

# NATIVE TREES OF THE ACADIAN FOREST



# Plant Native Trees to Encourage Biodiversity

Planting a tree may seem like a simple act, but it's not. First of all, the species of tree you choose to plant in your yard will have an impact on the surrounding flora and fauna. Planting a native tree contributes to the quality of the environment in our communities.

This booklet has been prepared to help you understand the role that trees native to the Acadian Forest play, by providing you with information on the importance of native trees and many other topics related to the forest in our region. In the last section, we show you how to plant a tree in 10 steps.

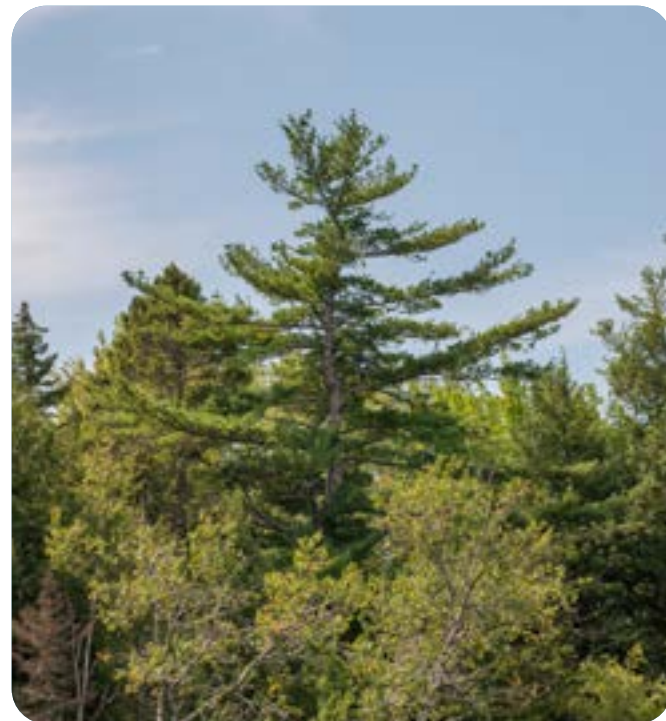
## What is a Native Tree?

A tree is said to be native if it has populated its region without human intervention. Native trees originally come from the region where they grow.

They have been around for a very long time, since our forest began growing over 10,000 years ago, when the glaciers began to melt.

The Eastern White Pine, Sugar Maple, Eastern White Cedar and Red Oak are examples of trees native to the Acadian Forest.

However, several tree species from other parts of the world have colonized our region after being introduced by humans. Some of these species can be harmful to the health of our forest.



The Eastern White Pine is considered the king of our forests. It often reaches impressive dimensions.

# The Importance of Restoring the Acadian Forest

It is more important than ever to protect and restore our forest. As citizens, you can contribute by becoming informed about the various issues that threaten it.



Beaubassin-est

The Acadian Forest, one of eight forest regions in Canada, covers most of the Maritime provinces and northern New England and extends into Quebec's Gaspé Peninsula. Although designated as a distinct region, it is actually a combination of the Northern Hardwood and Boreal Forests.

The Acadian Forest contains elements of both, thus creating a unique blend of hardwood and softwood trees found nowhere else on earth.<sup>1</sup>

With its 32 species of trees, the Acadian forest includes a mixture of hardwoods and softwoods.

<sup>1</sup> Simpson, J. (2008). Restoring the Acadian Forest: A Guide to Forest Stewardship for Woodlot Owners in the Maritimes.

It is composed of many ecosystems with plants, mosses, lichens, fungi and microscopic organisms, which provide habitat and food for many insects, birds, amphibians, reptiles, fish and mammals.

Over the years, the Acadian Forest has been significantly altered by logging, clearing for agriculture, and single species tree plantations.

Although most of the species in this forest region still exist, the trees are much younger and smaller than in the past. There are also often fewer tree species in forest stands due to human activity.

# The Benefits of Native Trees

Choosing to plant native trees rather than trees from other parts of the world has several advantages. First, native trees are important in maintaining the biodiversity of ecosystems.

A researcher in the United States determined that native oaks enable the integration of 100 times more caterpillar species than the ginkgo, a tree from Asia. Caterpillars, like many other insects or fruits associated with native trees, are important food sources for local animals.

In addition, native trees are necessary for the well-being of the soil microflora. Without native trees, some varieties of soil-beneficial fungi will not survive.<sup>2</sup>

Looking at the other side of the coin, native trees not only enrich local ecosystems; they can also help avoid exacerbating the lack of diversity in some areas. For example, if foreign trees are introduced, they may invade and choke out the native flora, destroying the habitat's natural balance.

To avoid drastically altering the area's ecosystems, it is therefore preferable to select native trees when this option is available.

<sup>2</sup> <https://www.audubon.org/content/why-native-plants-matter>



The Eastern White Cedar provides shelter for small animals and birds.



The Pileated Woodpecker feeds on carpenter ants and nests in large trees.



Hibou Blanc trail, Outdoor Park (Cap-Pelé)

## Trees, Essential for Life

Trees provide other important benefits. We need them for the air we breathe because they absorb carbon dioxide (CO<sub>2</sub>), which lets them produce oxygen.

By capturing CO<sub>2</sub> and storing it in their leaves, trunks and roots, they help mitigate climate change.

In our communities, trees create shade, which helps reduce air temperature. They also help slow down stormwater runoff, which reduces flooding while recharging aquifers for our drinking water supply.

# Trees for Healthy Rivers

Trees are essential to healthy rivers for several reasons. First, they support fish, wildlife and insects by providing shelter. Second, dead leaves from trees provide nutrients for insects that are food for fish. Trees also make shade in streams and rivers, which helps maintain proper temperature for fish and other aquatic species.



Aboujagane River (Beaubassin-est)

Riverbanks remain stable because of the presence of trees. Their roots hold the soil together, which reduces the rate of bank erosion. Fallen trees are crucial in creating a dynamic river by trapping sediment, creating pools and cleaning up gravel.

Finally, trees and other vegetation create a buffer zone that prevents pollutant runoff, such as pesticides and phosphates, from reaching watercourses. This buffer zone acts as a natural sponge, collecting and filtering rainfall and slowing the flow during heavy rains.



Shediac River

## Two Types of Trees - Deciduous and Coniferous

Trees can be divided into two categories: deciduous (hardwood) and coniferous (softwood). First, deciduous trees have leaves that change colour and fall in autumn. Instead of leaves, conifers have needles that they generally do not shed with the seasons.



Red Maple



The Tamarack is the only conifer that loses its needles in winter.

## The 32 Species of Trees in the Acadian Forest

The 32 native species of trees that make up the Acadian Forest are very important because they are adapted to this part of the world.

These trees have evolved over time to thrive in this unique ecosystem. They have developed resilience to disturbances and grow well in our soils. They also know how to survive our four seasons and they help sustain the biodiversity of our forest.

American Beech *Fagus grandifolia*  
American Elm *Ulmus americana*  
Balsam Fir *Abies balsamea*  
Balsam Poplar *Populus balsamifera*  
Basswood *Tilia americana*  
Black Ash *Fraxinus nigra*  
Black Cherry *Prunus serotina*  
Black Spruce *Picea mariana*  
Bur Oak *Quercus macrocarpa*  
Butternut *Juglans cinerea*  
Eastern Hemlock *Tsuga canadensis*

Eastern White Cedar *Thuja occidentalis*  
Eastern White Pine *Pinus strobus*  
Grey Birch *Betula populifolia*  
Ironwood *Ostrya virginiana*  
Jack Pine *Pinus banksiana*  
Large-tooth Aspen *Populus grandidentata*  
Red Ash *Fraxinus pennsylvanica*  
Red Maple *Acer rubrum*  
Red Oak *Quercus rubra*  
Red Pine *Pinus resinosa*  
Red Spruce *Picea rubens*

Serviceberry *Amelanchier canadensis*  
Silver Maple *Acer saccharinum*  
Sugar Maple *Acer saccharum*  
Striped Maple *Acer pensylvanicum*  
Tamarack *Larix laricina*  
Trembling Aspen *Populus tremuloides*  
White Ash *Fraxinus americana*  
White Birch *Betula papyrifera*  
White Spruce *Picea glauca*  
Yellow Birch *Betula alleghaniensis*

## Four Featured Species of the Acadian Forest

We have chosen to highlight the 4 following species because they are common in our area. These are also trees that people like to have near their homes. These species are generally available in our local garden centres, so they are relatively easy to purchase.

### Eastern White Pine

The majestic Eastern White Pine (*Pinus strobus*) is the tallest tree of the Acadian Forest. At the beginning of its life, this conifer has a thin and smooth greyish green bark.

At maturity, its bark turns dark greyish brown and breaks into large scaly ridges separated by deep grooves. With a lifespan ranging from 200 to 400 years, the white pine can reach a height of 30 to 50 metres.

The Eastern White Pine stands out from other conifers with its long thin needles of about 10 cm, which grow in groups of five. They are rather soft with a shade of green turning to blue.



### Interesting Facts

- In the past, white pine was used for boat building, specifically for the mast of tall sailboats. It was used for this purpose because of the tree's height, strength and straight trunk.
- Today, pine is often used in construction and is even considered one of the favourite woods in the eastern part of the country.
- White-tailed deer feed on white pine, eating the needles and twigs. Birds and small rodents, such as squirrels and chipmunks, prefer to eat its seeds.
- Birds make nests on the flattened tops of white pines, on lower branches or in holes in the trunk.

# Sugar Maple

The Sugar Maple (*Acer saccharum*)—from which we make maple syrup with the sap—has a bark that darkens and cracks as it ages, but is a light grey in its early life. As a deciduous tree, the Sugar Maple's leaves stand out with three or five distinct lobes.

In the fall their leaves turn red, orange or yellow. During its 150 to 250-year lifespan, the Sugar Maple can grow up to 30 metres high.



## Interesting Facts

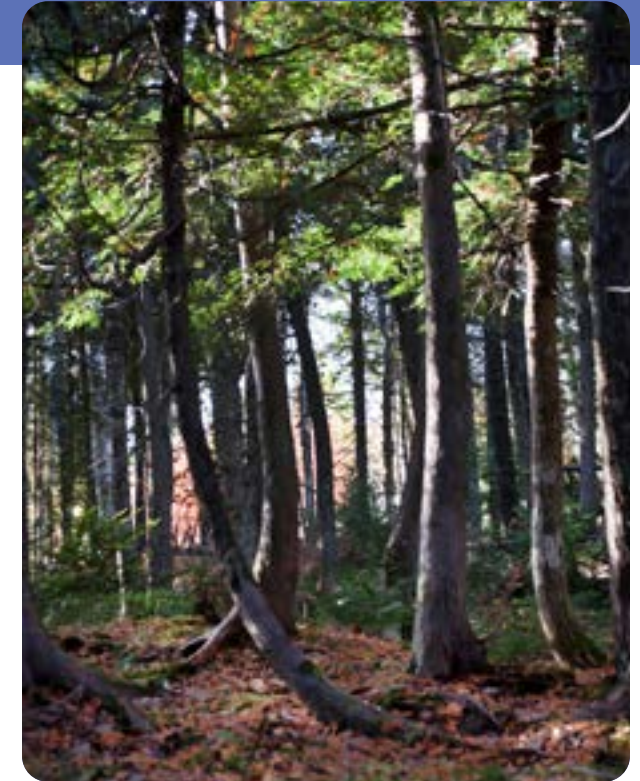
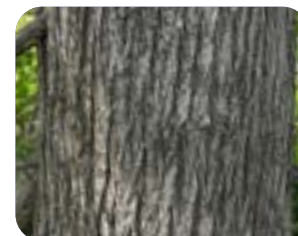
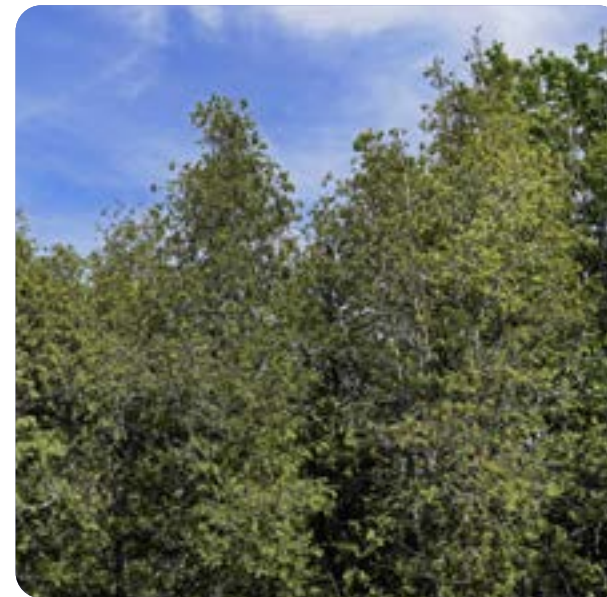
- Maples do not produce flowers every year. In fact, flowers will grow and release seeds only every two to five years.
- Almost every part of the sugar maple is eaten by one animal or another. For example, the buds and young shoots are eaten by white-tailed deer, the bark by porcupines, the sap and seeds by some birds and squirrels eat seeds, buds, leaves and twigs.
- Although it is possible to make maple syrup with other types of maple trees, the Sugar Maple is the best option.
- It takes 40 litres of sap to make one litre of maple syrup because we obtain the sweet liquid so greatly appreciated by Canadians by evaporating some of the water naturally contained in the sap.

# Eastern White Cedar

The Eastern White Cedar (*Thuja occidentalis*) is a tree with unique leaves that resemble small buds filled with scales.

It usually lives about 400 years, but one was found that has been alive for nine hundred years. Its bark becomes fibrous when the tree is mature, almost giving the impression that it is made of vertical strips.

The bark's colour can vary, either having shades of reddish brown or appearing a bit greyer.



## Interesting Facts

- The inner bark can be made into rope because it is very strong. White cedar wood can also be made into canoes, fences and shingles.
- This cedar can reach a height of about 12 to 15 metres at maturity. Its trunk measures between 30 and 60 centimetres in diameter.
- Cedar is sometimes called *arborvitae*, a Latin name that can be translated as "tree of life."
- White cedar provides food for many animals. In addition to being a good food source, it provides excellent protection from predators and bad weather.
- The optimal environment for white cedar is moist soil where it will be exposed to plenty of light.
- Compared to other trees in the Acadian Forest, the Eastern White Cedar is the lightest tree as well as the most resistant to decay.

# Red Oak

The Red Oak (*Quercus rubra*) is a deciduous tree whose bark becomes increasingly cracked and pale with age. On average, the tree has a 200-year lifespan, but some can reach more than double that age. Its diameter is normally between 30 and 75 centimetres and the top can exceed 20 metres when the tree stops growing.

The red oak's leaves have 7 to 13 lobes and are said to be simple and alternate. They change from a dark green on top, with a pale green underside that tends toward yellow, to a beautiful red in the fall. What's more, the dead leaves do not always fall off before winter.



## Interesting Facts

- This tree produces acorns, one of the most important sources of nutrition for many animals. For example, some insects, blue jays, red squirrels, ruffed grouses (partridge), raccoons and snowshoe hares all eat the tree's seed. Black bear and white-tailed deer feed on its buds and twigs.
- This oak is fast-growing, ideal for lawns, parks, golf courses and commercial areas. It withstands road salt and is therefore often used as a street tree.
- Red oak wood, known for its strength and durability, is used in many types of building and carpentry materials for homes and boats.

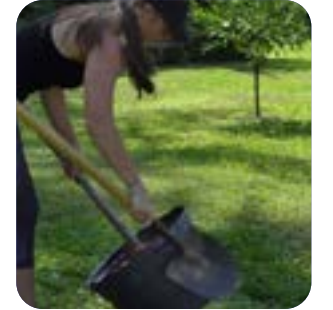
# How to Plant a Tree

More and more people want to plant trees on their property for aesthetic reasons, to create shade or to encourage biodiversity. But sometimes information on how to properly plant a tree is not passed on. There are steps that must be followed for a tree to adapt to its new environment and grow to maturity.

Before starting, you need to have on hand the tools and materials to plant your tree. You will need a shovel, a pair of pruning shears, mulch, planting soil, compost or fertilizer and a watering can.

## How to Plant a Tree in 10 steps

- 1** Inspect the tree and cut off any dead or broken branches.
- 2** Tap lightly on the sides and bottom of the pot and carefully remove the tree.
- 3** The hole must be twice as wide as the root ball, and dug so that the sides slope slightly with a flat bottom. With the shovel, measure the height of the root ball to the beginning of the trunk (collar). This measurement shows you how deep the hole needs to be.
- 4** Break up the ground at the bottom of the hole with the shovel while adding some potting soil so the roots can spread more easily. Depending on soil conditions, add fertilizer or compost. Recompact lightly the bottom of the hole to prevent the tree from sinking in too far.
- 5** Place the tree in the hole and loosen the roots wrapped around the root ball, taking care to spread them out so they penetrate the soil better. Make sure the tree is upright.
- 6** The soil surface must reach just below the collar; otherwise too much water can accumulate, which may kill the tree. If necessary, add more soil under the root ball.



## How to Plant a Tree (continued)

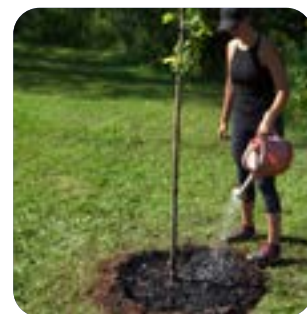
- 7 Fill around the root ball in successive layers with the planting soil and then with the soil that was set aside, lightly compacting the soil around the roots and adding a little water to eliminate air pockets.
- 8 Add soil and level it with the ground and the plant collar.
- 9 Loosen the soil around the tree collar to form a depression that will hold rainwater.
- 10 Add mulch, making sure it does not touch the trunk so that it does not rot.

Like any other living thing, trees need water to survive and grow. To ensure that it is well hydrated, it should be thoroughly and deeply watered when it is planted.

In the following days, water your tree without flooding it, in the morning or in the evening, and then as needed during the first year, especially in times of drought.

### Other Considerations

- Check site conditions to see which tree species will grow well. Some trees need well-drained soil while others prefer it more humid.
- Plant the tree as early as possible in the day and avoid hot days, otherwise water often to keep the roots moist.
- Plant the tree in a sunny or semi-shaded area, away from power lines and other obstacles.
- Avoid places where snow is piled up.



## Educational Video Series

A series of 3 educational videos is available on the EcoVision2025 website. In the first two, you will learn more about the importance of trees in the Acadian forest for the health of the environment, rivers and biodiversity. The third video shows the proper ways to plant a tree.

[www.ecovision2025.ca](http://www.ecovision2025.ca)

