

RESUME OF THE ROUGH FISH REMOVAL PROGRAM IN NORTH CAROLINA

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The first intensive rough fish removal program in North Carolina was established in November, 1951. A number of coastal streams of the State were selected as experimental test areas, but thus far Little River in the northeast corner of the State has provided the most information on the effects of rough fish removal on the game fish populations. The river had been open to commercial fishing until about 1930. During that time, the sport fishing was reported as being very good. After the river was closed to netting operations, the sport fishing success dropped off. It was mainly for this reason that the stream was chosen for a rough fish removal area. The program will be continued until January, 1955, when a complete report on the findings will be made.

The test section of the river is more or less typical of the coastal streams with large populations of longnose gar, bowfin, and various species of catfish present. In order to remove these and the other undesirable species of fish, a commercial fisherman who was familiar with the water was hired to build and operate the various fishing gear used in the operations. The fisherman works directly under the supervision of Wildlife Resources Commission personnel. Observation and data regarding fish populations, growth rates, and other biological phenomena are taken.

The most important device in use on this river is a type of modified fyke net. This net is in common use along the coast of North Carolina and is very effective in taking most species of fish. Catfish traps, gill net, dynamite, and a carp weir are also used, as conditions warrant. All species of non-game fish are removed from the river as they are captured. Game fish taken are returned to the water unharmed. The commercial fisherman receives the rough fish as part of his pay. All of the fish captured are counted and weighed by species, with daily records for all net recorded. Table 1 gives the number and weight of the game fish and the rough fish taken in the test area from November, 1951, through September, 1954.

Table 1. Number and weight of game and rough fish taken in the test area, November, 1951, to September, 1954.

	Game fish		Rough fish	
	No.	Wt. (lbs.)	No.	Wt. (lbs.)
Fyke nets	94,330	36,556.3	41,008	31,546.0
Gill nets	108	109.3	1,216	2,517.4
Carp weir	0	0	300	1,506.0
Catfish traps	105	12.5	220	63.8
Dynamite	36	25.6	112	533.2
Totals	94,579	36,703.7	42,856	36,176.4

It has been estimated that the rough fish removed from the river has had a market value of less than one thousand dollars a year. Many of the fish taken have no market value, as gar, bowfin, and many of the smaller fish cannot be sold locally. As the program continued, the catch of rough fish declined so that it was impossible to conduct such a program without financial assistance to the fisherman from a source other than fish removed. The point of diminishing returns was rapidly reached, as soon as the initial population of rough fish were taken.

The following list gives the more important non-game fish taken from the river in order of their numerical abundance:

1. White catfish — *Ictalurus catus*
2. Channel catfish — *Ictalurus lacustris punctatus*
3. Southern flounder — *Paralichthys lethostigmus*
4. Glut herring — *Pomolobus aestivalis*
5. Brown bullhead — *Ameiurus nebulosus*
6. Yellow bullhead — *Ameiurus natalis*
7. Bowfin — *Amia calva*
8. Carp — *Cyprinus carpio*
9. Longnose gar — *Lepisosteus osseus*
10. Gizzard shad — *Dorosoma cepedianum*
11. Chub sucker — *Erimyzon oblongatus connectens*
12. Redhorse sucker — *Moxostoma sp.*

With the addition of a fishing access area on the river in 1954 and with the publicity given to the program, the sport fishing pressure on the area has increased considerably. There are indications that sport fishing success has improved since the initiation of the program.