A fisheries survey of Cripple Creek, summer 2003

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INTRODUCTION

Water quality problems of lakes are often traceable to problems occurring in tributary streams (Hayes 1990). Because of this, many studies have been conducted to monitor the water quality in Otsego's permanent tributaries to document pollution (i.e., sediment and nutrient) sources and/or to evaluate the effectiveness of efforts to mitigate those problems (Heavey 1996; Hewett 1997; Miller 1998; Poulette 1999; Miner 2001; Albright 2002; Parker 2002; Meehan 2003). These studies typically monitor abiotic factors but a few have concerned the fish fauna (Hayes 1990; Miner 1997). Also, there have been previous studies on the fish conducted by the Department of Environmental Conservation (DEC) in 1961 and 1985. Studies of the fish present in the streams may also help indicate changing water quality that may pose a threat to the lake.

The purpose of this study was to qualitatively identify the species present in Cripple Creek, a follow up on Miner's (1997) study in 1996. The data were compared to previous studies to identify any new species present or to note the disappearance of any species. This study, like the previous study, will provide a more up-to-date list of the species present in Cripple Creek and their distribution respectively.

STUDY AREA

A qualitative survey of Cripple Creek, in the towns of Springfield and Warren, New York, was conducted from 26 July through 1August 2003. Cripple Creek is a permanent stream in the Otsego Lake Watershed (Miner 1997). It runs from Weaver Lake into Young Lake, both in Warren, and out through Springfield into Otsego Lake.

In 1996, Miner selected eight sites based on accessibility and varying stream characteristics. The intention was to re-sample each of the eight sites. However, access to some was not granted by the landowners, and other sites were not able to be fished due to high flows resulting from heavy precipitation on days on which the electrofishing gear was available. Therefore, only three sites were sampled. Figure 1 shows the locations of the original sites (1-8, circled) and the sites sampled in 2003.

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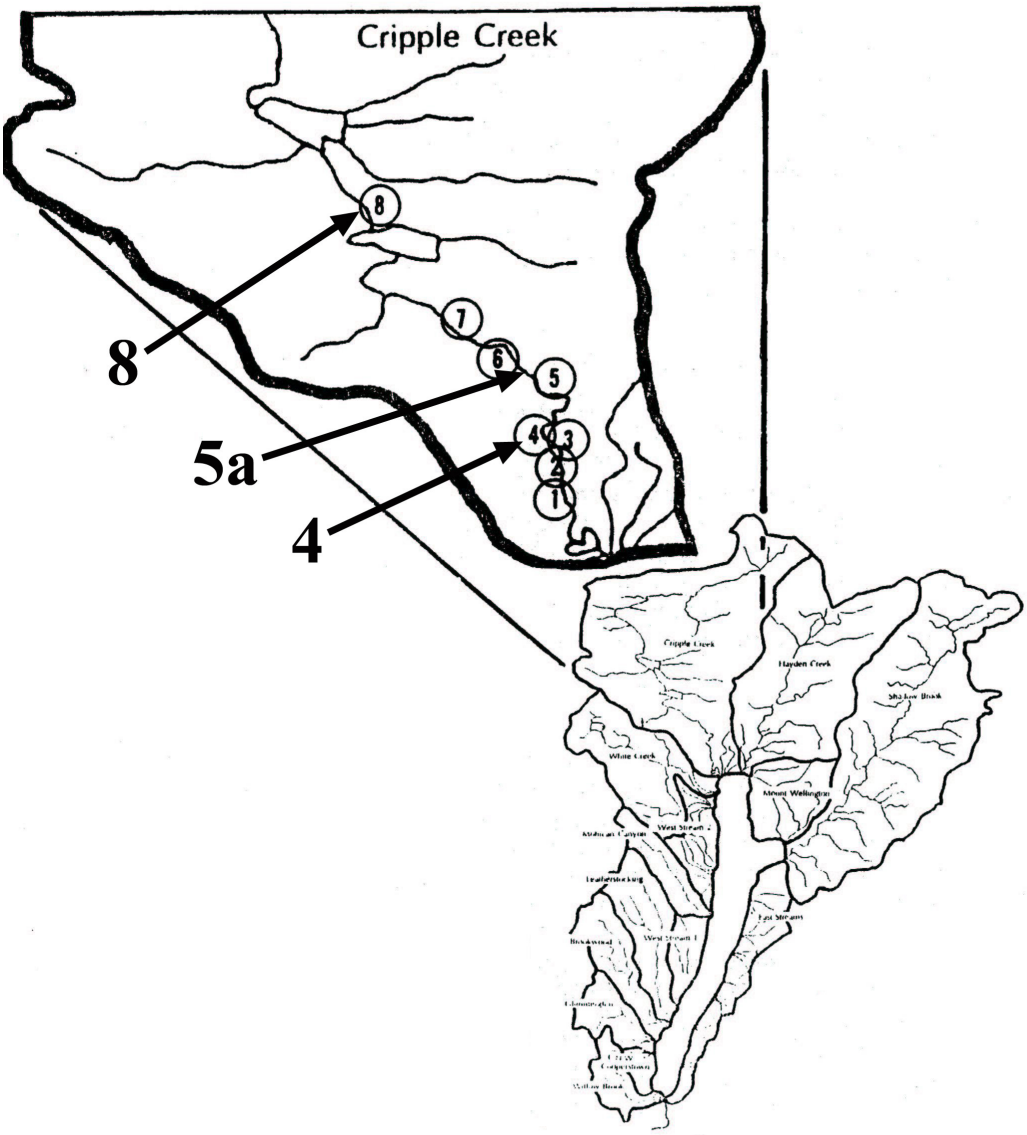

Figure 1. A map of Cripple Creek. The circled numbers indicate the original sites sampled in 1996 (Miner, 1997) and the numbered arrows site locations of 2003.

METHODS AND MATERIALS

A Smith-Root Type 7 backpack electrofisher was used to sample the sites for 1000 seconds each. The technique used at each site was to walk upstream passing the probe with the anode from side to side across the stream making sure to probe under the over hanging brush and debris. One or two people followed closely behind to scap the stunned fish. A third or forth crew member followed with a bucket to contain the stunned fish and a scap net to retrieve any missed fish.

After collection, the fish were identified, measured, counted, and returned to the creek. Results were recorded for later analysis.

RESULTS

Table 1 lists the species collected in the 1996 survey across all eight sites sampled and indicates the percent composition of each of those species in the three sites sampled in 2003. At the 3 sites, 13 different species were caught. Black nose dace (*Rhinichthys ataratulus*) was the most abundant fish overall. Rock bass (*Ambloplites rupenstris*), brown bullhead (*Ictalurus Nebulosus*), chain pickerel (*Esox Niger*) and pumpkinseed (*Lepomis gibbosus*) were the least commonly caught, only once for each species.

Site #	4	7	8
Species			
Black Crappie	0	0	0
Black Nose Dace	61.9	34.2	0
Bluegill	9.5	19.2	4.6
Brown Bullhead	0	0	4.6
Brown Trout	9.5	4.9	0
Central Mudminnow	0	2.4	36.4
Chain Pickerel	0	0	4.6
Common Shiner	0	0	0
Creek Chub	0	4.9	0
Cutlips Minnow	0	0	0
Largemouth Bass	0	4.9	9.1
Long Nose Dace	0	4.9	0
Margined Madtom	19.1	2.4	0
Pumpkin Seed	0	0	4.6
Rock Bass	0	0	4.6
Tesselated Darter	0	0	0
White Sucker	0	19.5	0
Yellow Perch	0	0	36.4
Total fish per site	21	41	22
Total sec. sampled	1000	1000	1000

Figure 2. A table of the percentage of each species caught per site. This table shows the catch, by percent, at each of the sites sampled.

Of the species found by Miner in 1996, all but the common shiner (*Noturus Insignis*), the tesselated darter (*Etheostoma olmstedi*), the cutlips minnow (*Exoglossum maxillingua*), and the black crappie (*Pomoxis nigtomaculatus*) were found again in 2003. However, the catch effort was substantially higher in 1996 than in 2003. No new species were found in Cripple Creek during this survey.

DISCUSSION

The original purpose of this survey was to update the list provided by Miner's survey in 1996 and to note the appearance or disappearance of any species in Cripple Creek. No new species were identified in the creek. Because only 3 out of the 8 sites were sampled it is difficult to make assumptions about changing water quality throughout the water body.

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