

FILE

STATE Texas  
PROJECT NO. F-6-R-1, Job B-5  
PERIOD July 1, 1953-June 30,  
1954

Segment Completion Report

by

Alvin Flury and Luciano Guerra

TITLE

Inventory of the Fish Species Present in Some Small Lakes in the Lower Rio Grande Valley.

OBJECTIVES

To determine the species present and their relative numbers in the above waters.

PROCEDURE

a. Netting Collections.

1. Two experimental gill net stations were established in each of the three lakes studied. Ten experimental nets were set in both Lake Bentsen and Delta Orchards Lake from January through June 1954. Six experimental nets were set in Olmito Lake from April through June 1954.
2. One  $1\frac{1}{2}$  inch square mesh net was set by mistake in Delta Orchards Lake but no 2" or 3" mesh nets were used in any of the lakes.
3. No hoop or fyke nets were set in any of the lakes.
4. All fish taken in nets after weighing and measuring equipment was delivered in February 1954 were weighed, measured, sexed and parasites noted. No stomachs were collected.

b. Seining Collections.

1. A straight seine, 30 feet long with  $\frac{1}{4}$  inch mesh was used to make one seining collection in Lake Bentsen and two collections in Delta Orchards Lake. No seining beach has been found in Olmito Lake.

c. Fish caught in nets were weighed, measured, sexed and parasites noted. Fish from seining collections were tabulated. Records were kept on fish cards and fish collection sheets.

RESULTS

a. Netting Collections.

1. From Lake Bentsen, a total of 146 fish of eight species were taken and 428 fish of 13 species were taken from Delta Orchards Lake. 247 fish of ten species were taken from Olmito Lake.
2. The  $1\frac{1}{2}$  inch mesh net set in Delta Orchards Lake took 71 fish of ten species.

2.

3. No fish were taken by hoop and fyke nets.
4. The information gathered from the collections was recorded and filed for use in making up the job completion report.

b. Seining Collections.

1. The seining collections from Lake Bentsen produced 459 fish of seven species; those from Delta Orchards Lake produced 2,179 fish of eight species. No fish were seined from Olmito Lake.

- c. A total count of 14 species of fish were recorded from Lake Bentsen, 18 from Delta Orchards Lake and 10 from Olmito Lake. Data concerning the fishes' condition and size were preserved and will be used to make tables and charts for the job completion report. The attached fish list shows the numbers and frequency of fish taken.

SUMMARY

Fish from three small lakes in the lower Rio Grande Valley, Lake Bentsen, Delta Orchards Lake and Olmito Lake were weighed, measured, sexed and parasites noted and the data collected will be presented in the job completion report. Fish lists show the numbers and percentages of each species of fish taken from the three lakes during the first segment.

## Fish List

| Name of Water                  | Bentsen Lake |              | Date  |       |
|--------------------------------|--------------|--------------|-------|-------|
| 18 Species                     | Seining Sta. | Netting Sta. | Total | %     |
| <i>Lepisosteus spatula</i>     | 0            | 5            | 5     | .83   |
| <i>Lepisosteus productus</i>   | 0            | 1            | 1     | .17   |
| <i>Lepisosteus osseus</i>      | 0            | 6            | 6     | .99   |
| <i>Dorosoma cepedianum</i>     | 6            | 2            | 8     | 1.32  |
| <i>Dorosoma petenensis</i>     | 1            | 0            | 1     | .17   |
| <i>Ictiobus bubalus</i>        | 0            | 85           | 85    | 14.05 |
| <i>Notropis braytoni</i>       | 8            | 0            | 8     | 1.32  |
| <i>Ictalurus furcatus</i>      | 0            | 41           | 41    | 6.78  |
| <i>Cyprinodon varigatus</i> v. | 146          | 0            | 146   | 24.13 |
| <i>Gambusia affinis</i> a.     | 262          | 0            | 262   | 43.31 |
| <i>Menidia beryllina</i>       | 35           | 0            | 35    | 5.79  |
| <i>Micropterus salmoides</i>   | 0            | 3            | 3     | .50   |
| <i>Lepomis macrochirus</i>     | 0            | 3            | 3     | .50   |
| <i>Aplodinotus grunniens</i>   | 1            | 0            | 1     | .17   |
| Totals                         | 459          | 146          | 605   | 99.95 |

## Fish List

| Name of Water                   | Delta Orchards Lake |              | Date  |       |
|---------------------------------|---------------------|--------------|-------|-------|
| Species                         | Seining Sta.        | Netting Sta. | Total | %     |
| <i>Lepisosteus spatula</i>      | 0                   | 22           | 22    | .84   |
| <i>Lepisosteus productus</i>    | 0                   | 3            | 3     | .12   |
| <i>Lepisosteus osseus</i>       | 0                   | 5            | 5     | .19   |
| <i>Dorosoma cepedianum</i>      | 1,408               | 81           | 1,489 | 57.09 |
| <i>Astyanax fasciatus m.</i>    | 416                 | 0            | 416   | 15.95 |
| <i>Ictiobus bubalus</i>         | 33                  | 61           | 94    | 3.60  |
| <i>Carpionodes carpio</i>       | 0                   | 116          | 116   | 4.45  |
| <i>Notropis lutrensis</i>       | 74                  | 0            | 74    | 2.83  |
| <i>Cyprinodon variegatus v.</i> | 9                   | 0            | 9     | .35   |
| <i>Ictalurus punctatus</i>      | 0                   | 28           | 28    | 1.07  |
| <i>Ictalurus furcatus</i>       | 0                   | 15           | 15    | .58   |
| <i>Mugil cephalus</i>           | 0                   | 16           | 16    | .61   |
| <i>Menidia beryllina</i>        | 233                 | 0            | 233   | 8.93  |
| <i>Lepomis macrochirus</i>      | 3                   | 3            | 6     | .23   |
| <i>Lepomis auritus</i>          | 0                   | 1            | 1     | .04   |
| <i>Pomoxis annularis</i>        | 0                   | 10           | 10    | .38   |
| <i>Aplodinotus grunniens</i>    | 0                   | 68           | 68    | 2.68  |
| <i>Cichlasoma cyanogutta c.</i> | 3                   | 0            | 3     | .12   |
| 18 species                      |                     |              |       |       |
| Totals                          | 2,179               | 428          | 2,608 | 99.99 |

Name of Water Olmito Lake Date \_\_\_\_\_

| Species                         | Seining Sta. | Netting Sta. | Total | %     |
|---------------------------------|--------------|--------------|-------|-------|
| <i>Lepisosteus spatula</i>      | 0            | 22           | 22    | 8.91  |
| <i>Lepisosteus productus</i>    | 0            | 61           | 61    | 24.70 |
| <i>Dorosoma cepedianum</i>      | 0            | 45           | 45    | 18.22 |
| <i>Ictiobus bubalus</i>         | 0            | 57           | 57    | 23.08 |
| <i>Carpionodes carpio</i>       | 0            | 52           | 52    | 21.05 |
| <i>Lepomis cyanellus</i>        | 0            | 3            | 3     | 1.21  |
| <i>Lepomis macrochirus</i>      | 0            | 2            | 2     | .81   |
| <i>Lepomis megalotus</i>        | 0            | 2            | 2     | .81   |
| <i>Chaenobryttus coronarius</i> | 0            | 1            | 1     | .40   |
| <i>Pomoxis annularis</i>        | 0            | 2            | 2     | .81   |
| Totals                          | 0            | 247          | 247   | 99.99 |