and that whole stone crabs cannot be landed, except for a tolerance of one stone crab per crate of blue crabs. Since stone crab claws cannot be iced or refrigerated before boiling, fishermen often hold the stone crabs alive until near the end of their run before declawing them. Chilling stone crab claws before boiling will result in the meat sticking to the shell. Stone crabs may be boiled with traditional Louisiana seasonings, but are at their best when boiled in lightly salted water and served with melted butter.