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A STUDY OF THE LENGTHS AND WEIGHTS OF SOME SAMPLES OF FISH
FROM CERTAIN REARING PONDS AND HATCHERIES

by

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Early in the year of 1941, District Supervisors of Fisheries Operations were instructed by Mr. M. J. De Boer to preserve samples of fish raised at their various stations for inspection during the Fisheries Conference to be held in the winter of 1942. A small number of these samples were retained at the Higgins, Lake Training School for exhibition purposes; the remainder were turned over to the Institute for Fisheries Research. Although the study of these samples reported here is not complete since it does not include those left at the School, it was considered worthwhile to make a comparison of the fish which were received. It should be pointed out, however, that the sizes of fish at the various stations may not be directly comparable since all stations were not stocked or sampled on the same dates and also the source of the fish varies. Nevertheless, certain interesting differences in the relative adaptability of various stations for certain species are apparent and may be worthy of consideration in future fish cultural activities.

Sixty-four samples of the fish were delivered to the Institute for examination and for disposition in the Museum collection or for class use at the University or Michigan State College. The samples consisted of 3 samples of smallmouth bass, 7 of largemouth bass, 10 of bluegills, 7 of rainbow trout, 11 of brown trout, and 26 samples of brook trout. Fish from 26 hatcheries and rearing ponds are represented in the collection.

The fish in the samples were counted and weighed. The minimum, maximum, and average lengths in millimeters and inches were recorded, along with the average weight in grams and ounces. Scales from the largest and smallest fish in each sample were examined for age and growth rate. Information contained on the labels with the samples was recorded, and when certain information was lacking this was also recorded (followed by a question mark) so far as it was possible to guess. These data are summarized in Table 1.

The only mistake of any importance as revealed by a careful examination of the samples was noted in the sample of "bluegills" from the Waterloo

Rearing Ponds. In this sample, 16 specimens actually consisted of 15 pumpkinseed sunfish, and one small bluegill. One sample of brown trout from Oden was incorrectly labeled "rainbow trout".

Assuming that the samples are representative of the fish raised at the various stations, certain points of interest may be considered. The three samples of smallmouth are not large enough to be at all representative. In largemouth, the best growth was obtained in fish from Hillsdale Rearing Ponds, Wolf Lake Hatchery, and Benton Harbor Ponds; the poorest was at Ortonville and Drayton Plains. In bluegills the best growth was at Wolf Lake, West Branch, and Three Rivers; the poorest was at Dowagiac, Union City, and Hillsdale. In rainbow trout the best growth was at Wolf Lake, Ontonagon, and Otter River. At both Ontonagon and Otter River the rainbows which showed excellent growth at 8 months were from Missouri stock. The poorest growth was at the Sturgeon Rearing Ponds, and Otter River, (the latter in Harrietta rainbows). In brown trout the best growth was at the Sturgeon Rearing Ponds and Tobacco River. The poorest was at Cocks Run and Harrisville. In brook trout the best growth was at the Tobacco River Station (Cresco, Pennsylvania stock), White River Station (Wolf Lake stock), and Otter River, (Paradise stock). The poorest growth was at Cocks Run (Colorado stock) and Oden (Paradise stock).

Four-months-old largemouth raised at various stations ranged in average size from 2.3 to 3.8 inches; bluegills from 3 to $4\frac{1}{2}$ months old ranged in average size from 1.1 to 3.7 inches; 6- to 8-month rainbows ranged in average size from 3.9 to 6.1 inches; 7- to 9-month brown trout ranged in average size from 3.1 to 4.5 inches; 7- to 10-month brook trout ranged in average size from 2.6 to 5.7 inches.

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