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Mr. Harold Hughes

Mr. George Washburn

**INSTITUTE FOR FISHERIES RESEARCH** Institute for Fisheries Res.

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ALBERT S. HAZZARD, PH.D.  
DIRECTOR

ADDRESS  
UNIVERSITY MUSEUMS ANNEX  
ANN ARBOR, MICHIGAN

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RESULTS OF EXPERIMENTAL STOCKING OF BROWN TROUT  
IN THE NORTH BRANCH OF THE SALINE RIVER, WASHTENAW COUNTY

By  
George N. Washburn

The North Branch of the Saline River, located in Washtenaw County, T3S., R5E., secs. 25, 26., R6E., secs. 20, 29, 30, is a small stream having a normal summer flow estimated at 3 c.f.s. The source of water consists of springs and surface runoff. A number of drainage ditches lead into the main stream at various intervals along its course, some of which contain cold spring water while others have seasonally tempered surface water. The entire stream passes through privately owned farm land, most of which is under cultivation. The areas adjacent to the stream are too marshy for cropping, consequently much of this is used for pasture.

During the summer of 1943 several water temperature records were obtained. These recordings were taken in late afternoon (5:30 P.M.) and are believed to be representative of maximum temperatures for each specific date. The first temperature record was obtained on July 20, 1943 - the air temperature was 89°F. and the water 72°F. On August 1, 1943, the air temperature was 88°F. and the water was 71°F. On August 7, 1943, the air temperature was 92°F. and the water 72°F. All of these temperature

records were obtained from the lower portion of the stream about 1,000 feet upstream from its juncture with the main branch of the Saline River in section 36.

From general observations on the stream as a whole, only the lower portion, about a mile in length lying in section 36, was decided as suitable trout waters the year around; as above this zone, the water became too warm during the hot summer months. The reason for this lower portion being suitable for trout was due to the entrance of a good supply of cold water from seven springs located on the Dan Hall property in the northeast corner of section 36.

The local landowners along this section of stream were visited and the trout possibilities discussed. By their cooperation, access to the stream for fishermen was granted. This agreement was verbal and its success depends upon the degree of cooperation among anglers frequenting this area, as several farmers were willing to allow fishermen on their holdings as long as no property damage was involved. Several of the local fishermen from nearby Saline grouped together and constructed stiles over the fences which barred free passage on the creek, thus eliminating the possibility of fence breaking.

The first trout planting in this stream consisted of marked brown trout. Prior to this, the only trout in the creek were escapees from a "lot" being held in a live box on the Hall farm which were to have been used in brine pollution studies being conducted by the Institute during 1942 and 1943. Due to a heavy influx of high water the last week in December, 1942, the live box was washed away and the fish lost. These escapees (150 in number) were all fingerling trout composed equally of the three species, brooks, browns, and rainbows.

Two plantings of marked brown trout, consisting of 150 trout in each plant, were made in the North Branch of the Saline River. The

first planting was made in November, 1943, and the second in April, 1944.

In addition to these plantings, two more were made of unmarked brown trout during the summer of 1944. The reason for marking the first two plantings was to determine, by the number of returns, the success of the project.

In summarizing the data for this stream, consideration will be given to marked fish only as the unmarked fish could be representatives of the summer 1944 plantings or from escapees previously mentioned.

On the opening day of the 1944 trout season, John Funk of the Institute staff visited the stream and contacted several fishermen. These fishermen reported a total of 14 marked trout taken. Nine of these 14 trout were representatives of the fall planting and the remaining 5 of the spring planting. The total number of tag returns for the entire season was 26; of these, 16 were fall planted fish and the remaining 10 spring planted fish. In addition to these returns, a number of local fishermen residing in nearby Saline reported that they had caught several marked trout but had failed to report the information at the time and consequently the tag data was lost. These fishermen, however, did report the approximate number of tagged trout taken. Roy Bixby, Saline, reported that he took 9 tagged browns; Dan Hall of Saline reported 8 tagged trout; Dr. Leidheiser of Saline reported the capture of 33 tagged fish; and Donald Friend of Saline reported the capture of 11 tagged fish. This makes a total of 61 marked trout captured but the tag records lost. Assuming that the above information is correct, then a grand total of 87 marked fish were removed from this stream. This catch would represent 29 per cent of the total number of marked trout placed in the stream.

In comparing the percentage of returns from this stream with other state waters studied, we find that the proportionate number of recoveries is much higher for the Saline River. A possible explanation for this deviation from the general trend is that practically the total population

of trout in this stream were marked fish and when introduced were free from competition from other fish, whereas in other state waters studied the introduced trout were immediately entering into competition with a population of fish already present. One, therefore, might expect a higher mortality under these latter conditions, which would have a definite bearing upon the number of returns. This also might account for the higher return of fall planted fish from the Saline River. Of the 26 actual tag records, 61 per cent represented fall planted fish and 39 per cent for the spring planting. However, as only a small number of returns were obtained, the above data might be misleading. According to past studies conducted in various parts of the state, recoveries of spring planted brown trout are generally much greater than those introduced in the fall.

It appears from recorded returns and fishermen's comments that the introduction of trout in the North Branch of the Saline River was a worthwhile project and further plantings should be made as long as the present policy of the Department is continued. Many anglers have been looking forward to the 1945 season and access to the stream has already been granted by the landowners. Plantings for this season have been recommended and the first one was made on April 16, 1945 composed of 160 legal sized trout, equally divided among browns and rainbows. These fish were not marked, but we will continue to seek records of marked trout taken from the stream.

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By George N. Washburn  
Junior Aquatic Biologist

Report approved by A. S. Hazzard

Report typed by L. J. Predmore