Invasive Plants in the GTA

A quick guide for identifying some of the invasive and non-native plants that affect natural landscapes in Toronto and surrounding areas.

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1. **European Buckthorn**
   - *Rhamnus cathartica & R. frangula*
   - **Impact:** Blocks sunlight, alters soil composition, smothers native plants
   - **Management/Control:** Hand pull, use shears, or a saw to cut the stems close to the ground. For larger plants, dig up the root system, remove all roots, and cover with a tarp for one week.

2. **Russian Olive**
   - *Elaeagnus angustifolia*
   - **Impact:** Displaces native plants, alters soil composition
   - **Management/Control:** Hand pull the plant before it seeds, use a trowel to remove roots, or cover with a tarp for one week.

3. **Black Locust**
   - *Robinia pseudoacacia*
   - **Impact:** Produces shoots from its root system, so any control effort should be targeted against the roots. Girdling and stumping are effective—especially when controlling mature trees.
   - **Management/Control:** Girdling and stumping, hand pulling, or using herbicides.

4. **Bindweed**
   - *Convolvulus arvensis*
   - **Impact:** Displaces native plants, alters soil composition
   - **Management/Control:** Hand pull, cover with a tarp for one week, or use herbicides.

5. **Goutweed**
   - *Aegopodium podagraria*
   - **Impact:** Displaces native plants, alters soil composition
   - **Management/Control:** Hand pull, cover with a tarp for one week, or use herbicides.

6. **Manitoba Maple**
   - *Acer negundo*
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The Benefits of Urban Naturalization

Urban natural areas are an essential part of healthy cities. They filter pollutants from our air and water, and provide valuable habitat for animals and insects. They also provide much-needed shade cover, which cools urban areas and reduces our energy use.

As Toronto and its surrounding urban centres continue to grow rapidly, there has never been a greater need to conserve and create more green spaces in neighbourhoods across the city.

Naturalization and Native Plants

Naturalization involves re-establishing healthy plant communities that attract and support members of our biota—from bacteria in the soil to plants, insects, birds and mammals. The process of naturalization puts in place necessary conditions to allow nature to re-establish and prosper with little help.

Native plants are particularly adapted to their environment. Through a complex evolutionary process of checks and balances, the local fauna and flora have formed working systems of life. Restoring native plant communities preserves these complex relationships between plants and wildlife and protects the region’s naturally occurring biodiversity.

From a practical standpoint, native plants require less maintenance because they’ve adapted to our climate. This means that in hot, dry summers they require less water and are not dependent on chemical fertilizers and pesticides to stay healthy and beautiful.

Invasive and Non-Native Plants

Invasive or non-native plants are species that are introduced to a new ecosystem in which they did not evolve naturally. As a result, they can often adversely affect the new habitat.

In their native habitat they are part of a complex system that controls their growth, including nutrient availability, natural predators and disease. Lacking these controls, invasive plant species can grow and spread quickly, smothering or out-competing native plants in the process. This leads to a decrease in plant diversity and a loss of habitat.

Once a foreign plant is thriving, it can quickly disrupt the natural ecosystem. When this happens a species is considered invasive. Invasive species often spread in such a way that they form large patches, making it unsuitable for anything else to grow. In urban settings where natural areas are very limited, it is important to have a diverse range of plant species to provide as much habitat as possible for local wildlife. Unfortunately, urban settings are often the areas where invasive species are most prevalent because they thrive in disturbed and ecosystems are disrupted. After development, invasive species are the second greatest threat to endangered species.

Controlling Invasive Non-Native Plants

Selective invasive species removal and restoration is a process that encourages greater species diversity and recreates ecosystems with the ability to provide more habitat.

The following are some general rules for invasive plant species removal:

- Have a plan for replanting before beginning removal. A three-year plan to remove invasive plants and monitor the site will meet with much greater success than a single-removal event.
- Replant sites densely with native species and mulch heavily. Invasive plants grow best in disturbed soil, so it is important to get other plants established quickly.
- Understand how the invasive plant spreads so that the most appropriate technique for removal can be used.
- Be careful how you dispose of invasive species. They can often spray from tiny stems, flow roots or root sections.

The next section provides an overview of the most common invasive species and non-natives in urban parks and some common removal practices.

Understanding the Threat of Invasive Species

It is important to understand the delicate balance that ecosystems maintain. In a healthy ecosystem, everything has a function.

1. Dog Strangling Vine

- **Description:** Invasive vine that is native to Europe and Asia. It aggressively invades new areas, smothering native plants and trees.
- **Impact:** This vine can form dense brooms, choking out native plants and trees, affecting local biodiversity and ecosystem services.
- **Management/Control:** Hand-pulling or mowing can be effective methods for controlling this invasive species.

2. Garlic Mustard

- **Description:** Garlic Mustard is a member of the mustard family and is native to Europe and Asia. It thrives in disturbed areas and is particularly aggressive in shaded environments.
- **Impact:** Garlic Mustard produces prolific flowers and spreads rapidly through seed dispersal, creating a dense ground cover that can outcompete native plants.
- **Management/Control:** Hand-pulling, mowing, or hoeing can help control Garlic Mustard, but herbicides may be necessary for more severe infestations.

3. Periwinkle

- **Description:** Periwinkle is a trailing invasive species native to Europe. It spreads through stolons and is often found in disturbed areas of urban parks and gardens.
- **Impact:** Periwinkle can quickly dominate an area, crowding out native plants and competing for resources.
- **Management/Control:** Hand-pulling will be necessary for small infestations, while herbicides may be needed for larger areas.

4. Phragmites

- **Description:** Phragmites is a common invasive species of reed that thrives in wetland environments. It can form dense stands, smothering native vegetation and affecting local water quality.
- **Impact:** Phragmites can quickly dominate wetland areas, disrupting local ecosystems and affecting water quality.
- **Management/Control:** Removal methods may include mechanical cutting, flooding, or the use of herbicides, depending on the severity and location.

Understanding the Glossary of Terms

- **Simple Leaf:** A leaf that is not divided into parts.
- **Compound Leaf:** A leaf that is divided into smaller parts called leaflets.
- **Rosette:** Leaves that grow in a circular pattern that resemble the shape of a rose.

The next section provides a quick reference on some of the GTA’s invasive and non-native plants, and a summary of some of the issues they cause. The guide offers a resource for identifying these plants, as well as a brief explanation on why we need to control their spread, and why native species are so important in restoring and maintaining healthy urban green spaces.

**About this guide**

Evergreen provides a range of on-the-ground activities that create wildlife habitat and enhance biodiversity throughout Canada. With this pocket guide, focused on the Greater Toronto Area (GTA), we hope to inspire individuals to get involved with stewardship initiatives in their community and to work together to have a positive impact on our ecosystems.

**Controlling Invasive Non-Native Plants**

- **Description:** Strong smell of garlic, first-year plants have dark green, kidney-shaped leaves with scalloped edges that grow in rosettes. Second-year plants are triangular with sharply-toothed edges. It has small white flowers with four petals and narrow, erect seed pods.
- **Impact:** Displaces native ground cover and alters soil chemistry to best suit its own growing conditions. The roots contain a chemical that affects root fungi required by many native plants.
- **Management/Control:** Remove pods before they go to seed or remove plant by pulling at the root. Dispose of plants in the garbage to prevent re-establishment in the compost pile.
- **Fun Fact:** Garlic Mustard is edible! Leaves and roots can be ground to create sauces, or eaten whole in salads.

**Norway Maple**

( Acer platanoides )

- **Description:** This plant trails along the ground, reproducing through stolons. It has shiny, dark green and elliptical leaves. The flowers are a pale lavender colour with five petals.
- **Impact:** Creates dense mats, covering out native ground vegetation.
- **Management/Control:** Permit will be required to remove Norway Maple, as it is considered an invasive species in the GTA.
- **Fun Fact:** The leaves of periwinkle can be used as a mild astringent.

**Phragmites**

( Phragmites australis )

- **Description:** Water-loving plant that can grow to heights of up to 5m. The stem is a beige/tan colour with a rough and dull texture. Leaves are a blue-green colour and the seeds form in dense burs.

**Periwinkle**

( Vinca minor )

- **Description:** This plant trails along the ground, reproducing through stolons. It has shiny, dark green and elliptical leaves. The flowers are a pale lavender colour with five petals.
- **Impact:** Creates dense mats, covering out native ground vegetation.
- **Management/Control:** Permit will be required to remove Phragmites, as it is considered an invasive species in the GTA.
- **Fun Fact:** The leaves of periwinkle can be used to relieve eczema.