

# Toronto Islands: How Can You Help Protect the Native Flora of the Toronto Islands?



*Dog Strangling Vine on a hillside (background), Asiatic Bittersweet (top inset) and Japanese Knotweed (Bottom inset). Invasive species which are threatening to take over the ecologically sensitive Toronto Islands.*

## Help Control Invasive Plants by Removing them from Your Yards!



### **The Special Nature of the Toronto Islands**

The Toronto Islands are home to many unique plant species and communities that are rare in Toronto and the GTA, as well as within Ontario. Some of these plant communities include wetland meadows, lagoon edges, beach strands, sand dunes, Cottonwood woodlands and sand prairies. These communities contain forty regionally, and three provincially rare plant species. Six regions of the Toronto Islands have been recognized as Environmentally Significant Areas (ESA's): East Ward's Island, Snake Island, the Wildlife Sanctuary, Mugg's Island, Hanlan's Point and Sand Dune area and West Algonquin Island. Unfortunately, these communities are being threatened by invasive plant species that are expanding into these natural areas, and threatening to eradicate our natural vegetation.

### **What Is an Invasive Plant?**

An invasive plant is a plant growing outside of its natural range, which grows aggressively to exclude other plant species. These species are typically exotic, coming from other countries, and grow without their natural biological controls (Insect feeders, diseases). Exotic plant species were introduced to Canada by early settlers and continue to be introduced today, as they escape from private gardens. A few of these plants exhibit prolific growth, and are replacing native plants in natural ecosystems. Typically, they produce abundant seeds that are able to survive in the soil for years and are spread easily by wind, animals and humans. Invasive plants will displace native plant species and wildlife habitat decreasing the overall biodiversity.

### **Invasive plants of the Toronto Islands**

There are many invasive plants found on the Toronto Islands, however, of these, Dog-strangling vine, Japanese knotweed and Asiatic bittersweet are of particular concern. These species are currently found along the boardwalk and other pathways as well as in some ESA's but could be easily spread along these corridors. If local residents start to monitor and remove these plants from their own yards and other areas on the Islands they can help to protect the native flora.

### **Recommendations for Invasive Plant Removal**

The following recommendations are given as a guideline to homeowners and volunteers to help control invasive species.

#### **1. Dog Strangling Vine (*Vincetoxicum nigrum*)**



**Description:** Dog-strangling vine is a non-native herbaceous perennial that forms dense colonies and twines around other plants, hence its name.

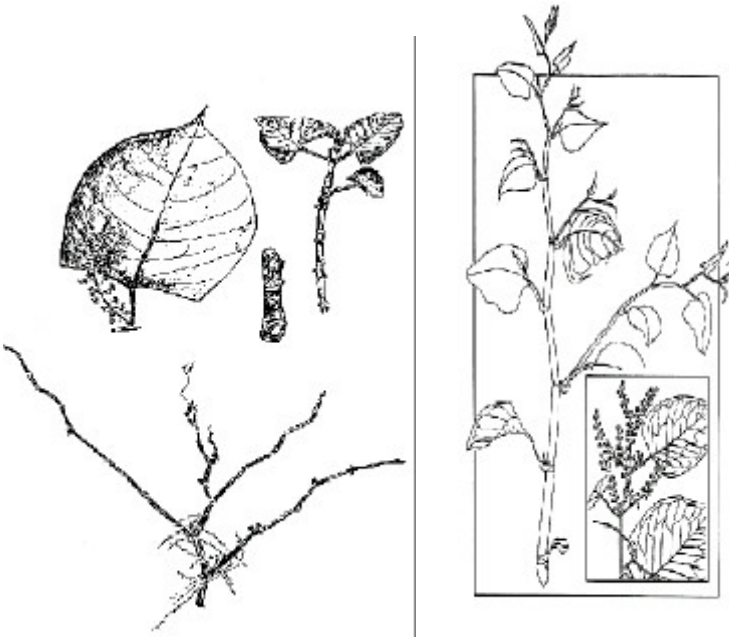
**Identification:** Leaves are oval, dark-green and glossy. Fruits are pod-shaped which begin as purple flowers. The plant can grow up to 2 meters in height

**Habitat:** Can grow in a wide range of habitats but prefers open sunny areas, as it is not tolerant to complete shade.

**Method of Control:** In the first year of establishment it is possible to dig the plant to remove roots from the ground. Care must be taken to get the entire root system and to limit the amount of breakage as this plant can re-sprout from root fragments left in the ground. By the second season of growth, pulling becomes more difficult as the root systems have become so large. Seed spread can be controlled at this stage by cutting the stem at the base, and a herbicide may be applied. City of Toronto staff treats Dog-Strangling

vine in selected areas using glyphosate (Roundup) applied in a 33% concentration using a sponge wipe. If using a spray, 3% concentration is recommended. The sponge wipe method enables more selective treatment and avoids accidental over spray to other non-target plants.

## 2. Japanese Knotweed (*Polygonum cuspidatum*)



**Description** Japanese knotweed is a non-native herbaceous perennial that grows up to 3 meters in height forming dense thickets. Colonies in North America originate from one or a few clones.

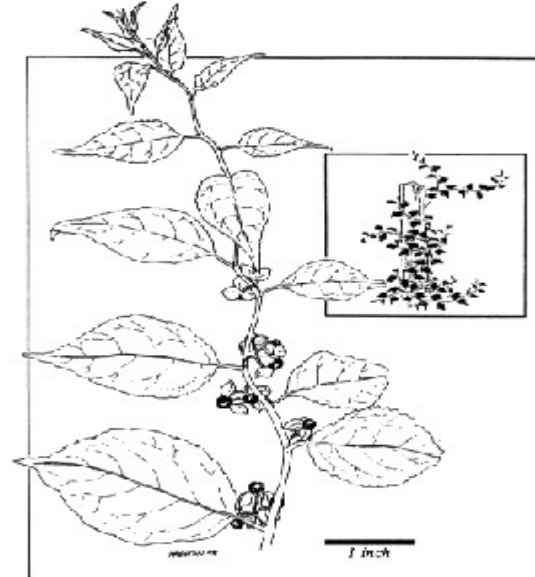
**Identification:** The leaves are broadly oval and 2 to 6 inches long. The stems are large and hollow like bamboo. White flowers appear in August and September

**Habitat:** Most commonly found in moist open habitats and in areas with disturbed soil

**Control:** To control the spread of Japanese knotweed cut the base of the stalk once the plant reaches a height of 5 to 6 feet but before the plant has flowered. This occurs around mid to late June in our region. Repeated cuttings should occur throughout the growing season as the plant re-sprouts from rhizome fragments. Subsequent cuttings may occur

around early August and again in early September in order to deplete the plants' resources in the roots. In heavy infestations, cutting followed by the application of a glyphosate herbicide is often recommended. City of Toronto staff has achieved successful control of colonies by cutting twice, once in June, and August followed by application of a 3% glyphosate spray to sprouts in early September. As with many other invasive plants, Japanese knotweed can regenerate by sprouting, meaning that any remnant roots not disposed of, or left in the soil, may re-sprout into new plants. Even stems left in water are able to root.

## 3. Asiatic Bittersweet (*Celastrus orbiculatus*)



**Description:** Asiatic bittersweet is a non-native woody vine that grows up other plants and smothers them by weighing them down and competing for resources.

**Identification:** The leaves are alternate. The fruit is yellow and pea-shaped, and flowers are found in the leaf axils.

**A word of Caution:** Asiatic Bittersweet can be confused with the native American bittersweet (*Celastrus scandens*), which differs in that the flowers and fruits are always found occurring at the tips of the vine, not in the leaf axils.

**Habitat:** This plant grows in a range of habitats including forest edges and dry rocky slopes.

**Control:** This species should be targeted in the fall (September to October) when other vegetation has died

back and the greenish-yellow leaves of this vine are easily identified. The base of each vine should be cut as low to the ground as possible. Again, for particularly effective treatment in heavy infestations, an application of glyphosate herbicide may be required. City of Toronto staff has successfully applied herbicide to cut stems to prevent re-sprouting. Alternately, new shoots can be repeatedly cut back as with native riverbank grapes

### **How to Prevent Invasion of Non-Native Invasive Species**

In addition to efforts to remove the invasive species that are presented in this brochure, you can help to prevent the introduction of more invasive plants when choosing plants for your garden. Always try to choose plants that are native to the Toronto Islands or the Greater Toronto Region. If you still decide to choose a non-native species (an 'exotic') please ensure that it does not grow so aggressively that it spreads into other areas beyond your garden and becomes an invasive plant pest. You can also help by keeping garden waste out of natural areas. Soil and plant clippings, which may contain seed or roots from invasive species, should be composted properly

A listing of plant species to avoid and alternative native species that can be planted can be found at the

*Federation of Ontario Naturalists web site:*

1) [www.ontarionature.org/enviroandcons/naturalinvaders/invade2.html](http://www.ontarionature.org/enviroandcons/naturalinvaders/invade2.html)

*Other Information:*

*The Nature Conservancy*

1) [www.natureconservancy.ca/index.asp](http://www.natureconservancy.ca/index.asp)

*The Society for Ecological Restoration*

2) <http://www.serontario.org>



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