

Japanese Knotweed

Japanese Knotweed (*Fallopia japonica*, syn. *Polygonum cuspidatum*, *Reynoutria japonica*) is a large, herbaceous perennial plant, native to eastern Asia in Japan, China and Korea. In North America and Europe the species is very successful and has been classified as invasive in several countries.

A member of the family Polygonaceae, Japanese knotweed has hollow stems with distinct raised nodes that give it the appearance of bamboo, though it is not closely related. While stems may reach a maximum height of 3–4 m each growing season, it is typical to see much smaller plants in places where they sprout through cracks in the pavement or are repeatedly cut down. The leaves are broad oval with a truncated base, 7–14 cm long and 5–12 cm broad, with an entire margin. The flowers are small, creamy white, produced in erect racemes 6–15 cm long in late summer and early autumn.



Closely related species include giant knotweed (*Fallopia sachalinensis*, syn. *Polygonum sachalinense*) and Russian vine (*Fallopia baldschuanica*, syn. *Polygonum aubertii*, *Polygonum baldschuanicum*).

Other English names for Japanese knotweed include fleecflower, Himalayan fleece vine, monkeyweed, Huzhang (Chinese: 虎杖; pinyin: Hǔzhàng), Hancock's curse, elephant ears, pea shooters, donkey rhubarb (although it is not a rhubarb), sally rhubarb, Japanese bamboo, American bamboo, and Mexican bamboo (though it is not a bamboo). In Japanese, the name is “itadori” (usually written in katakana). There are also regional names, and it is sometimes confused with sorrel.

Japanese Knotweed is a commercial source of resveratrol supplements. Hu Zhang root extract is a traditional Chinese medicinal treatment.

Invasive Species

In the U.S.A. and Europe, Japanese knotweed is widely considered an invasive species or weed. It is listed by the World Conservation Union as one of the world's 100 worst invasive species. It is a frequent colonizer of temperate riparian ecosystems, roadsides and waste places. It forms thick, dense colonies that completely crowd out any other herbaceous species and is now considered one of the worst invasive exotics in parts of the eastern United States. The success of the species has been partially attributed to its tolerance of a very wide range of soil types, pH and salinity. Its rhizomes can survive temperatures of -35°C (-30°F) and can extend 7 metres (23 ft) horizontally and 3 metres (9.8 ft) deep, making removal by excavation extremely difficult. The plant is also resilient to cutting, vigorously re-sprouting from the roots. The most effective method of control is by herbicide application close to the flowering stage in late summer or autumn. In some cases it is possible to eradicate Japanese knotweed in one growing season using only herbicides. Trials in the Queen Charlotte Islands (Haida Gwaii) of British Columbia using sea water sprayed on the foliage have demonstrated promising results, which may prove to be a viable option for eradication where concerns over herbicide application are too great.

It can be found in 39 of the 50 United States (PUSDA) and in six provinces in Canada. The species is also common in Europe. In the U.K. it was made illegal to spread Japanese knotweed by the Wildlife and Countryside Act 1981. In the U.S.A. it is listed as an invasive weed in Ohio, Vermont, Virginia, New York, Alaska, Pennsylvania, Oregon and Washington state.

Two biological pest control agents that show promise in the control of the plant are the psyllid *Aphalara itadori* and a leaf spot fungus from genus *Mycosphaerella*.

Elimination

Japanese knotweed has a large underground network of roots (rhizomes). To eradicate the plant the roots need to be killed. Picking the right herbicide is essential, as it must travel through the plant and into the root system below. Glyphosate is the best active ingredient in herbicide for use on Japanese knotweed as it is 'systemic'. It penetrates through the whole plant and travels to the roots. Glyphosate is available under several trade names - all label the product as a “weed and grass killer”. Commercial Glyphosate concentrates contain approximately 40% Glyphosate; the balance is mostly water.

The most effective spraying solution is made with 1 part concentrate and 6-9 parts water. A small amount of liquid dish-washing detergent can be added to improve wetting of the leaves. If possible, both sides of the leaves should be sprayed until they are completely wet. It takes about 2-3 weeks for most of the plants to dry. After 2-3 weeks, all remaining plants should be sprayed again. This process needs to be continued until all the plants dry out.

Erect inflorescence



Detail of the stalk

