

CAMPBELL CREEK

*Van Buren County (T1S, R13W, Sections 1, 11, 12)
Surveyed July 25, 1990*

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Environment

Campbell Creek (also known locally as Whiskey Run) is a very small designated trout stream in eastern Van Buren County. It is a third-order stream with a top-quality coldwater designation. Located just 3 miles north of Wolf Lake State Fish Hatchery, this creek can best be described as a true spring creek. The City of Kalamazoo is a short 15 minute drive to the east.

The headwaters of Campbell Creek occur in what is known as the Mentha Plantation. This area is famous for its rich muck soils. The creek flows entirely through nearly-level, poorly-drained soils, a combination of muck and loamy sands. Surface runoff is very slow and many times is "ponded" in this area. The watershed is almost entirely undeveloped, being composed of wooded wetlands and marshes. Only a few small unnamed tributaries that start as springs feed the creek.

Campbell Creek is estimated to be 2.4 miles long. Width averages 18 feet and depth averages 1 foot. Habitat is consistent throughout much of the watercourse. Deep pools, clay bank undercuts, overhanging brush, and aquatic plants are common throughout the channel. Woody material is lacking in much of the stream because most of the corridor is marshy and does not support large trees. Bottom substrates are also consistent throughout the stream. Sand accounts for roughly 57% of the substrate, followed by silt (37%), gravel (4%), clay (1%), and rock (1%). Campbell Creek falls about 40 feet between its spring source and its confluence with the north branch of the Paw Paw River.

The stream is very productive even with a deficiency of good bottom substrate for aquatic organisms. Each piece of aquatic vegetation is highly colonized by mayflies and caddisflies. The silt areas also contain many mayflies. The water quality of Campbell Creek is excellent. It is always crystal clear (hence its local name), and has a stable temperature regime between 45°-60°F. year round. No other water quality characteristics have been studied.

The only road crossing this waterway (28th Street) divides a large tract owned by Alma Township to the south and all private ownerships to the north. Angler access is granted by permission of the landowner.

Fishery Resource

Campbell Creek has been managed for trout since at least 1933. Brook trout have been stocked in the system every year since then except 1956 and 1965-1980. Brook, brown, and rainbow trout were stocked in combination during 1945-1957, and 1961. Brown trout only were stocked in 1973-1979, and in conjunction with brook trout in 1982-1984.

Historically, Campbell Creek has been associated with good brook trout fishing. Although not much is documented from 20-50 years ago, recent history has been rather dynamic. For 3 consecutive years, the largest brook trout reported to the local newspaper fishing contest came from Campbell Creek. These fish ranged from 1 lb., 4 oz. to 2 lb., 4 oz.

Anadromous salmonids have negotiated their way up to Campbell Creek via the Paw Paw River system since 1985, when boards were removed from the Watervliet Dam. Since that time the creek has been producing wild steelhead, in addition to brown trout. Most likely, chinook salmon are also reproducing, but their smolts have never been collected.

In 1990, 1100 feet of stream were sampled with a 240-D.C. stream shocker with two probes. The fish community then (Table 1) was no different from that in May 1926, our earliest survey. Wild brook trout of all sizes existed there in 1926, progeny from introductory stocking in the drainage.

Brook, brown, and rainbow trout are all available to anglers during the trout season. Salmon usually do not get up into the creek in significant numbers until the regular trout season closes. During this survey, wild brown trout up to 21 inches long were found. Recruitment of browns looks good. Of 25 brown trout sampled, 80% were legal size (>8"). Some rainbow trout are present, but not in significant numbers. (With Skamania strain steelhead being stocked in the St. Joseph River now, many of these fish find their way into Campbell Creek starting in July of each year). Sixteen stocked brook trout were found, all yearlings. Only one was of legal size. Species other than trout are not overabundant.

The growth rates of brown trout and rainbow trout were evaluated through scale analysis. Brown trout were growing very well with no year class showing poor growth. Only two rainbows were aged, and these also were growing above the state average rate.

Campbell Creek provides a very unique angling experience. No other stream in District 12 can be compared to this system. Fly fishing, spin fishing, and bait fishing opportunities are all excellent and should remain so in the future.

Management Direction

Campbell Creek should continue to be managed as a top-quality coldwater designated trout stream. The current stocking level of 1,200 brook trout yearlings per year should remain. This represents a stocking rate of about 275 trout per acre. Survival of stocked brook trout is estimated to be good based on the popularity of the stream with brook trout anglers.

Wild brown trout are doing very well in Campbell Creek. The brown trout fishery is also very popular with anglers. This species, along with steelhead and salmon, may be negatively impacting brook trout populations. A blocking weir to keep anadromous species out is not practical because the creek flows through such low wet areas.

A large habitat improvement program was completed during 1991 on a one-quarter mile section of Campbell Creek immediately above 28th Street. This work was done by the Kalamazoo Valley Chapter of Trout Unlimited, under supervision of the Fisheries Division. A total of 520 square feet of overhead cover in the form of half-logs and two Lunker structures were installed to improve in-stream cover. A program to evaluate the effectiveness of these techniques has been implemented. Pre-installation fish population samples were collected in April 1991. Post-installation population samples were collected in the fall of 1991. Further sampling is scheduled for spring and fall, 1992 and 1993. A technical report on this project should be available by 1995.

With the habitat improvement project completed, I expect that the trout fishery will respond positively by showing increased recruitment and survival of trout in that section. If it does, additional in-stream cover can be added in other areas of the stream that lack overhead cover. Goals for the future will include increased recruitment of wild brown trout and increased survival of stocked brook trout. Obstacles to attainment of these two goals include non-use of installed habitat structures by the various trout species and interspecific competition between these species. Ziegler (1988) found that steelhead outcompete brown trout in stream situations. Also, it is well known that brown trout displace brook trout in many stream situations. There is no way that we can reclaim the stream and manage on a single species approach.

Report completed: October 1991.

References

Ziegler, R. L. 1988. Stream resource utilization of sympatric and allopatric juvenile brown (*Salmo gairdneri*). Michigan State University, East Lansing.

Table 1. Species, relative abundance, and length of fish collected by electrofishing at Campbell Creek, July 25, 1990.

Species	Number	Percent	Length range (inches)
Mottled sculpin	62	38.5	1-4
Central mudminnow	44	27.3	1-4
Brown trout	25	15.5	3-21
Brook trout	16	9.9	6-8
Blacknose dace	5	3.1	2-3
Rainbow trout	4	2.5	6-8
Creek chub	2	1.3	4-5
Grass pickerel	2	1.3	5-6
Green sunfish	1	0.6	2

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