

Invasive Species Profile: Japanese Knotweed (*Fallopia japonica*)

By Greg Sykes (greg@grsykes.com)

Native Range: Japan, China, and Korea

U.S. Introduction: Late 1800s for ornamental erosion control

Life Cycle: perennial

Means of Spreading: rhizomes

Commercially Available: no

Control Method: hand-pull small plants; most patches require herbicide treatment

Good Alternative Species: goats beard (*Aruncus dioicus*), Virginia sweetspire (*Itea virginica*)

Comments: Japanese knotweed (*Fallopia japonica*); classification synonyms include *Reynoutria japonica* and *Polygonum cuspidatum*) first gained global notice as an ornamental plant. Shield-shaped leaves alternate along zigzagging branches. Clusters of tiny, cream-colored flowers bloom along these branches. Whereas plants often share male and female components on the same specimen, Japanese knotweed comes as either one sex or the other. At up to 10 feet tall, this herbaceous forb could be mistaken for a shrub. The straight stems resemble bamboo because of the nodes along their length. All of the stems and foliage die back each winter and re-emerge in full force from roots the following spring. Like bamboo, Japanese knotweed primarily spreads via rhizomes (i.e., long, subsurface roots). The extensive root system, previously hailed for erosion control, adapts to many soil conditions and penetrates up to 10 feet deep.



Figure 1. Japanese knotweed blooms from middle through late summer. This weed forms tall, dense mats that prevent other plants from growing.



Figure 2. Japanese knotweed emerges in the spring next to the dried stems from last year's growth. Red streaks color the new shoots; mature leaves turn green but stems retain maroon spots.

Japanese knotweed's global presence alludes to its adaptability. Outside of its Far East homeland, it is one of the World's most invasive weeds. This spread can be traced to German botanist and doctor, Philipp Franz von Siebold. By propagating a single plant, he introduced Japanese knotweed to the West. By 1848, it was distributed as an ornamental plant. However, late 19th century Victorian gardeners saw their knotweed samples explode into out of control weeds. By this time, the genie was out of the bottle. Today, Japanese knotweed is one of Europe's top 100 invasive species, plagues much of North America, is listed as "unwanted" in New Zealand, and gardeners in Australia are urged to reject this plant before it becomes a weed Down Under! Other countries dealing with it include India, South Africa, and Brazil. Literally, Antarctica is the only continent unconcerned with Japanese knotweed—for now!



Figure 3. Many of the individual plants outside of Japanese knotweed's native range come from a single specimen's cuttings (and hence a single sex), so most of the seeds are either not viable or form weak hybrids with related species. Therefore, the spread primarily comes from deliberate propagation through cuttings, root fragments dislodging and washing into other areas, and improperly disposing plant debris.

Within the U.S., Japanese knotweed grows anywhere from wetlands (freshwater to briny shores) to well-drained hillsides; from its preferred open sunny spots to shaded forests. In Northern Virginia, it infests both public lands and private properties. It is not yet established in the parks connected to Royal Lake. Volunteers and ecologists monitoring these natural areas remain on the lookout for this weed since it grows close by, such as the southern roadside of Zion Drive near Ox Road. *Fallopia* is also found on Braddock Road's southern edge between Trinity Christian School's driveway and Prestwick Drive.

Since only small root sections of Japanese knotweed are sufficient to start a new plant, digging out specimens tends to be ineffective for all but small, newly established plots. The plant debris must be sent to either an incinerator or a landfill; never throw Japanese knotweed in with yard waste recycling because the rhizomes can survive processing and spread elsewhere! Cutting back newly emerging vegetation is an inefficient control

measure because the roots' vast energy reserves enable shoots to keep emerging year after year. Herbicide treatment is the best method to kill this tenacious weed. In Fairfax County parks, Japanese knotweed is beyond the scope of Invasive Management Area (IMA) volunteers and only targeted by licensed contractors.

A terrific native alternative to Japanese knotweed is Virginia sweetspire (*Itea virginica*). This woody shrub reaches eight feet tall and produces cream-colored flowers in late spring. Whereas it likes sunny places with moist soil, this bush adapts to other locations. The chromatic autumn foliage ranges from reds to yellows. A perennial forb that only grows to three feet and also produces off-white blooms in the spring is goats beard (*Aruncus dioicus*).

For more information on Japanese knotweed:

<https://www.invasiveplantatlas.org/subject.html?sub=19655>

<https://www.invasive.org/biocontrol/12Knotweed.html>

<https://www.invasivespeciesinfo.gov/plants/knotweed.shtml>

<http://www.lawplainandsimple.com/legal-guides/article/the-day-of-the-knotweed>

<https://www.phlorum.com/blog/2017/07/19/how-japanese-knotweed-spreads/>

* * * * *