

Invasive Species Profile: Exotic *Wisteria* species

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Species Involved: Chinese wisteria (*Wisteria sinensis*) and Japanese wisteria (*W. floribunda*)

Native Range: see common name

U.S. Introduction: Chinese in 1816; Japanese ~1830

Life Cycle: perennial woody vine, living for at least 50 years

Means of Spreading: rapid vine growth; large, poisonous seeds and seed pods are dispersed via natural forces (e.g., waterways) and human activity (e.g., improperly disposing yard waste into woodlands)

Commercially Available: yes

Control Method: hand-pull small vines; may need a Weed Wrench to get all of the roots. Vines may be cut to free trees but all of the root must be removed or it will keep sending new shoots years afterwards. Large, mature vines may need glyphosate-based herbicidal application for effective eradication.

Good Alternative Species: American Wisteria (*W. frutescens*)

Comments: Exotic wisterias were first introduced to America as ornamental vines for trellises, gazebos, porches, and other structural features. The pinkish-purple flowers are the mid-spring highlights, though people find the twisting vine provides year-long interest—the Japanese twists clockwise whereas the Chinese twines counter-clockwise. Like a cute little cub that grows into a huge grizzly bear, wisteria vines skyrocket up to several meters within a year; without constant, vigilant pruning, wisteria becomes, well, *unbearably* out of control! Its roots send runners just beneath the surface; wherever new sucker shoots sprout, it sinks another deep taproot. No endemic herbivores or parasites adequately keep exotic wisterias in check.



Figure 1. Like a python constricting its prey, thick wisteria vines eventually kill the tree around which it coils. In this picture, wisteria almost completely hides the host tree.



Figure 2. Wisteria blossoms have a grape-like appearance.

Wisteria is a legume and related to peas, beans, clover, and kudzu. All legumes have specialized bacteria called *rhizobia* living in root nodules. These *rhizobia* convert inert atmospheric nitrogen into a form the plant can use while the root provides a place for the bacteria to flourish. This beneficial relationship between two species is called a *mutualism*. Having fertilizer manufacturers within root systems, wisteria is especially adaptable to poor soil conditions.

At Royal Lake Park and surrounding public lands, several Chinese wisteria patches were identified. The two small patches at Royal Lake and Crooked Creek Parks were already eradicated and those plots are currently monitored for resurgences. The public land where Shanes Creek originates, between Robinson High School and Commonwealth Boulevard, harbors a huge Wisteria infestation—in addition to English ivy and a host of other non-native invasive species. At this site, thick wisteria vines coil around trees, already killing some of them. Simply cutting back the wisteria does nothing to destroy this weed and the large vines are too mature for volunteers to remove via root-pulls. This site requires professional intervention.

If you would like wisteria growing in your yard, please consider purchasing the American Wisteria. It is native to the southeastern

states including parts of Virginia. *Wisteria frutescens* grows at a much slower and controlled rate than the exotic varieties while producing beautiful springtime flowers.

For more information on exotic *Wisteria*:

<https://projects.ncsu.edu/goingnative/howto/mapping/invexse/wisteria.html>

<http://www.invasive.org/browse/subinfo.cfm?sub=3083>

<https://www.fs.fed.us/database/feis/plants/vine/wisspp/all.html>

<http://www.ecosystemgardening.com/chinese-wisteria.html>



Figure 3. Chinese wisteria is the most apparent when flowering. Depicted is the blooming infestation at Shanes Creek's headwaters.

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