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Smallmouth Bass Experimental Plantings from

Lydell Hatchery

by

Gerald P. Cooper

Experimental plantings of fingerling smallmouth bass made in Louise (Charlevoix County), Birch (Cass County) Whitmore (Livingston County), Fife (Grand Traverse County), Crooked (Washtenaw County) and Clear (Jackson County) lakes during the fall of 1947 were fin-clipped (right pectoral) at the Lydell Hatchery during October 1946 (see I.F.R. Report 1083). A test lot of 1,000 of these fin-clipped bass, selected for uniformity of size, was deposited in Lydell Pond No. 21 on October 18, 1946, for subsequent observations on fin regeneration. These 1,000 bass weighed 15.25 pounds, average 0.244 ounce. A random sample of 100 of the 1,000 bass were measured in length individually; the length range was 2.76 to 3.86 inches, average 3.23 inches.

Pond No. 21 was drained on April 15, 1947 for the first check on this lot of bass. (Personnel included Claude Lydell, Cy Moody, George Van Antwerp, H. E. Predmore and G. P. Cooper). A total of 914 bass were

accounted for -- 910 recovered, 1 escaped in creek, and 3 found dead. The 910 weighed 14.5 pounds, average 0.255 oz. It was noted that some water was carried over in weighing, and the scales used were hardly accurate to within \pm 0.25 pound. Of the 910 bass a random sample was measured for length; the range was 2.9 to 4.1 inches, average 3.29 inches. Whether or not the difference between 3.23 and 3.29 is significant can be determined by statistical analysis of the length data (which are available). These bass grew very little, if at all, over the winter.

Pond 21 was drained slowly, over the course of a week. In the final draw-down the basin was checked carefully to recover any stranded fish. No explanation is available for the loss of 86 fish over the winter.

The 100 bass, as they were measured, were examined carefully by G. P. Cooper for regeneration of the right pectoral fin. On 93 bass there was no sign of regeneration, or at most a slight stub (on about 10 fish) which was presumably missed in the fin-clipping; in instances where a stub was present, it represented considerably less than 10 percent of the original fin. On 6 fish, about $1/4$ of the fin was still present, and on one fish about $1/2$ of the fin. In these latter instances it appeared that the base of the fin had been missed in clipping, for the cut margin of the fin did not appear to be new growth.

Of the 910 fish, 2 were injured in handling. The remaining 908 fish were deposited in Lydell Pond No. 16 to be held throughout the summer of 1947 for further observations.

On the creek which feeds the Lydell Hatchery ponds, a flash flood occurred on the night of May 13, 1947. Pond No. 16 was "washed out," and the 908 fin-clipped bass escaped into the creek.

The test on fin regeneration afforded by this lot of 1,000 bass held for six months over the winter of 1946-47 was not at all conclusive. Mr. Lydell is still holding some 25,000 smallmouth bass, young of 1946, which according to the original plans were to have been included in the experimental plantings in the six lakes listed above. It is recommended that this balance of some 25,000 bass be fin-clipped during the fall of 1947, and apportioned out for plantings in Louise, Birch, Whitmore, Fife, Crooked and Clear Lakes in order to complete, as far as possible, the experimental plantings as originally recommended (see letters by G. P. Cooper to A. E. Cook, dated October 7, 1946 and November 1, 1946). From this group of smallmouth, another test lot of 1,000 fin-clipped fish should be held in a pond at the Lydell Hatchery for subsequent observations on fin regeneration.

INSTITUTE FOR FISHERIES RESEARCH

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Approved by: A. S. Hazzard 6/26/47
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Smallmouth bass

Individual total lengths, inches and tenths

Lydell Hatchery, Pond 21, April 15, 1947

Length	Percent regeneration					Length	Percent regeneration					Length	Percent regeneration					Length	Percent regeneration				
	0	25	50	75	100		0	25	50	75	100		0	25	50	75	100		0	25	50	75	100
3.0	✓					3.3	✓				3.7	✓				3.3	✓						
3.0		✓				3.2	✓				3.5	✓				3.2	✓						
3.4			✓			3.3	✓				3.3	✓				3.3	✓						
3.4	✓					3.2		✓			2.9	✓				3.1	✓						
3.4	✓					3.0	✓				3.4	✓				3.3	✓						
3.1	✓					3.2	✓				3.1		✓			3.4	✓						
3.2	✓					3.1		✓			3.2	✓				3.2	✓						
3.2	✓					3.4	✓				3.3	✓				3.2	✓						
3.1	✓					3.0	✓				3.2	✓				3.7	✓						
3.5	✓					3.0	✓				2.9	✓				3.3	✓						
3.5	✓					3.3	✓				3.2	✓				3.6	✓						
3.2	✓					3.2	✓				3.3	✓				3.4	✓						
3.1	✓					3.5	✓				3.3	✓				4.1	✓						
3.1	✓					3.2	✓				3.0	✓				3.1	✓						
3.1	✓					3.3	✓				3.4	✓				3.3	✓						
3.2	✓					3.1	✓				3.4	✓				2.9	✓						
3.7	✓					3.3	✓				3.4	✓				3.1	✓						
3.5	✓					3.7	✓				3.6	✓				3.3	✓						
3.4	✓					3.7	✓				3.4	✓				3.2	✓						
3.4	✓					2.9	✓				3.3	✓				3.6	✓						
3.6	✓					3.3	✓				3.3	✓				3.3	✓						
3.5	✓					3.1	✓				3.2		✓			3.2	✓						
3.4	✓					3.1	✓				3.3	✓				3.7	✓						
3.4	✓					3.1	✓				3.3	✓				3.3	✓						
3.3	✓					3.2	✓				3.1	✓				3.4	✓						

Among those bass tabulated as 0% regeneration, about 10% of them had a stub of the right pectoral fin present, with the basal portions of the fin rays present. It is not at all certain that any fin regeneration has taken place since last fall. Where part of the fin was present the fin did not look like new growth. Probably these were instances where part of the fin was missed in fin-clipping.