

A Guide for Northern Ontario



Beautiful Non-Invasive Plants for your Garden

Spring 2014

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Gardening Best Management Practices

Follow the tips below to reduce the spread of invasive plants and help create sustainable gardens and landscapes.

- Learn to properly identify and manage invasive plants on your property. If an infestation is discovered, remove plants as soon as possible to prevent their spread. Techniques for removal include pulling, removing flowers before they go to seed, and hiring a professional to apply herbicides.
- Dispose of yard waste through your local municipality or in your backyard compost. Do not dump yard waste in nearby natural areas as this can smother natural vegetation and spread invasive plants.
- If disposing of invasive plants place them in a garbage bag and leave the bag in the sun for five days. Then throw the filled bag in the garbage or burn the contents. Do not compost as the flowers or seeds of invasive plants as seeds can remain viable long after the parent plant has been pulled.
- Do not remove vegetation from natural areas; they may be rare native plants or even invasive plants.
- Dispose of annual water plants at the end of the growing season properly. Transplanting them into local waterways could result in these invasive plants over-wintering during mild winters and negatively impacting native wetland and water-side vegetation.
- Purchase non-invasive or native plants from reputable suppliers. Native plants provide food and shelter to native insects and animals, including songbirds. A list of nurseries specializing in native plants can be found on this website: www.nanps.org.
- Share these best management practices and spread the word to friends, family and neighbours. Know what you are growing and be cautious when exchanging seeds and plants with other gardeners.
- When in doubt about a plant, whether it is invasive or how it should be controlled, contact the **“Invading Species Hotline” @ 1-800-563-7711** or www.invadingspecies.com or www.ontarioinvasiveplants.ca



Foreword from Landscape Ontario

Thank you for picking up this guide and showing your support for the importance of plants in the landscape.

The alternative plants listed here match the growing conditions, site requirements and garden effect of their sometimes problematic invasive counterparts. They were chosen based on their availability at Ontario's nurseries and garden centres. This guide will help you take full advantage of the wealth and variety of planting stock available across the province.

The issue of invasive species can be controversial and complex. A plant can be a huge problem in one area of the province and present absolutely no risk in another area. It is hard to believe that some of our favourite plants can cause economic and environmental damage. They can.

The vast majority of horticultural species pose no threat, and can be beautiful additions to any garden. However, some species can cause serious problems if planted near natural areas where they have a tendency to out-compete native species and alter local environmental conditions. For example, some species reproduce by creeping roots, and may be perfectly suitable in built-up urban locations where spread into natural ecosystems is unlikely. Furthermore, not all plants in a certain family or genus are the same, and cultivated varieties are not necessarily as prolific as their parent species, but more research is needed.

When making your plant choices we at Landscape Ontario wish you the best success. Ontario's green industry is on hand to provide you with a multitude of alternatives listed in this guide. We hope you make full use of the Grow Me Instead alternatives guide, and look forward to continuing our service to you in the years to come.

Sincerely,

Tony DiGiovanni
*Executive Director,
Landscape Ontario Horticultural Trades Association*



Impacts of Invasive Plants in Ontario

An invasive plant is an alien species whose introduction or spread negatively impacts native biodiversity, the economy and/or society, including human health. Second to habitat loss, invasive species have been identified by the International Union for Conservation of Nature as the most significant threat to biodiversity.

Invasive plants are spreading through our natural ecosystems, urban landscapes and agricultural lands at an alarming rate. These plants are introduced and spread through several pathways including:

- International, national, and regional travel and trade
- Horticulture and gardening
- Seed mixtures (re-vegetation, birdseed, wildflower)
- Transportation and utility corridors
- Recreation
- Wildlife, livestock, humans and pets.

If native plant communities are replaced by invasive plant infestations, biodiversity declines and habitats change. Invasive plants are more than “plants out of place”. They are far-reaching in their impacts, permanently altering landscapes and ecosystem functions and costing economies millions of dollars each year. Impacts associated with the introduction and spread of invasive plants are not unique to one industry, organization, or community – all citizens, regions, and industries in Ontario are affected. These unwanted invaders can negatively impact:

- Rangelands by reducing forage quality and quantity
- Forestry operations by competing with seedlings for light, nutrients, and water
- Recreation opportunities by puncturing tires, obstructing trails, and reducing aesthetics
- Water quality and quantity by increasing erosion and sedimentation
- Ecosystems by disrupting photosynthesis and nutrient cycles

Impacts of invasive plants are often irreversible and restoration can be extremely difficult, if not impossible. Preventing their establishment and spread is key.

Native Plants

The soil and the climate of a region in large part dictate the plants and animals that naturally exist there. These species are referred to as native. They evolved together over thousands of years, forming strong

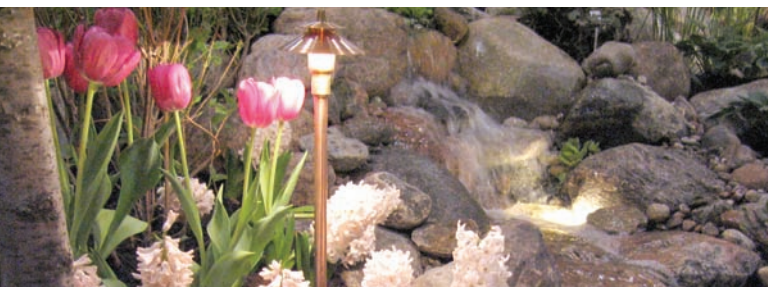
ecological connections. A native plant is simply a plant that occurs naturally or has existed for many years in an area and is connected in an ecological sense to other plants and animals found there. This vegetation may also be referred to as indigenous.

Specialized native plant nurseries grow native plants from seed collected in the same region in which the resulting plants will be used. By working with plants that are genetically adapted to your area, you will maximize growth and vigor, and minimize heat-stress, winterkill, frost damage, and insect and disease problems. Remember, the most expensive planting is a failed planting. This practice of collecting local seed for local use protects the genetic diversity of native plants. Genetic diversity is the variation of heritable characteristics present in a population of the same species. Ecologists view this diversity as important as diversity at the species and ecosystem level.

From a gardener's perspective, the source – also referred to as provenance – is equally important. Plants grown from seed that is collected from healthy plants growing in nearby similar environments typically perform better. When visiting a nursery, inquire about the seed source of plants that interest you. You may be surprised at what you find. Always ask your local garden supplier about the source of their plants and encourage them to provide locally-adapted material. The widely available Canada Plant Hardiness Zones (www.planthardiness.gc.ca), or Ontario's Tree Seed Zones (www.fgca.net) can help you with seed source decisions.

Grow Me Instead

Grow Me Instead informs gardening enthusiasts about some of the popular invasive plants that can sometimes cause problems in the landscape. It highlights a variety of native and non-native plant alternatives found to be non-invasive in Ontario. Whether you are adding new, attractive plants to your garden, starting a landscape project, or removing invasive plants, we hope this guidebook will be a valuable resource. By working together, we can ensure that future generations will enjoy the naturally beautiful landscape of Ontario, while creating sustainable communities, healthy ecosystems, and vibrant gardens.



Groundcovers

This perennial was introduced from Europe as an ornamental plant. It spreads both by a creeping root system and seed, the rhizomes can spread under fences, through lawns and under sidewalks and concrete.

The stems are often purplish, and grow to 1m or more in height, and it has nodding light purple flowers that look similar to harebell species.



It can still be found in some wildflower seed mixes. This plant is resistant to herbicides, and incredibly difficult to eradicate once established. (Alberta Invasive Plant Council)

Goutweed is native to Eurasia but can now be found in gardens throughout North America.

Also referred to as Bishop's Weed, this perennial groundcover tolerates a wide range of soil conditions including moist areas and disturbed sites.

It is highly shade-tolerant and competitive once established, reproducing by seed and spreading by underground stems called rhizomes.



It is most commonly found around shrubs in old gardens. Plants grow about 12 inches high with green leaves that are divided into three leaflets.

Some cultivars have variegated leaflets that are green near the centre but whitish around their margins. Umbrella-like white flowers appear in mid-summer.

Periwinkle is native to Europe, but can now be found in gardens throughout North America.

Its popularity is based on its ease of care, dense growth, and its ability to grow in dry shade - a difficult gardening situation. Periwinkle grows to a height of 3-6 in (7-15 cm) and is characterized by glossy evergreen foliage and long-lasting blue-violet flowers.

It has few pests or diseases outside its native range, which contributes to its persistence. It spreads via its shallow root system.



Garden use: groundcover for sunny gardens

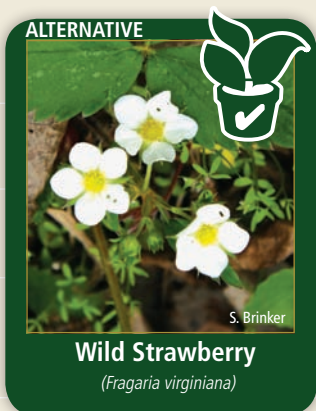
Growing conditions: sun; sand, loam or clay; dry to average soil

Size and shape: low-growing and spreading; 15 cm tall

Flower and fruit: small white flowers in late-spring; small edible red berries early-summer

Leaves: three-lobed and toothed

Additional info: spreads by runners and forms colonies



Groundcovers

Garden use: groundcover for shady location

Growing conditions: shade; average to moist, humus-rich soil

Size and shape: 15-20 cm tall; clump-forming

Flower and fruit: single maroon flower under leaves in late-spring

Leaves: soft green heart-shaped

Additional info: spreads slowly by roots to form attractive groundcover; drought-tolerant once established; deer-resistant; roots have a sweet ginger smell/taste and can be used in cooking

ALTERNATIVE



S. James

Wild Ginger

(*Asarum canadense*)

Garden use: rooftop, butterfly and bird gardens

Growing conditions: sun to partial shade; dry to medium; sand and loam

Size and shape: 5-15 cm tall shrub with multiple stems

Flower and fruit: showy white-pink flowers in spring and summer followed by showy red fruit

Leaves: shiny and leathery, bronze in fall

Additional info: drought tolerant; moderate spreader; good replacement for invasive groundcovers



S. James

Bearberry

(*Arctostaphylos uva-ursi*)

Garden use: shady groundcover; woodland habitat garden

Growing conditions: partial shade; dry to moist; prefers acidic soil

Size and shape: 10-15 cm tall

Flower and fruit: fragrant white flowers in spring; bright red berries in fall

Leaves: small, tough and fragrant; can be chewed for appealing minty flavour

Additional info: medicinal teas made from fruit and leaves



Garden use: groundcover for shady woodland or rock garden

Growing conditions: partial to full shade; average to moist, humus-rich loam soils

Size and shape: 13-25 cm tall

Flower and fruit: small white star-like flowers on spikes in spring and early-summer

Leaves: maple-like leaves turn red in fall and remain throughout winter

Additional info: spreads by runners



Groundcovers

Garden use: groundcover for shady woodland garden

Growing conditions: sun to partial shade; dry to moderate; sand or clay

Size and shape: 30-60 cm tall; clump-forming

Flower and fruit: showy pink or magenta blooms in late-spring and early-summer

Leaves: loose mounds of deeply-lobed leaves

Additional info: nectar source for hummingbirds; often forms colonies

ALTERNATIVE



Wild Geranium

(*Geranium maculatum*)

Garden use: groundcover for shade; woodland garden

Growing conditions: deciduous shade (needs spring sun); average to moist soil

Size and shape: up to 40 cm tall with one or two leaves

Flower and fruit: a single white flower under leaves in spring

Leaves: large, umbrella-like, deeply lobed leaves unravel in early spring

Additional info: one of the first wildflowers to emerge in spring; forms colonies; fruit is edible only when ripe (yellow and soft) in late summer

ALTERNATIVE



Mayapple

(*Podophyllum peltatum*)

Garden use: groundcover for woodland garden

Growing conditions: typically found on rich soils but can withstand nutrient-poor soil in damp, cool conditions; acid soil or peat moss

Size and shape: 7-20 cm tall

Flower and fruit: showy cream-green flowers throughout summer followed by red berries

Leaves: smooth-edged upper leaves are green above and whitish below; oblong or egg-shaped and pointed at the tip

Additional info: often grows on stumps or rotting logs in coniferous forests

ALTERNATIVE



W. D. Bakowsky

Bunchberry

(*Cornus canadensis*)

Garden use: groundcover in shade

Growing conditions: partial shade; rich and moist, well-drained soil

Size and shape: low, trailing deciduous shrub up to 45 cm tall

Flower and fruit: red berries in fall

Leaves: dense foliage turns scarlet in fall

Additional info: native to eastern North America; more vigorous than *Euonymus fortunei*

ALTERNATIVE



S. James

Running Euonymus

(*Euonymus obovatus*)

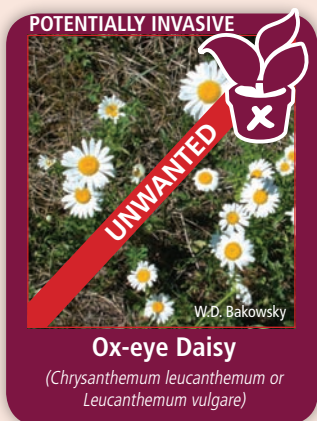
Groundcovers

Introduced from Europe in the early 1800's as a grass seed contaminant, and then spread as an ornamental.

Ox-eye daisy is very common in Ontario, and forms dense infestations in pastures, meadows, roadsides, gardens and lawns.

It is a perennial that reproduces both by seed and by underground rhizome, and has coarsely toothed leaves and a large flower head with white petals and a yellow centre.

Some cultivars sold as 'Shasta Daisy' are actually Ox-eye Daisy.



Garden use: mass planting; ground cover; container; prairie and meadow gardens

Growing conditions: full sun – partial shade; well-drained/loamy, sandy or clay soil; drought tolerant

Size and shape: biennial; rosette of leaves the first year and flowers in second year; stem is covered with long white hairs that give it a rough texture; forms bushy, upright clumps that can reach 1 m in height

Flower and fruit: flowers bloom atop single stems; 8-20 golden orange petals with brown centres; bloom from July-October

Leaves: leaves are covered with bristly hairs; oval in shape and scattered

Additional info: Good winter interest and for cutting; attracts birds and butterflies; deer resistant



Garden use: ground cover; cut flower; native plant garden; roadside, prairie and meadow gardens

Growing conditions: full sun – partial shade; sandy soil; does well in clay

Size and shape: clump-forming perennial plant; grows 30 cm – 1 m in height

Flower and fruit: yellow daisy-like flower heads are formed singly atop the stem; blooms in late summer

Leaves: shiny, green, sword-like leaves are opposite, 6-9 cm long; sometimes alternate near the top of the plant

Additional info: attracts butterflies

ALTERNATIVE



Lance-leaved coreopsis

(*Coreopsis lanceolata*)

Garden use: ground cover; native plant garden; roadside, prairie and meadow gardens

Growing conditions: full sun; average – dry soil; drought tolerant

Size and shape: 90 – 120 cm tall; usually produces single stout stems that have coarse white hairs; may produce multi-stemmed clumps in gardens

Flower and fruit: Flowers can be different shades of purple or white depending on cultivar; single flowers are produced on top of the stem; prominent centre cone surrounded by long, slender drooping florets; blooms in early summer

Leaves: most leaves occur at the plant base, some may alternate along the lower portion of the stem; lower surfaces of the leaves are covered with fine white hairs; leaves are sword-like, up to 25 cm long

Additional info: attracts butterflies and birds; deer resistant

ALTERNATIVE



Pale Purple Coneflower

(*Echinacea pallida*)

Grasses

Miscanthus grasses are native to Africa and Asia, but many species including this one are used in gardens in temperate regions around the world.

It is an herbaceous perennial plant growing to 2 metres or more in height and forming dense clumps. Flower heads change in colour from red to pink, before maturing to a silver colour.

It spreads by rhizomes and seed. Some other common names for this species include Maiden Grass, Eulalia, and Japanese Silver Grass.



Reed Canary Grass is similar to Common Reed (*Phragmites australis* subsp. *australis*) in that it has both a native and an invasive subspecies, which are very difficult to tell apart.

As such, the respective distributions of these species are unknown. It is a .5 – 2 m tall grass, with stiff upright stems and a purplish-brown inflorescence that turns beige in the summer.

It spreads through seed and through underground rhizome, and can form dense monocultures which out-compete native species.



Garden use: ornamental grass in border plantings; intermixed with wildflowers in prairie and meadow gardens as well as rooftop gardens

Growing conditions: full sun to partial shade; well-drained sand or loam

Size and shape: 1-2.5 metres tall, clumping grass

Flower and fruit: blue-red "turkey's foot" flowers in summer

Leaves: elegant blades turn bronze in fall

Additional info: extremely drought-tolerant and useful for erosion control; attracts birds and butterflies



Garden use: ornamental grass in border plantings; intermixed with wildflowers in prairie and meadow gardens as well as rooftop gardens

Growing conditions: full sun to partial shade; dry to moist sand, loam and clay

Size and shape: 1-2.5 metres tall

Flower and fruit: rich gold-purple sprays of flowers and seeds in the fall

Leaves: long, flat and narrow blades are dull to dark green

Additional info: drought and compaction-tolerant; consumed by wildlife and livestock



Grasses

Garden use: ornamental grass; used in naturalized gardens; screens; group plantings; entranceways; perennial borders

Growing conditions: full sun; moist to wet fertile soil; tolerates a wide range of soil types including dry sandy soil; clay soil

Size and shape: 1.5-2 metres tall; clumping grass

Flower and fruit: Flowers appear in June-July and often remain erect even under heavy snowfall

Leaves: Medium blade width; foliage is green

Additional info: One of the first grasses to start growing in the spring and an early bloomer. It has few if any pest or disease problems

ALTERNATIVE



J. Markowski

Feather Reed Grass

(*Calamagrostis x acutifolia* "Karl Foerster")

Garden use: ornamental grass in border plantings; intermixed with wildflowers in prairie and meadow gardens

Growing conditions: full sun; rich, moist soil; sandy - sandy loam soil

Size and shape: winter-hardy aromatic perennial grass; 1' to 2' tall; spreads mostly by rhizome; upright with few leaves

Flower and fruit: three-flowered spikelets bloom in an open panicle; produces very little seed

Leaves: up to 20cm in height, and then grow out horizontally to about 100 cm or more by late summer; undersides of leaves are shiny and hairless

Additional Info: has a distinctive vanilla scent; a sacred plant in First Nations cultures and is also used for basket-making

ALTERNATIVE



K. Copeland

Sweetgrass

(*Hierochloa odorata*)



Trees and Shrubs

Japanese Knotweed was introduced from Asia as an ornamental species in the late 19th century.

It escaped cultivation in some areas and can be found scattered across Ontario.

It is an aggressive plant with shoots and roots that can grow through asphalt and concrete.

It grows in clumps, reaches heights of one to three metres, and has hollow, semi-woody stems. Dense thickets of Japanese Knotweed displace native species and threaten habitats.



Japanese Knotweed

(*Polygonum cuspidatum*)

Garden use: pond edge or wetland garden; hedgerow; windbreak; screen; mass planting; erosion control

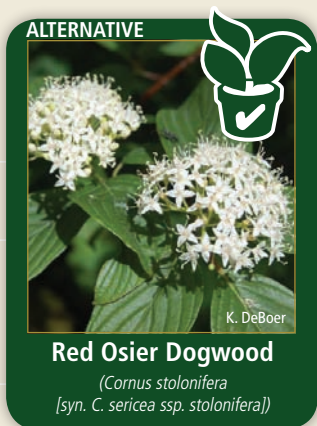
Growing conditions: part shade; normal – wet soil

Size and shape: multi-stemmed; rounded and spreading; 1 – 3 m tall with equal or greater spread

Flower and fruit: white, small flowers bloom in spring; white to pale – blue fruit develops in late summer

Leaves: leaves are opposite; rounded with a pointed tip and light to dark green in colour; 5 – 10 cm long and 3 – 6 cm wide

Additional info: spreads through suckers; bright red stems provide winter colour



Red Osier Dogwood

(*Cornus stolonifera*
[syn. *C. sericea* ssp. *stolonifera*])

Garden use: hedgerow; screen; erosion control

Growing conditions: full sun – part shade; moderate – well drained soil

Size and shape: shrub to small tree; 1 – 8 m in height; suckers to form colonies

Flower and fruit: small white flowers in spring; small, round purple fruit appears in early summer

Leaves: oval to almost circular leaves are 2 – 6 cm long and 1 – 5 cm wide

Additional info: edible berries can be consumed fresh from the shrub or used in jams, pies, wines and cider

ALTERNATIVE



W.D. Bakowsky

Saskatoon Berry

(*Amelanchier alnifolia*)



Garden use: fast-growing specimen planting; screen or hedge; edible ornamental

Growing conditions: full sun; moist soil

Size and shape: 2 – 4 m in height with rounded crown; multi-stemmed with open branching

Flower and fruit: large (18 – 26 cm wide) clusters of white flowers in early summer; purple-black fruit appears in late summer

Leaves: large bright green leaves with 7 leaflets

Additional info: transplants easily; berries are edible

ALTERNATIVE



S. Smith

Common Elderberry

(*Sambucus canadensis*)



Trees and Shrubs

Non-native honeysuckle shrubs

All five of these honeysuckles originally range from central Asia through the mountains of Europe.

They have all shown an invasive tendency, with rapid growth and high reproduction, and are taking over large natural areas.

These shrubs range from two to five metres in height and width at maturity, and have simple leaves that remain green through the fall.

Summer leaf colour is fairly similar among these, ranging from blue-green to dark green. Flowers range in colour from white to pink to crimson.

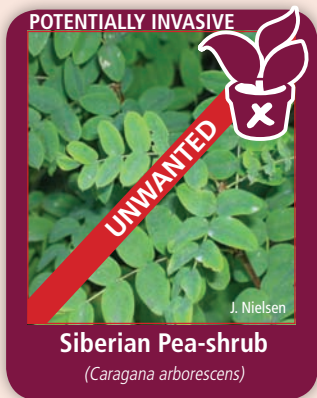


This shrub was introduced to North America to fight widespread erosion during drought in the 1930s.

Able to establish quickly in poor soils, Siberian pea-shrub can quickly turn in to a "living fence".

In Alberta, old homestead plantings have invaded native poplar stands. This shrub reproduces both by seed and sprouting rootstocks.

It is mainly considered invasive in prairie and forest edge habitats, and is less troublesome in other environments.



Garden use: shrub border; specimen planting; screen or hedge

Growing conditions: full sun – shade; moist – dry soil

Size and shape: 4 – 5 m in height; irregular to rounded form with upright branching

Flower and fruit: dense white flower clusters bloom in spring; hanging clusters of edible 1 cm long fruit ripen to blue-black

Leaves: light green leaves mature to a dark glossy green and then to maroon – red in fall

Additional info: capable of growing in full shade or sun; grows as a shrub or small tree if pruned; fruit are used by birds and wildlife

ALTERNATIVE



S. Smith

Nannyberry

(*Viburnum lentago*)

Garden use: stand alone shrub; screen or hedge

Growing conditions: full sun to partial shade; adaptable to various soil types

Size and shape: 2 – 3 m in height and width; becomes dense and rounded with age

Flower and fruit: white – pink domed flower clusters in spring; dry red-brown pods in fall

Leaves: colour is dependent on cultivar; leaves can be a range of colours from green to yellow to burgundy

Additional info: there are many commercially available cultivars of this species; very hardy and adaptable shrub offering winter appeal with exfoliating bark

ALTERNATIVE



S. James

Common Ninebark

(*Physocarpus opulifolius*)

Trees and Shrubs

Garden use: border; low hedge; tall groundcover

Growing conditions: hot, dry conditions in full sun – part shade; adaptable to various soil conditions

Size and shape: 0.5 – 2 m in height; 2 – 3 m wide

Flower and fruit: small yellow flowers on male plants in early spring; red hairy clusters of fruit on female plants in late summer

Leaves: fragrant blue-green leaves with a glossy upper surface; vibrant orange or red – purple in autumn

Additional info: good shrub for naturalized areas; may grow quite thick and intertwined; important cover and food crop for birds

ALTERNATIVE



S. Smith

Fragrant Sumac

(*Rhus aromatica*)

Garden use: border; screen or hedge; mass planting

Growing conditions: full sun – shade; moist, well-drained soil; tolerates dry and alkaline soil

Size and shape: dense shrub with upright stems, 1 – 2 m tall and equally as wide or larger

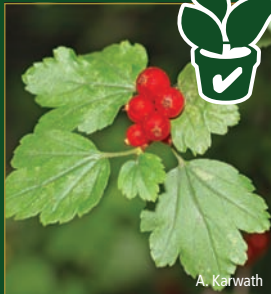
Flower and fruit: greenish-yellow flowers bloom in early spring; bright red berries are

produced mid-summer on female plants only (many commercially available cultivars are male)

Leaves: shiny, dark green, oval shaped leaves; 3 – 5 lobes; alternate on the stem

Additional info: very hardy species that can survive temperatures as low as - 45 degrees Celsius

ALTERNATIVE



A. Karwath

Alpine Currant

(*Ribes alpinum*)

Garden use: specimen planting; edible ornamental

Growing conditions: sun to partial shade; wide moisture and soil tolerance

Size and shape: 30 – 150 cm tall; branches have small thorns

Flower and fruit: showy cream to pink flowers in spring and early summer; orange to red “rose hips” (fruit)

Leaves: medium green leaves

Additional info: edible rosehips commonly used in tea that is rich in vitamin C

ALTERNATIVE



W. D. Bakowsky

Wild Roses

(*Rosa blanda*, *R. acicularis*)

Garden use: screen; mass planting; wildlife planting

Growing conditions: full sun – part shade; moist soil

Size and shape: upright shrub with open crown; can grow in tree form; 2 – 4 m tall and 2 – 3.5 m wide

Flower and fruit: tubular yellow flowers open in early summer; red berries on female plants appear in late summer

Leaves: silvery leaves are lance-shaped with blunt ends

Additional info: established plants are drought tolerant; roots fix nitrogen, allowing it to grow in poor conditions

ALTERNATIVE



IPCBC

Silver Buffaloberry

(*Shepherdia argentia*)

Trees and Shrubs

False Spirea occasionally escapes gardens and is found in open meadows or forest edges.

It has been identified as potentially invasive in other provinces and some states.

This plant looks very similar to the native Sumac (*Rhus*) species, except for the clusters of showy white flowers at the ends of branches.



Garden use: fast-growing specimen planting; screen or hedge; edible ornamental

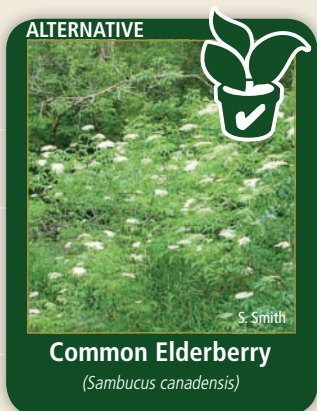
Growing conditions: full sun; moist soil

Size and shape: 2 – 4 m in height with rounded crown; multi-stemmed with open branching

Flower and fruit: large (18 – 26 cm wide) clusters of white flowers in early summer; purple-black fruit appears in late summer

Leaves: large bright green leaves with 7 leaflets

Additional info: transplants easily; berries are edible



Garden use: screen or hedge; mass planting; erosion control

Growing conditions: full sun – part shade; moist soil

Size and shape: 0.6 – 1.5 m tall; 1 – 2 m wide

Flower and fruit: fragrant, clustered yellow flowers open throughout the summer

Leaves: opposite, deep green, pointed, oval-shaped leaves, fall colour that turns yellow – burgundy

Additional info: also does well in rocky sites

ALTERNATIVE



W.D. Bakowsky

Bush Honeysuckle

(*Diervilla lonicera*)

Garden use: flowering ornamental shrub; screen or hedge

Growing conditions: full sun – part shade; medium – moist soil

Size and shape: 90 – 180 cm tall shrub

Flower and fruit: showy pink to purple flowers throughout summer; edible red fruit

Leaves: wide, dense foliage covered in bristly hairs

Additional info: dense hairs covering leaves and stems produce scent of licorice and cedar

ALTERNATIVE



S. Smith

Flowering Raspberry

(*Rubus odoratus*)

Trees and Shrubs

This medium sized tree is prized for its dense crown and ability to tolerate difficult urban conditions.

The prolific seed production of most cultivars, coupled with the species' ability to grow in dense shade, make Norway maple especially invasive and threatening to natural habitats.

Many urban ravines and parks exhibit nearly pure stands of this species.

The dense shade in these stands prevents sunlight from reaching the ground, making it difficult for groundcovers and shrubs to grow. Wildlife habitat is compromised and bare soil becomes susceptible to erosion.



Garden use: shade tree; specimen planting

Growing conditions: full sun to partial shade; moist soils for silver and Freeman maples; deep, rich soils for sugar maple

Size and shape: 30 – 35 m tall; upright to rounded crown

Flower and fruit: small, yellow to red flowers emerging before leaves in early spring; paired, winged maple "keys" developing in spring on silver and Freeman maples, and in fall on sugar maples

Leaves: medium to light green deeply lobed leaves; fall colours from brilliant yellow to red

Additional info: silver and Freeman maples are well-adapted to difficult urban conditions; silver maple has an aggressive root system and should not be planted near pipes and foundations; Freeman maple is a natural hybrid of red and silver maple and exhibits some of the best attributes of both species



Garden use: shade tree; specimen planting

Growing conditions: full sun – partial shade; dry – moist well-drained soil

Size and shape: 18 – 22 m tall; rounded crown; wide-spreading

Flower and fruit: fragrant creamy-yellow flowers in late spring and early summer; round brown nut-like capsules mature in early fall and persist through the winter

Leaves: heart -shaped, dull green leaves; 12 – 15 cm long

Additional info: also known as American Linden; it is valued as a soft and light hardwood and is often used in woodcraft; widely planted as street tree

ALTERNATIVE



Basswood

(*Tilia americana*)

Garden use: specimen planting; wildlife planting

Growing conditions: full sun – moderate shade; adapted to a range of soils; drought resistant; tolerates difficult urban conditions

Size and shape: up to 15 m tall with broad, upright crown, elm-like form

Flower and fruit: small green flowers; reddish – purple berry-like fruit maturing in fall and often persisting through winter

Leaves: green, elm-like leaves turn yellow in fall

Additional info: hardy tree; interesting ridged bark pattern with corky projections; persistent fruits provide food for over-wintering birds

ALTERNATIVE



Hackberry

(*Celtis occidentalis*)

Vines

Oriental Bittersweet is native to Asia and was introduced in the 1860's as a garden ornamental.

This brown, woody vine can grow up to 18 metres in length and climbs by twining around supports.

The fruits turn from green to yellow and split open in the fall to reveal very attractive bright red-orange seeds, the twigs with berries are used in flower arrangements.

However, when it escapes from gardens, oriental bittersweet may directly compete with the rare American bittersweet (*C. scandens*) for light and space, or may hybridize with it, jeopardizing the genetic purity of the native species. This vine can kill trees, smothering them and blocking sunlight.



Bittersweet nightshade is a slender, perennial vine or semi-woody shrub with dark green to purple leaves, and clusters of star-shaped purple to blue flowers.

The egg-shaped berries turn from green to orange to bright red when ripe. All parts of this plant are toxic to people, pets and livestock.

It can occasionally be found growing in lawns and gardens, and spreads through abundant seed production and from stem and root fragments.



Garden use: climbing vine, screen

Growing conditions: moist to well-drained soil; sun to partial shade

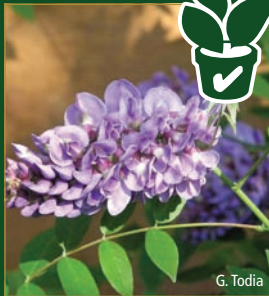
Size and shape: climbing, woody vine; 6-9 metres in length

Flower and fruit: male and female flowers are often borne on separate plants, but some cultivars are self-pollinating; yellow-green flowers are inconspicuous and bloom in late summer/early fall; very showy orange to red fruit is produced in the fall and split to reveal red seeds – the fruit is more than twice the size of Oriental Bittersweet

Leaves: dark green, glossy, round leaves which turn yellow in the fall

Additional info: often used in ornamental arrangements; berries and other parts of the plant are poisonous if ingested

ALTERNATIVE



G. Todia

American Wisteria

(*Wisteria frutescens*)



Garden use: climbing vine; ground cover

Growing conditions: full sun, roots require mulch or shaded area; light loam; moist soil

Size and shape: twining vine; 3-4 metres in length

Flower and fruit: large velvety dark purple flowers; bloom late summer to early fall; other cultivars of jackman clematis may have red, white, pink or lavender flowers

Leaves: dense foliage with bright to dark green leaves 5-10 cm in length

Additional info: lightly fragrant flowers

ALTERNATIVE



S. Smith

Jackman Clematis

(*Clematis x jackmanii*)



Vines

Garden use: climbing vine

Growing conditions: full sun to partial shade; average to moist soil

Size and shape: twining vine; grows up to 5 metres in length

Flower and fruit: white four-petaled flowers; bloom late summer to early fall; distinctive fluffy white seeds remain on the plant through winter

Leaves: leaves divided into three leaflets with toothed edges

Additional info: fragrant flowers attract hummingbirds, bees, and butterflies; self-sows and will root where the vine touches the ground

ALTERNATIVE



E. Snyder

Virgin's Bower

(*Clematis virginiana*)

Garden use: climbing vine; screen

Growing conditions: moist soil, but can be grown in drier conditions; full sun to full shade

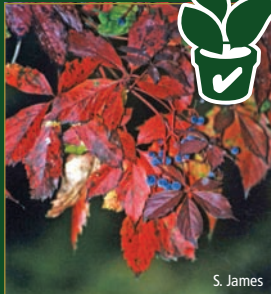
Size and shape: dense, woody, multi-stemmed, climbing vine; can reach over 12 metres in length

Flower and fruit: white flowers bloom in late spring/early summer; dark bright blue fruit is produced in the early fall

Leaves: Leaves are composed of five serrated leaflets, arranged palmately; green in the summer and turn brilliant red in the fall

Additional info: this cultivar is also known as "engelmann's ivy"; this native vine can be an aggressive spreader, but regular pruning will keep it in check; handling this plant may cause skin irritation in some people

ALTERNATIVE



S. James

Virginia Creeper

(*Parthenocissus quinquefolia*
"engelmannii")

Garden use: climbing vine; groundcover

Growing conditions: full sun to partial shade; dry to moist soil

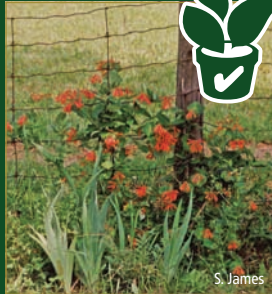
Size and shape: 3-4 metres in length; deciduous to semi-evergreen twining vine

Flower and fruit: fragrant and showy, dark red to orange trumpet shaped flowers; bloom repeatedly throughout spring and summer; crimson red berries in late summer-early fall

Leaves: dark green rounded and opposite leaves

Additional info: attractive to hummingbirds and butterflies; this vine may be confused with Japanese Honeysuckle vine (*Lonicera japonica*) which can be invasive. This species was developed in Manitoba, and is known to be hardy in Northern Ontario

ALTERNATIVE



Dropmore Scarlet Honeysuckle

(*Lonicera x brownii* "dropmore scarlett")

Garden use: climbing vine; can be trained into shrub form

Growing conditions: full sun to partial shade; moist soil

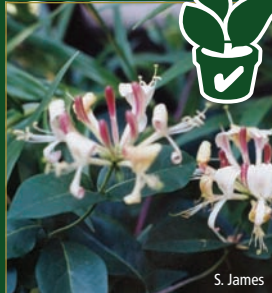
Size and shape: 4-6 metres in length; climbs by twining stems

Flower and fruit: fragrant tubular pink-purple flowers with yellow centres; grow in terminal whorls; blooms throughout much of the growing season from late spring until early fall

Leaves: pairs of round, blue-green leaves

Additional info: attractive to hummingbirds and butterflies; this vine may be confused with Japanese Honeysuckle vine (*Lonicera japonica*) which can be invasive

ALTERNATIVE



Goldflame Honeysuckle

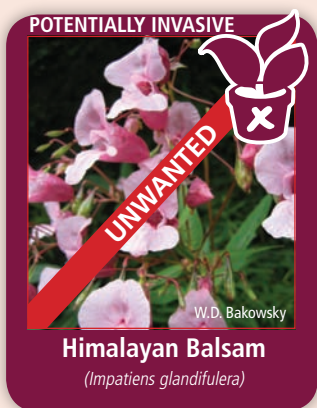
(*Lonicera x heckrottii*)

Ornamentals

This plant is a fast-growing introduced annual. It can reach an impressive size, rapidly out-competing other plants, especially in riparian areas.

Himalayan Balsam has an orchid-shaped flower resembling a British policeman's helmet, which gave rise to its other common name of "Policeman's helmet".

It has very brittle seed capsules which explode upon contact, catapulting seeds six metres or more. This plant has a shallow root system which makes it easily controlled by hand-pulling (Alberta Invasive Plant Council)



Garden use: shaded border; woodland garden; container; specimen

Growing conditions: partial – full shade; average well-drained alkaline soil; will also grow in clay, loam or chalk soils

Size and shape: 0.5 – 1 m tall with equal spread; forms a bushy upright mound

Flower and fruit: pink or white heart-shaped flowers hang from arching stems and appear from May –June

Leaves: soft-green in colour and lobed; leaves have a fern-like appearance

Additional info: all parts of this plant can be poisonous if ingested



Garden use: wetland/pond edges; riparian areas

Growing conditions: full sun – partial shade; moist acidic soil, will tolerate dry loam

Size and shape: reaches heights of 2 m; multiple erect stems rise from basal cluster of leaves

Flower and fruit: creamy white and very small flowers comprised of showy stamens, not petals; flowers in plumes from July – September

Leaves: leaves that are divided in small leaflets with 2 – 3 lobes

Additional info: attracts butterflies and bees

ALTERNATIVE



W.D. Bakowsky

Meadow Rue

(*Thalictrum polygamum*)



Garden use: woodland garden; riparian areas; native plant garden; flower bed/border

Growing conditions: partial – full shade; consistently wet – moist soil; prefers soil with additional organic matter

Size and shape: 0.5 – 1.5 m in height and 0.5 – 0.6 m spread; self-seeding annual that will form large shrub-like clumps; translucent, watery stems which are very fragile

Flower and fruit: orange-yellow pendant flowers with reddish spots bloom in clusters of 1 – 3 from July – September; the common name of touch-me-not refers to the seed capsules, which explode open when touched, dispersing seeds widely

Leaves: coarsely-toothed, oval bluish-green leaves

Additional info: Jewelweed stems contain watery sap that can soothe skin irritation caused by Poison Ivy and Stinging Nettle; the jewelweed name comes from the leaves, which have a silvery jewel-like sheen when submerged in water

ALTERNATIVE



W.D. Bakowsky

Spotted Jewelweed

(*Impatiens capensis*)



Ornamentals

Dame's rocket is a biennial or short-lived perennial native to Europe and southwest Asia.

A member of the mustard family, it is a prolific seed producer. The flowers are very fragrant (especially in the evening) and are insect-pollinated.

Introduced as an ornamental, it has spread throughout North America, except for the driest areas. Dame's rocket produces

a rosette in the first year of growth and then a flowering stalk in the second year. It blooms in early summer and the stems wither and die by late summer. Dame's rocket is very similar to Garden phlox, but can be identified by its four-petal flowers and alternate leaves. Garden phlox has flowers with five petals and opposite leaves. Dame's rocket requires disturbance to become established, but then can out-compete native vegetation. Plants will re-bloom if deadheaded. (Alberta Invasive Plant Council) Dame's rocket is often a component of wildflower seed mixes.



Garden use: flower bed/border; herb garden; cottage garden

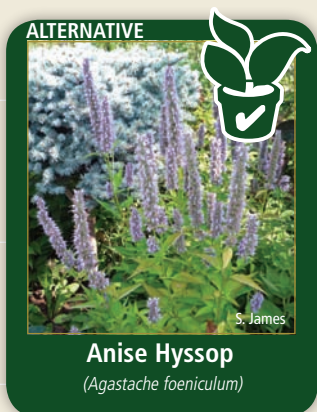
Growing conditions: full sun – partial shade; moist – dry well-drained soil; can also grow in clay, loam and rocky soils

Size and shape: erect branches grow 1 – 1.5 m in height; spread is about 30 cm; reseeds freely; clumping habit

Flower and fruit: produces a fuzzy spike of small whorled flowers that are dull blue – purple in colour; blooms from summer – early fall; fragrant foliage/leaves are mint and licorice scented

Leaves: opposite with short petioles; medium green in colour

Additional info: flowers are edible and can be crumbled into salads or made into tea; attracts bees, butterflies and hummingbirds



Garden use: flower bed/border; woodland garden

Growing conditions: full sun – partial shade; average – dry soils; can be aggressive in moist soil; spreads by underground stems

Size and shape: tall, erect leafy stems reach 1 – 1.5 m in height; stems are green or reddish and may be stiff and hairy

Flower and fruit: flowers in spikes; light purple – pink flowers consist of 4 petals and 4 sepals; flowers from June – August; fruit is a slender upright pod that turns purplish red as the seed ripens; ripe pods split open to disperse small brown seed; seed has a tuft of white hair to disperse in the wind.

Leaves: opposite near the base of plant; willow-like narrow leaves with a white midrib and short to no stalk; leaves are 10 – 20 cm long and up to 10 cm wide

Additional info: common name refers to the plant's seed germination being stimulated by fire; common early colonizer at burned/disturbed sites

ALTERNATIVE



M. McMurtry

Fireweed

(*Chamerion [syn. Epilobium] angustifolium*)

Garden use: butterfly garden; flower bed/border; prairie garden; mass planting

Growing conditions: full sun – partial shade; average – rich well-drained soil

Size and shape: 60 – 90 cm in height; spreads by seed and rhizome, clumping habit

Flower and fruit: pink to lavender-coloured tubular flowers grow in solitary flower clusters at the end of each stem; each cluster contains 20 – 50 flowers; blooms from June to September; the dried round seed heads are an attractive fall feature

Leaves: grayish-green leaves are borne on square stems; leaves are opposite and slightly toothed; 5 – 9 cm long; long, thin leaves that taper to a point

Additional info: also known as “Bee Balm”; attractive to bees, butterflies and birds; fragrant foliage; often used in/for honey production; can be used to make tea

ALTERNATIVE



S. Smith

Wild Bergamot

(*Monarda fistulosa*)

Ornamentals

Giant Hogweed was originally introduced as a garden ornamental because of its stature and large leaves.

It has escaped cultivation across Ontario and was added to Ontario's Noxious Weeds List in 2010 due to concerns over its threat to human health.

The sap can cause burning and blistering of the skin. Now that this plant is on the Noxious

Weeds List, it is no longer sold, and control programs have been put in place in many locations.

Gardeners may still unknowingly transfer Giant Hogweed through plant or seed swaps.



Garden use: meadow; wildflower gardens; flower beds

Growing conditions: full sun – partial shade; moist – well-drained soil

Size and shape: upright and single-stemmed plant reaches heights of 1.2 m; clump-forming perennial with a deep taproot

Flower and fruit: compound globular umbels (upside down umbrella shape) of flowers range in colour from off-white to burgundy; umbels can be up to 20 cm in width

Leaves: green, intricately divided leaves with toothed leaflets; leaves turn yellow – burgundy in fall

Additional info: the sap may cause an allergic reaction or sensitivity in some people, gloves are recommended for handling this plant; often used in herbal remedies



Garden use: border planting; specimen; wetland/pond edge

Growing conditions: full sun – partial shade; deep rich moist soil; mulching recommended

Size and shape: 1.5 – 2 m tall; 1 – 2 m spread; mounded leaves with single flowering stalks

Flower and fruit: small creamy white – cherry-red flowers (dependent on cultivar) are borne on stalks and bloom mid-summer

Leaves: colossal, coarsely-toothed, widely lobed leaves are 60 – 90 cm long; reddish-brown at first; maturing to dark green with purple undersides; turning red in fall

Additional info: contact with sap may cause allergic reaction in some people; like other members of the rhubarb family, the leaves are poisonous but the stems are edible

ALTERNATIVE



S. James

Ornamental Rhubarb

(*Rheum palmatum*)

Garden use: border planting; mass planting; wetland/pond edge

Growing conditions: partial sun – shade; rich, moist, well-drained soil

Size and shape: colony forming; grows up to 75 cm in height; spreads by rhizome

Flower and fruit: long-lasting, tall showy flowers are long-lasting and vary in colour from white to red depending on cultivar; bloom in mid-summer

Leaves: bold, shade-tolerant, compound leaves with 6 – 9 leaflets; leaves turn bronze-red in fall; can spread up to 1 m

Additional info: fragrant flowers

ALTERNATIVE



IPCBC

Rodgersia

(*Rodgersia spp*)

Aquatics

Yellow iris is native to Eurasia but can now be found throughout southern Ontario.

Occurring in shallow water along streams, rivers, ponds and lakes, it was likely introduced as an ornamental garden plant in ponds and outdoor water gardens.

This riparian perennial has erect leaves and brightly coloured showy flowers.

Yellow iris can easily be spread between water bodies by boats and other recreational vehicles, as well as by plant pieces and seeds.

Once established, yellow iris can form a dense stand which displaces native shoreline vegetation and converts wet habitat to drier environments. Plant juices may cause skin blistering.



Native to Eurasia, flowering rush can now be found in Ontario throughout Lakes Erie, St. Clair, and Ontario, as well as in the western St. Lawrence River, Severn River and Winnipeg River systems.

This perennial aquatic rush may grow submerged or emerge above the surface, with triangular leaves and multiple pink flowers on the end of a stalk.

Flowering rush can grow in lakes, rivers, marshes, ponds and wet ditches. It is used as an ornamental plant for ponds and outdoor water gardens, or intentionally planted along shorelines where it may escape and invade new areas. Once established, flowering rush can displace native shoreline vegetation and hinder recreational use.



This plant first arrived in eastern North America in the early 1800's as a seed contaminant in soil ballast and as an ornamental plant. Since its introduction, it has spread westward and today can be found across much of Canada and the United States. Once established, this emergent perennial can quickly degrade wetlands by outcompeting native plant species. The monocultures formed by purple loosestrife are neither beneficial nor utilized by native wetland flora and fauna. While mechanical control (e.g. pulling,

cutting) can be effective on smaller infestations, biological control is the preferred method for larger populations. In a true success story, Galerucella beetles (*G. pusila* and *G. californiensis*), were approved and released well over a decade ago and have been extremely successful at reducing large loosestrife infestations throughout Southern Ontario. Starting in 2004, a similar biological control program was initiated throughout northern Ontario; several beetle releases were undertaken in an effort to prevent further spread north.



Garden use: ornamental in ponds and water gardens, used for shoreline enhancement

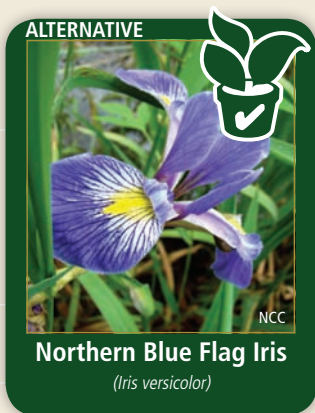
Growing conditions: along shores and in marshes, swamps, wet meadows and occasionally fens; in water up to 2 metres deep

Size and shape: stems 20-80 cm tall, growing in small colonies

Flower and fruit: showy, blue-purple flowers with yellowish veins separated into 3 petals; fruit capsules 2-3 cm long with flat seeds stacked inside turn brown in autumn

Leaves: elongated, with parallel veins, up to 3 cm wide

Additional info: root stocks are poisonous; flowers are pollinated by bees; muskrats, beavers and birds feed on flower nectar



Aquatics

Garden use: ornamental in ponds and water gardens, used for shoreline enhancement

Growing conditions: shallow water (rarely more than 1 metre deep) along muddy or sandy shores of lakes, ponds, marshes, rivers and streams

Size and shape: stems erect, stout, 30-60 cm tall growing from thick spreading root system often forming dense colonies in still waters

Flower and fruit: flowers violet-blue with 2 yellow dots on upper lip, funnel-like, about 8 mm long; single-seeded bladder-like fruit

Leaves: lance to egg shaped, heart shaped at base, 5-25 cm long, 2-5 cm wide

Additional info: young stems and leaves of pickerelweed can be eaten in salads or boiled and served with butter; seeds can also be eaten raw; pollinated by bees and butterflies



Garden use: habitat and shoreline enhancement of ponds and water gardens

Growing conditions: prefers medium to moist soils, found in moist fields and meadows; once established can be found in drier garden soils

Size and shape: ranging from 30-180 cm tall with square, grooved stem

Flower and fruit: blue-violet flowers, blooming from summer to fall;

Leaves: oppositely arranged, 5-15 cm long lance-shaped leaves, narrowed at base

Additional info: useful for shoreline restoration or in rain gardens; attractive to birds, butterflies and pollinating bees; young plants are often confused with mint



Aquatics

European common reed is native to Eurasia and can now be found scattered throughout much of southern Ontario, and as far north as Georgian Bay, Lake Superior and Northwestern Ontario.

This extremely tall (2-4 metres), perennial grass grows in dense stands in shallow waters in wetlands, streambanks, lakeshores, wet fields and ditches.

It was commonly used in site restoration and slope stabilization, and is sold as an ornamental plant. This plant can spread very aggressively by both seed and underground tubers.

Also, plant pieces carried by water or wind can regenerate easily, displacing native wetland vegetation and threatening habitat of rare and at risk species, and other wetland species.



Narrow Leaf and White Cattail are herbaceous perennials that grow in wet or saturated soils.

Narrow Leaf Cattail was either introduced from Europe by settlers, or was relatively rare and local in eastern North America and has invaded westward as a result of human activity.

Both species are frequently found in disturbed wetland sites.



Garden use: shoreline enhancement of ponds and water gardens

Growing conditions: found in marshes, ponds, and ditches and less frequently in fens and swamps

Size and shape: stems over 1 metre tall, spreading by roots

Flower and fruit: dense tiny flowers in spikes, with male spike at stem tip reaching 10-20cm long, female spike immediately below; minute fruit with many brown hairs giving mature spikes their brown colour, seeds produced in great quantity

Leaves: flat, 10-25 mm wide, spongy but very strong due to the framework of fibers

Additional info: common cattail can quickly colonize new and disturbed sites through the fluffy masses of seeds produced by each plant; good source of nesting materials for birds and food and habitat for wildlife; tuberous roots can be cooked and eaten like potatoes

ALTERNATIVE



W. D. Bakowsky

Common Cattail

(*Typha latifolia*)



Garden use: habitat and shoreline enhancement of ponds and water gardens

Growing conditions: Found in shallow marshes, beaver meadows and swamps; quickly colonizes disturbed soils, wet cutovers and ditches

Size and shape: up to 2 metres tall, prominently triangular stems with thick short roots

Flower and fruit: flowers in loose, 15-30 cm long clusters of many rounded clusters of spikelets; whitish 3-sided seeds, 0.7-1.0 mm long with 6 long white to rust-coloured bristles at the top

Leaves: ridged, very rough, 3-10 mm wide and over 30cm long

Additional info: favored by geese during migration as the tubers are an important food source; seeds are eaten by a variety of waterfowl including black duck, mallard, and pintail

ALTERNATIVE



T. Howes

River Bulrush

(*Scirpus fluviatilis*)



Garden use: habitat and shoreline enhancement of ponds and water gardens

Growing conditions: commonly found on sandy, wave-washed lakeshores and in sheltered bays and ditches

Size and shape: flowering stems 1-3 metres tall, olive green

Flower and fruit: tight clustered flowers in spikelets appear to grow from side of stem with pale or whitish brown, orange dotted scales; 1.5-2.5mm long fruits are brown to black with 0-6 barbed bristles as base; appear mid-summer

Leaves: barely visible bladeless sheaths at base of stem

Additional info: hardstem bulrush is very similar to softstem bulrush (*S. validus*), but softstem bulrush can be distinguished by its light blue-green stems, which are easily crushed between fingers

ALTERNATIVE



Hardstem Bulrush

(*Scirpus acutus*)

Eurasian watermilfoil is a feathery submerged aquatic plant that can quickly form thick mats in shallow areas of lakes and rivers in North America.

These mats can interfere with swimming and entangle propellers, which hinders boating, fishing and waterfowl hunting.

Heavy infestations may reduce property values.

Matted milfoil can displace native aquatic plants, impacting fish and wildlife.

Since it was discovered in North America in the 1940's, Eurasian watermilfoil has invaded nearly every U.S. state and at least three Canadian provinces. Milfoil spreads when plant pieces break off and float on water currents.

POTENTIALLY INVASIVE



Eurasian Watermilfoil

(*Myriophyllum spicatum*)

European frog-bit is native to Eurasia but can now be found in the St. Lawrence River to Lake Ontario, throughout the Kawartha Lakes, the Rideau and Ottawa River systems and along Lakes Erie and St. Clair.

It is also spreading northward at scattered sites throughout the southern margin of the Canadian Shield.

It grows free-floating, or as a rooted mat in shallow waters. Roots can grow up to 50 cm long with numerous root hairs. Leaves are floating and form a rosette; white-pink flowers emerge in summer.



Water soldier is an aquatic plant commonly sold in the aquarium and water garden industry.

This plant is native to Europe and Central Asia. It was recently found for the first time in Canada in the Trent Severn Waterway.

Water soldier, also known as water aloe, looks very similar to an aloe vera plant, or the top of a pineapple. Water soldier grows underwater on the river bottom most of the year, and emerges in late spring and summer.

The leaves that grow once it has surfaced have air pockets enabling the plant to float. Water soldier forms dense populations with large masses of plants which out-compete other aquatic plant species. A notable concern is that each leaf is lined with small serrated spines that can easily cut swimmers.



Garden use: oxygenation, habitat enhancement for ponds and water gardens

Growing conditions: submerged aquatic found in lakes, ponds, streams, marshes and quiet rivers; overwinters as an evergreen under ice; tolerant of low light and cool water

Size and shape: coarse, branching stems and no roots; may drift and become loosely anchored in sediment

Flower and fruit: very small, stalk-less solitary flowers on submerged leaves; fruit is dark olive green, elliptic

Leaves: split into 2 equal, thread-like segments; sharply toothed; in whorls of 5-12; leaves get denser at the end of the stem and look like a raccoon's tail

Additional info: coontail provides food and shelter for many invertebrates; can become very abundant in shallow ponds and may form large beds; also known as hornwort; reproduces through fragmentation

ALTERNATIVE



G. Lovell

Coontail

(*Ceratophyllum demersum*)

Garden use: oxygenation, habitat enhancement for ponds and water gardens

Growing conditions: submerged aquatic found in lakes, ponds, marshes and rivers, sometimes common in lakes with low nutrient availability

Size and shape: Grow in depths of up to several metres; leaves are directly attached to slender stems; stems are anchored in sediment by shallow roots; stems branch profusely and form dense, tangled stands

Flower and fruit: white flower up to 9 mm wide, raised to the surface of the water by stalks 3 –20 cm long; oval beaked fruit 6 mm long, narrow and cylindrical occurring mid to late summer

Leaves: small and lance-shaped; bright green when young 6–17mm long, in whorls of 3 in middle and upper part of stem

Additional info: one of the few plants found at depths greater than 10 metres

ALTERNATIVE



E. Snyder

Common Waterweed

(*Elodea canadensis*)

Garden use: oxygenation, habitat enhancement for ponds and water gardens

Growing conditions: submerged or above surface, aquatic found in lakes, ponds, marshes, streams and rivers, sometimes on peat in fens; muddy substrate; prefers non-acidic conditions

Size and shape: stems thick, soft, erect, 10-50 cm tall, from spongy roots

Flower and fruit: flowers are very small, lacking sepals and petals in axils of upper leaves, rare and occur in the summer; nutlet fruits are 1.7–2.5 mm long, occurring mid-to late summer

Leaves: when breaking water surface, 1-2 cm long thick, firm and spiky whorls of 6-12; when submerged, 1-3 cm long thin and weakly attached, dropping when removed from water

Additional info: marsh birds occasionally feed on the leaves and stems of common mare's tail; *Hippuris* means "horse's tail"

ALTERNATIVE



J. Viola

Common Mare's Tail

(*Hippuris vulgaris*)

Garden use: ornamental in ponds and water gardens; provides shade for fish and habitat for invertebrates

Growing conditions: found in lakes, ponds, quiet streams and rivers; can grow in sun or shade, but flowers more readily in sun

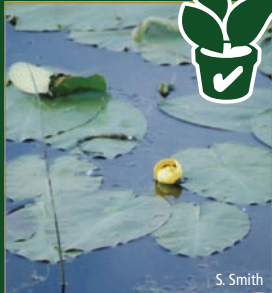
Size and shape: floating-leaved perennial with thick and elastic leaf stalks; grows in water depths up to 2 metres

Flower and fruit: yellow, 4–6 cm wide flowers with 6 showy petals; 2-4.5 cm long green to red oval berries, occurring in fall

Leaves: heart-shaped leaves with rounded lobes are 10-25cm long, submerged when young, floating when mature

Additional info: waterfowl and marsh birds eat seeds; mammals eat rhizomes and leaves

ALTERNATIVE



S. Smith

Yellow Pond Lily

(*Nuphar variegata*)

Aquatics

Garden use: ornamental in ponds and water gardens; provides shade for fish

Growing conditions: lakes, ponds, slow rivers and marshes; variety of sediment types

Size and shape: round stems rise toward water surface from fleshy rhizome buried in the sediment; grows in water depths up to 2 metres

Flower and fruit: white, showy, fragrant flowers are 7-20 cm wide, open from mid-morning to early afternoon throughout summer; flowers are produced on separate stalks growing directly from the rhizome; cultivars may also have pale pink flowers; leathery berries with many seeds ripening underwater in mid to late summer

Leaves: floating, round "lily-pad" with narrow V-shaped split; underside of leaf is reddish purple

Additional info: waterfowl eat fruit and seeds; roots are eaten by mammals

ALTERNATIVE



S. Smith

Fragrant (White) Water Lily

(Nymphaea odorata)



Garden use: ornamental in ponds and water gardens, provides shade for fish and habitat for invertebrates, oxygenator

Growing conditions: shallow ponds, lakes, rivers, streams and marshes and wet shorelines; full sun

Size and shape: single stems emerge from rhizomes; up to 1 metre tall with erect stalk emerging from the water surface; stems are floating and hairless

Flower and fruit: bright pink elongated flower clusters at stem tips; dark seeds form in late summer to early autumn.

Leaves: often reddish floating oval leaves; rounded or heart-shaped at the base

Additional info: hot pepper-flavoured leaves can be used in salads or cooked like spinach; seeds consumed by waterfowl in fall

ALTERNATIVE



W. D. Bakowsky

Water Smartweed

(*Polygonum amphibium*)



Species List

Invasive Plants

| <i>(by Common Name)</i> | <i>(by Scientific Name)</i> | |
|--------------------------------------|---|----|
| Amur Honeysuckle | <i>Lonicera maackii</i> | 21 |
| Bells Honeysuckle | <i>Lonicera x bella</i> | 21 |
| Bittersweet Nightshade | <i>Solanum dulcamara</i> | 29 |
| Creeping Bellflower | <i>Campanula rapunculoides</i> | 7 |
| Dame's Rocket | <i>Hesperis matronalis</i> | 35 |
| Eurasian Watermilfoil | <i>Myriophyllum spicatum</i> | 45 |
| European Common Reed (Phragmites) | <i>Phragmites australis subsp. australis</i> | 43 |
| European Fly Honeysuckle | <i>Lonicera xylosteum</i> | 21 |
| European Frog-bit | <i>Hydrocharis morsus-ranae</i> | 46 |
| False Spirea | <i>Sorbaria sorbifolia</i> | 25 |
| Flowering Rush | <i>Butomus umbellatus</i> | 39 |
| Giant Hogweed | <i>Heracleum mantegazzianum</i> | 37 |
| Goutweed | <i>Aegopodium podagraria</i> | 7 |
| Himalayan Balsam | <i>Impatiens glandifulera</i> | 33 |
| Japanese Knotweed | <i>Polygonum cuspidatum</i> | 19 |
| Miscanthus | <i>Miscanthus sinensis and M. sacchariflorus</i> | 15 |
| Morrow's Honeysuckle | <i>Lonicera morrowii</i> | 21 |
| Narrow Leaf Cattail | <i>Typha angustifolia</i> | 43 |
| Norway Maple | <i>Acer platanoides</i> | 27 |
| Oriental Bittersweet | <i>Celastrus orbiculatus</i> | 29 |
| Ox-eye Daisy | <i>Chrysanthemum leucanthemum or Leucanthemum vulgare</i> | 13 |
| Periwinkle | <i>Vinca minor</i> | 8 |
| Purple Loosestrife | <i>Lythrum salicaria</i> | 40 |
| Reed Canary Grass | <i>Phalaris arundinacea</i> | 15 |
| Siberian Pea-shrub | <i>Caragana arborescens</i> | 21 |
| Tartarian Honeysuckle | <i>Lonicera tartarica</i> | 23 |
| Water Soldier | <i>Stratoides aloides</i> | 46 |
| White Cattail | <i>Typha x glauca</i> | 43 |
| Yellow Iris | <i>Iris pseudacorus</i> | 39 |

Grow Me Instead Alternatives

| <i>(by Common Name)</i> | <i>(by Scientific Name)</i> | |
|-------------------------|---|----|
| Alpine Currant | <i>Ribes alpinum</i> | 23 |
| American Bittersweet | <i>Celastrus scandens</i> | 29 |
| American Wisteria | <i>Wisteria frutescens</i> | 30 |
| Anise Hyssop | <i>Agastache foeniculum</i> | 35 |
| Basswood | <i>Tilia americana</i> | 28 |
| Bearberry | <i>Arctostaphylos uva-ursi</i> | 9 |
| Big Bluestem | <i>Andropogon gerardii</i> | 16 |
| Black-eyed Susan | <i>Rudbeckia hirta</i> | 13 |
| Bleeding Heart | <i>Lamprocapnos (syn. Dicentra) spectabilis</i> | 33 |
| Blue Vervain | <i>Verbena hastata</i> | 42 |
| Bunchberry | <i>Cornus canadensis</i> | 12 |
| Bush Honeysuckle | <i>Diervilla lonicera</i> | 21 |

| | | |
|------------------------------|--|----|
| Common Cattail | <i>Typha latifolia</i> | 44 |
| Common Elderberry | <i>Sambucus canadensis</i> | 20 |
| Common Mare's Tail | <i>Hippuris vulgaris</i> | 47 |
| Common Ninebark | <i>Physocarpus opulifolius</i> | 22 |
| Common Waterweed | <i>Elodea canadensis</i> | 47 |
| Coontail | <i>Ceratophyllum demersum</i> | 47 |
| Dropmore Scarlet Honeysuckle | <i>Lonicera x brownii</i> "dropmore scarlet" | 32 |
| Feather Reed Grass | <i>Calamagrostis x acutifolia</i> "Karl Foerster" | 17 |
| Fireweed | <i>Chamerion syn. Epilobium angustifolium</i> | 36 |
| Flowering Raspberry | <i>Rubus odoratus</i> | 26 |
| Fragrant (White) Water Lily | <i>Nymphaea odorata</i> | 49 |
| Fragrant Sumac | <i>Rhus aromatica</i> | 23 |
| Freeman Maple | <i>Acer x freemanii</i> | 27 |
| Goldflame Honeysuckle | <i>Lonicera x heckrottii</i> | 32 |
| Hackberry | <i>Celtis occidentalis</i> | 28 |
| Hardstem Bulrush | <i>Scirpus acutus</i> | 45 |
| Heart-leaved Foamflower | <i>Tiarella cordifolia</i> | 10 |
| Indian Grass | <i>Sorghastrum nutans</i> | 16 |
| Jackman Clematis | <i>Clematis x jackmanii</i> | 30 |
| Lance-leaved Coreopsis | <i>Coreopsis lanceolata</i> | 14 |
| Mayapple | <i>Podophyllum peltatum</i> | 11 |
| Meadow Rue | <i>Thalictrum polygamum</i> | 34 |
| Nannyberry | <i>Viburnum lentago</i> | 22 |
| Northern Blue Flag Iris | <i>Iris versicolor</i> | 40 |
| Ornamental Rhubarb | <i>Rheum palmatum</i> | 38 |
| Pale Purple Coneflower | <i>Echinacea pallida</i> | 14 |
| Pickernelweed | <i>Pontederia cordata</i> | 41 |
| Red Osier Dogwood | <i>Cornus stolonifera syn. C. sericea ssp. stolonifera</i> | 19 |
| River Bulrush | <i>Scirpus fluviatilis</i> | 44 |
| Rodgersia | <i>Rodgersia spp</i> | 38 |
| Running Euonymus | <i>Euonymus obovatus</i> | 12 |
| Saskatoon Berry | <i>Amelanchier alnifolia</i> | 20 |
| Silver Buffaloberry | <i>Shepherdia argentia</i> | 24 |
| Silver Maple | <i>Acer saccharinum</i> | 27 |
| Spotted Jewelweed | <i>Impatiens capensis</i> | 34 |
| Sugar Maple | <i>Acer saccharum</i> | 27 |
| Sweetgrass | <i>Hierochloe odorata</i> | 17 |
| Virginia Creeper | <i>Parthenocissus quinquefolia</i> "engelmannii" | 31 |
| Virgin's Bower | <i>Clematis virginiana</i> | 31 |
| Water Smartweed | <i>Polygonum amphibium</i> | 50 |
| Wild Angelica | <i>Angelica purpurea(syn. A. stricta)</i> | 37 |
| Wild Bergamot | <i>Monarda fistulosa</i> | 36 |
| Wild Geranium | <i>Geranium maculatum</i> | 11 |
| Wild Ginger | <i>Asarum canadense</i> | 9 |
| Wild roses | <i>Rosa blanda, R. acicularis</i> | 24 |
| Wild Strawberry | <i>Fragaria virginiana</i> | 8 |
| Wintergreen | <i>Gaultheria procumbens</i> | 10 |
| Yellow Pond Lily | <i>Nuphar variegata</i> | 45 |

Alert Species

The following species are additional horticulture plants to be on alert for in Ontario. Gardeners should be aware that these species can be invasive in natural areas:

- Bohemian Knotweed (*Polygonum x bohemicum*)
- Common and Chinese Privet (*Ligustrum vulgare*, *L. sinense*)
- Giant Knotweed (*Polygonum sachalinense*)
- Hydrilla (*Hydrilla verticillata*)
- Lily-of-the-valley (*Convallaria majalis*)
- Parrot Feather (*Myriophyllum aquaticum*)
- Saltcedar/Tamarisk (*Tamarix ramosissima*)
- Tree of Heaven (*Ailanthus altissima*)
- Water Chestnut (*Trapa natans*)
- Winged Euonymus/Burning Bush (*Euonymus alatus*)



Additional Resources

Websites

Canadian Wildlife Federation

www.wildaboutgardening.org

Credit Valley Conservation

www.creditvalleyca.ca/invasives

Evergreen

www.evergreen.ca

Landscape Ontario

www.landscapeontario.com

North American Native Plant Society

www.nanps.org

OFAH / OMNR Invading Species Awareness Program

www.invadingspecies.com

Invading Species Hotline: **1-800-563-7711**

Ontario Invasive Plant Council

www.ontarioinvasiveplants.ca

Ontario Ministry of Natural Resources

www.ontario.ca/invasivespecies

Society for Ecological Restoration

www.serontario.org

Toronto and Region Conservation

www.trca.on.ca/yards

Publications

Native Alternatives to Invasive Plants

C. Colston Burrell et al., Brooklyn Botanic Garden, 2006

The Landowners Guide to Controlling Invasive Woodland Plants

D. Pridham, Ontario Federation of Anglers and Hunters, 2009

Available at www.invadingspecies.com or

www.ontarioinvasiveplants.ca



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