



Photo: Martin Neptune

Pəskehtək^wok

Joining of the Branches

Winter 2004 ~ Issue 3

Penobscot Indian Nation
Department of Natural Resources

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~ ALERT ~ CORRECTION ~

We apologize for giving you incorrect information about the Old Town recycling program in the last newsletter. But here we are to correct that mistake.

Indian Island residents are able to bring recyclables to the Old Town transfer station **WITHOUT** a permit, for **FREE**, at any of the times that they are open.

The hours of operation are from 7:30am - 5:30pm on

- Tuesday
- Wednesday
- Friday
- Saturday

STAY TUNED

Old Town transfer station operation and hours will be changing soon. We will keep you posted!



Putting on the Winter Whites: Weasels

By Angie Reed

A few weeks ago, as I was returning from my lunch-break walk, I had the privilege of seeing one of these little guys run down the cemetery road toward Nick Dow's yard. He had seen my dog and I and decided that going the other way would be much safer. It is only the second time I have actually seen one of these guys - and I am not sure whether he or she was a short- or long-tailed version. It was a great way to wind down my walk so I thought I would find some information to share with those of you who know as little about them as I do.

The Latin species name, *Mustela*, means "one who carries off mice," and all weasels are accomplished mousers. However, to reap the benefits of their small, dynamic world, the weasels can't afford to be picky eaters. The bill-of-fare includes chipmunks, ground squirrels, insects, small birds, frogs and snakes. Shrews form an important part of their winter diet. Though they occasionally eat fish, weasels are poor swimmers, paddling clumsily with their backs arched out of water. Weasels have an earned reputation as fierce, efficient predators that will attack animals several times their own size. A four-ounce weasel

can kill a four-pound rabbit.

The pelts of all three weasels are brownish and are replaced by a winter white coat that begins to appear by the first of November. The long-tail and short-tail sport a black tip on their tails; an attribute which may confound the striking accuracy of avian predators.

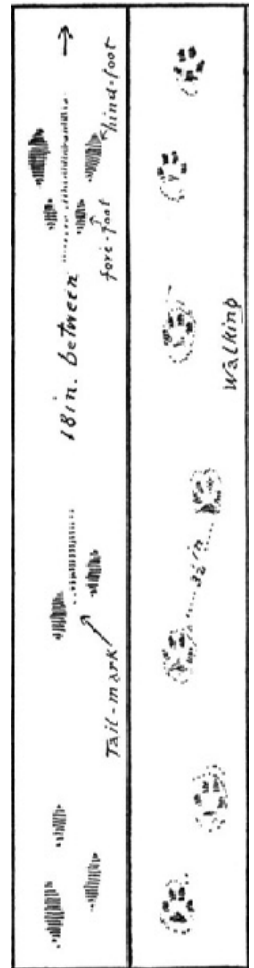
Weasels are easiest to see in winter when leaf cover is gone and a thin layer of tracking snow will show their whereabouts in the neighborhood. Weasels leave



staggered pairs of little footprints placed in a bounding gait fashion. The front feet come down and, as the front feet leave the ground, the hind feet come in immediately behind. Look for sudden right-angle turns in the tracks that often disappear beneath the snow and reappear at a considerable distance.

Weasels sexually mature before their first birthday. A typical litter of six or seven young is born each year and is cared for by both parents. Weasels reaching five to six years are regarded as fully mature. Individuals as old as 10 are considered ancient.

Most of this information was taken directly from www.wnrmag.com/stories/1998/feb98/weasel.htm#find. Check out this and other web sites for more information if you are curious. Happy winter!



Art. James Eric Francis

Antibacterial Spray

Many essential oils, such as the oils of lavender and thyme, are more antiseptic than phenol, the industry standard. Research is also showing that antibacterial plant oils may not cause drug resistance as could be the case with common chemical disinfectants. The essential oil-based spray, below, leaves a lovely, clean scent. It is a good choice, for example, to use for misting your cutting board after use.

Simple Solution: Lightly Lavender Antibacterial Spray

* 1 cup water

* 20 drops pure essential oil of lavender

Pour the water into a spray bottle. Add the lavender essential oil and shake to blend. Spray on the surface and let set for at least 15 minutes, or don't rinse at all.

Makes: 1 cup spray

Shelf Life: Indefinite

These tips come from www.care2.com/channels/lifestyle/home

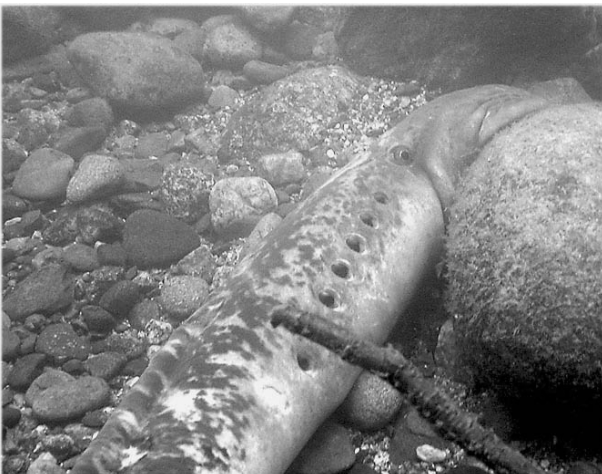
The Sea Lamprey: A Biological and Ecological Profile

Sea lamprey (Scientific Name: *Petromyzon marinus*) is one of Maine's most unique, and most misunderstood, native fish species. Its elongated body shape causes many people to think it is related to the American eel (*Anguilla rostrata*, featured in the Summer 2004 Issue 2 of this newsletter). Although both are thought to be, in terms of evolutionary origin, amongst the most primitive fish species that still exist today, these species are not really closely related. Part of the reason humans misunderstand this ecologically important fish is because they are parasitic during a portion of their life. If this species is ever to get the recognition it deserves it is necessary to understand: 1) the "damage" done by parasitism on other fish's lives is both natural and necessary, and 2) the ecological benefits they provide to other native species that are unrelated to their parasitic life stage

Maturing and adult stage lampreys in seawater do indeed "damage" or harm host fish, including Atlantic salmon, by their removal of fluids from the host body. Several lampreys may attach to the same fish and thus increase this parasitic burden. However, death of host fish due to lamprey parasitism is rare, and in most cases, they drop off the host after several months of feeding and then either find another host or begin their migration back to freshwater. Once adult sea lampreys reach freshwater, they no longer feed. In addition, the "transformed" juveniles mentioned to the right do not feed during their out-migration back to the ocean, although they may attach to a fish that is moving downstream simply for a temporary "free ride".

It is important to understand that this parasitic life style of adult sea lampreys is something that has co-evolved in balance with the other native fish species in its native range for thousands, if not millions, of years. And, as long as humans do not overly upset this balance (or introduce them into non-native habitats), the sea lamprey is in fact critical toward processes of natural selection and evolution of the other native fish species it parasitizes. Problems develop when sea lampreys are introduced, BY HUMANS, into non-native habitats, such as the Great Lakes.

Lampreys, along with other native migratory species such as shad and alewives, **benefit** ecosystems by cycling nutrients from the ocean to the river and back over the course of their life. They are attractive prey to a variety of ocean and river predators, including eagles, ospreys, herons, and gulls. Their early-summer nest building activities loosen compacted gravel in the exact same areas where adult Atlantic salmon and native brook trout will seek to build their gravel nests (or redds) later in the fall. When they die on the spawning grounds, their flesh is consumed by scavengers or decomposed by bacteria. The nutrients contained in their flesh, which originate from the ocean, enhance the growth and abundance of the organisms that live and feed there including macroinvertebrates that are an extremely important food source for juvenile salmon. Finally, their nest sites are often used by other native species as spawning beds, especially certain native minnow species like blacknose dace.



Beyond these ecological roles, lampreys possess several unique features that make them valuable toward certain human biological and medical research areas, such as neurological and spinal cord regeneration. They are also a prized food item in some regions of Europe.

All in all, it seems that sea lamprey should be highly esteemed and honored, rather than being maligned or ignored as most uninformed humans do today.

For more information on sea lampreys, please visit the website home.gwi.net/~fks/ksalmon.html and look for relevant links. You could also contact Clem Fay, PIN's Fisheries Manager and author of this article, at 207-827-7776, ext 7362, or email at pinfish@penobscotnation.org.

SEA LAMPREY LIFE HISTORY

The sea lamprey has a long and complex life history. Juvenile lampreys are born in riffle sections of streams and rivers and live burrowed in an area of softer river bottom for 4 to 8 years, filtering algae and plankton from the water column. Larvae gradually "transform" into a parasitic stage over a period of several months, and then migrate to the ocean. In the ocean, they spend between 18 and 24 months maturing to adulthood, during which they are parasitic on the blood and other body fluids of host fish. They have rasp-like teeth around their "oral disc", or mouth, which allows them to burrow through tough skin or scales and attach directly to the soft tissue of the host fish.

After maturation at 2-3 feet in length, adults migrate back to their rivers of origin in the spring. While they possess only a modest swimming ability, they are able to surmount swift currents, shallow depths, and even some dams, by "winching" themselves upstream with their suction type mouth. When they reach the headwaters of their home river in early summer, they collect small stones with their mouth and pile them in a shallow, high current riffle area, and then lay their eggs amongst the stones. Then, they all die within a few hours, usually right near the spawning site.