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NOTES ON EARLY SEASON FISHING IN 1941 IN THE  
LOWER SLATE RIVER, GOGEBIC COUNTY, MICHIGAN

by

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The Slate River has its headwaters in Sections 9 and 10 of T. 45 N., R. 42 W., Marenisco Township, Gogebic County, Michigan. From this point the stream meanders in a northerly direction, intersecting with highway U.S.-2 about 7 miles west of the Village of Marenisco, and entering the southern extremity of Lake Gogebic in Section 3, T. 46 N., R. 42 W. About  $1\frac{1}{2}$  miles above the junction of the river and lake, the stream is joined by 3 tributary streams entering from the west--Pelton, Nelson and Marshall Creeks. These add sufficient water to the main branch of the Slate River to make the stream about 75 feet in width at the point where it enters the lake. It has a depth of from 7 to 10 feet.

The mouth of the Slate River is flooded as the result of the relatively recent construction of a dam at the outlet of Lake Gogebic, which raises the normal water level about 30 inches. A slow, sluggish current (except during the break-up period in the spring) and large areas of flooded land adjacent to the stream are characteristics of the vicinity of the mouth of the river. This condition persists to a distance of about  $1\frac{1}{2}$  to  $3\frac{1}{4}$  mile upstream from the point where the river enters the lake.

Along much of this distance, however, extensive marshy areas are typical of only one side of the river, the other side being bounded by highlands.

Approximately 300 yards above the point where the stream enters the main body of Lake Gogebic, it is spanned by a bridge (called in this report the "Slate River Bridge"), across which a graveled township road passes which roughly follows the south shore of Lake Gogebic. This bridge marks the dividing line between the lake and the river, insofar as existing statutes dealing with the fishing in the two waters are concerned. The Slate River is a designated trout stream above this bridge and below this point is governed by fishing regulations covering Lake Gogebic, which is a designated pike lake.

Since the trout season in Michigan opens on the last Saturday in April, while pike lakes open to fishing on May 15, a situation arises in which pike may be legally taken by angling in the Slate River for a period of from 15 to 22 days earlier than in Lake Gogebic. The Slate River Bridge provides a convenient place for live bait fishing with cane poles; many live bait fishermen frequent the Lake Gogebic area; and some numbers of good catches have been taken from the bridge in the past. As a result, the opening of the trout season brings unusual numbers of fishermen to the bridge. Other portions of the river above the bridge, being inaccessible except by boat, attract no more than normal numbers of anglers.

Since the swamp lands bordering the river above the bridge furnish ideal spawning grounds for northern pike, the opinion has been forwarded from various sources that the large take of pike and walleyes early in the season materially interferes with spawning activities of the species concerned and significantly reduces the natural propagation of young. In order to determine the advisability of further regulating fishing in the Slate River

to protect the spawning fish, various field observations were made in the spring of 1941. These are described in the following pages of this report.

The area in the Slate River accessible to Lake Gogebic fishes is limited to a distance of about one mile upstream from the junction of the stream and lake. At this point Nelson Canyon Falls on the Slate River forms an effective barrier to upstream migration. The river for about  $1/4$  mile below the falls is not bounded by flooded areas suitable for pike spawning. Thus there remains about  $1/2$  mile of stream above the bridge which provides ideal spawning habitat for northern pike.

In the interests of determining the extent to which the Slate River is used for northern pike spawning, frequent observations were made during their supposed spawning period. No pike were observed while spawning, but other evidence obtained points to a rather extensive use of the area for this purpose.

The portion of the Slate River here concerned supported a solid ice cover up until about April 8. By April 10 certain portions of it were still closed, but large blocks of ice were seen floating downstream, and a final break-up was in progress.

On the following day, a boat trip was taken upstream as far as Nelson Canyon Falls. Although the ice was removed from much of the marsh area, and although the trip was made in the forenoon of an overcast day, no evidence of pike activity was found. Temperatures ranged from  $36^{\circ}\text{F.}$  in the main stream to  $40^{\circ}\text{F.}$  in the shallows, with restricted shaded areas apart from the main stream still supporting an ice cover and a lower temperature.

By April 14, surface temperatures in the Slate River had risen to a range of from  $46^{\circ}\text{F.}$  to  $54^{\circ}\text{F.}$  Ice was leaving Lake Gogebic. No spawning

activity could be observed. This temperature was pretty well maintained until April 19, with stream temperatures ranging from  $46^{\circ}\text{F}$ . to  $48^{\circ}\text{F}$ . By April 22 several days of cool weather had reduced the temperature to  $40^{\circ}\text{F}$ . in the main stream. A  $36^{\circ}\text{F}$ . reading was taken, and in certain shallow portions of the marsh a thin ice cover had formed during the night and persisted until about 9 A.M.

Since no pike activity was seen prior to this time, a gill net was set just above the Slate River Bridge to determine whether adult pike were frequenting the area. This was done on April 24, 2 days before the opening of trout season. The net, a 125 foot experimental gill net of graded mesh, was set for 3 hours, from 6:30 P.M. to 9:30 P.M. Water temperature was  $44^{\circ}\text{F}$ ; air temperature was  $49^{\circ}\text{F}$ . A total of 17 fish were taken in the short time, including 9 northern pike, 5 common suckers, 2 walleyes and one yellow perch. The northern pike ranged from  $16 \frac{5}{8}$  to 19 inches in total length, and from 14 to 22 ounces in weight. Four of these were dissected and found to be spent females. Only scattered eggs remained in the ovaries. The organs indicated that spawning had been recent. Since the other 5 fish were obviously also spent, as judged by an external comparison with the dissected fish, they were released alive after scale samples, lengths and weights had been taken. The walleyes were both  $14 \frac{3}{4}$  inches long, weighed slightly over one pound each, and were immature females. The suckers ranged between  $2 \frac{1}{2}$  and  $4 \frac{1}{8}$  pounds and were ripe. The perch weighed 5 ounces, was  $8 \frac{3}{8}$  inches long and was a ripe female.

The catch in the gill net seems to indicate that the marsh adjoining the Slate River near and above the Slate River Bridge is much frequented by northern pike during and right after the spawning season. Spawning had

been recent, as judged by the state of the pikes' sexual organs, and the closest suitable habitat for northern pike spawning other than the vicinity of the Slate River mouth is 4 miles north of this area, along the west shore of Lake Gogebic. A migration to the Slate River from that point immediately after spawning is inconsistent with the known facts concerning the life history of the northern pike.

Careful observation of fish caught from the Slate River Bridge during the first several days of the season revealed no northern pike which were not spent. A number of walleyed pike were taken which were ripe. However, the principal spawning grounds of the walleyes were found to be along the east shore of Lake Gogebic. Since the fish were caught during the daytime, it is quite possible that the walleyes moved into the Slate River to feed and were not using it as a spawning ground. Also, the fish may not have been completely ready to spawn at the time of their capture by anglers. None were observed which could be recognized as being partially spent.

"Seining" with a small mesh scap about May 1 and later with a small mesh minnow seine failed to reveal any young pike in the swamp near the Slate River Bridge. Observations in this area made with a spotlight, on the night of May 10, were equally unproductive. Evidence found of the use of the area for pike spawning is restricted to the gill net catch and early season anglers' catches, as described above.

In order to determine the extent of reported dangerous decimation of numbers in the broodstock of northern pike in Lake Gogebic due to heavy catches at a point of seasonal concentration, a creel census of the fishing from the Slate River Bridge was made at the suggestion of the writer, by Mr. Dexter Reynolds. The period covered extended from the opening of

trout season (April 26) to the opening of Lake Gogebic to fishing (May 15). It is estimated that the census covered 75 per cent of the fishing.

According to the creel census reports, 211 fishermen fished for 934 hours from the Slate River Bridge to catch a total of 59 northern pike (averaging 16.4 inches), 47 walleyes (averaging 17.2 inches), 2 burbot and one sucker. The average length of a fisherman day was 4.4 hours, and fish were caught at an average rate of 0.12 fish per hour. One hundred forty-three fishermen (or about 68 per cent) caught no fish. The homes of 68 per cent of the fishermen were within a radius of about 20 miles of the Slate River Bridge.

An analysis of the above figures reveals that fishing in the Slate River was only one third as good as the fishing in Lake Gogebic itself during the 1940 season, when an average of 0.36 fish per hour was taken by anglers. Averaging in the 25 per cent of the fishermen believed not contacted with those censused shows that probably about 78 northern pike and 63 walleyes were taken from the Slate River Bridge between the opening dates of trout and pike seasons respectively. These do not constitute excessive numbers of either species. Conversations with fishermen who had fished from the bridge in previous years, and a local boat liveryman, revealed that the quality of fishing seemed to be "about the same" as in previous years. Occasional reports of large catches at the bridge no doubt arise from the fact that the fish at times bite exceptionally well, and a number are taken in quick succession by several different fishermen almost simultaneously. Such periods of excellent fishing are, however, much abbreviated in length and occur only at wide intervals.

The distribution of fishermen as to residence shows that the Slate River Bridge offers an opportunity for early-season fishing to many live-

bait, non-trout anglers of the vicinity, who otherwise would find little opportunity to enjoy such recreation.

In conclusion, it may be stated that the observations made thus far offer no real justification for closing the lower Slate River, between Nelson Canyon Falls and the Slate River Bridge, to fishing during the opening days of the trout season. In fact, there seems little if any advantage gained in restricting the open fishing season at all in this portion of the stream. A solid ice cover was present over most portions of the Slate River until April 8, in 1941, and the spring break-up was said to be particularly early, as compared to the average during recent years. The trout stream designation thus restricts the fishing in the lower Slate River for a period of only about 2 weeks during the average spring season, while it eliminates fall pike fishing (after Labor Day) entirely. Few trout are taken in the Slate River between the falls and the bridge, and catches made at any point other than immediately below the falls are restricted to the very early part of the season. Pike fishermen use bait which is relatively unattractive to trout, and their activities would hardly result in any significant pre-season trout mortality. The stream being deep and soft-bottomed throughout most of the area here concerned, no interference with spawning trout would be likely to occur. The direct, broad connection between Lake Gogebic and the Slate River, and the excellent pike habitat provided by the latter, makes it a natural tendency for fishermen to be attracted upstream, above the bridge, to try their luck. Fishermen unacquainted with the local stream designations are continually (generally unintentionally) running afoul of the law in fishing the Slate River during the fall months.

In view of the above discussion, it is recommended that the designation of that portion of the Slate River between Nelson Canyon Falls and the Slate River Bridge be changed to that of a non-trout stream. This designation should be tested for a period of one year, during 1942 or 1943. There is a possibility that the catch of northern pike will be sufficiently large to be harmful during the early spring, immediately after the ice cover leaves. The results of the new designation, especially during this particular time of the year, should be carefully checked by the conservation officers and the district fisheries biologist.

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