



NOVA SCOTIA

Natural Resources

**Tree Identification Guide for
Common Native Trees of
Nova Scotia**



Before you Start!

- To navigate through this presentation you must use the buttons at the bottom of your screen or select from the underlined choices.
- The following presentation includes most of Nova Scotia's commercial tree species. There are far too many other non-commercial species to cover in this presentation. Please refer to the books listed on the following page for more information.



References

- Trees of Nova Scotia
 - Gary Saunders
- Native Trees of Canada
 - R.C. Rosie
- Silvics of Forest Trees of the United States
 - US Department of Agriculture



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Glossary of Terms

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Alternate leaf arrangement - one of two kinds of arrangements of leaves along shoots of hardwoods; in this case the leaves appear at staggered intervals along the shoot.

Bark - The outer covering of the trunk and branches of a tree, usually corky, papery or leathery.

Bud - rounded or conical structures at tips of (terminal buds), or along (lateral or auxiliary buds) stems or branches, usually covered tightly in protective scales and containing a preformed shoot (with leaves), or a preformed inflorescence (with flowers). May or may not be on a stalk.

Clear cut - a silvicultural system that removes an entire stand of trees from an area of one hectare or more, and greater than two tree heights in width, in a single harvesting operation.

Compound leaf - a leaf divided into smaller leaflets.

Cone - in botany, a reproductive structure bearing seeds (seed cone) or pollen (pollen cone) in conifers.

Coniferous - see "Softwood."



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DBH - diameter of the tree at breast height; a common measure of tree trunk thickness at about 4 ft from the ground.

Deciduous - see “Hardwood.”

Fruit - a mature plant ovary; contains seeds.

Hardwood - a term commonly applied to broad-leaved or deciduous trees; although some may be evergreen, they do not bear cones.

Humus - decomposed plant and animal residues in the lower organic soil layer.

Layering - a method of plant propagation in which a stem is induced to send out roots when it is surrounded by soil (and still attached to a parent plant).

Leaf - on a plant, the main organ of photosynthesis (thus often green) often made up of a lamina (or blade) which is attached to the stem or root with a petiole (or leaf stalk) that often has some sort of appendage, called a stipule, at its base. The petiole continues through the lamina as the mid-rib, which supports the leaf with veins.

Leaflet - a single division of a compound leaf.

Leaf Scar - the scar left on a twig when a leaf falls.



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Lobe - in botany, a lobed leaf is shallowly divided and has rounded edges.

Needle - in botany, a very long and narrow leaf that is folded to resemble a sewing needle.

Opposite leaf arrangement - one of two kinds of arrangements of leaves along shoots of hardwoods; in this case the leaves appear opposite one another along the shoot.

Pith - the central, usually soft portion of a twig.

Pulpwood - wood that is used in the pulp and paper industry; not used for timber or firewood.

Resin - a semi-solid viscous solution that exudes from many tree after physical trauma; sap.

Seed - a structure that develops from a fertilized ovule; a mature seed contains an embryo of a plant.

Selection - a silvicultural system that removes mature timber either as single scattered individuals or in small groups at relatively short intervals, repeated indefinitely, where the continual establishment of regeneration is encouraged and an uneven-aged stand is maintained.

Scarification - a method of seedbed preparation which consists of exposing patches of mineral soil through mechanical action.

Shelterwood - a silvicultural system in which trees are removed in a series of cuts designed to achieve a new even-aged stand under the shelter of remaining trees.



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Shoot - a stem plus the attached leaves.

Simple leaf - a leaf whose blade is not completely divided into separate leaflets.

Slash - the residue left on the ground as a result of forest and other vegetation being altered by forest practices or other land use activities.

Softwood - a term commonly applied to coniferous trees; although some may be deciduous (ie. larches), most have needle or scale like leaves that are evergreen, and all bear cones.

Soil texture – several types:

Sand – gritty, large soil particles.

Silt – smooth and slippery when wet, small soil particles.

Clay – sticky and plastic-like when wet, extremely small soil particles.

Loam – a mixture of all three.

Stem - in trees, the woody axis forming the trunk or a branch to which leaves, other branches, and reproductive structures are attached.

Stump sprouting - in many species, a tree can be burned or cut without damaging its long taproot. The taproot will then stimulate new growth in the form of sprouts from the stump. The many thin trees that result are sometimes called coppice-growth.

Sucker - A secondary shoot produced from the base or roots of a woody plant that gives rise to a new plant.



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Tree - a woody perennial (a plant that lives many years), usually with a single trunk and growing more than 5 m in height.

Twig - a small limb, a branchlet of a tree.

Vein - in botany, a thread of thickened tissue in a leaf, especially those that branch.



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Key To Softwood Trees

Leaves not needle like

Leaves needle like

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➤ EASTERN WHITE CEDAR

- Very small, flat, scale-like needles that are soft and yellow-green



Key To Softwood Trees

Needles in bundles or groups

Single needles

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Key To Softwood Trees

Two needles in each bundle

More than two needles/bundle

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➤ RED PINE

- Straight needles that easily snap or break

OR

➤ JACK PINE

- Yellow-green needles are twisted, stiff and flat

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➤ WHITE PINE

- Five long needles in each bundle that are soft and blue-green

OR

➤ EASTERN LARCH/ TAMARACK

- Short three-sided needles, in bundles of 12 to 30

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Key To Softwood Trees

Needles flattened
(Do not roll between fingers)

Needles four-sided
(Roll between fingers)

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➤ **EASTERN HEMLOCK**

- Needles glossy green above with two white bands below
- Short needles with a small stalk

OR

➤ **BALSAM FIR**

- Needles dark green above with two white lines below
- Fragrant when crushed

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- Distinct yellow-green needles
- Light orange, slightly hairy twig

OR

- Distinct blue-green needles
- Brownish, slightly hairy twig

OR

- Blue-green, odiferous sharp needles
- Pale, hairless twig

➤ **RED SPRUCE**

➤ **BLACK SPRUCE**

➤ **WHITE SPRUCE**

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Key To Hardwood Trees

- **Alternate leaf arrangement**

- one of two kinds of arrangements of leaves along shoots of hardwoods; in this case the leaves appear at staggered intervals along the shoot.

- **Opposite leaf arrangement**

- one of two kinds of arrangements of leaves along shoots of hardwoods; in this case the leaves appear opposite one another along the shoot.

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Key to Hardwood Trees: Alternate Leaf Arrangement

Buds on a short stalk

Buds not stalked

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➤ **SPECKLED ALDER**

- Speckled grey bark
- Buds with two bud scales
- Black cone-like fruiting bodies usually present
- There are no silvics for this non-commercial, but common, species



Key to Hardwood Trees: Alternate Leaf Arrangement

Only one bud scale

More than one bud scale

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➤ **WILLOW**

- About 15 species
- Flexible slender twigs
- Buds clasp tight to twig
- Catkins (slim, cylindrical flower clusters without petals) appear in early spring
- There are no silvics for the many, and easily confused, willow species



Key to Hardwood Trees: Alternate Leaf Arrangement

Twigs more or less straight

Twigs slightly or very
zig-zag in shape

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Key to Hardwood Trees: Alternate Leaf Arrangement

Twigs with no or few hairs

Twigs very hairy

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➤ **SUMAC**

- Twigs very stout
- Dense brownish hairs on twigs
- Large compound leaves
- There are no silvics for this non-commercial species



Key to Hardwood Trees: Alternate Leaf Arrangement

Star shaped pith

Pith round

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- Stout reddish or green-brown twigs
- Buds are usually fuzzy and have multiple tips

➤ **RED OAK**

OR

- Slender, red-brown, shiny twigs
- Buds shiny dark brown, pointed and curved toward twig

➤ **TREMBLING
ASPEN**

OR

- Twigs somewhat thick
- Twigs and buds have grey downy hairs

➤ **LARGE-TOOTH
ASPEN**

OR

- Stout, shiny, red-brown twigs
- Very large buds with gummy, aromatic resin

➤ **BALSAM
POPLAR**

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Key to Hardwood Trees: Alternate Leaf Arrangement

Buds grey and fuzzy

Buds hairless or smooth

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➤ **EUROPEAN MOUNTAIN ASH**

- Twigs stout
- Lateral buds similar to terminal buds
- Flower stalks persist in winter
- There are no silvics for this non-commercial species



Key to Hardwood Trees: Alternate Leaf Arrangement

Thick twigs

Twigs thin or slender

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➤ **AMERICAN MOUNTAIN ASH**

- Smooth, red-brown twigs with whitish spots
- Large, purplish, gummy buds
- Terminal bud twice as big as lateral
- There are no silvics for this non-commercial species



Key to Hardwood Trees: Alternate Leaf Arrangement

Buds not pinkish

Buds pinkish

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➤ **PIN CHERRY**

- Smooth, shiny, red-brown twigs with peeling skin
- Buds tiny and rounded

OR

➤ **CHOKE CHERRY**

- Greyish-brown twigs
- Pointed, brown buds with grey edged scales
- There are no silvics for these non-commercial species

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➤ **SHAD BUSH**

- Medium size pointed buds with hair-fringed scales
- Twigs with many spurs or branches
- There are no silvics for this non-commercial species



Key to Hardwood Trees: Alternate Leaf Arrangement

Buds >1.3 cm long

Buds < 1.3 cm long

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➤ BEECH

- Buds long and pointed
- Twigs slender and shiny brown
- Bold, straight leaf veins



Key to Hardwood Trees: Alternate Leaf Arrangement

Twigs without wintergreen taste

Twigs with wintergreen taste

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➤ YELLOW BIRCH

- Slender twigs
- Yellowish, papery bark

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Key to Hardwood Trees: Alternate Leaf Arrangement

Bark papery

Bark not papery

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- New twigs slightly hairy becoming smooth red-brown
- Old twigs with white specks

OR

➤ **WHITE BIRCH**

➤ **GREY BIRCH**

- Slender wiry twigs with warty protrusions
- Short stunted tree form

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- Tiny stalked glands on new twigs and leaves
- Twig reddish and very slender

OR

- Slightly hairy, red-brown buds
- Buds not evenly spaced on twig
- Many bud scales

➤ **IRONWOOD**

➤ **WHITE ELM**

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Key to Hardwood Trees: Opposite Leaf Arrangement

More than three leaf scars

Three leaf scars

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Key to Hardwood Trees: Opposite Leaf Arrangement

Five leaf scars

16 leaf scars

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➤ **HORSE CHESTNUT**

- Large leaf scars, shaped like a horse shoe
- Stout twigs with gummy buds
- There are no silvics for this non-commercial species



- Stout, brownish to grey-green twigs ➤ **WHITE ASH**
- Dark brown, fuzzy buds

OR

- Stout grey twigs with some raised bumps ➤ **BLACK ASH**
- Nearly black, fuzzy buds
- There are no silvics for this rare species

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Key to Hardwood Trees: Opposite Leaf Arrangement

Buds not stalked, with
several scales

Buds stalked, with
two bud scales

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Key to Hardwood Trees: Opposite Leaf Arrangement

Buds pointed

Buds with blunt tips

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➤ SUGAR MAPLE

- Slender shiny red-brown twig with white spots
- V- shaped leaf scars



➤ RED MAPLE

- Slender red twig
- Bud usually less than 0.5 cm



- Twigs and buds covered in white downy fuzz
- Slender reddish twigs
- There are no silvics for this non-commercial species

OR

- Twigs and bark hairless
- Greenish to brown bark with white stripes

➤ **MOUNTAIN
MAPLE**

➤ **STRIPED MAPLE**

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Sugar Maple



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Sugar Maple

Leaves

- Opposite, simple
- Thin with 3 – 5 lobes separated by rounded indentations
- Dark green above and paler below
- Turns wine, scarlet, orange or yellow in autumn



Sugar Maple

Mature Bark

- Deep vertical ridges



SUGAR MAPLE *Acer saccharum* Marsh

Other common name(s): Rock maple, hard maple

Life expectancy: 150 - 250 years

Mature height: 24 m to 27 m (78' to 88') tall

Mature stem diameter: 30 cm to 60 cm (12" to 23") DBH

Shade tolerance: Very high

Timber value(s): Flooring, furniture, interior finishing, veneers, sporting goods, musical instruments

Wildlife value(s): Young shoots provide food for deer, porcupines feed on bark, sapsuckers utilize as sap trees, and squirrels feed on seeds, buds, leaves and twigs

Other value(s): While all maples can produce maple syrup, sugar maple sap is considered to produce the most valuable syrup

TREE-VIA: It takes up to 40 litres of sap to make only 1 litre of syrup!



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Red Maple



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Red Maple

Leaves

- Opposite, simple
- 3 – 5 lobes with V shaped indentations and coarse saw-like teeth
- Green above, silvery green below
- Turns yellow to red in autumn



Red Maple

Reproduction

- Red maple can regenerate by producing sprouts from a “dead” stump, as shown here
- It can also reproduce by seed



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Red Maple

Mature Bark

- Dark gray or brown with long narrow scales



RED MAPLE *Acer rubrum* Linnaeus

Other common name(s): Soft maple, white maple, swamp maple

Life expectancy: 80 - 130 years

Mature height: 8 m to 22 m (26' to 72') tall

Mature stem diameter: 30 cm to 46 cm (12" to 18") DBH

Shade tolerance: Moderate

Timber value(s): Flooring, furniture, interior finishing, veneers, sporting goods, musical instruments: except where strength, hardness or large size are critical

Wildlife value(s): Sapsuckers utilize as sap trees (sometimes causing mortality), important source of winter browse for moose and deer

TREE-VIA: Red maples have some structure that is red in every season- winter: red buds, spring: red flowers, summer: petioles or leaf stems are red, and autumn: leaves!



Striped Maple

Leaves

- Opposite, simple
- 3 lobes with drawn out tips
- Pale green



Striped Maple

Immature Bark

- Its name comes from conspicuous vertical stripes on its smooth greenish to brown bark



Striped Maple

Mature Bark

- Smooth green to brownish bark with white vertical stripes



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STRIPED MAPLE *Acer pensylvanicum* L.

Other common name(s): Moose maple

Life expectancy: 100 years

Mature height: up to 10 m (33') tall

Mature stem diameter: 25 cm (10") DBH

Shade tolerance: Tolerant

Timber value(s): Very little

Wildlife value(s): Striped maple is most important for its wildlife values. It is important browse for deer and moose, and ruffed grouse eat buds

Other value(s): Striped maple provides good erosion control on steep banks and slopes

TREE-VIA: When there are large numbers of striped maple in the understory before cutting, they frequently become the dominant vegetation after cutting



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Yellow Birch



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Yellow Birch

Leaves and Twigs

- Alternate, simple
- Dark glossy green above, yellow green below
- Twig is slender, brownish, smooth or hairy, grows in a zig zag pattern
- Twig has a wintergreen smell and taste when crushed or chewed



Yellow Birch

Mature Bark

- Thin, papery golden curls



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YELLOW BIRCH *Betula alleghaniensis* Britt.

Other common name(s): curly birch, hard birch, black birch

Life expectancy: 150 - 200 years

Mature height: 18 m to 24 m (60' to 80') tall

Mature stem diameter: 30 cm to 60 cm (12" to 24") DBH

Shade tolerance: Moderate

Timber value(s): Yellow birch is the second most valuable hardwood in NS, after sugar maple. It is commonly used for flooring, furniture, cabinet work, and veneer

Wildlife value(s): It is a preferred food of deer and hare. Grouse eat buds. Buds are the favourite food source of yellow-bellied sap sucker and grouse

TREE-VIA: When trying to promote yellow birch regeneration, it is important to scarify (dig up) the ground until bare mineral soil is exposed



White Birch



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White Birch

Leaves

- Alternate, simple
- Leaf base varies from heart-shaped to rounded
- Smooth, dark green above
- Paler and slightly hairy below



White Birch

Bark

- Immature bark is dark brown and thin
- Mature bark is many layered creamy white sometimes with a pink tinge
- Pale black triangle marking where limbs join



WHITE BIRCH *Betula papyrifera* Marsh

Other common name(s): paper birch, canoe birch, silver birch

Life expectancy: 80 - 130 years

Mature height: 15 m to 21 m (50' to 70') tall

Mature stem diameter: 25 cm to 60 cm (10" to 24") DBH

Shade tolerance: Low

Timber value(s): It can be used as veneer, pulpwood and fuel wood. Often used for turning

Wildlife value(s): Important browse for deer and moose.

TREE-VIA: Although white birch bark is one of the best natural tinders - do not rip birch bark off a living tree for your campfire – it may *kill* the tree!



Grey Birch



Hardwood Trees



Grey Birch

Leaves

- Alternate, simple
- Upper surface glossy
- Small leaves, very drawn out at the tip



Grey Birch

Bark

- Dull chalky- white bark is tight and hard to peel
- Black triangle marking where limbs join the main stem are more pronounced in grey birch than in white



GREY BIRCH *Betula populifolia* Marsh

Other common name(s): wire birch, white birch

Life expectancy: 20 - 50 years

Mature height: 6 m to 11 m (20' to 35') tall

Mature stem diameter: 8 cm to 12 cm (3" to 5") DBH

Shade tolerance: Low

Timber value(s): Low, used for fuel wood and barrel hoops

Wildlife value(s): Cover and food for small birds, rodents and grouse. Deer and moose browse the branches

TREE-VIA: The wood is excellent for turning and often used by craftsman.



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White Ash



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White Ash

Leaves

- Opposite, compound
- 20 – 30 cm long, made up of 5, 7 or 9 smooth sparsely toothed leaflets that are usually oppositely arranged
- Dark green above and paler below



White Ash

Immature Bark

- Smooth ashy grey, sometimes with an orange cast



White Ash

Mature Bark

- Ashy grey with a fine diamond shaped interlacing, flat topped ridges



WHITE ASH *Fraxinus americana* L.

Other common name(s): ash, American ash

Life expectancy: 100 - 200 years

Mature height: 18 m to 21 m (60' to 70') tall

Mature stem diameter: 45 cm to 75 cm (18" to 30") DBH

Shade tolerance: Moderate to low, more tolerant when young

Timber value(s): Highly prized for its strong, shock resistant wood which makes excellent tool handles and sporting goods

Wildlife value(s): Shoots browsed by beaver and deer. Porcupine like bark. Seeds eaten by purple finch, pine grosbeak, wood ducks, etc

TREE-VIA: Juice made from white ash leaves gives topical relief to mosquito bite swelling and itching



Trembling Aspen



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Trembling Aspen

Leaves

- Simple, alternate
- Lustrous dark green above
- Dull yellow green below
- Leaf is on a vertically flattened stem about as long as the leaf is wide
- Leaf flutters or trembles in the slightest breeze



Trembling Aspen

Immature Bark

- Smooth and pale grey with diamond shaped indentations



Trembling Aspen

Mature Bark

- Furrowed and dark brown or grey



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TREMBLING ASPEN *Populus tremuloides* Michx.

Other common name(s): aspen, poplar, popple, quaking aspen

Life expectancy: 60 - 100 years

Mature height: 12 m to 18 m (40' to 60') tall

Mature stem diameter: 25 cm to 40 cm (10" to 16") DBH

Growth: Fastest growing native hardwood in NS

Shade tolerance: Low

Timber value(s): Has limited use for pulpwood, matches and fuelwood

Wildlife value(s): Important source of wildlife forage for moose, deer, ruffed grouse, beaver rabbits and mice

TREE-VIA: Trembling aspen is the most widely distributed tree in North America. It grows from Cape Breton to Alaska south to Mexico!



Large-toothed Aspen



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Large-tooth Aspen

Leaves

- Simple, alternate
- Leaves dark green above, paler below
- Leaves have obvious, round indentations along edges



Large-toothed Aspen

Immature Bark

- Smooth, olive green



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Large-tooth Aspen

Mature Bark

- Brownish and furrowed



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LARGETOOTH ASPEN *Populus grandidentata* Michx

Other common name(s): aspen, poplar, popple, bigtooth aspen

Life expectancy: 60 - 100 years

Mature height: 12 m to 18 m (40' to 60') tall

Mature stem diameter: 30 cm to 48 cm (12" to 18") DBH

Shade tolerance: Low

Timber value(s): Low timber value. The wood can be used for pulpwood, pallets, and fuel wood

Wildlife value(s): Important source of wildlife forage for moose, deer, ruffed grouse, beaver rabbits and mice

TREE-VIA: Suckers remain connected to parent roots even after they develop their own root system.



Balsam Poplar



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Balsam Poplar

Leaves and Twigs

- Simple, alternate
- Dark glossy green with rusty blotches below
- Leaf stalk rounded
- Twigs are stout, shiny green in summer
- Twigs are stout red brown in winter
- Twigs have large buds that exude an aromatic resin



Balsam Poplar

Mature Bark

- Smooth greenish to brownish when immature
- Bark becomes dark grey and deeply furrowed



BALSAM POPLAR *Populus balsamifera* L.

Other common name(s): poplar, popple, Balm of Gilead, black poplar, bam

Life expectancy: 80 - 150 years

Mature height: 20 m to 24 m (65' to 80') tall

Mature stem diameter: 20 cm to 40 cm (8" to 16") DBH

Shade tolerance: Low

Timber value(s): Low timber value

Wildlife value(s): Many mammals and birds eat the bark, twigs, buds and seeds. It is a preferred food for the beaver

TREE-VIA: A compound is extracted from the resinous buds that effectively stops bleeding from minor cuts, and which, when used in an inhalator, clears cold-clogged nasal passages. This is sold under various trade names, notably "Friar's Balsam".



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Beech



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Beech

Leaves

- Simple, alternate
- Dark blue-green above, paler below
- Straight side veins each ending in a tooth
- Dead leaves sometimes stay on tree all winter



Beech

Fruiting Body

- Beech Nuts



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Beech

Immature Bark

- This photo is slightly diseased
- When severely diseased: bark is cankered, and the stem is crooked
- When not diseased: bark is smooth grey blue



Beech

Mature Bark

- This photo is slightly diseased



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BEECH *Fagus grandifolia* Ehrh.

Other common name(s): American beech

Life expectancy: 100 - 200 years

Mature height: 12 m to 21 m (40' to 70') tall

Mature stem diameter: 20 cm to 60 cm (8" to 24") DBH

Shade tolerance: Very high

Timber value(s): Traditionally used in wooden ware and small furniture. A decrease in the quality of beech in NS due to heavy damage from beech bark disease has resulted in it being used primarily for fuel wood

Wildlife value(s): Beech nuts are an important food source for mice, squirrels, bears, raccoons and ruffed grouse

TREE-VIA: Beech nuts were the preferred food of the now extinct passenger pigeon



Red Oak



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Red Oak

Leaves

- Simple, alternate
- Dull, dark green above and yellow green below
- 7 – 11 lobes each tipped by a stiff bristle
- Dead leaves sometimes stay on tree all winter



Red Oak

Fruiting Body

- Acorn



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Red Oak

Immature Bark

- Smooth greenish-brown



Red Oak

Mature Bark

- Dark brown broken into wide ridges
- Inner bark orange or yellow



RED OAK *Quercus rubra* L. Michx.f.

Other common name(s): oak, Northern red oak

Life expectancy: 200 - 250 years

Mature height: 15 m to 21 m (50' to 70') tall

Mature stem diameter: 30 cm to 75 cm (12" to 30") DBH

Shade tolerance: Moderate to low

Timber value(s): Used for flooring, interior finish and furniture. Good quality trees are very valuable as shipbuilding lumber

Wildlife value(s): Acorns eaten by squirrels and deer, insects and small rodents

TREE-VIA: "If your life is hard and rewards are few, remember that the mighty oak was once a nut like you!"- Anonymous



White Elm



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White Elm

Leaves

- Simple, alternate
- Green and either smooth or sandpaperly above
- Paler and usually hairy below
- Lopsided at the base



White Elm

Inner bark

- has white corky stripes in it when broken



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White Elm

Immature Bark



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White Elm

Mature Bark

- Grey interlaced ridges
- Inner streaked with buff, corky patches



WHITE ELM *Ulmus americana* L.

Other common name(s): elm, American elm

Life expectancy: 150 - 200 years

Mature height: 23 m to 27 m (75' to 90') tall

Mature stem diameter: up to 175 cm (70") DBH

Shade tolerance: Moderate

Timber value(s): Used for boat building, furniture, lumber, and pulpwood

Wildlife value(s): Woodpeckers use tree cavities in white elm as nesting sites. Mice and many birds, such as the evening grosbeak, purple finch, and American gold finch eat the seeds and buds

TREE-VIA: Is considered a " soil improving species" because of its litter decomposes rapidly and contains many desirable nutrients.



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Ironwood



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Ironwood

Leaves

- Simple, alternate
- Dark yellowish-green above and below
- Hairs on undersides
- Sharply toothed
- Teeth in two sizes, the larger teeth at the ends of the straight veins



Ironwood

Mature Bark

- Greyish-brown
- Mature bark breaks into vertical strips



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IRONWOOD *Ostrya virginiana* (Mill) K. Koch

Other common name(s): hornbeam, hophornbeam

Life expectancy: 50 - 100 years

Mature height: 10 m to 12 m (33' to 40') tall

Mature stem diameter: up to 25 cm (10") DBH

Shade tolerance: High

Timber value(s): Used as sled runners, tool handles and fuel wood

Wildlife value(s): Grouse eat buds, some browse by deer

TREE-VIA: One of the hardest woods in North America!



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[Hardwood Trees](#)

Red Spruce



Softwood Trees



Red Spruce

Needles

- Needles are four cornered and 1.3 to 1.6 cm in length
- Bright yellow green
- Sharp pointed
- Will roll between fingers



[Softwood Trees](#)



Red Spruce

Backs of branches

- New growth is yellowish brown
- Old growth is reddish brown



Red Spruce

Mature Bark

- Finely scaled, thin, reddish brown
- Inner bark is black brownish yellow



[Softwood Trees](#)



RED SPRUCE *Picea rubens* Sarg.

Other common name(s): Yellow spruce, Maritime spruce.

Life expectancy: 250 to 350 years

Mature height: 21 m to 24 m (70' to 80') tall

Mature stem diameter: 30 cm to 60 cm (12" to 24") DBH

Shade tolerance: Very high tolerance, but needs full light for best growth

Timber value(s): The most valuable lumber and pulpwood species in Nova Scotia

Wildlife value(s): Winter cover for deer and moose. Also good habitat for ruffed grouse, snowshoe hare, woodcock, many songbirds, mink, skunks, fishers and weasels

TREE-VIA: Red spruce is the provincial tree of Nova Scotia, and is considered the “holy grail” of woods for acoustic steel string guitars



White Spruce



[Softwood Trees](#)



White Spruce

Needles

- Needles are four cornered, 0.8 to 1.9 cm long
- Sharp pointed
- Blue-green in colour



[Softwood Trees](#)



White Spruce

Mature Bark

- Thin, scaly, ash-brown to silver
- Inner bark streaked with rust-brown layers



White Spruce

Branches

- Dead branches stay on the trunk for a long time



[Softwood Trees](#)



WHITE SPRUCE *Picea glauca* (Moench) Voss

Other common name(s): Cat spruce, pasture spruce, skunk spruce

Life expectancy: 100 to 200 years

Mature height: 18 m to 24 m (70' to 80') tall

Mature stem diameter: 30 cm to 60 cm (12" to 24") DBH

Growth: Fast, fastest growing spruce in Nova Scotia

Shade tolerance: Moderate

Timber value(s): Pulpwood, lumber, boxes and crates, general construction

Wildlife value(s): Provides habitat for moose, hare, red squirrel, and spruce grouse

TREE-VIA: Black bears will peel away the bark of white spruce to get at the sweet sapwood. This often kills the tree



[Softwood Trees](#)

Black Spruce



[Softwood Trees](#)



Black Spruce

Needles

- Blue green in colour, 0.6cm to 3.2cm long
- Four cornered
- Blunt pointed on stunted trees
- Needles sometimes curve to upper side of twig



Black Spruce

Backs of branches

- New growth is light green
- Old growth is dark brown to reddish



[Softwood Trees](#)



Black Spruce

Mature Bark

- Thin, grey to reddish brown
- Inner usually olive green



[Softwood Trees](#)



BLACK SPRUCE *Picea mariana* (Mill.) BSP

Other common name(s): Bog spruce, swamp spruce, red spruce

Life expectancy: 150 to 250 years

Mature height: 9 m to 15 m (30' to 50') tall

Mature stem diameter: 15 cm to 25 cm (6" to 10") DBH

Shade tolerance: High to moderate

Timber value(s): Pulpwood, mine timbers, and rough construction

Wildlife value(s): Spruce grouse, ruby-crowned kinglet, magnolia warbler, cape may warbler, oven bird, pine grosbeak, pine siskin and crossbills can all find habitat in black spruce

TREE-VIA: Can form a hybrid species with red spruce that is difficult to distinguish from either parent tree



[Softwood Trees](#)

White Pine



[Softwood Trees](#)



White Pine

Needles

- Needles in clusters of five
- 10 cm long



[Softwood Trees](#)



White Pine

Immature Bark

- Smooth, dark green



White Pine

Mature Bark

- Deeply furrowed, dark grey



[Softwood Trees](#)



WHITE PINE *Pinus strobus* L.

Other common name(s): Eastern white pine, soft pine, pattern pine, yellow pine, majestic pine

Life expectancy: 200 to 400 years

Mature height: 30 m to 35 m (80' to 100') tall

Mature stem diameter: 60 cm to 90 cm (24" to 36") DBH

Shade tolerance: Moderate. White pine thrives in full sunlight, but the seedlings are moderately shade tolerant. Can attain full vigor if shade is removed by age 20

Timber value(s): Most valuable softwood lumber in eastern Canada. It is highly prized for interior finish

Wildlife value(s): Dense young stands make excellent wildlife cover. White tail deer eat needles and twigs of white pine. Red squirrels and many species of birds eat seeds

TREE-VIA: Because of its size and strength white pine was used to make mast for sailing ships



Red Pine



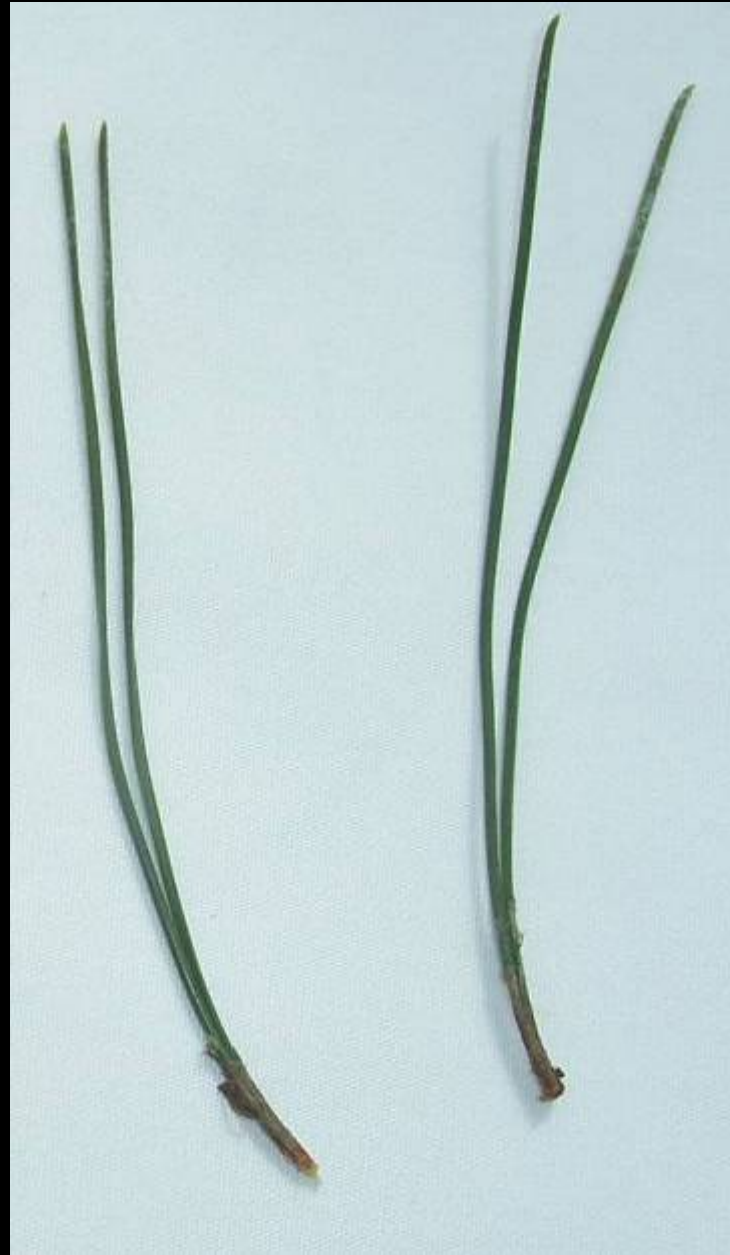
[Softwood Trees](#)



Red Pine

Needles

- In clusters of two
- Needles are not twisted
- 12 to 15 cm long



Red Pine

Branch



[Softwood Trees](#)



Red Pine

Mature Bark

- Breaks off in flat red-brown plates



RED PINE *Pinus resinosa* Ait.

<u>Other common name(s):</u>	Norway pine, bull pine
<u>Life expectancy:</u>	150-200 years
<u>Mature height:</u>	18 m to 24 m (60' to 80') tall
<u>Mature stem diameter:</u>	30 cm to 60 cm (12" to 24") DBH
<u>Shade tolerance:</u>	Low. Red pine seedlings may be more tolerant than older trees, but they grow very slowly under cover
<u>Timber value(s):</u>	Sturdy rot resistant wood makes it ideal for power poles and wharf and bridge pilings
<u>Wildlife value(s):</u>	Provides cover, nesting sites and some food for many species of birds and animals
<u>TREE-VIA:</u>	Good seed crops are produced at intervals of 3 to 7 years.



Jack Pine



Softwood Trees



Jack Pine

Needles

- In cluster of two, 1.9cm-3.8cm long
- Each pair usually twisted and spreading apart
- Light yellow green



Jack Pine

- Twigs



[Softwood Trees](#)



Jack Pine

Cones

- Yellowish brown; thick scaled
- Usually curved toward branch tip; often borne in pairs
- Remain closed on tree for many years
- Require extreme heat like fire to open



[Softwood Trees](#)



Jack Pine

Mature Bark

- Becomes scaly and furrowed



[Softwood Trees](#)



JACK PINE *Pinus banksiana* name Lamb.

Other common name(s): Princess pine, scrub pine, grey pine

Life expectancy: 80-130 years

Mature height: 12 m to 18 m (40' to 60') tall

Mature stem diameter: 20 cm to 30 cm (8" to 12") DBH

Shade tolerance: Low

Timber value(s): Generally used for railway ties, poles and fuelwood.

Wildlife value(s): Jack pine cones and seeds are food for red squirrels, other rodents and birds. Stands provide food and shelter for snowshoe hare and white tail deer

TREE-VIA: Jack pine cones need a lot of heat to open and germinate. That is why it often establishes after a fire



Eastern Hemlock



Softwood Trees



Eastern Hemlock

Needles

- Dark shiny green 0.8cm to 1.8cm long
- Needles are flat with two white lines on underside
- Blunt tips



[Softwood Trees](#)



Eastern Hemlock

Twigs

- Two white lines on underside of needles



[Softwood Trees](#)



Eastern Hemlock

Immature Bark



[Softwood Trees](#)



Eastern Hemlock

Mature Bark

- Inner bark with purplish to cinnamon streaks



[Softwood Trees](#)



EASTERN HEMLOCK *Tsuga canadensis* (L.) Carr.

Other common name(s): tree juniper, white hemlock

Life expectancy: 300 - 400 years

Mature height: 18 m to 21 m (60' to 70') tall

Mature stem diameter: 60 cm to 122 cm (24" to 48") DBH

Shade tolerance: Very high. Small trees can persist in closed stands for many decades.

Timber value(s): Bridges, planks, sills, boxes, crates, and general construction

Wildlife value(s): Deer and rabbits browse hemlock and porcupine gnaw bark. Mice, voles and squirrels feed on seeds and small seedlings

TREE-VIA: In the late 1800's hemlock was a popular Christmas tree. This was short lived because the branches were not strong enough to hold ornaments



Tamarack / Eastern Larch

Only native
softwood to
lose all needles
each winter



Softwood Trees



Tamarack / Eastern Larch

With needles



[Softwood Trees](#)



Tamarack / Eastern Larch

- Needles blue green
- Needles in clusters of 12 – 30
- Needles are three cornered 1.9 cm – 3.2 cm long



Tamarack / Eastern Larch

- Needles turn gold and fall off in autumn
- Twigs are orange brown, slender with numerous short spur shoots after first season
- Likes cold wet drained soil



Tamarack / Eastern Larch

Immature Bark

- Thin
- Smooth
- Blue-grey



[Softwood Trees](#)



Tamarack / Eastern Larch

Mature Bark

- Red-brown with fine rough scales



Tamarack / Eastern Larch

Cones



[Softwood Trees](#)



TAMARACK *Larix laricina* (Du Roi) K. Koch.

Other common name(s): larch, juniper, hackmatack

Life expectancy: 100-180 years

Mature height: 12 m to 23 m (40' to 75') tall

Mature stem diameter: 30 cm to 60 cm (12" to 24") DBH

Shade tolerance: Low

Timber value(s): Fence posts, poles and ties

Wildlife value(s): Porcupines eat the bark of tamarack. Rabbits like needles, ruffed grouse and other birds like sparrows, the veery, the common yellow throat and Nashville warbler eat the seeds

TREE-VIA: Tamarack is the only native softwood that loses all of it's needles each autumn



Balsam Fir



[Softwood Trees](#)



Balsam Fir

Needles

- Dark shiny green above
- 1.9cm to 3.8cm long



[Softwood Trees](#)



Balsam Fir

Back of Needles

- White lines on underside of the needles



[Softwood Trees](#)



Balsam Fir

Immature Bark

- Smooth, dull green



[Softwood Trees](#)



Balsam Fir

Mature Bark

- Grey to red-brown with resin blisters



BALSALM FIR *Abies balsamea* (L.) Mill.

Other common name(s): Fir, balsam

Life expectancy: 70 to 150 years

Mature height: 12 m to 18 m (40' to 60') tall

Mature stem diameter: 20 cm to 36 cm (8" to 14") DBH

Shade tolerance: High to moderate

Timber value(s): Pulpwood, lumber, boxes, crates, and of course, Christmas trees!

Wildlife value(s): Shelter for deer, hare, mice, voles and black bears. Seeds are food for several bird species, including spruce and ruffed grouse and the shoots provide deer and moose browse

TREE-VIA: Balsam fir is the most popular Christmas tree species in Nova Scotia



Eastern White Cedar



Softwood Trees



Eastern White Cedar

Needles

- Very small - about 0.3 cm long
- Pointed, flattened, overlapped in opposite pairs
- Tightly covering the twig like shingles
- Dull yellow green



Eastern White Cedar

Mature Bark

- Thin and fibrous
- Reddish to greyish brown
- The inner bark is tough enough to make into string or rope



[Softwood Trees](#)



EASTERN WHITE CEDAR *Thuja occidentalis* L.

Other common name(s): Northern white-cedar, arbor-vitae

Life expectancy: 150 -350 years

Mature height: 12-15 m

Mature stem diameter: 30 cm-60 cm (12"-24")DBH

Shade tolerance: High to moderate, responds well when released from shade

Timber value(s): Fence posts, shingles and canoes

Wildlife value(s): Stands are often used as winter deer yards. Rabbits eat foliage and gnaw the bark of young trees. Many birds use cedar during the summer including several warblers, white-throated sparrows and kinglets. Pileated woodpecker often use mature cedar for cavity nests

TREE-VIA: Arbor-vitae, a common name for cedar, is Latin for "Tree of Life"



[Softwood Trees](#)