TRAVIS CREEK
Kalamazoo County (T1S, R11W, Sections 5, 8, and 9)

Surveyed August 1996

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Environment

Travis Creek is a small first-order stream classified as top-quality coldwater. It is located in Cooper Township in the northeastern corner of Kalamazoo County. The city of Plainwell is located about 2 miles to the north. The stream originates in springs in a marshy woodland and flows north and east to the Kalamazoo River. It appears on United States Geological Survey topographical maps but not county maps.

The watershed of Travis Creek is very small. This is evident by the creek's small size and short length. The surrounding area is composed mainly of fallow farmland, marshy lowland, and wetland forest. The bottom half of the watershed is poorly drained, consisting of Glendora sandy loam. The upper half consists of Houghton muck that is poorly drained. These soils exist on top of glacial outwash and sandy morainic deposits that are well drained overall.

The creek is about 3.1 miles long and falls about 70 feet between the headwaters and its mouth. The average width is 4 feet. Depth averages 6 inches, with most deep water occurring in the lower end. Rock, gravel, and cobble make up 40-60% of the stream bottom substrate, while sand, silt, and clay compose the remainder. Water velocities are moderate to slow. Overall habitat is excellent, consisting of a mosaic of logs, rocks, undercut banks, overhanging brush, pools, riffles, and watercress.

Water quality appears to be excellent based on the presence of brook trout and mottled sculpin. Development on the creek is sparse, with only a few homes and a few cow pastures bordering the banks. Most of the channel corridor is too wet for development. There is no public access except at three road crossings. We do not know if access is a problem (or even a concern).

Fishery Resource

According to records, brook trout were stocked in Travis Creek in 1937, 1938, 1941, 1942, 1943, 1949, and 1951. Stocked trout varied from month-old fingerlings to yearlings. No fish surveys of any type were conducted before 1989 when the creek was first evaluated (Dexter 1991). The only fish information prior to the 1989 survey was the stocking records.

Travis Creek supported a diverse group of fish species in 1989 (Dexter 1991), primarily in the lower end. Minnows predominated in that area. No trout were found in the lower end in 1991, although water quality is suitable for them. The middle reaches had some brook trout and supported fewer species than the lower end. The upper reaches had many brook trout and only four other species.

A follow-up survey was conducted in August 1996 to assess only the population of trout in Travis Creek. A mark and recapture estimate was made at B Avenue using 250-V DC backpack electroshocker. This section of the creek is very brushy and difficult to get through, but offers excellent trout habitat. In the 400 feet of stream surveyed (0.046 acres) the brook trout population was estimated at 457 trout per acre (±110, 2 SE). This represented 66.1 pounds per acre, which is

quite respectable when compared to other brook trout streams in the state. Brook trout collected ranged from 2-11 inches. A few young-of-year brown trout were also collected for the first time, and their estimated abundance was 136 trout per acre (±68, 2 SE). This represented 2 pounds per acre.

The catch rate per hour of brook trout was 27 in 1996, compared to 39 in 1989. Legal size brook trout accounted for 37% of the marking run sample. If brown trout are added to the total trout catch, the catch per hour is 35, comparable to 1989 when only brook trout were collected.

Unfortunately, scale samples of trout collected were lost before they were aged, so no age analysis can be made. Using length-frequency analysis (Figure 1) and comparing to the statewide average growth rates for wild brook trout, age groups 0, 1, and 2 were probably present. All brown trout were probably age 0.

Water temperature at B Avenue was monitored in 1996. The mean July temperature determined by continuous recording thermometer was 57.0°F. The maximum temperature was 64.6°F. The total July degree-days was only 806, which puts Travis Creek in the company of the coldest streams recorded to date in Michigan. Wehrly et al. (1999) developed thermal classifications for Lower Michigan rivers that can be used to describe the thermal distribution of stream fishes and generate expectations of species assemblages. Using these classifications it is obvious that the environment of this stream is most suitable for brook trout.

Management Direction

Obstacles to keeping the stream in its present state or improving the fish resource are the numerous ponds connected to the creek. Air photos from 1988 show nine separate ponds along the watercourse. There is no way to know what other species exist in these ponds at this time.

It appears that there is no fishing pressure on the creek. Travis Creek is doing well and should continue to do well into the future. Brown trout may have been present during the initial 1989 survey, but perhaps in such low numbers that we did not find them. Based on temperature monitoring, the environment of Travis Creek is likely too hostile for brown trout to displace brook trout. Because of the wetland makeup of the stream corridor, there is little chance that encroachment by development will present a problem.

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References

Dexter, J. L. Jr. 1991. Travis Creek. Michigan Department of Natural Resources Fisheries Division, Status of the Fishery Resource Report 91-9, Ann Arbor.

Wehrly, K. E., M. J. Wiley, and P. W. Seelbach. 1999. A thermal habitat classification for Lower Michigan rivers. Michigan Department of Natural Resources, Fisheries Division Research Report 2038, Ann Arbor.

Figure 1.-Length-frequency distribution of brook trout based on mark-and-recapture estimates at Travis Creek, 1996.

**Questions, comments and suggestions are always welcome! Send them to
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