



Photo: Martin Neptune

Penobscot Indian Nation

Pəskehtək^wok

Joining of The Branches

Summer 2004 ~ Issue 2

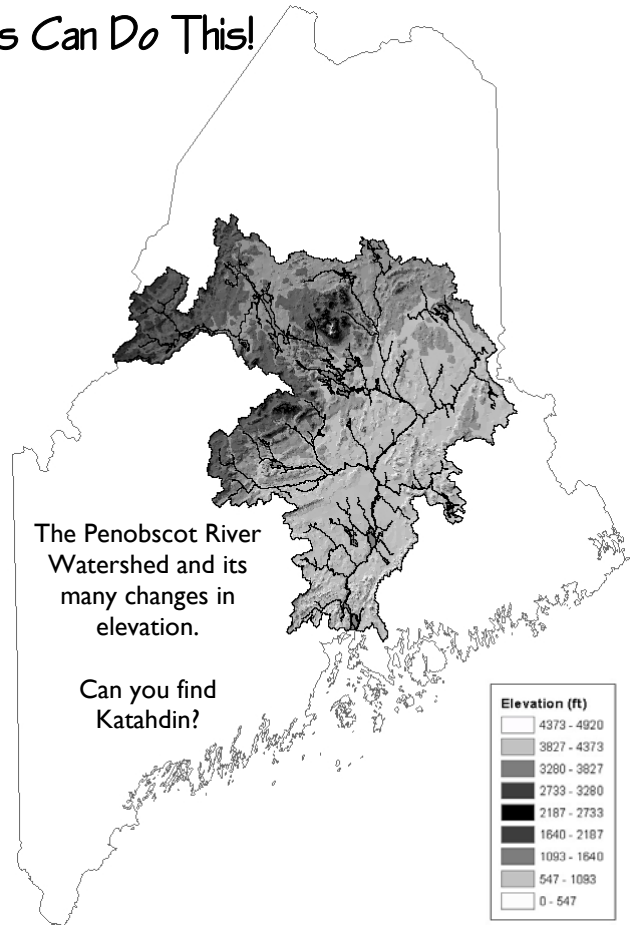
Not All Tribal Programs Can Do This!

| Phone Extensions | |
|---|------|
| Air Technician | 7340 |
| David Almenas, Forest Technician | 7335 |
| Ron Bear, Forest Technician | 7335 |
| John Banks, DNR Director | 7330 |
| Rhonda Daigle, Water Quality Monitoring Program Coordinator | 7326 |
| Clem Fay, Fisheries Manager | 7362 |
| Yvonne "Cookie" Francis, Administrative Assistant | 7331 |
| Tim Gould, Game Warden Supervisor | 7395 |
| Dan Kusnierz, Water Resources Program Manager | 7361 |
| Frank Loring, Game Warden | 7392 |
| Josh Loring, Game Warden | 7392 |
| Jason Mitchell, Water Resources Field Coordinator | 7381 |
| Eric Nicolar, Air Quality Manager | 7336 |
| Jim Pardilla, Game Warden | 7392 |
| Ed Paul, Game Warden | 7392 |
| Jan Paul, Water Resources Field and Lab Technician | 7382 |
| Angie Reed, Water Resources Planner | 7360 |
| Russ Roy, Forest Manager | 7339 |
| Dennis Stevens, Forester | 7337 |
| Binke Wang, GIS Specialist | 7341 |
| Water Resources Trainees | 7363 |

What not all Tribal programs can do is computerized mapping using a Geographic Information System (GIS). However, the DNR has the privilege of having a very well-qualified staff member, Binke Wang, to do this work. Binke is originally from a town near Xi'an, in China's province of Shaanxi and has been living in the US and Canada since 1994. Since he joined our staff in 2001 he has worked alone and with many other staff to greatly enhance our map database and produce some very useful maps.

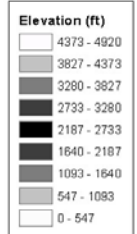
The map shown here is the result of using three-dimensional elevation data to reveal the beautiful hills and valleys of the Penobscot River Watershed. Maps like this provide a very different visual perspective on the land - a watershed perspective. Our software also allows Binke to perform spatial analysis and network modeling to derive sophisticated data layers and information used for forest resources planning, management zoning, water quality monitoring and water resource modeling.

Please come into the DNR office and see the collection of Tribal Land maps that Binke has provided for community members to take home with them. The collection is hanging in containers on the wall and includes: a single map showing all tribal lands distinguishing between reservation islands and waters, fee lands and trust lands, individual maps of each parcel, and a detailed map of Indian Island. In addition to the collection of small maps you can



The Penobscot River Watershed and its many changes in elevation.

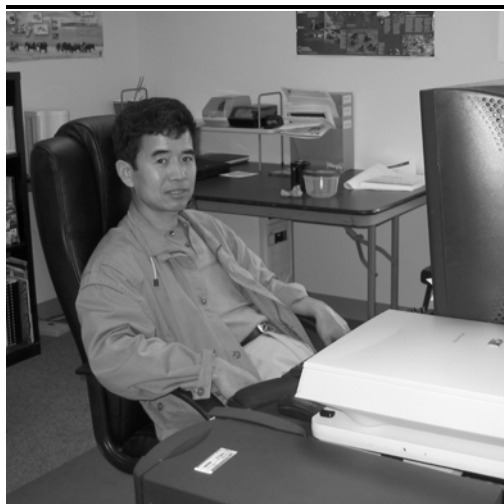
Can you find Katahdin?



HAVE YOU RETURNED YOUR POND SURVEY YET?

We are pleased to have gotten over 30 responses so far - thank you! And we are still interested in hearing from folks. So if you haven't filled out the survey that was delivered with the Community Flyer about a month ago it's not too late.

If you need another survey please stop by the DNR office.



also see the poster-size maps that were created on our large-format printer. Because we have the capability to print on 42" wide paper there are a wide range of products that we can create. So stop by - learn - get some maps! We would love to see you.

Left: Binke's usual spot - in front of his computer - always ready to help us make any map that we need.



Mountain Brook, in the Mattamiscontis Lake area, will be getting a new bridge this summer. Repairs will make the bridge closed for about a week and there will be signs posted when this is to begin.

American Eel ~ Species Profile

Like the Atlantic salmon that has been so highlighted in the news over recent years, the American eel (*Anguilla rostrata*) is a native, migratory fish of the Penobscot River that was very important historically to the Penobscot Indians. The Penobscot word for eel is "Naha 'mu". And, according to Frank Speck's book "Penobscot Man", the "Eel Clan" (Neptune family) is one of the oldest clans in Penobscot history. Speck also describes the unique methods that Penobscot Indian families used to gather eels for subsistence, which, among others, included preparing an extract from local plants to use as poison to stun the eels living in a stream for subsequent capture.

Unlike salmon and other "anadromous" species, which are born in freshwater, migrate to the ocean to grow into adults, and then return to the freshwater again to spawn, eels use an opposite life cycle, termed "catadromous". Eels are born in the Sargasso Sea, an area of the Atlantic Ocean near Bermuda where sargasso weed, a floating marine plant, flourishes. After the eggs hatch, the young "larvae" drift northward along the coast with the Gulf Stream currents, entering tidal areas of nearly every river and stream that drains into the ocean. After arriving in these tidal zones and at about 1 year of age, the young transform from larvae into the stage known as "glass eels". They are called this because they are nearly transparent, except for their eyes and their spinal cord. They are about 3-4 inches long at this point. Then, over a period of several weeks in the tidal zone, the glass eels become pigmented and

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DNR "Spruces" up the Place

You may have noticed that the once barren landscape around the Sapiel Building is now beginning to come alive. We are embarking on a journey of creating a native plants demonstration area that we will continue to plant with trees, wildflowers, flowering shrubs and native grasses. Dan Kusnierz got the seed of this idea from the folks at the Natural Resources Conservation Service (NRCS) and helped it grow with grant money from the Environmental Protection Agency (EPA). A significant aspect of this project's development has and will continue to come from the help of Bonnie Newsom, Director of Cultural and Historic Preservation. Bonnie helped us find Tami Connolly to do the landscape design and will be assisting with the plaques that will identify the plants and their uses in both Penobscot and English. Where appropriate we will utilize native plants that are of traditional importance to the Penobscot Nation. It is hopeful that sufficient quantities of plants can be grown within the demonstration area to serve as a plant nursery to use for other projects.

As the landscaping evolves and matures it will also begin to serve as a way to slow down the rain that falls directly onto the ground as well as running off the roof of the building. Slowing down the runoff will allow the rain to soak into the ground and not carry with it any non-point sources of pollution that can ultimately get into the river.

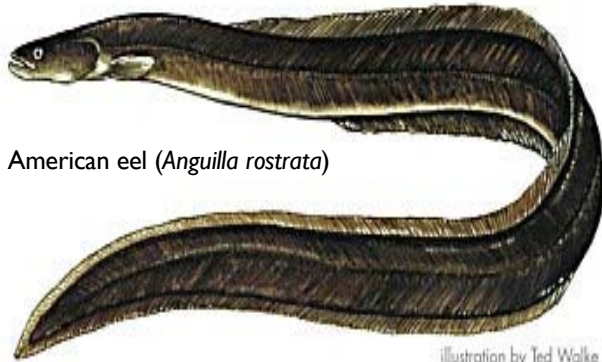
At this point we have two Spruce, one Cedar, one Sugar maple and one Dogwood. In the future we will also have White birch, Cinnamon fern, Ostrich fern, Yellow root, Lily of the valley, Pussy willow, Lady fern, Joy-pye weed, Milkweed, Labrador tea, Common witchhazel, two varieties of Highbush blueberry, and Nannyberry. Come over once in a while and watch the progress.

Right: Jason Mitchell puts stakes in the ground to stabilize a cedar tree planted on the northwest corner of the building. Stabilization will keep the trees straight and help with root development.



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are called "elvers". Elvers then begin migrating further upstream into freshwater during their first summer, and this general "upstream trend" continues throughout their freshwater life until they are mature.



American eel (*Anguilla rostrata*)

illustration by Ted Walker

Young eels don't "decide" what sex they are going to be until about age 5. At

that point, some eels become males and remain in the river itself, maturing rapidly and rarely growing larger than 20 inches in length. They are called "yellow eels". The rest become females and continue migrating up the river and into headwater lakes, where they live another 10-15 years prior to maturing. Females grow much larger, up to 5 feet in length, and change color when they mature, their sides and belly becoming silvery (thus they are often called "silver eels"). Then, in the fall, and usually in response to rainfall and increased stream flows, the mature males and females migrate to the ocean together, then out to the Sargasso Sea, where they spawn together in large groups and then die.

In addition to their importance historically to Penobscot Indians, and their commercial importance in more recent times, eels are extremely important from an ecological perspective. They represent one of many important historical connections between the ocean and coastal rivers, and are a critical species in the food web of watersheds like the Penobscot River, both in terms of what they eat, but also, what eats them (for example, eagles and striped bass!). If you wish to learn more about this unique and somewhat mysterious and elusive fish species, please contact Clem Fay of our staff, at 817-7362, or pinfish@penobscotnation.org.

Nahmun's River Reflections

This is the last episode of this story by Butch Philips.

Their protests could not stop the dams and mills or the increasing population along the river. With this change came a change to the way of life of the People and to their traditions as well.

In the past, when the People needed help, they summoned Gluscabe, their cultural hero, for help. But Gluscabe knew he was no match for powers of the towns, industries, and the State. Gluscabe went away also. The people then appealed to the Legislature to help stop this destruction to the river and to their way of life. However, their Indian voices fell on deaf ears because the Legislature believed that the river, like the people, had been conquered by the settlers. The people went away from the river. The sacred circle of life was broken.

A sudden splash broke the day dream and caused Nahmun to sit upright. The eagle had dived into the river and arose with a small pickerel. Watching the eagle fly to his perch high in the oak tree, Nahmun started casting his lure once again. The eagle had reminded him of another change that was taking place on the river. A change for the better. Nahmun's father had told him about the federal programs that initiated the clean up of the river. The Pollution Control Act of 1956; the Anadromous Fish Act of 1960, and the Clean Water Act of 1972 had provided the incentives to begin the restoration of the Penobscot and the other rivers.

With the actions and programs of the State and various user groups, the river started to cleanse itself.

Finally people were becoming aware of the serious destruction to the river. They came to understand what the Native People had been telling them for so long. "If you cause harm to Mother Earth, you will eventually cause harm to mankind." A serious effort had begun to reverse the damage to the river. The Pollution Abatement programs drastically reduced the amount of pollutants in the river. Laws were passed to regulate the use of certain chemicals and

regulations passed to stop damage to the streams. The dams were improved to enhance fish passage upstream and downstream. Logs no longer jammed the river as the river drives were curtailed. In 1975, the Penobscot Nation became a federally recognized tribe and through grants became very involved in the restoration effort.

The beaver, eagle and osprey came back and the People came back to the river also. Efforts are underway to remove two dams and to improve another so the sea-run fish can once again enter reservation waters on their way to their ancient spawning areas. The young Indian man thought how happy the ancestors must be to see the river cleansing itself and to see the people once again traveling up river to hunt fish and gather plants.

Nahmun thought to himself. How can the ancestors be happy. They remember when unknown diseases killed so many of our people nearly four hundred years ago, and there are still unseen poisons in the river that are causing suffering for the People. Dioxin, mercury and cadmium are in the flesh of the fish and game that cause sickness and death to the people. Nahmun held up a two pound bass for a few moments before releasing it. He thought about the present dangers that still exist from eating the fish from these waters. There have been great strides to restore this river and we can be proud of the many accomplishments, but until we can safely eat the fish again as our ancestors did, the precious Circle of Life of this river will not be completed.

Nahmun carefully released the bass back into the river and as it swam away, he said to the fish, "Woli Woni" (Thank You). And all my Relations, "Woli Woni."