Invasive Plant Suppression

The world around us is full of green – trees, shrubs, vines, grass – but when is green not good? Much of the green along roadways, river banks, parking lots, and even in your back yard is often an invasive plant.

What is an invasive plant and why is it bad? An invasive plant is one that evolved elsewhere, often in Asia, was brought here deliberately and/or by accident, and grew out of control without its homeland competitors and predators to keep it in check. Once an area is overtaken by an invasive, the plants that do belong – the native plants – cannot compete and slowly die out. This upsets nature's balance, depriving wildlife on land and water of food and shelter.

No doubt you've seen that tall, lush, bamboo-looking plant that seems to line every creek bank, fill every roadside ditch or crowd every abandoned place in western Pennsylvania. Chances are, you're looking at Japanese knotweed. Japanese knotweed is considered a noxious weed and an invasive plant by the PA Department of Agriculture.

Japanese knotweed seeds – which form in late summer on pale yellow sprays of flowers – float downstream and start new patches along waterways. Dense tangles of knotweed are nearly impossible to walk through, but do not hold the soil on a stream bank, leading to erosion. Erosion turns soil to mud. Muddy water smothers macroinvertebrates, the tiny animals that fish eat. The whole food chain is upset, from top to bottom.

What can you do about Japanese knotweed? First, learn to identify it. If you have it on your property, control it. Penn State Extension has guidance on what to do: https://extension.psu.edu/japanese-knotweed. Share your knowledge and work together with your neighbors. Knotweed doesn't respect property lines.

Some people say nothing can be done to control Japanese knotweed. This isn't true. Patience, persistence and an educated approach will work in the long run. If you don't want to spray the leaves, try this method. Wait until June or July when the canes are very high and thick at the bottom. Cut the canes off about a foot tall, just below a bulging joint segment. Prepare a one or two-gallon pump-type hand sprayer tank with a solution of half water and half glyphosate concentrate (Roundup). Be sure to use concentrated glyphosate, 41% or more, not "ready-to-use" weed killer. Pump the sprayer up and carefully fill the hollow center of each stem with the solution (see photos). The solution will make its way into the underground rhizomes of the knotweed clump and kill it. If the knotweed is flowering when you do this treatment, be sure to bag and dispose of all the flowers and seeds. Use an agricultural dye or blue food coloring to help you see which stems you have treated. Glyphosate does not persist in the soil, and is safe when used as directed on the label. Always read and follow label directions.

At Rocky Bend Nature Preserve, Independence Conservancy is actively reclaiming acres of shoreline from dense stands of Japanese knotweed. Where it was once impossible to walk or enjoy the view, Conservancy crews have suppressed or eliminated knotweed. Freed from competition, native wildflowers and shrubs are sprouting up in the places they had grown before knotweed arrived. These native plants – the plants that evolved here – are once again nourishing and sheltering the wildlife we enjoy seeing and hearing – songbirds, butterflies, waterfowl, fish and amphibians.

Japanese knotweed is just one of many invasive plants common in Western Pennsylvania. Ailanthus, or "tree-of-heaven," oriental bittersweet vine, bush honeysuckle, autumn olive trees, glossy

buckthorn shrubs, Japanese barberry bushes, Callery pear trees and Japanese stiltgrass are all problematic plants of the green-is-not-good variety. Unfortunately, they are becoming the common backdrop of too many public thoroughfares. Stands of Japanese knotweed block visibility at roadway intersections. Oriental bittersweet vines choke out and pull down the trees they climb. Japanese stiltgrass smothers the woodland floor, crowding out wildflowers and new tree seedlings. Japanese barberry bushes harbor ticks that spread Lyme disease. Ailanthus trees attract spotted lantern flies that damage fruit crops. And these are but a few examples of the ecological, economic, health and safety issues caused by invasive plants.

Learning to identify invasive plants is the first step in halting their progress in your own back yard or woodlot. A wealth of information can be found online:

PA Department of Conservation & Natural Resources - Invasive Plants in Pennsylvania
https://www.pa.gov/agencies/dcnr/conservation/wild-plants/invasive-plants.html

PA Department of Conservation & Natural Resources - Invasive Plant Fact Sheets
https://www.pa.gov/agencies/dcnr/conservation/wild-plants/invasive-plants/invasive-plant-fact-sheets.html

Western Pennsylvania Conservancy – Invader Watch List
https://waterlandlife.org/wildlife-pnhp/invasive-and-unwelcomed-species/invader-watch-list/

Sustainable Forestry Institute – link to Penn State Extension Invasive Plant Fact Sheets
https://sfiofpa.org/sustainable-forestry/psu-invasive-fact-sheets/

For Japanese Stiltgrass: https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-stiltgrass

For Japanese Barberry:
https://www.invasivespeciesinfo.gov/terrestrial/plants/japanese-barberry

For Callery Pear:
https://www.invasivespeciesinfo.gov/terrestrial/plants/callery-pear

For Tree-of-Heaven:
https://extension.psu.edu/tree-of-heaven

For Autumn Olive:
https://extension.psu.edu/autumn-olive

For Glossy Buckthorn:
https://www.nps.gov/articles/000/glossy-buckthorn-acadia.htm

For Oriental Bittersweet:
https://www.invasivespeciesinfo.gov/terrestrial/plants/oriental-bittersweet

PHOTO GALLERY

Filled knotweed stems. Several weeks after filling with glyphosate, the Japanese knotweed rhizome is unable to sprout any significant regrowth. Like a battery slowly draining, this rhizome is losing its stored energy and will eventually die off.

Knotweed Rhizome. This is the seldom-seen underground rhizome of a Japanese knotweed clump. It is made of wood – heavy and hardy. Depleting the energy stored in this rhizome is the key to killing a Japanese knotweed plant.

Native meadow. This healthy meadow at Rocky Bend Nature Preserve is teeming with native grasses and wildflowers. It fills a space once occupied by invasive plants.

Hack n squirt demo. Bruce Senior demonstrates the hack-n-squirt, or frill-cut method of killing an ailanthus tree with blue-dyed glyphosate applied to shallow cuts in the living bark near the base of the tree.

Spotted lanternflies on ailanthus.
A perfect storm of invasive interaction - spotted lanternflies swarm over the stems of a young ailanthus tree.