

DRUM FISHING FOR BLUE CATFISH, *Ictalurus furcatus*, AND FLATHEAD CATFISH, *Pylodictis olivaris*

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INTRODUCTION

During the spring of 1965, we learned that large "white cats" and "goujons" could be captured in fifty-five gallon drums. "White cat" and "goujon" are local names for blue catfish and flathead catfish.

Arrangements were made to go back in the early spring of 1966 and work with a local commercial fisherman in order that the Louisiana Wild Life and Fisheries Commission could ascertain the success and validity of drum fishing.

PROCEDURE

An aggregate of thirty-nine, fifty-five gallon drums were obtained for use in this study. All were prepared in the same manner. A hole fifteen to eighteen inches in circumference was chopped in one end of each drum for a mouth. Numerous small holes were then made in each side and the bottom to facilitate sinking and drainage. A piece of medium gauge wire was then looped between the mouth of the drum and one of the holes situated near the mouth. Wire had to be used because rope would have been cut by rough edges of the drum mouth. Next, twelve to twenty feet of rope was secured to the wire loop, and the drum was ready to be fished.

After the drums were prepared, a suitable location, usually near a deep hole or a duck blind, was sought. The loose end of the rope was then attached to a float or pole and the drum sunk.

Each drum was set out individually. Drums were placed at various points in Bayou Des Allemands and Lac Des Allemands. The span of thirty-nine drums covered a distance of approximately twenty miles.

To raise the drums, the pole or float with the attached rope was found and then, while holding on to the rope, the boat was pulled into a position almost directly over the drum. With the boat in position, the drum was raised straight up. Upon reaching the surface, the wire loop would be grasped and the drum held against the side of the boat until a paddle could be shoved inside the drum. It was quite easy to feel whether or not fish were in the drum. If fish were present, the drum would be raised further until most of the water had drained out. The fish were then poured into the boat and the inside of the drum inspected for the incidence of eggs or fry.

In this study, catch per unit effort, species, sex, length-weight data, gonadal development, incidence of eggs or fry, and surface water temperatures were recorded.

Drums were raised on the average of once every 5.5 days. The project lasted from February through July with the best catches of large blue and flathead catfish coming in late April and early May when the surface water temperature was between 72° and 82° Fahrenheit. A large number of channel catfish were caught after the water became warmer than 82°F.

RESULTS

Results are recorded as "catch per unit effort." A unit of effort is one drum fished until raised and checked and is identical to the set described by Schafer, et al., in 1965.

A total catch of one hundred and thirty-six fish yielded a success ratio of .396 fish per unit of effort (Table I). The average catch of blue catfish and flathead catfish per unit of effort was low, .044 and .149, respectively. However, the harvest of two or three large catfish per set would equal or exceed the normal daily catch on trotlines or

in cans as shown in Table I. Channel catfish constituted the bulk of the catch per unit of effort, 0.192, but were only taken in significant quantities after the water temperature was above 82° F.

TABLE I. TOTAL RESULTS OF DRUM FISHING.

SPECIES	TOTAL NO.	AVERAGE LENGTH	AVERAGE WEIGHT
Blue catfish	15	35.6	20.0
Flathead catfish	51	30.3	16.6
Channel catfish	66	15.1	1.5
TOTAL	132		
Total No. Drums Fished			343
Average catch per effort396
Average catch blues per drum effort044
Average catch flatheads per effort149
Average catch channel catfish per effort192
Average catch miscellaneous fish011

With the exception of two immature flatheads, all fish harvested were sexually mature. A majority of fish caught were males. Male catfish constituted an over-all 56.8% of the harvest although blue catfish percentages were slightly higher, 66.6% (Figure 1). Male and females were often captured in the same drum. Multiple catches were common and the maximum number of fish harvested from one drum was four. Single catches occurred with the greatest frequency followed closely by catches of two. Three fish were harvested from one drum on several occasions (Table II). Incidence of eggs was not uncommon; fry were found only four times.

TABLE II. FISHING SUCCESS.

FISHING EFFORT	NUMBER OF DRUMS THAT						
Total	Caught None	Caught 1 Fish	Caught 2 Fish	Caught 3 Fish	Caught 4 Fish	Contained Eggs	Contained Fry
343	252	51	36	3	1	13	4

DISCUSSION

Various commercial fishermen in the Des Allemands area have utilized drums for taking of large catfish for several years. Only one or two drums are fished and they are raised at random whenever the fishermen happen to pass their location and have not made a good catch by normal fishing methods.

Normal fishing methods in Lac Des Allemands include cans in the spring, summer and early fall, trotlines, slat traps in the late fall, winter and early spring months, telephones (small illegal hand-operated generators) and an occasional piece of webbing.

Lac Des Allemands has experienced a history of controversial fishing methods. At the present time, as a result of House Concurrent Resolution 172 of the 1965 Louisiana Legislature, Lac Des Allemands is the only area in Louisiana where legality of drums, cans and slat traps is questionable and the use of these is not being enforced.

Drums proved to be comparable to cans in the number captured per set or per unit effort. Schafer, et al., op cit., reported that cans captured 0.494 fish per set. In this study, the average catch in drums was 0.396 fish per set.

It was impossible to compare the harvest of fish by drums with the harvest of fish by hoop nets, Davis and Posey, 1959, or slat traps, Posey and Schafer, 1964, because inclement weather would allow some drums to be raised while others could not be safely checked. This resulted in highly variable fishing periods within the same area.

Regardless of how well our drums were hidden, other fishermen found and raised them. This undoubtedly gave us poorer results than would have normally occurred.

The largest catfish captured weighed 54.0 pounds. It was decided that no larger catfish were harvested because the mouths of the drums were not large enough to permit the larger fish to enter.

Most of the larger catfish harvested were cut and scratched. One catfish was nearly cut in half. This problem could have been eliminated by splitting a piece of rubber hose and slipping it over the edges of the drum's mouth.

A small hoist modified to sit in a boat would have facilitated handling the drums. Drums as fished were difficult to raise out of the

SEX RATIO OF TOTAL HARVEST BY SPECIES

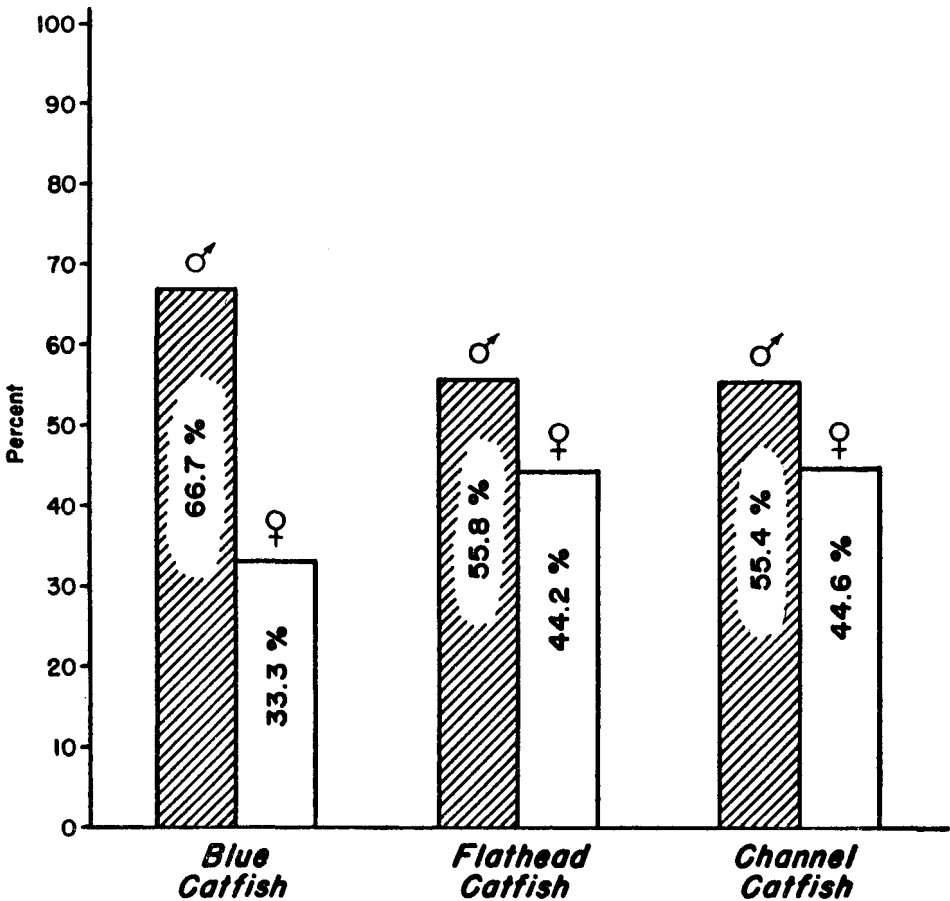


Figure 1

water and as a result several fish were lost before we could get the drum into the boat.

In drums that contained blue and flathead catfish no crabs or shrimp were found. In drums that contained channel catfish, crabs, shrimp, small sunfish, and flathead fry were found. Only one channel catfish was harvested before the water temperature reached 82° F. Stomach contents indicated that the fish had apparently gone into the drum to eat a soft-shelled crab. It was one month later and the water temperature had reached 82° F. before another channel catfish was harvested. Two immature and two spent flatheads captured in drums during June and July had apparently gone into the drum seeking either a hiding place or food. Blue catfish seemed to be the most wary. Several were lost just as the drum reached the surface.

As the water temperature warmed, the catch of large blues and flatheads declined rapidly, and the catch of channel catfish increased. The small size of the channel catfish did not justify continued raising of the drums and the project was terminated.

CONCLUSION

Drums were and still are an effective method of harvesting large, mature blue and flathead catfish particularly during their spawning season.

The catfish apparently entered the drums to spawn although some may also have entered the drums seeking food or a hiding place.

With the exception of two immature flatheads, all fish captured were sexually mature. Fifty-six per cent of the fish harvested were males. Eggs and fry of blue, flathead and channel catfish were found in the drums.

It is conceivable that the commercial use of drums to harvest large blue catfish and large flathead catfish could be detrimental to the future existence of these species. It is just as conceivable that dwindling blue and flathead catfish populations could be encouraged to reproduce better if game and fish commissions would put prepared drums into lakes and streams.

More experimentation on the influence of drums on the population dynamics of blue and flathead catfish is necessary before drums can be recommended as either a commercial method of harvesting fish or an inexpensive way of encouraging spawning of the blue and flathead catfish.

LITERATURE CITED

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