



RIPARIAN READS

Newsletter of the Kennebecasis Watershed Restoration Committee

Summer 2026



Ebony jewelwing
Photo by Ellen MacGillivray

Manager's Message

Where do you buy your trees? Or your garden plants? Do you ever stop to think about how much money you spend in your local community? Or how much of that money stays in your community? The KWRC always tries to engage local businesses, and to not only do business with them but help create a partnership that sees both the business and the KWRC flourish. Local businesses, organizations, and clubs have helped us enhance and monitor local watersheds and host lots of great educational events. The community building we take part in is often an overlooked benefit of our work, so I want to briefly highlight it. There is no way we could list all our partners and collaborators here but trust me, the list is long and varied.

I want to take a minute and highlight not just the watershed work we do but the community building we inevitably participate in to conduct our work. It is not a one-sided task; it takes multiple, willing partners working

toward similar goals to build a healthy community and collaborative ecosystem. Being able to call upon a tree nursery when we need native species helps facilitate our efforts of planting pollinator gardens for a municipality. Having a school call upon us because they need a last-minute stand-in for a presentation on biodiversity means they appreciated our efforts when we built bird boxes with them before. When a local store matches our purchase for prizes during a workshop it might result in us hosting a more successful event or more of them. When we call upon the Canadian Rivers Institute because we need them to confirm our identification of a potentially harmful bacteria and they lean on us to host educational workshops to spread the word on that same bacteria—these are things that only occur when you have, dare we say, friends in your community.

Friendships require trust if they are to survive and we trust many of our friends. We trust all the farmers with

whom we partner to create and maintain riparian setbacks, we trust our funders to aid us in reporting when we need it, and we trust our friends to step up when we call for volunteers to plant or weed a garden. This trust goes both ways, and we thank all our friends for trusting us to report effectively on water quality, implement a solid riparian management plan, or keep their kids safe as we teach them to fish. We take the task of maintaining your trust seriously and will continue to do so.

Many people might be surprised to see how big our social network is and the breadth of work we do. We are engaged with local groups such as the Sussex Fish and Game Association, regional groups like the Kings Regional Service Commission, provincial organizations such as the NB Invasive Species Council, and even broader reaching networks like the Atlantic Water Network or the Community Collaborative Rain Hail and Snow Monitoring Network which includes volunteers

across Canada and the US. This community network is important to our success as we rely on our connections to inform us of the best approaches to restoration, monitoring, and education. Many of the watershed groups across NB have similar networks and build healthy natural and cultural environments and we are proud to be a part of the work the many watershed groups do. If you haven't done so yet, you should look up a local watershed group in your area and check out how they are likely already connected to you and your networks.

Building better communities and waterways go hand in hand, so let's wade in together!

~ Ben Whalen
Project Manager



Invasive Norway Maple—A Beloved 'Bad Neighbour'

At a glance, Norway maple trees look really similar to other maple trees that are native to the area. You've probably seen Norway maples along roadsides or even growing in your own backyard, but you might not have known that they are invasive.



Invasive Norway maple (left) and native sugar maple (right)

Norway maple trees were first introduced to North America as an ornamental from Europe in the mid-1700s, but they really took off in Canada just after WWII when they were planted to replace white elm forests infected with Dutch elm disease. They were loved for their ability to grow well in poor soil conditions, their lack of pests, and the aesthetic appeal and shade

provided by their giant leaves. They were soon brought to urban properties, but thanks to their wind dispersed seeds and tolerance to poor growing conditions, they quickly spread to roadsides and further into forests.

Norway maples use a combination of shading and shallow root systems to outcompete native tree species, including the iconic sugar maple (produces sweet sap used for making maple syrup) and the red oak (provides vital food and shelter for native wildlife). Although some native trees are shade tolerant, most thrive in full sun, which is rare under the thick canopy of a mature Norway maple forest. Native trees also typically prefer deep, rich soil so they can develop deep root systems, while the Norway maple's shallow roots absorb topsoil nutrients and are also known to wrap around nearby roots (sometimes even their own), which risks the lives of nearby trees.

Norway maples are also fairly resistant to pests, which seems like a great thing at first because that means less maintenance, but those pests are what feed our insectivores. Once established, Norway maples are difficult to remove, usually requiring an herbicide application on the stump to prevent it from regrowing (crazy!). They also have a high seed output and can still germinate after spraying, so the area should be monitored for a few years to stop saplings from reestablishing.

So how can a plant be fine in one place, but a problem in another? Different habitats support different plants and animals while maintaining balance. If these ecosystems are tampered with, then balance shifts. Norway maples have their own competitors in Europe and Asia that are absent in North America. Here, the ecosystem has yet to develop a counteractive component to these relatively new neighbours, which is how they were able to dominate many urban areas. That's why, if a plant is known to be invasive, it should never be purposely planted as it will spread much further than intended, and often the spread is unseen, as birds and animals can help to disperse the seeds.

It's one thing for a wind dispersed plant to spread from its origin naturally, and another for people to bring one to the other side of the world, introducing the potential

to wipe out native plants that haven't had time to adapt to their brand-new competitor. Although the habitats in our watershed are beautiful, it would be a shame for the whole world to look just like them—just like it would be a shame for our watershed's habitats to be replaced by something completely different.

As mentioned, Norway maples are present in many backyards in New Brunswick, so don't panic if you have them. Remove the saplings if you can, and support native wildlife by planting a variety of native trees, shrubs, and flowers!

~ Julia Koester
Habitat Technician



A Glimpse Into the “Puddling” Behaviour of Butterflies



Some of the best moments during fieldwork are the ones that come entirely out of the blue. This past week, on a hot, muggy day, Julia and I ventured off to complete a wood turtle survey in

Trout Creek. After slowly making our way through the river, fighting blackflies all the way, we finally reached the end of the route with no turtles to be found. As we were about to turn around and head back to the truck ‘empty-handed’, we noticed something strange on the riverbank—something bright, shifting, and alive. And there they were—a flock of tiger swallowtail butterflies, all crammed together, seemingly vying for a position on a clump of coyote scat. They barely noticed us as we carefully approached, and with scant feet between us, we snapped as many photos as we could. For two people who had only ever seen these butterflies in isolation, this was a very special, and very curious event!

As it turns out, this was our first experience with “puddling”, a behaviour observed in many species of butterfly where adults (mostly males) congregate in damp places—mud puddles, wet sand, areas with ani-

mal scat or urine, or even sweat-dampened skin—to drink the mineral-rich water and gain important micro-nutrients for themselves, such as sodium and nitrogen, that they do not otherwise receive in their nectar-heavy diet. After all, sodium is an important ion for nervous function while nitrogen is an essential building block of amino acids. These and other nutrients gained through puddling play many complex roles in the butterflies’ bodily function, and collecting these nutrients can even increase a male’s chances of successful reproduction.

Despite the benefits of puddling, it is clearly a behaviour that puts the butterflies at risk. Many butterflies, like tiger swallowtails, are easily seen due to their bright colours, and during puddling, they become engrossed in their task and are less aware of their environment. Julia and I learned this



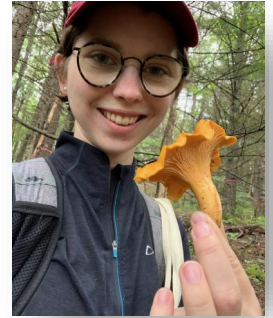
Tiger swallowtail butterflies engaging in “puddling” behaviour

firsthand when we were able to approach them so easily for photographs. Because of these factors, butterflies are vulnerable to predators during puddling. However, the butterflies may have accounted for this; there is evidence that the strange congregational behaviour we observed is actually a counter to this danger—safety in numbers, so to speak. This is the same strategy used by schools of fish or flocks of birds; by grouping together with other individuals during their vulnerable moments, each butterfly reduces its own chance of becoming a predator's meal.

The natural world is full of wonderful secrets, and the more time you spend outside, the greater your chances of experiencing something new. We may not have found

wood turtles on our excursion into the field that day, but instead, we encountered something interesting that we had never seen before: butterfly “puddling!” With even more biodiversity fieldwork planned for this summer—bank swallow surveys, barn swallow habitat building, and aquatic invasive species work—I am excited to discover whatever other secrets the summer has in store for us.

~ Rebecca Mader
Biodiversity Coordinator



In Defense of Sea Lamprey



Footage captured by Nolan Boyd

A pair of sea lamprey in freshwater

This June we started to see the sea lamprey make their way back to the Kennebecasis river to spawn. They are an extremely interesting and incredibly misunderstood species. Sea lamprey or “lamper eels” are actually not eels, they are a species of jawless fish belonging to one of the most ancient lineages of vertebrates, with ancestors dating back more than 360 million years. Sea lamprey have an unsettling appearance, with their toothy suction-cup mouth, and are often thought of as a blood-sucking nuisance that we should be wary of, when in reality they are completely harmless when they come up our rivers. Sea lamprey only parasitize fish when they are in the ocean. When they come into our rivers to spawn, lamprey stop feeding completely and rely on fat reserves to get them to their spawning areas, where they will spawn and die. Much of their bad reputation comes from the sea lamprey of the Great Lakes, who are invasive and actively parasitize native fish.

In the Kennebecasis watershed, sea lamprey serve as excellent nutrient transporters. They are an anadromous fish species meaning they live most of their lives in the ocean and come back to freshwater to spawn, bringing marine nutrients into our rivers. Sea lamprey also serve as ecosystem engineers, as they move rocks and sediment to form their nests, which can create riffles, and potential nesting habitat for other fish like brook trout and Atlantic salmon. Juvenile sea lamprey help keep our waters clean through filter feeding on organic matter, and they are also a prey species, providing food for larger fish, birds, and other wildlife.

Next time you're hanging out along the Kennebecasis and see some lamprey making their way upstream, consider taking a moment to look beyond their intimidating appearance and reputation. What most people see as a pest is actually a very cool species that actively benefits the Kennebecasis watershed. At the KWRC, we are fans of sea lamprey!

~ Nolan Boyd
Restoration Coordinator

View of sea lamprey gills, right side.



Footage captured by Nolan Boyd



Conservation in the Farming Community



The KWRC staff have had a busy spring working with our agricultural community, including restoration work, environmental monitoring, and educational outreach.

Habitat and Wildlife Restoration

Riparian tree planting: A total of 4651 trees have been planted to enhance riparian zones at Brownsville Farm, Walkerville Farm, Sugarhill Farms, and Shipley Farm.



Sign at Pascobac Farm

Project signage: Three new restoration signs were installed at Brownsville Farm, Shipley Farm, and Pascobac Farm to highlight restoration efforts in 2025.

Habitat creation: In collaboration with the Sussex Regional High School's woodworking

class, TBLC Landscapes & Excavations, and Norrads, a new barn swallow shelter is now ready to be constructed at Passekeag Holdings to increase nesting habitat on the property. Stay tuned to our social media pages for updates on this project & our other endeavours!

Environmental Monitoring

Water quality: Collected water samples for laboratory analysis and deployed HOBO data loggers for continuous water temperature tracking.

Species at risk surveys: Conducted surveys for wood turtles and bank swallows along watercourses in areas that were identified as having suitable habitat to monitor

local populations and to engage landowners in the implementation of beneficial management practices to support these species.

Vegetation surveys: Carried out assessments within the riparian areas of restoration sites to monitor vegetation establishment as an indicator of riparian health.

Educational Outreach

Birds Bioblitz: Hosted at Shipley Farm and guided by Paul Martin, the Birds Bioblitz identified 31 bird species! Events like this help us engage the public in something interesting that contributes to our watershed biodiversity inventory.

Other public events: Educated the public through an information booth at the Sussex Farmers Market and the Agricultural Museum of New Brunswick's Tractor Show and Parade. At these booths, staff showcased environmental projects on agricultural lands and handed out educational materials, including our brand-new Agricultural Services pamphlet, which you can check out on the [publications page](#) of our website!



Photo by Jenna Ross

Participants of our Birds Bioblitz event viewing a catbird

Find us on Facebook and Instagram to see what we're planning next!

~ Megan Thorpe
Agricultural Stewardship
Coordinator



A Simple Action and a Lasting Impact

Healthy waterways depend on more than just water running through them. The land surrounding the water is called the riparian zone or setback, and it is very important for biodiversity, water quality, and overall stream health. At this point in my third week, I've developed a solid understanding of several types of work we do at the KWRC. The first thing I was taught to do was plant trees. Tree planting is relatively simple in practice, but it plays a major role in protecting and enhancing the ecosystem around the waterway. When planting trees, there are many factors to consider, such as soil type, moisture levels, surrounding vegetation, and the hardiness zone or climate.



A fenced riparian setback on agricultural land

One of the primary reasons for planting trees in riparian areas is to stabilize stream banks. When water flows down a waterway, it can slowly start to eat away at the bank of the stream; this is called erosion. Deep-penetrating roots running through the riparian zone help prevent the degradation of the stream bank by reducing erosion, and limiting the amount of sediment being carried downstream. Roots woven throughout the bank

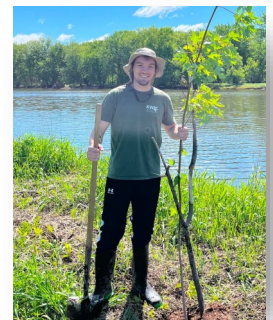
make it much stronger and more resistant to erosion, which is why planting as many trees as possible in riparian areas is such an effective way to protect the banks.

In addition to stabilizing stream banks, restoring riparian zones greatly benefits the surrounding ecosystem. Vegetation along the water's edge creates habitat for countless species, helps regulate water temperature through shading, and acts as a corridor for the movement of wildlife. These healthy, well-vegetated areas support high biodiversity and play a crucial role in maintaining the overall health of the watershed. Well-forested stream banks also act as filters trapping sediments and absorbing nutrients prior to them reaching the water, and in turn increasing overall water quality.

Some of the most common threats to these zones include deforestation, development, and livestock access. As previously discussed, tree planting is one of the primary remediation measures used to restore these biodiversity hubs. To protect existing and newly planted riparian areas, fencing livestock out of these zones is an effective way to reduce trampling and soil compaction, allowing vegetation to recover naturally. Thankfully, farmers have been some of the most cooperative landowners we have had the pleasure of working with.

Seeing firsthand how restoration work improves stream health has made me appreciate the importance of protecting riparian zones. Restoration work today is a small investment for waterway and ecosystem health in the years to come.

~ Adam Box
Habitat Technician

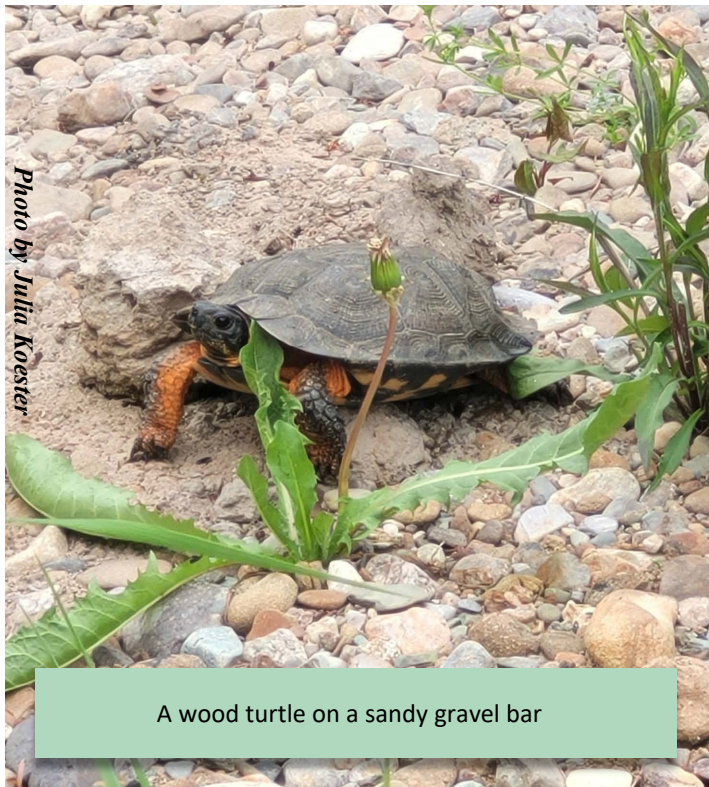


Benefits of Wood Turtles in River Ecosystems

Wood turtles are native to New Brunswick watersheds and are currently a species at risk due to habitat destruction and slow population growth rates. Wood turtles are semi-aquatic, spending summers on riverbanks and in fields foraging for food. They nest in sandy, gravelly bars along the rivers, and hibernate along rivers as well.

Why are turtles important to our watershed? They are omnivorous and the janitors of the river, because they clean up dead rotting organisms and eat berries and other shrubs along river banks, keeping them clean and not full of debris that can pollute the water. They also contribute to biodiversity along the river by eating a variety

of berries and fruits and depositing the seeds, helping to regrow what they eat and control riverbank erosion.



A wood turtle on a sandy gravel bar

Between the months of May and August, wood turtles will roam into farm fields to forage, and sometimes nest in hayfields if the soil type is right instead of in an unsuitable riparian zone, which is typically the preferred nesting habitat. The turtles will regularly travel 300 to 900 meters away from the river bank to find food if food is scarce.

If you would like to help protect wood turtles from harm or suspect there may be a population present in your area, here are some things you can do:

If you're a farmer suspecting your field is habitat, raise your mower 6 inches or more above the ground when mowing to increase the chances of wood turtle survival. If you are a livestock farmer, you could pasture your animals rather than hay in river-adjacent fields, to lessen accidents risking the turtles. If you are not a farmer and are still interested in helping the turtles, you could leave a larger riparian buffer from the river to help turtles retain preferred habitat and promote populations. You can also plant some of their dietary plants around rivers to support habitat and make sure they don't go hungry.

Personally I think turtles are a keystone species in the river and help in ways that you may not notice until we no longer have wood turtles. They keep the rivers clean, they keep the rivers healthy, and we keep the banks healthy where we can. Wood turtles aren't hurting anyone, but they are certainly important to have around and it is not to be taken lightly that their populations are decreasing.

~ Tate Baxter
Habitat Technician



Water Quality Monitoring in the Kennebecasis Watershed

I know summer has arrived when the paperwork begins to pile up on my desk! We have been busy deploying temperature loggers, monitoring cyanobacteria, and collecting water samples.

At the beginning of May, our monitoring team deployed 16 temperature loggers at 16 different sites throughout the Kennebecasis watershed. These loggers will record stream temperature every hour of every day until they are retrieved at the end of October. The KWRC staff uses this data to determine each site's average and maximum daily water temperatures. The loggers will provide valuable data which will indicate if stream temperatures are changing and if habitat restoration has reduced stream temperatures or indicate where the KWRC should conduct future restoration projects.

In May, our team also began monitoring for cyanobacteria. Cyanobacteria blooms and benthic mats can produce toxins and can be harmful to people and pets. We visit 11 hot spot sites bi-weekly until September. We conduct visual surveys and measure water parameters such as temperature, dissolved oxygen, conductivity, and pH at these sites. But we are always on the lookout for cyanobacteria while we are conducting field work! This may result in additional sites being added to our cyanobacteria monitoring field sheet. This data will help us to understand over time why a cyanobacteria bloom or benthic mat develops. Our team reports any sightings to Department of Environment and Local Government (DELG). If you suspect cyanobacteria is present in the water, be sure to report the sighting to the [GNB website](#).

This month, our team began monthly water quality monitoring at 14 different sites throughout the watershed. We collect water samples once a month from June to October, for a total of 70 surface water quality and *E.coli* samples collected by the end of the field season. We also record water parameters such as temperature, dissolved oxygen, conductivity, pH, and total dissolved solids. These samples are collected as per DELG's guidelines. Upon collection, every water sample bottle is placed in an ice-filled cooler for preservation and then delivered to the NB Research and Productivity Council (RPC) laboratory within 24 hours for processing and analysis. After the analysis, RPC forwards the results to us and DELG. The KWRC measures the health of the rivers and streams based on standards from the Canadian Council of Ministers of the Environment (CCME) and Health Canada Recreational Guidelines (HCR). The

results from these water samples are analyzed to understand the current environmental impacts that these sites could be facing such as pollution, temperature, run-off, or excess nutrients in the water.

These monitoring activities are just a sample of what I accomplish along with my team during the year. The KWRC is truly grateful for the funding we receive. The Environmental Trust Fund (ETF) makes it possible for our organization to be able to measure, record, and analyze the health of the rivers and streams throughout the Kennebecasis watershed.

~ Kate Vey

Monitoring Coordinator



Environmental Events to Look Forward to

At the KWRC we always try to include interesting and educational events in our programming. In my role as the Education Outreach Coordinator, not only am I responsible for our social media pages and other digital aspects such as our website and this newsletter, but I organize our [events calendar](#) and ensure events are carried out as smoothly as possible. And with many events as part of various education, restoration, monitoring, biodiversity, and agricultural goals we have as a team, it feels like we're offering more opportunities than ever! However, in our efforts to promote all these events, I'm afraid many are lost in the mix of social media, and within our busy summer schedule, it can be tricky to navigate other options for getting the word out there. That's why I'd like to outline here what we have planned, so you can pencil in any opportunities that pique your interest!

Already this spring, we have hosted an Anglers' Social event along the Kennebecasis river, a volunteer tree planting event at our Gateway site which is also on the Kennebecasis river, a pollinator garden planting day in collaboration with the Rotary Club of Hampton, and a Birds Bioblitz, the first of four bioblitz events being funded by the New Brunswick Wildlife Trust Fund to bring awareness of biodiversity and engage people in citizen science using the iNaturalist app. Not to mention the partner events we have participated in, such as an Earth Day cleanup in Hampton and two fishing derbies,

hosted by the Hammond River Angling Association and the Sussex Fish and Game Association!

Coming up soon is our second **bioblitz event** which focuses on plants! This walk will be guided by yours truly on one of our riparian restoration sites along Trout Creek. Wear rubber boots and get ready for a bit of (light) bush-whacking! Happening on July 13th at 6pm, at 201 Waterford Road (rain date on July 16th) - we'll be creating a Facebook event page with all the details this week, so be sure to check it out.

Our other **two bioblitz events** will focus on insects and fungi, planned for August 17th and September 14th respectively, so mark those dates if you want to learn more about identifying different species and uploading them to the identification app iNaturalist.

If you're around Sussex this Friday, June 26th, we will have a booth at the **Sussex Farmers Market!** Come shop local vendors, get some delicious fresh food, and chat with us about anything from erosion to species at risk! We are also scheduled to appear at the Market on July 3rd and August 28th.

Our Biodiversity Coordinator has also organized a **Clean Drain Dry event** in partnership with the New Brunswick Invasive Species Council for Saturday, July 18th, where we will be washing boats for FREE to help prevent the spread of aquatic invasives such as Eurasian watermilfoil, curly-leaf pondweed, and zebra mussels!

Then we have our highly anticipated **Ripples & Roots nature camp**, which still has space available if you know a high school student who would love to spend some time outdoors learning valuable field skills! The camp is based in Sussex, from July 20th to the 24th, from 9am till 3pm each day. Participants will get to experience real field work, use all kinds of equipment, and contribute to river restoration. Check out our [Facebook event page](#) for more details or register [here](#).

Following the nature camp, we are scheduled to participate in Butternut Valley's '**Love Your Covered Bridge**' event, where we will be stirring up some benthics (riverbed bugs) for visitors to see—it's cooler than it sounds! We are also anticipating funding to host a **Youth Angling Day Camp**, and **Beginner's Fly-Fishing Workshop** later in the summer, as well as a potential **paddle event** on the Kennebecasis. You can also expect to see us at the **Kings County Agricultural Fair**, and if you're interested in volunteering, don't miss the **cleanup** on September 19th.



Aside from those that have already happened, I've listed 14 events in this article, which is basically one per week until the end of summer! So bear with us as we try to make the exact details public as timely as possible. We populate our [public events calendar](#) at the beginning of the year to help people plan ahead for the variety of events we offer, but details such as funding, landowner permission, permits, promotional materials are all factors that must be finalized before we carry out the event.

That being said, you can check out our [events calendar](#) at anytime, and always feel free to reach out with questions. We create Facebook events and pin them to the top of our Facebook page. We have also resorted to posting physical posters around town, so be sure to check out the bulletin boards at local shops and community centres!

~ Ellen MacGillivray
Education Outreach
Coordinator



Follow us!



@kennebecasis_watershed



@kennriverrestoration



@kennebecasisriver



@TheKennebecasis

Riparian Reads is a publication of the Kennebecasis Watershed Restoration Committee, all rights reserved. © 2026

For questions regarding content and operations, contact us at (506) 433-4394, info@kennebecasisriver.org, or write 5 Moffett Avenue, Unit E, Sussex, NB, E4E 1E9.

Information is also available on our website at www.kennebecasisriver.org. This newsletter is available as an email subscription, so you never miss an issue! Visit our website to subscribe.

Thanks to Our Sponsors



The Foundation for Conservation of Atlantic Salmon

