



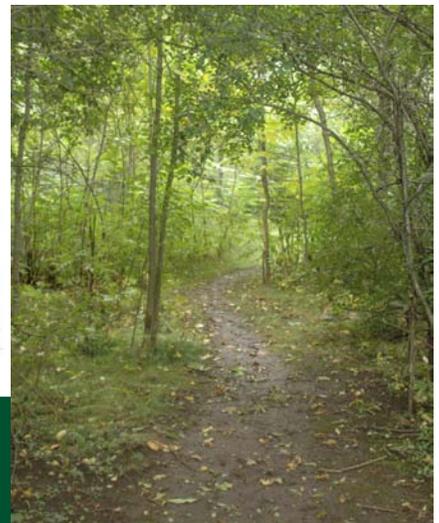
# H. R. Frink

Outdoor Education Centre

# Tree Guide

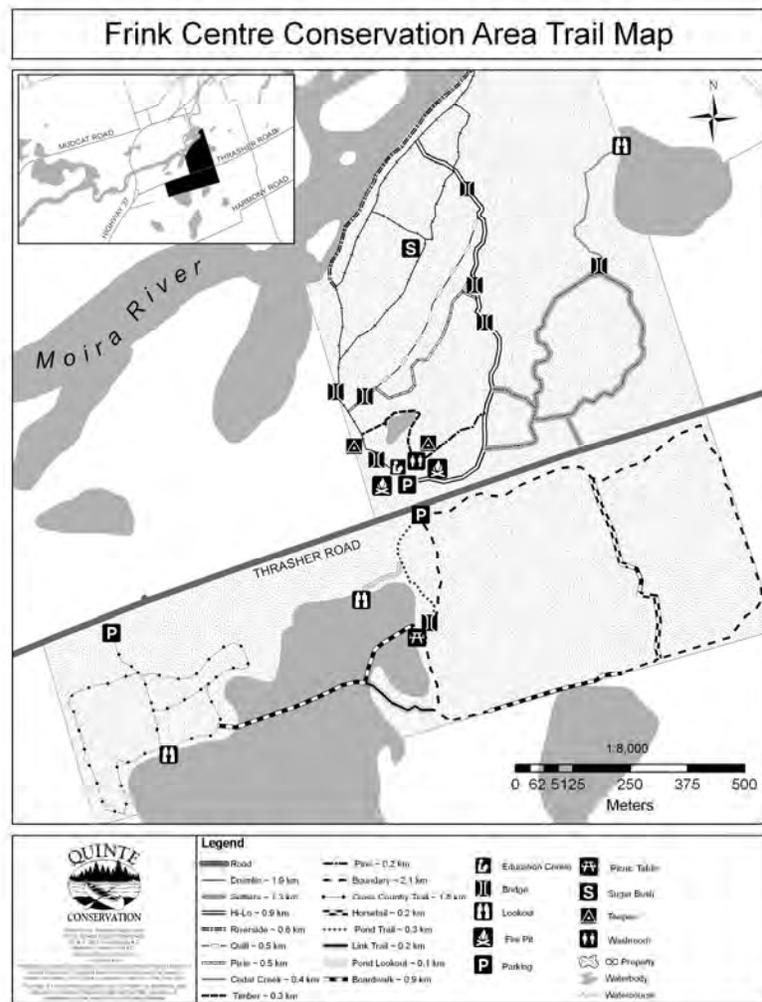
Use this guide to compliment your walk along  
the H.R. Frink Centre Woodland Trail  
highlighting over 25 tree species.

Created through the partnerships of:



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The Woodland Trail follows the Drumlin Trail and the Hi-Lo Trail and highlights over 25 tree species.

# Tree Species

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# White Ash

*Fraxinus americana*



**HEIGHT:** 5-20 metres

**CROWN:** Pyramidal

**BARK:** Mature bark is grayish brown with thin intersecting ridges in regular diamond patterns.

**LEAVES:** Opposite, 20-40 cm long; compound and pinnately divided into 5 to 9 similar leaflets.

**HABITAT:** Found on upland sites with rocky to deep, well drained soils.

**NOTES:** Wood Ducks, Quail, Wild Turkey and songbirds feed on the seeds.

# American Basswood

*Tilia americana*



**HEIGHT:** 18-22 metres

**CROWN:** Irregular and rounded

**BARK:** The young bark is pale and smooth while mature bark is a dark grayish brown with blocky, narrow, flat-topped ridges.

**LEAVES:** The alternate, simple leaves are heart shaped with asymmetrical bases growing to 12-15 cm long. The blades are dark green and paler on the underside with hairy vein axils.

**HABITAT:** Found in cool, moist, rich wooded areas, often near water and mixed with other hardwoods.

**NOTES:** A beneficial species for attracting pollinators such as bees.

## American Beech

*Fagus grandifolia*



**HEIGHT:** 18-25 meters

**CROWN:** Rounded

**BARK:** Mature bark is silver-grey in colour and is thin and smooth.

**LEAVES:** Alternate and simple, 5 to 15 cm long with 9 -14 straight parallel veins per side ending in a coarse tooth. They have a leathery texture and are dark bluish-green above while paler below.

**NUTS:** The smooth shelled nuts are enclosed in a bur-like husk covered in sharp 3 angled points.

**HABITAT:** Found on moist, well drained slopes and bottom lands.

**NOTES:** Nuts are an important food source for muskrats, squirrels, chipmunks, black bears and birds such as grouse, wood ducks and wild turkeys.

## Blue Beech

*Caprinus caroliniana*



**HEIGHT:** 4-9 metres

**CROWN:** Low, rounded and bushy

**BARK:** The bark is thin, smooth and slate grey. The ridges have a muscle-like appearance.

**LEAVES:** Leaves are alternate, simple and arranged in two rows. The blades are 5-10 cm long. Leaves are bluish green on top and yellow green on the bottom with sharp double teeth . The veins are straight and only slightly forked.

**HABITAT:** Found in rich, moist, shady sites, often near water.

**NOTES:** Birds and small rodents eat the buds, flower clusters and seeds.

# White Birch

*Betula papyrifera*



**HEIGHT:** 15 - 25 metres

**CROWN:** Open and conical

**BARK:** Mature bark is white, peeling in large sheets.

**LEAVES:** Leaves are alternate and simple growing 5-10cm long. They are dull green above and paler underneath. There are 5-9 veins per side ending in large teeth.

**HABITAT:** Found in open, often disturbed sites and forest edges in a variety of soil types.

**NOTES:** White Birch foliage is used as a food plant by the larvae of a large number of butterfly and moth species. It is also an important species in the early stages of forest succession.

# Yellow Birch

*Betula Alleghaniensis*



**HEIGHT:** 15-25 metres

**CROWN:** Rounded

**BARK:** Young bark is shiny reddish brown with horizontal pores while mature bark is yellow to bronze with tightly curling papery shreds.

**LEAVES:** Leaves are alternate and simple. They grow to be between 6-18cm in length and are deep yellow green above and paler beneath. Each leaf has 9-11 straight veins per side ending in a large tooth with 2-3 smaller intervening teeth.

**HABITAT:** Found in rich, moist, often shady sites.

**NOTES:** Several species of moths and butterflies use this tree as a food plant for their larvae.

# Black Cherry

*Prunus serotina*



**HABITAT:** 20-30 metres

**CROWN:** Rounded

**BARK:** Young bark is a dark reddish brown to almost black with visible pores while mature bark is rough with out curved square scales.

**LEAVES:** Leaves are alternate and simple and grow to be 5-15cm in length. Blades are thick and waxy. They are dark green above and paler below with fine white to rusty hairs on each side of the lower mid-vein.

**HABITAT:** Found on open woodlands on rocky terrain, often on disturbed sites.

**NOTES:** All parts of the tree are poisonous except for the berry. The berries provide a food source for game birds, song birds and small mammals.

# American Elm

*Ulmus americana*



**HEIGHT:** 18-24 metres

**CROWN:** Fan, umbrella or vase shaped

**BARK:** The bark has slanted ridges of alternating corky layers of thin pale scales and thick dark scales.

**LEAVES:** Leaves are alternate and simple growing in 2 vertical rows. They are between 10-15 cm in length. They are thick, usually slightly rough above, oval, abruptly pointed, with rounded, asymmetrical bases. The veins are prominent and straight ending in sharp teeth.

**HABITAT:** Found in moist bottom lands and protected slopes.

**NOTES:** The leaves of the elm serve as food for many different kinds of moths and butterflies.

# Bitternut Hickory

*Carya codifmis*



**HEIGHT:** 15-25 metres

**CROWN:** Short and rounded

**BARK:** Young bark is smooth with pale vertical lines. Mature bark is flat with shallow, grayish ridges.

**LEAVES:** Alternate and pinnately compound divided into 7-11 leaflets. Leaves are dark, shiny green above and paler, hairy and dotted with glands below. Each leaf is between 10-15 cm long.

**NUTS:** Round, greenish brown and aromatic nuts that are sharp tipped and 2 -3.5 cm long.

**HABITAT:** Found in sheltered, rich, moist woods from swamps to drier hillsides.

**NOTES:** The nuts are eaten by animals but because of their bitter flavour are not a favoured food source.

# Shagbark Hickory

*Carya Ovata*



**HEIGHT:** 19-25 metres

**CROWN:** Irregular shape

**BARK:** Mature bark is dark grey, shaggy, with long, peeling plates.

**LEAVES:** Leaves are alternate and pinnately compound divided into 5 leaflets and 15-30 cm long. They are yellowish green above, paler below and almost hairless underneath. Each is fine toothed, fringed with 2-3 tufts per tooth and is 8-18 cm long.

**NUTS:** Round, greenish to dark reddish brown, fragrant nuts. Hard, 4 angled husks, 3-5 cm long.

**HABITAT:** Found in rich, moist sites, mixed with other broad-leaved trees.

**NOTES:** The nuts are an important food source for squirrels.

# Butternut

*Juglans cinerea*



**HEIGHT:** 12-25 metres

**CROWN:** Irregular

**BARK:** Mature bark is rough with flat-topped, intersecting ridges.

**LEAVES:** Leaves are alternately and pinnately compound, divided into 11-17 leaflets that are yellowish-green above, paler and thickly hairy beneath. They have finely toothed leaflets 5-12 cm long.

**HABITAT:** Found in dry, rocky sites to moist rich sites.

**NOTES:** Leaves, nuts and bark contain toxins that inhibit the growth of other plants. The butternut is a species at risk due to declining numbers caused by Butternut Canker.

# Black Walnut

*Juglans nigra*



**HEIGHT:** 20-30 meters

**CROWN:** Open and rounded

**LEAVES:** Alternate and pinnately compound, divided into 14-23 leaflets that are yellow-green, smooth above and faintly hairy below. Each is finely toothed, short stalked and 5-9 cm long. The tip leaflet is small or absent and the leaf scars are heart shaped.

**NUTS:** Round, yellow green to brown nuts, 4-6 cm across.

**HABITAT:** Found in deep, well drained, fertile lowlands.

**NOTES:** Toxins released from the roots and leached from decaying leaves prevent other broad leaved plants from taking root, including walnut seedlings.

# Hop-hornbeam (Ironwood)

*Ostrya virginina*



**HEIGHT:** 7-12 metres

**CROWN:** Shape is wide-spreading

**BARK:** Mature bark is grayish brown, shaggy, with narrow peeling strips loose at both ends.

**LEAVES:** Leaves are alternate, simple, growing to be 6-13 in length and are arranged in 2 rows. The blades are dark yellowish green, soft, sharp toothed and tapering to a sharp point. The straight veins fork near the edge of the leaf.

**HABITAT:** Found on well drained, shady sites.

**NOTES:** White tailed deer browse on the twigs while seeds, buds and flowers provide food for squirrels, grouse and a variety of songbirds.

# Bur Oak

*Quercus macrocarpa*



**HEIGHT:** 12-18 metres

**CROWN:** Broad and full

**BARK:** Mature bark is grey, often reddish tinged with thick, irregular, scaly ridges. The branches often have corky ridges.

**LEAVES:** Alternate and simple. The blades are shiny green above and paler and hairy below. They are pinnately lobed with 2-4, or sometimes 6-8 rounded lobes.

**NUT:** The fruit is a rounded nut or acorn at 2-3 cm long. The lower half or more is a conspicuously fringed cup of overlapping, knobby, pointed scales.

**HABITAT:** Found in rich bottom lands to rocky uplands, mixed with other trees.

**NOTES:** Thick bark and roots make the Bur Oak very fire and drought resistant.

## Red Oak

*Quercus rubra*



**HEIGHT:** 12-18 metres

**CROWN:** Round

**BARK:** Young bark is smooth and slate grey while mature bark is pale grey which has long, low, narrow ridges, eventually checkered.

**LEAVES:** Leaves are alternate and simple. Blades are 10 - 20 cm long and deeply, pinnately lobed with 7-11 roughly triangular lobes.

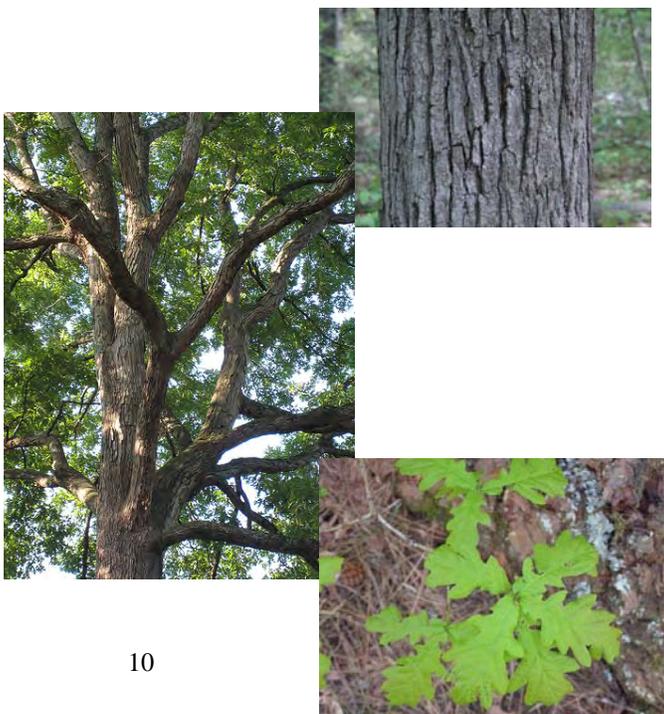
**NUTS:** The nuts or acorns have leathery shells about 1.2 - 1.8 cm long. The lower quarter sits in a saucer shaped cup that is thin, hairless and has reddish brown scales.

**HABITAT:** Found in various sites, but prefers dry, sunny slopes.

**NOTES:** Raccoons and squirrels, white tailed deer, black bears, wild turkeys and blue jays eat the acorns.

## White Oak

*Quercus alba*



**HEIGHT:** 15-35 metres

**CROWN:** Broad and full

**BARK:** Mature bark is pale grey, often red tinged and flaky.

**LEAVES:** Leaves are alternate and simple. Blades are 10-22 cm long, bright green above, paler below, hairless, and deeply lobed with 5-9 rounded lobes.

**NUTS:** The nuts, or acorns are 1.2-2 cm long with leathery shells set inside a cup of overlapping, knobby scales.

**HABITAT:** Found in varied habitats, from deep, rich, well drained soils to rocky outcrops and limestone pavements.

**NOTES:** The leaves are eaten by several species of moth and butterfly larva. The acorns are eaten by turkeys, wood ducks, pheasants, songbirds, small rodents and deer.

## Black Maple

*Acer nigrum*



**HEIGHT:** 18-21 metres

**CROWN:** Dense, rounded and broad

**BARK:** The bark is blackish grey with long, irregular, vertical ridges and is sometimes scaly.

**LEAVES:** Leaves are opposite, simple and appear wilted. The blades are dark green above and densely brownish velvety beneath. They are 10-15 cm long with 3 palmate lobes separated by open shallow notches with a few irregular, blunt pointed teeth. Easily mistaken for a sugar maple leaf.

**HABITAT:** Found on moist, fertile sites, bottomlands and floodplains.

**NOTES:** Black Maples and Sugar Maples hybridize frequently. Like the sugar maple, sap can be collected from black maples to make syrup.

## Red Maple

*Acer rubrum*



**HEIGHT:** 20-25 metres

**CROWN:** Long and rounded

**BARK:** Young bark is light grey and smooth. Mature bark is dark grayish brown and scaly with plates that peel at both ends.

**LEAVES:** Leaves are opposite and simple. The blades are light green, whitish beneath and grow to be 5-15 cm long. They have 3-5 palmate lobes separated by shallow sharp notches and are irregularly double toothed.

**HABITAT:** They grow in cool, moist sites by swamps, streams and springs but can be found on upland sites as well.

**NOTES:** Elk and White tailed deer like to browse on the new growth of Red Maples.

# Silver Maple

*Acer saccharinum*



**HEIGHT:** 20-30 metres

**CROWN:** Rounded and open.

**BARK:** Young bark is smooth and grey. Mature bark is grey, often shaggy, with thin strips that peel at both ends.

**LEAVES:** Leaves are opposite and simple. Blades are light green, silvery white beneath and grow to be 8-12 cm long. They have 5-7 palmate lobes separated with deep, concavely narrow notches and have irregular course teeth.

**HABITAT:** Found on moist to wet sites near streams, swamps and lakes.

**NOTES:** Many birds and small mammals eat the seeds. Silver maples commonly have hollow trunks that mammals like squirrels and raccoons den in. Cavity nesting birds like, wood ducks, use them to nest.

# Sugar Maple

*Acer saccharum*



**HEIGHT:** 20-35 metres

**CROWN:** Rounded and narrow

**BARK:** Mature bark is grey, irregularly ridged and sometimes scaly.

**LEAVES:** Leaves are opposite and simple. Blades are a deep yellowish green above and paler and hairless below. They are 18-20 cm long with 5 palmate lobes separated by rounded notches and edged with a few irregular, blunt pointed teeth.

**HABITAT:** Found in deep, rich soils in fairly dry woods.

**NOTES:** Sugar Maples are best known for their sweet sap that can be made into syrup. The sap contains 2-6% sugar, so it takes 30-40 L to produce 1 L of Syrup.

# Balsam Poplar

*Populus balsamifera*



**HEIGHT:** 18-25 metres

**CROWN:** Narrow and irregular

**BARK:** Young bark is smooth, greenish brown with dark markings. Mature bark is dark grey and furrowed.

**LEAVES:** Leaves are alternate and simple. Blades are dark green above, silvery green to yellowish below and often brown stained. They are oval, 6-15 cm long, edged with blunt teeth and have 2 warty glands at the base.

**HABITAT:** Found in moist, low lying sites such as ditches, river valleys and moist fields.

**NOTES:** Grouse and songbirds eat the buds. Deer, moose and small mammals eat the buds, twigs, leaves and bark.

# Large Toothed Aspen

*Populus grandidentata*



**HEIGHT:** 30-60 metres

**CROWN:** Short and rounded

**BARK:** Young bark is smooth and olive to yellow grey with diamond shaped marks about 1 cm wide. Mature bark is dark grey and furrowed.

**LEAVES:** Leaves are alternate and simple. The blades are dark green above, paler beneath and 5-10 cm long. They are ovate to almost round with 7-15 course, uneven, blunt teeth.

**NOTES:** Grouse and purple finches eat the buds. Moose, deer, beavers, muskrats and rabbits all eat the buds, bark, twigs and leaves.

# Cottonwood

*Populus deltoids*



**HEIGHT:** 20-30 metres

**CROWN:** Broad when growing in open sites and narrow when growing in forests.

**BARK:** Young bark is smooth and yellowish grey. Mature bark is dark grey and furrowed.

**LEAVES:** Leaves are alternate and simple. Blades are shiny green above and paler beneath. They are shaped like a rounded triangle and grow to be 5-17 cm long. The leaf edges have 40-50 callus tipped teeth and 3-5 warty glands at the base.

**HABITAT:** Found on moist sites, usually on floodplains or sandy soils near lakes.

**NOTES:** A very fast growing tree.

# Trembling Aspen

*Populus tremuloides*



**HEIGHT:** 12-25 metres

**CROWN:** Short and rounded

**BARK:** Young bark is smooth, pale greenish to almost white with dark, diamond shape marks. Mature bark is dark grey.

**LEAVES:** Leaves are alternate and simple. Blades are dark green above and paler beneath. They are ovate to almost kidney shaped, short and pointed, 3-7 cm long, with 20-30 fine, uneven, blunt teeth. The stalks are flattened, making them "tremble" in the wind.

**HABITAT:** Found on upland habitats in various soil types.

**NOTES:** Heart rot fungus produces hollow trunks that are used by cavity nesters such as owls, flying squirrels, woodpeckers and wood ducks.

# Eastern Red Cedar

*Juniperus virginiana*



**HEIGHT:** Up to 10 metres

**CROWN:** Conical to almost cylindrical

**BARK:** Bark is light reddish brown in narrow strips.

**LEAVES:** The leaves are dark bluish green flat lying scales, 2mm long, in overlapping pairs on mature branches. Young branches have sharp needles, 5-7 mm long. Sometimes both can be found on the same branch.

**CONES:** Male and female cones are usually on separate trees. Male cones are yellowish and 2.5-3 mm long. Female cones are berrylike and deep blue with a whitish bloom.

**HABITAT:** Found on dry, rocky, or sandy sites and abandoned fields.

**NOTES:** Many types of songbirds eat the berries of the Red Cedar.

# Eastern White Cedar

*Thuja occidentalis*



**HEIGHT:** 15 metres

**CROWN:** Steeple shaped compact and neatly trimmed.

**BARK:** Mature bark is grey and shreds in narrow flat strips.

**LEAVES:** Leaves are dull yellowish green and scale like. They are 2-4 mm long with oil filled glandular spots. Leaves on older branches are lance shaped, 4-5 mm long and glandless.

**HABITAT:** Found on swampy ground to dry limestone outcrops. Prefers habitats with calcium rich soils, high snowfall and humidity.

**NOTES:** Seeds provide important food for finches and other songbirds. Red squirrels store branches with cones on them for winter feeding. It also provides cover and shelter for white-tailed deer.

## Balsam Fir

*Abies balsamea*



HEIGHT: Up to 25 metres

CROWN: Narrowly cone shaped

BARK: Young bark is thin and smooth with blister like pockets of aromatic resin. Mature bark is brownish and irregularly scaly.

LEAVES: Flat evergreen needles are dark shiny green with two white bands on the underside, 1-2.5 cm long and stalk-less. They are spirally attached but twisted into two rows on one plane.

HABITAT: Found on low, swampy ground to well drained hillsides. Requires moist soils and air.

NOTES: Dense stands of pure fir will protect steep slopes from erosion and provide food and shelter for wildlife.

## Eastern Hemlock

*Tsuga Canadensis*



HEIGHT: Up to 30 metres

CROWN: Crown shape is densely conical when young and irregular with age.

BARK: Young bark is reddish brown and scaly. Mature bark is dark brown and furrowed. The inner bark is bright reddish purple.

LEAVES: The leaves are flat, flexible evergreen needles. They are dark yellowish brown and grooved above with 2 whitish bands within the green margins beneath. The needles are 1-2 cm long, blunt, notched and edged with tiny teeth.

NOTES: Provide shelter and cover for white tailed deer, porcupines, snowshoe hare, grouse and wild turkey.

## Red Pine

*Pinus resinosa*



HEIGHT: up to 25 metres

CROWN: Crown is conical when young and rounded and irregular with age.

BARK: Young bark is reddish to reddish pink and scaly. Mature bark has broad, scaly plates.

LEAVES: Leaves are shiny, dark green evergreen needles. They are straight, 10-16 cm long and found in whorls of 2.

HABITAT: This tree is found on dry sandy or rocky soils. It grows best on dry to moderately wet sites with slightly acidic, sandy loam.

NOTES: Various songbirds eat the seeds, especially red crossbills, pine grosbeaks and pine siskins. Red Squirrels harvest the cones from the tree while chipmunks and voles harvest cones from the ground.

## Eastern White Pine

*Pinus strobus*



HEIGHT: up to 30 metres

CROWN: Crown is conical when young becoming irregular and often lopsided with age.

BARK: Young bark is greyish green, thin and smooth. Mature bark is dark greyish green with broad ridges of purple tinged scales.

LEAVES: Needles are light bluish green in colour and soft, slender, straight and flexible. They grow to be 5-15 cm long and are found in whorls of 5.

NOTES: White pine is fairly fire resistant and will readily spread its seeds after a fire on the freshly exposed ground. White pine blister rust and white pine weevil have killed many white pine trees.

# White Spruce

*Picea glauca*



HEIGHT: up to 25 metres

CROWN: Narrow to broadly cone shaped.

BARK: Mature bark is dark grey, with thin, scaly plates. Newly exposed bark is pinkish.

LEAVES: Needles are straight, stiff and 4 sided. Each needle is 1.5-2.2 cm long and are white lined on all sides. They are arranged spirally but curved upwards and crowded on the upper side.

HABITAT: Found in a wide range of sites, but prefers rich and moist soils.

NOTES: White Spruce provides food and shelter for a number of birds and small mammal species. Black bears can damage them by peeling off the outer bark to eat the sweet inner bark.

# Tamarack

*Larix laricina*



HEIGHT: up to 25 metres

CROWN: Crown shape is roughly cone shaped.

BARK: The young bark is grey, smooth and thin. Mature bark is light reddish brown with narrow peeling scales. Newly exposed bark is reddish purple.

LEAVES: Leaves are light bluish green, soft, slender, deciduous needles. They are 2-5 cm long, slightly spiraled in clusters of 15-60 at tips of stubby side shoots.

HABITAT: Found on cold wet sites such as bogs, but grows best on moist, well drained upland sites.

NOTES: Red squirrels, chipmunks, mice and crossbills eat the seeds. White tailed deer eat the young shoots. Porcupines often kill Tamarack by peeling the outer bark to eat the inner bark.