Report of Fisheries Investigations

Resurvey of Waters of Region 1-B

by

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Dingell-Johnson Project F-7-R-7, Job B-14
June 1, 1959 - December 31, 1959

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ABSTRACT

One stream and two lakes were resurveyed during this seven month period of study in order to detect and record possible changes in any aspect of previous surveys.

Buffalo Springs Lakes, near Lubbock, were resurveyed in June 1959, to determine the need for a total-kill treatment and restocking. Results of this survey revealed that the lakes still contained excessive populations of rough fish, including carpsuckers, bullhead catfish, and golden shiners. Their relative abundance was essentially the same as previously reported. In September 1959, the lakes were treated for a total eradication of fish species with rotenone compounds, and restocked with game fish after the chemical had sufficiently detoxified.

Results of previous studies have shown that the Canadian River is being seriously polluted by industrial wastes in the vicinity of Borger. The violating concern was notified, and they agreed to study the problem and take necessary action to abate the pollution. Periodic studies have been continued since June 1954, to determine extent and results of their efforts.

Another fisheries survey and pollution investigation was conducted during this period of study on the entire river, insofar as it exists in Texas. Results of this work are given in the report F-7-R-7, Job C-1.

Rita blanca Lake, near Dalhart, was checked with various types of fishing equipment during this period of study to determine the most effective methods of removing undesirable fish species. Equipment used included small-meshed gill nets, ordinary fyke nets, seines and "bullhead nets". Results of this work confirmed the findings of previous surveys. An experimental management project is now in progress at Rita Blanca, and a discussion of this work is given in the Report, F-7-R-7, Job B-16.

Segment Completion Report

State of TEXAS

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

Job No. B-14 Title: Resurvey of Waters of Region 1-B.

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

OBJECTIVES

To resurvey waters in Region 1-B that have been previously surveyed so that possible changes in any aspect of the previous survey can be detected and recorded.

PROCEDURE

Basic surveys and inventories of fish species have been conducted on seven streams and eight lakes in Region 1-B within the past six years. It is logically expected that certain changes will naturally occur in these waters that may alter fish populations as well as chemical and physical factors. These waters were resurveyed as time permitted in the same manner as in the previous surveys, except on a much smaller scale, so that changes in the concerned waters could be detected and recorded.

DISCUSSION

This report is for a segment of short duration, covering a period of only 7 months between June 1 and December 31, 1959.

Buffalo Springs Lakes

Buffalo Springs Lakes, near Lubbock, were resurveyed in June 1959, to determine the need for a total-kill treatment and restocking. This treatment had been proposed and approved under the previous segment, but it was not accomplished because of unseasonable rains and high water.

Since some of the officials in charge of the lakes expressed doubt as to the need for the treatment, another inventory was made.

Results of this survey revealed that the lakes still contained excessive populations of rough fish, including carpsuckers, bullhead catfish and golden shiners. Their relative abundance was essentially the same as previously reported in the report, "Supplemental Report. Fisheries Survey of Buffalo Springs Lakes, Lubbock, Texas".

On September 27 and 28, 1959, Buffalo Springs Lakes and a part of their watershed were treated for a total eradication of fish species with rotenone compounds. An account of this work is given in the Report, F-14-D-4, Job 16a-19. The lakes were restocked with game fish species after the rotenone had sufficiently detoxified. Details of the restocking are presented in the Report, F-14-D-4, Job 18a-10.

Canadian River

Results of previous studies have shown that the Canadian River is being seriously polluted by industrial wastes in the vicinity of Borger, Texas. These violations were brought to the attention of the responsible industrial concern, who agreed to study the problem and take necessary action to abate the pollution. Periodic studies have been continued since June 1954, to determine the extent and results of their efforts. Details of these previous studies on the Canadian River are given in the Reports, F-7-R-2, Jobs A-1 and B-5; F-7-R-2, Job C-1 (Part 1); F-7-R-5, Job C-1 (Part 2); and F-7-R-6, Job C-1.

In October 1959, during the segment covered by this report, another fisheries survey and pollution investigation was conducted on the Canadian River completely across the Texas Panhandle, from the New Mexico State Line to the Oklahoma State Line.

In order to avoid lengthy repetition of information, the reader is referred to the Report F-7-R-7, Job C-1 for details of these investigations.

Rita Blanca Lake

Previous investigations at Rita Blanca Lake, near Dalhart, revealed excessive populations of bullhead catfish and golden shiners, as well as threatening populations of carp and goldfish. As a result of this work, an experimental management project was initiated to control excessive populations of undesirable species.

During the seven month period covered by this report, Rita Blanca was checked with various types of fishing equipment to determine the most effective methods of removing unwanted fish species, primarily golden shiners and bullhead catfish. Equipment used included small-meshed gill nets, ordinary fyke nets, seines and "bullhead nets".

Results of this work confirmed the findings of previous surveys, which are presented in the Report, F-7-R-5, Job B-13. However, since the manual methods that were used during this segment proved to be slow, restricted, laborious, and too expensive to constitute effective control measures, the decision was made to rely primarily on biological controls. Rita Blanca was stocked with substantial numbers of adult black bass and large flathead catfish to increase predation on the excessive, undesirable species. For details of this work, the reader is referred to the Report, F-7-R-7, Job B-16.

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