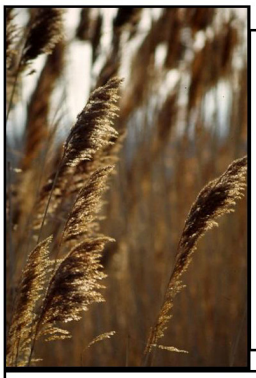
The Silent Invasion: Invasive Exotic Plant Species of Southern Ontario

A special fact sheet presented by

The Naturalized Habitat Network

Southern Ontario is home to a wide variety of plant and animal species. The forests, wetlands and other varied habitats found here and the wildlife that they support combine to make this region surprisingly rich in its overall biodiversity. In fact, this region, which is sometimes referred to as the Carolinian Zone, is regarded as the most biologically diverse region in all of Canada.

Yet all is not as it seems. This very same region is confronted with some very serious problems that threaten its biodiversity and overall well-being. One especially serious problem arises from the appearance of non-native plants in our remaining native plant communities. Without the natural checks and balances that these plants would have in their own natural habitats, some of these non-native plants can grow and re-seed aggressively. These particular plants are referred to as invasive exotics. Since these plants can rapidly out-compete their native plant counterparts, they pose a significant threat to our region's native plant communities and the wildlife that depend on them. Invasive exotic species have impacted practically every remaining ecosystem to some degree, making this problem one of the most significant issues that affect our natural heritage. Since these species often invade natural spaces swiftly and without much notice, this issue has been referred to as "the silent invasion".



Eurasian Reed – *Phragmites australis*

This species arrived in North America accidentally through transatlantic shipping, by released ballast water. These tall reeds with their feathery seed plumes often dominate wetlands and other moist areas. Their stalks can grow 2.5 metres and often higher and can form thick colonies. They reproduce by seed and spreading roots, choking out native vegetation as they spread. Cutting these invaders normally does not work and can even stimulate their growth. Managed programs that combined controlled applications of glyphosate with managed cutting and controlled burning have shown success in containing their growth.

Garlic Mustard – *Alliaria petiolata*

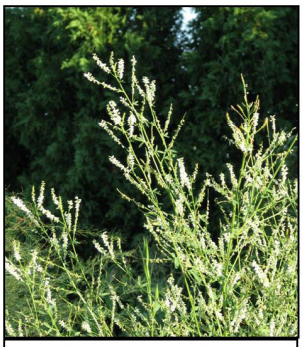
This herbaceous species originated in Europe and gets its name from the garlic odor that comes from its leaves and stems. Each plant produces hundreds of seeds and spreads rapidly through wooded areas. Their roots also produces toxins that affect soil quality, making it more difficult for nearby native plants to grow. Pulling out plants before they produce seeds and preventing the further spread of their seeds form a practical two-part strategy for managing this invader.

Purple Loosestrife – *Lythrum salicaria*

This deceptively attractive herbaceous perennial is identified by its narrow leaves and purple-pink flowers. This species originated in Europe and was originally promoted by garden centers as an ornamental. These plants can rapidly colonize wetlands and other moist areas. When mature, each plant reaches one meter or more and can produce more than 2 million seeds per year. These plants can be controlled by carefully removing their roots in the spring before their seeds are formed. There has also been some success in field trials with predator insects.

From the Field to the Meadow

Many invasive exotic plants were introduced unintentionally, often arriving inside shipments of other intended goods. Canada Thistle (*Cirsium arvense*), for example, arrived in Canada through international grain shipments from Europe. Other species were introduced for agricultural purposes. For example, Garlic Mustard (*Alliaria petiolata*) was first introduced as a food crop. White Sweet Clover (*Melilotus alba*) was introduced as a forage crop. These species now persist in a variety of habitats.



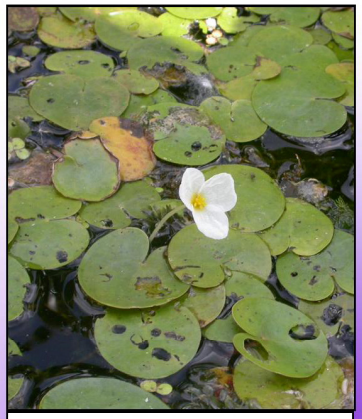
White Sweet Clover
Melilotus alba

Canada Thistle
Cirsium arvense

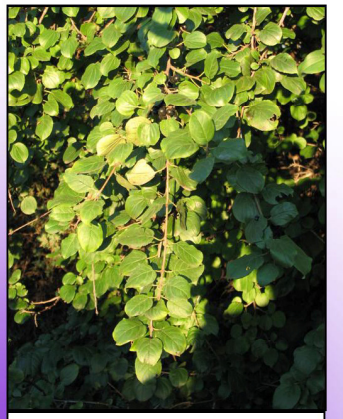
From Yesterday's Gardens to Today's Habitats

Of the many species of exotic plants that presently invade our ecosystem, a significant number of these were originally introduced as ornamental plants. Some of these were introduced in the mid 1800's while others were much more recent. In their time, many of these species were promoted as promising new introductions and were actively embraced by the gardening public. However, long after these species have fallen out of garden fashion, they continue to cause problems within our native plant communities.

Dames Rocket
Hesperis matronalis



European Frogbit
Hydrocharis morsus-ranae

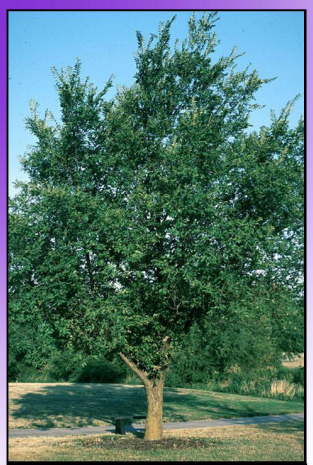


European Buckthorn
Rhamnus cathartica

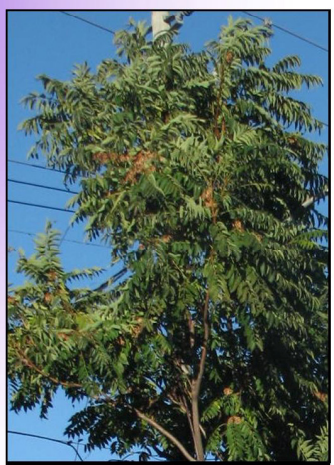
Eurasian Water Milfoil
Myriophyllum spicatum

Giant Hogweed
Heracleum mantegazzianum

Japanese Knotweed
Polygonum cuspidatum



Siberian Elm
Ulmis pumila



Tree of Heaven
Ailanthus altissima