



NORTH SHORE Steelhead REPORT

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It's the Journey, Not the Destination

By Keith Ailey



Photo courtesy of Keith Ailey

Early spring is a great time to explore a new river in search of secluded waters and untouched trout. We are very fortunate to have wild steelhead and the beautiful rivers that hold them scattered all along the north shore of Lake Superior. The steep gradient of our landscape contributes to some stunning rapids and waterfalls flowing into the world's largest freshwater lake. While catching a steelhead is the excuse we use to get outside, the thought of hiking upstream and exploring new waters can be equally rewarding.

The excitement of that first exploratory trip of the season usually begins as anticipation the night before. Rarely does the alarm on our phone get a chance to wake us on Saturday mornings; we are already up, patching waders and making coffee.

Meeting up with an old friend or a new fishing partner adds fuel to the fire and soon we are on the road, telling fish tales as we rumble down the deserted highway, trying our best to stay within the speed limit. Anticipation is high - will the water level be right? Is it still too cold? Too muddy? Are the fish in yet? Will any other anglers be out this early? There are always plenty of questions we can't wait to answer, but when we are fishing a river that is new to us, or one that has recently been altered by flooding or ice jams, we tend to drive a little faster than usual. This part of the journey always seems to fly by.

Once we arrive at the river, the truck doors fly open and we are racing to gear up for the adventure to come. We usually start fishing close to the vehicle, but I've never been very patient on the water and it isn't long before the exploration begins. There is an old saying, "Never leave fish to find fish", but I often find myself skipping over obvious honey holes just to see what's around the next bend. Whether

the river cascades over the Canadian Shield, carves its path through a gravel esker, or winds beneath a thick canopy of cedar trees, there is always something to marvel at on the North Shore.

Exploring our region can be exhausting, but I've never felt the journey wasn't worth the effort. The places we discover and the sights we see are like those dreamlike photos in magazines we keep coming back to all winter. It is these locations, not just the fish that call us back to the river each spring.

So, we trudge through snow and mud, we search for lost and overgrown trails and we invest far too much time from our busy lives just to get back to the water. In pursuit of our best steelhead locations, we tend to make some risky decisions - balancing on a fallen tree to cross the river, maneuvering over log jams, wading across slippery rocks while fighting a raging current, and scaling rock cliffs while holding our fishing rods between clenched teeth.

Northwestern Ontario's unpredictable weather can also add excitement to the journey, especially if the rain is torrential or the wind is whipping snow into our faces. Spring mornings are often bitterly cold, especially in April, so it is a good idea to keep moving. Besides the cold temperatures, scattered, migrating fish also make the nomadic run-and-gun approach to early season steelheading a good choice. This not only increases the odds of finding some fish, but it allows us to travel further and to see more.

Spring is just about here, and with the longer days come the promise of new adventures. Call it a "fishing trip" but you'll discover that the voyage itself can be reason enough to get outside. Sometimes, searching for fish is just an excuse to make the journey.

Inside This Issue

Hail and Farewell	2
Co-op Angler Program Update	2
McIntyre River Bank Stabilization Project 2015	3
Boulevard Lake Dam Refurbishment	3
Boulevard Lake Fish Ladder	3
Status of Adult Steelhead Populations in Lake Superior	4
Officers and Directors	4



Hail and Farewell



Lorne Allard, founding member of North Shore Steelhead Association

In a lifetime, if we are lucky, we are fortunate to meet a few people who are truly larger than life. These are the folks who leave an indelible impression on us and serve as reminders that, with only a bit of effort, we can all help make our piece of the world a better place.

Lorne Allard was one of those who I will always remember in this way. From my early days in minor hockey to my teens spent on football fields, high school tracks or fishing on local streams, it seemed that Lorne was always only a

few steps away. Whether he was coaching hockey or football, mentoring young anglers or organizing community groups, projects and events, it was evident that he wanted to be involved. Almost everyone knew Lorne, and his hearty handshake was proof that he knew most of us.

It's been over 40 years since my dad first took me to Lorne's shop, but I remember it vividly; the big smile, his welcoming nature and his memorable warmth. Many afternoons were

spent in Lorne's company in my youth, rummaging through tackle bins and poring over photo albums, listening to stories and telling a few, as well. I was fortunate to have spent some days on the river with Lorne, and fondly recall many an evening around the dinner table on Nicol Island with Lorne, Hank, Bart, Andre, John, Chris, Randy and Ron, sharing a few beers and talking of Hockey and Steelhead. These are times I will always remember, and those which all Lorne's 'friends of the river' will keep close as we continue our journey.

Lorne was a Founding Member of the North Shore Steelhead Association, a leader in the community and a friend to my family and to me. Most importantly, I know that he cared very much about the happiness and success of everyone that he called a friend, and I believe there can be no greater legacy than that.

He will be greatly missed, and always remembered.

Tight lines, Lorne! Save a little room on the river for me...

Tom Whalley, President, North Shore Steelhead Association



Co-op Angler Program Update

The "Co-op Angler Program" involves anglers biologically sampling adult steelhead (fork length, sex, scale sample) from their daily catch as they fish tributaries of western Lake Superior, Ontario. Each angler obtains a sampling kit (knife, measuring tape, tailing glove, pencil, scale envelopes and instructions). This program provides applied science that can be used to evaluate the overall health of wild steelhead populations. It can also be used to determine the success of habitat alterations and harvest regulations. A stream's adult steelhead population is estimated by marking steelhead with a fin clip in year #1 and recapturing clipped fish the following year. Life history characteristics (stream life, lake

life, total age, maturity and number of spawning events) is extracted from scale sample analyses. In 2016 population/life history assessment will be carried out on the Neebing, McIntyre, McVicar, MacKenzie and Portage river systems. Life history data only will be collected on other tributaries including the Whitefish, Jackpine, Cypress and Prairie Rivers.

This 25 year program has been funded by CFWIP in the past, on a hit and miss arrangement; however, that funding program no longer exists. This year we are fortunate to have secured 50% of the operating costs from the Upper Great Lakes Management Unit of the MNRF.



McIntyre River Bank Stabilization Project 2015



The North Shore Steelhead Association recently completed a two part habitat restoration project on the McIntyre River.

LH North Contracting, following the design provided by True Grit Consulting, completed the re-construction work in August.

The first part saw 50 meters of slumping river bank located on the Thunder Bay Country Club property reshaped, stabilized with rock, and replanted to prevent continued erosion.

The second part involved the re-vegetation of a former parking area adjacent to the Central Ave culvert. Vehicular access was restricted by the addition of jersey barriers, while numerous native trees, shrubs and grasses were planted to restore the riparian zone in this area. The access roadway was graded and a rock lined swale created in order to redirect rainwater runoff into the swale and thereby filter the roadway runoff prior to entering into the river system.

The planting was completed by volunteers from the North Shore Steelhead Association, the Thunder Bay District Stewardship Council, and the general public.

Local funding was provided by the North Shore Steelhead Association, the Thunder Bay District Stewardship Council, and Lakehead University's Remedial Action Plan office, with in-kind support from City of Thunder Bay and Thunder Bay Country Club.

Government funding was given by the Recreational Fisheries Conservation Partnership Program of the Department of Fisheries and Oceans, the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, the Great Lakes Guardian Community Fund and the Land Stewardship & Habitat Restoration Program.

Boulevard Lake Dam Refurbishment

The proposed restoration work on the Boulevard Lake Dam to be done by the City of Thunder Bay has been postponed until, at the least, the summer of 2017 or longer if the City has issues meeting the environmental requirements as set by the Ministry of the Environment and Climate Change.

The NSSA has had a structural engineer evaluate the cracks that have appeared in the fish ladder, which were identified as superficial but that should be repaired. The NSSA will put together a work party and complete the repairs during the summer months of 2016.

The NSSA has also discussed the installation of a fish trap on the fish ladder which could be

coordinated to occur when the City's refurbishes the dam. The fish trap would provide a means of accurately documenting the size of the run, and also allow for the collection of life history information from each fish captured.

Another component of having a fish trap is the potential for the use of pit tags for the purpose of monitoring fish movement and for the identification of potential barriers or partial barriers to upstream migration, and the identification of spawning areas.

The availability and amount of funds required for such a project will be investigated, and volunteers to man the fish trap will be required when it is installed.



Boulevard Lake Fish Ladder



This structure was built in 1992 and has never been properly evaluated for its effectiveness in allowing the passage of fish. It was always assumed that a self sustaining run of Rainbow Trout would develop given time. "Does the fish ladder actually work" is a long asked question. The quick answer is "yes it does" as proven by the capture of fish during the 2010 low water year when fish were rescued from the cells of the fish ladder and passed upstream manually. However we do not have a clear understanding of how many fish actually pass or what flow regimes are best for this fish ladder. The NSSA has plans to hire a consultant to review the design of the current fish ladder, and to make recommendations on possible changes to the structure once the issue of water sharing is settled.

As many of you are aware, the City is currently involved in a legal dispute with the owner of the hydro facility and this unfortunately has had an impact on the development of a new water sharing agreement by the Ministry of the Environment and Climate Change.

In advance of this agreement, the NSSA will be meeting on site with representatives from the Department of Fisheries and Oceans in the next few weeks to discuss the importance of establishing a Permit to Take Water (PTTW) that acknowledges the rights to water required for fish migration and for the maintenance of a functioning riverine system. The NSSA is clear in our vision that would enshrine suitable flows through the fish ladder for the maintenance of riverine conditions throughout the year.

The Status of Adult Steelhead Populations in Western Lake Superior Tributaries

By Jon George

A healthy Lake Superior steelhead population exhibits a wide diversity of life history characteristics (stream life, lake life, spawning timing and migration patterns), and a repeat spawning rate of > 50% over one generation (four years). Having these characteristics enables a wild population to maximize the recruitment of juveniles and maintain the resiliency of localized adaptations. (Swanson 1985, Clarkson and Jones 1997).

Environmental variables (i.e. flow, water temperature and winter severity), also play an important role in year class survival.

From 2009 to 2015, Lake Superior tributary streams and rivers have undergone a wide variety of environmental conditions including drought (2010), flooding, high flows (2012, 2013 and 2014) and very late spring spawning in 2013 and 2014. In spite of these environmental variables, most adult steelhead populations in Thunder Bay and Nipigon areas appear healthy (Table 1) and express a wide variety of life history strategies. The 2009, 2011 and 2012 year classes have recruited large numbers of juveniles into their adult spawning populations.

Applying Swanson's (1985) repeat spawning index of 50% to the nine tributaries (Thunder Bay to Marathon) listed in Table 1, most average greater than this percentage over the past four years (exception been small tributaries on Lake Shore Drive, Thunder Bay). Each Lake Superior basin (Thunder Bay, Black Bay and Nipigon Bay) also have at least one estimate of actual adult population size (Table 1). All exceed 1000 adults with Portage Creek in Black Bay been the only exception.

Black Bay tributaries (Wolf, Coldwater, Black Sturgeon and Portage) express high repeat spawning rates but poor recruitment of juveniles (using Portage Creek data as an index stream). Interaction with increased perch and walleye populations since the mid 2000's may be responsible for the reduced steelhead survival in Black Bay during their early life.

Literature Cited

- Clarkson, J. and M.L. Jones. 1997. A method to estimate an Index of Mortality based on proportion of repeat spawners in rainbow trout (*Oncorhynchus mykiss*) population.
- Swanson, B. 1985. Pikes Creek/Lake Superior: population dynamics, fishery and management alternatives. Wisconsin DNR. Management Report 125, 29p.

Table 1. Repeat spawning, mortality and population Size

Tributary	Repeat Spawning*	Total Mortality	Harvest Rate**	Population Size***
Neebing R. (Thunder Bay)	62%	38%	8%	1120
McIntyre R. (Thunder Bay)	59%	41%	11%	2000
McVicar Cr. (Thunder Bay)	61%	39%	9%	1518
Lake Shore Drive tribs. (Thunder Bay)	45%	55%	25%	
MacKenzie R. (Thunder Bay) 2015 only	54%	46%	16%	
Portage Cr. (Black Bay)	73%	27%		286
Jackpine R. (Nipigon Bay)	56%	44%	14%	
Cypress R. (Nipigon Bay)	58%	42%	12%	2396
Prairie R. (Nipigon Bay)	75%	25%		

* Four year average

** Based on 30% natural mortality (Swanson 1985)

*** Adult spawning population size based on Petersen mark/recapture calculations

Note: Population estimate on the Neebing River is only for the north branch. Fishing mortality rates on Portage Creek and the Prairie River could not be obtained using the repeat spawning index.

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Photo courtesy of Darren Wright, Steelhead House, Terrace BC

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