

JOB COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-7-R-9

Fisheries Investigation and Surveys  
of the Waters of Region 1-B

Job No. F-1 Experimental Introduction  
of Fish Species

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## ABSTRACT

A total of 1,382 red drum and 184 spotted seatrout have been caught along the Texas coast and transferred to Lake Kemp during previous segments. Reliable information concerning survival, growth rate, and the possibility of reproduction of these introduced species is still lacking. Approximately 800 striped bass were transferred from California to Lake Diversion in December 1960. Although proof was obtained during the previous segment that these fish survived the transplant, no information concerning their growth and present status was obtained during this period of study. As reorganization has included these waters within Region II, future evaluations of these experimental introductions of marine species into Lakes Kemp and Diversion will be made by personnel located in that region.

During this period of study, an additional 1,000 striped bass fingerlings were transported to Texas to be stocked in the Brazos River system. However, aircraft engine failure caused a delay en route and an almost total mortality of the fish being transported. The undetermined number of survivors of this flight are being held at the Fort Worth State Fish Hatchery and will be released, after they have attained a suitable size, into waters of Region II.

Rita Blanca Lake was stocked with 285 flathead catfish, averaging 11.1 pounds each, in November 1959. The primary purpose of this introduction was to increase predation on golden shiners and bullhead catfish. Resurveys have proven that they have survived the transplant and are thriving in the new environment. Reduction in the number of larger bullheads present in Rita Blanca indicate possible beneficial results of this introduction.

## JOB COMPLETION REPORT

State of TEXAS

Project No. F-7-R-9

Name: Fisheries Investigations and Surveys of the Waters of Region 1-B

Job No. F-1

Title: Experimental Introduction of Fish Species

Period Covered: January 1, 1961 - December 31, 1961

### Objectives:

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

### Techniques Used:

In waters where conditions were favorable, non-native sport species were stocked to provide an additional sport fish or to aid in controlling over-abundant rough or forage species.

1. Work on red drum (Scianops ocellata) and spotted seatrout (Cynoscion nebulosus) was confined primarily to determining results and benefits of previous stockings.

2. Striped bass (Roccus saxatilis) were secured through the Fisheries Division, California Fish and Game Commission, and transported to Texas by air. They will be released into suitable waters when they attain sufficient size to prevent their being eaten by larger predaceous species.

3. Flathead catfish (Pylodictus olivaris) previously stocked into Rita Blanca Lake, near Dalhart, to increase predation on golden shiners (Notemigonus crysoleucas) and black bullhead catfish (Ictalurus melas) were evaluated for data pertaining to condition and survival.

### Background Information:

The work on this job prior to this segment included the experimental stocking of five fish species. Three of these were salt water game fish, the other two were flathead catfish and white bass (Roccus crysops).

Prior to this segment period, a total of 1,382 red drum and 184 spotted seatrout had been captured along the Texas coast and experimentally stocked in Lake Kemp. Details on the capture and transplanting of these species are given in the reports for F-7-R-3, F-7-R-4, 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.

Striped bass were obtained from the California Fish and Game Commission and were stocked in Lake Diversion.

Flathead catfish from Lake Stamford were stocked in Rita Blanca Lake to help control golden shiners (Notemigonus crysoleucas), black bullhead catfish (Ictalurus melas) and goldfish (Carassius auratus).

The full details and results of these stockings during previous periods of study are given in Job F-1 Completion Reports, F-7-R-3 to F-7-R-8 inclusive.

#### Findings and Discussion:

During this segment, an additional number of striped bass was made available by the California Fish and Game Commission. As a trade for these fish, 56 flathead catfish were flown to Sacramento and exchanged for about 1,000 fingerling striped bass. Shortly after the beginning of the return flight with the stripers, the airplane developed engine trouble and returned to Sacramento for repairs. The engine repairs forced a 24-hour delay during which time it was necessary to hold the fingerling striped bass aboard the plane in transport vats. As a result of confinement for so long a time, a large percentage of the fish subsequently died. Of the original number of fish, only about 200 were alive when they arrived at Fort Worth, and only 80 of these survived in good condition. These fish are now being reared at the State Fish Hatchery at Fort Worth and will be released into suitable waters when they have attained sufficient size to prevent their being eaten by larger predaceous species.

The first transplant of striped bass was made in December 1960, when about 800 fingerlings survived a flight from California to Wichita Falls. These fish were stocked in Lake Diversion. The success of this transplant has not been determined as yet. Monthly netting and seining collections made in Lake Diversion during the months following the stocking failed to produce any of the striped bass, but there is a very good chance that some of them survived and will reach maturity in the lake.

Future evaluations of the experimental introductions made in Lake Kemp and Lake Diversion will be made by fisheries personnel located in Region II, since reorganization has included these lake within that region.

An evaluation of the experimental introduction of 285 flathead catfish in Lake Rita Blanca has shown that the flatheads survived and are in excellent condition. These fish have apparently been feeding on the larger individuals of black bullhead catfish present in the lake. There was a sharp decrease in the number of larger bullheads taken in the survey made last September. Tentatively, this decrease has been attributed to predation by the flatheads.

Further studies of flathead catfish experimental introductions will continue in an effort to determine the value of this species for controlling certain species of rough fish. Since it appears that in the near future, flathead catfish will be successfully reared in State Fish Hatcheries, additional information concerning the predation and stocking rates necessary to provide various degrees of predation will be very valuable in the future.

Recommendations:

Experimental introductions under this project should be terminated until such time that positive evaluations of previous work have been made, or until developments occur which will make the desired species more easily available.

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Project Leader

Date March 8, 1962

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