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DIVISION OF FISHERIES  
MICHIGAN DEPARTMENT OF CONSERVATION  
COOPERATING WITH THE  
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REPORT NO. 991

WATER TEMPERATURES IN FISH CREEK AND TRIBUTARIES

LOCATED IN MONTCALM COUNTY

by

George N. Washburn

At the request of Mr. Westerman, Chief of the Fish Division, a series of water temperatures were taken in Fish Creek and its tributaries located in Day and Evergreen Townships, Montcalm County.

Mr. Earl Bigelow, local conservation officer, was contacted on July 6, 1944 and assisted in making the temperature checks. Weather conditions for this type of an investigation were ideal as the air temperature ranged from 91° to 93° from 10 a.m. to 4 p.m., and the sky was clear. According to Mr. Bigelow, there had been no significant change in the weather for the preceding two or three days and one would expect that under these conditions maximum stream temperatures would be encountered. Presented below in tabular form is the water temperature recordings for Fish Creek and its feeders.

Name of stream	Township	Location	Water temperature OF.
M. Br. Fish Creek (Chapin Creek)	Evergreen	T. 10 N., R. 6 W., Sec. 10	72
Fish Creek	Evergreen	T. 10 N., R. 6 W., Sec. 11	74
Fish Creek	Day	T. 11 N., R. 6 W., Sec. 25	72
Hooker Creek	Day	T. 11 N., R. 6 W., Sec. 23	70

No temperature readings were taken on Fish Creek in Ferris Township, but due to the fact that this section of stream lies above that in Day Township where a temperature check was made (T. 11 N., R. 6 W., Sec. 25) and 72° water recorded, it can be assumed that at least the portion of Fish Creek located in Ferris Township, immediately above would possess water temperatures as low or lower. The stream in this area is well wooded and quite fast.

The main stream and its feeders consists of pools and rapids, well shaded by trees and brush along most of the entire course covered by the inspection. As only a two degree difference in water temperatures was recorded over a four mile stretch of stream, it would indicate that this water is suitable for all three species of trout during the entire year. The stream carrying capacity would indoubtably be greater for brown trout than for brook trout as this species would possibly be forced to retire to the small feeders during the hot critical period. Brown trout will tolerate temperatures almost as high as those endured by rainbow trout and are less migratory. Even though planted as legal-sized fish, many would be lost downstream before being caught.

The trout plantings in Fish Creek for the past four years are as follows:

- 1940 - 5,000 two months old rainbows and  
600 six months old rainbows
- 1941 - 400 yearling rainbows  
6,000 two months old rainbows and  
1,000 eight months old rainbows
- 1942 - no plantings
- 1943 - 400 yearling rainbows

Recommendations

According to Mr. Bigelow, this past season plantings (1944) had consisted of both brooks and rainbows and ~~that~~ all of the anglers he encountered were satisfied with the fishing conditions.

Since brook trout are preferred and since temperatures appear to be suitable for them in Chapin and Hooker Creeks, this species could be planted there and the main stream above the junction with the West Branch in Section 23 of Evergreen Township could be stocked with brown trout if such plantings are necessary and desirable.

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