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REPORT ON THE AGE, RATE OF GROWTH AND CONDITION OF 13 YELLOW PIKEPERCH FROM LAKES TOBIN AND MARY, IRON COUNTY, MICHIGAN

On July 30, 1935 the Institute for Fisheries Research received from District Supervisor Clare Farwell, a package containing one yellow pikeperch (Stizostedion vitreum) 8.75" in standard length (10.80" in total length—this measurement is over all including the tail fin). On the same date, a letter was also received from Mr. Farwell relative to the pikeperch, a copy of which is as follows:

"This specimen of pike-perch was taken from Big Tobin Lake, Section 15-T 42-R 32 W, in Iron County. There are several lakes in that vicinity that seem to be very well stocked with these fish. They are all about the size of the specimen and have been the same size for the past two years.

We would like to know if there is something wrong with the fish or if some natural condition is retarding their growth".

An examination of this fish indicated the need for more specimens, so a letter requesting 12 more pikeperch was sent to Mr. Farwell on August 7.

On August 19, 1935 the Institute received from Mr. Farwell, a package containing the 12 pikeperch, and an accompanying letter, a copy of which is as follows:

"You are being sent, under separate cover, twelve pike-perch, as you have requested.

Six of the fish were taken from Tobin Lake which is located in Section 19 (15 is correct)-T 42-R 32 W in Iron County. The other six were taken from Lake Mary which is in the same vicinity (parts of Sections 5, 6, 7, 8—T 42-R 31), and where the fish seem to be in the same condition.

Any information that can be obtained about the fish would be greatly appreciated."

*An examination of the 13 yellow pikeperch resulted in the following observations, which are given in tabular form:

Locality where fish were taken	When captured 1935	Sex	Standard length (inches) in formalin 4 weeks)	Total length (inches) in formalin 4 wks.	Age of fish Winters	Summers
Lake Tobin, Iron Co.	Late July	?	8.75	10.80	4	5
" " " "	First half of Aug.	♀	8.30	9.85	4	5
" " " "	"	♂	9.00	11.00	4	5
" " " "	"	♂	9.75	11.90	4	5
" " " "	"	♂	9.20	11.20	4	5
" " " "	"	♂	8.80	10.70	4	5
" " " "	"	♂	8.80	10.90	4	5
Lake Mary, Iron Co.	"	♀	8.75	10.40	3 or 4	4 or 5
" " " "	"	♀	8.90	10.80	3 or 4	4 or 5
" " " "	"	♂	9.20	11.05	3	4
" " " "	"	♂	9.60	11.70	3	4
" " " "	"	♂	9.00	10.70	3	4
" " " "	"	♂	9.45	11.10	3	4

General Remarks

The data given above suggests a difference in the rate of growth between the pikeperch of Lake Tobin and Lake Mary; the fish from Lake Tobin being of slower growth than those from Lake Mary.

Juday and Bennett** give the average length of Yellow Pikeperch from Wisconsin waters (fish apparently taken from the entire state) as 15.0" in average total length (3 specimens examined: range from 14.0 to 16.0") for fish of 3 summers; as 14.25" in ave. total length (29 specimens examined: range from 10.75" to 15.75") for fish of 4 summers; and as 15" in ave. total length (36 specimens examined: range from 10.50" to 20.30") for fish of 5 summers. As the total length of 4 and 5 year (summers of life) old pikeperch from lakes Tobin and Mary (northern Michigan) range from 9.85" to 11.90" in total length, it appears highly probable that the fish from these lakes are somewhat dwarfed. They are decidedly below the average lengths of 4 and 5 year pikeperch from

* Scale examinations were made by Gerald P. Cooper; examinations for parasites and disseases by E. L. Cheatum.

** Growth of Game Fish in Wisconsin Waters.—Third report; Notes from the Limnological Laboratory of the Wisconsin Geol. and Nat'l. Hist. Surv.; May, 1935; mimeographed).

Wisconsin waters.

All 13 specimens were lightly infested with the cysts of the strigeid trematode Neascus ambloplites. The infestation was not sufficiently severe to cause material retarding of growth.

Cursory internal examinations were made of the 13 fish, which resulted in negative findings.

The 13 specimens had the general appearance of being slightly emaciated; at least there was little or no trace of fatty tissue in the mesentery.

The eyes of the pikeperch were abnormally large for this species, averaging as large as those of its close relative the blue pikeperch (Stizostedion glaucum). However, other characters, such as color, definitely indicated these fish to be yellow pikeperch. Northern Michigan is far from the normal range of the more southern blue pikeperch. (Large eyes and large heads sometimes indicate a lack of proper food).

Some factors which may cause dwarfing of pikeperch in such northern lakes as Tobin and Mary are:

(1) Lack of the proper food supply; especially forage fish.

(2) Overpopulation of pikeperch due to (a) very favorable spawning and fry conditions which cause a super abundance of young, or (b) overstocking of fry or young from hatcheries.

(3) The cause of dwarfing may be genetical; the fish may belong to a dwarf race or a race of slow growing individuals.

(4) Extremely cold water may effect both the food supply and the amount of food eaten by the pikeperch.

Conclusion: To ascertain the extent and reason for the dwarfing of pikeperch in lakes Tobin and Mary, would necessitate an investigation of these lakes by the Institute for Fisheries Research.

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