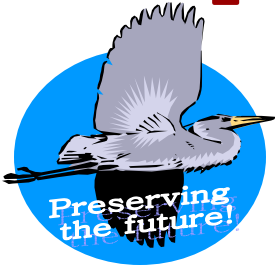


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Japanese Knotweed Important Facts and Removal Guide

A Publication Of The Pequannock River Coalition



Acknowledgements:

This guide was developed with funding provided by the Watershed Institute. We also gratefully acknowledge the participation and aid of the Borough of Riverdale and the volunteer effort of our members and supporters.

Japanese Knotweed: Important Facts and Removal Guide

Background:

Japanese Knotweed (*Fallopia japonica*) is a large plant, native to areas of eastern Asia including Japan, China and Korea. Also called “Japanese Bamboo” the plant has hollow stems with raised nodes or joints, reminiscent of true bamboo, although it is not related. Knotweed reaches heights of 6-12 feet by July each year, growing from tuberous roots that become large and woody over time.

It is extremely aggressive, able to grow from cracks in sidewalks and spreading either through lateral expansion of the root system or by seeds. In autumn it turns yellow, then brown, and dies off above the roots. Illustrations on the next page show it’s appearance. Note that it changes substantially from new shoots and young plants to older, dense thickets.

Japanese knotweed has become a significant problem across New Jersey. This invasive plant creates extensive, thick stands especially in wet places around rivers and streams, shutting out native plants while providing no benefit to wildlife.

Few attempts have been made to control this weed in our region, and insufficient public awareness exists of the problems it poses for native plants and wildlife. Left unchecked, it can take over large areas. As a component of our ongoing restoration work, combating Japanese knotweed has become a necessary task for the Pequannock River Coalition. Until recently, however, we had never executed a removal project.

In 2010 we chose Riverdale’s Appelt Park as a trial removal site. Our project, funded by the Watershed Institute, provided a valuable learning experience for our group in dealing with Japanese knotweed. We thank the Borough of Riverdale for their support and assistance, as well as the Watershed Institute, and the members and friends of the Pequannock River Coalition for their volunteer efforts.

Through this document we hope to encourage you to take on the task of removing this plant by passing on our experience, providing tips and suggestions for knotweed control, and by increasing public awareness on this important topic.

Why should knotweed be removed?

As noted, this plant will completely shut out native vegetation over time. This reduces food and nesting areas for native wildlife, eliminates wildflowers, and, if left unchecked, it can even crowd out people, invading public areas, closing paths, and covering lawns. Our lands can become ruled by this single plant.





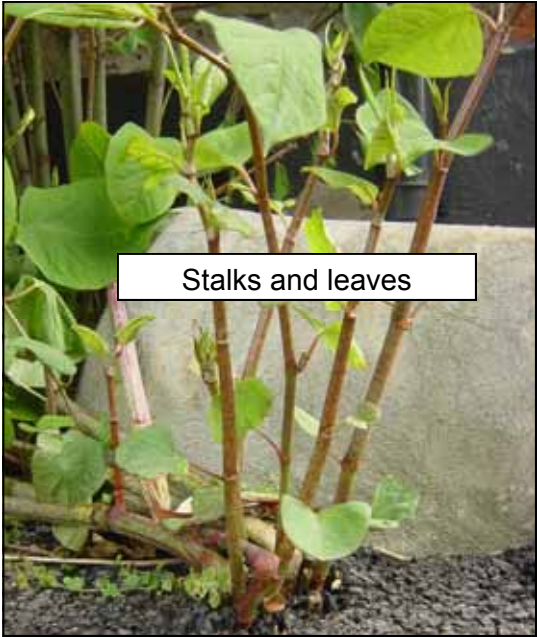
Young plant



Stand of mature plants



Leaves and flowers



Stalks and leaves



Knotweed in winter

Control of Japanese Knotweed—A Long-term Commitment:

First, realize that knotweed will never be truly eradicated, at least in the foreseeable future. This plant is here to stay! The best we can hope for is to keep it at a bare minimum on the lands we actively manage. In addition, removing it is a process that takes time. Persistence pays! The Pequannock River Coalition expended more than 400 hours of effort over a 4-month period to remove knotweed from approximately 4 acres in Appelt Park. It is difficult but worthwhile.

Prevention:

Once established, knotweed is much harder to eradicate than when it first arrives in an area. The best defense against Japanese knotweed is early detection and immediate removal. All landscape maintenance staff should learn to recognize this plant and report its occurrence. If immediate steps are taken to remove it, major problems can be avoided.

Where dense vegetation is present, knotweed will have difficulty establishing itself. Whenever vegetation must be removed from a site, replanting that site immediately and staying alert for knotweed emergence is good protection against this plant.

Hand pulling:

Hand pulling can be effective depending on the age of the plants and their location, particularly when combined with other methods.

Young plants in soft loam or sand are easiest to pull. Older plants growing in rocky soil or among tree roots can be difficult or impossible to pull by hand. A shovel can help to loosen these older root systems for removal. The best time for pulling is in June and July. Plants are larger then, to assist in finding and pulling them, but have no seeds. Once seeds are on the plants, usually by August, they should not be pulled to avoid spreading the seeds.

Like dandelions, Japanese knotweed can re-sprout if just a small portion of the root system remains after pulling. Try to remove as much of the root system as possible. However, removing a portion of the root system and the green portion of the plant will assist in the next step of removal – spraying.

Once removed, be careful not to spread knotweed through poor disposal practices. The pulled weeds may be properly and thoroughly composted, or incinerated. Never use collected knotweed stalks or roots as mulch.





Woody roots of mature plant

Spraying:

Spraying with herbicides can eliminate Japanese Knotweed. It is not really practical to spray large stands of mature plants, since it is difficult to spray enough of the plant to be effective and the amount of herbicide needed for 12-foot plants is enormous. This is why we have found that spraying should be combined with cutting and/or hand pulling. When the plant is pulled or cut in June and July, even if all the roots are not removed, the sprouts that grow back will be much smaller and therefore easier to spray.

The foliar herbicides recommended for use on knotweed kill actively growing plants. Since drought conditions and hot weather can slow the growth of the weeds, this also reduces the effectiveness of the herbicide. Cool weather and frost also reduce their ability to kill weeds. The best temperatures for application are between 60 degrees and 85 degrees.

The most recommended herbicide for use against Japanese knotweed is glyphosate. This is available in stores under various brand names, such as Roundup. Literature we reviewed varied widely in the suggested concentrations of this herbicide, giving the effective range from as low as 2% to as high as 40%. We found that typical concentrations in retail mixes of 2% to 5% were ineffective. Better success was achieved with a mixture of concentrate and water yielding a rate of 25% glyphosate. We also added a small amount (2 tablespoons per gallon) of dish detergent to this mixture, as recommended, to aid in application.



Plants re-sprouting after hand pulling

Care must be taken with spraying, particularly around rivers and streams. Prevent any overspray onto water. This means that some plants at the water's edge must be handled entirely by pulling. Also, avoid spraying onto non-target plants. Make sure that rain is not predicted within 4 hours after spraying. Always pay strict attention to the manufacturer's directions.

In Appelt Park, we hand-pulled knotweed in June and July, followed by spraying in mid-August to late September. The spraying was repeated several times at 2-week intervals. With each spraying, less of the weed was found. We estimate that this combination has eliminated 80-85% of the Japanese Knotweed in the park. On any site, repeated sprayings are likely to be needed.

Further information and assistance:

This guide is intended as a basic overview. For more information on the elimination of Japanese Knotweed, please contact the Pequannock River Coalition via email at pequannockriver@optonline.net, by phone at 973-492-3212, or reach us by mail at Pequannock River Coalition, P.O. Box 392, Newfoundland, NJ 07435.



Appelt Park before removal.

We can assist with assessing parks and other lands for the presence of knotweed and provide advice on removal strategies. Volunteer recruitment is also possible. We're here to help!

Working together we can prevent this plant from dominating our landscape. We hope you will take on this challenging but important task.



Hand pulling underway.



Appelt Park after removal.
Ready for native plants.