

Original: Fish Division ✓  
cc: Education - Game ✓  
Institute for Fisheries  
Research

**INSTITUTE FOR FISHERIES RESEARCH**  
DIVISION OF FISHERIES  
MICHIGAN DEPARTMENT OF CONSERVATION  
COOPERATING WITH THE  
UNIVERSITY OF MICHIGAN

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July 27, 1951

ADDRESS  
UNIVERSITY MUSEUMS ANNEX  
ANN ARBOR, MICHIGAN

Report No. 1293

LOCATION OF THE UPSTREAM BOUNDARY FOR FALL  
RAINBOW TROUT FISHING ON THE LITTLE MANISTEE RIVER

By

David S. Shetter

Abstract

To determine the upstream boundary of waters to be open to fall rainbow fishing, certain parts of the Little Manistee River were investigated by D. S. Shetter, L. N. Allison, and S. J. Lieveuse on June 29, 1951. An electric shocker was used to collect fish. It was assumed that the relative abundance of trout fry at various stream locations could be used as a criterion for establishing the upstream boundary for fall fishing. This boundary should be located below the majority of brook and brown trout spawning areas.

Collections made on June 29 at specific locations indicated that the upstream boundary for fall rainbow fishing on the Little Manistee River when and if opened to such fishing, should be set at the <sup>mouth</sup> ~~north~~ of Stronach Creek, in Section 7 of T. 20 N., R. 14 W., Lake County. Other well defined locations which could be considered if the first location is too far upstream are Nine-Mile Bridge, or Six-Mile Bridge in Manistee County.

*corrected as per  
L. from Shetter  
8-7-51*

Brown trout spawning areas in the vicinity of Stronach Creek should be definitely located in the fall of 1951 and if necessary the upstream boundary for fall rainbow fishing should be relocated.

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The Little Manistee River is reported to have a fall run of rainbow trout similar to those experienced on the Big Manistee River, the Sturgeon River, the Au Gres River and others. To date, it has not been open to fall rainbow trout fishing during the period from the second Sunday in September to November 30. Various sportsmen of western Michigan have requested that the Little Manistee River be opened for this fall fishing.

The problem is to locate the upstream boundary of the waters open to fall rainbow trout fishing so that anglers will be fishing over the fewest possible brook trout and brown trout. The season on the latter species closes on the second Sunday in September.

It is desirable, therefore, to establish an upstream boundary at some point on the stream located below the majority of brown trout and brook trout spawning beds. Since neither the author nor the District Fisheries Biologist, Stanley Lievens, has observed the river during the spawning season, the relative abundance of trout fry has been used as the main criterion in recommending the upstream

boundary for the proposed fall fishing. Under this procedure, the reasonable assumption is made that the young-of-the-year trout will still be quite close to the stream areas where they were laid down as eggs.

The electric shocker was used on June 29, 1951, to determine the relative abundance of trout and other species of fish at four different sites on the Little Manistee River. The author was assisted by Dr. L. N. Allison and Stanley Lievense.

At each site the shocker was operated for approximately 150 yards along the bank with the best cover. All stunned fish observed were netted, identified and measured. The results of the shocking are given in the accompanying table. The sites are arranged in order, progressing from the uppermost to the lowermost.

The largest numbers of trout (35) were collected at the uppermost site in Lake County (T. 20 N., R. 14 W., Sec. 24); also the young-of-the-year brown trout and rainbow trout were most numerous here (26). The latter might have been expected, inasmuch as the stream bottom has abundant gravel and rubble needed for spawning redds, and cover was good to excellent.

At the next point examined downstream (T. 20 N., R. 14 W., Sec. 16 about 3/8 mile downstream from the bridge), a total of 19 trout were taken. Four of these were young-of-the-year brown trout. Here the stream was mainly sand-bottomed with silty edges and rather deficient in cover.

At the Stronach Creek site only 6 trout were captured or seen. Three of these were recently-hatched rainbow trout, while one was a brown trout of the 0 age-group. In this part of the Little Manistee River, the current is relatively sluggish and the bottom consists almost entirely of sand and silt. Apparently the warm waters of Stronach

Summary of size range of species of fish captured at four sites on the Little Manistee River, Lake and Manistee counties, June 29, 1951 by A.C. Shocker

Location	Species of fish taken	Size range of fish taken in inches					Total fish captured	Temperatures
		0-1.9	2.0-4.9	5.0-6.9	7.0-9.9	10+		
T. 20 N., R. 14 W., Sec. 24 Upstream from bridge (Lake Co.)	Brown trout	2	7	3	3	1	16	2:30 P.M. Air-72° Water-60°
	Rainbow trout	15	2	2			19	
	Common sucker					1	1	
	Muddler	1	2				3	
	McMinnow	1					1	
T. 20 N., R. 14 W., Sec. 16 (Lake Co.)	Brown trout		4	4	2	1	11	9:45 A.M. Air-65° Water-54°
	Rainbow trout			8			8	
	Blacknose dace		1				1	
	Longnose dace		1				1	
	Muddlers		3				3	
T. 20 N., R. 14 W., Sec. 7, 8 (Lake Co.) Above Stronach Creek	Brown trout		1				1	1:30 P.M. Air-74° Water-61° Stronach Creek-70°
	Rainbow trout	2	1	1		1 ↓	5	
	Common sucker			2	1	4	7	
	Creek Chub		18				18	
	Common shiner		3				3	
	Blacknose dace	3	5				8	
Muddlers		6				6		
T. 21 N., R. 15 W., Secs. 34, 35 (Manistee Co.) Above and below 9-mile Br.	Brook trout		1				1	11:00 A.M. Air-68° Water-58°
	Brown trout		1			2	3	
	Rainbow trout		1			1	2	
	Common sucker			2			2	
	Creek chub		1				1	
	Blacknose dace		3				3	
	Longnose dace		2				2	
	Johnny darter		1				1	
Muddlers		3				3		

↓ Observed and estimated.

Creek (which drains five lakes) were responsible for the relatively large numbers of suckers and minnows captured at this site. Cover varied from poor to excellent.

Sampling with the shocker at the Nine-Mile Bridge in Manistee County yielded 6 trout. One young-of-the-year fish of each of brook, brown, and rainbow trout were captured, along with two legal brown trout and one legal rainbow trout. In the immediate vicinity of the bridge the stream is narrow and rapid, and the bottom has about 50 percent gravel and rubble for a short distance. However, where the road parallels the river through the northeast corner of Mason County, between Stronach Creek and Nine-Mile Bridge, the Little Manistee River is generally wide and sandy with silt deposits at the edges and in the eddies. Underwater cover is excellent around the Nine-Mile Bridge; only fair through Mason County.

In addition to the three species of trout, eight other species of fish were captured. These were the common sucker, creek chub, blacknose dace, longnose dace, common shiner, Johnny darter, mudminnow, and muddlers. A greater number of species were captured at the lower two sites.

In view of the fish distribution noted on June 29 and in the absence of observations of record on the spawning localities of the brown trout, it is suggested that the upstream boundary for fall rainbow trout fishing on the Little Manistee River, when and if opened, be set at the <sup>mouth</sup> ~~mouth~~ of Stronach Creek in Section 7 of T. 20 N., R. 14 W., Lake County. It is further suggested that observations on the locations of brown trout spawning be made downstream from Stronach Creek, during the fall of 1951 and re-location of the boundary made for future seasons if such seems needed. Other well-defined geographical points which

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might be designated as upstream boundaries are Nine-Mile Bridge and Six-Mile Bridge in Manistee County should it be found that the suggested boundary line is too far upstream.

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