

Report of Fisheries Investigations

Basic Survey and Inventory of Species, As Well As Their Distribution
in the Rio Grande River of Texas in Region 3-B.

by

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Dingell-Johnson Project F-5-R-4, Job B-15
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SEGMENT COMPLETION REPORT

Investigations Projects

State of TEXAS

Project No. F5R4 Name: Fisheries Investigations and Surveys of the Waters of Region 3-B.

Job No. B-15 Title: Basic Survey and Inventory of Species, as well as their distribution in the Rio Grande River of Texas in Region 3-B.

Period Covered: April 15, 1956 to April 15, 1957

ABSTRACT:

Basic and inventory data were obtained during the period; however, information obtained thus far is known to be inadequate. Because of unforeseen difficulty in gaining access to the river and other difficulties this work may be considered to be fragmentary at present. This survey is to be resumed in 1958.

OBJECTIVES:

To gather fundamental data on the above waters in regard to their physical, chemical and biological aspects and to determine the distribution of the species present, their relative abundance and the ecological factors influencing their distribution.

PROCEDURE:

A. Basic Survey

Information was collected by standard procedures to complete the stream survey forms similar to those given by Lagler in his HANDBOOK OF FRESHWATER FISHERY BIOLOGY.

B. Inventory of Species (seining stations were selected)

1. Data was collected including a tally for each species taken as well as ecological information concerning each species.
2. Temperature, pH, turbidity, dissolved oxygen and carbon dioxide were determined at every station.
3. Netting collections were made at stations selected during the course of the work.

FINDINGS:

Because of the many difficulties encountered in completing other river surveys; (i.e.

the Upper Colorado River and the Pecos River watersheds) the only data obtained and the only work attempted on the Rio Grande River was done at three locations. Netting collections were made at the mouth of Terlingua Creek near the east end of Santa Helena Canyon and near the Mouth of the Pecos below the Comstock-Langtry crossing. Seining was confined to these localities and to a lesser extent to pools in the river near El Paso. Information and experience obtained in the aforementioned surveys indicated that work on the Rio Grande would require more time than was previously anticipated. For that reason and in order to comply with several requests of sportsmen groups and city authorities this survey will be postponed in order to conduct inquiries into several reservoirs for the cities of Abilene, Sweetwater, Santa Anna, and Big Spring. The data obtained thus far is as follows.

Netting - Four experimental gill nets set captured 201 individuals and revealed the following data.

Species	No.	Numerical Percent	Avg. Wt. ounces	Percent by Wt.	Avg. K
Gizzard shad	162	80.50	10	51.95	1.84
River carpsuckers	23	11.82	26	19.00	2.68
White bass	4	1.97	21	2.67	3.10
Longnose gar	12	5.81	68	26.17	.45

Seining - Seining was conducted at eight localities near the above described areas of the river. It is believed that numerical results may be misleading because; (1) it was very difficult to locate areas where stone or brush obstructions on the stream bottom did not prevent or render ineffective this method of sampling and (2) because the small number of specimens obtained is regarded as insufficient even for the areas worked. For these reasons a species check list with comment is regarded as being more suitable for this particular report.

Seining Check List

Gizzard shad (Dorosoma cepedianum) - Particularly numerous about the mouth of the Pecos River; however, the clearness of the water in that area and the natural speed of these fish prevented their capture by seining.

Banded Tetra (Astyanax fasciatus) - numerous near the mouth of the Pecos but absent from the more westerly portions of the river where work was done.

Moxostoma sp. (tentatively identified as Moxostoma poecilurum) - found near mouth of Terlingua Creek.

Roundnose minnow (Dionda X episcopa) - numerous near mouth of Pecos River and absent from other collections.

Largemouth bass (Micropterus punctulatus) - taken in all three areas but rare.

Green sunfish (Lepomis cyanellus) - numerous in the El Paso area, but were not taken at other areas.

Bluegill (Lepomis macrochirus)- taken in all collections, but were not numerous.

Rio Grande Cichlid (Cichlasoma cyanoguttatum) - found near the mouth of the Pecos only; however, since this species was taken during the survey of Terlingua Creek it is considered that this species also occurs in that area of the river.

RECOMMENDATION:

It is recommended that this survey be discontinued at this time and resumed in 1958-1959.

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Approved by:

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Date: April 24, 1958
