



# TREES OF THE ACADIAN FOREST

Identification CD





## **BEFORE YOU START!**

- To navigate through this presentation you can use the buttons at the top of the screen to access the main pages, the next page in the series, and the previous page.
- In the softwood and hardwood keys you can use the green buttons to navigate.
  - Example: Leaves not needle like
- Clicking the name of most trees will bring you to a more detailed profile.
- Some tree profiles have multiple pages, which can be navigated using the More button.
- Clicking underlined terms will bring you to the glossary.
  - Example: [shoots](#).
- The following presentation includes most commercial trees and some of the non-commercial trees of the Acadian Forest Region (Nova Scotia, New Brunswick, Prince Edward Island, and Maine). Please refer to the books listed on the following page for more information.



## REFERENCES

- Saunders, G. (1996). *Trees of Nova Scotia*. Halifax, NS: Nimbus Publishing. 102 pp.
- Hosie, R.C. (1979). *Native Trees of Canada*. Don Mills, ON: Fitzhenry & Whiteside. 380 pp.
- Fowells, H. A. (1965). *Silvics of Forest Trees of the United States*. U.S. Department of Agriculture, Forest Service. 762 pp.
  - Available online: [http://www.na.fs.fed.us/spfo/pubs/silvics\\_manual/table\\_of\\_contents.htm](http://www.na.fs.fed.us/spfo/pubs/silvics_manual/table_of_contents.htm)



# **C O N T E N T S**

Softwoods

Softwood Key

Hardwoods

Hardwood Key

Glossary



# **GLOSSARY OF TERMS**

[A-C](#)

[D-Le](#)

[Lo-Se](#)

[Sh-Ste](#)

[Stu-V](#)



# GLOSSARY OF TERMS

**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.

**Bud scale** - modified leaves that cover the bud during winter. Bud scales are shed in the spring, leaving scars.

**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."



# GLOSSARY OF TERMS

**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 or fruiting body** - 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.



# GLOSSARY OF TERMS

**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.

**Petiole** – the stalk that joins a leaf to the stem

**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 trees after physical trauma; sap.

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

**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.



# GLOSSARY OF TERMS

**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.

**Shoot** - a stem plus the attached leaves.

**Silviculture** – the art and science of controlling the establishment, growth, composition, and quality of forest vegetation for the full range of forest resource objectives.

**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.



# GLOSSARY OF TERMS

**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.

**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.



# KEY TO SOFTWOOD TREES

[Leaves](#) not [needle](#)-like

[Leaves](#) [needle](#)-like

*Clicking the “Softwood” button in the top right corner will return you to the beginning of the key.*

*Clicking a tree name will take you to a more detailed profile if available.*



Leaves not needle-like

## **EASTERN WHITE CEDAR**

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





# KEY TO SOFTWOOD TREES

Leaves needle-like

Needles in bundles or groups

Single needles





# KEY TO SOFTWOOD TREES

Leaves needle-like

Needles in bundles  
or groups

2 needles in each bundle

More than 2 needles in  
each bundle





Leaves needle-like

Needles in bundles  
or groups

2 needles in each bundle

## **RED PINE**

- Straight needles that easily snap or break



OR

## **JACK PINE**

- Yellow-green needles are twisted, stiff and flat





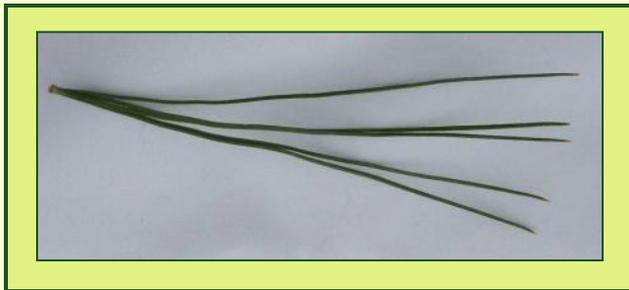
Leaves needle-like

Needles in bundles  
or groups

More than 2 needles in  
each bundle

## **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





# KEY TO SOFTWOOD TREES

Leaves [needle](#) like

Single [needles](#)

Needles flattened  
(do not roll between fingers)

Needles four-sided  
(roll between fingers)





Leaves needle-like

Single needles

Needles flattened

## **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





Leaves needle-like

Single needles

Needles four-sided

## **RED SPRUCE**

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



OR

## **BLACK SPRUCE**

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



OR

## **WHITE SPRUCE**

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





# 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.

*Clicking the “Hardwood” button in the top right corner will return you to the beginning of the key.*

*Clicking a tree name will take you to a more detailed profile if available.*



[Alternate leaf arrangement](#)

[Buds](#) on short stalk

[Buds](#) not stalked





[Alternate leaf arrangement](#)

[Buds](#) on short stalk

## **SPECKLED ALDER**

- Speckled grey bark
- Buds with two [bud scales](#)
- Black, cone-like [fruiting bodies](#) usually present



# Hardwood Key

Hardwood

[Alternate leaf arrangement](#)

[Buds](#) not stalked

Only 1 [bud scale](#)

More than 1 [bud scale](#)



[Alternate leaf arrangement](#)

[Buds](#) not stalked

Only 1 [bud scale](#)

## BLACK WILLOW

- Flexible, slender twigs
- Buds clasp tight to twig
- Catkins (slim, cylindrical flower clusters without petals) appear in early spring



# Hardwood Key

Hardwood

Alternate leaf arrangement

Buds not stalked

More than 1 bud scale

Twigs more or less straight

Twigs slightly or very zig-zag in shape

# Hardwood Key

Hardwood



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

Twigs with no or few hairs

Twigs very hairy



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud](#) scale

[Twigs](#) more or less straight

[Twigs](#) very hairy

## SUMAC

- Twigs very stout
- Dense brownish hairs on twigs
- Large [compound](#) leaves



# Hardwood Key

Hardwood

[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Star-shaped [pith](#)

## RED OAK



- Moderately stout, reddish twigs
- Buds are shiny, reddish-brown with few hairs at the tip

OR

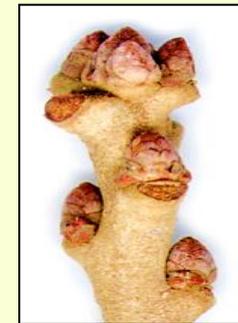
## LARGETOOTH ASPEN



- Dull brown, slightly hairy twigs
- Buds stout, dull brown, with fine hairs

OR

## BUR OAK



- Yellowish-brown, slightly hairy twigs
- Buds blunt, brown, with pointed scales



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Star-shaped [pith](#)

## TREMBLING ASPEN



- Twigs slender, shiny, dark green or brownish-grey
- Buds pointed and dark-reddish brown

OR

## BALSAM POPLAR



- Stout, shiny, red-brown twigs
- Very large buds with gummy, aromatic [resin](#)

# Hardwood Key

Hardwood



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Star-shaped [pith](#)

Round [pith](#)

# Hardwood Key

Hardwood



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

Buds gray and fuzzy

Buds hairless or smooth





[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) gray and fuzzy

## EUROPEAN MOUNTAIN ASH

- Twigs stout
- Lateral buds similar to terminal buds
- Flower stalks persist in winter



# Hardwood Key

Hardwood



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) hairless or smooth

Thick twigs

Twigs thin or slender





[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) hairless or smooth

Thick [twigs](#)

## **AMERICAN MOUNTAIN ASH**

- Smooth, red-brown twigs with whitish spots
- Large, purplish, gummy buds
- Terminal bud twice as big as lateral



# Hardwood Key

Hardwood



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) hairless or smooth

[Twig](#) thin or slender

Buds not pinkish

Buds pinkish





[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) hairless or smooth

[Twig](#) thin or slender

[Buds](#) not pinkish

## PIN CHERRY

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



OR

## CHOKECHERRY

- Greyish-brown twigs
- Pointed, brown buds with grey edged scales





[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) more or less straight

[Twigs](#) with no or few hairs

Round [pith](#)

[Buds](#) hairless or smooth

[Twig](#) thin or slender

[Buds](#) pinkish

## **SERVICEBERRY**

- Medium size pointed buds with hair-fringed scales
- Twigs with many spurs or branches



# Hardwood Key

Hardwood

Alternate leaf arrangement

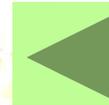
Buds not stalked

More than 1 bud scale

Twigs slightly or very zig-zag in shape

Buds greater than 1.5 cm long

Buds less than 1.5 cm long



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) slightly or very zig-zag in shape

[Buds](#) greater than 1.5 cm long



## **BEECH**

- Buds long and pointed
- Twigs slender and shiny brown
- Bold, straight leaf [veins](#)

# Hardwood Key

Hardwood

Alternate leaf arrangement

Buds not stalked

More than 1 bud scale

Twigs slightly or very zig-zag in shape

Buds less than  
1.5 cm long

Twigs without wintergreen taste

Twigs with wintergreen taste



[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) slightly or very zig-zag in shape

[Buds](#) less than 1.5 cm long

[Twigs](#) with wintergreen taste

## YELLOW BIRCH

- Slender twigs
- Yellowish, papery [bark](#)



# Hardwood Key

Hardwood



Alternate leaf arrangement

Buds not stalked

More than 1 bud scale

Twigs slightly or very zig-zag in shape

Buds less than 1.5 cm long

Twigs without wintergreen taste

Bark papery

Bark not papery





Alternate leaf arrangement

Buds not stalked

More than 1 bud scale

Twigs slightly or very zig-zag in shape

Buds less than 1.5 cm long

Twigs without wintergreen taste

Bark papery

## WHITE BIRCH

- New twigs are slightly hairy, become smooth red-brown
- Old twigs with white specks

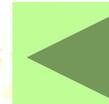


OR

## GREY BIRCH

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





Alternate leaf arrangement

Buds not stalked

More than 1 bud scale

Twigs slightly or very zig-zag in shape

Buds less than 1.5 cm long

Twigs without wintergreen taste

Bark not papery

## IRONWOOD

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



OR

## WHITE ELM

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





[Alternate leaf arrangement](#)

[Buds](#) not stalked

More than 1 [bud scale](#)

[Twigs](#) slightly or very zig-zag in shape

[Buds](#) less than 1.5 cm long

[Twigs](#) without wintergreen taste

[Bark](#) not papery

## BASSWOOD

- Rounded, slightly toothed leaves
- Large, hairless buds, reddish in colour



Marlin



[Opposite leaf arrangement](#)

More than 3 [leaf scars](#)

3 [leaf scars](#)



# Hardwood Key

Hardwood



[Opposite leaf arrangement](#)

More than 3 [leaf scars](#)

5 leaf scars

16 leaf scars





[Opposite leaf arrangement](#)

More than 3 [leaf scars](#)

5 [leaf scars](#)

## **HORSE CHESTNUT**

- Large leaf scars, shaped like a horseshoe
- Stout [twigs](#) with gummy [buds](#)





[Opposite leaf arrangement](#)

More than 3 [leaf scars](#)

16 [leaf scars](#)

## WHITE ASH

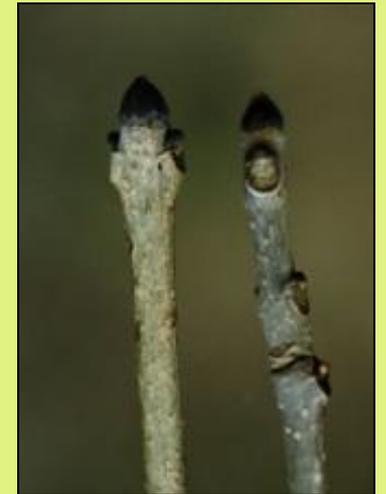
- Stout, brownish to grey- green [twigs](#)
- Dark brown, fuzzy [buds](#)



OR

## BLACK ASH

- Stout grey [twigs](#) with some raised bumps
- Nearly black, fuzzy [buds](#)



# Hardwood Key

Hardwood

[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) not stalked,  
with several scales

[Buds](#) stalked,  
with 2 bud scales

# Hardwood Key

Hardwood



[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) not stalked,  
with several scales

Buds pointed

Buds with blunt tips





[Opposite leaf arrangement](#)

3 [leaf scars](#)

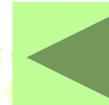
[Buds](#) not stalked,  
with several scales

[Buds](#) pointed

## SUGAR MAPLE

- Slender, shiny, red-brown [twig](#) with white spots
- V- shaped leaf scars





[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) not stalked,  
with several scales

[Buds](#) with blunt tips

## RED MAPLE

- Slender red [twig](#)
- [Bud](#) usually less than 0.5 cm





[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) not stalked,  
with several scales

[Buds](#) with blunt tips

## **SILVER MAPLE**

- Terminal bud reddish, almost twice as long as wide
- Twig deep, reddish-brown
- Leaves paler green underneath





[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) stalked,  
with 2 bud scales

## **MOUNTAIN MAPLE**

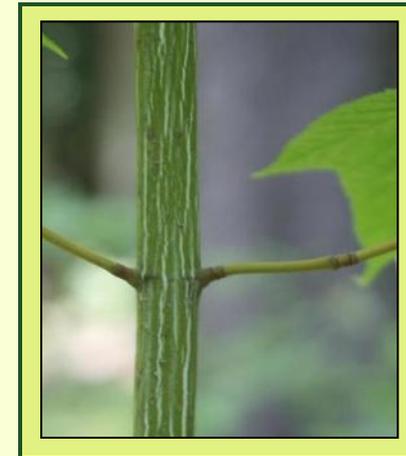
- [Twigs](#) and buds covered in white downy fuzz
- Slender reddish twigs



OR

## **STRIPED MAPLE**

- [Twigs](#) and [bark](#) hairless
- Greenish to brown bark with white stripes





[Opposite leaf arrangement](#)

3 [leaf scars](#)

[Buds](#) stalked,  
with 2 bud scales

## **BUTTERNUT**

- Terminal [leaflet](#), with leaflets growing smaller towards twig
- Buds blunt-tipped, hairy





# HARDWOOD TREES

*Click on a tree name to see the detailed profile*

[American Beech](#)

[Chokecherry](#)

[Striped Maple](#)

[American Mountain Ash](#)

[Grey Birch](#)

[Sugar Maple](#)

[Balsam Poplar](#)

[Ironwood](#)

[Sumac](#)

[Basswood](#)

[Largetooth Aspen](#)

[Trembling Aspen](#)

[Black Ash](#)

[Pin Cherry](#)

[White Ash](#)

[Black Cherry](#)

[Red Maple](#)

[White Birch](#)

[Black Willow](#)

[Red Oak](#)

[White Elm](#)

[Bur Oak](#)

[Serviceberry](#)

[Yellow Birch](#)

[Butternut](#)

[Speckled Alder](#)



# 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

## Mature Bark



- Deep vertical ridges

# SUGAR MAPLE

## SUGAR MAPLE (*Acer saccharum*)

<b>Other common name(s):</b>	Rock maple, hard maple
<b>Life expectancy:</b>	150 - 250 years
<b>Mature height:</b>	24 m to 27 m ( 78' to 88') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12" to 23") DBH
<b>Shade tolerance:</b>	Very high
<b>Timber value(s):</b>	Flooring, furniture, interior finishing, veneers, sporting goods, musical instruments.
<b>Wildlife value(s):</b>	Young <a href="#">shoots</a> provide food for deer, porcupines feed on bark, sapsuckers utilize as sap trees, and squirrels feed on seeds, buds, leaves and twigs.
<b>Other value(s):</b>	While all maples can produce maple syrup, sugar maple sap is considered to produce the most valuable syrup, due to its high sugar content.
<b>TREE-VIA:</b>	It takes up to 40 litres of sap to make 1 litre of syrup!

# 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

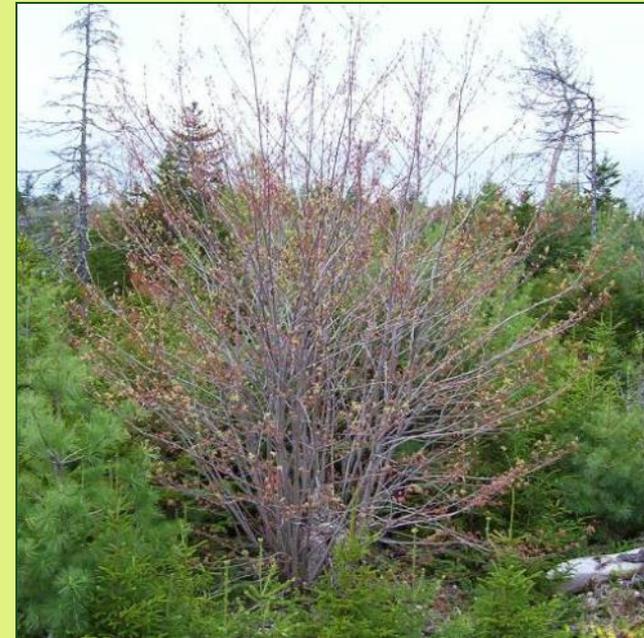
# RED MAPLE

## Mature Bark



- Deep, vertical ridges

## Reproduction



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

# RED MAPLE

## RED MAPLE (*Acer rubrum*)

<b>Other common name(s):</b>	Soft maple, white maple, swamp maple
<b>Life expectancy:</b>	80 - 130 years
<b>Mature height:</b>	8 m to 22 m ( 26' to 72') tall
<b>Mature stem diameter:</b>	30 cm to 46 cm (12" to 18") DBH
<b>Shade tolerance:</b>	Moderate
<b>Timber value(s):</b>	Flooring, furniture, interior finishing, veneers, sporting goods, musical instruments, except where strength, hardness or large size are critical.
<b>Wildlife value(s):</b>	Sapsuckers utilize as sap trees (sometimes causing mortality), important source of winter browse for moose and deer.
<b>TREE-VIA:</b>	Red maples have some structure that is red in every season - winter: red buds, spring: red flowers, summer: red petioles or leaf stems, 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 smooth, greenish to brown bark

**Mature Bark**



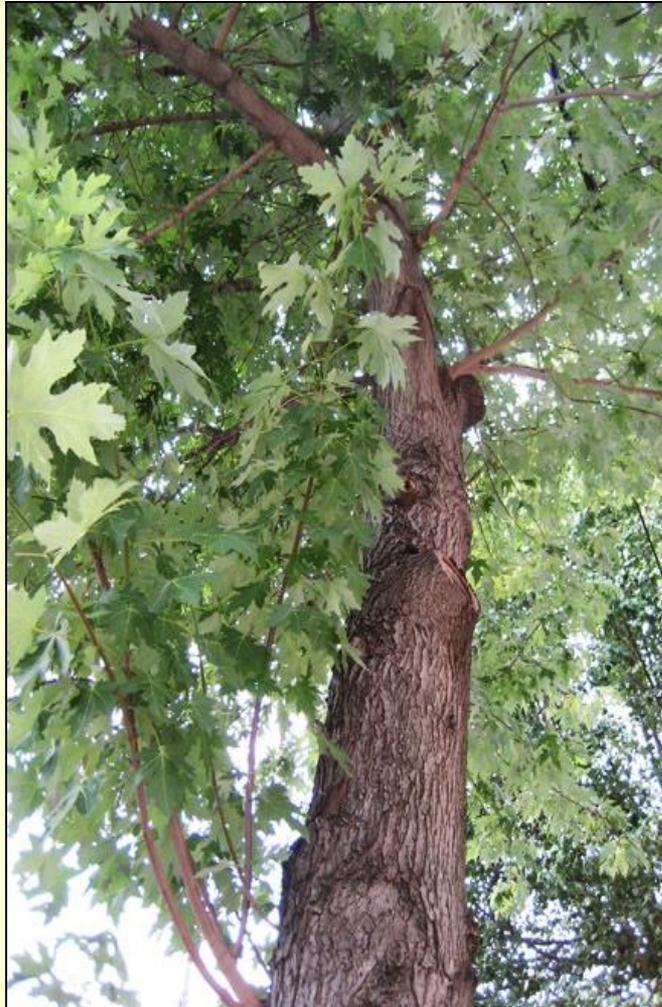
- Smooth green to brownish bark with white vertical stripes

# STRIPED MAPLE

## STRIPED MAPLE (*Acer pensylvanicum*)

<b>Other common name(s):</b>	Moose maple
<b>Life expectancy:</b>	100 years
<b>Mature height:</b>	Up to 10 m ( 33') tall
<b>Mature stem diameter:</b>	25 cm (10") DBH
<b>Shade tolerance:</b>	Tolerant
<b>Timber value(s):</b>	Very little
<b>Wildlife value(s):</b>	Striped maple is most important for its wildlife values. It is important browse for deer and moose, and ruffed grouse eat buds.
<b>Other value(s):</b>	Striped maple provides good erosion control on steep banks and slopes.
<b>TREE-VIA:</b>	When there are large numbers of striped maple in the understory before cutting, they frequently become the dominant vegetation after cutting.

# SILVER MAPLE



## Leaves

- Opposite
- 5 lobes with long points
- Dull green above, silver-white below
- Long petioles allow leaves to twist in wind



© 2010 USDA Plants

## Fruiting Body

- Paired, called samaras
- Hang in clusters of two in spring, with wide wings



© 2004 Gary Fewless



# SILVER MAPLE



## Mature Bark

- Grey-brown, with shaggy scales on exterior
- Interior bark is orange in colour

## Flowers



© 2002 Gary Fewless

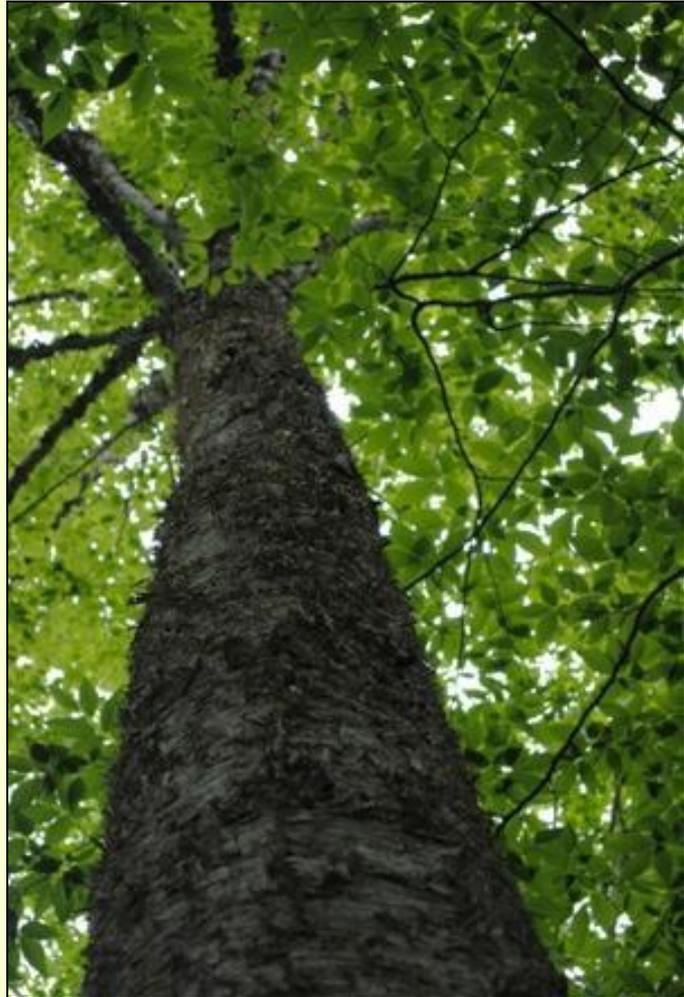
- One of the earliest to flower in spring
- Form in dense clumps

# SILVER MAPLE

## SILVER MAPLE (*Acer saccharinum*)

<b>Other common name(s):</b>	white maple, soft maple, swamp maple, river maple, creek maple, papascowood, silverleaf maple, water maple
<b>Life expectancy:</b>	80 to 130 years
<b>Mature height:</b>	24 m to 27 m (80' to 90') tall
<b>Mature stem diameter:</b>	60 cm to 90 cm (24" to 36") DBH
<b>Shade tolerance:</b>	Moderately intolerant
<b>Timber value(s):</b>	Not much commercial value; wood is used to make furniture, parquet flooring, boxes, crates and pallets.
<b>Wildlife value(s):</b>	Many songbirds eat the seeds and white-tailed deer browse heavily on twigs and leaves. In old trees, the large branches are hollowed out by fungus and rot, creating dens for raccoons and squirrels. The nest cavities are used by the wood duck and many other birds.
<b>TREE-VIA:</b>	The tree gets its name from the silver underside of its leaves. It is a floodplain species that thrives in the Saint John River valley of New Brunswick, but is rare elsewhere in the Acadian forest region.

# 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

## Flowers



© 2008 Tree Canada

- Catkins (slim, cylindrical flower clusters without petals) appear in spring

## Mature Bark



© 2006 Jeffrey Pippen

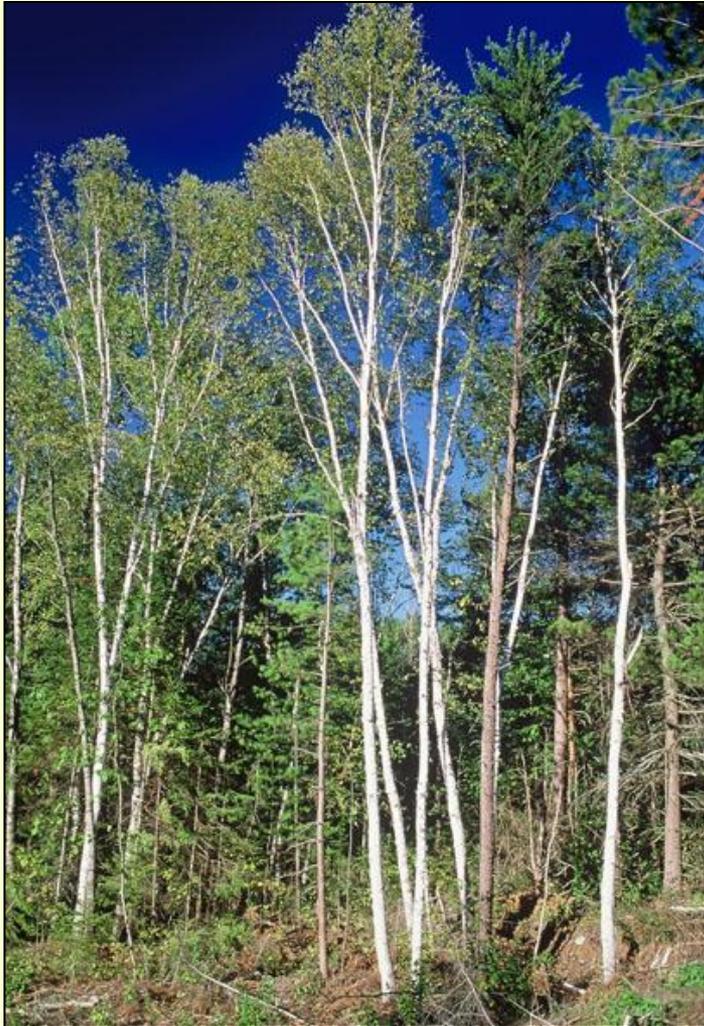
- Thin, papery, golden curls; shiny bark
- Becomes less golden as tree ages

# YELLOW BIRCH

## YELLOW BIRCH (*Betula alleghaniensis*)

<b>Other common name(s):</b>	curly birch, hard birch, black birch
<b>Life expectancy:</b>	150 - 200 years
<b>Mature height:</b>	18 m to 24 m ( 60' to 80') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12" to 24") DBH
<b>Shade tolerance:</b>	Moderate
<b>Timber value(s):</b>	Yellow birch is the second most valuable hardwood in NS, after sugar maple. It is commonly used for flooring, furniture, cabinet work, and veneer.
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	When trying to promote yellow birch regeneration, it is important to scarify (dig up) the ground until bare mineral soil is exposed.

# 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

# WHITE BIRCH

## WHITE BIRCH (*Betula papyrifera*)

<b>Other common name(s):</b>	Paper birch, canoe birch, silver birch
<b>Life expectancy:</b>	80 - 130 years
<b>Mature height:</b>	15 m to 21 m ( 50' to 70') tall
<b>Mature stem diameter:</b>	25 cm to 60 cm (10" to 24") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	It can be used as veneer, <a href="#">pulpwood</a> and fuel wood. Often used for turning.
<b>Wildlife value(s):</b>	Important browse for deer and moose.
<b>TREE-VIA:</b>	Although white birch bark is one of the best natural tinder, do not rip birch bark off a living tree for your campfire – it will kill the tree!



# GREY BIRCH



Leaves



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

Bark



Flowers (Catkins)



# GREY BIRCH

## GREY BIRCH (*Betula populifolia*)

<b>Other common name(s):</b>	Wire birch, White birch
<b>Life expectancy:</b>	20 - 50 years
<b>Mature height:</b>	6 m to 11 m ( 20' to 35') tall
<b>Mature stem diameter:</b>	8 cm to 12 cm (3" to 5") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Low, used for fuel wood and barrel hoops
<b>Wildlife value(s):</b>	Cover and food for small birds, rodents and grouse. Deer and moose browse the branches.
<b>TREE-VIA:</b>	The wood is excellent for turning and often used by craftsmen.

# 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

## Mature Bark



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

# WHITE ASH

## WHITE ASH (*Fraxinus americana*)

<b>Other common name(s):</b>	ash, American ash
<b>Life expectancy:</b>	100 - 200 years
<b>Mature height:</b>	18 m to 21 m ( 60' to 70') tall
<b>Mature stem diameter:</b>	45 cm to 75 cm (18" to 30") DBH
<b>Shade tolerance:</b>	Moderate to low, more tolerant when young
<b>Timber value(s):</b>	Highly prized for its strong, shock-resistant wood which makes excellent tool handles and sporting goods.
<b>Wildlife value(s):</b>	Shoots browsed by beaver and deer. Porcupine like bark. Seeds eaten by purple finch, pine grosbeak, wood ducks, etc.
<b>TREE-VIA:</b>	Juice made from white ash leaves gives topical relief to mosquito bite swelling and itching.



# AMERICAN MOUNTAIN ASH



© 2006, Jeffrey Pippen



## Leaves

- [Alternate](#), [compound](#), with 13-17 separate [leaflets](#)



## Fruit

- Bright orange-red berries in clusters
- Remain on tree through winter

# AMERICAN MOUNTAIN ASH



## Mature Bark

- Smooth, light gray surface
- Thin bark with some scale-like texture



# AMERICAN MOUNTAIN ASH

## AMERICAN MOUNTAIN ASH (*Sorbus americana*)

<b>Other common name(s):</b>	mountain-ash, dogberry, rowan tree, rowan berry, service tree, rown
<b>Life expectancy:</b>	Short
<b>Mature height:</b>	Shrub or very small tree, 3 m to 9 m (10' to 30') tall
<b>Mature stem diameter:</b>	10 cm to 25 cm (4" to 10")
<b>Shade tolerance:</b>	Intolerant of shade
<b>Timber value(s):</b>	The pale brown wood has little value because it is soft and weak.
<b>Wildlife value(s):</b>	The American mountain-ash is an important source of food for many small birds and mammals including thrushes and waxwings. Fruits persist through winter.
<b>TREE-VIA:</b>	The fruit has been known to intoxicate birds. The American mountain-ash was believed to be powerful in exorcising witches by the early settlers and was known as "witchwood".

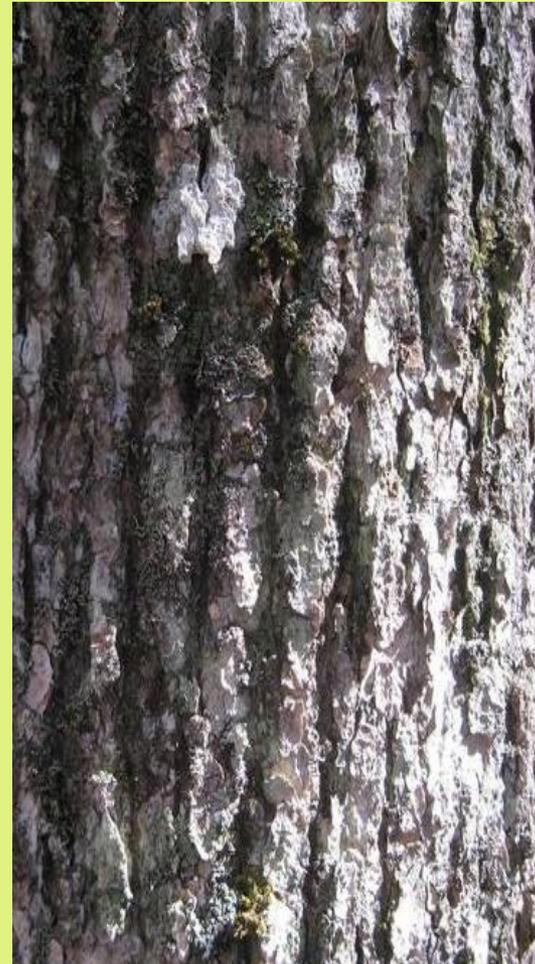


# BLACK ASH



## Leaves

- [Opposite, compound](#)
- Oval shape that tapers at tip



## Mature Bark

- Light gray
- Furrowed edges with corky texture

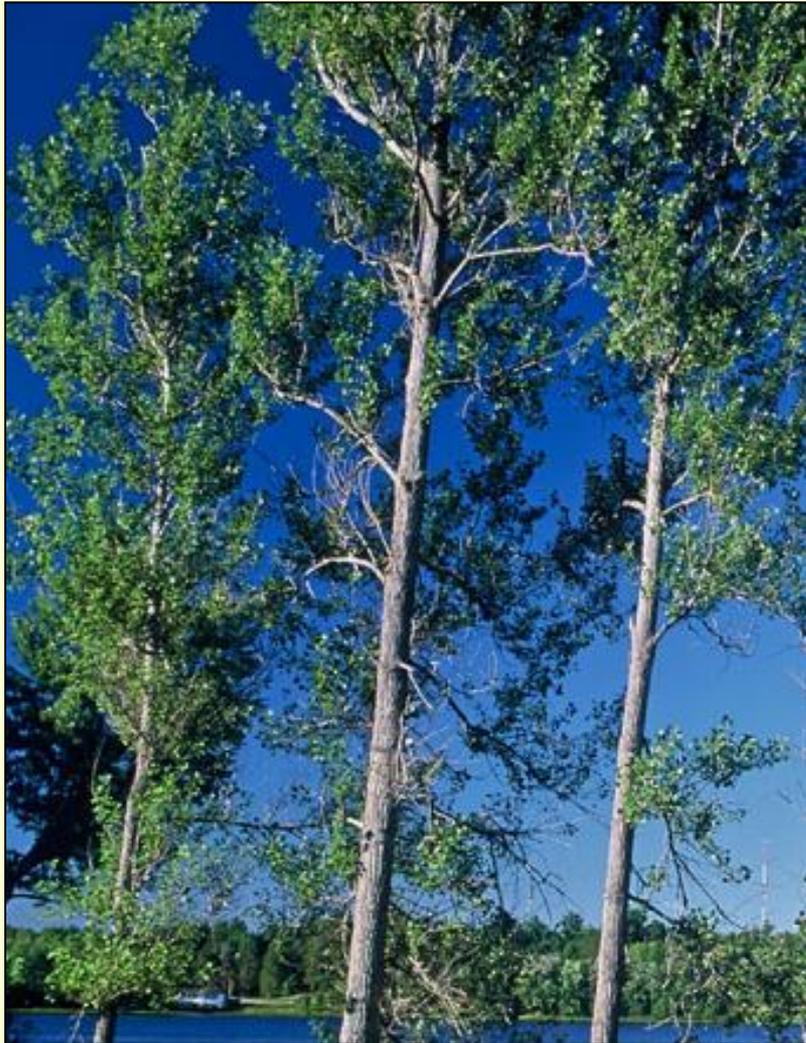
# BLACK ASH

## BLACK ASH (*Fraxinus nigra*)

<b>Other common name(s):</b>	swamp ash, basket ash, brown ash, hoop ash, water ash
<b>Life expectancy:</b>	Up to 200 years
<b>Mature height:</b>	18 m to 21 m (60' to 70')
<b>Mature stem diameter:</b>	20 cm to 60 cm (7" to 24")
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Though not as strong as other ash species, it is commercially used for domestic products, cabinets, and some furniture.
<b>Wildlife value(s):</b>	The seeds are an important food to game birds, songbirds, and small animals, and the twigs and leaves provide browse for deer and moose.
<b>TREE-VIA:</b>	Also known as wisqoq, is significant in both cultural and economic uses of First Nations in the Northeastern U.S. and Maritime provinces. There are said to be less than 200 trees remaining in Nova Scotia.



# 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

## Mature Bark



- Furrowed and dark brown or grey

# TREMBLING ASPEN

## TREMBLING ASPEN (*Populus tremuloides*)

<b>Other common name(s):</b>	aspen, poplar, popple, quaking aspen
<b>Life expectancy:</b>	60 - 100 years
<b>Mature height:</b>	12 m to 18 m ( 40' to 60') tall
<b>Mature stem diameter:</b>	25 cm to 40 cm (10" to 16") DBH
<b>Growth:</b>	Fastest growing native hardwood in NS
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Has limited use for <a href="#">pulpwood</a> , matches, and fuelwood.
<b>Wildlife value(s):</b>	Important source of wildlife forage for moose, deer, ruffed grouse, beaver rabbits, and mice.
<b>TREE-VIA:</b>	Trembling aspen is the most widely distributed tree in North America. It grows from Cape Breton to Alaska south to Mexico!



# LARGE TOOTH ASPEN



Leaves



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



# LARGE TOOTH ASPEN



**Immature  
Bark**

- Smooth,  
olive green

**Mature Bark**



- Brownish and furrowed

# LARGETOOTH ASPEN

## LARGETOOTH ASPEN (*Populus grandidentata*)

<b>Other common name(s):</b>	aspen, poplar, popple, bigtooth aspen
<b>Life expectancy:</b>	60 - 100 years
<b>Mature height:</b>	12 m to 18 m ( 40' to 60') tall
<b>Mature stem diameter:</b>	30 cm to 48 cm (12" to 18") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Although not very strong or suited for fuelwood, the wood from largetooth aspen is excellent for mouldings.
<b>Wildlife value(s):</b>	Important source of wildlife forage for moose, deer, ruffed grouse, beaver rabbits, and mice.
<b>TREE-VIA:</b>	A single tree may produce more than 1.5 million seeds!

# 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

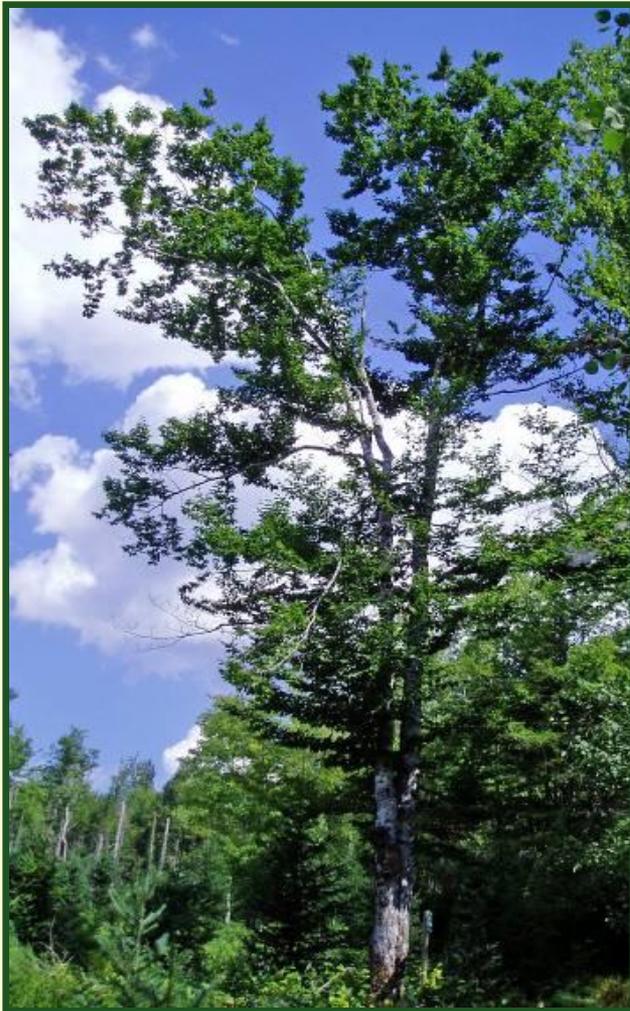
- Smooth greenish to brownish when immature
- Bark becomes dark grey and deeply furrowed

# BALSAM POPLAR

## BALSAM POPLAR (*Populus balsamifera*)

<b>Other common name(s):</b>	poplar, popple, Balm of Gilead, black poplar, bam
<b>Life expectancy:</b>	80 - 150 years
<b>Mature height:</b>	20 m to 24 m ( 65' to 80') tall
<b>Mature stem diameter:</b>	20 cm to 40 cm (8" to 16") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Wood is light and soft; can be used as <a href="#">pulpwood</a> or in finishing.
<b>Wildlife value(s):</b>	Many mammals and birds eat the bark, twigs, buds and seeds. It is a preferred food for the beaver.
<b>TREE-VIA:</b>	A compound is extracted from the <a href="#">resinous</a> 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" and "Balm of Gilead".

# 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



## Fruiting Body

- Beech nuts

# BEECH

## Mature Bark



- Bark has mottled pattern
- The tree in this photo is slightly affected by beech bark disease

## Immature Bark



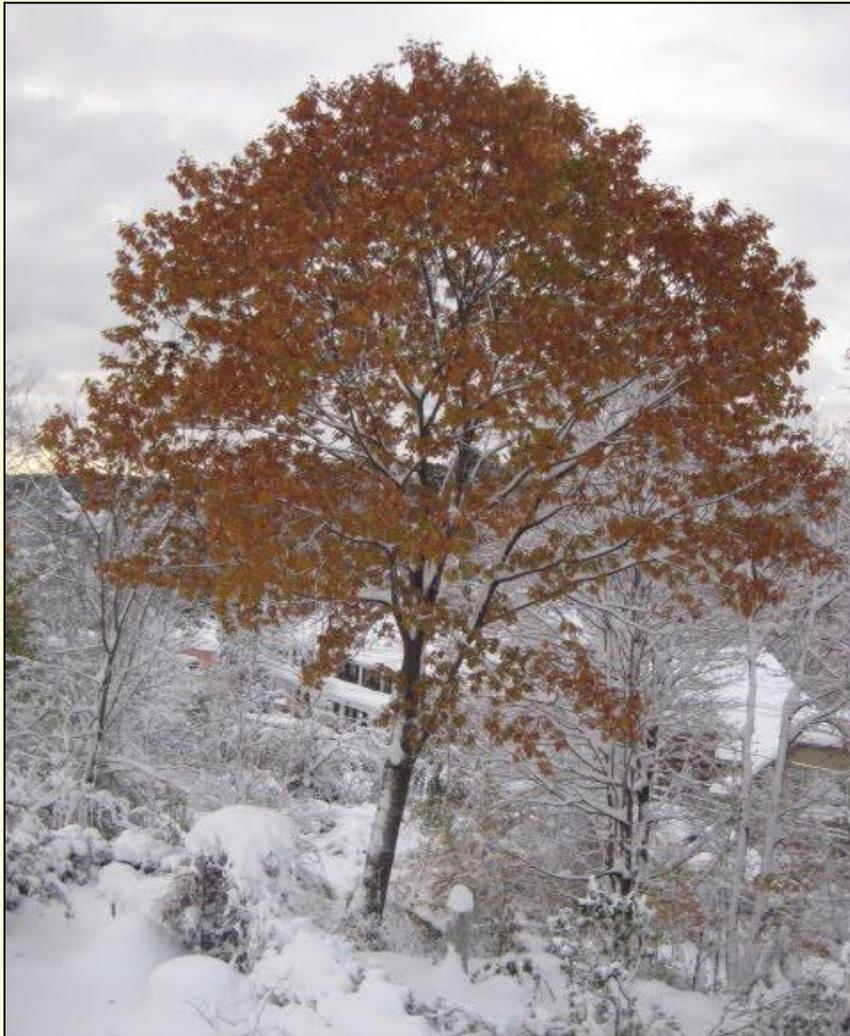
- The tree in this photo is slightly affected by beech bark disease
- When severely diseased, bark is cankered, and the stem is crooked
- When not diseased, bark is smooth grey blue

# BEECH

## BEECH (*Fagus grandifolia*)

<b>Other common name(s):</b>	American beech
<b>Life expectancy:</b>	100 - 200 years
<b>Mature height:</b>	12 m to 21 m ( 40' to 70') tall
<b>Mature stem diameter:</b>	20 cm to 60 cm (8" to 24") DBH
<b>Shade tolerance:</b>	Very high
<b>Timber value(s):</b>	Traditionally used in wooden wares 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.
<b>Wildlife value(s):</b>	Beech nuts are an important food source for mice, squirrels, bears, raccoons, and ruffed grouse.
<b>TREE-VIA:</b>	Beech nuts were the preferred food of the now extinct passenger pigeon.

# 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

Immature Bark



- Smooth greenish-brown

Mature Bark



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

Fruiting  
Body: Acorn

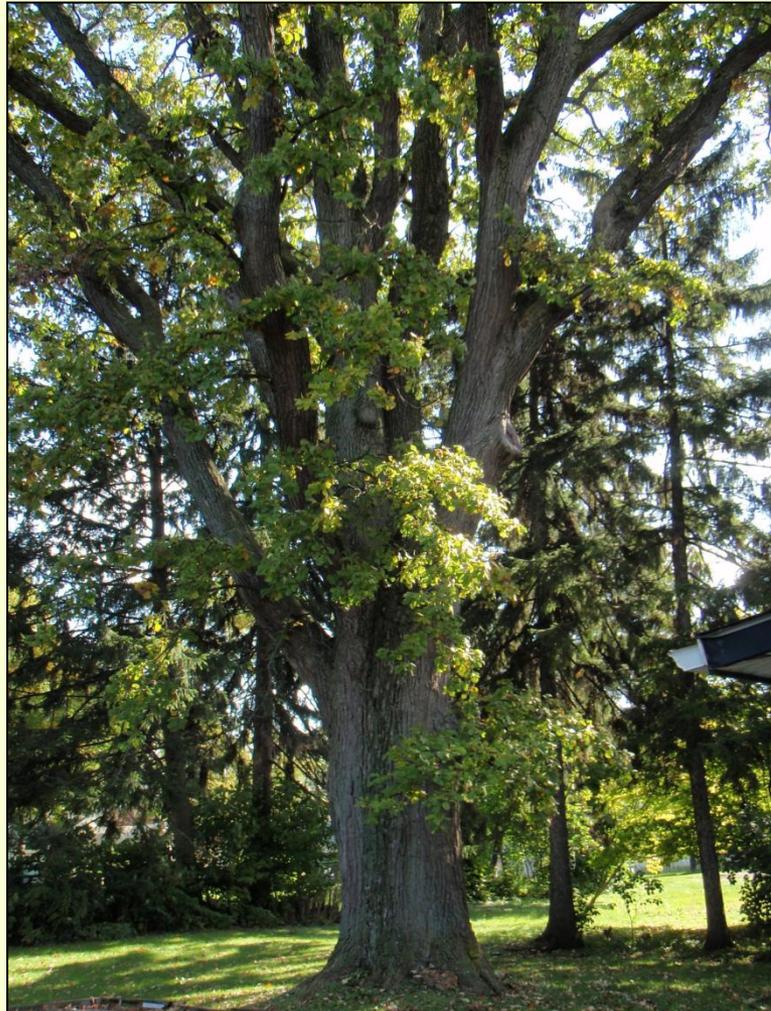


# RED OAK

## RED OAK (*Quercus rubra*)

<b>Other common name(s):</b>	oak, Northern red oak
<b>Life expectancy:</b>	200 - 250 years
<b>Mature height:</b>	15 m to 21 m ( 50' to 70') tall
<b>Mature stem diameter:</b>	30 cm to 75 cm (12" to 30") DBH
<b>Shade tolerance:</b>	Moderate to low
<b>Timber value(s):</b>	Used for flooring, interior finishing, and furniture. Good quality trees are very valuable as ship building lumber.
<b>Wildlife value(s):</b>	Acorns eaten by squirrels and deer, insects and small rodents.
<b>TREE-VIA:</b>	"If your life is hard and rewards are few, remember that the mighty oak was once a nut like you!"- Anonymous

# BUR OAK



## Leaves

- Variable in shape
- Simple, deeply lobed
- Leaves are often wider at the top, narrow at base
- Dark green and lustrous above



## Fruiting Body

- Acorns easily distinguished by a fringed cup on top
- Knobbly scales below



© 2008 Gary Fewless



# BUR OAK

**Immature Bark**



- Beginnings of long fissures

**Mature Bark**



- Highly ridged and deeply furrowed
- Medium gray in colour

**Branchlets**



- Corky, rough texture
- Lateral ridges

# BUR OAK

## BUR OAK (*Quercus macrocarpa*)

<b>Other common name(s):</b>	mossycup oak, blue oak
<b>Life expectancy:</b>	200 to 300 years
<b>Mature height:</b>	Can grow up to 15 m (50') tall
<b>Mature stem diameter:</b>	Up to 60 cm (24")
<b>Shade tolerance:</b>	Intermediate
<b>Timber value(s):</b>	Used in cabinet-, boat- and barrel-making. Bur oak can also produce decorative wood veneers.
<b>Wildlife value(s):</b>	The acorns are the largest of any North American oak and are an important wildlife food; black bear sometimes tear off branches to get them. Other wildlife, such as deer and porcupine, eat the leaves, twigs and bark.
<b>TREE-VIA:</b>	Bur oak is one of the trees most likely to be found growing by itself, in a farmer's field or floodplain. It is characteristic of forests in the United States. It was once common in the Saint John River valley of New Brunswick but now faces extirpation.



# WHITE ELM

## Leaves



- [Simple](#), [alternate](#)
- Green and either smooth or sandpapery above
- Paler and usually hairy below
- Lopsided at the base

# WHITE ELM

**Immature Bark**



**Mature Bark**



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

**Inner Bark**



- Has white corky stripes in it when broken

# WHITE ELM

## WHITE ELM (*Ulmus americana*)

**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 its litter decomposes rapidly and contains many desirable nutrients



# IRONWOOD



## Leaves

- Simple, alternate
- Dark yellowish-green above and below
- Hairs on underside
- 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

## Fruiting Body



- Seed sacs

# IRONWOOD

## IRONWOOD (*Ostrya virginiana*)

<b>Other common name(s):</b>	hornbeam, hop hornbeam, hardhack, leverwood
<b>Life expectancy:</b>	50 to 100 years
<b>Mature height:</b>	10 m to 12 m ( 33' to 40') tall
<b>Mature stem diameter:</b>	Up to 25 cm (10") DBH
<b>Shade tolerance:</b>	High
<b>Timber value(s):</b>	Used as sled runners, tool handles and fuel wood
<b>Wildlife value(s):</b>	It is a preferred food for sharp-tailed grouse and wild turkey, and the buds are an important winter food supply for ruffed grouse.
<b>TREE-VIA:</b>	One of the hardest woods in North America!

# P I N C H E R R Y



## Leaves

- Alternate
- Narrow, oval-shaped, tapers at end



## Fruit

- Bright red, drooping from stem
- Grow around a single seed

© 2009, Andy Fyon



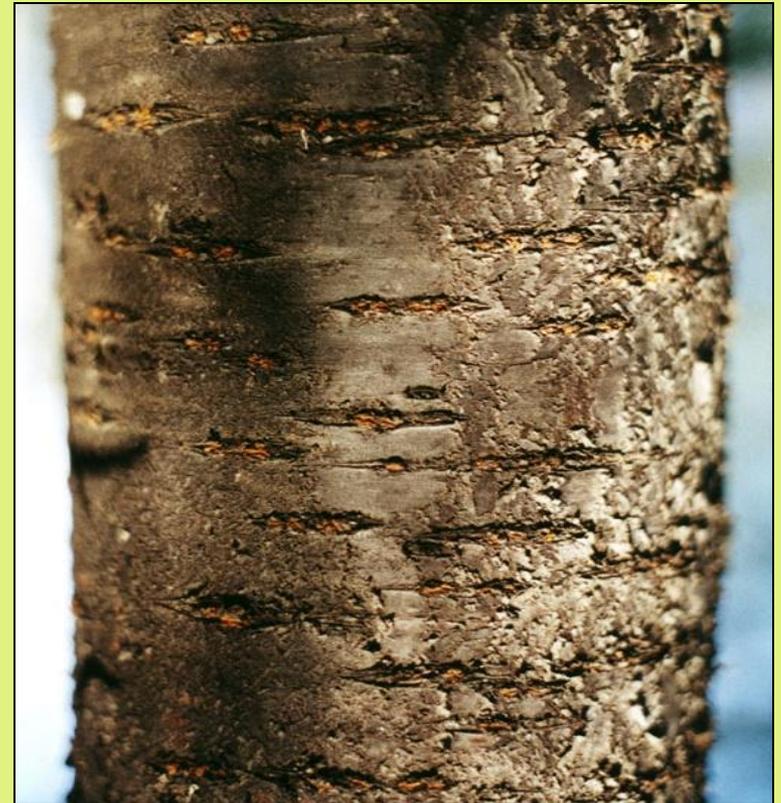
# P I N C H E R R Y

**Immature Bark**



- Smooth, shiny, horizontal pores

**Mature Bark**



- Dark, reddish-brown, raised pores



# PIN CHERRY

## PIN CHERRY (*Prunus pensylvanica*)

<b>Other common name(s):</b>	fire cherry, bird cherry, northern pin cherry, wild red cherry, pigeon cherry
<b>Life expectancy:</b>	20 to 40 years
<b>Mature height:</b>	Up to 30 m (100') tall
<b>Mature stem diameter:</b>	10 cm to 50 cm (4" to 20") DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Low; wood is light, soft, porous, and with little strength.
<b>Wildlife value(s):</b>	Fruit is favoured by small birds, and buds provide food for ruffed grouse.
<b>TREE-VIA:</b>	The common name fire cherry comes from it's reforestation value after forest fires. Pin cherry stands provide shade for seedlings of slower growing species, then dies off, making way for new trees.



# CHOKECHERRY



## Leaves

- [Alternate](#), oval, pointed at tip
- Bright green above, pale below



## Flowers

- Clusters 5-15 cm long with many flowers

# CHOKECHERRY

Mature Bark



- Reddish to gray-brown, raised pores

# CHOCHECHERRY

## CHOCHECHERRY (*Prunus virginiana*)

<b>Other common name(s):</b>	wild black cherry, black chokecherry
<b>Life expectancy:</b>	20 to 40 years
<b>Mature height:</b>	Up to 8 m (25') tall
<b>Mature stem diameter:</b>	Up to 15 cm (6") DBH
<b>Shade tolerance:</b>	Shade tolerant, but needs full sun to produce a good fruit crop.
<b>Timber value(s):</b>	Very low; main function as decorative or fruit-bearing species.
<b>Wildlife value(s):</b>	Fruits are a preferred food for ruffed grouse, pileated woodpecker, yellow-bellied sapsucker, eastern kingbird, wood thrush, cedar waxwing, and evening grosbeak. Dozens of other bird species utilize the fruit to a lesser degree, as do many small mammals. This small tree bears consistent, heavy crops of fruit.
<b>TREE-VIA:</b>	The seeds of a chokecherry tree can lie dormant for over 100 years. The fruit is known to make excellent wine.



# BLACK CHERRY



## Leaves

- Alternate, lance-shaped
- Upper surface bright shiny green



## Fruit

- Long, drooping clusters of 6 to 12 berries
- Slightly sour but edible

©2007 Will Cook



# BLACK CHERRY

Immature Bark



© 2006 Jeffrey Phippen

- Smooth, with horizontal pores

Mature Bark



- Dark reddish-brown to grey
- Older bark separates into square scales that curve along vertical edges

# BLACK CHERRY

## BLACK CHERRY (*Prunus serotina*)

<b>Other common name(s):</b>	wild black cherry
<b>Life expectancy:</b>	150 years
<b>Mature height:</b>	Up to 22 m (72') tall
<b>Mature stem diameter:</b>	Up to 60 cm (2') DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Very popular in furniture and cabinet making; black cherry wood is moderately hard and excellent for decorative or turning work.
<b>Wildlife value(s):</b>	An important large tree source of food for many birds, squirrels, deer, mice, among other wildlife. Woodlot owners should encourage this tree instead of planting exotic berry-producing trees. Fruit is edible and versatile in cooking.
<b>TREE-VIA:</b>	As black cherry leaves wilt, they produce cyanide which can harm domestic livestock, although wild animals such as deer are not affected. Farmers are advised to remove black cherry trees near their pasture as it can be fatal to their animals.



# SPECKLED ALDER



## Leaves

- Alternate, oval, with toothed edges
- Dark green above and paler below
- Bold [veins](#)



# SPECKLED ALDER



## Mature Bark

- Brown to gray
- Speckled with many white spots



## Fruiting Body

- Form into strobiles (cone-shaped structure)



## Flowers

- Catkins (slim, cylindrical flower clusters without petals) appear in fall

# SPECKLED ALDER

## SPECKLED ALDER (*Alnus incana*)

<b>Other common name(s):</b>	tag alder, gray alder, hoary alder, hazel alder, swamp alder
<b>Life expectancy:</b>	20 to 40 years
<b>Mature height:</b>	Up to 5 m (16') tall
<b>Mature stem diameter:</b>	Up to 8 cm (3") DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Used locally for fuel but the wood has no commercial value.
<b>Wildlife value(s):</b>	Speckled alder thickets provide cover for white-tailed deer and rabbits. Songbirds, including redpolls, goldfinches, woodcock, and grouse eat the seeds, buds, and catkins.
<b>TREE-VIA:</b>	Rapid growth in open habitats, wide tolerance to soil types, and potential for soil conditioning make it useful in rehabilitation of disturbed sites, including old mines.

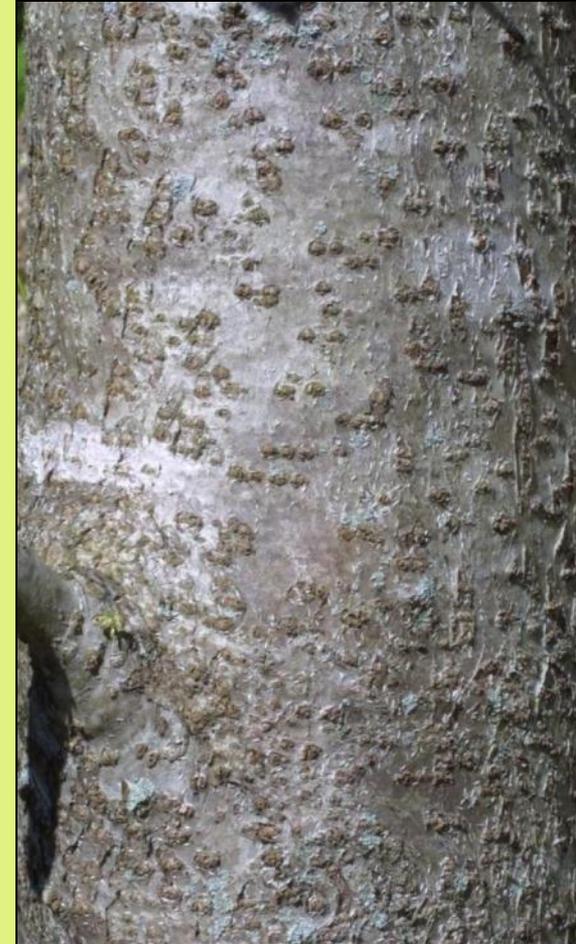
# SUMAC

## Leaves



- [Alternate, compound](#)
- Turn scarlet in fall

## Mature Bark

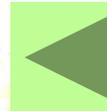


- Smooth
- Grey to brown
- Raised pores

## [Fruiting Body](#)



- Bright red
- Cone-shaped clusters
- Flowers from May to June



# SUMAC

## SUMAC (*Rhus hirta*)

<b>Other common name(s):</b>	staghorn sumac, velvet sumac, sumac vinegar tree
<b>Life expectancy:</b>	20 to 30 years
<b>Mature height:</b>	3 m to 10 m (9' to 32') tall
<b>Mature stem diameter:</b>	20 cm to 30 cm (8" to 12") DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	With a short, often crooked stem, the wood has more value for decorative finishing and wooden novelties.
<b>Wildlife value(s):</b>	Berries are a preferred food source for ruffed grouse, ring-necked pheasant, wood thrush, and hermit thrush. It is also used by over 30 other species, and since the fruit hangs on throughout the winter, is another excellent emergency source of food.
<b>TREE-VIA:</b>	Some beekeepers use dried sumac 'drupes', or clusters of fruit, as a source of fuel for their smokers.

# SERVICEBERRY



## Leaves

- Simple, oval, wide at centre
- Edges are slightly toothed



## Mature Bark

- Light gray streaked with darker lines
- Scale-like texture

# SERVICEBERRY

## SERVICEBERRY (*Amelanchier canadensis*)

<b>Other common name(s):</b>	Eastern shadbush, juneberry
<b>Life expectancy:</b>	Moderate
<b>Mature height:</b>	Up to 12 m (40') tall
<b>Mature stem diameter:</b>	Up to 0.6 m (2') DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Although an attractive tree, it is not valued for timber because of its small size. Has some use in manufacturing fishing rods and dowels.
<b>Wildlife value(s):</b>	Fruits are a preferred food of birds, squirrels, raccoons and bears.
<b>TREE-VIA:</b>	Serviceberry, although a small tree, has several medicinal properties which can be extracted from the roots and bark, and sweet, edible fruits. Flowers in spring before leaves appear.



# BUTTERNUT



## Leaves



- Broad, flat, [compound](#)
- [Alternate](#) with terminal [leaflet](#) usually present

## Buds



- Terminal bud present, elongated
- Hairy, [lobed](#) outer scales



# BUTTERNUT



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## Mature Bark

- Ridged in shallow grooves
- Wide, irregular furrows
- Light gray in colour

## Fruiting Body



- Elongated, pointed
- Hang in clusters of 2 to 5
- Husk covered in dense, sticky hairs

# BUTTERNUT

## BUTTERNUT (*Juglans cinerea*)

<b>Other common name(s):</b>	white walnut
<b>Life expectancy:</b>	60 to 80 years
<b>Mature height:</b>	Seldom exceeding 21 m (70') tall
<b>Mature stem diameter:</b>	Up to 91 cm (36") DBH
<b>Shade tolerance:</b>	Tolerant
<b>Timber value(s):</b>	Not an important timber species but it is used for interior trim, cabinet work, furniture and small household woodenware
<b>Wildlife value(s):</b>	Woodpeckers, wild turkeys, fox and grey squirrels crack open the tough shells to get at the tasty butternuts inside. Wood ducks, finches and songbirds eat the buds
<b>TREE-VIA:</b>	The bark can be used for dyeing wool a dark brown colour and was even used to dye hair up until the early 20th century. Now, the butternut tree is threatened by the butternut canker, and is listed as endangered.



# BASSWOOD



## Leaves

- Thick, tip elongated
- Upper surface dull, dark green



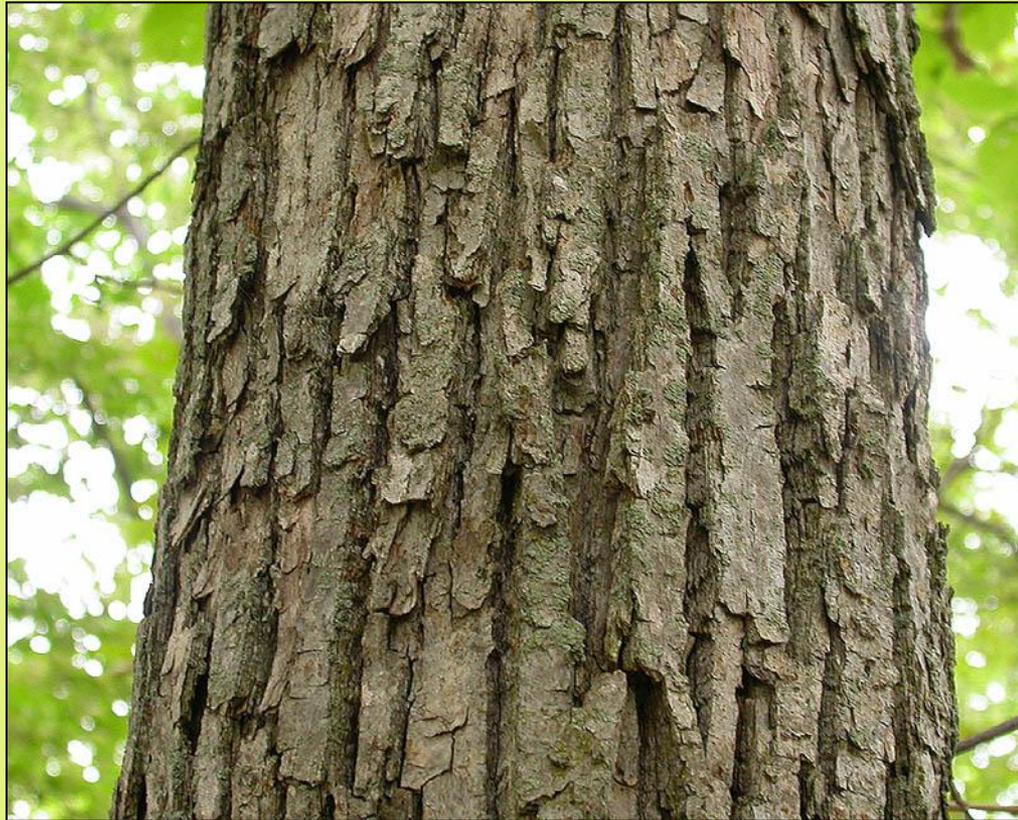
## Twigs and Buds

- Buds hairless, reddish in colour
- Twigs hairless and yellow-brown



# BASSWOOD

Mature Bark



- Long, narrow ridges that form into short blocks

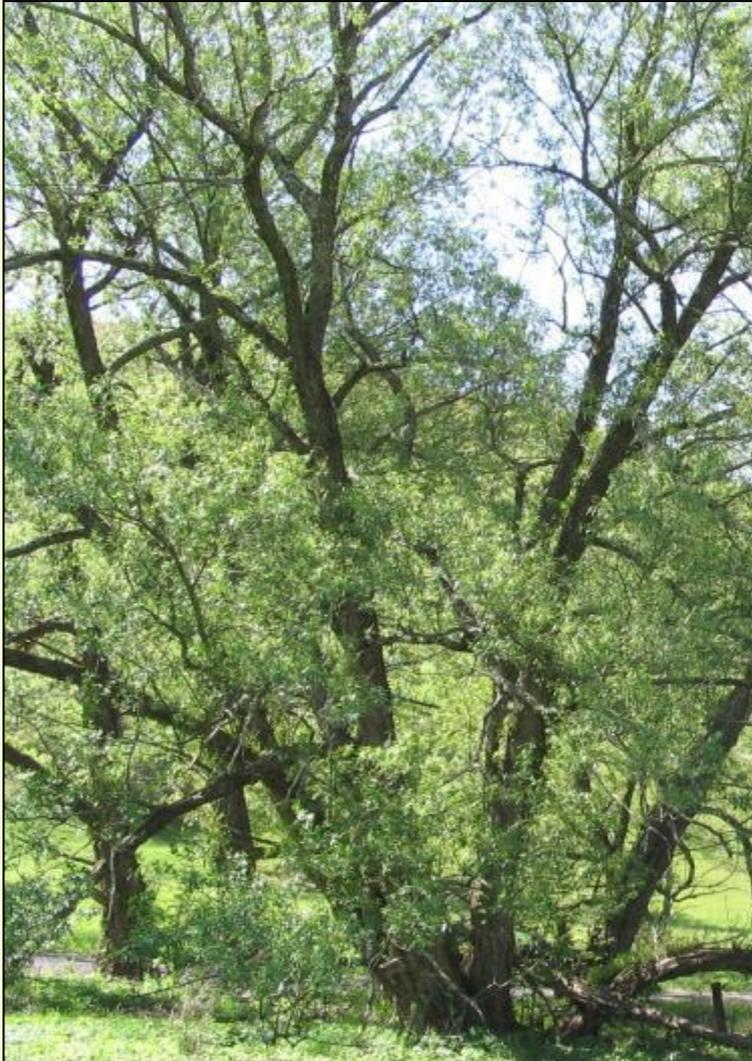
# BASSWOOD

## BASSWOOD (*Tilia americana*)

<b>Other common name(s):</b>	linden, American linden, American basswood, lime, whitewood, European linden
<b>Life expectancy:</b>	60 to 100 years
<b>Mature height:</b>	18 m to 21 m (60' to 70') tall
<b>Mature stem diameter:</b>	61 cm to 76 cm (24" to 30") DBH
<b>Shade tolerance:</b>	Very shade-tolerant
<b>Timber value(s):</b>	Excellent sculpting, turning and woodworking wood. The wood is used to make musical instruments, models, frames, toys, veneer, and other objects.
<b>Wildlife value(s):</b>	Basswood makes a great den tree for wildlife. Squirrels, chipmunks and hares love the seeds. Rabbits and deer eat the leaves and tender twigs.
<b>TREE-VIA:</b>	Common in the Saint John River valley of New Brunswick and also Maine. Basswood has thin bark and is sensitive to fire, but it is one of the least susceptible of Eastern hardwood species to late spring frosts.



# BLACK WILLOW



## Leaves

- Alternate
- Narrow, thin, lance-shaped
- Slightly curved at tip and finely toothed



## Flowers

- Catkins are erect and on short, leafy shoots
- Appear at the same time as leaves



# BLACK WILLOW

Mature Bark



- Very dark brown, grey, or black
- Deep ridges with thin scales

# BLACK WILLOW

## BLACK WILLOW (*Salix nigra*)

<b>Other common name(s):</b>	swamp willow
<b>Life expectancy:</b>	70 years
<b>Mature height:</b>	Up to 12 m (40') tall
<b>Mature stem diameter:</b>	Up to 30 cm (1') DBH
<b>Shade tolerance:</b>	Intolerant
<b>Timber value(s):</b>	Although not a major commercial species, black willow wood is light and soft, and has been used to make boxes, crates, and in some furniture manufacturing.
<b>Wildlife value(s):</b>	Willow is a good soil stabiliser and can be planted along stream banks to restore a riparian area. Their fruit is an important food for white-tailed deer, rabbits, and small rodents. They also provide cover for many birds which may live in similar stream bank habitats.
<b>TREE-VIA:</b>	Salicin, a chemical compound naturally occurring in willow, was once used in the production of aspirin. The chemical is still used today but is manufactured instead of extracted from black willow trees.



# SOFTWOOD TREES

*Click on a tree name to see the detailed profile*

[Balsam Fir](#)

[Eastern White Cedar](#)

[Tamarack](#)

[Black Spruce](#)

[Jack Pine](#)

[White Pine](#)

[Eastern Hemlock](#)

[Red Pine](#)

[White Spruce](#)

[Red Spruce](#)



# RED SPRUCE



**Mature Bark**



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

# RED SPRUCE

## Needles



- Bright yellow green needles are four cornered and up to 1.5 cm long
- Sharp pointed
- Will roll between fingers

## Backs of branches



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

# RED SPRUCE

## RED SPRUCE (*Picea rubens*)

<b>Other common name(s):</b>	Yellow spruce, Maritime spruce
<b>Life expectancy:</b>	250 to 350 years
<b>Mature height:</b>	21 m to 24 m (70' to 80') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12" to 24") DBH
<b>Shade tolerance:</b>	Very high tolerance, but needs full light for best growth
<b>Timber value(s):</b>	The most valuable lumber and <a href="#">pulpwood</a> species in Nova Scotia
<b>Wildlife value(s):</b>	Winter cover for deer and moose. Also good habitat for ruffed grouse, snowshoe hare, woodcock, many songbirds, mink, skunks, fishers and weasels.
<b>TREE-VIA:</b>	Red spruce is the provincial tree of Nova Scotia, and is considered the "holy grail" of woods for acoustic steel string guitars.

# WHITE SPRUCE



## Needles



- Needles are four cornered, 1 cm to 2 cm long
- Sharp pointed
- Blue-green in colour



# WHITE SPRUCE

**Mature Bark**



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

**Branches**



- Dead branches stay on the trunk for a long time

# WHITE SPRUCE

## WHITE SPRUCE (*Picea glauca*)

<b>Other common name(s):</b>	Cat spruce, pasture spruce, skunk spruce
<b>Life expectancy:</b>	100 to 200 years
<b>Mature height:</b>	18 m to 24 m (70' to 80') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12" to 24") DBH
<b>Growth:</b>	Fast; fastest growing spruce in Nova Scotia.
<b>Shade tolerance:</b>	Moderate
<b>Timber value(s):</b>	<a href="#">Pulpwood</a> , lumber, boxes and crates, general construction.
<b>Wildlife value(s):</b>	Provides habitat for moose, hare, red squirrel, and spruce grouse.
<b>TREE-VIA:</b>	Black bears will peel away the bark of white spruce to get at the sweet sapwood. This often kills the tree.

# BLACK SPRUCE



Mature Bark



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



# BLACK SPRUCE

**Needles**



- Blue-green in colour, 0.5 cm to 3 cm long
- Four cornered
- Blunt pointed on stunted trees
- Needles sometimes curve to upper side of twig

**Back of Branches**

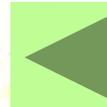


- New growth is light green
- Old growth is dark brown to reddish

# BLACK SPRUCE

## BLACK SPRUCE (*Picea mariana*)

<b>Other common name(s):</b>	Bog spruce, swamp spruce, red spruce
<b>Life expectancy:</b>	150 to 250 years
<b>Mature height:</b>	9 m to 15 m (30' to 50') tall
<b>Mature stem diameter:</b>	15 cm to 25 cm (6" to 10") DBH
<b>Shade tolerance:</b>	High to moderate
<b>Timber value(s):</b>	<a href="#">Pulpwood</a> , mine timbers, and rough construction.
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	Can form a hybrid species with red spruce that is difficult to distinguish from either parent tree.



# WHITE PINE



## Needles



- Needles in clusters of five
- 10 cm long



# WHITE PINE

**Immature Bark**



- Smooth, dark green

**Mature Bark**



- Deeply furrowed, dark grey



# WHITE PINE

## WHITE PINE (*Pinus strobus*)

<b>Other common name(s):</b>	Eastern white pine, soft pine, pattern pine, yellow pine, majestic pine
<b>Life expectancy:</b>	200 to 400 years
<b>Mature height:</b>	30 m to 35 m (80' to 100') tall
<b>Mature stem diameter:</b>	60 cm to 90 cm (24" to 36") DBH
<b>Shade tolerance:</b>	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.
<b>Timber value(s):</b>	Most valuable softwood lumber in eastern Canada. It is highly prized for interior finishing.
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	Because of its size and strength, white pine was used to make masts for sailing ships.

# RED PINE



## Needles



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



# RED PINE

**Branch**



**Mature Bark**



- Breaks off in flat, red-brown plates

# RED PINE

## RED PINE (*Pinus resinosa*)

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



# JACK PINE



**Mature Bark**



- Becomes scaly and furrowed

# 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

## Twigs



## Needles



- In clusters of two, 2-4 cm long
- Each pair usually twisted and spreading apart
- Light yellow green

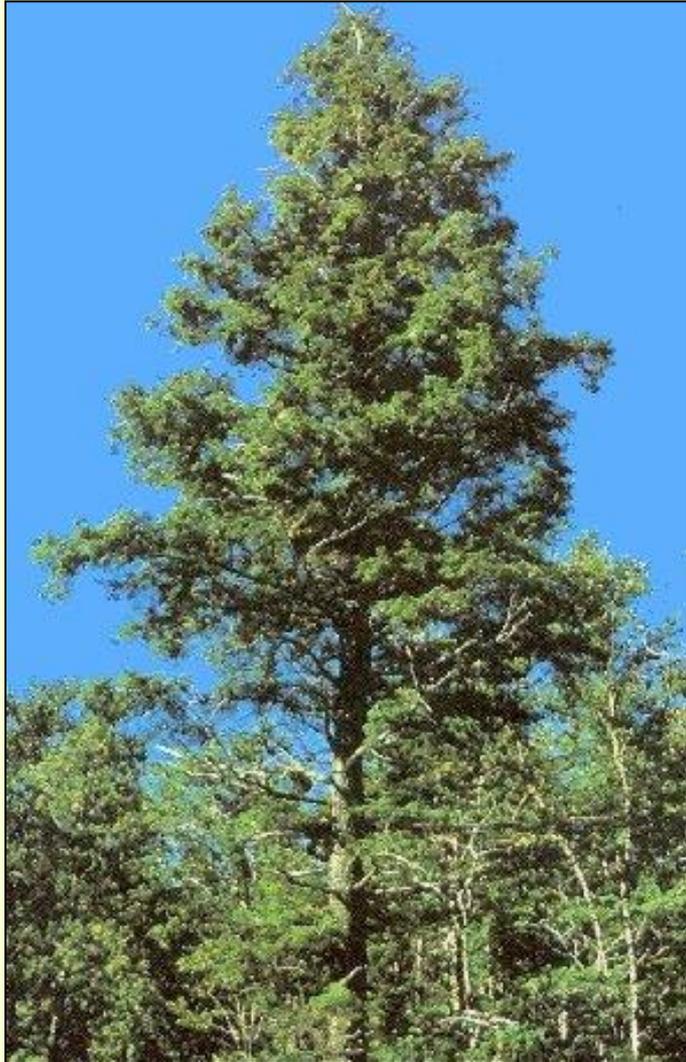
# JACK PINE

## JACK PINE (*Pinus banksiana*)

<b>Other common name(s):</b>	Princess pine, scrub pine, grey pine
<b>Life expectancy:</b>	80 to 130 years
<b>Mature height:</b>	12 m to 18 m (40' to 60') tall
<b>Mature stem diameter:</b>	20 cm to 30 cm (8" to 12") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Generally used for railway ties, poles and fuelwood.
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	Jack pine cones need a lot of heat to open and germinate. That is why it often establishes after a fire.



# EASTERN HEMLOCK



## Needles

- Dark shiny green, 1 cm to 2 cm long
- Needles are flat with two white lines on underside
- Blunt tips



## Twigs

- Two white lines on underside of needles



# EASTERN HEMLOCK

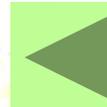
Immature Bark



Mature Bark



- Inner bark with purplish to cinnamon streaks



# EASTERN HEMLOCK

## EASTERN HEMLOCK (*Tsuga canadensis*)

<b>Other common name(s):</b>	tree juniper, white hemlock
<b>Life expectancy:</b>	300 to 400 years
<b>Mature height:</b>	18 m to 21 m (60' to 70') tall
<b>Mature stem diameter:</b>	60 cm to 122 cm (24" to 48") DBH
<b>Shade tolerance:</b>	Very high. Small trees can persist in closed stands for many decades.
<b>Timber value(s):</b>	Bridges, planks, sills, boxes, crates, and general construction.
<b>Wildlife value(s):</b>	Deer and rabbits browse hemlock and porcupine gnaw bark. Mice, voles and squirrels feed on seeds and small seedlings.
<b>TREE-VIA:</b>	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



- Only native softwood to lose all needles each winter



- With needles



- In autumn



# TAMARACK

## Needles



- Blue-green needles
- Grow in clusters of 12 – 30

## Twigs & Cones



- Twigs are orange brown, slender with numerous short spur [shoots](#) after first season
- Cones can remain on tree through winter



# TAMARACK

**Immature Bark**



- Thin
- Smooth
- Blue-grey

**Mature Bark**



- Red-brown with fine, rough scales



# TAMARACK

## TAMARACK (*Larix laricina*)

<b>Other common name(s):</b>	Eastern larch, larch, juniper, hackmatack
<b>Life expectancy:</b>	100 to 180 years
<b>Mature height:</b>	12 m to 23 m (40' to 75') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12" to 24") DBH
<b>Shade tolerance:</b>	Low
<b>Timber value(s):</b>	Fence posts, poles and ties.
<b>Wildlife value(s):</b>	Porcupines eat the bark of tamarack. Rabbits like needles, ruffed grouse and other birds like sparrows, the common yellow throat and Nashville warbler eat the seeds.
<b>TREE-VIA:</b>	Tamarack is the only native softwood that loses all of its needles each autumn.



# BALSAM FIR



## Needles

- Dark, shiny green above
- 2 cm to 4 cm long



## Back of Needles

- White lines on underside of the needles



# BALSAM FIR



**Immature  
Bark**

- Smooth, dull green



**Mature Bark**

- Smooth, thin, and gray, with bubbles of resin

# BALSAM FIR

## BALSALM FIR (*Abies balsamea*)

<b>Other common name(s):</b>	Fir, balsam
<b>Life expectancy:</b>	70 to 150 years
<b>Mature height:</b>	12 m to 18 m (40' to 60') tall
<b>Mature stem diameter:</b>	20 cm to 36 cm (8" to 14") DBH
<b>Shade tolerance:</b>	High to moderate
<b>Timber value(s):</b>	<a href="#">Pulpwood</a> , lumber, boxes, crates, and of course, Christmas trees!
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	Balsam fir is the most popular Christmas tree species in Nova Scotia.

# 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

**Cones**



- Oval in shape, upright
- Grow in clusters on short, curved stalk
- Numerous, leathery scales

**Mature Bark**



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

# EASTERN WHITE CEDAR

## EASTERN WHITE CEDAR (*Thuja occidentalis*)

<b>Other common name(s):</b>	Northern white cedar, arbor-vitae
<b>Life expectancy:</b>	150 to 350 years
<b>Mature height:</b>	12 m to 15 m (40' to 50') tall
<b>Mature stem diameter:</b>	30 cm to 60 cm (12"-24") DBH
<b>Shade tolerance:</b>	High to moderate, responds well when released from shade.
<b>Timber value(s):</b>	Fence posts, shingles and canoes.
<b>Wildlife value(s):</b>	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.
<b>TREE-VIA:</b>	Arbor-vitae, a common name for cedar, is Latin for "Tree of Life".