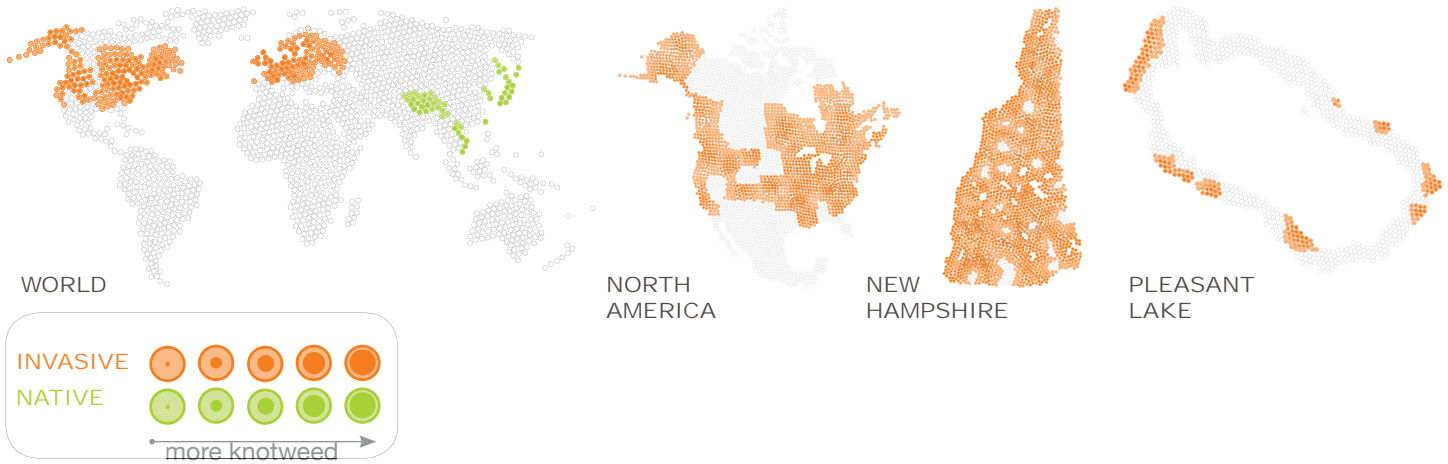


INVASIVE JAPANESE KNOTWEED AROUND PLEASANT LAKE

[Craig and Emily Williamson]

Japanese Knotweed is an exotic plant from eastern Asia that has invaded much of Europe and North America, including New Hampshire, New London, and now Pleasant Lake.



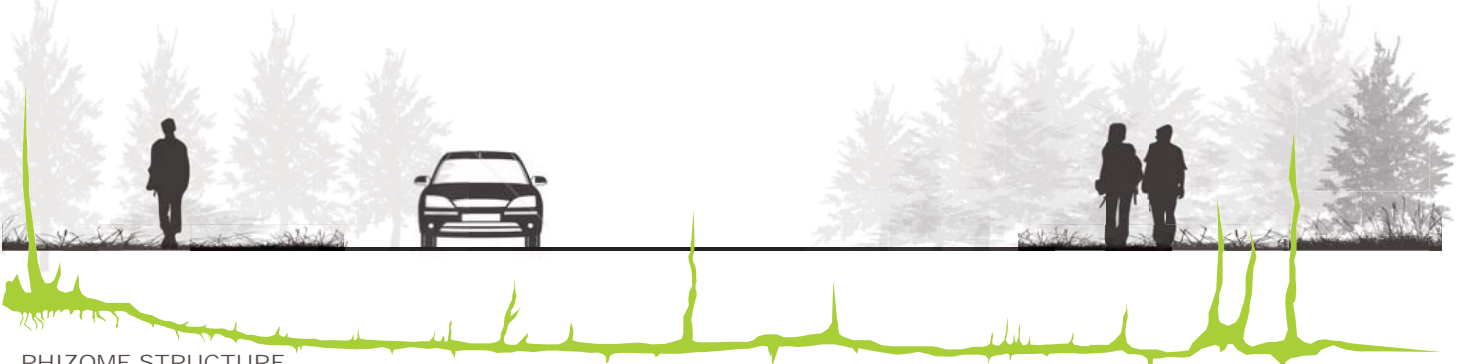
It is often called 'Godzilla Weed' because it can grow in size from short sprouts to over 10 feet tall in a single season and is also very difficult to get rid of once established. It can grow in dense stands that take over and replace all other plant species below the tree canopy. It can disrupt sidewalks, roads, walls, and even house foundations with its aggressive root and shoot system. It is 'riparian', meaning that it grows particularly well along shorelines such as rivers and lakes. A walk around Pleasant Lake in October of 2010 revealed knotweed in over 20 locations.



Locations where Japanese Knotweed was found during a walk around Pleasant Lake in October, 2010 with a global positioning system (GPS). The unlabeled red markers show locations where Knotweed was abundant. All locations were not recorded.

Why should we be concerned about Japanese Knotweed?

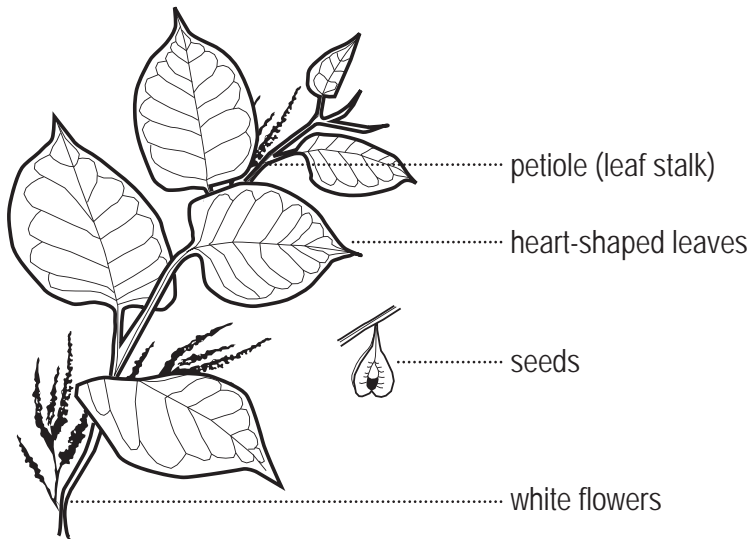
- 1) It is a 'riparian' plant that tends to thrive and take over shorelines of rivers and lakes.
- 2) It can grow in dense stands that take over and replace all other plant species below tree level.
- 3) Its aggressive root and shoot system can disrupt sidewalks, roads, and even house foundations.
- 4) It is VERY difficult to get rid of once it becomes established – eradication may take years.
- 5) Invasive species damage in the USA is over \$100 billion per year (\$34 billion for plants).
- 6) It is one of the top 100 least desirable invasive species in the world and it surrounds our lake.



RHIZOME STRUCTURE
[maximum depth = 6'-0" and maximum length = 60'-0"]

How can I recognize Japanese Knotweed?

Japanese Knotweed, *Polygonum cuspidatum*, often called 'false bamboo', is actually in the Buckwheat family and not related to bamboo. It has hollow stems with nodes like bamboo, often in dense stands. It has medium to large, somewhat heart-shaped leaves that often have red petioles. The white sprays of flowers appear in late summer, followed by clusters of thousands of seeds. It can cross with the larger Giant Knotweed to form Bohemian Knotweed. All three are similar in general form.



JAPANESE KNOTWEED PLANT STRUCTURE



credit: Craig Williamson



credit: Paul A. Graham



credit: Paul A. Graham



credit: www.ipmimages.org



credit: Paul A. Graham

How can Japanese Knotweed be controlled?

Knotweed is a 'prohibited invasive species' and 'noxious weed' in New Hampshire. Proper control methods are essential because even small fragments of roots or shoots can sprout new plants. Mechanical control such as cutting of stems or digging out the roots can lead to the spread of knotweed if the cuttings are not properly disposed of in well-sealed black plastic bags (best left in the hot sun for a period following bagging). In addition to repeated cutting or digging, another non-chemical control method is to cut the plants and cover the stand area with a thick dark tarp. The challenge is that the aggressive roots may grow laterally out from under the tarp for many feet beyond the initial stand. Chemical methods of control include table salt or vinegar poured down the hollow cut stems, and the herbicide Glyphosate (sold commercially as Roundup). Care must be used in applying any chemicals: too much salt can persist in the soil and prevent recolonization by desirable native or cultivated plants, and Glyphosate, though biodegradable, is toxic to aquatic organisms and thus prohibited near waterways. Established stands of knotweed may take repeated control applications involving multiple methods over many years to fully eradicate. Knotweed may disappear, only to resprout many years later. Biological enemies are often effective in controlling exotic species. The idea is that invasive plants arrive in a new region without their enemies. So importation of natural enemies from the homeland can help to control these exotic invasives. A small plant-sucking insect, *Aphalara itadori*, that belongs to a group called jumping plant lice (Psyllids) is being tested for biological control in the United Kingdom where they were released in March of 2010.

Other Information of Interest

The deep roots of Japanese Knotweed are not good at holding surface soil and can promote serious erosion along the shores of rivers and lakes.



image credit: Craig Williamson

Although Japanese Knotweed contains oxalic acid that aggravates medical conditions like arthritis and kidney stones, some people do eat it and say it tastes like green apples or rhubarb.



image credit: Paul A. Graham

The New England Wildflower society has some recipes for those who are interested:
<http://www.newfs.org/protect/invasive-plants/japanese-knotweed-recipes.html>

How can I get more information on Japanese Knotweed?

As with so many things these days, head to the internet. Here are a few suggestions:

- 1) Humorous but frightening video: <http://www.youtube.com/watch?v=HTF8oQ0075Y>
- 2) USDA (Dept. of Agriculture) website: <http://plants.usda.gov/java/> (then search for japanese knotweed)
- 3) Informative video: <http://www.youtube.com/watch?v=IG2z7IqPHTe>

A copy of this information is available on the PLPA website education section at: <http://www.plpa.net/>.