

GAME LAWS AND FISHING IN REELFOOT LAKE¹

C. L. BAKER

Associate Director and Resident Biologist, Reelfoot Lake Biological Station and Department of Biology, Southwestern, Memphis

Reelfoot Lake is without doubt one of the finest lakes in the South for such game fish as large-mouth black bass, crappie, and numerous types of sunfish. Its 56,000 acres and its abundant vegetation make it a natural fish hatchery and an unexcelled haven for millions of game and rough fishes. An increasing number of people of the State of Tennessee as well as an ever numerous band of sportsmen from neighboring states come to the lake each year to match their skill with pole and line or rod and reel with these denizens of the fresh waters. Since no records are kept of the numbers of fish caught by private fishermen and sportsmen, one can only guess at the number removed from the lake each year. Some idea of the magnitude of the catch can be obtained, however, by considering the fact that more than 160,000 pounds of bass, crappie, and sunfish on which a royalty is paid pass through the hands of the Department of Fish and Game each year.

The abundance of game fish in Reelfoot Lake makes it possible for Tennessee to continue as one of the few remaining states in the Union to allow these fish to be caught for commercial purposes. How long this liberal policy can continue cannot be determined, although it is the opinion of many that these game fish of Reelfoot Lake are not as abundant as in former times. Neither is it possible to predict how much more abundant the bass and crappie would be, or how many additional fishermen would try their skill, if the commercial catches were restricted in a greater degree or prevented entirely.

We do know, however, that at the present time this lake is being fished for its natural resources rather than "farmed" by restricting the "crop." The experiences of fish conservation managers in such states as Michigan, Ohio, Wisconsin, New York, California, Arkansas, etc. show that, even with commercial fishing for game fishes prohibited, it is necessary to rear the young fingerlings in hatcheries and restock the streams and lakes at frequent intervals in order to maintain an adequate supply and to shorten "the time between bites." Such a condition might be avoided in Reelfoot Lake, due to the abundance of fish food, the lack of game fish parasites, and abundant protective vegetation, if immediate measures are taken to preserve and maintain the present ever decreasing supply.

¹Contributions from the Reelfoot Lake Biological Station No. 2.

In regard to our most popular game fish, the large-mouth black bass, Seth E. Gordon, in 1928, as conservation director of the Izaak Walton League of America (now Executive Secretary, Pennsylvania Game Commission) stated very emphatically that "the black bass is worth far more as a sport fish than he can ever be as a market fish. . . . In view of the enormous demands upon our inland streams and lakes there is certainly no longer any excuse for permitting the sale of black bass over the market stall. They are worth their weight in gold, because any section of the country that can boast good bass fishing will reap a harvest of tourist gold far greater than the dead fish would ever bring."

Mr. Gordon goes on to state that the:

. . . commercial fishermen yield to this opinion most stubbornly, and by so doing, have made it difficult for themselves as well as the anglers. In an act in 1926 to stop the sale of black bass, Senator Hawes, of Missouri, and the Izaak Walton League succeeded in securing the enactment of an act in 1926 to stop the sale or shipment of black bass. That law, however, is effective only in states that have laws making it illegal to take bass for commercial purposes or to offer or ship them for sale. We have succeeded in scaling down the list to eleven states, and in one of these the state's own bass may not be sold, but those shipped in by her neighbors may be sold. The League is now making a concerted effort to have these remaining eleven states stop the sale of black bass. Let me suggest to the representatives of commercial fishing interests . . . that they can win thousands of friends by openly espousing such legislation. The principal offenders are Maryland, Virginia, North Carolina, Florida, and *Tennessee*. Four of these permit commercial fishing for bass in restricted areas only, but so long as there is a legal market anywhere you may bank on it that thousands of pounds of illegally caught bass will be sold. The way to stop it is to close all the markets, then give the United States Bureau of Fisheries some funds for the enforcement of the Hawes bass law.

The present Tennessee law is most liberal towards commercial fishermen. In this state each fisherman may catch and sell "twelve (12) large-mouth black bass per day, and said black bass must have been taken from the waters of Reelfoot Lake with hook and line, with pole or rod in hand." April and May are excepted, during which time no bass may be caught commercially.

Towards the private fishermen and anglers Tennessee again is able to be most liberal. Arkansas finds it necessary to have a closed season on bass during March, April, and part of May; while Kentucky finds May sufficient. In both states the daily catch is restricted. In Illinois and Indiana bass cannot be taken legally during their spawning seasons, and the number in the catch is limited. Even in Alabama, while having no closed season, an angler can catch only ten bass per day legally. In Tennessee, however, at Reelfoot Lake any number may be caught at all seasons except during April and May, provided they are eleven inches long. During these months each fisherman may take only twelve. Reelfoot Lake thus remains as one of the few places where bass may actually be removed from their nests during spawning. This means the immediate death of thousands of young bass by voracious minnows. Mr. Gordon tells

us that we must have such regulations as necessary "to stop irresponsible persons from taking fish at all seasons of the year, and especially to prevent as much disturbance to the fish as possible during the spawning period." In a number of states Mr. Gordon finds that "the fish laws have been badly neglected. They permit the taking of bass right off the nest, but they would not think of allowing anyone to shoot a wild turkey, or quail, or ruffed grouse while hatching and rearing her young. Probably scientists can convince the public that fish are not fit food at that time. People abhor the idea of eating the flesh of a setting hen but keep right on catching spawning fish for both sport and food." Some anglers insist that the spawning season is the only time bass can be caught, but the real sportsman prefers to match his skill and wits with those of the bass only when these fish are attempting to feed. During this particular season a bass will strike at an artificial bait, not because she believes it is a delectable morsel, but for the same reason that a cat with kittens will strike out at a dog, or a hen will give her life if necessary for her young. While little scientific investigation has been carried out in this latitude on the time of spawning of the bass, it is generally agreed that their spawning periods in Ohio and Illinois are during part of March and the months of April and May. It is quite probable that the majority of bass in Reelfoot Lake begin spawning during March, which is open season for both commercial and private fishermen. Howland, of the Bureau of Scientific Research, Division of Conservation of Ohio, finds bass spawning when the temperature of the water reaches approximately 61° F. in the spring. In Pennsylvania, Michigan, Iowa, Minnesota, New York, North Dakota, and West Virginia there is a complete closed season from December through part of June in order to insure the protection of those bass preparing to spawn. A number of commercial fishermen of Reelfoot Lake state quite readily that bass can be seen spawning during March and on rare occasions in the latter part of February. Arkansas has recognized this fact and has a closed season on bass from February 28 to May 16.

The number of bass in Reelfoot Lake would in all probability not only hold their own in numbers but increase in abundance if steps were taken to stop the sale of these game fish entirely and prevent the catch during the spawning season. Since a bass fisherman is content with battling a small number of bass, the number of the catch for any season should be restricted. If such steps are not taken soon, this lake will become as thousands of other inland lakes where bass fingerlings are introduced each year.

Another factor concerned with the conservation of bass and other game fishes is the indiscriminate use of trammel nets. These nets, usually about one hundred and fifty feet long, are lowered in a semi-circular fashion in favorable fishing grounds. The fishermen then begin the fish "drive" by beating on the boats with oars, splashing about with heavy instruments which are affixed to poles with ropes,

and by jabbing about in the water and around stumps with long poles. In this manner buffalo, carp, catfishes, bass, and sunfish are driven towards the trammel net in which they become entangled. The net is then raised and the fish removed. This operation of lowering the net, driving and disturbing the fish, and collecting the catch is repeated some thirty to forty times in one night. Many commercial fishermen along with those using these nets admit that this method is injurious to the bass and crappie which by law are returned to the lake. In addition they find a noticeable difference in the ability of sportsmen to catch bass and crappie on days following nights that trammel nets are used. This can probably be explained by the fact that, even though these fish are not captured by the nets, they have been driven from their regular resting grounds and do not feed normally for a time thereafter.

While the experienced fisherman prefers to try for the large-mouth black bass, there are many amateurs who are content with fishing for crappie, blue-gill, goggle-eye, and other members of the sunfish family. In order to maintain an adequate supply of these types of fish, it is also necessary that their sale be prohibited and to restrict the size and number in the catch. The Tennessee law at present restricts the minimum size of crappie caught to nine inches and the other sunfish (commonly referred to as "bream") to six inches. In Arkansas, Alabama, Mississippi, Illinois, and Indiana it has been found necessary to limit the catch to 25 per day, while in Kentucky the number is reduced to fifteen that can be taken in one day of fishing. If this number were reduced to twenty-five per day as a limit for Reelfoot Lake, the average number of fish per fisherman per day should increase. If the more than 50,000 pounds of sunfish which are sold commercially each year are left for the amateur fisherman, there might be no necessity for a closed season on any fish except bass and crappie.

The rapid decrease in number of white bass (*Lepibema chrysops*)—usually called rock bass—calls for special legislation to prevent it from being fished out entirely. Numerous fishermen state that a few years ago this bass was quite numerous, but during the past four years it has become quite rare. Commercial catch records show a decrease of thirty per cent during the past two years over the preceding biennial. A special ban should be placed on the catching or selling of the white bass for several years.

The gars and grindles are of no commercial importance and are consequently not caught. At the same time they are quite predaceous in habits and consume large numbers of young game fish. It is quite possible that in the near future steps must be taken to reduce their numbers either by finding some commercial use for them or by paying a bounty for their removal.

One other animal of economic importance which is found in abundance on Reelfoot Lake is the lowly turtle, commonly referred to as sliders, diamond backs, and soft-shelled types. They furnish a

revenue to commercial fishermen in three ways: (1) the eggs are dug from the nests in the summer and used for trot-line bait; (2) the small turtles, one year old or less, are shipped by the thousands to be sold as souvenirs in pet stores, at fairs, and "centennials"; (3) the adults, of three and four years of age, are marketed by the carload as food for the northern markets. While no actual figures are available, it is known that 5,000 small turtles were shipped from the lake by one fisherman each week during the summer, and one Chicago dealer purchased 800 dozen of the large sized turtles in one season. As bait the eggs are worth only a few cents per dozen, while the small turtles may bring from twenty-five to thirty-five cents a dozen. The adult turtles net the collectors from fifty cents to two dollars and a half a dozen, depending on the size and condition of the markets. A person can readily see from these figures that the taking of turtle eggs from the nests for bait and the shipping of small turtles should be prohibited.

In order to conserve our natural resources and continue to develop Reelfoot Lake as a fisherman's paradise, the following legal restrictions are suggested in addition to those already in force:

1. Prohibit the sale of all game fish at all seasons of the year. Game fish being defined as large-mouth black bass, crappie, blue-gills, and other members of the sunfish family known collectively as "ream."
2. Declare a closed season on bass and crappie during March, April, and May.
3. Prohibit the use of trammel nets in Reelfoot Lake.
4. Restrict the number of large-mouth black bass caught by hook and line to ten per day; crappie and sunfish to twenty-five of any one kind, or forty as total number for all types.
5. Declare a closed season for two years on *Lepibema chrysops* (white bass).
6. Prohibit the digging and use of turtle eggs and the sale of any turtle less than five inches in length.