

The Development Of The Brown Shrimp Fishery In Texas

CHARLES H. LYLES, *Fishery Marketing Specialist*
New Orleans, Louisiana

THE SHRIMP of the southern United States are among our most valuable marine resources. The present production of this crustacean exceeds one quarter of a billion pounds, of which the Gulf of Mexico produces more than 75 per cent. The growth of the fishery in the past five years has been attributable chiefly to the exploration of the grooved shrimps, *Penaeus aztecus* and *P. duorarum*. The phenomenal growth of the fishery has been greatest since 1945, for prior to the beginning of the brown shrimp fishery in Texas, Lindner, Anderson, and Johnson of the Bureau of Fisheries estimated the catch of grooved shrimp to be about 3 per cent of the total annual shrimp harvest.

Several circumstances contributed to the growth of the brown shrimp fishery in Texas. In 1940 there were less than 70 trawlers, of 5 net tons or greater, operating in Texas. In the same year the vessel *Neptune* brought the first cargo of grooved shrimp to Port Isabel, near Brownsville, Texas. The catch amounted to 3400 pounds and was taken on East Bank near Port Isabel. The "brownies" were marketed, but at reduced prices compared to those for common shrimp. The catch of the *Neptune* is the first known case of an entire load of brown shrimp being landed and marketed in Texas. Apparently the significance of this catch was not immediately recognized, for there is no further record of landings of this variety until much later, excepting the few sold with the common shrimp. The war years cut short field observations, and only hearsay evidence exists from 1941 to 1945. However, the construction of new trawlers did not halt, since higher prices lured fishermen and wholesalers to construct more and larger trawlers. These vessels were, for the most part, 40 to 50 feet in length and the owners were in many instances indebted for sums amounting to 11 to 16 thousand dollars. Shortly after the war there developed off Carmen, Mexico, a fishery for the white shrimp, and it was this operation that drew off many boats from the Texas and Louisiana coasts. With the pressure reduced, building continued and by the summer of 1947 large numbers of trawlers had returned from Mexican waters and established themselves in Texas. By this time costs had risen and many new owners found themselves burdened with a heavy investment in a declining white shrimp fishery. It was this very serious economic condition that faced the Texas shrimp fishery in the summer of 1947. Many of the owners, not content to remain in port and lose their investment, took to sea in search of a money crop. That year, 1947, marked the turning point of the fishery, for landings of brownies at Aransas Pass were greater than ever before, many cargoes being totally brown shrimp. These shrimp did not sell very well at first, and dealers refused to buy some catches. Others took the lead in attempting to market the catch of brownies. Some progress was made, and 1948 saw increased landings of brown shrimp all along the Gulf coast. This expanding market provided momentum for the expanding fleet and new boats were added each month. These were of a larger more seaworthy type, of increased cost. Some dealers further restricted brown shrimp landings in 1948, which forced some trawlers to tie up; others only worked harder.

The Fish and Wildlife Service tagged shrimp along the Texas coast, and

proved that shrimp from Texas migrated along the Texas coast toward Mexico, showing that these animals had little regard for man's artificial boundaries. Fishermen, observing these operations, reached their own conclusions: that schools of shrimp at Carmen, Mexico could be intercepted by fishing the Texas coast south of Aransas Pass to the Mexican border. This they did, and since the fishing was outside the territorial waters of the state, the trawlers did not stop because of darkness as they are obliged to do in waters within the jurisdiction of the state. It was in the hours of darkness that the largest catches were made in early April of 1949. It should perhaps be pointed out that, had not several trawlers operated together in the same general area, the brownies might never have been taken, for it seems that when this variety is sought by trawlers fishing one behind the other, the first craft may expect a smaller catch than the following boats.

Another contribution to the development of this fishery was the use of echo sounding devices. Much of the fishing off Brownsville area is in mud gullies between rock formations. Net losses were relatively high. Since most of the shrimp were taken in water ranging from 20-27 fathoms in depth, the echo sounding devices were of great value in increasing the catch per unit of effort by keeping the craft in the gullies of correct depth. The initial influx of boats was to Brownsville simply because of lack of harbor facilities in other nearby ports. One firm handled all the unloading for several months, but as the permanency of the fishery was demonstrated other houses were constructed. A very substantial portion of the catch was landed with the heads off and therefore required little labor at the wharf. The catch was either frozen after being landed or was trucked up the coast to Port Lavaca or Galveston. Probably little of the early catches were marketed fresh.

Market resistance was overcome to some extent by lowering the price and by intensive advertising. The shrimp were given such names as "Golden Browns" and "Go'den Brazilians." Several articles were written by specialists of the Fish and Wildlife Service informing the public of the quality of brown shrimp. Trade magazines assisted with editorials, comments and opinions. All these factors helped to lessen buyer resistance to this valuable fishery. It should not be overlooked that at this time there was a strong market demand for shrimp. Had this fishery been discovered ten or more years ago, it probably would not have been exploited, simply because the product would not have had a market. It might be noted in this regard that brown shrimp had been taken in Louisiana for many years, but no attempt had been made to expand the fishery simply because of the limited extent of the market. Fortunately the Brownsville fishery was discovered at a time when the market could be taught to accept the product.

The Brownsville fishery is now over a year old and by continued exploration the extent of the fishery has expanded to include areas near the Campeche Banks of Mexico. Landings were originally only of *Penaeus aztecus*; they now include *P. aztecus*, *P. duorarum*, and *P. setiferus*. Production has now increased until Texas lands over 50 million pounds of shrimp annually.

In summary, the most important factors contributing to the development of the brown shrimp fishery have been (1) market acceptance of the brown shrimp, hitherto considered unacceptable (2) construction of larger and more expensive trawlers, making necessary more shrimping grounds (3) attempts to intercept schools of white shrimp believed moving south to the area off Carmen, Mexico and (4) use of sounding instruments to fish areas formerly unavailable to commercial trawling.