

# Encounters with the Wild Penobscot

by Cheryl Daigle  
Community Liaison/Outreach Coordinator



Penobscot River Restoration Trust. © 2006

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## Otters on the River (Part 2):

### Habits of the River Otter

In last month's column, I wrote of my unexpected encounter with a family of river otters on the Penobscot River near my home. Their reputation for being secretive seems at odds with other behavior that exhibits their curiosity and inclination toward play. They certainly did not appear to be bothered by my watching them, and their interest in me and my dog piqued my own curiosity. I wanted to know more about their habits, and to understand better how otter fit into the Penobscot River as it is now and with the changes to come when the river's native fisheries are restored.

Since otter have not been well-studied in Maine, I had trouble finding a wildlife biologist with a strong knowledge of otters in the watershed. However, I was able to find a good source of information to supplement library research. Bill Mackowski, a local trapper who lives on the banks of the Penobscot River, was referred to me by several biologists. As it turned out, he also was trained as a wildlife biologist, so offered the best of two educational worlds: practical knowledge he obtained being out on the land and waterways tracking otter and the scientific knowledge gained from the wildlife program at The University of Maine. Mackowski has been trapping otter in Maine and in states as far south as Georgia for the past 25 years. He has a deep respect for the animal that helps provide him with a living, and his familiarity with otter habitat and behavior has provided him with a wealth of stories to share.

"River otters are a fascinating animal – I've been intrigued by them for 30 years," says Mackowski. "I never stop learning from them."

Mackowski knows well the shoreline of the Penobscot, and many of the winding streams and brooks that connect the river to a vast system of wetlands. These waterways and the fish and other small animals that inhabit them are the key to providing ideal habitat for river otter. Fish are the favored food of the river otter, and they prefer slower-moving fish that tend to find shelter in the nooks and crannies of rugged shoreline or fish that can be easily herded. They have a bad reputation among some sportfishermen that they take trout and salmon, but, while they are fast and agile swimmers and can catch salmon easily, they are efficient eaters so their diet leans toward the fish that sit and make an easier meal. The exception to this is during the spawning season.

"It's all a matter of energetics - the least amount of energy expended, the greatest amount of energy gained," explains Mackowski. "But they're certainly not going to choose a sucker if there are tons of brook trout. They will take what's easiest to take."

They will also eat crayfish, amphibians, and other small animals, such as an occasional snake or muskrat. In the winter, Mackowski has watched otter from his windows as they dig up frogs and crayfish out of the mud and bring them on to the ice to eat. Group foraging behavior is seen with adult females teaching their young. From what Mackowski has observed, family groups don't seem territorial, rather they show a pattern of mutual avoidance.

"I've seen several family groups at a primary feeding area, but they feed there at different times," he says.

The highly adaptable river otter can live in a variety of aquatic habitats, from food-rich coastal areas and estuaries, to inland lakes, marshes, and bogs. They prefer habitat with little impact by human disturbance, and are fairly common on rivers that remain unpolluted. Wetlands associated with river and coastal systems are especially important, and otter benefit from wetlands created by the abundant beaver populations we now have in Maine

"There is definitely an association between active beaver flowages and otter," reports Mackowski.

The wetland habitat created by beaver provides areas with stable water levels year-round, some open water in winter, and the vegetative cover along the water's edge that is used by fish and frogs, the preferred otter prey species. Since otters do not dig their own den sites, they often use abandoned bank dens and lodges created by beaver or dens dug out by other animals. Natural shelters, such as hollow trees or logs, piles of loose rock, or brush piles, also serve as dens. Dense vegetation that grows in beaver flowages provides shelter for young otter pups when the bank dens are flooded in spring.

Otter typically follow feeder streams while traveling over land, and appear to be programmed to visit the same locations.

"From generation to generation, you will find otters at the same place," Mackowski says. "They use the same crossings, same landings, same pullouts from year to year."

In all the time Mackowski has spent outdoors tracking otter, he has heard an amazing range of vocalizations and seen firsthand the extent of their carefree and curious antics.

"They chat, scold, whistle, snort - make sounds you wouldn't believe an otter could make," he says. "They are just fascinating - so much fun. Playful. Can't go 100 feet without rolling over one another or jumping on one another."

Otter exhibit other interesting behavior. For example, they use specific locations for a toilet. There may be as many as four to five toilets along a brook. Some toilets have been there so long, you can dig down inches and find fish scales. Some landings are never used as a toilet, but just a place where they pullout and run around, checking out all kinds of places on land. And, like other members of the weasel family, otter have a very distinct offensive smell for marking scent locations. These are not necessarily near a toilet. Otters also roll up little wads of grass, for reasons Mackowski has not figured out.

"Otters are the least reasonable animal of anything I've ever seen - but there must be a definitive reason for what they do," he says.

The reproductive cycle of otter is also intriguing. Like other members of the weasel family, river otters have delayed implantation. After breeding, the embryo floats around in the uterus until conditions are suitable for development, in some regions up to a year after breeding. Studies suggest that the amount of daylight available is what triggers implantation, indicating that it occurs when food sources increase.

"I am absolutely sure females only produce every other year," Mackowski states. During the autumn months, the females he finds with several pups are emaciated, very little fat left on them. But, he will also find adult females in very good health with no signs of lactating. "I am sure they take a whole year off to restore their strength. This makes the population very vulnerable."

Age is an important component of reproduction. Simply due to their biology, young males are not effective breeders.

"Big males do most of the breeding," says Mackowski. "So, you have to be careful you don't take out too many big males."

In areas undisturbed by development or other human activity, big adult males seem to congregate. As trapping pressure increases, he doesn't see aggregations of large adults.

Otters are highly valued for the quality of their pelts, and are managed in Maine and most other places in

the country as a harvested resource. The demand for otter pelts is particularly high in Tibet, where robes trimmed with otter fur are a status symbol. The nationwide otter harvest is about 20,000, and it is considered a fairly limited commodity. While Mackowski believes the current otter population in Maine is in good shape, he is a proponent of stricter regulations for trapping otter here. He does not trap otter two years in a row, and does not trap the same watershed more than every three years.

"With pelt prices so high (\$125 a pelt), we are at a real critical point right now," Mackowski says.

Maine has never conducted a population study on this intriguing animal. The estimate of 18,000 - 24,000 otter residing in the state is based on a 1985 assessment that looked at available habitat. Current management policy and harvesting regulations are based on that figure and to some extent on harvesting pressure, which varies (depending on pelt price) but has remained relatively stable. In Maine, the harvest averaged at just under 800 otter from 1976 to 1995, with a high of 1,324 in 1994. The otter harvest was 931 in 2004. Harvest of river otters is regulated under Appendix II of the CITES Treaty of 1976 (Convention on International Trade in Endangered Species of Wild Flora and Fauna).

"Otter is our most valuable furbearer," claims Mackowski. "Like any other sustainable resource, if you take care of it, and take care of its habitat, the population will do fine."

Restoring the sea-run fisheries of the Penobscot River would certainly boost the food resources available to help river otters thrive in the watershed. Since removal of the Edwards Dam on the Kennebec River, reports of sightings of river otter, mink, and other wildlife have increased on the now free-flowing stretches of the river. Water quality on the Kennebec River has improved, insect populations have rebounded, and with healthy returns of shad and alewives (now over 2 million), overall productivity on the river has increased. The Penobscot River Restoration Project, once implemented, promises the same boost in productivity and even greater fish returns on the Penobscot River. It won't happen overnight - it may take several years to see the river show signs of returning to something resembling its former wild state - but it will happen. And when it does, I will look forward to more frequent encounters with the river otters that make their home on this stretch of the river - perhaps the offspring of the ones that accompanied me on my shoreline walk last fall.

~ Cheryl Daigle, Penobscot River Restoration Trust



email: [info@penobscotriver.org](mailto:info@penobscotriver.org) | Web site: [www.penobscotriver.org](http://www.penobscotriver.org) | Tel. (207) 232-9969

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