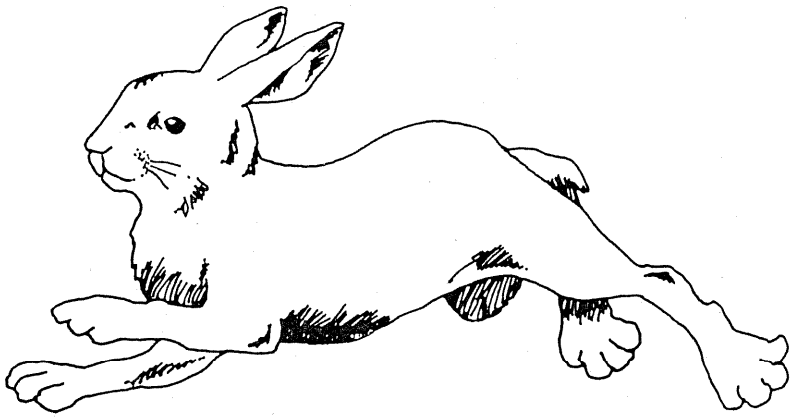
# Winter Wonderland



*snowshoe hare*

Imagine a cold moonlit night with two feet of snow covering the ground. Snowshoe hare feed in open areas while fox and coyote make their rounds. Ruffed grouse take advantage of snow's insulating effect by burrowing into it to spend the night. River otter cavort among the creeks where they feed on minnows.

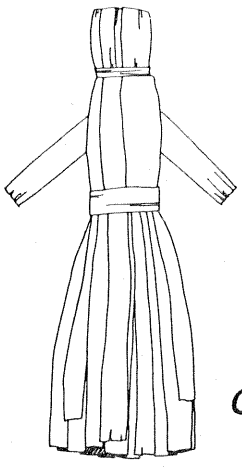
*hind foot*

Many northern animals are marvelously adapted to winter. For example, snowshoe hare turn completely white in the fall, except for the black tip of their nose. They have large hind feet which enable them to move about easily in deep snow. In winter the hair on their feet is longer and more coarse, an advantage on icy footing. Hare feed mostly at night and their range is small, often only a few acres.

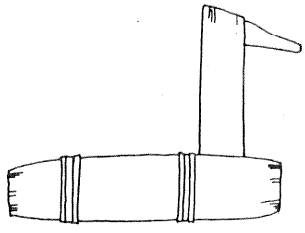
# Early Residents

Anishinabe (Ojibwa or Chippewa) people have lived in this region for about 300 years. Their lives depended on the ability to hunt game and knowing how to use the plant resources at hand. Many plants used by the Anishinabe for fiber and food grow in wetlands. Bark of red osier dogwood was mixed with other herbs and smoked like tobacco. Alder provided a yellow dye. Labrador tea leaves were brewed to provide relief from ulcers. Cattail leaves were woven into reed mats, while the stems were eaten like potatoes. Canoe paddles and ribs for birch bark canoes were carved from white cedar.

Could you make a meal, build a home, and raise a family using these wetland materials?



*cattail doll*



*duck decoy*

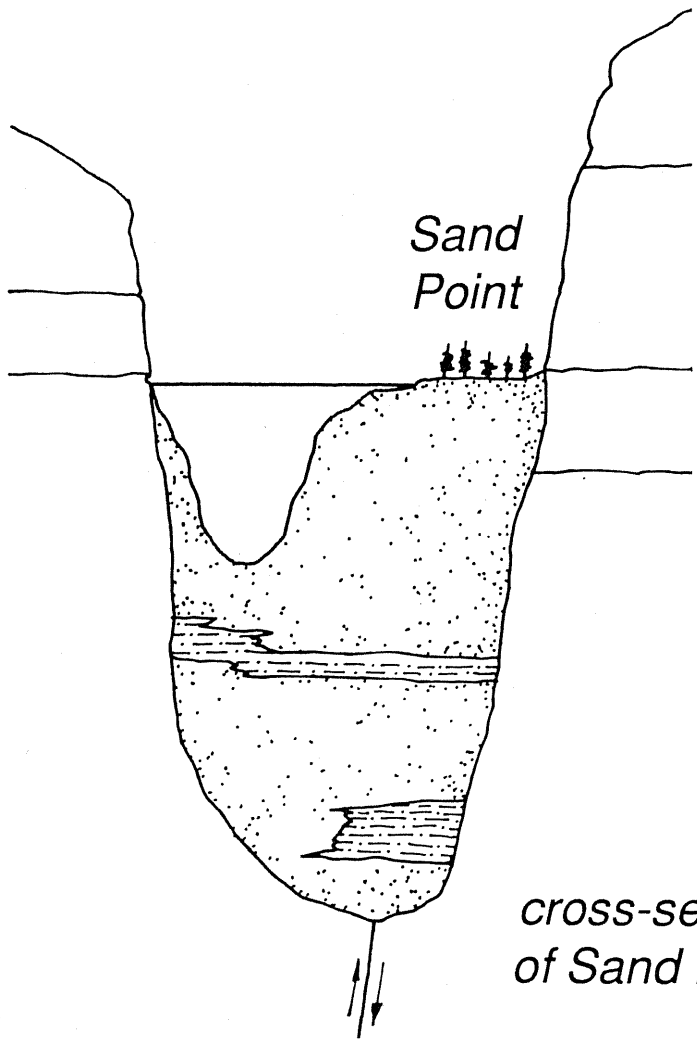
*Ojibwa couple*

Life was not all work and no play for the Anishinabe. Toys were made from local plant materials. Small duck decoys and dolls were made from cattail leaves and stems. White pine boughs were fashioned into toy dolls. Long, straight sticks were tossed for distance in the winter game of "snow snakes."

# Sand Point's Life Stream

Water on Sand Point comes from snow and rain, surface water running off the top of the cliffs, and groundwater from within the bedrock of the Pictured Rocks escarpment.

Water percolates slowly through the nearby porous sandstone cliffs. Creeks on top of the cliffs also contribute water via waterfalls. Think for a moment of the volume of water flowing beneath you, through sand, vegetation, and beaver channels on its way to Lake Superior. How do water levels change with the season or with beaver colonization?




*cross-section of Sand Point*

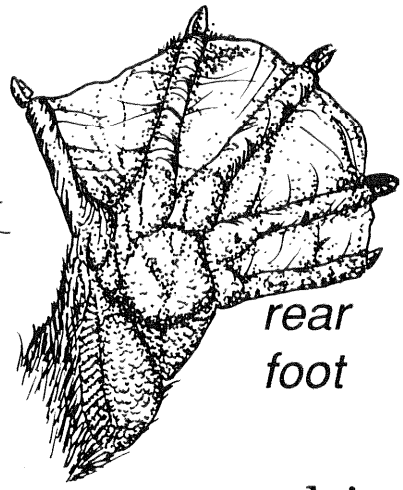
Wetlands are like giant sponges, able to retain enormous quantities of water. Sphagnum moss, a common wetland plant, can absorb eight times its dry weight in water. During dryer times of the year this wetland slowly releases clean water to Lake Superior.

# Look, A Beaver!

Beaver have built dams in at least two places on Sand Point. The dams regulate the flow of water and help to maintain pond levels. Adult beaver have built a lodge in this pond. Can you see it? Food caches of water lily roots and alder branches are located in the water beyond the lodge near the opposite shore. These caches are collected by beaver in late summer and fall as a winter food supply.

Beaver are well adapted to an aquatic environment. Membranes cover their eyes, allowing them to see under water. Their hind feet are webbed and have a split claw used to comb oil into their fur. Strong, razor-sharp teeth are used to snip water lily roots and nibble succulent tree bark.

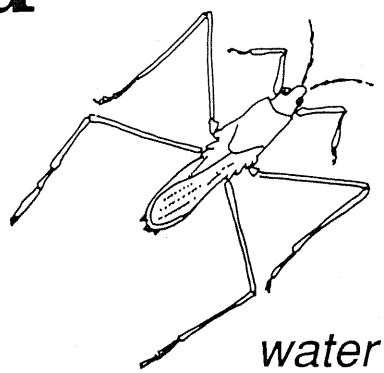
*beaver lodge*



*rear foot*

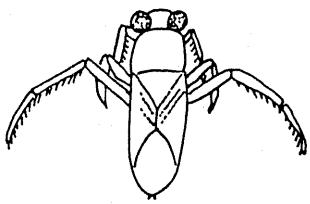
Giardiasis or "beaver fever" is a disease caused in humans by exposure to the protozoan Giardia lamblia. Beaver and other aquatic mammals carry Giardia in their intestinal tract. People who drink untreated surface water are at risk of contracting giardiasis. To be safe, Lakeshore visitors are encouraged to obtain drinking water from public pumps or to boil surface water for one full minute.

# Life Of The Pond

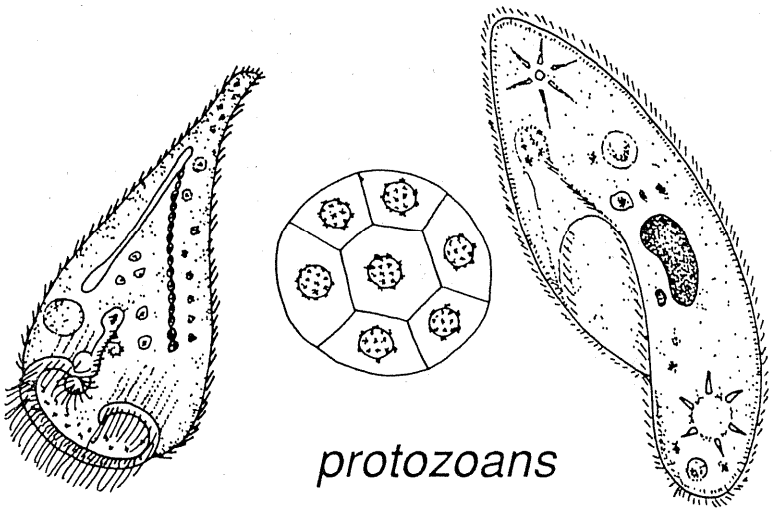


*water strider*

The creek channel is "home" for several aquatic species which swim, dive, and search for food in the still water. Dragonflies rest on emergent vegetation. What would happen to wetland species diversity if the beaver dams were removed? What would this scene look like without water?

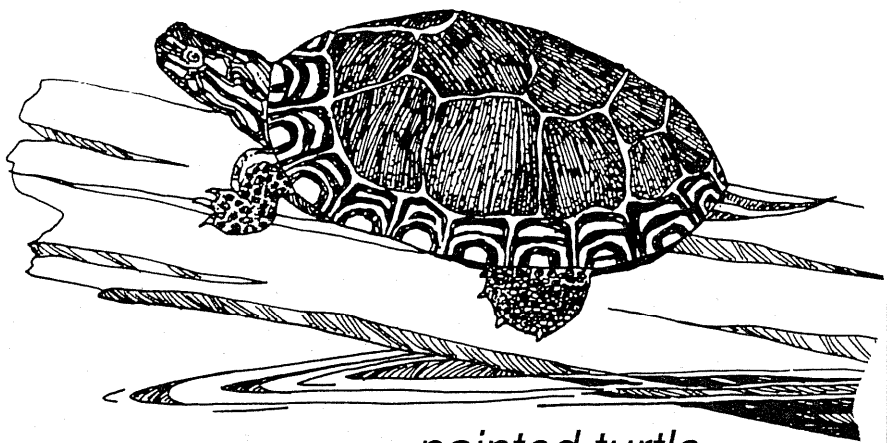


*backswimmer*



*protozoans*

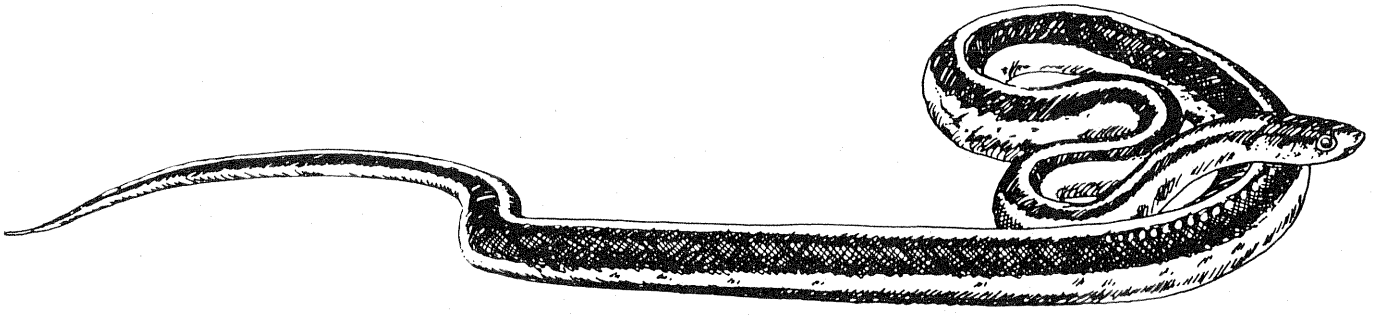
Diatoms, copepods, rotifers, and protozoa are not names of space probes, but tiny animals, intricate components of an aquatic food chain. Pond water teems with millions of these creatures that are eaten by larger animals...that are eaten by larger animals...that are eaten by larger animals...



*painted turtle*

# A Northern Forest

Sunlight streams down in shafts through the canopy. A whisper of wind moves through the red pines as their needles bake in the sun, releasing a pungent odor. Garter snakes hunt mice among the blueberries.



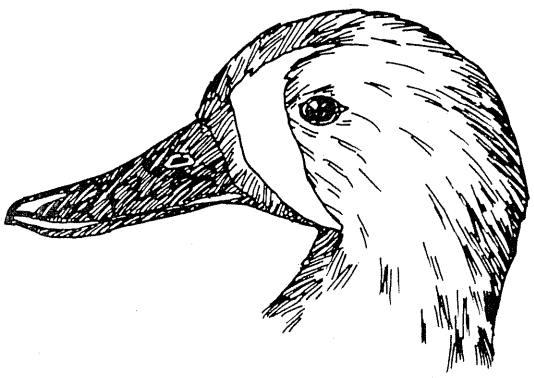
*garter snake*

Once again we are among plants and animals that exist in dryer soil conditions. Like an island in a sea of fresh water, this ridge adds to the mosaic of the diverse wetland.

*blueberries*

Three species of blueberries, the Canada (velvetleaf), low, and late low blueberry grow within the Lakeshore. Each are representative of the north country. Each blooms and bears fruit at different times. Each puts a smile on your face when added to pancakes.

# Seasonal Sounds

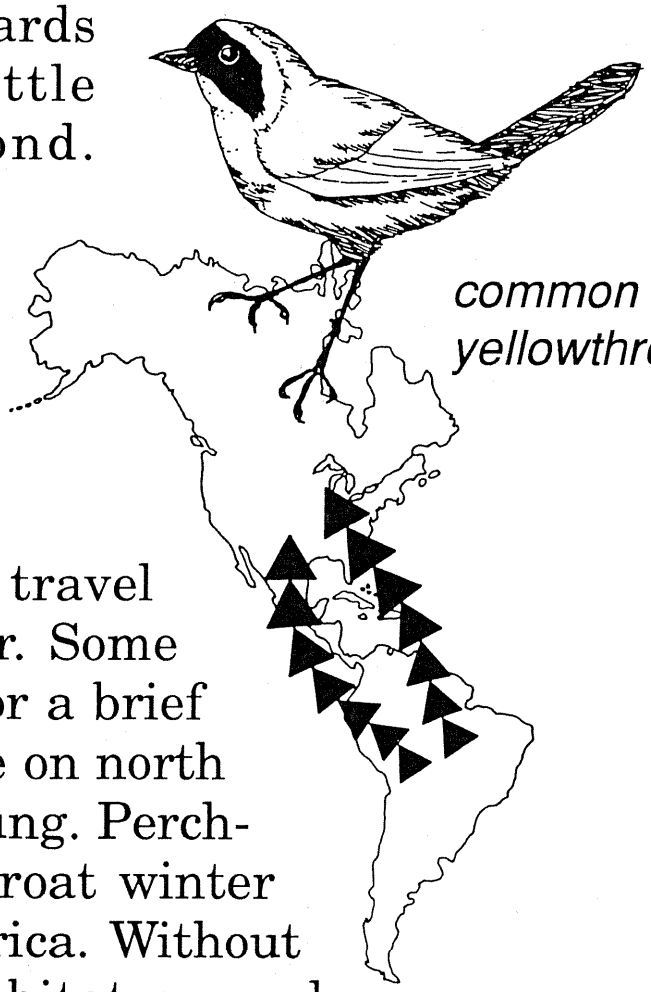


*blue-winged teal*

As the pond ice melts in early spring, sandhill cranes arrive, rattling their prehistoric call. Spring peepers fill the air with their ritual sounds of mating.

In summer, warm breezes whisper in the pines as the veery, and whitethroat call at dusk. Cedar waxwings twitter in the tree tops.

Toward autumn, mallards and blue winged teal settle noisily onto the pond. Snowflakes fall silently on the wetland, and yet even in winter, spirited calls of chickadees, nuthatches, ravens, and bluejays fill the crisp air.



*common yellowthroat*

Many migrating birds travel long distances twice a year. Some are only passing through for a brief time to rest, feed, and move on north to breed and raise their young. Perching birds like the yellowthroat winter in Central and South America. Without preservation of critical habitat around the world, numbers of these birds will continue to rapidly decline.

# Legacy Of The Marsh

*Somewhere today, a wetland is being lost to a drainage project, housing development, or the construction of a parking lot.*

Wetlands— swamps, marshes, bogs, no matter what they are called, are important for many reasons. Wetland communities filter, purify, and slowly release surface water. They help control flood waters and protect water quality by recharging groundwater. They provide critical habitat to many plant and animal species.

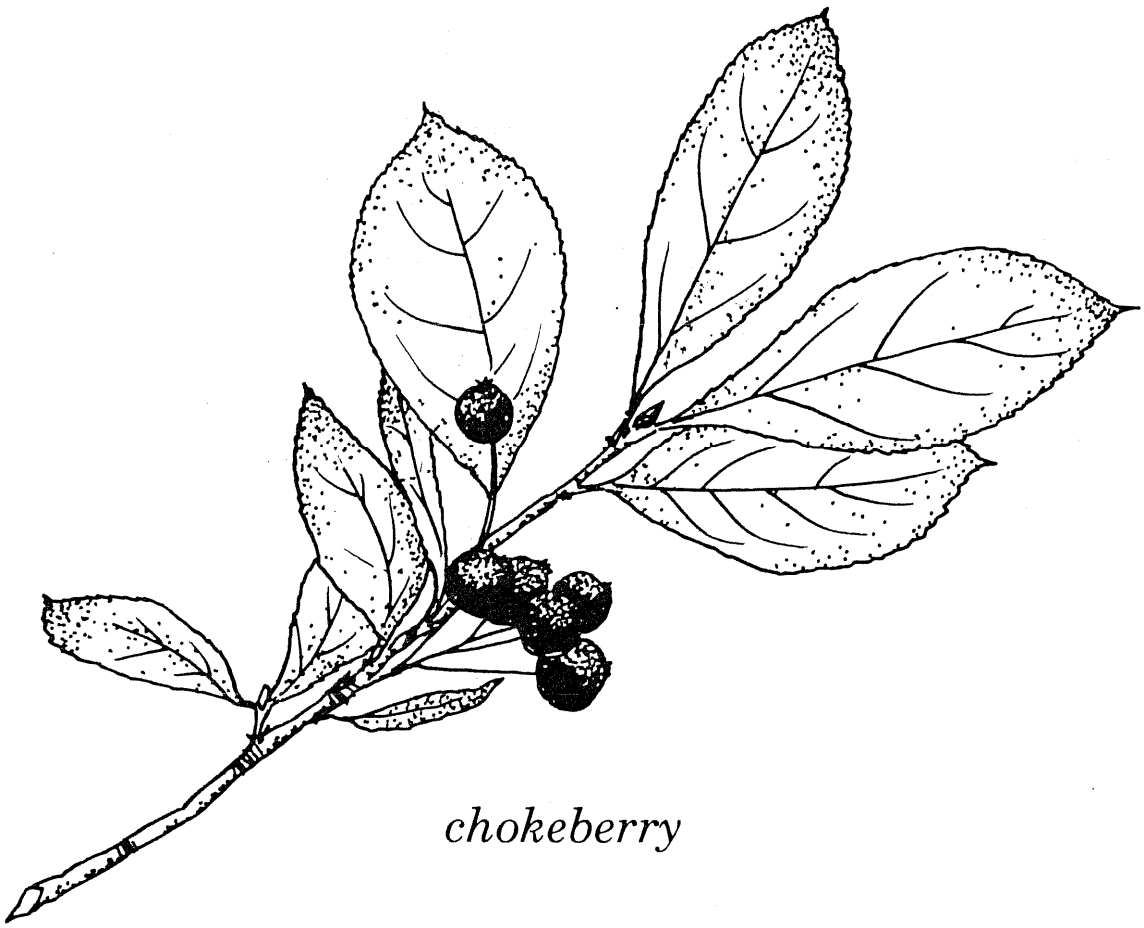
Wetlands are also refuges for the human spirit, places to visit but not stay. Places to study, and someday more fully understand.

We must place a higher value on wetlands and the natural processes that maintain them. We must teach our children the need to preserve these wild sanctuaries.

Nearly half of the eastern upper peninsula of Michigan is wetland. Although this seems like a lot of land, Michigan has already lost 71% of its original wetlands. Only people can preserve wetlands. People like you.

The Sand Point Marsh Trail is located on Sand Point Road, four miles northeast of Munising, Michigan, within Pictured Rocks National Lakeshore. For further information on the trail or group interpretive activities associated with the trail, call (906) 387-2607 or write:

Superintendent
Pictured Rocks National Lakeshore
P.O. Box 40
Munising, MI 49862



*chokeberry*

If you have no further use for this brochure, please return it to the box at the trailhead.

Thank You