BIG WICHITA RIVER

Report of Fisheries Investigations

Experimental Introduction of Fish Species

by

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Dingell-Johnson Project F-7-R-7, Job F-1
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Segment Completion Report

Investigations Projects

State of TEXAS

Project No. F-7-R-7 Name: Fisheries Investigations and Surveys of the Waters of Region 1-B.

Job No. F-1 Title: Experimental Introduction of Fish Species.

Period Covered: June 1, 1959 - December 31, 1959

ABSTRACT

A total of 1,382 redfish and 184 speckled trout have been caught along the Texas Coast and transferred to Lake Kemp. Details of the capture and transplanting of these species are given in previous job completion reports. No additional stockings of these two species have been made since May 1957. Activities concerning this job since that time have been confined primarily to determining results and benefits of previous stockings. Reliable information concerning survival, growth rate, and the possibility of reproduction of the introduced marine species is still lacking. Efforts will continue during future segments to determine the status of these experimental introductions in Lake Kemp and its headwaters.

A total of 285 flathead catfish, averaging 11.1 pounds each, were transferred from Lake Stamford to Rita Blanca Lake. The primary purpose of the introduction of these fish, which were stocked at the rate of one per acre, was to increase predation on golden shiners and bullhead catfish. Since no restrictions were placed on their capture by sports fishermen, they also represent an additional sports fish for the upper Panhandle region. Periodic resurveys will be conducted to detect effects, if any, of this experimental introduction on the fishery of Rita Blanca Lake.

OBJECTIVES

To experimentally introduce non-native species to provide either new sport species to improve the quality of sport fishing or to add a predacious species to aid in the control of rough fish and forage fish species.

TECHNIQUES

In waters where survival conditions were considered favorable, sport species, not native to those waters, were experimentally introduced to aid in the development of better sports fishing. Predacious species were experimentally stocked into waters lacking in efficient predators to aid in the natural control of rough fishes. Experimental stockings included the following fish species:

1. Redfish (Scianops ocellata) and speckled weakfish (Cynoscion nebulosus) were collected from the Gulf of Mexico along the Texas Coast and stocked into the

saline waters of upper Big Wichita River and Lake Kemp, to provide a game fish for the upper river and a new game fish for Lake Kemp.

2. Flathead catfish (Pylodictus olivaris) were collected from Lake Stamford and stocked into Rita Blanca Lake, near Dalhart, to increase predation on golden shiners and bullhead catfishes.

FINDINGS AND DISCUSSION

Redfish and Speckled Weakfish

Prior to this segment period, a total of 1,382 redfish and 184 speckled weakfish had been captured along the Texas Coast and experimentally stocked in Lake Kemp. Details of the capture and transplanting of these species are given in the Reports F-7-R-3, Job F-1; F-7-R-4, Job F-1; and F-7-R-5, Job F-1. Due to the great expense and many difficulties involved, no additional stockings of these two species have been made since May 1957. Work since that time has been confined primarily to determining results and benefits of previous stockings.

Reliable information concerning survival, growth rates and reproduction of the introduced marine species is still lacking. Several attempts have been made during the past two years to collect some of the introduced species by gill nets and seines, but none have been taken. Several reports of catching redfish and speckled trout by sports fishermen and bait seiners have been received, each of which was investigated for authenticity. Practically all specimens collected by bait seiners were identified as logperch (Percina caprodes). Several of the other reports could have been authentic, but positive identifications could not be made because the fish had either been released or eaten and their remains destroyed by the time the report was investigated. Since credence will not be given any report unless a specimen is produced and positive identification is made, all posters around the lake have been changed to instruct fishermen to keep fish suspected of being introduced marine species and to present them to gatekeeper, concessionaire, game warden, or biologist for positive identification.

Efforts will be increased at Lake Kemp during the next segment period to determine status of these experimental introductions. Plans are to net, trap and seine extensively from the dam to the headwaters and tributary streams in an effort to catch a specimen that was either stocked originally or a progeny that was spawned in Lake Kemp. Sufficient time has lapsed since the original stocking for reproduction of redfish and speckled trout in Lake Kemp, if it is going to occur.

No additional stockings of marine species into Lake Kemp or any other waters in Region 1-B are planned until the feasibility and benefits of the work accomplished to date have been determined and the cost justified.

Flathead Catfish

Flathead catfish were experimentally introduced into Rita Blanca Lake in an effort to restore balance by controlling excessive populations of golden shiners and bullhead catfish, as well as threatening populations of carp and goldfish.

In November 1959, 288 flatheads were captured from Lake Stamford and transferred to Rita Blanca Lake, near Dalhart. This was a very successful operation, having lost only three out of the 288 fish that were transported during sub-freezing temperatures.

A total of 285 flatheads, ranging from 3 to 28 pounds, was successfully transplanted. The average weight was 11.1 pounds and comprised a total weight of 3,171 pounds.

The primary purpose of the introduction of these fish, which were stocked at the rate of one per acre, was to increase predation on golden shiners and bullhead catfish. No restrictions were placed on their capture by sports fishermen, however, which makes them an additional sports fish for the upper Panhandle region.

Rita Blanca Lake will be resurveyed periodically to detect any changes in relative abundance of species that may result from the introduction of this, reputedly, very efficient predator.

Gars (Lepisosteus sp.)

Plans were made to introduce gars into small bodies of water, especially farm ponds, as a natural control on sunfish, goldfish, and perhaps other rough fish species. To prevent reproduction, only males were to be stocked.

Time did not permit this introduction during the short period of time covered by this job completion report.

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