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questions are

welcome.

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Plamu and Mi'kmaq ecological knowledge

Plamu / Atlantic Salmon is very important to Mi'kmaq people. UINR's new publication "Plamu-Mi'kmaq Ecological Knowledge: Atlantic Salmon in Unama'ki" gathers much of what we know from generations of traditional knowledge.

Written by UINR's Shelley Denny, Angela Denny, Keith Christmas, and Tyson Paul, this new publication brings together the knowledge of Elders and harvesters from several workshops held in 2012.

Mi'kmaq Ecological Knowledge—the Mi'kmaq way of life—is derived from centuries of interaction, observation, and adaptation to the natural environment. It is the Mi'kmaq science of survival intertwined with spirituality and our unique culture.

The publication looks at traditional harvesting methods and locations, and outlines rivers and brooks in Unama'ki where plamu have been, and continue to be harvested. Information on what kind of habitat plamu prefer and cues we can take from nature are an important part of understanding this species.

Salmon is harvested by young and old alike, and reflects a local and intimate understanding of salmon ecology in Unama'ki. The traditional practice of spearing salmon continues today and is maintained through harmony and respect for the spiritual relationships between people, plants, animals, and all elements on Earth.

The value of salmon harvesting and its important dietary considerations is also discussed in this new work. Eating salmon is linked to long and healthy lives but it is part of the social norm to spend time with family learning about harvesting practices and netukulimk. People enjoy time spent outdoors even if salmon is not caught.

Plamu harvesting is an excellent example of netukulimk or traditional Mi'kmaq management. Everything from considering the salmon's size to when it is harvested contributes to a sustainable harvest.



The current state of the salmon population is discussed and some of the possible reasons for its decline are examined.

A call for action outlines some of the things that need to be done to ensure that plamu populations remain healthy. Habitat preservation, improved management, and education are all parts of a plan to make sure that salmon is here now and for future generations.

You can download a free copy of "Plamu-Mi'kmaq Ecological Knowledge: Atlantic Salmon in Unama'ki" at uinr.ca. It's in the LIBRARY section of our website.

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NEWS²

WWW

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Early in 2014 UINR will release "Our Rightful Place," a new video on moose in Unama'ki, its management and traditional harvesting practices. The video looks at moose management from the perspective of both government and harvesters... We are also working on two new publications on moose in Unama'ki... Rankin School of the Narrows is the latest school to join Unama'KIDS... The Mi'kmaq Forestry Initiative gives management authority on assigned parcels of Crown Land to the Mi'kmaq. There are two tracts of land currently identified on the mainland and the next step will identify parcels of Crown Land in Eastern Nova Scotia, including Cape Breton... Black Ash was added to Nova Scotia's Species at Risk list this past summer. With this distinction comes the development of a recovery team. Mark MacPhail, UINR's Director of Forestry is a member of the multifaceted team that has habitat protection and improvement of Black Ash numbers as two of its primary goals... Guardians assisted DFO with seining and tagging salmon in Margaree River for their catchability coefficient experimental project and assisted provincial fisheries with the collection of broodstock in Mabou River. Guardians also participated with CBU in detailed barrachois assessments in Frenchvale, Irish Cove, and Eskasoni... UINR guardian coordinator Keith Christmas is contributing to a research study of community-based monitoring groups by a Dalhousie University student. The research focuses on the CURA H2O water monitoring program... A new publication on Malagawatch will be released this spring...

Here's where we keep you up-to-date on new stuff online at uinr.ca

We just released two new publications that are now available at uinr.ca as a free download. "Peju-Mi'kmaq Ecological Knowledge: Cod in Unama'ki, and "Ji'kaw-Mi'kmaq Ecological Knowledge: Striped Bass in Unama'ki." These are two new volumes that examine species important to Mi'kmaq people while gathering traditional knowledge.

If you are a Facebook user (and who isn't) be sure to LIKE our UINRpage. There you will find albums of photos and up to the minute information on everything from fishing eels to invitations to our events, workshops and training opportunities.



Recent examples are

photos of our catch and release of salmon in the Margaree and photos from our Feast in the Highlands. See how many people you recognize!

If you use Twitter, be sure to join our over 800 followers! It's the best way to stay informed on new additions to our website and all the latest updates.



Unama'KIDS spent a fall day cleaning up the shores of Chapel Island in Potlotek.

UINR



UINR, working with DFO Gulf Region and Potlotek Guardians, capture salmon to tag, measure, scale sample and release.



UINR's Shelley Denny, Lesley Carter, Environment Canada's Fresh Water Quality Monitoring-Atlantic Watershed CABIN Coordinator and UINR's Angela Denny and Tyson Paul evaluate Unama'ki streams in the Canadian Aquatic Biomonitoring Network project.



UINR Guardian Coordinator Keith Christmas, along with Unama'ki Guardians, participated in culvert assessments in the Middle River watershed with the Clean Annapolis River Project group. Assessments are part of the Aquatic Connectivity Program.



Parks Canada's Chip Bird, Monique Catlin join Albert Marshall, Charlie Dennis, Lisa Young and Anthony Morris at the release of the video "Did Eels Change the Course of History?"

UINR's

Welcome

As we started assembling stories for this issue of UINR Marten we saw a pattern emerging. We recently released a publication on Plamu (Atlantic Salmon) and Mi'kmaq ecological knowledge that we decided to feature on our cover. In our partnership section, we profile our long-time partner, CSI Cape Breton, and Charlie's story in The Oyster Garden is all about plamu too!

We've been doing a lot of work on salmon this year, from our smolt wheel, sessions with DFO on salmon population to tagging fish in Cape Breton rivers.

It's no wonder. Salmon has been and continues to play an important part in Mi'kmaq culture and tradition. What feast would be complete without a freshly caught salmon on the menu?

Speaking of feasts, our round-up of fall events would not be complete without a look at our annual feast in the Highlands with our Moose Management Initiative. This is an event that we all look forward to every year and before you ask, yes, there was salmon served!

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Shelley Denny and Tyson Paul do a swim-through salmon count with DFO on Middle and Baddeck Rivers.

How many salmon smolt in Bras d'Or Lakes watershed?

After three years of operating a rotary screw trap (also known as a smolt wheel) in Middle River, UINR is able to estimate the number of smolt leaving the river in spring 2013.

Smolt are one of several stages in the life cycle of Atlantic salmon in which it makes the transition from freshwater to the sea and take on a silvery appearance.

Smolt are two to four years old before leaving the river in May and June,

spending the next one to three years feeding at sea before returning to spawn as adults.

Smolt estimates have been made for Margaree River and other rivers in mainland Nova Scotia in the past, but this is the first smolt estimate for a river located in the Bras d'Or Lakes watershed.

The smolt wheel is a tool used to capture young salmon and other fish in a river. It operates 24 hours a day for five to six weeks capturing migrating smolt, and other fish, such as smelt. Once a day, all fish are removed, counted, weighed, measured, and have scales removed so we can determine their age.

The tail fin is clipped as a way to mark them as being captured. Marked fish are returned upstream so they can mix with the population, to be recaptured in the smolt wheel later in the season as they attempt to migrate to the Bras d'Or Lakes again. Recaptured smolts are released downstream of the smolt wheel.

This method of mark-recapture allows us to use the information to calculate the number

of smolts leaving Middle River using the adjusted Peterson method to estimate population. You can look up the formula if you are interested but for the sake of simplicity, it is not included here.

In the spring of 2013, 474 smolt were marked, 575 smolt were captured and 24 were recaptured. Using this information, we get an estimate of 10,943 smolt leaving Middle River in the spring of 2013. This estimate is NOT the number of adult salmon in Middle River. By knowing how many smolt leave Middle River and the number of returning adults one, two, and three years later, we can estimate the proportion of Middle River salmon that die at sea.

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What to do with a tagged salmon

UINR is asking for your cooperation. If you catch a tagged salmon, please report it to us.

If possible, please release any tagged fish and report the tag number. If you keep a tagged fish, please report it and return the tag to UINR or a guardian. You can also send the tag and information to the address on the back of the tag.

DFO Science (Gulf Region) is working with UINR and Unama'ki communities to capture and mark salmon by seining river pools in the fall, and recapturing fish in the spring. Salmon are marked using a small white tag attached at the base of the dorsal fin to identify individual fish.

To report tag numbers or for more information, please contact UINR.

Shelley Denny	902 578 4340
Keith Christmas	902 578 8149
Tyson Paul	902 371 0981
Angela Denny	902 578 2732

Volunteers needed

To help estimate total adult salmon returns to Margaree River, recapture of tagged salmon will be undertaken in the spring during kelt migration. However, we need the help of our harvesters.

Volunteers are needed to dedicate time to fish the lower pools of the Margaree River to capture black salmon (kelts) in the spring. This is something that you can do when you are already out harvesting kelts. It involves keeping track of time you spend fishing, number of salmon caught, and number of tagged salmon captured.

For more information or to volunteer please contact

Shelley Denny	902 578 4340
Keith Christmas	902 578 8149 or
Michel Biron	506 851 2618



it's all about the partnerships

Collaborative Salmon Initiative **CSI**

At first glance, CSI Cape Breton might sound like a new TV crime show, but a second look reveals that it's the Collaborative Salmon Initiative!



A diverse group of salmon enthusiasts had been meeting informally for several years and, in 2006, CSI Cape Breton was formally endorsed at a two-day workshop in Wagmatcook. Representatives from First Nations, government, conservation groups, scientists, academics, and recreational fishers met at "Dialogue on Plamu/Atlantic Salmon in Cape Breton," an intensive workshop that focused on issues facing Atlantic Salmon and brought together a broad-based group of people concerned with the status and future of Atlantic Salmon in Unama'ki. The proceedings from that workshop can be found at the LIBRARY at uinr.ca.

Plamu/salmon is important in the history and culture of both Mi'kmaq and non-native peoples and everyone shares a concern on the species' declining populations. Scientific and anecdotal reports indicate that most plamu/salmon populations in Unama'ki are in decline or are at low population size.

"I am thrilled with the level of interest and concern for Cape Breton plamu," says **Charlie Dennis**, Senior Advisor at UINR. "We have taken the first steps to make sure that salmon will continue to be an important part of our culture. A stewardship plan developed with the help of the communities will be our priority."

A workshop was held in 2010 to gather traditional knowledge on salmon and to release a new CSI document: "Stewardship Framework for the Monitoring, Assessment and Enhancement of Plamu/Atlantic Salmon Populations and Their Habitat in Unama'ki/Cape Breton" that outlines a five-year plan to address CSI's stewardship goals.



Currently, CSI meets twice a year to share information and work on new projects. Recently CSI participated in posting smolt and parr identification signs on salmon rivers, planting trees on river banks, and assisting in UINR's smolt wheel.

John Hart, President of the Margaree Salmon Association, believes in CSI. "UINR's leadership combined with the will of communities across Unama'ki will maintain and improve salmon stocks for the future. Whether our ancestors have been here for 10 years or 10,000 years, whether we fish to fill our bellies or to fill our hearts, we all

share common thoughts, bonds, and concerns for salmon."

Lewis Hinks, Regional Director for the Nova Scotia Atlantic Salmon Federation, feels "that CSI leads to greater cooperation among all the groups that benefit from Cape Breton salmon."

Mi'kmaq elder **Albert Marshall** feels that both CSI and salmon benefit from traditional knowledge. "Combining Traditional Ecological Knowledge (TEK) with modern science could provide a bright future for the generations to come."

charlie@uinr.ca



Tyson Paul, Joe Googoo, Stephen Lafford, Anthony Pierro, Keith Christmas, Don MacLean, Chuck Thompson, Peter Marshall, Norman Basque, Lewis Hinks, Shelley Denny, Charlie Dennis, Angela Denny, George Christmas, Cornelia Peck, Derek Quann, Cathy MacEachern, Lisa Young, Jim Foulds.

NR



OYSTER

garden
by Charlie Dennis



Plamu / Wild Atlantic Salmon—The Way It Used To Be / Ta'n I'tle'kp

The beautiful fall season is upon us, the leaves have already changed into their multi-colorful display and have gently fallen to the ground with the help of the cool, frosty evenings. The fall season also means that Atlantic Salmon has started its journey to its original spawning grounds where it was spawned by its ancestors three to four seasons ago.

This journey that the wild Atlantic Salmon takes has been happening for hundreds of years and we all assumed that this journey would always take place. Like the cod stocks, no one could imagine any changes.

All my life, I have listened to stories from Elders, both Mi'kmaq and non-Mi'kmaq, about how plentiful salmon once were. "The way it used to be..." are the famous words that suggest it was good in those days. There was a time when you could see salmon in almost every stream, brook, and river in the Bras d'Or Lakes region.

Every once in a while, someone would catch a salmon accidentally while fishing for trout or even trying to catch the elusive cod. Those days are getting very rare. My dad commonly went torching for eels in the fall, but once in a while, he would come back with a huge salmon on the boat and he would tell how he struggled to get this large salmon. I could always tell from the bent, twisted spears.

An Elder from Malagawatch once told me that it was very common to catch salmon while jigging for cod in the Bras d'Or Lakes, and people usually kept them because they would be so damaged by the jig they wouldn't survive if released.

One time in the 1970s, my brother Steve and I were snaring for salmon in Qamsipuk (Indian Brook), and we saw something wedged near a large boulder on the bottom of one of the pools. We thought it was a log, but when I poked at it with my pole, this log darted into deeper parts of the pools. The "log" turned out to be a very large salmon, at least four feet long. Of course we stayed at the pool, trying to get it, but the fish never reemerged from deeper water. We finally gave up because it was getting dark.

Another story I would like to share with you is one that was told to me by my close friend in Eskasoni, Andrew (Mooney) Francis. When he was young, his uncle asked him if he would go catch him a salmon at the pump house pool in Qamsipuk. Uncle suggested taking the cod jig and fishing line. Mooney had never fished for salmon before, and didn't really know how to use the jig, but he listened to his uncle and headed off for the brook.



Mooney told me, "When I got to the brook it was flowing fast and deep because it rained the night before, but I didn't hesitate one beat because I had to put food on the table for the family. I threw the jig into the rapids and every now and then I would give it a quick pull like if somebody was jigging for cod. In just a few casts, I hooked onto something and a tug-of-war took place. I wasn't too big at that time but the battle was on for a few minutes, with me pulling on that line with all my strength, and I succeeded in pulling the monster fish to shore. I hadn't even seen a salmon before but I was so excited, I ran all the way home with large fish in tow. When I got home my uncle just laughed at me thinking I wouldn't catch anything. 'Well my son, you got your first salmon! That's a salmon!' I kind of smiled, feeling so surprised and real proud of myself."

I watched my uncle as he dressed the salmon, stuffed its belly with bread stuffing, and then baked it in the oven for an hour or so. It was the best meal I ever had!" When Mooney finished his story, he said, "Charlie Joe, now I'm getting hungry, let's go fishing!"

These are some of the stories of Plamu / Wild Atlantic Salmon—The Way It Used To Be. Ta'n I'tle'kp.

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Photo of Francis Mooney by Cyril MacPhee



A record number of people turned out for our Annual Feast in the Highlands this year. Everyone from youth to Elders enjoyed the weather, the company, and of course the food!

The Moose Working Group (pictured below) are working together to improve the state of moose in Unama'ki and this annual event is one of the highlights.

To see more photos visit UINR's Facebook page: UINRpage

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Annual Feast in the Highlands

Thursday October 10, 2013
12:30–2:00 PM

At the paved airstrip
13 km from Hunter's Mountain entrance

Everyone Welcome!



The Feast is enjoyed by all ages.

Flo Young, Billy Taylor, Stan Johnson, Susie Marshall, Annie Johnson and Charlie Dennis plant Black Ash trees to commemorate the 2013 Feast.



Unama'KIDS



The Googoo family enjoy the Feast.



The Moose Working Group: Annie E Johnson—UINR; Benedict Toney—DNR; Andre Roy—Fisheries and Oceans Canada,

Bob Petrie—DNR, Wildlife Division; Peter Austin-Smith—DNR; Eric Zscheile—KMKNO; Tim Courage—Parks Canada,

Carol Ann MacNeil-Rolls—NS Office of Aboriginal Affairs; Dominique Audet—Parks Canada; Gary Lowe—DNR,

Peter Labor—NS Environment Protected Areas and Ecosystems Branch; Dave Williams—NS Environment Protected Areas and Ecosystems Branch,

Clifford Paul—UINR; Charlie Dennis—UINR; Kneeling: Bruce Nunn—DNR, Lisa Young—UINR.

NR

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