

# FISHERIES SESSION

## COMMERCIAL FISHERIES MANAGEMENT

WILLIAM R. DRYER, Tennessee State Game and Fish Commission

Proc. Annu. Conf. Southeast. Assoc. Game & Fish Comm. 8:236-240

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One important aspect of fishery management is the proper utilization of rough species. It seems that most efforts to interest sportsmen in utilization of rough fish are futile. Some states encourage spearing and bow and arrow shooting of carp, but this sport is enjoyed by a relatively small percentage of sportsmen. Tennessee recently legalized "tubbing" for rough fish but very few people practice this sport.

Although game and fish agencies have made available new methods and ideas concerning the preparation of rough fish for food, many people still harbor the idea that rough fish, particularly carp, are not fit to eat no matter how they are cooked. Consequently, it appears that the available crop of rough fish cannot be effectively utilized by sportsmen.

A commercial fishing program is one obvious answer to the utilization of rough fish. First, a formerly wasted crop of rough fish is utilized under such a program. Secondly, the removal of rough species from public waters tends to please sportfishermen who believe rough fish a detriment to their game fishing. Third, commercial fishing provides a means of livelihood for many people, i.e., those actually engaged in fishing, wholesale and retail dealers, net and twine companies, etc. Lastly, there is some evidence that rough fish removal may improve sport fishing.

Commercial fishing programs are operating in many states with various degrees of success. In Tennessee, 1,900 commercial fishing licenses were sold last year. Commercial fishing is allowed on some TVA reservoirs, Cumberland River, Mississippi River, Reelfoot Lake and other lesser bodies of water.

The fishermen in Tennessee are charged a flat rate of \$15.00 which allows them to fish any quantity of authorized gear. Legal commercial gear consists of bait or trot lines, snag lines, hoop nets (2" min. bar measure) with or without wings, and trammel nets (4" min. inner wall, 10" max. outer wall). Four-inch nets are allowed only on Reelfoot Lake and the Mississippi River.

The principal commercial fishes in Tennessee, in order of preference are catfish, buffalo, paddlefish, carp and drum. The market price for these fish varies. However, fishermen receive an average rough weight price of \$0.30 per pound for catfish, \$0.15 for buffalo and paddlefish, and \$0.05 for carp and drum.

In February, 1953, a biologist was hired for the purpose of investigating the commercial fisheries of Tennessee. The investigation was to determine the following: 1) the use and types of commercial gear and its seasonal effectiveness; 2) the approximate commercial harvest and average annual income of the fishermen; and 3) damage, if any, that present commercial fishing activities have on game fish populations. All data were collected by interview and participation in commercial fishing activities. Although the investigation is not yet complete, some interesting facts have been uncovered.

Generally speaking, commercial fishermen in Tennessee are of a low income group. It was found that the commercial fishermen in Tennessee fall into three separate groups as follows:

Group I. Of the 1,900 licenses sold in 1953 - 54, about one-third or 600 fishermen depend on commercial fishing as their only source of income. The fishermen in this group fish the year around and own from 3 or 4 bait lines to 50 or 60 nets each. The average fisherman in this group owns 24 pieces of gear. Their average income is around \$3,000, with some making up to \$7,000, and others only \$1,500.

Group II. Commercial fishermen in this group either farm or work to supplement their fishing income, or vice versa. This comprises the largest group and is estimated to be about 1,200 fishermen. Some of these fishermen have gear in the water year around but most of them fish only during the more lucrative months, i.e., spring and fall. In most cases they own as much gear as the full-time fishermen but use it only during the good fishing seasons. The Group I, or full-time fishermen, feel that this group harms them by flooding the market with fish during the catfish runs. This condition may be true but there are other reasons for a flooded market in the spring and fall. During the spring catfish run, the commercial catch per unit effort is extremely high and most fishermen average well over 100 pounds per day. Also, during this time, sport-fishermen are catching limits of black bass, crappie and white bass. Consequently, when game fish are so plentiful, the demand for rough fish from the fish markets generally is lower than during the other seasons of the year.

Group III. The fishermen in this group are usually of a high income bracket who fish only for the sport. They rarely sell their fish and own but a very small amount of gear. About 100 fishermen fall into this group.

The main problem in Tennessee's present commercial fishing program is the conflict between the sport and commercial fishermen. These conflicts vary but the more important ones are as follows:

1. With no local restrictions on waters open to commercial fishing, gear is often placed in areas which are heavily fished by the sport fishermen. Their baits frequently get caught on the commercial gear, consequently they feel that even the presence of this gear in their favorite fishing areas is an infringement on their rights as sportsmen.
2. Many sportsmen feel that the game fish which are caught and sold illegally by the commercial fishermen ruins the sport fishing and during the spring months some commercial fishermen do catch and sell game fish illegally. However, the overall effect on sport fishing requires careful study.
3. Commercial fishermen may interfere with sport fishing activities by normal operation of commercial gear. The trammel net is probably the biggest offender in this respect. Trammeling operations include the beating of water with sticks and paddles which causes the fish to run into the net. To any sport fisherman within a quarter mile, this sounds as if it were scaring every fish within ten miles and he believes immediately that fishing is ruined in the entire area.

A second problem in the commercial fishing program is that of law enforcement. Many of the fishermen interviewed admitted that at one time or another they had taken game fish illegally either for their personal use or for the purpose of sale. During the early spring months, large numbers of crappie, sauger and white bass

are caught in commercial hoop nets. Catfishing is poor at this time and the demand for game fish after the winter lull is great. The temptation to sell game fish is too great for most commercial fishermen.

Conservation officers find it extremely difficult to make cases of this type. The fishermen live on or near the fishing waters and have become very shrewd in "bootlegging" fish. When a fisherman is caught violating the law, the case is often tried before a rural magistrate who usually levies the minimum fine. The minimum fine may actually be less than the amount he received from the sale of the game fish. In other words, the fines for illegal commercial fishing practices are not usually severe enough to reduce violations.

A third and comparatively minor problem is that of conflict among commercial fishermen. They accuse each other of running each others lines. They accuse the shell or mussel diggers of dragging up their gear. Full-time fishermen frown on the part-time fishermen. Actually the Game and Fish Commission is not in a good position to offer protection on these issues.

Biologically, there is doubt as to the benefit restrictive commercial fishing has on game fish populations. It is plausible that there is territorial and food competition between game and rough fish. However, it is doubtful that the annual harvest of rough fish by Tennessee's commercial fishermen has any appreciable effect on the competition. The states of Wisconsin and Minnesota, for instance, have found that after years of intensive seining for carp, game fish populations have not increased and but for a very few exceptions, carp populations have not decreased. Therefore, probably the only salvation to their rough fish program is the utilization of the available crop. Biologists from these states have evidence that carp are merely an extra dividend to an aquatic life population and their presence or absence has no material effect on other fish populations.

On the other hand, Iowa has found that intensive rough fish removal has increased game fish populations. But in both cases mentioned, removal of rough fish has been intensive. Tennessee's commercial fishing is not an intensive rough fish removal program. Because of this fact, we believe that Tennessee's harvest of rough fish under the present commercial regulations is not great enough to benefit game fish populations.

Assuming this to be the case, the problem becomes more sociological than biological. We have evidence that commercial fishermen in Tennessee remove about 6,000,000 pounds of catfish annually. We have no substantial records on the harvest of the other rough species but it is known that the annual yield is considerably less than catfish. In fact, because the market price for carp and drum is so low, many of the fishermen throw back all the carp and drum they catch. It is estimated that the commercial fishing industry in Tennessee today is worth well over \$2,000,000 annually.

Most fisheries men believe that utilization of rough species is sound management practice. By allowing commercial fishermen to utilize these species it makes available an important food to the public. Provided their activities do not interfere with those of sportsmen, commercial fishermen should be given a fair opportunity to exploit the available crop. We must assume that the monetary value of sportfishing is considerably greater than the value of commercial fishing. Because of this fact, decisions concerning commercial fisheries must be made in the sportsman's favor.

As a possible solution to the problem in Tennessee, it is felt that the commercial fisheries program should be under the direct supervision of the Game and Fish Commission. Under the present program, the Game and Fish Commission only has authority to regulate mesh size of nets and to open waters to commercial fishing. All other regulations are the result of legislative action and therefore cannot be amended or deleted by Game and Fish action. It is felt that the Game and Fish Commission should be in a better position to control commercial fishing activities in the public waters of the state. With this in mind, the following recommendations are well worth careful consideration by any state with commercial fisheries:

1. The commercial fishing license schedule should tax individual pieces of gear rather than a flat rate fee. All gear should be marked with tags furnished by the Game and Fish Commission. Charges for these tags should be: 1) \$3.00 for each hoop net tag; 2) \$2.00 for each snag line tag; and 3) \$1.00 for each bait line tag. Each 100 yards of gill net should be tagged at a cost of \$6.00; each 100 yards of trammel net at \$5.00. Each tag should bear the license number of the owner. Helper's licenses would cost \$10.00.
2. It is further recommended that the Game and Fish Commission have authority to promulgate all other regulations pertaining to commercial fishing. If such authority is granted the Game and Fish Commission, the following regulations should be effected giving the Commission additional control.
  - 1) No fisherman could buy commercial tags unless he shows evidence that a \$500.00 corporate surety or cash bond has been made to the Game and Fish Commission. A regulation of this nature should provide that the bond would be forfeited automatically to the Game and Fish Commission upon the fisherman's conviction of a game and fish violation involving commercial fishing. Once a bond has been forfeited, the fisherman's chances of obtaining another would be slim.

It is believed that by requiring the commercial fisherman to post a bond of this amount it will practically eliminate violations. The fisherman would have too much at stake to take any chances. In addition, only the better class of fishermen would be able to obtain bond; also it would be extremely difficult for those with past game and fish convictions to obtain bonds. However, fishermen would be allowed to post a cash bond in lieu of the corporate surety bond.

Under the proposal, it would cost the average fisherman between \$40.00 and \$75.00 to fish. The higher cost of gear and the required bond will undoubtedly eliminate any fishermen, particularly the part-time fishermen. It should give the full-time fisherman more incentive to work for an adequate income. He will have more invested in his business but in return he will have less competition on the water and at the market. It is believed that the total pounds of commercial fish harvested will not decrease although there will probably be fewer fishermen.

- 2) The Game and Fish Commission should zone waters now open to commercial fishing. Certain heavily sport-fished areas may be closed to commercial fishing and the Director should have authority to open and close these areas at his discretion.

- 3) The Director should have authority to regulate quantities and types of gear which may be fished in specific areas. By having this authority, local trouble spots can be dealt with immediately and effectively without conflict with the legal barriers which are now present.
- 4) All fishermen should be required to mark each piece of gear with either a flag or buoy with his name and license number printed thereon. This will aid law enforcement officers in their work as well as help sportsmen avoid hanging their lures on the gear. Also outboard enthusiasts can avoid damaging the gear.
- 5) A monthly report would be required of all fishermen showing their catch by species.

A program such as outlined above would be advantageous to fishermen who desire to make a good living from commercial fishing. These fishermen would have more room to fish; more protection of their rights. Eventually, the commercial fishing industry should attain the respect of a lucrative business rather than be looked down upon as is often the case today.