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Toqaqiw (It is Autumn)

September 2017

Clarissa Sabattis - Tribal Chief
Susan Young - Editor

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**Skitkomiq Nutacomit
Earth Speaker**

Fish Habitat Restoration Project on the North Branch of the Meduxnekeag River

In mid-August, the tribe successfully completed their second fish habitat restoration project, this time on the North Branch of the Meduxnekeag River in Monticello. This project was similar to the one completed on the main stem of the river in the summer of 2014 between the Lowery and Covered Bridges. Once again logs with root masses and boulders were placed in the river to create critical habitat for trout and other salmonids (cold water fish).



This project was funded by the US Fish and Wildlife Service and brought together HBMI, Monticello Fish and Game Club, Maine DEP and local property owners.

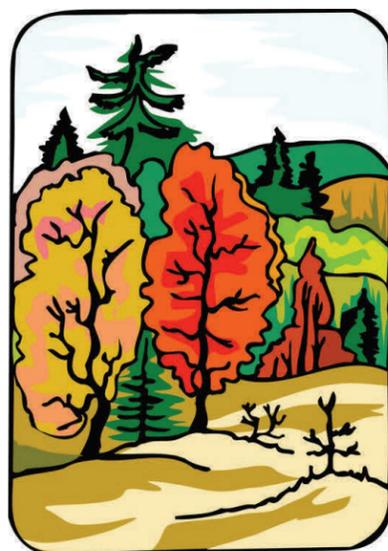
This project was designed by John Field of Field Geology Services and he worked with Bill Dunbar of Dunbar Construction to complete the installation.

The structures can be seen looking west from the Route 1 Bridge in Monticello. They will provide much needed boost to this section of river, by creating places for fish to rest and spawn, and by creating pools and turbulence which will oxygenate the water.

During the log-driving era, naturally occurring structures were dynamited out of the way resulting in the loss of pools and other critical habitat that help fish thrive.

- Clockwise from left -*
- Looking west from Route 1 Bridge
 - Project area
 - Logs being installed

Fantastic Fall Colors



Now that summer's gone it won't be long before the trees of Maine share their spectacular fall foliage.

This year with drought conditions experienced by most of the state, the colors have started a bit earlier than normal.

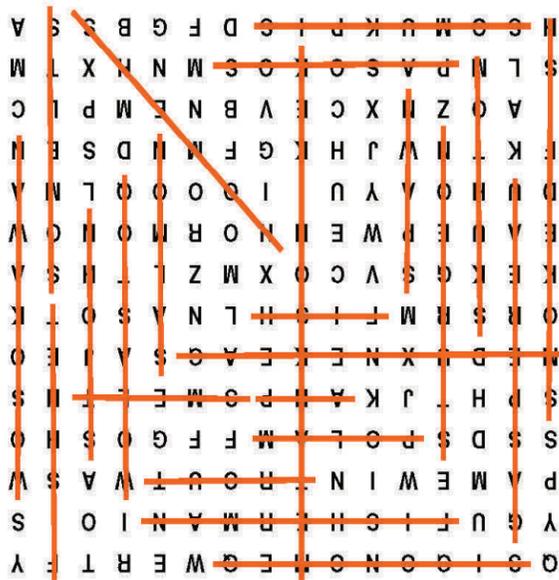
The State of Maine hosts a website that provides in-depth reports of fall foliage to help you plan your leaf peeping adventures.

Be sure to check it out!

http://www.maine.gov/dacf/mfs/projects/fall_foliage/whenandwhere/index.html



Word Search Answers



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Dendrology Corner

Dendr = tree ology = study of

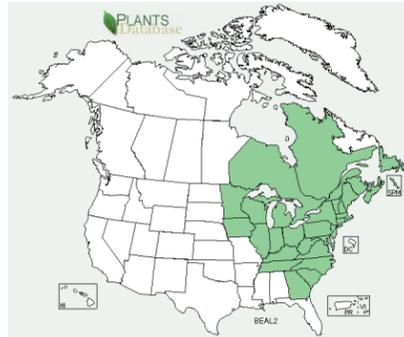
Prepared by: **Matthew P. Edberg, HBMI Natural Resources Specialist**

Yellow Birch (*Betula alleghaniensis*), golden birch.

Native Range: See map at right

Habitat: Often found growing with other hardwoods such as the “Northern hardwoods” forest type (sugar maple [*Acer saccharum*], beech [*Fagus grandifolia*]). Yellow birch prefers well drained upland soils, cool temperatures, and plentiful precipitation. However, it can often be found growing in wetlands with Northern white cedar (*Thuja occidentalis*) black ash (*Fraxinus nigra*) and Eastern hemlock (*Tsuga canadensis*).

Natural History: Yellow birch (*B. alleghaniensis*) can reach heights of 100 feet and a DBH (diameter at breast height = Measured 4.5 feet above the ground) of 2 feet. It commonly reaches an age of 300 years (a record specimen on McNutt’s Island Nova Scotia came in at **1500 years**



old!!) with a record DBH of 9 feet -12 feet. The leaves are alternate, simple (one leaf blade), oval, pointed at the tip, and the leaf base slightly cordate (heart shaped). Yellow birch (*B. alleghaniensis*) is a monoecious (both male and female flowers are found on the same tree) species. The “catkins” (group of flowers) are wind pollinated and produce a fruit that is a “nutlet” (seed with tiny 3 pronged wing).

When growing in a forest with little disturbance (logging etc.) yellow birch seed can only grow on rotting logs, stumps or where another tree has blown down causing soil disturbance (scarification). As a result yellow birch exhibit an interesting growth form in forests with little disturbance called “stilting” where the stump or log rots away leaving a tree that has legs or stilts.



Stilted yellow birch

Special Uses: Yellow birch (*B. alleghanensis*) is a highly valued timber tree its wood being used for flooring, cabinetry and veneer.

Medicinal Uses: The bark contains wintergreen (methyl salicylate) oil which can be distilled from it. Wintergreen has many medicinal uses such as pain relief and the prevention of infection. Native Americans use the bark as a blood purifier and twigs were often used as toothbrushes.

This is not an endorsement of use for medical purposes. Use caution as many herbal remedies have not been medically tested and can be dangerous if not used properly.

Edibility: All birches, including yellow birch, can be tapped in the spring and a sweet syrup can be produced. Wintergreen tea can be made from the bark, the inner bark is also edible and can be dried and ground into flour.

Note: When collecting any wild plant species for medicinal or edible use, please be absolutely sure you have identified the species correctly. Furthermore, be respectful of nature and use a hunter-gather ethic, leave something for the future and for others.

Utilitarian: Yellow birch (*B. alleghaniensis*) produces a fuel wood that burns slowly and produces a good bed of coals. The fibers of the wood were used make twig brooms and toothbrushes and the bark can be good tinder for starting fires. The wood is strong and is used for tool handles.

Continued page 7

Fish Habitat Restoration (continued)

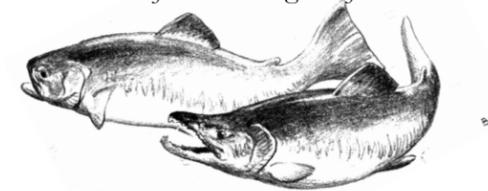


Above - Meduxnekeag just below Lowery Bridge, you will note the bridge in the background.

Right - same stretch of river looking east from the western bank

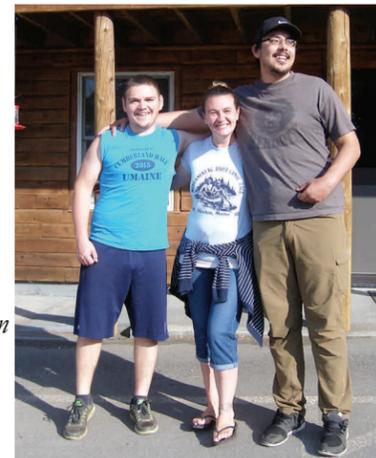
In addition to the fish-friendly installations within the North Branch, a few more trees were placed at the Lowery Bridge. These were added to replace the wood structures that washed out since their initial installation on the main stem in the summer of 2014.

Adding wood mimics the natural process of trees falling into the river. The wood moves to new places, banks itself and causes a debris jam. These structures are creating habitat for fish and other aquatic organisms.



A Fond Farewell

It’s once again time to say goodbye to our summer techs Gage LeFay and Jenna Matthews. It was a busy summer with many projects and adventures and we’re sad to see them go. Hopefully, they’ll apply again next year to work with us here in Natural Resources.



Shown here are Summer Techs Gage LeFay Jenna Matthews and Water Technician Sam St. John



Dendrology Corner

Continued

Ecological Values: Yellow birch is an important hard mast (mast= any fruit-or vegetative part produced by a woody plant i.e. raspberries, acorns, nutlets, catkins)-source producing thousands of tiny edible nutlets, as well as buds and catkins favored by a variety of wildlife species such as the red squirrel and ruffed grouse. They also provide cover to wildlife and their deep roots bring up nutrients that improve soil productivity.

Literature Cited

- Silvics of North America Vol. II Hardwoods, USDA, Handbook 654
- Foster, 1990, Medicinal Plants, Peterson Field Guides.
- naturalmedicinalherbs.net
- Lee Allen Peterson, 1977, Edible Wild Plants, Peterson Field Guides.



Skitkomiq 2017 by Jenna Matthews

Another successful Skitkomiq Science Camp is in the books! Due to budgetary constraints, camp was only a one day event this year but we were still able to hold a fun and interactive day with some of our

tribal youth.

We began the morning with Matthew Edberg, who taught the kids how to identify, harvest and dry sweet grass and muskrat root. The kids then able to potted white sage plants to take home. Before lunch we taught the kids how to harvest sumac and make sumac-ade (which we got to enjoy with our delicious lunch of Indian tacos!).

For the afternoon session the youth took to the Meduxnekeag River to learn how to use a seine net to catch macro- invertebrates, which they identified and categorized based on what they had learned. The kids really enjoyed being in the water and getting to play with bugs! Although our group was smaller than in years past, Skitkomiq was still a big success and will only continue to get better every year!

Tribal Elder and Culture Keeper, Imelda Perley led the 24 hour "Teen Fast" and sweat lodge. Along with many new faces, there were some fasters returning from last year. This ceremony is a way for tribal youth to start their journey into a more holistic and spiritually connected life with Mother Earth and ends with a Naming Ceremony. This year 5 of the first year participants, ranging in age from 12 to 32, were able to earn their spirit names:

- David Abernathy- Somakonossuwin (zem-u-ge-niss-win) Brave warrior with courage to change, "change other peoples and minds & attitudes towards Native peoples."
- Traci Stone- Petacomit (be-duj-de-mud) Messenger of good news "Must share experience of ceremony with others."
- Jenna Matthews- Kinapesq (geena-besk) The female warrior, brave, takes on action without fear or worry.
- Amaya Carmichael- Pisunkewin (pee-zun-ka-win) One who gathers medicine before the winter. "Kindness and love are also medicines to be shared."
- Aliya Sabattis-Webber – Alamossit (ala-moo-sid) (Hummingbird) Fragile but strong, carrier of joy. "Can be medicine for others who feel fragile, need joy in their lives."

Throughout the 24 hours of the fast, family members were encouraged to come and sit by the sacred fire, pray for their loved ones and offer support to anyone who



Fasters and Friends - left to right, Amaya Carmichael, Jenna Matthews holding Sullivan, Wambli and Tawoma Martinez, David Perley, Nalani Alverado, Natasha and Friend, Imelda Perley, Doris Polchies, Traci Stone, Chief Clarissa Sabattis, David Abernathy

needed it. It was a deeply spiritual time of prayer and reflection and overall cleansing of the mind. I would highly recommend this experience to all tribal members!

*I would also like to thank the following people for their help, support, participation and guidance: Imelda and Dave Perley for their infinite wisdom and amazing stories; Tawoma and Wambli Martinez for being our around the clock fire keepers; Fred Tomah for donating his leftover basket ash for us to use in our sacred fire; Chief Sabattis for her participation, prayers and gifts; Cathy St. John for the AMAZING fry bread to break the fast; and The Maliseet Natural Resources Department for their partnership, wood delivery, cooking skills, tent supplies, lawn mowing services, and about a million other things.



Planting sage in the greenhouse (l-r) David Abernathy, Keanen Lindsay, Caden Shaw, Jacob Carmichael

(right) The Boys harvesting Sweetgrass - Wambli Martinez, Keanen, David, Caden and Jacob



Invasive Smallmouth Bass in the Meduxnekeag by Sam St. John

Due to many factors such as illegal introduction and warming water temperatures in recent years, smallmouth bass have begun to rapidly takeover the Meduxnekeag river. All cold-water fish species indigenous to the Meduxnekeag are being affected negatively by the rise of the bass. The rate at which the bass have taken over can be attributed to their prolific breeding, highly varied diet, and ability to adapt easily to a warming watershed.



So . . . what can be done? There are a plethora of ways to manage the growing Smallmouth bass population, including the in-stream restoration projects we are currently implementing which help make the river more trout friendly. Smallmouth bass are widely sought throughout the country as a popular game fish. Their willingness to bite a variety of baits combined with their lively fighting spirit makes them a worthwhile and fun fish to catch.



As with most nuisance species, there is no imposed limit so any amount of keeper-sized fish can be kept. In the Meduxnekeag, there are no size or bag limits on smallmouth bass. Most bass caught are affected by a parasite called Neascus that appears as tiny, black dots in the fins and flesh but, like pork, complete and thorough cooking keeps meat perfectly edible. Also, fish can be kept and buried whole as fertilizer in small gardens.

Neascus on fish

Cooking Smallmouth Bass

Both largemouth and smallmouth bass are great for eating because of their mild taste. They are even easier to cook because their meat is firmer than most pan fish. This allows bass to be used in many versatile ways. Here you will find a couple of smallmouth bass recipes to try in your own kitchen.

Bass Recipes Cooking Tip: Soak your bass or bass fillets in milk for a few hours before cooking. This will remove the fishy taste from the meat.

Baked Bass

This is the easiest of the bass recipes to make.

Ingredients

- ✓ 2 bass fillets
- ✓ 2 onions, sliced
- ✓ Salt to taste
- ✓ 1 oz. red wine
- ✓ butter
- ✓ garlic salt to taste
- ✓ black pepper to taste
- ✓ 1 lemon

Directions

Place fish on large piece of well buttered heavy foil. Put onion slices around fillets. Sprinkle well with garlic salt, salt and pepper. Add wine. Squeeze lemon over fish.

Wrap fish in foil, securing ends tightly.

Bake in a 450 degree oven for 30 minutes on one side. Turn and bake 15 minutes. Be careful when opening the foil do to steam.

Pan-Fried Whole Bass

Ingredients

- 4 whole fresh Smallmouth Bass cleaned with head and tails removed
- Bacon drippings
- Corn meal
- Salt and pepper to taste



Directions

Place bass in a salt water bath, soak for 20 minutes.

Wash and rinse in cold water. Pat dry with paper towels.

Coat the fish lightly with bacon drippings. Roll in corn meal. Dust inside cavities with salt and pepper.

Heat bacon drippings in a cast iron fry pan. Drippings should be 1/4 – 1/2 inch deep and hot enough to brown a 1 inch cube of bread in 2 minutes (no hotter).

Cook fish until it is browned on one side, about 4 minutes, then turn and brown on the other side. Drain on paper towel before serving.

<http://www.lakefishingtechniques.com/great-largemouth-and-smallmouth-bass-recipes/>

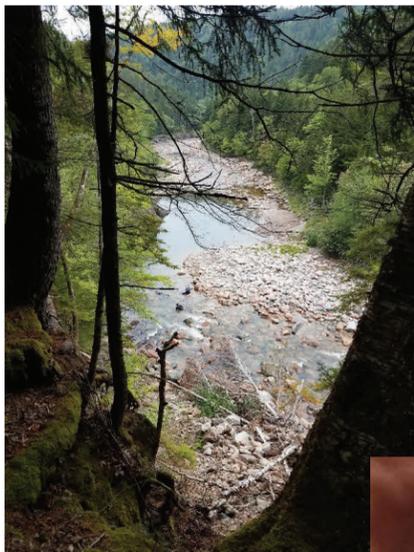


Swimming with Salmon... by Cara O'Donnell

What better way to understand salmon populations than to swim in clear, cold salmon pools in the month of September?

This summer has been a year of many firsts for the water crew; assisting on a project to survey salmon populations tops the list. Over the past year HBMI has been working to bring together US and Canadian federal agencies to discuss the future of Atlantic Salmon within the St. John (Wolastoq) watershed. A first step is to assess the salmon population in the Meduxnekeag Watershed.

Electroshocking data collected in August 2017 in the Canadian portion of the watershed found salmon parr and fry (young stages of salmon life) in 3 of the 4 sites sampled. This news breathed hope and gave new direction to our Natural Resources Department. Our next steps will include a more in-depth assessment of the salmon within



Above - Big Salmon River



Right - Jenna Matthews holding a young sturgeon at the Mactaquac Biodiversity Center

Below - Salmon board at hatchery



our system to determine what stocks are left and how to proceed with our planned salmon restoration projects.

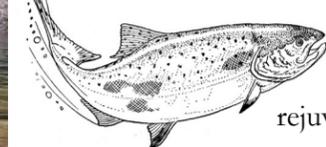
In an effort to understand what kinds of Atlantic Salmon restoration efforts are underway in Canada, our water resources crew traveled to the Big Salmon River to work with Canada's Department of Fisheries and Oceans (DFO) for a day on population assessment via snorkel surveying.

We also met with field crews from Fort Folley Mikmaq First Nation, and Mikmaq Conservation Group. They discussed with us the multiple ways to assess salmon, including running smolt wheels during the spring, using tags inserted in the salmon to understand fate and movement, and electroshocking methods. Our crew is energized and looking forward to doing amazing work on the Meduxnekeag and collaborating with groups in the St. John Watershed.

As part of our research, the water crew took a tour of the Mactaquac Biodiversity Centre and Fish Hatchery in New Brunswick. We were able to see first-hand how salmon gene-banking projects function, and the process of moving salmon and other fish species around the Mactaquac Dam.

Though the gene banking project has been successful enough to keep some salmon in the river it has not succeeded in creating a self-sustaining population.

The St. John salmon stocks are on life-support with assistance from the hatchery. Atlantic salmon face many threats to their existence including dams, over-fishing and threats at sea. The Natural Resource crew will continue to explore avenues for salmon to rejuvenate in the Meduxnekeag.



Left - snorkel surveying in Big Salmon River



Floods, droughts, hurricanes, tornadoes, what next?!

What kind of weather extremes are in our future in northern Maine? Recently, the Water Resources crew attended a Climate Change Adaptation training sponsored by the University of Northern Arizona and the Institute for Tribal Environmental Professionals (ITEP) to discuss our climate future and how we can become ready and resilient to adapt to the coming changes.



The magnitude of these changes depends on how quickly 'we', the collective population of the planet, take steps to reduce our greenhouse gas emissions a few scenarios lay before us.

Temperatures in our region are expected to rise between 3° - 10° F by the end of the century, thus extending the summer season by a few weeks on both ends. We can expect

later ice-set and ice-out on the lakes, cooler and wetter springs, and warmer night time low temperatures.

Some of these trends are already being noticed in our area. We are getting fewer snow storms and more rain events through out the winter months. Some folks say they enjoy less snow in the winter, but less snow accumulating in the winter means less water in the lakes, ponds, and rivers throughout the summer months, resulting in drought conditions like we are battling this year.

In the coming months we hope to begin working on an adaptation plan for HBMI. Please call us or come in to share stories about the natural resource issues you care about the most.



(left) Jenna Matthews (left) and Sam St. John at the ITEP Climate Change Adaptation Training held at UMPI in August



Word Search Puzzle

Find the English & Maliseet Fish in the Puzzle

English	Maliseet
Fish	Nomehs
Fish Net	Ahp
Fisherman	Amewin
Gaspereau	Siqonomeq
Meduxnekeag	Metahsonikek
Salmon	Polam
Smelt	Somelts
Smoked Fish	Somukpis
Spawn	Wosokawan
St. John	Wolastoq
Sturgeon	Pasokos
Trout	Skuhtom

Q S I Q O N O M E Q W E R T F Y
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