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COMMERCIAL HARVEST OF CATFISH

W. GUTHRIE PERRY AND ARTHUR WILLIAMS

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## Comparison of Slat Traps, Wire Cages, and Various Baits for Commercial Harvest of Catfish

W. GUTHRIE PERRY

Louisiana Department of Wildlife and Fisheries, Rockefeller Wildlife Refuge  
Grand Chenier, Louisiana 70643, USA

ARTHUR WILLIAMS

Louisiana Department of Wildlife and Fisheries, Post Office Box 15570  
Baton Rouge, Louisiana 70895, USA

**Abstract.**—Slat traps and wire cages fished for 2,414 trap-days in southwest Louisiana between February 8, 1984, and March 11, 1985, yielded 3,218 lb of catfish. Wire cages were most effective, catching 71% of the total. Only 24% of the channel catfish *Ictalurus punctatus* taken in wire cages were greater than the legal size restriction of 11.0 in total length. By comparison, 55% of the catfish caught in the slat traps were legal size. Cages caught an average of 2.0 lb of catfish per trap-day; slat traps caught 0.7 lb/trap-day. Both gears were highly selective for channel catfish, even though blue catfish *Ictalurus furcatus* was the dominant catfish species present in those waters. Cheese bait accounted for 46% of the channel catfish harvested in wire traps and 60% of the fish caught in slat traps. Soybean chips used as bait in wire cages and slat traps yielded 28 and 33% of the total catch, respectively. Game fish catches in cages were minimal.

Commercially harvested wild catfish contributed over \$2.6 million to Louisiana's economy in 1983. Channel catfish *Ictalurus punctatus* was the most sought-after freshwater species; blue catfish *Ictalurus furcatus* and flathead catfish *Pylodictis olivaris* were of lesser importance. Management of these species has been accomplished by regulating gear types and enforcing commercial size limits.

Because of the demand for large catfish in the southeastern United States, Louisiana fish historically brought high prices (Harry Schafer, Louisiana Department of Wildlife and Fisheries, personal communication). However, in the late 1960s and early 1970s, a shift in the size of fish preferred was noted when commercial fishermen from Louisiana's Black River area were successful in having the minimum square-mesh size of hoop nets reduced from 2.0 to 1.0 in in their area. Their justification for changing the minimum mesh size was to allow fishermen to harvest the smaller, underutilized (but still legal) 13.0-in channel catfish.

The apparent shift in popularity toward smaller fish also was influenced by commercial catfish farmers, who began supplying small, high-quality fish to the markets at a competitive price. The demand for smaller fish caused commercial fishermen to seek fish below the legal size limit. In 1971, Perry and Carver (1973) concluded a study of the minimum length at maturity of channel catfish which resulted in decreasing Louisiana's

total length limit for channel catfish to 11.0 in in 1972.

Recently, a demand for still smaller fish has evolved in the New Orleans area where an apparent market exists for fish as small as 6.0 in. Channel catfish size limits were rendered unenforceable in 1981 due to a court injunction. On January 1, 1985, the legal length was reinstated in most of the state. The waters exempt were Lac des Allemands, Lake Salvador, Lake Cataouatche, Lake Maurepas, the western portion of Lake Pontchartrain, and associated bayous and streams, exclusive of the Mississippi River and Bayou Lafourche. The new action extends until January 1, 1990, at which time the results of a Fish Division study of catfish will dictate future management of this resource.

In 1982, commercial fishing interests asked the Louisiana Department of Wildlife and Fisheries to consider legalization of wire cages of a unique design developed in Florida. Because of this unique design, the fishermen reported the gear was highly selective for channel catfish. Selectivity of various gear types previously had been investigated in Louisiana, but this design was not included in the studies. Davis and Posey (1959) investigated various mesh sizes of trammel nets, gill nets, hoop nets, wire cages, basket traps, trot lines, and seines used in commercial fishing. Posey and Schafer (1967) and Perry (1979) studied the catch of slat

