Japanese Knotweed

(Fallopia japonica)

How to Identify Japanese Knotweed

- Grows rapidly in large bamboo-like clumps, reaching heights of 1 to 3 m (3 to 10 ft) and spreads about 50 cm (19 in)/year
- Perennial herbaceous plant
- Found along river edges, streams and in disturbed areas
- Smooth, purple to green coloured stems – up to 2.5 cm (1 in) in diameter
- Leaves are alternate in a zigzag pattern
- Spreads quickly with large underground root systems which can reach depths of up to 2 m (6 ft)

Characteristics

Family	• Buckwheat family
Range & Habitat	• Throughout Ontario – Grows in full sunlight or shade
Height	• Reaching heights of 1 to 3 m (3 to 10 ft).
Flowers	• Late July/August small, white-green flowers bloom in sprays near end of stem & leaf axils
Leaves	• Oval to triangular with a pointed tip and flat base with a long stalk arising from the stem; 10 to 17 cm (4 to 7 in) & 7 to 10 cm (3 to 4 in) wide, alternate in a zigzag pattern.
Stem	• Woody, hollow, smooth, purple stem with reddish-brown nodes surrounded by a papery sheath; up to 2.5 cm (1 in) in diameter. Stems can grow up to 8 cm (3 in) per day. • Juvenile stems resemble asparagus spears, purplish/green
Fruit/Seeds	• Winged, triangular, shiny and very small
Lifecycle	• The stems die back each fall and remain standing over winter. Numerous new stems emerge in spring from the over-wintering root system. Grows rapidly!
Origin	• Invasive

Photo: Barbara Tokarska-Guzik, University of Silesia, Bugwood.org

Photo: Jan Samanek, Phytosanitary Administration, Bugwood.org

Photo: Catherine Herms, The Ohio State University, Bugwood.org

Japanese Knotweed

Impact

- Severely degrades quality of wetland and habitats where it becomes established
- Dense thickets can reduce sunlight and prevent other plant species from growing
- Established stands do not support the same levels of native amphibian, reptile, bird and mammal populations
- Roots contain unique compounds, which may alter soil chemistry
- Can significantly damage infrastructure and cause unstable erosion and flooding
- Attempts to eradicate it by digging out the plant to a depth of about 3 m with an excavator failed as it grew back twice as large the next year

Photo: Ohio State Weed Lab, The Ohio State University, Bugwood.org

Japanese Knotweed is a very persistent plant. Pieces of the stem or root (rhizome) as small as 1 cm (.5 in) can produce new plants within 6 days if they are submerged in water.

Prioritizing within a Control Area

1. Focus on large blocks of un-invaded areas and keep them free of invaders
2. Control small, younger, outlier (satellite) populations first
3. "Unfragment" the boundaries of invaded areas by removing outlying plants
4. Reverse the invasion, expand the un-invaded area outward

Do Not Compost.

All plant materials should be placed in thick black plastic bags. Seal the bags tightly and leave them in direct sunlight for about a week. The best disposal after drying is to burn them or send them to the landfill.

Burning

Not recommended

- Fire will kill established plants but they will re-sprout from taproots

Management of Invasive Japanese Knotweed

It is important to use a control plan. Control measures will be dictated by infestation area and density. To prevent and fight infestations more than one type of measure will likely be required to successfully control Japanese Knotweed. Higher success is achieved when heavily infested sites are re-planted with native species that are able to out-compete new growth.

Control Methods:

Digging	Mowing	Tarping	Excavating	Herbicide
Slightly Effective • For small populations • Has a large, dense root system and will re-sprout if not completely removed	*Slightly Effective* • For small populations • Continue through growing season for 5 years	*Slightly Effective* • Don't use in low light areas (not hot enough) • Late spring, continue through growing season • Cut stems, cover area with dark tarp • May need to leave in place for more than one growing season • Monitor for plant growth	*Effective* • For large populations • Create deep pits (more than 5 m deep) and excavating all soil up to 2 m deep within the area of the infestation • All soil removed from the area should be buried in the deep pits lined with root barriers	*Best method* • Late May, early summer • Best when applied more than once between mowing treatments which exposes newly grown and more susceptible sprouts to the herbicide • Will likely need to be repeated for several years to effectively kill the root systems

Leeds Grenville

Use of herbicides must follow all provincial and/or federal regulations. Appropriate training, timing and application methods are critical factors for success. Anyone having information on specific locations where this weed is posing a significant public risk should contact the Weed Inspector for the United Counties of Leeds and Grenville at 613-342-3840 ext. 2425