



Lowland Black Spruce Forest

The soils are quite wet and acidic in a lowland black spruce forest. A thick layer of sphagnum moss covers the forest floor. In the summer, there are often small pools of standing water. This is a favourite location for labrador tea to grow.

Did You Know?

The soils in this location are acidic mainly due to the sphagnum moss. The moss takes up nutrients from the soil and water and secretes hydrogen ions, which make the soil acidic. Sphagnum is very absorbent and can hold ten times its own weight in water. For this reason, Aboriginal peoples used to pad babies diapers with sphagnum.



Labrador tea

The leaves of Labrador tea can be dried and used to make tea. Aboriginal peoples have used Labrador tea for centuries. It is an excellent source of vitamin C, an important factor in the winter when other foods high in vitamin C (e.g., berries) are lacking. The tea should be taken in moderation, however.

The plant contains andromedotoxin, which can cause cramps and headaches. Labrador tea can be easily identified by its dark, leathery leaves. The underside of the leaves are covered densely with white to reddish-brown hairs.



Cavity Bird Nest

There is a bird nest in this jack pine tree. And it is not nesting in the branches, it is nesting in the tree itself. Some birds such as woodpeckers or flicker hollow out a nest in trees. However, they normally choose older trees, which may have a rotted core and thus are easier to hollow out. They also tend to choose trees such as trembling aspen or balsam poplar. A cavity nest in a jack pine is unusual.



Bird nest



Black Spruce/Tamarack Bog

You wouldn't want to try walking here in the summer! This is a black spruce/tamarack bog. The area is very wet. These small trees might be more than 200 years old (compared to 100 years for the largest black spruce, fir and aspen trees you've seen along the trail so far) and yet are less than 5-6 m tall. The



Black Spruce/Tamarack Bog

Sphagnum moss thrive in such habitats, and because the acidic environment limits the decomposition of plant material, massive layers of peat build up over centuries. Peatlands such as this bog are important in controlling water flow throughout the region.

Did You Know?

To survive in such a nutrient-poor environment, some plants eat bugs as part of their diet! The Pitcher Plant collects rainwater in its tubular leaves. Insects that wander into the leaves get trapped in the water and can't climb back out. The plant secretes enzymes that digests the bug, thus providing much needed nutrients for the plant.



Pitcher Plant

Although tamarack have needles, they lose their needles every autumn. In late September and early October, the soft, green needles turn a brilliant yellow-orange before falling off. Contrary to popular belief, other "evergreen" trees such as spruce do not keep their needles for life. Needles die and are replaced every 3-5 years.



Meadow

This wet area contains a variety of plants that are quite different than those found in forested areas. The wet conditions provide a good place for plants such as sedges, cat tails, willow, dogwood and hazel to grow. Keep you eyes open for moose that like to travel through these areas.



Rock Outcrop

This rocky outcrop of precambrian shield granite creates a very different type of forest habitat. The plants that grow on these outcrops are adapted to the



wet, nutrient-poor, and acidic conditions of bogs such as this make growth and survival of trees pretty tough. Other plants found here include bog birch, bog rosemary, leatherleaf, pitcher plant and sphagnum moss.



Black Ash Stand of Trees

This is a stand of black ash trees. The area is wet, providing an ideal habitat. Ash are commonly found growing in moist soils, especially along streams. Ash have a unique bark which makes it easy to identify.



Black Ash bark



Black Ash stand

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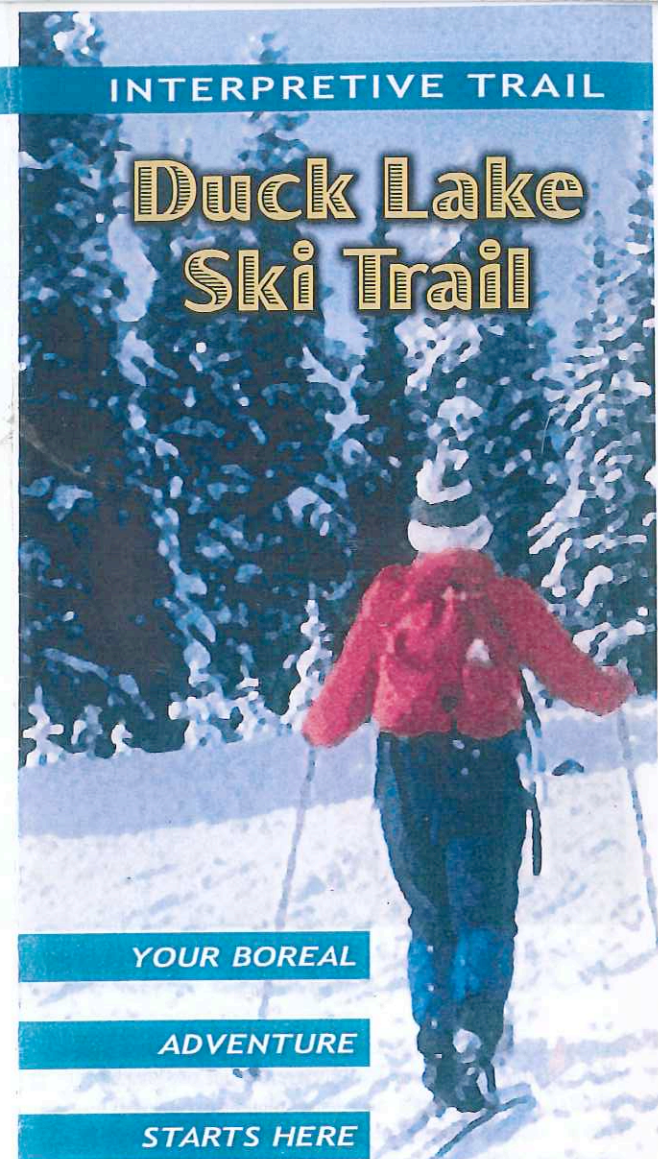
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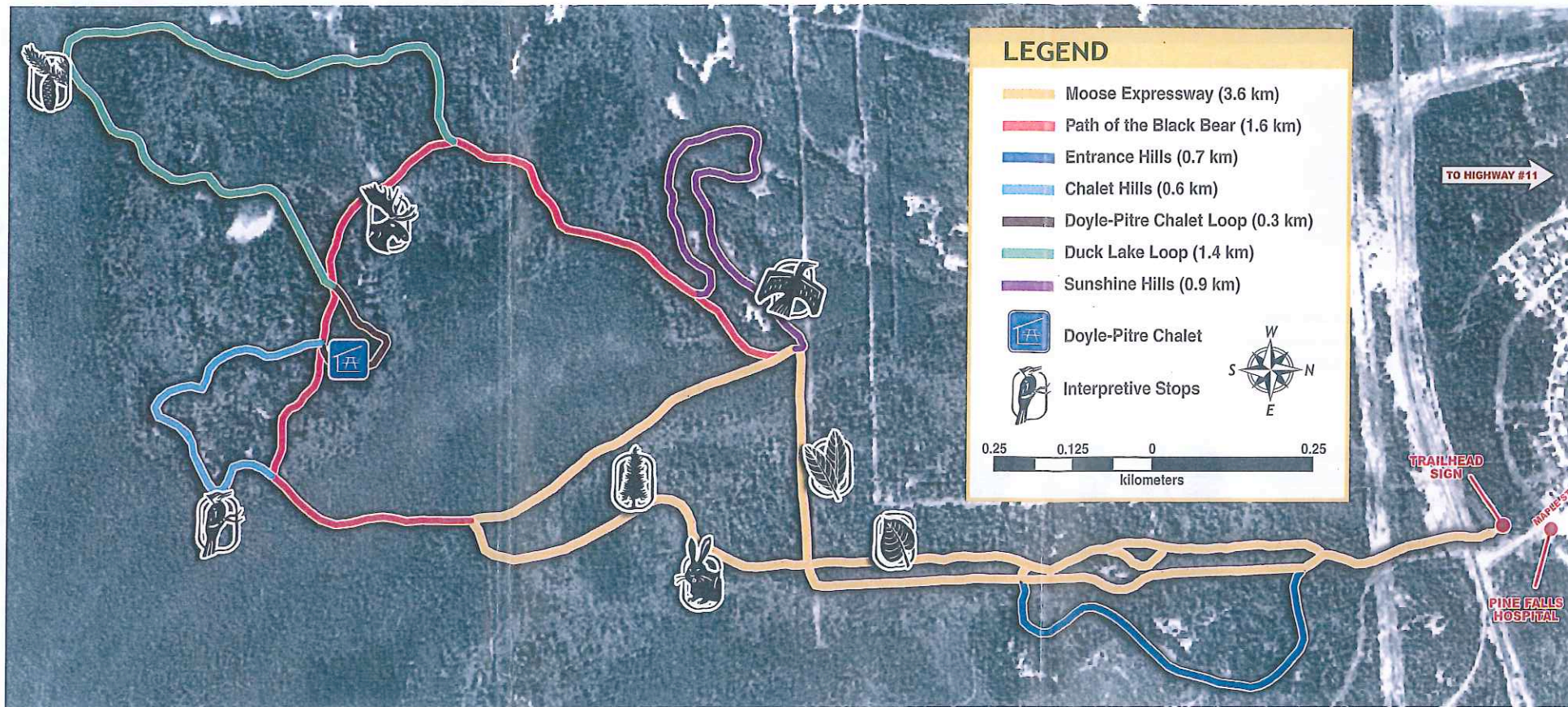
Pine Falls School

Duck Lake Ski Trail



YOUR BOREAL
ADVENTURE
STARTS HERE

Explore the rich diversity of forested habitats and wildlife of the boreal forest.



YOUR BOREAL ADVENTURE STARTS HERE...

The Duck Lake Ski Trail is located in the boreal forest south of Pine Falls, a rich mosaic of different types of forested habitats. These habitats range from upland mixedwood forests (including trembling aspen, black spruce, balsam fir and birch), jackpine growing on precambrian shield rock ridges, to stunted black spruce/tamarack bogs. As you ski across the various trails you will experience both subtle and abrupt changes in the main types of tree species and plants growing near the ground (called understory). The changes often reflect differences in soil type, moisture and small changes in topography.

The Duck Lake Ski Trail has over 9 km of groomed trails which start at the large trailhead sign at the end of Maple Street in Pine Falls, near the hospital. Most trails are relatively flat, although the Entrance Hills and Sunshine Hills traverse some rock ridges. Signs are posted at all

major trail junctions to show you the way. Stop by the Doyle-Pitre Chalet to warm up.

Take some time to enjoy the trail system and explore the area! Interpretive stops are located along the way. This brochure contains some interesting facts about the boreal forest in general, and some of the features found along the Duck Lake Ski Trail.

The Forest That Wasn't Always

Approximately 8,000 to 10,000 years ago, all of the area you are now standing on was under several kilometers of ice. As the climate warmed and glaciers retreated, they left behind a hilly, scarred and barren land. Some of this land also formed the basin of glacial Lake Aggasiz. The old sand beaches of the relic

lake are found nearby throughout the eastern side of Manitoba. As the climate warmed further and the lake receded, plants began to colonize the barren ground. And thus was born the boreal forests of eastern Manitoba.

Boreal Forest: Please Do Not Disturb?

Boreal forests are an amazingly resilient ecosystem. Unlike forests found in more temperate climates, such as along the coast of British Columbia, boreal forests commonly experience large, frequent disturbances. The main disturbance is forest fire. Fires typically occur every 50 to 100 years in this region, and many of the plant and animal species depend on fire to create just the right living conditions for them. As the forest re-grows, tree species early to colonize the burned landscape are replaced over time with other species. This is known as succession. While some see forest fires as a destructive force, it is actually part of the circle of life for the boreal forest.

...EXPLORE OVER 9 KM OF BEAUTIFUL GROOMED TRAILS

INTERPRETIVE STOPS



Boreal Mixedwood Forest

This upland area is called a mixed wood forest. It gets its name from the fact that both hardwood and softwood trees are found together. As you ski through this stretch of forest you will see a mosaic of balsam fir, birch, trembling aspen and black and white spruce. The soils are fertile and well drained.



Boreal Mixedwood Forest

Did You Know?

The easiest way to tell the difference between a fir tree and spruce tree is to look at the needles. If you cut through a fir needle with your fingernail, it has a flat shape in cross section. A spruce needle is 4 sided.

Aboriginal peoples across Canada have traditionally used the pitch from both fir and spruce trees in everything from providing water tight seals on canoes, to curing sore throats, scrapes and cuts.

In the summer, the forest floor in this mixed wood forest is commonly carpeted with bunchberry.

The large white petals of the flower are actually not petals at all. They are called bracts. The petals are green and are very small. The red berry that the plant produces can be cooked and used in sauces or preserves.



bunchberry



Balsam Fir Forest

This dense stand of trees is a balsam fir forest. Notice the lack of needles on the lower branches of the trees. Most of the needles are found higher up on the tree, where they can capture the sun's energy, through a process called photosynthesis.

There is very little understory vegetation in this area because the fir trees effectively block the sunlight from reaching the ground. The soils are well drained.