Shrimping In Galveston Bay

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Penaeid shrimp in the Gulf of Mexico are of importance to the commercial fisherman, the week-end enthusiast, and the sport fisherman. To the commercial fisherman, shrimp represent the most valuable marine resource in terms of dollar value. To the week-end vacationer, amateur shrimper affords a relatively simple method for obtaining a seafood in the "delicacy" class. To the sport fisherman, shrimp are the most effective bait for the redfish, speckled trout, and croakers that abound in the bays. Although some of the more ardent advocates of artificial lures may look with contempt upon the use of bait, the importance of shrimp for this purpose has given rise to a bait industry of some magnitude in some areas of the Gulf.

In Greater Galveston Bay, several species of penaeid shrimp are found: the white shrimp, *Penaeus setiferus*; the brown shrimp, *Penaeus aztecus*; the pink shrimp, *Penaeus duorarum*; and the sea bob, *Xiphopenaeus kroyeri*. Brown and white shrimp are the most abundant species, while pink shrimp and sea bobs occur rather infrequently.

The life history of the white shrimp has been fairly well-established. The spawning season extends from April to October and spawning takes place in the saline waters offshore. At the time of mating, the male attaches a sperm sac to the spermatophore to the female. The eggs are fertilized as they are shed in the water. From 500,000 to 1,000,000 eggs are shed during a single spawning. The eggs are microscopic in size, measuring about a hundredth of an inch in diameter, and sink to the bottom. Within 24 hours, they hatch into larval forms that are planktonic, that is, they are transported by and subject to vagaries of the tides and currents.

While passing through an additional number of larval stages, the shrimp are transported into the brackish waters of the bays and bayous where they adopt a benthic, or bottom-dwelling, existence. At this time, they are about a half inch in length. Four to ten weeks are spent in the inside waters, during which the shrimp grow rapidly. Growth has been estimated at more than an inch per month during the summer months. As the shrimp increase in size and mature, they gradually move back out of the bay to the offshore waters.

The life span of white shrimp is not well defined, but apparently ranges from 12 to 18 months. Most shrimp spawn only once, but there is reason to believe that occasionally, more than one spawning occurs.

Less is known about the other species of penaeid shrimp, but the general life history follows a similar pattern. The striking difference between the white shrimp and the brown and pink shrimp is that the latter two species seem to be more efficiently caught at night while the former is primarily fished during the day.

Shrimp commonly mistaken for young penaeid shrimp include several species of grass shrimp. These small shrimp, found in large numbers along the marshes in the inside waters, seldom grow to more than an inch in length. Unlike the penaeid shrimp, they carry the developing eggs under the abdomen. Another species that carries its eggs is the river shrimp. The river shrimp have long, well-developed legs, and appear more formidable than the other species of shrimp. They are primarily fresh-water creatures, but are frequently seen in the bays after periods of heavy rainfall.

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