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A SCHEME FOR STOCKING LAKES WITH SPECKLED TROUT IN CHARLOTTE COUNTY, NEW BRUNSWICK.

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A SCHEME FOR STOCKING LAKES WITH SPECKLED TROUT IN CHARLOTTE COUNTY, NEW BRUNSWICK.

April 18, 1939.

No.188C.

MEMORANDUM UPON THE SCHEME FOR STOCKING LAKES WITH SPECKLED TROUT IN CHARLOTTE COUNTY, NEW BRUNSWICK.

February 24, 1939.

by

M. W. Smith.

FISHERIES RESEARCH BOARD OF CANADA

MANUSCRIPT REPORTS OF THE BIOLOGICAL STATIONS

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A SCHEME FOR STOCKING LAKES WITH SPECKLED TROUT IN CHARLOTTE COUNTY, NEW BRUNSWICK.

A memorandum, embodying the following scheme for stocking lakes with speckled trout in Charlotte county, was prepared and presented to the Department of Fisheries last November. On the whole the reaction of the Department of Fisheries was favourable toward the proposals outlined by the scheme, but, as is the usual procedure in such matters, the Department wished to obtain the views of the people who would be most intimately connected with the lakes in question, or, in other words, the anglers of Charlotte county. The local member of Parliament, Mr. Hill, held an informal meeting of interested individuals in St. Stephen late in November, and this meeting was duly reported upon in the St. Stephen Courier of December 1, so I presume that the proposals, to a considerable extent at least, are not new to you. Since that time the matter has been discussed upon various occasions with favourable comment. We have discussed the scheme with the Directors of the Schoodic Branch of the New Brunswick Fish and Game Protective Association, and it is upon their request that I appear tonight to present briefly what the proposed scheme includes, and thereby to secure your opinion as a Fish and Game club.

According to the fish cultural records of recent years a number of lakes have been stocked in Charlotte county, but no organized method was employed in these lakes to determine the results of stocking. Anglers' reports are all that are available, and these are consistent in indicating that the catches per

individual were not appreciably improved, if at all. In many other Maritime lakes the same story applies. The Fish Culture Branch of the Department of Fisheries has appreciated the condition and in certain cases has adopted remedial measure. Thus, in lakes of the Yarmouth district of Nova Scotia the copper sulphate method of eliminating the entire fish population has been used to rid lakes of predator fish, which have been considered the underlying cause for poor stocking results. However, in the Charlotte county lakes that will be indicated, there does not appear to exist a predator fish population of white and yellow perch as was the case in the Nova Scotian lakes treated with copper. It is true that certain predators of trout exist, as eels for instance, and competitor fish may be numerous. On the whole, however, there seems to be no readily apparent conditions inherent in the Charlotte county lakes in question to account for a failure or near failure of stocking. One condition comes immediately to mind, however, namely over-fishing. It is well known that the Charlotte county lakes are heavily angled, and it is quite possible that it has been this outside influence that has determined the results of stocking in the past.

When lakes are stocked with trout but not closed to angling many fish are removed while still small. The stock is being continually drained, and such predator and competitor action that is possible in the lake has full scope to operate against a declining number of trout. If lakes are closed to fishing after they have been stocked, then, although the trout encounter similar predator and competitor forces, they are not subjected

to a continual reduction in numbers from angling efforts, and thus have what opportunity that presents itself, to become established.

In view of these considerations, the following scheme is advanced. Select the following lakes in Charlotte county, which are reasonably close to each other: Welch, Gibson, Limeburner, Bonaparte, Johnson, Kerr, Crecy and St. Patrick. Stock these lakes according to the following schedule, and close to angling until the planted fish are three years of age.

	Stocking year	Stock	Opening year	Stocking year	Stock	Opening year
Limeburner	1939	No.2 fingerlings	1942	1944	Yearlings	1946
Bonaparte	1939	" "	1942	1944	"	1946
Johnson	1939	Yearlings	1941	1942	No.2 fingerlings	1945
Kerr	1939	"	1941	1942	" "	1945
St. Patrick	1940	No.2 fingerlings	1943	1944	No.5 "	1947
Crecy	1940	" "	1943	1944	" "	1947
Welch	1941	No.5 "	1944	1945	No.2 "	1948
Gibson	1941	" "	1944	1945	" "	1948

From this schedule it may be seen that after the scheme is in operation, there will always be four lakes open to angling and four closed in any one year.

A patrol, adequate to stop illegal fishing, is essential to the scheme. If proper protective measures are not taken, then the stocking as outlined above will provide no advance over the policy now employed in some of these lakes. Adequate protection would require the guardian or guardians to spend his or their entire time upon the eight lakes. Equally essential to the plan is the cooperation of the local anglers. Through your

interest and willingness to cooperate the operation of the scheme is greatly simplified, and worthwhile results should be secured.

In the above schedule, as you note, three sizes of planting stock are to be used, namely No.2 fingerlings (about 1.25 to 1.5 inches in length), No.5 fingerlings (about 2.5 to 3.5 inches in length), and yearlings. Most of the stocking as now done is made with the smaller size of fish. This is necessarily the case since the Maritime hatcheries are not at present equipped to supply many older fish, as yearlings. However, since the relative merits of these various sizes of fish for stocking purposes is a much debated question, it is considered, in the operation of the proposed scheme, that an excellent opportunity was provided to test the efficiency of stocking with these several sizes of fish. If the stocking schedule, as proposed, is carried through, then tests of stocking with No. 2 fingerlings, No. 5 fingerlings, and yearlings will have been made in four lakes for each size group.

The number of lakes involved is not large. Therefore a carefully-made creel census should be undertaken, and this is important,for it offers the best means of evaluating the results. In this phase of the procedure, the cooperation of the angler is most desirable. If the scheme is adopted and when the lakes are opened to fishing, and a creel census is in operation, it is urged that each angler assist, as far as he is able, the person who is making the census to compile a complete record of all trout taken.

To operate the scheme funds are necessary, the major portion of which are required for the guardian's salary. Since this would be a test case, it is considered that the Department of Fisheries should bear the expense. It is also considered that the guardian should be appointed by the Department of Fisheries in coqperation with the Fisheries Research Board of Canada and the Chief Game Warden of the Province of New Brunswick.

As you can appreciate, the scheme is not a complicated one. The idea behind it is not new, but a proper demonstration of its efficacy in lakes of this district at least appears lacking.

It is obvious that the scheme can be extended to take in a greater number of lakes, and even streams, and thereby have more waters available for angling at one time. We must always bear in mind, however, that at no time should the number of lakes be too great for adequate patrol. For a preliminary test, the eight lakes that we have indicated are quite sufficient in number, and form a compact group. Expansion of the scheme should await results from the eight lakes under consideration.

M. W. Smith,
Atlantic Biological Station,
April 18, 1939.

(Read before the Annual Meeting and Banquet of the New Brunswick Fish and Game Protective Association, Schoodic Branch, April 20, 1939).