

**MATTAGAMI REGION
CONSERVATION AUTHORITY**

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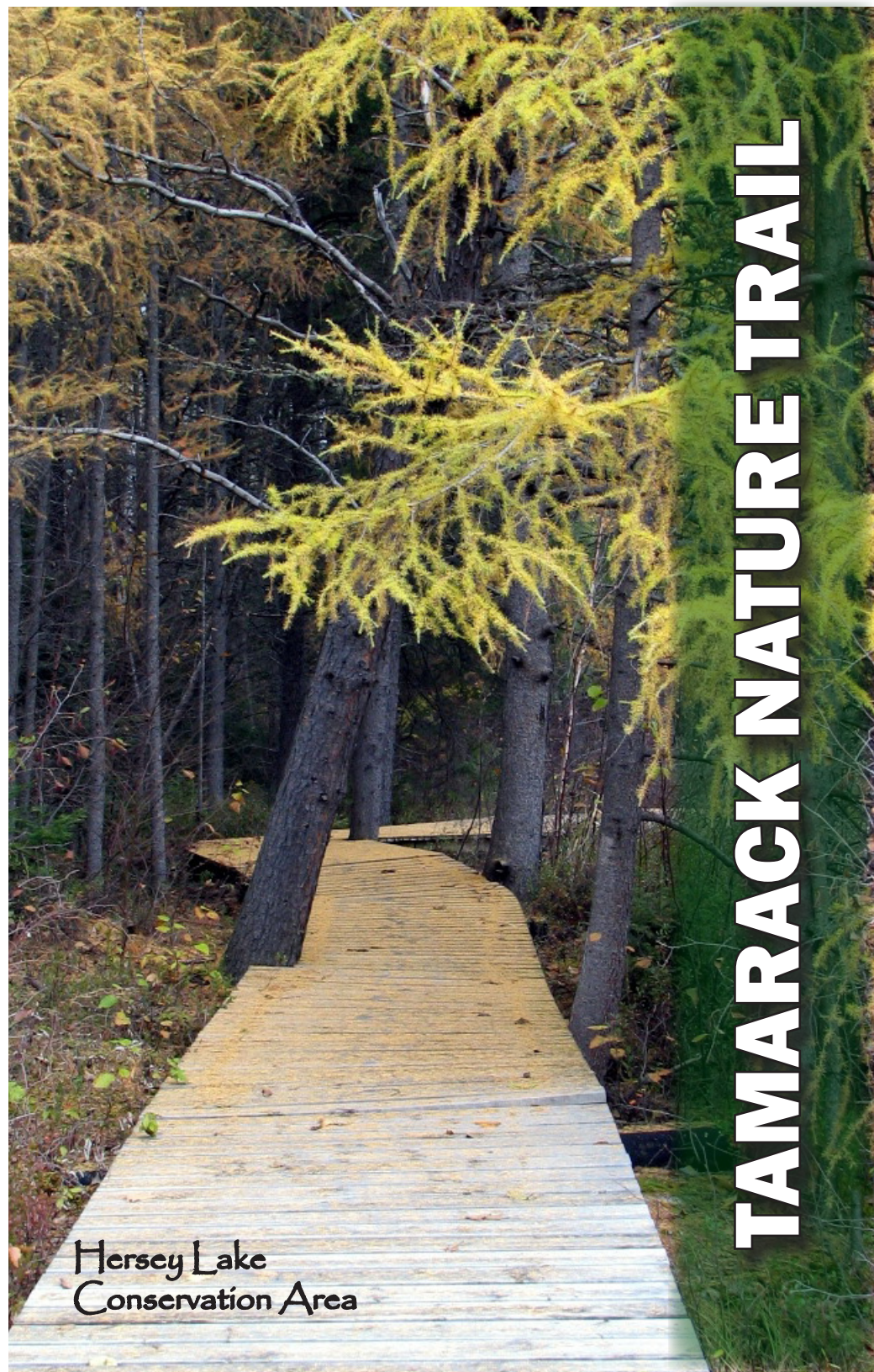
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Wintergreen Fund For Conservation



Mattagami Region
Conservation Authority



TAMARACK NATURE TRAIL

Hersey Lake
Conservation Area

POST FOURTEEN-EARLY SETTLEMENT

The history of the area dates back 5000 years to the time when the glacial ice finally retreated and nomadic bands of Cree and Ojibwa Indians moved from the south and began to hunt the caribou. Later, with the coming of European explorers and settlers, the area opened up to the fur trade and the establishment of a number of trading posts.

The Timmins area began to grow with the start of the first profitable gold mining operation in 1909. Although traces of gold were found as far back as 1886, it was not until the first major strike that the area became covered with small settlements filled with people looking for their own gold mine.

The “Porcupine Camp”, as the area is affectionately known, has since grown to include the forest industry, extensive gold, copper and zinc mining and a large tourist trade based on hunting and camping.

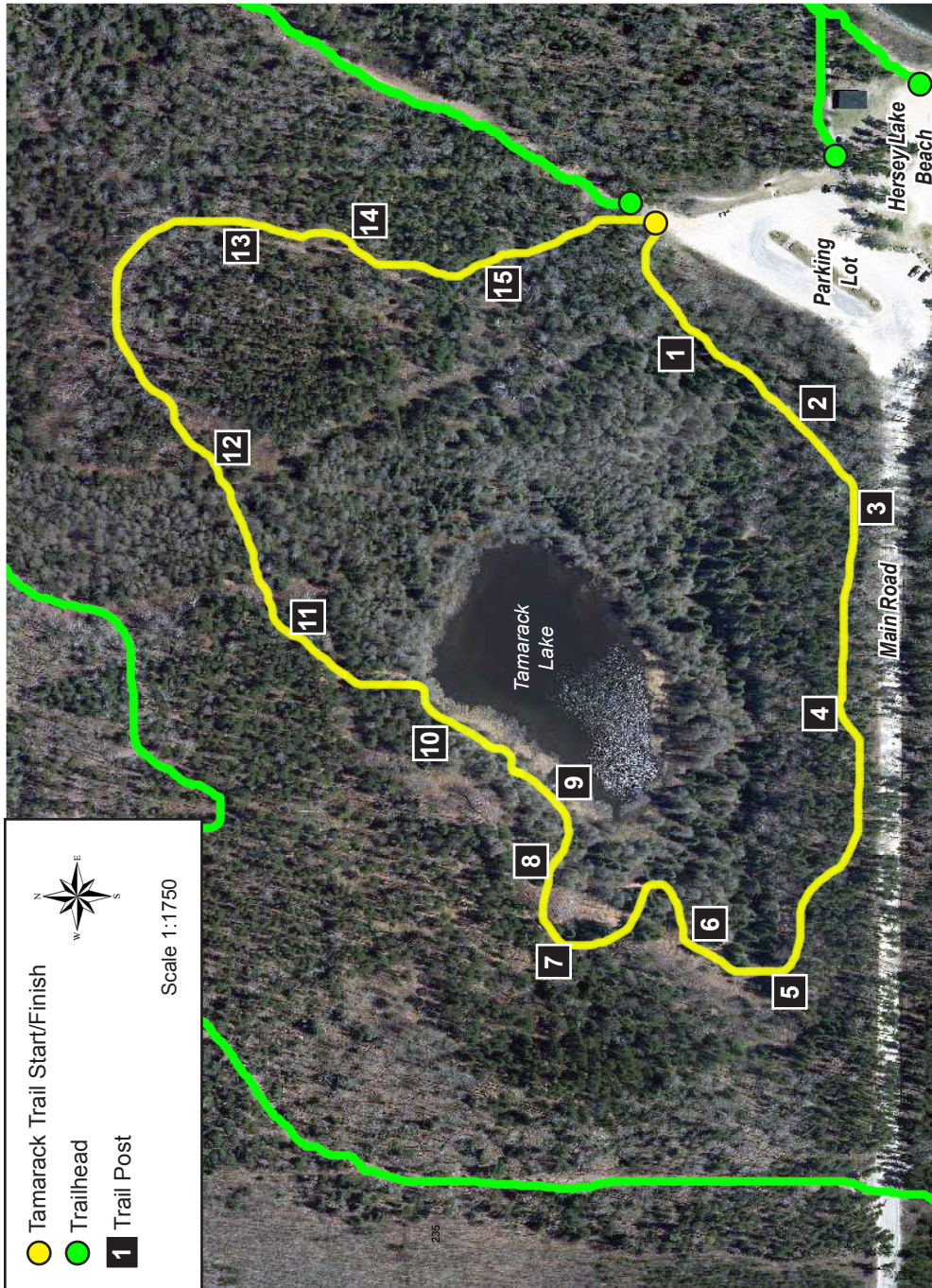
The Hersey Lake Conservation Area consists of eleven patented mining claims that were given by the Government of Ontario at the turn of the century to veterans of the Boer War in return for their services during the war. In 1920, the land was taken over by a lumber company and the trees cut for use in the construction of the Ontario Northland Railway. Since then, the land has seen many owners until the Conservation Authority purchased it to develop it into a recreation area.

POST FIFTEEN-PARKS AND CONSERVATION

The last post along the trail has been set up to give you an opportunity to reflect on some of the things you have read about and experienced over the last thirty minutes. Whether you intended your walk to be a chance for some healthy exercise or for a moment of peace and solitude, the fact remains that the sights, smells and sounds were there for you to enjoy and experience.

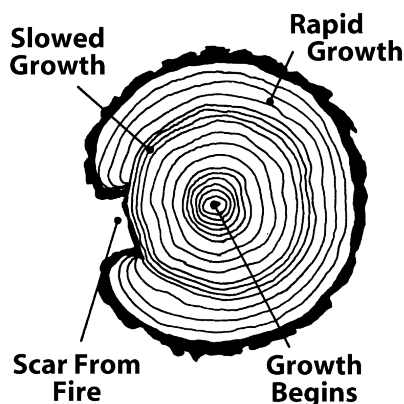
Ontario is blessed with a system of parks and natural areas that range from the largest national park to the smallest municipal park off a busy city street. All have a role to play in providing us with an opportunity to be outdoors. The Hersey Lake Conservation Area is no exception. It was set up in 1979 after the Conservation Authority recognized its importance as a natural area, an area located close to the downtown core and ideal for hiking, swimming, picnicking and outdoor education.

Hersey Lake is now one of the busiest park areas in the City, especially during the summer months. Often it must live through the threat of fire, noise, litter and vandalism, threats that you, as a park user can help control. So please, to ensure that this area is available for generations to come, play it smart with open flames, litter and your recreational toys. Our fragile environment needs all the help it can get!



POST TWELVE - A STORY IN STUMPS

The history of a whole forest can unfold before your eyes by just looking at a single tree stump. The clues are hidden in the annual rings and they can tell you exactly what the tree and its neighbours have experienced over the years. The annual ring is made up of both a dark ring, indicating the slowed growth experienced during the winter months, and a light one, revealing the accelerated growth of summer. Each new ring envelops the older rings.



One can determine the age of the tree by counting these annual rings with one dark and one light ring representing one year. As well, the thicker the rings, the more favourable were the growing conditions during that particular year. Scars within the stump can indicate if the tree was subject to fire, wind damage or some pest or disease.

Look closely at the stump. Can you tell how old the tree was when it was blown down by a windstorm?

POST THIRTEEN - NATURAL DISASTERS

Forests are not without their natural enemies. Two of the most feared are weather and fire. Over the past 300 metres I am sure you have noticed all the trees that have been blown over. These 20 metre trees were the victim of a summer storm whose strong winds cut a wide swath through the conservation area. Whereas trees located out in the open or near the forest's edge are deep rooted for stability, these trees, as can be seen by their overturned root system, are shallow rooted and therefore more susceptible to strong winds.

Fire, whether caused by lightning or man through his carelessness, is also an enemy, but an enemy that plays an important role in northern Ontario. Although it is most remembered for its destructiveness, fire is an important biological control that can affect the distribution of plants and animals in the area. A forest that has recently been burned over clears the way for new plant growth. These younger shrubs and trees provide food and shelter for all forms of wildlife, including moose and deer. Some of the first species to grow after a fire are jack pine and poplar. These plants thrive on the strong sunlight. Fire also recycles nutrients into the soil for new growth.

TAMARACK NATURE TRAIL

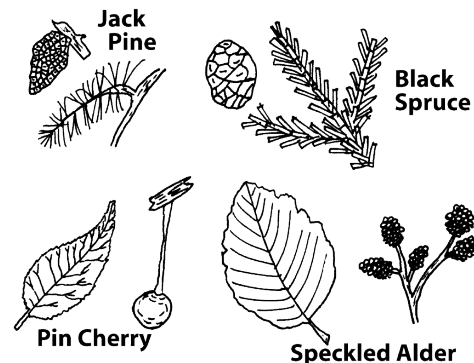
Welcome to the Tamarack Nature Trail. This self-guided interpretive trail has been designed to introduce the conservation area visitor to some of the unique plants and animals of the northern environment. Located along the trail are fifteen interpretive stations whose numbers correspond to those in this booklet. Each station acts as a rest spot where you will be able to learn more about the natural and human history of the area while experiencing some of the sights, sounds and smells of the forest around you.

With this pamphlet in hand, you can embark on a 1 km walk that should not take more than half an hour to forty-five minutes to complete. The clearly marked trail passes over a gently rolling terrain, through the forest surrounding Tamarack Lake, looping back to where you started.

So that all hikers may enjoy the trail to its fullest, please do not pick any of the flowers or plants. It would also be appreciated if you could pass this booklet along to a friend so that they may take pleasure in walking the trail as well.

POST ONE - THE BOREAL FOREST

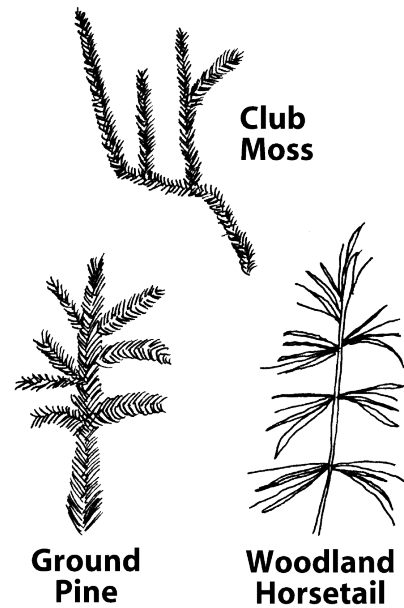
So you can't see the forest for the trees! The trees found all around you form part of the Boreal Forest Region of North America; a forest region that stretches in a broad band from Newfoundland to the Pacific, north of the Great Lakes and Prairie Regions. It is made up of coniferous trees (evergreen and cone bearing) such as the white and black spruce, jack pine and balsam fir; and deciduous trees (which lose their leaves in the winter) such as poplar, white birch and alder. What makes this forest ecosystem different from those further south is how the plants and animals adapt to both the harsher climate and the types of soils we have here in Northern Ontario. More about that later!



The larch or tamarack is a conifer that can be identified by its small rose-shaped cones and long, slender needles that are shed during the winter. The tree turns a golden yellow in the fall. The black spruce has downward pointing branches that will often enter the ground as "suckers" and emerge as a new tree. Not all trees have to be tall either. The pin cherry with its distinctive red berries is considered more a shrub. The mountain maple is also a small tree identified by its "maple leaves" and "helicopter seeds".

POST TWO - MOSSES, LICHENS, FERNS

After the last remains of the continental ice sheet disappeared 10,000 years ago, the first plant to establish itself on the bare Canadian Shield was the lichen. Lichen is a complex plant made of an algae and a fungus growing together in a mutually beneficial relationship (symbiosis), usually on a hard surface such as a rock or tree stump. The fungus provides the water and nutrients while the algae produces the food for both hosts. Two types of lichen are found along the trail; "Reindeer" lichen, a grey spongy-looking plant, and "British Soldier" lichen, a small thin lichen with a bright red square cap. Lichen was often ground by the Indians and used as flour in the making of Indian bread.



There are also many types of mosses in the area. The common club moss is a trailing plant that has branches that look like tiny clubs. In August there are usually 1 to 3 fruiting bodies on top of each branch. The ground-pine moss looks like a small pine tree. It has two fruiting bodies that appear in the month of August. Trailing Christmas-green has leaves that are very cedar-like.

POST THREE - WILDFLOWERS

The wildflowers that carpet the forest before you are typical of the boreal forest. Some of the more interesting plants that grow in the conservation area include the twinflower, wintergreen, clintonia, Indian pipe, bunchberry, and trailing arbutus. While most of these wildflowers bloom in May and early June, some bloom later in the summer.

Can you find these plants as you walk along the trail? The wintergreen, also known as teaberry, has a sharp taste of wintergreen that can be used to make tea. Bunchberry is easily identified by the red berries that grow in tight bunches. Indian pipe is totally white because it has no chlorophyll. Instead of photosynthesis, the plant gets its nutrients from dead or living host plants. Difficult to spot, the Indian Pipe is very fragile, so be careful not to touch it! The clintonia is a yellow wildflower with large, waxy leaves, usually three or four in number. It has a dark blue fruit that is not edible.

POST NINE - BEAVER ACTIVITY

It almost looks like a major logging operation. The forest around you has been heavily cut over by beavers that have been bringing down large poplar trees for both the tender twigs and bark that they use for food, and the large branches that eventually become part of the beaver lodge. As a member of the rodent family, which includes mice and squirrels, the beaver is well adapted to spending a great deal of time in the water. Its heavy fur keeps it warm in cold water while an oil that comes from glands near the hind legs keeps the fur waterproof. Large webbed feet, a flat tail and flaps to cover the nose, ears and mouth all combine to make the beaver an excellent swimmer.

The beaver is most active during the night, cutting trees and hauling them to the water's edge. Using the "castor" scent gland, he marks the many trails he uses so he can find his way back to the pond. The lodge is made of sticks and mud, and is used for protection and warmth in the winter.

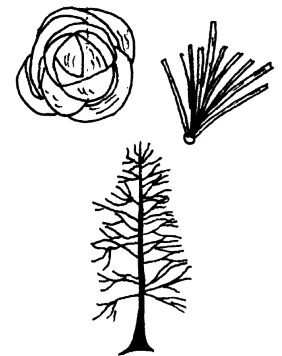
During the fall, he collects food for the oncoming winter. Beavers fall prey to bear, lynx and others, and of course man, who traps them for their valuable fur.

POST TEN - TEST PITS

Although it might look like the simple beginnings of a mineshaft, what you see in front of you is more than likely a test pit to see how much sand and gravel is in the area. The pit, along with the several trenches you will see later on each side of the trail, was put in many years ago and is only now starting to grow back in. Starting back in the 1930's, the sand and gravel was used extensively as backfill for the local mines. Now it is used in the construction industry and the manufacturing of cement.

POST ELEVEN - TAMARACKS

Probably the most interesting tree found in the Boreal Forest is the tamarack. Although it is a member of the conifer family, it sheds its needles in the fall along with all the other deciduous trees. The tamarack is easily identified by its straight trunk and clusters of soft, flexible, light green needles that turn a golden yellow with the approach of winter. The cones are small and rose-shaped. This stand, which enjoys the coolness and dampness of the bog climate, has a relatively shallow and wide spread root system so as to compensate for the lack of stable ground. As a resource to man, the tamarack is used for making railway ties and pulpwood paper.



Tamarack

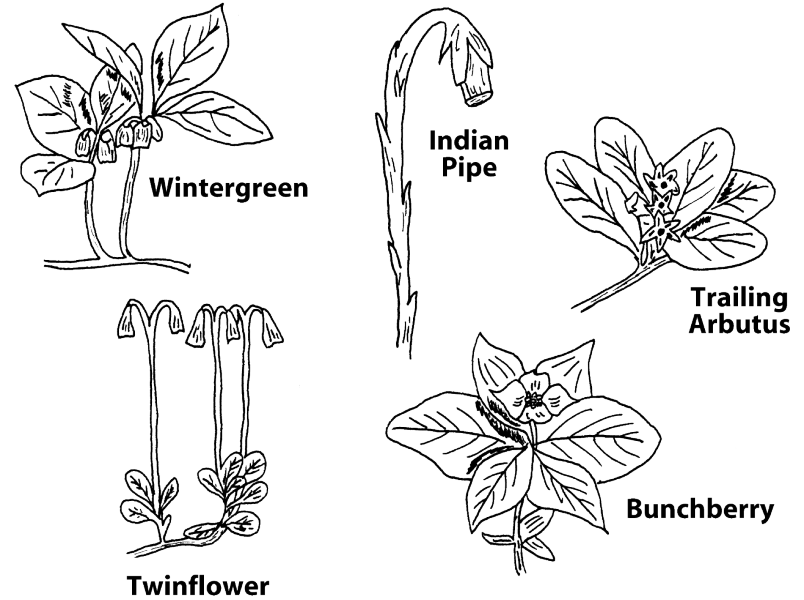
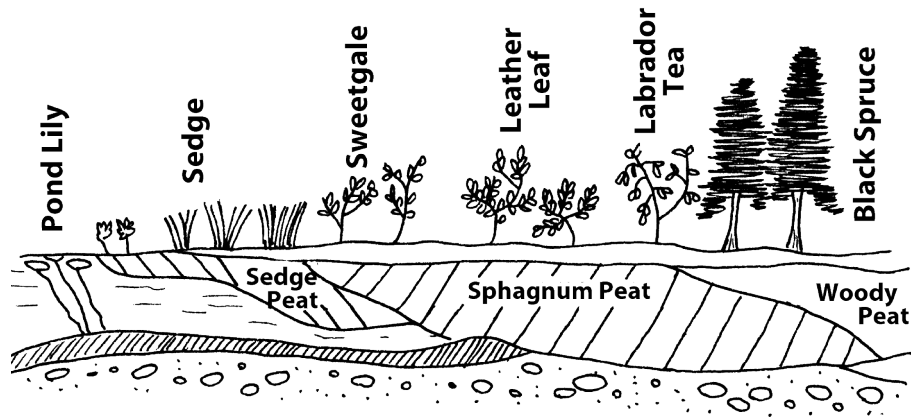
POST SEVEN - GLACIERS

It's the Mount Everest of the Hersey Lake Conservation Area. Glaciers formed the hill you are now standing on 10,000 years ago when most of Canada, including Northern Ontario, was covered with a thick layer of ice almost three kilometres in height. This ridge, which is made of sand and gravel, is part of a large glacial deposit that stretches for many kilometres along the Texasgulf Highway. Because of the ice's tremendous weight, the ice sheet actually moved, picking up or pushing boulders, gravel, and sand along its way. As the climate began to warm and the ice started to melt, streams and rivers formed within the ice carrying with them the material that had been picked up along the way. This material was deposited in the form of eskers, long winding ridges; kames, small hill formations; or in a large delta, similar to the one you are standing on right now. The sand and gravel associated with this old glacial delta is an important resource for the City of Timmins as is evident from the many gravel and sand pits in the area.

POST EIGHT - SUCCESSION

The word "succession" refers to how things in nature never stay the same, but instead constantly change from day to day. Although not easily noticeable, over several years one can look at a forest or a small pond and see how very slowly one species will replace another. For example, after a major fire the first trees to appear will be the jack pine and poplar. These jack pine and aspen will in turn provide the shade necessary for the dominant species to appear which in this area might be red pine or white spruce.

The pond before you displays the progress of succession more clearly; from open water to the stands of poplar and jack pine.

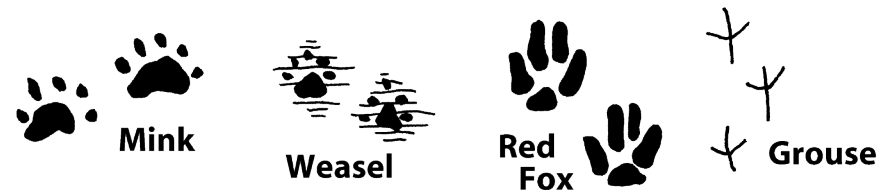


POST FOUR - WILDLIFE

A variety of wildlife including birds, mammals and reptiles call the conservation area thier home. If you are quiet and patient, you will be able to spot some of them as you move through the forest.

There is the snowshoe hare with its grey-brown fur changing to white in the winter for camouflage, and its very wide and long hind paws that help move it through the snow. The fisher, martin and mink, with their slender bodies and long tails can be seen next to the water's edge washing their food. Some of the smaller mammals include the Eastern chipmunk, a small curious animal with a striped back, and the red squirrel, a small rodent with reddish brown fun and a large fluffy tail.

The larger mammals such as the black bear, moose and lynx are sometimes found in the area. Occassionally you will be able to see their tracks in the snow or mud.



A variety of birds, each with its own distinctive colouring and song, can be found in abundance along the trail. On the water you can find the common loon, a diving bird that is an excellent swimmer, has distinctive white and black markings, and an eerie call. The mallard duck also stops over occasionally. The male has a green head and white collar while the female is a mottled brown colour. The small bird found along the shore on long spindly legs and constantly rocking back and forth is the spotted sandpiper.

The forest is home for such birds as the ruffed grouse, the white-throated sparrow, the yellow-bellied sapsucker and the evening grosbeak. The grouse, brownish in colour and the size of a chicken, has large brown and white tail feathers. During blizzards and very cold weather, it spends its time buried beneath the snow to keep itself warm. In the spring, you may happen to hear the males make a drumming sound produced by the beating of their wings against their sides.

The white-throated sparrow, besides being distinctive with patches of white on its head and throat, has one of the most unique calls in the woods; a high and low note usually followed by a long trill. The yellow-bellied sapsucker is usually found on the sides of trees pecking for insects. It has a red marked head with a yellowish belly. The evening grosbeak with its large beak and yellow, black and white markings is one the birds found year round in the conservation area.

POST FIVE - THE HEATH

The heath ecosystem has very acidic soils and water that is low in nutrients and oxygen. These conditions make life for most vegetation very difficult. Fortunately, nature has provided some plants with the adaptations necessary for growth in such an environment. For example, because nutrients (nitrogen and calcium) are not available from decayed vegetation, heath plants must obtain their essential minerals solely from rainwater. Another adaptation is most heath plants are evergreen and broad leafed. By not losing their leaves, the plants retain the valuable nutrients contained within them year- round.

Labrador tea, a heath named for the slightly bitter tea that can be made from its leaves, is one such plant. It has white flowers with five petals and leaves that are brown and woolly underneath. Leather leaf has white bell-shaped flowers on one side of the stem and small dull green elliptical leaves on the other. These leaves have an underside that is dotted and have a rusty scale. Bog rosemary has leaves that are white underneath, dark on top, and are narrow with margins rolled inward. The flowers are pink and white.



Labrador Tea

POST SIX - THE BOG

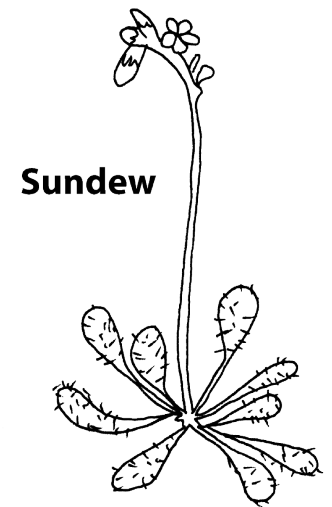
The bog before you is an example of one of the most unique and intriguing ecosystems of the Boreal Forest. Its unique characteristics and diverse plant communities demonstrate not only how nature is constantly changing, but how it can adapt to even the harshest of environments.

A bog in its early history starts out as a clear water lake within a shallow depression. However, because of its poor drainage, sediment and dead vegetation begin to collect, forming a false, undecayed bottom of organic material. There is no decomposition of the material because of a lack of oxygen in the water. Slowly we get the formation of peat and the release of humic acids, giving the water a brownish tinge.

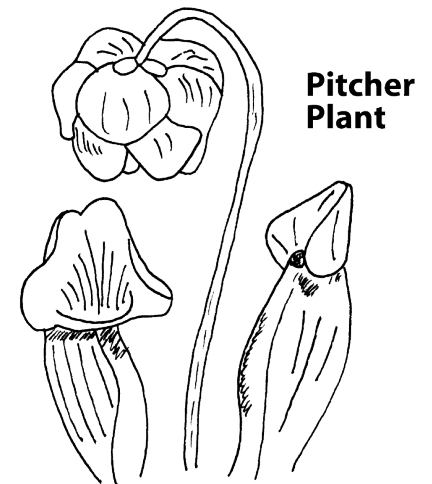
Submerged and floating aquatic plants begin to “mat over” the lake. Some sphagnum, a highly coloured, spongy moss, attaches itself to the existing vegetation, making the mat thicker and more stable as it extends further from the shore. The mat grows until it becomes grounded to the bottom of the lake. Succession after several hundreds of years will see the establishment of a forest over what is now open water.

Some of the more interesting bog species include the sundew, the pitcher plant, and the horned bladderwort. Sundew has adapted to the lack of nutrients in the bog by catching insects with a sticky substance on its leaves. The insect becomes trapped and the sundew absorbs the necessary nutrients from it.

The pitcher plant, with its tubular reddish leaves, also attracts insects, trapping and drowning them with the rainwater found in the bottom of its tubes. The horned bladderwort is a curious plant with a yellow flower and leaves that are found below the water. Also obvious is the long drooping spur or “horn” on the underside of the flower.



Sundew



Pitcher Plant