

Shoreline Restoration



Using Native Plants

by the Haliburton County Master
Gardeners

www.haliburtonmastergardener.ca



Introduction

The ribbon of land between the lake and cottage has undergone monumental changes since lake development began. Many cottage owners removed the natural vegetation at the shoreline in an attempt to urbanize the area. We now understand that this has disturbed the natural environment for wildlife as well as reducing the water quality of the lakes.

Shoreline protection and an understanding of how it affects waterways is critical for wildlife habitat for a variety of species including spawning fish, aquatic insects, turtles and nesting waterfowl. Shoreline vegetation also helps protect water quality. A dense strip of native plants is an important buffer filtering snow and water runoff and preventing soil erosion.

Experts agree that re-creating cottage shorelines with native vegetation is the best solution for water quality and long-term shoreline stability. This would be the way nature kept shorelines stable and our lakes and streams clean long before the impacts of human development.

The downside to this, if there is one, is that sourcing native plants tends to be difficult and expensive. Most nursery stock of 'native plants' are hybrids. Many nurseries also carry invasive species and the buyer may not be aware of this. Native plants, especially perennials, in specialty nurseries are often very small and may take time and effort to establish. A list of Native plant Nurseries is provided at the end of the document.

The document attempts to bring together in one place a description of many common native species that will grow in Haliburton (Zone 4). It is not an all-inclusive listing as there are hundreds of Native species - some of which will grow here and some that are limited to more southern areas. Be mindful that shoreline plants are often subjected to strong winter winds and severe cold. Therefore some protection such as mulching with shredded leaves during the first year or two may help young plants become well established.

The Haliburton County Master Gardeners

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Trees



Balsam Fir (*Abies balsamea*)



Balsam fir is one of the most recognizable trees in Ontario. It's tall and narrow and tapers to a skinny point at the top. When the tree is young, its bark is covered in sap blisters. Balsam grows in a variety of climates and temperatures and is found across Ontario. Its cones are barrel shaped and greyish brown and are 4 to 10 centimetres long. Its needles are 2 to 4 centimetres long and a dark, shiny green, with two white bands underneath. When the balsam fir grows in a group of other trees the branches at the bottom of the tree die and dry out. When in open sunlight, the lower branches stay green all the way to the ground.

It grows up to 30 metres tall and the trunk may be 60 centimetres in diameter. It tolerates different moisture levels so it is a great choice along a shoreline. It tolerates shade and grows in a variety of soils. Since the roots of the balsam fir don't go very deep in to the soil, they can blow down during extremely high winds, so it is best planted in a sheltered area or away from your house.

Balsam firs are popular as Christmas trees as they keep their needles longer than other conifers. The resin is used to produce Canada balsam, traditionally used as a cold remedy and as a glue for glasses and other optical specimens. The wood is milled for framing lumber, siding and pulp and paper. Balsam fir oil is an approved nontoxic rodent repellent. Balsam fir is also used as an air freshener and as incense.

Red Maple (*Acer rubrum*)



Red maple is named for its red flowers, red fruit, red twigs, and of course, the brilliant red fall foliage! The leaves may also turn yellow or orange.

The red maple grows best in moist soil so it is suited to waterfront planting. Considered to be a generalist species, it can tolerate a wide range of habitat conditions. They do well in sunny or shady spots, dry or wet soil, high or low elevation. It's unlikely that any other tree in North America can match the red maple's wide range of growing conditions. Adaptable roots help the red maple to cope with differing soil types. If the tree is placed in wet soil, it grows a short taproot and extensive lateral roots to soak up water at the surface. When red maples grow in dry sites, a long taproot and short lateral roots develop.

It is found in central and southern Ontario, in the Great Lakes/St Lawrence region. Being a medium-sized tree, it will grow up to 25 metres tall; with a trunk that's 60 centimetres in diameter.



The red maple's leaves are 5 to 15 centimetres long and light green on top and paler underneath.

Its bark is smooth and light grey when the tree is young, turning greyish-brown, scaly and ridged as the tree gets older.

The spring flowers of the red maple are pictured above.

The seeds of the red maple are contained in samaras or 'keys' that float down from the tree's branches in the early summer.

Comments:

The red maple is a good, fast-growing tree that is tolerant of some shade. In the forest it is a tall, straight tree, but in the open it tends to divide its main stem several times, often making it susceptible to breaking later in life. Pruning and maintenance may be needed to keep its form strong. Its roots are shallow, but they can spread widely, so be sure to plant your red maple where it will have room to grow.

By tree standards, red maples don't live very long. The average lifespan is only 80 to 100 years. However, red maples can start producing seeds at just four years old!

Red maples can become the dominant species in the forest. The extensive growth of this species is kept in check by moose, deer, and rabbit, for which red maple is a favourite treat. Wrapping chicken wire around the base of the trunk of your tree will protect it from browsers. Red maple is one species whose sap is used to make maple syrup. The biggest syrup provider is the sugar maple, though, which is named for the high sugar content of its sap.

Red Oak (*Quercus rubra*)



Commonly known as northern red oak or champion oak, this tree is a native of North America, growing from the north end of the Great Lakes east to Nova Scotia. Often simply called “red oak”, northern red oak is formally named to distinguish it from southern red oak, also known as the Spanish Oak. It is the provincial tree of Prince Edward Island.

In many forests, this deciduous tree grows straight and tall to 28 metres, exceptionally to 43m tall. Open-grown trees do not get as tall, but can develop a stouter trunk, up to 50-100cm. It has stout branches growing at right angles to the stem, forming a narrow round-topped head. It grows rapidly and is tolerant of many soils and varied situations, although it prefers the well-drained borders of streams. Under optimal conditions, northern red oak is fast-growing and a 10 year old tree can be 5-6 m. Trees may live up to 500 years.

Red oak is easy to recognize by its bark, which feature ridges that appear to have shiny stripes down the centres. The bark is dark reddish grey brown with broad rounded ridges and scales but is smooth and light gray on young trees. The wood is pale redish-brown, heavy, hard and strong and coarse grained. The northern red oak is one of the most important oaks for timber production in North America. Quality wood is highly valued for lumber.

The leaves are alternate, seven to nine-lobed, oblong, five to ten inches long, four to six inches broad. The lobes are less deeply cut than most other oaks. The acorns mature in about 18 months, are solitary or in pairs. The kernels are white and very bitter. Despite this bitterness, they are eaten by deer, squirrels and birds.

Serviceberry (*Amelanchier*)

There are about 15 species of *Amelanchier* native to Canada. Most are shrub sized and a few medium sized trees. They are called Serviceberry, Saskatoon Berry, Bilberry, Juneberry or Shadbush.

All species have:

- Flowers with 5 white petals that appear before the leaves are fully formed in April or May. No scent but attractive to bees and butterflies for pollination and to their larvae for food.
- Purple berries eaten by cedar waxwings, robins, blue jays, thrushes, grosbeaks and more.
- Orange/Red leaves in autumn.



All species are:

- Subject to many diseases and insect damage but these are only cosmetic and not fatal.
- Hardy to Zone 3.
- Enjoyed by small and large mammals that eat the fruit, twigs, leaves, buds, bark and flowers.



The Serviceberry Tree requires sun to partial shade. It is tolerant of poor soil and prefers moist soil but will do fine where it is dry.

Height 15-30 ft. and width 15 ft. Branches are fairly low to the ground.

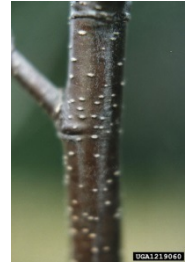
Most nursery tree species are *Amelanchier arborea*.

Speckled Alder (*Alnus incana*)

The Speckled Alder, also known as tag alder, swamp alder, and eastern river alder is generally found along streams and lake shorelines and in fresh water wetlands; often forming dense thickets. It is known as ‘the little tree with big powers’ and stands 5-9 m tall. The bark is brown to dark gray and marked with prominent, whitish, horizontal lenticels through which gases can pass.



The leaves are arranged alternately and are pinnately-veined. Leaf blades are broadly elliptic to ovate, 4-11 cm long, dark green above and paler beneath.



Male and female catkins are borne on the same plant in early spring. The female catkins become cone-like as the fruits develop. The catkins attract bees and provide high-energy seeds and flowers for warblers and other birds throughout the year.

The stalkless cones are the best distinguishing feature of the Speckled Alder. The heavily speckled twigs separate this species from the Green Alder and Beaked Hazel, with which it is sometimes confused.



The fruit is in the form of very small samaras which are about 2mm long, with narrow wings and are produced in the cones.



Speckled Alders need full sun to flourish. They propagate by sucker roots forming dense stands which provide protection for many bird species throughout the year.

Comments:

Alders are able to fix nitrogen from the air in the soil through nodules on their rootlets (similar to clover and beans). The leaves contain high levels of nitrogen. When they are shed, they decay quickly and provide an excellent fertilizer source for other trees and

plants. They are a very important ‘pioneer species’ that provide the base for mature hardwood forests.

Native peoples and settlers extracted a dark dye from the bark for tanning and staining hides. The bark was boiled to make medicinal teas for treating rheumatism. It was also applied to wounds as a poultice to reduce bleeding and swelling. The bark contains salicin, the active ingredient of aspirin, as do willows and trembling aspens.

White Pine (*Pinus strobus*)

The Eastern White Pine can be found in most of Ontario and grows up to 40 meters tall. It is considered a fast grower, often adding 1-2 metres per year to its height. It grows best in full sun but young trees can tolerate some shade. It is also the Provincial tree of Ontario. If the tree is planted in a windy area it can become lopsided with small short branches on the side that faces the wind

Needles

- skinny needles 6-12cm long in bunches of 5

Seeds

- cones 8-20 cm long and hang down
- good seed crops produced after 20-30 years maturity
- seed cones are produced every 3-5 years

Bark

- dark greyish brown with broad thick ridges that are 2-5 cm thick

Size

- 20-35 metres tall
- trunk 60-140 cm in diameter

Moisture

- tolerates different moisture levels

Exposure

- prefers full sun
- tolerates partial shade when younger

Soil

- any but prefers sand or sandy loam



Sugar Maple (*Acer saccharum*)

The Sugar Maple can be found in central and southern Ontario as well as the north eastern US. It is a long-lived tree and species are known to survive 200 years. The leaf is well known as it is depicted on the Canadian flag. It is also the National Tree of Canada.

Leaves

- yellowish-green with 5 shallow lobes
- 8-20 cm
- autumn - yellow, brilliant orange or red

Bark

- smooth and grey, becomes darker and splits into ridges that curl out as the tree gets older.

Flowers

- greenish yellow with long stalks (pedicels) appearing in drooping clusters 1 to 2.5 inches long
- monoecious; that is, it has female (staminate) and male (pistillate) flowers on the same plant
- pollinated by bees

Seeds

- Seeds from the sugar maple are contained in 'keys' which are 30 to 35 millimetres long.
- Seed is produced every year, with an abundant crop every 7 years.
- minimum seed bearing age is 30 years

Size

- 35 metres tall, 90 centimetres in diameter
- crown 18-24 metres

Moisture

- Prefers moist soil

Exposure

- Can tolerate shade but grows better when it gets full sun

Soil

- Prefers deep and rich, well drained soil
- wide pH range of 3.7 - 7.3



Shrubs



Highbush Cranberry (*Viburnum trilobum*)



- Height:** Deciduous shrub from 0.5 - 3.5 metres tall
- Leaves:** Opposite, 3-lobed, sharply toothed and hairy beneath, with a pair of teeth near the junction of the blade and stem.
- Flowers:** White, in small clusters, 1 - 3 - cm wide, borne on short stems with a pair of leaves.
- Fruit:** Fruits are red or orange, in clusters of 2 - 5 with individual stems radiating from a single point, 1-seeded, 1 - 1.5 cm long berry-like drupes with large, flattened stones.
- Bark:** The bark is smooth reddish to grey.
- Habitat:** Highbush cranberry grows in moist forests and forest edges and thickets, and on rocky slopes, margins of wetlands stream banks, river terraces, and rocky shorelines.
- Interest:** The fruit is an important food source for over-wintering birds since they are available all winter.

Black Chokeberry (*Aronia melanocarpa*)



- Height:** Deciduous shrub grows from 4 - 8 feet
- Leaves:** Alternate on the stems, simple, 1-3 inches in length and 3/4-2 inches in width. They are obovate in shape (oval, but narrower at the base than near the tip), with fine and regular teeth along the edges. Their upper surfaces are dark green and lower leaf surfaces are lighter green. Both surfaces are glabrous (smooth). The petioles are 1/4 inch or less in length. Leaves often grow only on the top 2/3 of plants. The leaves are bright green as they develop in spring, and they darken as the season progresses.
- Flowers:** Flowers have five white petals, and numerous pink stamens. As many as 30 flowers occur in each 2 inch diameter cluster. Flowers in May and June. Primary pollinators are small bees.
- Fruit:** Fruits are 1/3 - 1/2 inch diameter, glossy and black when ripe. They hang down in clusters from red pedicels, with few-to-30 fruits per cluster. The fruits are pomes, and each contains 1-5 seeds. They mature in August.
- Bark:** Reddish brown with distinct lenticels.
- Habitat:** The black chokeberry tolerates dry and wet conditions so its habitat varies. It can be found in swamps, wetlands, moist forests, sand dunes, dry bluffs, rocky slopes, and grassy clearings..
- Interest:** Glossy green leaves turn yellow, red, and orange in autumn. Grows very quickly

Chokecherry (*Prunus virginiana*)



Chokecherry or Virginia bird cherry is variously classified as a native deciduous shrub or small tree, depending on its height and spread. It has good ornamental qualities. Fragrant showy white flowers in elongated clusters occur in May. Attractive pea-sized berries ripen to purplish black in early fall. The autumn leaves turn golden yellow or orange. It is hardy to zone 3 and found across Canada from Newfoundland to Saskatchewan.

As a small tree, chokecherry will grow to a height 6 or more metres (20 ft) or it can spread by suckering to form a hedge or thicket 3.5 m (11.5 ft) wide. It likes a full to part sun exposure.

This plant is a good choice for the upper shoreline and will tolerate shallow, rocky soil, and dry conditions. The downside is that it is susceptible to insect and disease problems.

Chokecherry berries can be cooked with sugar and used for making jams, jellies, and sauces. Be sure to harvest the berries when they have turned very dark when they will be sweeter and have lost some of their astringency. Robins, thrushes, grosbeaks, woodpeckers, deer, moose, and other wildlife eat the berries and don't seem to be bothered by the slightly bitter taste.

Red Osier Dogwood (*Cornus Sericea*)



Also called red twig dogwood, this fast-growing native shrub has distinctive shiny red/purple stems in fall, winter, and early spring. The creamy white flowers bloom from May to September.

Height: 1.6 - 4 m

Spread: Equal to or greater than its height

Growing Conditions: Red osier dogwood thrives in normal, moist, or wet soil with a high sand, loam, or clay content. It likes a full sun or part sun exposure.

Interest: This shrub is the larval host for the spring azure butterfly and the gossamer-winged butterfly.

Golden Ninebark (*Physocarpus opulifolius luteus*)



- Height:** Deciduous shrub grows from 8 - 10 ft. high and 6 - 8 ft. wide.
- Leaves:** Leaves usually 3 lobed, toothed margins and are more than 3 in. long. New foliage is golden yellow, and slowly turns green in summer then bronze in fall.
- Flowers:** Corymbs of flowers, mostly white, but may be pink-tinged or entirely pink, in late spring-early summer.
- Fruit:** In autumn clustered dried capsules turn from reddish to brown and cling to plant throughout winter.
- Bark:** Bark shreds or peels revealing different colours, hence the term "ninebark".
- Habitat:** Adaptable to a very wide range of soil and site conditions, from moist to dry, acid to alkaline, and gravelly to heavy clay; and can grow in partial shade to full sun

Pussy Willow (*Salix discolor*)



The soft grey catkins of the male pussy willow shrub herald the arrival of spring each March. Like all members of the willow family this native shrub readily grows along lakes and stream banks and other wet habitat throughout Canada and the north eastern US. They respond well to pruning and are easily propagated through branch cuttings simply dug into the soil, and send out new shoots where branches are cut. They are prized in spring flower bouquets or dried flower arrangements.

Height: 4 - 6 m.

Spread: 3.5 - 4.5 m.

Growing conditions: Pussy willow grow best in damp soil and full sun to partial shade. It will tolerate 'wet feet' in springtime if lake levels are high.

Purple-flowered Raspberry (*Rubus odoratus*)

The Purple-flowered Raspberry, (*Rubus odoratus*), which is a member of the Rose family, is a native, perennial shrub that grows 1 - 2 metres high and up to 3 metres wide. It thrives in most well-drained soils along woodland edges in partial shade or sun.

Coarse, hairy, cane-like stems produce five lobed, maple shaped leaves and multiple, fragrant, deep pink-purple flowers with yellow stamens. The flowers bloom throughout the summer and give way to large, flat raspberry-like fruit in late summer. The fruit are edible with a mild raspberry flavour but have a dry, seedy texture.

The shrub propagates readily through seeds and suckers. It can be divided in spring or fall. Pruning after flowering helps prevent stems from becoming overly long and gangly and encourages stronger growth. Flowering raspberry will grow into a thicket if suckering and self-seeding is not controlled through deadheading and removal of suckers. New stems are covered in bristles but unlike others in the Rose family do not have thorns.

The shrub attracts bees, butterflies and birds and is resistant to deer, pests and disease. The leaves are naturally astringent and traditionally were valued for their medicinal properties.



Photos: Albert F. Vicks & Sally Wasowski



Spiraea Alba (*Spiraea latifolia* & *Spiraea tomentosa*)

SPIRAEA ALBA (*Spiraea latifolia*), a shrub with pale pink or white flowers, and (*Spiraea tomentosa*), a shrub with pink flowers



Native to Eastern North America, this plant is a tough, deer resistant moderate-growing deciduous shrub. It flowers for a long season, mid to late summer with white or pale pink terminal clusters of flowers. Butterflies and other nectar-feeding insects are attracted to the flowers. In autumn Spiraea turns a butter yellow color sometimes infused with a bit of orange.

Height: .6 - 1.5 m.

Spread: will colonize under ideal conditions

Growing conditions: Spiraea likes fertile moist soil but it's also drought tolerant. It likes full sun or part sun exposure.

Grasses



Blue Joint Grass (*Calamagrostis Canadensis*)

Blue Joint Grass is also known as marsh reedgrass or bluejoint reedgrass. It is a medium sized blue-green grass that grows 90 to 150 cm high. It will tolerate temporary spring flooding.

This species is adapted to very acid to slightly alkaline clay soils (pH 3.5 to 8) in a wide variety of environments including meadows, open woods, wet thickets or swamps, marshes, bogs, ditches, and the margins of streams and lakes.

Areas that are disturbed by logging or fire are readily colonized by this grass, especially in our colder northern forests.

Identification:

Look for a membranous ligule around the base of the grass blade. Notice the 'V' shape.

This grass produces reddish rhizomes near the soil surface.

The inflorescences (flower heads) are panicle types that are purplish, four to five inches (10 cm) long, and appear in May and June.

Comments:

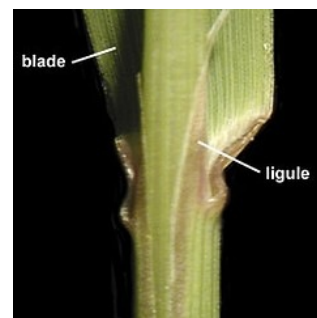
Canada Bluejoint was historically used by Native Canadians for bedding material and for food storage. They lined winter storage pits with bluejoint and covered the vegetables in these pits with a thick layer of this grass to protect them from the frost.

This grass is also important forage eaten by deer, moose and muskrats. Canada Bluejoint is a robust, sod forming grass that provides shelter and nesting areas for waterfowl and shore birds. It is one of the few native cool season grasses amenable for use as livestock forage.

Comparison to invasive species:

This grass can easily be mistaken for the very aggressive, invasive canary reed grass (*Phalaris arundinacea*), and slightly less so orchard grass (*Dactylis glomerata*), and they often inhabit the same areas. Use caution when attempting to control these non-native grasses, making sure that this native species is not taken out.

Canada bluejoint itself can be quite aggressive, so for restoration purposes in wetlands, or in gardens, it is best to let less aggressive plants take time to get established before introducing Canada Bluejoint.



Big Bluestem (*Andropogon gerardii*)

Big bluestem is a grass native to a large part of North America. It is a warm season grass so don't look for new growth until sometime in June. The foliage is a blueish green colour with flowering August through to September. Partners well with other native plants such as aster and coreopsis. Excellent winter interest with flowers swaying in the breeze above the snow. Cut flowers back in late spring before new growth. Tolerates some drought once established. Excellent for soil erosion.



Soil

- Moist fertile soil
- Will grow in a variety of soils including sandy and heavy

Height

- 100 - 150 cm

Width

- 60 - 90 cm

Flowers

- August through fall
- Green turning reddish-brown
- 150 - 250 cm

Leaves

- Blue- green colour, narrow to medium blade width

Exposure

- Full sun but will tolerate some shade

Giant Bur-reed (*Sparganium eurycarpum*)



Giant bur-reed, also known as broad-fruit bur-reed, is a native aquatic perennial plant found in marshes, ponds, wetlands and the shallow waters of lakes. Standing $\frac{1}{2}$ to 2 m ($1\frac{1}{2}$ ft to $6\frac{1}{2}$ ft) high, the plant may resemble a cattail. However, the erect strap-like leaves and the burr-like spiky flower heads distinguish it. Sometimes floating or submerged ribbon-like leaves will also be produced.

If buying nursery stock, it should be rooted in a depth of a few centimetres or inches of the shallow silty or muddy bottom of a lake or stream or planted in the lower quadrant of a shoreline adjacent to shallow water. Giant bur-reed thrives in a sun or a part sun exposure.

This interesting plant is useful as an element of shoreline erosion control. It also acts as a natural filter, by cleaning and clarifying the water. The seeds provide food for ducks and other waterfowl as well as marsh birds. Muskrats will devour the entire plant.

Porcupine Grass (*Miscanthus sinensis*)



Porcupine Grass or Japanese Silver Grass features bold plumes of rose flowers which rise above the foliage in late summer. Its attractive grassy leaves, bluish-green in summer, turn yellow in fall and have showy gold variegation. The silver seed heads are carried on plumes displayed in abundance from early fall right through to late winter. The brick red stems are very effective in adding winter interest. Its medium texture blends into the garden, but can always be balanced by a couple of finer or coarser plants for an effective composition.

Porcupine Grass is an herbaceous ornamental grass with an upright spreading habit, growing 5 to 6 feet tall and 4 feet wide. It prefers full sun to partial shade and is hardy to Zone 4a. It grows best in average to moist conditions, and shouldn't be allowed to dry out. It is not particular as to soil type or pH. It is highly tolerant of urban pollution and will even thrive in inner city environments. This plant can be propagated by division. It grows at a medium rate, and under ideal conditions can be expected to live for approximately 20 years.

Porcupine Grass is recommended for many landscape applications such as: general garden use, ground cover, mass planting, hedges or screening or providing a vertical accent. It will require occasional maintenance and upkeep, and is best cleaned up in early spring before it resumes active growth for the season. It has no significant negative characteristics.

Perennials



Beebalm (*Monarda didyma*)



Common Names: Beebalm, Oswega Tea, Red Bergamot

Family: Lamiaceae (Mint Family)

Plant Type: Herbaceous Perennial **Herbs:** Culinary

The native plant, *Monarda didyma* is a popular perennial with dense rounded terminal head-like clusters of bright red tubular flowers atop 1m. square stems which are lined with large, oval dark green leaves. Flowers appear in midsummer and last for several weeks. *Monarda didyma* can be invasive but is controllable in a garden. The native plant is found throughout eastern North America. It attracts bees, butterflies and hummingbirds. The leaves and flowers can be eaten raw and cooked. The leaves are used to make Earl Grey Tea. Cultivars that are mildew resistant include: 'Colrain Red', 'Jacob Cline' (red), 'Violet Queen' and 'Gardenview Scarlet'. Beebalm prefers moist conditions and light shade. Propagation is by seed or division in early spring. Seeds, native plants and cultivars are available at local nurseries.

Wild Bergamot (*Monarda fistulosa*)



- Height: 3 - 4 ft. (30-90cm) Spread: 24 - 40 in.
- Flower: Flower clusters are solitary at the ends of branches. Each cluster is about 1.5 in (4 cm) long, containing about 20-50 flowers.
- Blooming: Blooms in summer from June to September. Deadhead flowers to extend blooming period
- Leaves: Opposite 2-3 in (5-8 cm) long, lance-shaped, and toothed.
- Habitat: Often grows in rich soils in dry fields, thickets, and clearings, usually on limy soil. Will tolerate average to dry soil; drought tolerant.
- Interest: Attracts butterflies hummingbirds and bees.

Blue Flag Iris (*Iris versicolor*)

Other common Names: American Blue Flag, Dagger Flower, Flag Lily, Larger Blue Flag, Multi-coloured Blue Flag, Northern Blue Flag, Poison Flag, Snake Lily, Water Flag

French names: *Iris versicolore*

Native Ontario Wildflower

Height

- 90-120 cm

Spread

- 60-75 cm

Exposure

- Full sun - part shade

Habitat: marshes, shallow water, preferring sun or partial shade and wet feet. Performs well under average border conditions.

Flowers: Its deep blue flowers appear in July atop stems that reach 60 to 90 cm. It is a perennial that spreads by fleshy rhizomes. Blooms late spring to early summer

Muskrats will not eat the root rhizomes!



Boneset (*Eupatorium*)



Eupatorium is a genus of flowering plants in the aster family. The genus is native to temperate regions of the Northern Hemisphere. Most are commonly called bonesets, thorough worts or snakeroots. *Eupatorium* has been held to contain about 800 species, but now many of them have been moved to other genera. Now the term *Eupatorium* contains about 42 species of white flowered plants in North America, Europe and Asia and the Joe Pye weeds.

Boneset is a perennial herb with an erect stout cylindrical hairy stem, 2 to 4 feet high, branched at the top. The leaves are large, opposite, united at the base, lance-shaped, 4 to 8 inches long, tapering to a sharp point. The edges are finely toothed, the veins prominent, the blades rough above, downy and resinous beneath. The leaves serve to distinguish the species at first glance.

The flower-heads are terminal and numerous, large and slightly convex with from ten to twenty white florets, having bristly hairs which are arranged in a single row. The odour of the plant is slightly aromatic, the taste astringent and strongly bitter. This species varies considerably in size, hairiness, form of leaves and inflorescence. It flowers from July to September. It is an excellent plant for shoreline meadows.

Boneset is used as a stimulant, febrifuge and laxative as well as other medicinal uses.

Canada Anemone (*Anemone canadensis*)



Canada anemone (sometimes called Canadian anemone) is an herbaceous perennial of the buttercup family and is native to moist meadows, stream banks and lake shores in North America. Other common names for this plant are Canada windflower and meadow anemone.

Hardy to zone 4, Canada anemone prefers moist sandy soil but will grow in loamy or clay soils in a sunny exposure. Under the right conditions it tolerates shade well. The plants spread quickly by underground rhizomes to form colonies. This is an advantage when the plant is used in shoreline restoration.

Blooming time is April, May, or June. The bright white showy flowers are 3 cm (over 1 in) in diameter with yellow centres and appear on stalks up to 70 cm (2 ft) tall. A welcome sight on a spring walk! The leaves, arranged in whorls, are deeply divided into 3 to 5 segments and coarsely toothed.

Canada anemone attracts bees and butterflies. Warning: the plant is toxic when eaten in large quantities.

Foam Flower (*Tiarella cordifolia*)

Foam Flower (*Tiarella cordifolia*) is a shade-loving native perennial that sends up beautiful 10-20 cm spires of tiny, delicate, white to pinkish star-shaped flowers from late April to June. As an ephemeral its foamy flowers soon begin to fade as the canopy of spring leaves mature. However, its bright green leaves, which are heart-shaped with dark veining, grow into dense, spreading clumps throughout the summer and turn deep reddish-purple in the fall.



Foam Flower grows in colonies, spreading by runners (stolons) and seed. It makes an excellent native ground cover in moist woodland, shady border or waterside gardens. The shallow root system thrives in rich, acidic soil and prefers an evenly moist, well-drained habitat. The Foam Flower is semi-evergreen but in very cold climates it benefits from a thick, protective layer of leaf mulch, which as it decomposes, also provides the organic matter needed to enrich the soil.

Deer seem indifferent to the Foam Flower and generally leave it alone. This may be in part due to its slightly hairy leaves that have a high tannin content, which gives the plant natural astringent properties. First Nations people were known to use the leaves and roots in poultices for the treatment topical wounds.

Creeping Foam Flower is best planted in groups and can be propagated by seed or division in spring or autumn. Their vigorous network of roots and runners are helpful in providing erosion control.

Tiarella cordifolia is readily available at native plant nurseries and new cultivars such as *Tiarella wherryi* are making their way into mainstream garden nurseries.

Bottle Gentian (*Gentiana andrewsii*)



Gentiana andrewsii (Bottle gentian, Closed gentian, or Closed bottle gentian) is a herbaceous species of flowering plant in the Gentian family [Gentianaceae](#).

Plants are native to northeastern North America from the Dakotas to the East coast, Zones 3 - 7. They bloom in late summer (August-October).

The flowers are 1-1.5 inches long, tubular with pleats between each of the 5 fused petals. The 5 lobes overlap and have tiny fringe or teeth around the tip. They never open, resembling large buds which are typically a rich blue colour. The flowers are clustered at the top of the plant or in the axis of the top leaves. The stems which are 1-2 feet tall, are lax and sprawl 1-1.5 feet wide. The foliage is hairless with a glossy sheen to it. The root system consists of a stout taproot.

Plants prefer full or partial sun, and moist rich soil. It is easier to start with potted plants rather than seed, as germination can be erratic and seedling mortality can be high. Mature plants are rarely bothered by foliar disease or leaf-chewing insects. The worst threat is droughty conditions, but appropriate placement of plants will mitigate this problem.

Bottle Gentian are slow-growing but long-lived and require little care once established. Bumblebees are the main pollinators because they are the only insects strong enough to pry open the closed flowers. Plants are fed upon by ground hogs and scale insects. This species can hybridize with *Gentiana alba*, producing upright growing plants with white flowers with blue edges. This gentian is considered a threatened species in the USA states of New York and Maryland.

Wild Ginger (*Asarum canadense*)



- Height:** 3 - 6 in. (8 - 15 cm) **Spread:** 30 cm (12 in.) or wider
- Flower:** In spring it bears purplish maroon bell-shape blooms mostly hidden in the foliage.
- Blooming:** April through May
- Leaves:** Basal on long stalks, kidney r heart shaped, 8 - 12 cm wide covered with soft downy hairs..
- Habitat:** Rich forests and woodlands, growing in full to partial shade.
- Interest:** Wild ginger is a great ground cover, spreading readily with beautifully glossy, slightly heart-shape leaves. It must have shade and moist but well-drained soil to thrive, but with the right conditions this native plant is indispensable, doing well where many other plants would not.



Goldenrod (*Solidago canadensis*)

Interest: Good as background in shrub borders or where fast-growing plant is needed to fill space. Seldom needs attention. This plant is attractive to bees, butterflies and birds.

Do not confuse this with

Common Ragweed



Excerpt from OMAFRA Publication 505 '*Ontario Weeds*'

It is essential that Goldenrod, *Solidago* spp., [verge d'or, solidage], not be confused with Common ragweed. Several species of Goldenrod occur throughout Ontario in meadows, pastures, woodland, river flats and roadsides, and have very conspicuous bright yellow inflorescences during the ragweed hayfever season of late summer and autumn. Goldenrods do produce pollen but only in small quantities, and their pollen is heavy and sticky. It is not carried on the wind and the plants are pollinated by insects. Because Goldenrod pollen is not carried on the wind, it must not be blamed as the source of irritation for ragweed hay fever sufferers.

Common ragweed is the most important cause of hay fever during August and September. Although inconspicuous and not recognized by most people, the tiny male flower beads hanging on their slender stalks produce huge quantities of very light pollen. As the pollen falls from these hanging flowers, it is caught by the wind and may be carried for distances greater than 200 km (125 miles). Hay fever sufferers, therefore, may be affected by pollen from ragweed plants far away.

Goldenrod (*Solidago canadensis*)

- | | |
|---|--|
| •Easy to grow and easy to pull out | •35-70 cm (1-2 feet) tall and 45 cm (1 ½ ft) wide |
| •Available in nurseries as <i>Solidago</i> | •DOES <u>NOT</u> PRODUCE WIND BLOWN POLLEN OR CAUSE HAYFEVER |
| •Beautiful; good for cut flowers | •Blooms late summer and fall |
| •Sun; tolerant of dry or wet conditions, Zone 3 | •Winter interest and seeds for birds |
| •Attracts butterflies and bees | |

Helen's Flower (*Helenium autumnale*)



Helen's flower (believed to be named for Helen of Troy) is more commonly known as sneezeweed. This herbaceous native perennial will not cause sneezing in spite of its name.

Hardy to zone 3, this is a favourite plant for shoreline restoration because it grows reliably from seeds, plugs, and divided clumps and will outcompete weeds. The extensive fibrous roots stabilize soil on a slope and won't need staking if used in mass plantings along pathways leading to a lake or river.

The plant's multiple wing-shaped clumping stems can grow to 1 ½ m (5 ft. tall). Leaves are lance-shaped, toothed, and alternate. The flowers bloom from August to October, and appear as golden brown discs surrounded by 3-lobed yellow petals.

The plant prefers rich, moist but well-drained soil in a sunny exposure. When planting the seeds, broadcast them over moist soil, and add a thin layer of soil to cover. Whether seeding, or using plugs or pre-vegetative mats, be sure to keep the area well watered until plants are established.

A wide range of insects are attracted to the pollen and nectar of Helen's flower, including honeybees, bumblebees, and butterflies. A note of caution: the flowers, seeds, and leaves of this plant contains sesquiterpene lactone that can cause vomiting if ingested.

Cardinal Flower (*Lobelia cardinalis*)



Lobelia cardinalis is a species of *Lobelia* native to the Americas, from southeastern Canada south through the eastern and southwestern United States, Mexico and Central America to northern Colombia. It was introduced to Europe in the mid-1620s, where the name *cardinal flower* was in use by 1629, likely due to the flower's color. *Lobelia cardinalis* has now gained the Royal Horticultural Society's Award of Garden Merit.

It is a perennial herbaceous plant growing up to 4 feet tall. It is found in wet places, stream banks, and swamps and requires rich, deep soil which remains reliably moist year-round. The leaves are up to 8 inches long and 2 inches wide, lanceolate to oval, with a toothed margin. The flowers are usually vibrant red, deeply five-lobed, up to 4 cm across. They are produced in an erect raceme up to 28 inches tall during the summer to fall. Forms with white (f. *alba*) and pink (f. *rosea*) flowers are also known.

This plant, pollinated by ruby-throated hummingbirds is easily propagated by division and transplanting the young plants which form around the older mature plants. Although the plant is generally considered a perennial any one plant may only live 7 to 10 years. To ensure a continuum of cardinal flowers, propagate new plant lines using seeds at least every 4 years.

Lobelia cardinalis, is related to two other *Lobelia* species in Eastern United States, *Lobelia inflata* (Indian tobacco) and *Lobelia siphilitica* (great lobelia). All display the characteristic "lip" petal near the opening of the flower and the "milky" liquid the plant excretes. *L. siphilitica* has blue flowers and is pollinated by bees.

Joe Pye Weed (*Eutrochium*)

Joe Pye weed is native to North America and can be found in ditches along the roadside in many places in the county.

Light:

Sun, Part Sun

Zones:

3-10

Soil

Range of soil from normal through sandy and clay.

Soil pH - acidic to slightly alkaline

Does well in moist to wet areas

Plant Height:

2-6 feet tall

Plant Width:

2-4 feet wide

Flower

Deep pink

Bloom Time

Late summer to late fall

Landscape Uses:

Containers, Beds & Borders, Specimen plant, Accent Plant (Good Texture and Form), Wildflower Garden, Shoreline rehabilitation

Special Features:

Large Flowers, Attractive Foliage, Fragrant, Attracts Butterflies (Fritillaries, Swallowtail, Monarch, Skippers), Drought Tolerant, Deer Resistant, Easy to Grow

Tips

Pinch back early summer for bushier plants



New England Aster (*Symphyotrichum novae-angliae*)

New England Aster is a herbaceous perennial for zones 4-8. A native plant of Ontario, it attracts both bees and butterflies, especially the monarch looking for late season nectar. It is a member of the Asteraceae family.

Flowers

- summer, autumn, (August to October)
- Purple, ray flowers, 3 cm in diameter, numerous



Leaves

- clasping and crowded along stem
- 3 prominent veins, toothless, smell spicy when crushed
- Lower leaves usually disappear by flowering time
- Stem is rough with several branches



Height

- 60-150 cm

Stem

- bristly-hairy, stout

Habitat

- Fields / open areas / roadsides

Exposure

- full sun

Soil

- Medium, well drained soil, moist and rich

Attracts

- Bees, Butterflies

Miscellaneous

- No serious insect or disease problems
- Leaves and flowers can be added to salad

Ostrich Fern (*Matteuccia struthiopteris*)



This perennial grows in damp shady to dappled sun areas and will tolerate standing water in the spring. It is hardy to Zone 3 and is a native plant across most of Canada.

Ostrich ferns rootstock transplant readily but if the fronds do die back leave the roots as they will likely come back next spring.

In the spring, May, this is the most desirable fern to find to pick edible fiddleheads. These unfurled fronds are covered in a light brown crispy 'paper-like' film. Never pick more than $\frac{1}{2}$ of the fiddleheads from one cluster from which all the fronds of one plant emerge.

Ostrich ferns spread readily from the rootstock and can be aggressive. Each plant could attain a height of 4 ft. and a width of 2 ft. and are an attractive green and showy.

This fern provides a beautiful backdrop to other shade loving plants. The fertile fronds of the ostrich fern (about 1.5 ft.) turn dark brown and provide winter interest, often remaining until spring. It is deer resistant.

Swamp Milkweed (*Asclepias incarnata*)

Swamp Milkweed can be found in wet meadows, swamps, ditches, edges of streams, shorelines, and other wet areas. It is common throughout the Great Lakes region of Ontario and also found in the southern areas of Canada from Saskatchewan to Newfoundland.

It grows to a height of 50-100 cm (19-39 in).

The leaves are smooth, narrow and lanced shaped. They grow in an opposite array on a smooth stem.

The flower clusters are terminal, erect, flat-topped umbels with individual flowers that are pink to rose-purple (more striking than Common Milkweed) and are 5-7mm across. The bloom time is June to August.



↑
The fruit is in the form of a slender pod. The erect follicle is 5-10cm long (2-4 in)

Comments:

The species name, *incarnata*, comes from the Latin word *incarnates*, meaning “red” or “flesh-coloured” a reference to the flower colour.

Like all milkweeds, the Swamp Milkweed has a milky sap. It attracts butterflies and is a nectar and larval plant for them. By ingesting the toxins while feeding the larvae and adult insects themselves become toxic and protected against most predators.

The fibres from the dried stems are very tough. When collected and dried in the early winter they make excellent cordage.



Butterfly Milkweed (*Asclepias tuberosa*)

This native perennial makes a prized possession in the garden and near the shoreline. Butterflies, along with bees and hummingbirds are attracted to this plant by its bright orange flowers and its copious production of nectar. It is also an host plant to the Monarch butterfly and is important in the conservation and rebuilding of this species.



Soil

- Variety of soils
- Prefers good drainage

Height and width

- 30-90 cm

Flowers

- Summer flowering
- Orange in clusters at the top of the plant

Leaves

- Narrow
- Opposite on the stem

Exposure

- Full sun

Other attributes

- Fragrant
- Once established they are long lived and drought tolerant and deer resistant
- Grows well from seed

White Turtlehead (*Chelone glabra*)



Turtleheads are native wildflowers that adapt beautifully to garden conditions. These plants form an upright, bushy mound of green foliage, bearing upright stems of large white hooded flowers beginning in mid-summer. Best in a moist or wet site, terrific at the waterside. Excellent for cutting. Showy and long lived. Excellent for cutting. Showy and long lived. Attractive to butterflies. Plants are easily divided in spring.

- Full sun or partial shade
- Normal, sandy or clay soil
- Moist or wet soil
- Easy care

Deep green foliage, with large white flowers, turtleheads show good texture and form. The flowers appear in tight, spike-like terminal racemes. Snapdragon-like, the flowers are hooded with two lips. The leaves are coarsely-toothed and lance-shaped. They grow to 60-90 cm. and spread to 45-60 cms. They have a medium growth rate.

Wild Columbine (*Aquilegia canadensis*)



- Perennial, Zone 3
- Blossoms in May to June.
- Essential nectar plant for hummingbirds and is pollinated by bees. No scent.
- Nodding flower: yellow petals turning to red/purple spurs with red sepals.
- The Latin name comes from aquila, eagle. The long spurs are like talons.
- Blooms are held high above the glossy tripartite leaves.
- Seed heads are 5 linear pods which split open releasing the seeds.
- Plant can be 1-2 ft. tall and 1 ft. wide.
- Grows in semi-shade and moist to dry soil. pH tolerant.
- Easy to grow.
- Deer do not like the poison leaves.
- Many different coloured cultivated varieties are for sale in nurseries.

Wild Lupine (*Lupinus perennis*)



Lupinus perennis is a perennial wildflower that is native to Ontario. There are 28 species of lupines native to Canada.

Lupines prefer sun and sandy or gravelly soil and dry conditions. They are hardy to Zone 3.

The showy blue/purple flowers bloom in June & July. (There are cultivated varieties, Russell Lupines, which come in pink.)

The plant is usually about 1 ½ ft. tall. It can be aggressive because it disperses a lot of seeds from 2 inch linear pods. The seeds are poisonous.

Lupine plants are difficult to transplant but not impossible. However, they do grow readily from seed, provided you do it right. If you obtain ripe un-split seed pods in the summer, simply open the pods & put the seeds directly on the ground, covering very lightly with soil. If it is spring and you wish to plant seeds that you have stored you must stratify them first. This means put them in a plastic bag with a damp paper towel and place the bag into the refrigerator for 10 days. Then plant them.

A member of the Legume Family, this plant is a 'nitrogen fixer' which means that Lupines, like peas, have nodes along the roots which contain bacteria that take nitrogen from the atmosphere and convert it into a form that plants can use. (When sowing seeds into a new area, treat the soil with a rhizobium inoculation to supply the nitrogen fixing bacteria. This is not necessary for growth of the plant.)

Lupinus perennis is the host for the Karner Blue Butterfly caterpillar. Unfortunately this species of butterfly is now considered extirpated in Ontario.

Wild Strawberry (*Fragaria virginiana*)



Photographer: Muller, Thomas L

Wild strawberry is a creeping native plant common to sunny areas in meadows, fields, stream banks, roadsides and forest edges. It is very similar in appearance to the common cultivated strawberry but much smaller.

It grows up to 10 cm tall with even tooth-edged leaves split into three leaflets per stem. Growing by runners it produces small, white, five-petal flowers that bloom late April through to June. The petals are attached to a yellow centre cone that as it matures becomes the well-recognized red, heart shaped fruit.

The strawberry fruit contains many tiny dry seeds but the plant reproduces primarily by runners that grow sideways along the stem, setting down their own roots and establishing new plants. Wild strawberry thrive in sun or partial shade and being tolerant of slightly acidic soil and dry conditions will soon grow into dense mats of sturdy low plants that make an excellent native ground cover.

The flowers attract many pollinators and the leaves are eaten by deer and rabbits. The small sweet fruit attract many small animals and birds including chipmunks, voles, mice, blue jays, cardinals, wood peckers and wild turkey.

The leaves and fruit contain high levels of Vitamin C. The fruit though tiny are sweet and flavourful and the leaves make excellent tea.

Creeping Wintergreen (*Gaultheria procumbens*)

Wintergreen is a tiny, slow growing, woody evergreen shrub and as a member of the heath family is related to other common heath family members like blueberries, huckleberries and cranberries. It grows well in moist, loamy, slightly acidic soil such as that found beneath stands of evergreens and mixed forest. Wintergreen is tolerant of deep shade but will do best in sunnier locations with light shade during mid-day.

Creeping wintergreen reaches about 10 -15 cm in height and spreads by long rhizomes into small colonies of plants. The glossy, dark green leaves are oval in shape, 10-20 cm in length supported on reddish petioles. The leaves emit a distinctive minty scent when torn or crushed.

The small pinkish-white bell shaped flowers grow under the leaves throughout the summer and often go unnoticed. The flowers are followed by bright red, tough-textured berries that ripen in fall and last well into winter.

The berries provide winter food for birds and have long been used by people along with the leaves for medicinal purposes (teas and oils with analgesic properties) and mint flavouring (wintergreen extract). Wintergreen oil should not be ingested as it can be quite toxic to humans.



Small bell-shaped flowers from early to late summer



Bright red berries last well into winter

Native Plant Nurseries

1. Acorus Restoration: Ontario Native Plant Nursery

www.ecologyart.com/

Acorus Restoration is a **native plant nursery** and ecological consulting firm in **Ontario**, Canada working towards the enhancement and creation of natural areas.

2. Native Plant Nurseries

www.nativeplantnurseries.ca/

NPN is dedicated to producing quality **Ontario native plants** from seed in an ethically sustainable fashion. Located in Zephyr Ontario (near Mt. Albert)

3. Native Plants in Claremont | Ontario Native Wild Flower, Tree, Vine

www.nativeplants.ca/

Native Plants in Claremont is a **nursery** devoted to the increased awareness and restoration of **Ontario's native plants** and their habitats.

4. Southwestern Ontario Nurseries that Sell Native Plants & Seeds

www.thamesriver.on.ca/Native_species/images/Listofnurseries.pdf

5. Native Plant Resource Guide Ontario - Ontario Society for Ecological Restoration

www.serontario.org/.

Guidelines for Buyers of Native **Nursery Stock** This guide provides a listing of suppliers of **native plant materials** in **Ontario**.

6. St. Williams Nursery

www.stwilliamsnursery.com/images/

Ontario Native Plants & Trees & Seed Mixes (Packets, Bulk, Custom Mixes) & Tree and Shrub Seedlings (Plug, Bareroot,. Transplants, Whips).

7. **Verbinnen's Nursery** | Ontario native plant nursery for landscaping

www.verbinnens.com/

Verbinnen's Nursery - a wholesale operation specializing in Native Trees & Shrubs located in Dundas, Ontario.

8. **Bark Ecological Gardens and Nursery**

Baysville/Dwight area. (705-489-1541). Contact Rebecca at barknursery@hotmail.com

9. **Wildflower Farm** - Coldwater Ontario

www.wildflowerfarm.com