HBMI Natural Resources Department

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from HBMI Natural Resources



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Toqakiw/Puniw 2016 (Autumn/Winter)

Brenda Commander - Tribal Chief Susan Young - Editor





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Skitkomiq Science Camp & Fall Teen Fast

Over a dozen youth participated this year. A number of professionals came to share their knowledge of environmental topics such as climate change, tree identification, cultural archeology, fish ecology, and big-game biology. Activities revolved around cultural values and included crafting, processing sweet grass, singing, prayers, and smudging. Favorites activities included flipping canoes and learning to turn them right side up in Drews Lake and the end-of-camp celebration at Wilderness Pines.



Above - Viewing animal pelts as part of big game biology session *Right* - picking sweet grass **Below** - Emily Shaw and Skylar Flewelling erecting a fasting lodge









We held our second Skitkomiq science camp for tribal youth August 22 to 25.



Flipping canoes on Drews Lake

A Teen Fast/Naming Ceremony led by elder Imelda Perley was held on October 7 to 8, 2016 with participants of all ages, from 9 years to 40. Both the science camp and ceremonies were designed to help tribal youth strengthen their connection to their environment and culture, foster nurturing towards mother earth, and increase their interest in natural resources and environmental sciences. With major



issues such as climate 💦 change and environmental sustainability looming ahead, our youth will be the ones charged with merging culture and science to find solutions for these problems.

We will keep Skitkomiq and the Fasting/Naming ceremony going as long as funding will allow. If you are interested in either of these events as a youth or volunteer please feel free to contact the Natural Resources staff at any time 207.532.4273.

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Metahksonikqewi Puskonikonhkuk Meduxnekeag Overlook Tribal Cemetery



We are pleased to announce that the tribal cemetery is now officially open and burials have begun. The burial crew is led by Bill Tomah along with Doug Sabattis, Wyatt Folsom and Joe Tomah. Currently, arrangements are being made with the families of deceased tribal members to have cremated remains buried in the cemetery.

We're also pleased to announce that the tribe has been awarded a \$250,000 grant from the Dept. of Veterans Affairs for the creation of a veterans section within the tribal cemetery. When completed, this will be the first tribal veterans cemetery east of the Mississippi. The new veterans sections will have a granite wall with 5 bronze service medallions representing the United States Air Force, Army, Coast Guard, Marines and Navy. It will also have a paved assembly area with 3 flag poles (lit with solar lights) for the United States, Maliseet and POW/MIA flags. The veterans section is scheduled to be completed in time for Native American Veterans Day, June 21, 2017. We'll keep you posted this project moves forward.

If you have any questions about the tribal cemetery, please feel free to contact members of the Tribal Cemetery Commission; Bill Tomah (Chair), Rose Tomah, Dolores Crofton-MacDonald, Margaret Sabatis, Brenda Commander, and Doug Sabattis or Superintendent Susannah Wright.



Audubon's Guide to Winter Bird Feeding

More than a hundred bird species supplement their natural diets with foods offered at feeders. They often rely most heavily on feeders in winter, when food is scarce. Additionally, some species will take advantage of backyard refueling stations during spring and fall migrations; others will stop by while nesting during the summer. Selecting a specific feeder design and a variety of foods can set the table for a greater diversity of birds. Choosing more than one will prevent crowding at your backyard buffet. Keep birds coming back with three essential ingredients: the right mix of quality seed and other foods, a source of fresh water for drinking and bathing, and ample cover from native plants. Follow this guide and watch the birds flock to your feeders.

1. Tube feeder - If you hang just one feeder, this should be it. Choose a model with metal ports around the seed dispensers to deter squirrels. Hang it at least 5 feet off the ground, and 3 feet (or 30-plus feet) from a window to avoid bird collisions.

Seed types: black oil sunflower, mixed seed, safflower, peanuts

Birds: Chickadees, titmice, nuthatches, goldfinches, siskins, purple and house finches

2. Hopper feeder - With these feeders you can keep an abundant supply of seed dry and ready for visiting birds. The weight of the arriving birds triggers the release of seeds. Position this feeder on a pole about 5 feet off the ground, or hang it from a tree branch.

Seed types: safflower, sunflower, cracked corn

Birds: attracts all the species that visit tube feeders, plus larger birds like cardinals, jays, grackles, red-winged blackbirds

3. Suet feeder - Hang suet in mesh onion bags or purchase a cage feeder. You can make your own suet "pudding" by grinding suet and adding seeds. Create homemade suet feeders by packing the mixture into the crevices of large pine cones.

Seed types: suet and bird puddings

Birds: woodpeckers, titmice, nuthatches, chickadees; occasionally wrens, creepers, warblers

4. Thistle feeder - These feeders make seed available only to small-beaked finches. Hang them from a tree or place on a 5-foot pole near other feeders.

Seed types: nyjer (a.k.a. thistle) seed

Birds: goldfinches, redpolls, pine siskins

Toqakiw / Puniw 2016

Above Left - Spirit names Above Right - Community sharing the Sacred Fire at the Recognition Day Field Right - Amy Joseph and Nalani Alvarado building shelter Below Right - Cara O'Donnell (left) presenting information about Science Camp at the annual EPA Tribal Environmental Conference **Below Left** - More spirit names Left - Tawoma Martinez making blueberry soup for fasters

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Images from the Skitkomiq Teen Fast









Native Range



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

Hophornbeam Ostrya virginiana Ostrya = a tree with hard (dense) wood virginiana = of Virginia

Habitat: Hophornbeam is found growing on a wide variety of soil types and has a

pH tolerance range of 4.2 (very acidic like blueberries) to 7.6 (alkaline like wild ginger). It is found growing on dry mesic (medium moisture) sites and sometimes on well drained river floodplains.

Natural History: Hophornbeam is a small tree averaging 6"- 10" in DBH (diameter at breast height 4.5 feet above ground). A record specimen in Michigan was 3 feet in DBH and 73 feet in height. Maine's record is a tie between two trees; one in Livermore Falls and one in Pownall. (77 and 70 inches in circumference and 63 and 67 feet tall respectively). In general, it is only a minor

component in most forest types. The fruit is bladder-like and encloses a nutlet. The hop in hophornbeam refers to the fruit that resembles the fruit of the hops (Humulus lupulus) vine, a common ingredient in beer. It is often planted as an ornamental, but is very sensitive to pollutants.



Above -Hophornbeam leaves Right - bark

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Special Uses: The wood of hophornbeam is very dense and is prized for use in tool handles, fence posts, and in yokes for oxen. Its density and high resistance to compression makes it an excellent Bow (archery) wood. The Mic-Mac Indians of Canada once had an industry making hockey sticks from hophornbeam, back when hockey sticks were made of wood.

Edibility: Not considered edible for humans, it is a preferred food for ruffed and sharp-tailed grouse and wild turkey. It is also eaten by bobwhite, cottontails, white-tailed deer, ring-necked pheasant, purple finch, rose-breasted grosbeak, red and grey squirrels, and downy woodpeckers

Note: When collecting any wild plant species for medicinal or edible use 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: Excellent Bow wood and tool handle wood.

Ecological Values: Buds and catkins are an important food source in the winter for some birds, particularly the ruffed grouse (or partridge) Bonassa umbellus.

Literature Cited

Silvics of North America Vol. II Hardwoods, USDA, Handbook 654 **USDA** Plant Files Forest Trees of Maine, Maine Forest Service Department of Conservation Foster, 1990, Medicinal Plants, Peterson Field Guides. Wilbur, 1990, Indian Handicrafts, The Globe Pequot Press.

Bureau of Land Management Survey

This October a survey team from the Bureau of Land Management (BLM) came here to perform a cadastral survey on some of our tribal trust lands. So just what is a cadastral survey?

U.S. DEPARTMENT OF THE INTERIO BUREAU OF LAND MANAGEMENT According to the BLM website, "The term cadastral survey refers to the official boundary surveys performed under the authority of Title 43 of the United States Code (U.S.C.). Cadastral surveys in general create, mark, define, retrace, resurvey, and reestablish the boundaries and subdivisions of the public lands of the United States. By Title 43 U.S.C., the BLM is required to perform cadastral surveys on all Federal interest and Indian Country lands. In addition to performing official surveys on the public lands administered by BLM,

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Cadastral Survey also performs surveys for other Federal Agencies... Forest Service, Navy, Air Force, National Park Service, Fish and Wildlife Service, and the Bureau of Indian Affairs."

This current survey work, funded through the BIA, is focused on the Folsom, Henderson, McCarthy and McCarthy 2 parcels. Previously the BLM completed cadastral surveys on the Housing, Administration, North Road and Pond Parcel.

For more info about the BLM and cadastral surveys check out

http://www.blm.gov/wo/st/en/prog/more/ cadastralsurvey.html

Wolastoq/St. John International Watershed Summit

A second transboundary watershed summit on the Wolastoq (St. John) River took place on November 1 - 2, 2016 in Fredericton NB, hosted by Kingsclear First Nation. This summit continued the conversation between the Maliseet Nations in Maine and New Brunswick, and US and Canadian federal agencies around our common goals of restoring migrating Atlantic salmon to this watershed and improving and protecting water quality and fish habitat.

Our Meduxnekeag River and its watershed are part of the international Wolastoq/St. John River Watershed. The St. John River is located in the State of Maine and



Patrick Polchies -Kingsclear speaking on the impact of the Mactaquac Dam.

From left, Kevin Chu (NOAA), Amber Giles (MNCC), Sharri Venno (HBMI), Kathryn Parlee (ECC), Aruna Jayawardane (MNCC), Terry Melanson (DFO), Patrick Polchies (Kingsclear First Nation)

genetic diversity of Inner Bay of Fundy Atlantic Salmon populations.

Within sight of the dam, Patrick Polchies of Kingsclear First Nation talked about the historic impacts of the Mactaquac Dam on Kingsclear as well as how the four options NB Power has proposed for dealing with the structural problems at the dam will affect their community.

Participants in the summit included representatives from HBMI, Kingsclear First Nation, Tobique First Nation, Madawaska First Nation, US Environmental Protection Agency, (EPA), US Army Corps of Engineers (ACOE), US Fish &

Wildlife Service (FWS), International Joint Commission (IJC), US Geological Survey (USGS), Bureau of Indian Affairs (BIA) Eastern Area Office, Maliseet Nation Conservation Council (MNCC), US Public Health Service, Global Affairs Canada (GAC), Fisheries & Oceans Canada (DFO), Canadian Rivers Institute (CRI), Environment and Climate Change Canada (ECCC), Canada Environmental Assessment Agency (CEAA), St. Thomas University and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service.



the provinces of New Brunswick and Quebec, Canada and serves as part of the US/Canada border.

As at the first summit in April 2016, a wide range of topics were discussed, including tribal sovereignty and culture, fish passage, NB Power's Mactaquac

hydro-electric dam in Canada, the International Joint Commission and more. A tour of the Mactaquac Biodiversity Center showcased efforts being made to re-establish native fish populations and maintain the



Salmon eggs at the Biodiversity Center. Each tray holds approx. 4000 eggs



Conroy Lake Fish Passage Project

Fish passage on a small stream has been restored at Conroy Lake through a joint project between HBMI's Natural Resources and Roads Programs and the Natural Resources

Conservation Service (NRCS). This project replaced a poorly designed culvert that went under the West Conroy Lake Road. As you can see from the picture at right, this culvert is far too small and was set far too high to allow for natural stream flow and fish passage.

This culvert replacement project, designed by Engineer Heidi Bunn of the Natural Resources Conservation Service (NRCS), and was installed by Bill Dunbar of Dunbar Construction in late August 2016. The project, replaced this undersized hanging culvert with a bridge thereby allowing natural stream flow. We hope to see an increase in smelt runs and populations of other aquatic species soon.



Bridge under construction

Underside of bridge showing return of stream flow

GLOOSCAP TURNS BAD INTO GOOD

As retold by Elder Charles Solomon of Kingsclear and Luke Simon of Big Cove

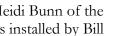
When Glooscap came in from the sea, he was riding his canoe, which was made of stone. He ran aground near what we now call St. John. He had been chasing two giant beavers. He was trying to stop them from raising any trouble. He tried to stop them right there, where the Reversing Falls is today. He built a dam so they couldn't go up the river. But still, the beavers managed to get past Glooscap, and travelled up the "Beautiful River", which is now called the St. John River.

Glooscap took two stones and threw them at these beavers. One stone landed a long way up the river and became Grand Falls.

The other stone hit the beaver. It landed in a rocky area, which is now called Plaster Rock. To this day, you can still see the red clay on the river bank. They say that this comes from the blood of the beaver. Glooscap often used animals who were bad to make something good. He paddled up and down this Beautiful River (St. John) many times.

Even near Kingsclear where Glooscap came up, long before the Mactaquac Dam was built, he used the ledges to hold on to when he fell. Glooscap even left his image on those rocks. And where he left his snowshoes is where they were transformed and turned into The Snowshoe Islands.

These are all sacred places. Even the little people lived near the village of Kingsclear.









Completed bridge





Skitkomig Nutacomit

Togakiw / Puniw 2016

Local Environmental Observer Network

For the last two years, HBMI Natural Resources Staff have been hearing about an online Climate Change tracking project called the Local Environmental Observer (LEO) Network, created and run by and for Indigenous governments. LEO staff have shared what they do and progress they've made at annual conferences between Tribes in New England and the US Environmental Protection Agency's Regional Office in Boston.



From LEO's website:

http://www.aoos.org/alaska-community-based-monitoring/what-are-we-observing/leo-network/

The Local Environmental Observer (LEO) Network is an organization of tribal professionals in Alaska and Canada who share information about environmental events where they live, post observations on public maps and coordinate with technical experts to identify appropriate actions. The LEO Network documents time and local specific events and encourages communication between communities, academic institutions and resource agencies. The purpose is to increase understanding about climate and other drivers of change and to develop appropriate adaptation strategies. To achieve this, LEO applies traditional knowledge, western science and modern technology to form a robust and effective environmental health surveillance system. The LEO Network is hosted by the Alaska Native Tribal Health Consortium, Center for Climate and Health and is supported by the Environmental Protection Agency and Landscape Conservation Cooperatives.

The LEO Network is composed largely of tribal environmental, natural resources and health professionals who share observations about events that are unusual or unique and locally relevant. The network has compiled a database of observations on topics including extreme weather, floods, erosion, ice changes, permafrost thaw, invasive species, infrastructure damage, environmental contamination, and changes in the health, range, and behavior of fish, insects, birds and wildlife.

So what could that mean for us?

Recently EPA announced it would expand their support of the LEO program to develop a network hub at Northwest Indian College in Bellingham, Washington and promote the creation of hubs at Tribal Colleges across the lower 48 States. A LEO network can include tribal members as local observers who share traditional and local on-the-ground knowledge about unusual animal, environmental and weather events. Sharing observations and reporting changes in the local environment can help us all adapt to these local changes. As EPA's plans develop we'll report back with more information.



Audubon Guide to Winter Bird Feeding (cont'd from page 2)

5. Ground feeder

A simple screen-bottomed tray that typically sits several inches off the ground or on a deck. Some have covers to keep out snow; others may have wire mesh to keep out squirrels and large birds like crows. Place at least 10 feet from trees or shrubs to give birds a chance to escape predators.

Seed types: mix of cracked corn, milo, millet; also sunflower seed, mixed seed, wheat, oat Birds: doves, juncos, sparrows, towhees, goldfinch.

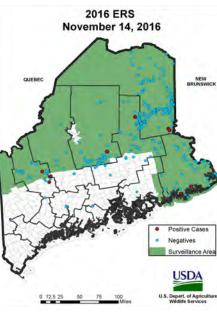
http://www.audubon.org/magazine/november-december-2010/audubon-guide-winter-bird-feeding

Rabies in Maine



Earlier this year, portions of Aroostook County were seeded with Oral Rabies Vaccine (ORV) in an

attempt to stem the spread of rabies in wildlife populations, especially raccoons, foxes and coyotes. A portion of the project area was located near tribal lands. Since 1997, Wildlife Services (WS) a program within the US Department of Agriculture's Animal and Plant Health Inspection Service (USDA APHIS) has been working with local, state and federal governments to manage rabies in wild carnivore populations. This year the ORV was distributed from low flying aircraft over target areas in southern Aroostook County. The baits, consist of a fishmeal coated sachet (about the size of a catsup package) or an uncoated sachet encased in a fishmeal bait. When the animal bites into the bait, the rabies vaccine comes into contact with the animal's mouth and throat thereby administering the vaccine. As the number of vaccinated animals in the population increases the ability to spread rabies in the raccoon population decreases.



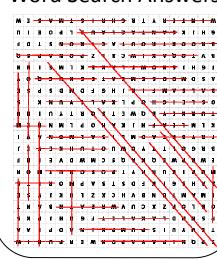
According to Jesse Morris, Wildlife Services Rabies Biologist, "We did the oral rabies distribution on August 16th in Maine, and distributed approximately 132,000 vaccines from 5 aircrafts. One month later, five WS employees set out nearly 250 live cage-traps through the entire zone stretching from Mars Hill, south to Houlton, and as far west to Oxbow. The results for animals captured and sampled are 134 raccoons, 6 striped skunks, and 2 fishers. All target animals were weighed, sexed, ear-tagged, and blood collection was taken from each animal. Serology from these animals have been sent in to the lab to evaluate antibody levels to the rabies virus.

For our enhanced rabies surveillance (ERS), we currently have collected 603

specimens since January 1, 2016. The ERS program relies heavily on networking with many federal, state, tribal, and local programs within the State. The increased networking that started in 2014 by USDA WS – Maine have resulted in higher priority and better quality samples (without exposures to humans or domestic pets). These specimens include a variety of different methods, such as strange-acting, road-killed, nuisance, and recreationally trapped animals. All specimens collected for the ERS program are tested using a procedure called Direct Rapid Immunohistochemistry Test (DRIT) out of the Augusta office. All DRIT positives sampled are shipped to the lab to be confirmed by DFA testing. Thus far, 9 positive cases have been confirmed and all but two have been from our networking efforts throughout the surveillance zone."

Wildlife Services currently has two positions available serving the greater Houlton area - Biological Science Aid and Biological Science Technician. The application period opens December 1, 2016 and closes December 16, 2016 so you need to act fast if this is something that interests you. Please check out our Facebook page for the job announcement, send an email to ogs1@maliseets.com asking for the complete job announcement or contact Robin Dyer, State Director Wildlife Services at 207-629-5181.

Word Search Answers





Earlier this year, HBMI signed an MOU with the United States Department of Agriculture (USDA) Animal Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ). This document makes it easier for the PPQ to exchange information with the tribe on monitoring, detection and management of the Emerald Ash Borer (EAB)-(Agrillus planipennis). This agreement will also allow for rapid response, quarantine and control of EAB if it is ever detected on or near Maliseet Tribal Lands.

<u>Emerald Ash Borer (EAB)</u> <u>Memorandum of Understanding</u>

(MOU) Prepared by Matthew P. Edberg HBMI Nat. Res. Specialist

