

# Japanese Knotweed

*Reynoutria japonica*



## What is it and Why is it a Problem?

Japanese Knotweed is a semi-woody perennial plant that forms dense patches, usually in sunny clearings. Its roots can quickly invade a space as they are capable of spreading over 10 m wide and growing through cement. This shrub can significantly reduce sun penetration and prevent the growth of other plants by outcompeting native vegetation and releasing compounds through its roots. Although vast, the roots do not hold soil well, and therefore create unstable banks which increase the risk of erosion in areas where it is found. Japanese Knotweed is an extremely persistent shrub found along riverbanks and shorelands. It disperses mainly by water carrying plant fragments to other areas. It can withstand extreme floods and remain standing after all the native vegetation has been washed away.



## What Does it Look Like?

- Generally grows 1-3 m tall
- Stems are smooth, round, hollow, and segmented, and may be green to purple in colour
- Juvenile stems look similar to asparagus and adult stems look similar to bamboo
- Leaves are a pointed egg shape with a flat base (ovate), between 3-6" long and 2-5" wide
- Flowers are greenish-white





# How Can it be Managed?

## Prevention

- Report sightings of any invasive species online through [EDDMapS Ontario](#), a web-based mapping system which also has an app, or through the [Invasive Species in Ontario](#) project on [iNaturalist.org](#).
- Stay on the trail and keep pets on a leash to avoid unintentionally spreading the plant fragments and seeds.
- Do not buy, sell or plant invasive Japanese Knotweed by learning how to identify it. Instead, grow native plants.
- Inspect and clean mud, seeds and plant fragments from clothing, pets, ATV's and tools after leaving an infested area.

## Removal

- Ensure you follow [OMNRF's rules](#) regarding removing invasive aquatic plants.
- Avoid mowing! This can actually encourage growth and spreading of the plant as fragments break off and travel elsewhere. If mowing will be used as a technique, it is advised to cut back the stems and collect them in a sealed bag to rot and be disposed of first. Mowing must also be done once a month for a minimum of 5 years and used in combination with other methods.
- Remove satellite infestations first - early detection and control is extremely important.
- Dig or excavate the entire root, including rhizomes if it is a new or early infestation. Plant the newly-bare area with native species or mulch it to prevent the establishment of more invasives. For established infestations, you can dig under each plant by 5 m deep or more, as well as the soil surrounding the plants by 2 m deep. This would be ideally done with heavy equipment.
- If excavation is not feasible, consider tarping the infestation with a dark-coloured tarp to reduce sunlight reaching the plant, and to "cook" the roots. This should be done after the stems have been cut back in late spring and continued throughout the summer for a total of up to 3 growing seasons. It is most effective in areas that typically receive a lot of sunlight. This technique, as well as others, are outlined in the [Japanese Knotweed Best Management Practices in Ontario](#).

- Chemical control can also be used for extremely persistent infestations, but ideally should still be used in combination with the above listed methods. For an up-to-date list of herbicides that can be used to control Japanese Knotweed, visit the [Pest Management Regulatory Agency's website](#). Also make sure to check the [Ontario Government's Allowable List of Pesticides](#) to ensure your selected herbicide is not prohibited for use in Ontario.
- It is important to stick with control measures - established Japanese Knotweed sites can take anywhere between 5-10 years of control measures to eradicate. It takes a minimum of 5 years for the rhizomes to be fully depleted.

## Disposal

- Japanese Knotweed can be brought to a designated disposal facility in your municipality in a plastic bag. If your municipality does not have a disposal facility for this, you can collect the seed heads in a black plastic bag to rot - they can be disposed of regularly after this. For the stems, collect them in a brown paper bag to dry. Once dried, and if your municipality permits it, you can burn the bags in burn barrels. If you cannot do either of these things, seal plant material in a black plastic bag until it rots, then dispose of in garbage.
- Do not compost! Collect the plant in sealed thick black plastic bags and put in direct sunlight for at least a week until dried. You can then burn the plant pieces or dispose of them in a landfill.

## References

[Great Lakes Nonindigenous Species Information System](#), produced by the National Oceanic and Atmospheric Administration

[Invasive Japanese Knotweed – Best Management Practices in Ontario](#), produced by the Ontario Invasive Plant Council

[Ontario Invading Species Awareness Program](#), developed by the Ontario Ministry of Natural Resources and Forestry (MNRF), and the Ontario Federation of Anglers and Hunters (OFAH).

[Methods to Control Invasive Species](#), produced by Credit Valley Conservation