

INSTITUTE FOR FISHERIES RESEARCH
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GROWTH RATE OF FISHES IN WATKINS PARK, A LIGHTLY FISHED LAKE IN
SOUTHERN MICHIGAN

Watkins Lake, located in the northern part of the Irish Hills a few miles north of Wampler Lake, in Sec. 13, Norvell Township, Jackson County, is reported to have been owned by the Watkins family for several generations. The present owner, L. Whitney Watkins, is especially interested in the body of water and has expressed his willingness to permit the use of his lake for scientific study. It was considered especially desirable that a study of the growth rate be made here because fishing is not intensive and because the history of fishing in the lake over a considerable period of time is well known.

On September 29, 1934, Prof. T. L. Hankinson and a party from the Institute for Fisheries Research visited Watkins Lake and spent the greater part of a day collecting fish with a bag seine. The data given below relative to growth rate are based on the fish taken on this day (except where otherwise indicated).

The fish were taken at, or near, the end of the growing season and would have grown very little before the following summer. Ages given indicate "summers of growth" rather than winter marks.

Five species, viz. Largemouth Bass, Bluegill, Pumpkinseed, Perch and Golden Shiner were studied. All five were found in relative abundance in Watkins Lake. Some other species are present, but, with the exception of bullheads, these appear to be less abundant than those mentioned. No one species strikingly predominates.

Since Watkins Lake is rich and shallow with abundant vegetation and plentiful food, one would expect a relatively fast growth rate. Growth would be retarded, however, by the presence of a large fish population, which has probably been largely caused by limited fishing and the absence of predacious fishes (gar, dogfish and

The five larger bass were taken with hook and line. A definite break occurs in the size range of the one summer old fish. Forty-one specimens had an average length of 2.7 inches while 10 specimens had an average length of 4.7 inches. This difference may be due to an interruption in the spawning season, or it may be that a few of the young bass were large enough to eat the young of other fish species thereby accelerating this size difference.

One bass of 3 summers was of legal size. All bass over 3 summers old were of legal size.

3. Pumpkinseed

Age	I	II	III	IV	V
Sex not determined	1.8(14)
Males	...	3.7(1)	4.6(14)	6.1(11)	6.7(1)
Females	...	3.4(2)	4.8(6)	5.95(11)	6.6(2)

Male pumpkinseeds 4 summers old averaged longer than 6 inches (legal size) while the females of this age on the average were slightly shorter than the legal size. Six males and 4 females in the 4-summer class were of legal size.

4. Perch

Age	I	II	III	IV	V
Males	2.9(1)	4.3(15)	5.05(13)	6.5(1)	7.2(1)
Females	2.9(1)	4.2(22)	5.7(6)	6.5(19)	8.2(1)

Perch 3 summers old were all under legal size except 1 female. Three-fourths of the 4-summer old perch were of legal size.

5. Golden Shiners

Age	I	II	III	IV
Sex not determined	2.1(48)
Male	...	3.5(33)	4.8(5)	...
Female	...	3.6(29)	4.6(5)	5.5(1)

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