



TORONTO MASTER GARDENER INVASIVE PLANTS FACT SHEETS

INVASIVE PLANTS

TORONTO MASTER GARDENERS GUIDE

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INTRODUCTION
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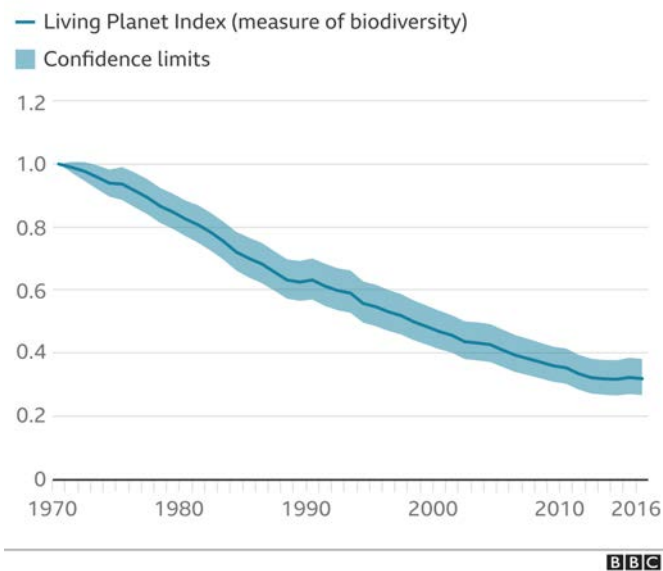
**SUPPORTED BY
THE INVASIVE SPECIES CENTRE**



WHAT IS AN INVASIVE PLANT?

An invasive plant is a plant that is not native to Canada but introduced to Canada by human activities. Not all introduced plants are invasive – plants which become invasive develop traits that allow them spread into natural areas where they aggressively outcompete native species. Invasive plants have many negative impacts including affecting the ecology and economic impacts. Invasive plants degrade habitat, reduce biodiversity, and inhibit forest regeneration (the process by which new seedlings become established). They can alter landscapes, shading out the forest understory to leave bare soil that is more prone to erosion, reducing water quality and increasing flooding. They are a direct threat to at risk species and linked to our declining wildlife populations.

How wildlife has declined, 1970-2016



Horticulture is the foremost source for introductions of invasive plants and many of

these invasive plant species are available from Toronto stores, garden centres and online as plants or seeds. The botanical names are not always listed on the plant tags so that the consumer may not be aware of what they are purchasing or of the potential for the invasiveness of these plant species and their cultivars. The Toronto Master Gardeners are now advising that gardeners reconsider purchasing or growing invasive garden plants.

HOW GARDEN PLANTS ESCAPE

Garden plants reproduce like all other plants – they can have seeds that are dispersed by the wind or by animals like birds, squirrels, insects and humans (either deliberately through the dumping of plant matter or accidentally by tracking seeds on shoes or boots). If the seeds find their way to natural areas or to neighbouring yards, they will germinate and start producing new plants. For example, the seed keys of Norway Maple trees blow over large areas and the seeds grow wherever they find soil. As a result, Norway Maple trees can be found in both natural areas and gardens that are some distance from the parent tree.

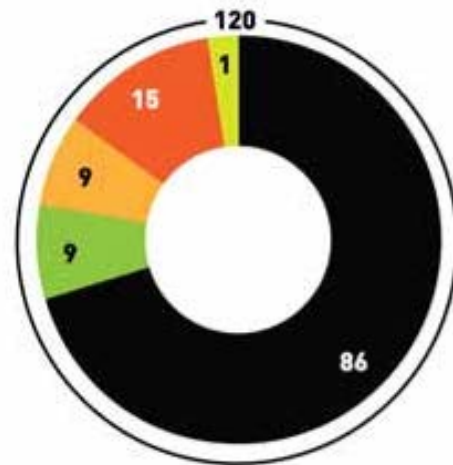
Plants may also spread due to vigorous root or stem systems that travel from our gardens into surrounding areas. Goutweed and periwinkle are often grown as ground covers due to their spreading tendencies, but can easily spread out of one person's garden and into surrounding areas. Fences and other above-ground barriers will not keep out these plants.

Total Number of invasive alien species with pathway information: 245 (out of 486)



Intentional Introduction 141

- as agricultural crop (food, fodder, fibre) **(33)**
- as ornamental or landscaping plant **(73)**
- for soil improvement, erosion control, reclamation **(15)**
- for herbal or medicinal use **(15)**
- for research (escape from research stations, botanical gardens, arboreta, etc.) **(2)**
- unknown purpose **(3)**



Unintentional Introduction 120

- with plant products (contaminants in seed, forage, produce, wood products, garden supplies) **(86)**
- with livestock or other animals **(9)**
- in soil, sand, gravel (including ballast soil) **(9)**
- with freight, packing materials, machinery, equipment, etc. **(15)**
- through recreation/tourism (baggage, camping equipment, boats, etc.) **(1)**

Canadian Food Inspection Agency – Invasive Alien Plants in Canada

HOW DO I KNOW IF I HAVE ONE OF THESE PLANTS IN MY GARDEN?

There are 441 invasive plant species growing in Ontario as noted by the Canadian Food Inspection Agency. Not all of these are sold in nurseries or commonly found in Toronto gardens. Listed below are some of the more problematic plants common in horticulture, with links to individual fact sheets. We have also

listed some additional plants to avoid, and unwanted visitors that frequently find their way into your garden even though not commonly sold. If you need further help identifying a plant, our “Ask a Master Gardener” function will connect you with a Master Gardener who can look at it. A clear photo of the plant (leaves, stems, flowers) really helps us when it comes to plant identification.

INVASIVE PLANT SPECIES

The following plants are commonly available in garden centers and nurseries:

- | | |
|--|-----------------------------------|
| • Maiden Grass | (<i>Miscanthus sinensis</i>) |
| • Goutweed | (<i>Aegopodium podagraria</i>) |
| • English Ivy | (<i>Hedera helix</i>) |
| • Lily-of-the-valley | (<i>Convallaria majalis</i>) |
| • Periwinkle | (<i>Vinca minor</i>) |
| • Japanese Barberry | (<i>Berberis thunbergii</i>) |
| • Euonymus including winged euonymus (a.k.a. burning bush), European euonymus, Wintercreeper | (<i>Euonymus</i> spp.) |
| • Privet | (<i>Ligustrum vulgare</i>) |
| • Invasive honeysuckles | (<i>Lonicera</i> spp.) |
| • Norway Maple | (<i>Acer platanoides</i>) |
| • Russian olive | (<i>Elaeagnus angustifolia</i>) |
| • Autumn olive | (<i>Elaeagnus umbellata</i>) |
| • White mulberry | (<i>Morus alba</i>) |

The following plants may also be available in horticulture and should be avoided due to invasive tendencies:

- | | |
|------------------------|---|
| • Yellow Archangel | (<i>Lamium galeobdolon</i>) |
| • Pale-yellow Iris | (<i>Iris pseudacorus</i>) |
| • Amur cork-tree | (<i>Phellodendron amurense</i>) |
| • Amur maple | (<i>Acer ginnala</i>) |
| • Scilla | (<i>Scilla siberica</i>) |
| • Forsythia | (<i>Forsythia suspensa</i> , <i>Forsythia viridissima</i>) |
| • Oriental Bittersweet | (<i>Celastrus orbiculatus</i>) |
| • Tawny Daylily | (<i>Hemerocallis fulva</i>) |
| • Creeping Jenny | (<i>Lysimachia nummularia</i>) |
| • Porcelain-berry | (<i>Ampelopsis glandulosa</i> var. <i>brevipedunculata</i>) |

Finally, these plants are not usually available in garden centres but are often spread to private gardens due to their invasive tendencies – they may pop up in the middle of your flower bed, or hide behind the garage growing fast enough to be an unmanageable monster by the time they are found:

• Canada thistle	<i>(Cirsium arvense)</i>
• Common reed	<i>(Phragmites australis)</i>
• Dames rocket	<i>(Hesperis matronalis)</i>
• Dog-strangling Vine	<i>(Vincetoxicum rossicum)</i>
• Garlic mustard	<i>(Alliaria petiolata)</i>
• Japanese knotweed	<i>(Polygonum cuspidatum)</i>
• Manitoba maple	<i>(Acer negundo)</i>
• Moneywort	<i>(Lysimachia nummularia)</i>
• Multiflora rose	<i>(Rosa multiflora)</i>
• Siberian elm	<i>(Ulmus pumila)</i>
• Tree-of-heaven	<i>(Ailanthus altissima)</i>

MANAGING INVASIVE PLANTS IN TORONTO GARDENS

Our individual garden guides give specific instructions for getting rid of each of these plants. The traits that make these plants invasive also make them difficult to eradicate (for example, many plants have the ability to resprout from even small remaining pieces of root, and where plants spread freely by seed there can be a “seed bank” in the soil that can take many years to eradicate) so ongoing management is often necessary. Common methods of removal may include:

HAND PULLING

Most commonly used for smaller plants and seedlings. Hold the plant by the base and ease it from the soil taking care not to break the roots. Watering before doing this can assist in loosening the soil, as can a hand fork.

DIGGING

Most often used for small to medium shrubs, saplings and larger areas of ground cover species. Dig to a depth below the roots and remove the entirety of the plant. In some cases it may be helpful to sift the soil for remaining pieces of root or rhizome.

CUTTING

Most commonly used for larger shrubs and trees and plants with an annual lifecycle (they germinate, release seed the same year, then die; cutting after flowering but before seed develops will assist in preventing further dispersal). Cut the plant to ground level for example using secateurs, loppers or a saw. This is rarely a “one and done” method for perennial plants as in most cases invasive plants are sufficiently vigorous to resprout from the stump or remaining roots and all regrowth must be repeated cut until the carbohydrate reserves of the plant are exhausted.

SMOTHERING

Most commonly used for large areas of groundcover plants or seedlings. If deprived of light the plant will be unable to photosynthesise and will eventually die. This may be done with either a weighted tarpaulin or thick mulch on top of cardboard. This may take one to two years to be effective.

SOLARIZING

Most commonly used for large areas of groundcover plants or seedlings in areas that receive full sunlight. Ideally this will take place over four to six weeks during hot summer months. Cut the plant to ground level, water the ground deeply until wet, and cover the area with clear plastic. Use caution with this method as the heat can kill or damage other plants including trees or large shrubs whose roots extend beneath the area.

In all instances, reproductive parts of invasive plants (parts of the plant capable of producing new plants such as rhizomes, seeds or vegetative parts that may produce new roots) should not be disposed of in yard waste as the composting temperatures may not be sufficient to kill them. Ideally, they should be disposed of in the landfill in sealed plastic bags, but check with your municipal authority for any restrictions on disposal.

ALTERNATIVE NATIVE PLANTS

Planting native plants instead of invasive species can support the ecology and provide food and habitat for wildlife. There are many plants with similar aesthetic attributes that you can grow instead that will make your garden both beautiful and responsible. Consult our individual guides for some suggestions, or visit the [Ontario Invasive Plant Council's “Grow Me Instead”](#) guide.



REFERENCES AND RESOURCES

Canadian Food Inspection Agency - Invasive Alien Plants in Canada - Technical Report, available at: http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf

Credit Valley Conservation (<https://cvc.ca/your-land-water/tree-planting-and-habitat-restoration-services/invasive-species/>)

The International Union for Conservation of Nature (IUCN) Red List of Threatened Species available at: www.iucn.org/resources/issues-briefs/invasive-alien-species-and-sustainable-development

Invading Species Awareness Program (<https://www.invadingspecies.com>)

Invasive.org (<https://www.invasive.org/species/weeds.cfm>)

Invasive Species Centre (<https://invasivespeciescentre.ca>)

Ontario Invasive Plant Council (<https://invasivespeciescentre.ca>)

Reichard SH, White P (2001) Horticulture as a pathway of invasive plant introductions in the United States. *Bioscience* 51, 103-113

Settele, J., UN Report May 2019: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating', summary available: <https://ipbes.net/news/Media-Release-Global-Assessment>

PHOTO CREDIT

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Helen Battersby