

## Grassroots Conservation for Atlantic Salmon Gaining Momentum

The conservation initiative, Living Rivers, gained momentum in 2019 as it spread to new areas in western and central Newfoundland. The goal of Living Rivers is to contribute to the restoration of wild Atlantic salmon populations and the conservation of river ecosystems in Newfoundland and Labrador. It does this by engaging people in stewardship activities to restore, conserve, and enjoy rivers as freshwater ecosystems and as habitat for wild Atlantic salmon. With the help of over 10 new partnering organizations and individuals, the program has grown in one year to where it now supports 35 rivers and streams across the Province. The Living Rivers initiative invites participation from people who share a vision for healthy rivers and sustainable populations of Atlantic salmon. This newsletter highlights some of the many activities that partners engaged in during 2019.



Intervale staff Mac Whitehead, Russell Wall, and Eric Bennett at Canon Richards Memorial Academy, Flower's Cove.

## River Connectivity Essential for Salmon and Trout

One of the many threats that Atlantic salmon face on their long journey from sea to spawning grounds are barriers, both natural and man-made. Barriers cut the essential connectivity of habitats within streams. The Department of Fisheries and Oceans (DFO) has engaged non-profit organizations across Newfoundland in a complete inventory of barriers, with a particular focus on problems stemming from culverts and beaver dams that could affect salmon and trout.

Four organizations contracted in western Newfoundland are Intervale, Qalipu, ACAP Humber, and the Bay St. George South Area Development Association (BSGSADA). Teams from each organization took part in an all-day training session in Stephenville Crossing, led by DFO biologists Richard Van Ingen and Lica Christensen. Each team assessed numerous rivers and streams, taking measurements such as condition, slope, and water velocity. These and other



Assessment teams were trained in Stephenville Crossing by DFO staff.

variables will be used to determine problems affecting fish passage and what can be done to restore connectivity of habitats.

## Accomplishments May – November 2019

Stewardship signs posted:  
93 signs on 35 rivers & streams



Youth presentations:  
600 youth, 13 schools



Youth fly-tying workshops:  
38 youth at 3 events  
McKay's, Roddickton,  
St. Anthony



General audience  
presentations:  
123 participants, 6 events



Snorkel surveys: Robinson's  
River, Middle Barachois Brook,  
Little Barachois Brook



Habitat assessment: Crabbe's  
& Robinson's rivers,  
Fischell's Brook



Salmon counting fence,  
Little Barachois Brook:  
474 salmon counted



Fridge magnets:  
1,300 distributed; 3,100 total  
across Newfoundland



Clean-ups: Bay St. George  
2600+kg of waste diverted

Thus far, the project has resulted in over 100 rivers being assessed for barriers. Working in a coordinated fashion, the non-profit organizations discovered many previously undocumented blockages and severe degradation of culverts. An example would be the culvert under the abandoned St. Anthony airstrip. As seen in the image, the land has eroded away and the culvert has collapsed, making fish passage impossible.



Collapsed culvert under the old, abandoned St. Anthony air strip.

## Protecting Rivers from Poaching and Waste

One objective of Living Rivers is to reduce illegal fishing, i.e. poaching, and sale of salmon door-to-door. In 2018 Intervale designed and printed 35 signs that were posted along salmon rivers with great success. There was only one instance of vandalism and at least one episode where a concerned individual, upon seeing the sign, took action by reporting an illegal salmon net. The net was quickly removed by enforcement officials.

Intervale expanded the effort in 2019, recruiting the help of many volunteers in new areas of the Province. Together they posted a total of 93 signs along 35 rivers: 14 in the western region, 13 in central, and 8 on the Northern Peninsula. All were strategic locations alongside rivers: well-known angling pools, popular swimming spots, areas of high pollution, known dumping sites, and in areas easily visible from passing vehicles.



Volunteer Clarence Goodyear posting a sign on the Northern Peninsula.

Based on visible distance from each of the 93 signs, the combined effort contributed to the conservation of 46.5 kilometers of river habitat. Enforcement personnel have offered positive feedback on the beneficial effect of the signs, particularly along rivers where it is difficult for enforcement to provide adequate surveillance. Intervale thanks the many partners and volunteers who helped with the posting of signs.

While signs are proving to be a conservation tool on the rivers, the Living Rivers “refrigerator magnet” is a useful prompt for people to report illegal fishing and the sale of salmon door-to-door. During 2019, 1,300 additional magnets were distributed to partners, town offices, anglers, guides, concerned citizens, and the general public.

## Assessing and Restoring Salmon Habitat

During the second year of habitat assessment and restoration in rivers of Bay St. George, the BSGSADA conducted assessments on three rivers—



The BSGSADA team assessing salmon habitat in southwest Newfoundland.

Crabbes, Robinsons, and Fischells—and their tributaries. Under the direction of Travis Hulan of the BSGSADA and habitat supervisor Jonah Hulan, field crews collected data and photographed obstructions such as large woody debris and beaver dams that can potentially block salmon connectivity. They also documented deteriorating stream bank conditions, siltation, and possible sources of pollution. In total, they surveyed 84 km and identified and removed 27 obstructions.

Poor habitat conditions such as obstruction or pollution can become a problem for migrating adult salmon. Clearing obstructions from the rivers increases the habitat connectivity for salmon and improves their chances of reaching the spawning grounds. Successful spawning is an essential component of the strategy for increasing salmon populations in rivers of Bay St. George.

## Partners Gather for Snorkel Survey

Thanks to another year of funding from the Atlantic Salmon Conservation Foundation (ASCF), BSGSADA and 15 volunteers from several organizations completed snorkel surveys on Middle Barachois Brook, Robinson’s River, and a portion of Little Barachois Brook. Information gathered during the snorkel survey helped to determine whether the salmon population had decreased from the previous year.



Counting salmon on the Robinson's River.

to count salmon, all under the training and guidance of DFO scientist Rex Porter. The volunteers, representing a range of ages, came from many organizations: BSGSADA, Conservation Corps of Newfoundland and Labrador, Atlantic Salmon Federation, Seawatch, Fisheries and Oceans Canada, and World Wildlife Fund (WWF). All participants shared a common desire to partake in this rare opportunity and all were dedicated to the recovery of salmon populations in Newfoundland and Labrador.

For Robinsons and Middle Barachois rivers, conducting a snorkel survey is the most accurate and cost-effective means of determining salmon populations. The rivers have very few ponds, which means that salmon have fewer places to hide. In comparison to last year, the number of salmon counted this year on the Middle Barachois River had increased by 172. For the Robinsons River, it decreased by 185.

Along with Robinsons and Middle Barachois, a snorkel survey on the Little Barachois was conducted from the salmon counter to the estuary to make sure that salmon that did not pass through the counter were not missed. A total of 144 salmon were counted.

At the end of each day, participants gathered at the local Royal Canadian Legion, where they were treated to a generous home-cooked supper that had been prepared by staff and volunteers of the BSGSADA. The current plan for next year is to conduct snorkel surveys again on Robinsons and Middle Barachois rivers.

## Reducing Pollution, Maintaining Healthy Rivers

One of the largest and fastest growing environmental issues in Newfoundland is pollution caused by the illegal

The survey involved spending long days on the rivers, walking 8-10 kilometers per day through swift currents and snorkeling through pools

dumping of garbage into the ocean, freshwater ecosystems, and adjacent land. Plastics and other harmful pollutants end up in aquatic ecosystems through careless fishing practices, blow-offs from landfills, littering, illegal dumping, and many other activities. Once in the environment, pollutants can cause harm to all forms of life, including preventing aquatic plant life from taking root.

In an effort to reduce the presence of garbage in waterways, the BSGSADA has posted signs and coordinated clean-ups on beaches in the Bay St. George area. They started a community composting challenge and set up eight bins to collect waste such as metal, plastic, and wood. A total of 26,000+ kg of waste was diverted from freshwater ecosystems to the local landfills.



Clean-up at Drovers Beach, Gambo River, with students from Smallwood Academy.

Water quality testing has also been completed on select rivers and streams

from Codroy Valley to Southwest River. Meanwhile, Intervale organized several clean-ups in the central and western regions and on the Northern Peninsula, in areas where illegal dumping was known to be an issue. With partner and volunteer support and funding from EcoAction, clean-ups were completed on six rivers and



QLF interns doing a cleanup on the Northern Peninsula.

two lakes: Gander Lake (Little Harbour); Gambo Lake (Drovers Beach); Black Duck (Trout Brook); St. Genevieve River; Southwest Pond, First Sou'west, and Salmon River (Main Brook), and Beaver Brook. Thanks to the efforts of the 66 people who volunteered and helped with clean-ups, a total of 0.96 tonnes of waste was removed from the shorelines and

riparian areas to help restore 15.42 hectares of salmon habitat.

## Educating Youth, Increasing Public Awareness

A large emphasis of the Living Rivers initiative is educating youth and increasing public awareness of the need for salmon conservation. Workshops and presentations enable in-depth learning about salmon

ecology and conservation efforts in Newfoundland and Labrador, while fly-tying workshops for youth provide hands-on learning in an atmosphere of fun and mentoring from experts. In 2019 the Living Rivers initiative gave 27 presentations across Newfoundland, reaching a total of 600 individuals at schools, community meetings, and public events. Assisting Intervale were several partners, including the Quebec-Labrador Foundation (QLF), which provides university students who receive training as teachers. Other partners include Pirates Haven, Tuckamore Lodge, several schools, International Grenfell Association, Point Amour Lighthouse Provincial Historic Site, Community Youth Network of the Labrador Straits, Boys and Girls Club of St. Anthony, and the Town of Roddickton-Bide Arm. The presentations covered topics of salmon life-cycle, river ecology, threats to survival,



Eric Bennett presenting to classroom students.

the effects of human actions on local salmon habitat, and what people can do to help. Popular among youth are the fly-tying workshops, led by fly-tying expert Hans van Klinken. Angling guide Clarence Goodyear provided one-on-one training assistance, as did the QLF interns. Overall, youth were given a tremendous experience that they will remember for many years.

The fly-tying workshops reached a total of 38 youth from the McKay's area of Bay St. George, Roddickton-Bide Arm area of the Northern Peninsula, and the St. Anthony area. The workshops help youth to develop skills in fly-tying, adopt best practices for catch and release, and cultivate an interest in becoming stewards of their local rivers.

Intervale is extremely grateful to the people and organizations that contributed generously to these events.

Photos by Kathleen Blanchard except Page 1, bottom, Lica Christensen; Page 2, top, Calvin Pilgrim, right, Jonah Hulan; Page 3, top, Troy Gilbert, middle, Russell Wall.

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*Intervale is a nonprofit organization, incorporated in Newfoundland and Labrador, with a mission to conserve biodiversity, interpret heritage, and promote the integrity of rural livelihoods. For more information, please contact Intervale at [info@intervale.ca](mailto:info@intervale.ca) or visit [www.intervale.ca](http://www.intervale.ca).*

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