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INSTITUTE FOR FISHERIES RESEARCH

DIVISION OF FISHERIES

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COOPERATING WITH THE

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NOTES ON THE OPERATION OF THE WARNER-BOWER FISH CONVEYOR

AT UNION CITY DAM, MICHIGAN, MAY-JUNE, 1941

by

John Greenbank

From May 27 to June 7, 1941, I was attendant to the Warner-Bower fish conveyor at the Union City power dam in the St. Joseph River at the outlet of Union Lake, Branch County. Mr. Bower has made a few alterations in the conveyor, but in essential principle it is the same machine as is described and pictured in the Transactions of the American Fisheries Society, Vol. 66, pp. 411-414, 1936.

Since there were rather few fish in the stream below the dam at any time during the period stated above, I did not operate the conveyor continuously, but only at periodic intervals, usually three or four times per day, between 6 a.m. and 11 p.m. The number of operations ("dips") made by the machine, and the numbers of fish carried, are given in the following table:

W

| Date | Water Level | Water Temp. | No. Dips (approx.) | Fish Transported | | | Fish Below Dam |
|--------|-------------|-------------|--------------------|------------------|----------|----------|----------------|
| | | | | Bluegills | Bass | Others | |
| May 27 | Dropping | 72° | 3 | 6 | 1 | 1 | Few |
| 28 | " | 72° | 10 | 30 | 0 | 0 | " |
| 29 | " | 72-75° | 14 | 7 | 0 | 1 | Several |
| 30 | Steady | 72° | 2 | 0 | 0 | 1 | None |
| 31 | Up 6" | 71° | 5 | 3 | 0 | 0 | Very few |
| June 1 | Steady | 71° | 2 | 0 | 0 | 1 | " " |
| 2 | " | 71° | 10 | 1 | 0 | 0 | " " |
| 3 | " | 70° | 16 | 5 | 0 | 0 | " " |
| 4 | " | 68° | 4 | 0 | 0 | 0 | " " |
| 5 | " | 68° | 6 | 0 | 0 | 0 | " " |
| 6 | " | 70° | 5 | 0 | 0 | 0 | " " |
| 7 | Down 2" | 68° | 3 | 0 | 0 | 0 | " " |
| | | | <u>80</u> | <u>52</u> | <u>1</u> | <u>4</u> | |

Most of the bluegills were from four to six inches in length. Only a few were seven to eight inches.

I left the dam on June 7, since it seemed to be futile to remain there longer. I returned on a check inspection on June 14. At that time there still were no fish below the dam; and I was informed by Mr. Harper, the part-time attendant of the power plant, that he had observed few or no fish in the river during my absence. Again on June 23 I visited the dam. At that time there were a few dozens of small bluegills and bass below the dam. The river water level was very low; and since there was at that time no water flowing through the chute of the conveyor, it was useless to try to operate the machine.

What the reason may have been for the practically negligible run of fish in the river, I cannot say with any certainty. It may have been the unusually low water of this season, or perhaps water temperatures or weather conditions. At only one time during the period, i.e. on May 29, were there any fairly large numbers of fish to be seen below the dam. On that date there were several dozens of fish, mostly small bluegills. I

was told by Mr. Bower and by local residents that in most past years the run of fish has been very much greater.

Since my role was only that of an observer, I am not setting forth here any opinion regarding the conveyor, or its workability. My duty, as I understood it, was only to report the numbers and kinds of fish which I saw transported, and the above table constitutes such a report.

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