NORTH SHORE
Steelhead
REPORT

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A Return to the River

by Keith Ailey

When my daughters were very young, they would often be with me down at the river while I got my spring steelhead fix.

They were usually asleep in one of those child carrier backpacks, or a double-wide and luxurious Chariot off-road stroller, but I cherish those memories and the time we spent together.

As they matured, they would still sometimes choose to come along with me, but only if I promised they would catch fish. Scared of my girls having a negative fishing experience, I picked my days carefully and stuck to a proven formula: trips were short, snacks were plentiful, and I picked only days when the weather was favourable and the chance of us catching fish was pretty much guaranteed.

Then, there was a long period of time when they no longer had any interest in joining me on the river, no matter how many snacks I packed or how many fish I promised they could catch. In their early teens, other interests like athletics and academics filled their lives to the brim. Then there were summer jobs, friends, and boyfriends all vying for the valuable time of my precious daughters.

My approach as a parent is very much the same as the teaching style I rely on in my professional career. I provide every opportunity, but I know you cannot push a teen too hard, and every decision must ultimately be their own. So, despite having countless opportunities to fish every year, very rarely did they choose to spend their tiny bit of free time with me at the river. Considering how busy their lives are, it was a decision I could both understand and respect.

Recently however, there has been a shuffling of priorities and both girls were asking to go fishing last spring. They are busier than ever, but when their schedules allowed, each joined me for a day on the river. I was careful to ensure our fishing days were during the peak of the spring steelhead run, when I was confident we would catch fish. The strategy worked, they both caught fish, and were therefore eager for more fishing opportunities.

Throughout the summer, they both came out fishing in the boat several times too. Often the trips were short, and they spent much of their time reading books while I trolled around looking for fish, but I was grateful to have their company.

Looking forward to the coming season, I am eager to see what fishing adventures we will enjoy together. I don't expect they will be waking up in the dark to scrounge around on ice-covered riverbanks looking for early-season steelhead with me. However, when the temperatures warm up and the sun is out on those beautiful afternoons in May, I believe they will be eager to hook into another steelhead or two.

While academics and athletics still take precedence for my daughters, I'll take their company whenever I can get it, and I'm just happy to see that fishing with dad is back on the "to-do" list.

Keith Ailey is a Visual Arts teacher at Superior Collegiate & Vocational Institute where he volunteers his time with the Outdoors Club and Travel Club as well as the cycling, skiing and XC running teams.

Let it Rain

by Tom Whalley

These are challenging times for rainbow trout (steelhead) anglers around Lake Superior. Populations have declined around the lake, largely due to recent climate conditions that have handed us a succession of hot and dry summers that have left streams very dry, limiting available habitat for survival of juvenile fish from hatching to age 2. This means that there are fewer young fish surviving long enough to leave their natal streams and grow in Superior, then return to streams as adults in (typically) 2 to 4 years. Lower numbers returning means a smaller fishery for dedicated anglers, such as we see today.

Frankly, there is little we can do about this. Hope alone cannot make it rain during hot summers when it is most needed. Harvest is already restricted to one fish in possession and most anglers release their catch, and population analysis shows us the problem of lower numbers currently is not related to excess harvest. Juvenile steelhead are at the mercy of mother nature, so we continue to hope for more timely rains that keep stream habitats wet and capable of maximizing juvenile production. Rains that provide ideal summer conditions will lead to larger populations and better angling opportunities in coming years... and this will simply be a matter of waiting to see what Mother Nature will deliver.

This is not the first time this has occurred. Those of us who have been around for many decades can recall years saw lower numbers of adult steelhead in years following periods of drought; we can also recall how populations rebounded and gave us fantastic angling when wet years returned.

With a changing climate, we can only speculate what the future may hold. This is where hope comes in: hope, and the knowledge that steelhead populations can respond quickly when conditions improve.

So... let it rain !

UPDATE

Current River Migration Corridor Improvement

Hooray! This project, which began in 2020 through funding from Environment Canada's Great Lakes Protection Initiative fund is finally being implemented this summer.There are three main aspects:

First - The Installation of cameras and fish counting devices to determine the number of fish utilizing the fishway.

Second - The creation of a more concentrated flow pattern within the fishway, in order to improve the attraction flow.

Counter tubes determine numbers as well as ease migration of fish entering the fishway.

Third - The creation of openings in the walls of the various cells to facilitate a less fatiguing migration corridor for any fish entering the fishway.

This project, which began in 2020 is finally being implemented this summer. The final piece of funding was secured from the Northern Ontario Heritage Fund in late fall of 2024, unfortunately too late for the contractor to begin the project. KEM Contracting will begin to make the changes between June 15 and September 15.

NEW PROJECT

McVicar Creek Migration Corridor Improvement

Project description

There are at least three sites that are partial barriers to migration under normal flow conditions, However, all three would be affected by low/cold water events.

Two of the identified sites are man-made barriers while the third is a natural waterfall.

Project Goal

The NSSA is applying to various funding agencies to assist with funding. The first year would see a local engineering firm hired to provide a survey of the three areas, provide detailed construction drawings, and prepare a tender package for future funding applications.

Man-made

There is a large watermain encased in concrete located only 50 metres from Lake Superior that is the first partial barrier. Sometime ago, large boulders were placed downstream from the watermain in an effort to raise the water levels below the crossing area. In our opinion, this site has changed and should be considered for remediation.

The other man-made barrier is a small wooden/concrete dam that was constructed on private property in an area further upstream blocking access to approximately 2 km of habitat under low water conditions. The land owner is willing to work with the NSSA to remediate the site.

Natural

Remediation efforts on the waterfall located downstream of Court Street were done on two other occasions. The first effort was in the eighties and saw large boulders cabled below the falls area in order to create a deeper holding/jumping pool. In 2010, one of the tethered boulders broke loose due to ice forces and moved downstream leaving the existing pool low and not ideal for ease of migration. The NSSA repositioned the boulder, however it is shifting and a more permanent solution should be found.

Project timeline

The NSSA has applied to two funding agencies. Should the applications be successful the project will be completed this year.

The Status of Wild Steelhead Populations in Ontario Waters of Western Lake Superior (2024)

by Jon George

A healthy Lake Superior adult steelhead population maintains a 55% repeat spawning which in turn relates to 45% new or maiden spawners.

The status of eleven western Lake Superior adult steelhead populations is illustrated in Table #1. The majority of the tributaries sampled achieved a healthy status. Presently a strong forage base in Lake Superior has produced better growth and fitness on adult steelhead especially with repeat spawners. These larger females have high egg potential that produces bigger more aggressive juveniles.

Figure 1 uses the McIntyre River population size to index fluctuation in abundance over the past twenty years. The adult population size has averaged between three and four thousand over the past eight years. Strong survival of juvenile steelhead to the adult stage occurred in 2013 and 2016. The decline in the adult steelhead population in 2022 can be related to lower survival of juvenile steelhead over the past several years. The changes in juvenile age class survival is most likely related to environmental conditions in their nursery tributaries. Poor environmental conditions for juvenile steelhead include things such as prolonged high-water events in streams (i.e. spring 2021and 2022) prolonged periods of low flows (i.e. summer and fall 2023 and 2024) and winter severity.

The adult population that presently exists in the McIntyre River is probably closer to its normal carrying capacity. With the large number of very productive repeat spawners presently in the adult population there is potential for strong year classes in future years if environmental conditions are suitable.

Figure 1.

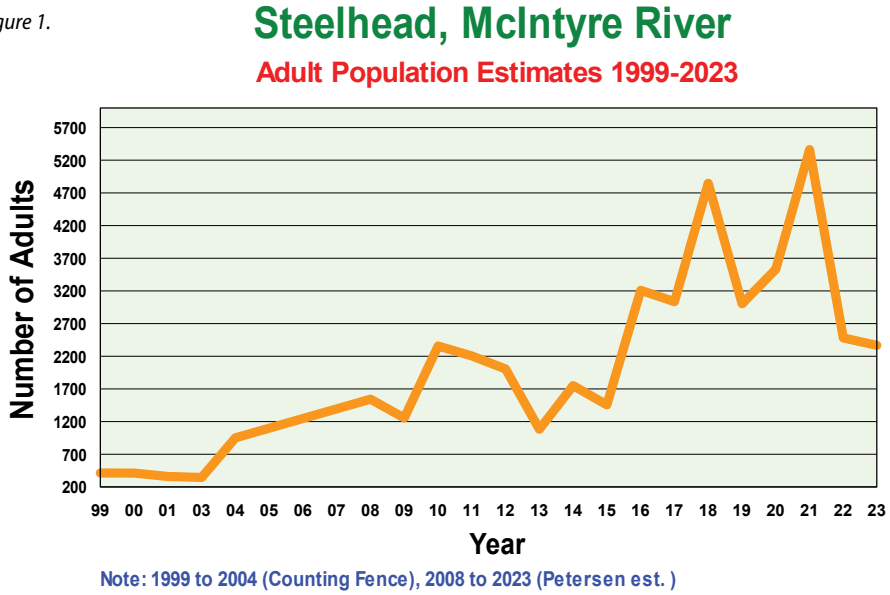

Table 1—Status of Steelhead Populations in Western Lake Superior Tributaries.

Tributary	Repeat Spawners	Maiden Spawners	Population Size	Status
Whitefish River (Thunder Bay)	68%	32%		Stable population
Neebing River (Thunder Bay)	75%	25%	906 (± 606)	High repeat spawners
McIntyre River (Thunder Bay)	74%	26%	2,378 (± 855)	High repeat spawners
McVicar Creek (Thunder Bay)	53%	47%	1,596 (±1,513)	Marginal recruitment
Blind Creek (Thunder Bay)	54%	46%		Small population with low recruitment
Birch Beach Creek (Thunder Bay)	59%	41%		Stable population
McKenzie River (Thunder Bay)	70%	30%	253 (±155)	Small adult population
Portage Creek (Thunder Bay)	80%	20%	39 (±18)	Small, fragile population, very low recruitment
Jackpine River (Nipigon Bay)	63%	37%		Low recruitment
Cypress River (Nipigon Bay)	65%	35%	770 (±399)	Low recruitment
Steel River (Nipigon Bay)	72%	28%		Appears healthy

Sea Lamprey Trapping

by Michelle Willows

Sea Lampreys are parasitic fish introduced to the Great Lakes through man-made locks and shipping canals, specifically the Welland Canal, making their way to Lake Superior in the 1930s. As a result, Sea Lampreys caused the collapse of Lake Trout, White Fish, and Chub populations within the Great Lakes between the 1940s and 1950s.

In response, the Great Lakes Fishery Commission, in cooperation with the Department of Fisheries and Oceans, developed a binational program to carry out Sea Lamprey control within the Great Lakes. Control is achieved by lampricide treatment to eliminate larval Sea Lamprey.

To measure its efficiency, the Department of Fisheries and Oceans (DFO) organizes mark and recapture programs in select river systems to determine population estimates within the Great Lakes on an annual basis. Sea Lamprey Trapping began on the Neebing River in 1954, followed by the McIntyre River in 1987 as a part of the Lake Superior network of traps.

The Lakehead Region Conservation Authority has recently been contracted under the DFO to assist in monitoring Sea Lamprey populations within the Thunder Bay region. Initially, this was carried out through electrical and mechanical weirs, but now the Neebing and McIntyre River systems both have permanent traps installed as of 2023.

The traps are designed to capture Sea Lamprey as they attempt to travel upstream to spawn. The annual trapping program begins in early May until the end of June.

Want to see how it all works?

Join the LRCA for the Fish and Aquatics Workshop on June 5th, 2025, to watch trap operations and learn about the other fish species navigating the Neebing River.

New lamprey trap installation on the Neebing River—2024

Join The NSSA!

Membership is Free

The North Shore Steelhead Association (NSSA) was formed on January 13, 1973, as a non-profit organization concerned with the conservation and preservation of fisheries in the tributaries of Lake Superior.

NSSA's primary mission is the protection and enhancement of the North Shore migratory Rainbow Trout (Steelhead) fishery, however this has evolved to include all coldwater species of the Lake Superior Watershed.

The NSSA's constitution stresses public education and close collaboration with authoritative bodies (M.N.R.F., L.R.C.A., and North Shore Community Councils) as strategies for conservation.

Our financial base is developed exclusively from fundraising and donations from supporters. These activities not only generate capital for our projects, they also heighten public awareness of the need for environmental protection of Lake Superior's North Shore.

The objects of the NSSA are the conservation and preservation of the coldwater fisheries of Lake Superior and Lake Superior watershed (Ontario).

This includes activities and programs that promote and achieve environmental preservation and enhancement, such as:

- Lake and stream rehabilitation
- fish habitat restoration and enhancement
- activities to combat invasive species
- data collection and analyses (including genetic, DNA, tissue, cell, molecular)
- fish population monitoring (sampling, aging, tagging, counting), restoration, and
- associated scientific research for the purpose of understanding and enhancing fish populations and habitat.

The NSSA also engages in awareness campaigns, programs, and signage consistent with, and for the purposes of pursuing, its objects.

The NSSA may from time to time make donations to other organizations whose activities are consistent with and beneficial to the NSSA's Objects.

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NORTH SHORE Steelhead ASSOCIATION

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