The Knotweed Factor and Other Nasties

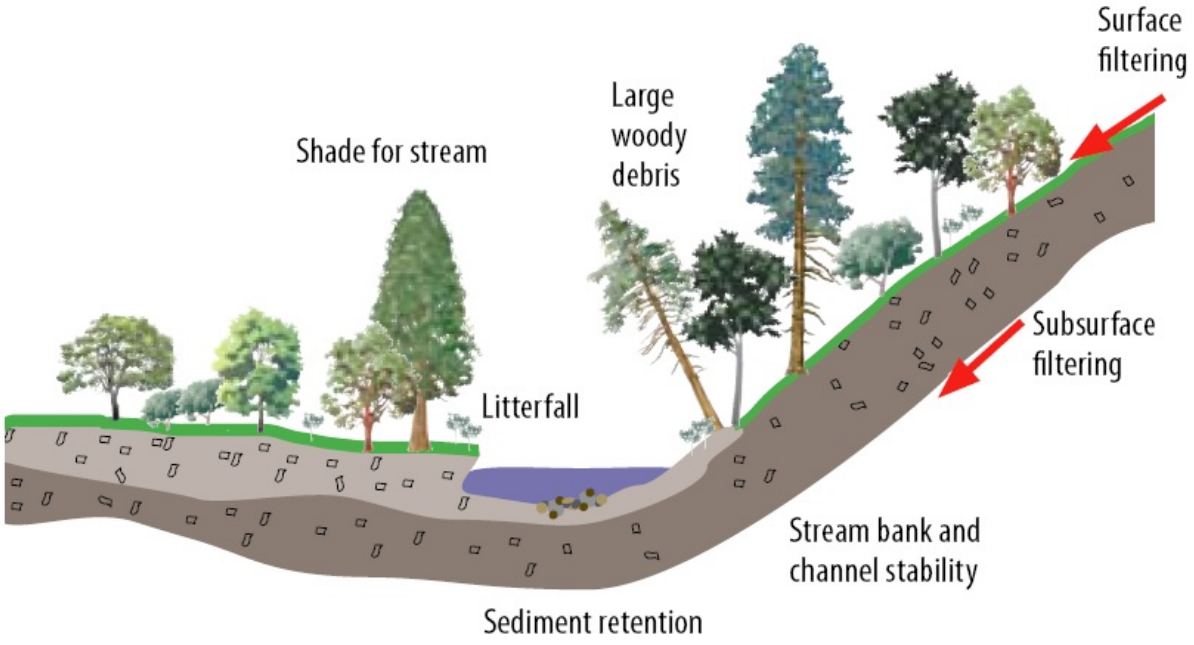


Figure 4.—Important functions of a riparian area include shade for the stream, stream bank stability, woody debris for the stream, sediment retention, litter for aquatic organisms in the stream, water filtering, aquatic habitat, and riparian wildlife habitat. (Adapted from Sacramento Area Flood Control Agency.)

1.

What is a riparian zone?
A riparian zone (also referred to as a buffer or corridor) is the interface between the land and a body of water including a river, stream, pond, lake, or reservoir.

Benefits of a Riparian Zone A riparian zone full of native vegetation provides many ecosystem services, or positive benefits that wildlife or whole natural ecosystems provide to people. Riparian zones help to…

- ♦ Improve water quality
- ♦ Prevent flooding
- ♦ Prevent erosion
- ♦ Provide food, shelter, & a migration corridor for fish and wildlife.[2]

Proximity to water's edge
Invasive plants that are directly at the water's edge should be a control priority. Seeds, rhizomes and roots, and plant fragments can easily flow downstream during periods of high water and establish elsewhere at your site, or on an adjacent property…

Proximity to significant natural communities or critical wildlife habitat
Infestations that threaten to overcrowd or shade out important native species and/or communities or compromise wildlife habitat may also be a high priority for management action. The New York Natural Heritage Program maintains online guides to help you identify and understand these communities and habitats if they occur at your site…
For example, vernal pools offer a breeding and feeding refuge to a variety of amphibians and reptiles including frogs, toads, turtles and salamanders. These pools are shallow depressions in the landscape that are filled with water during spring thaw or after a heavy rain storm… Invasive species that spread into these areas can threaten sensitive habitat and the species that rely on it.[3]

Japanese Knotweed

This common streamside and roadside invader can reproduce from the tiniest root fragment and a new plant can grow out of a single leaf. The stems are hollow and the large, heart-shaped leaves grow alternatively from stems. Japanese knotweed has been expanding along many… rivers and streams. Japanese knotweed displaces native vegetation due to its aggressive growth and by forming dense stands that shade out other plants; it lowers quality of habitat for fish and wildlife; and can contribute to streambank erosion problems. Japanese knotweed exceedingly difficult to manage as any disturbance can lead to its spread and control can take many years due to the energy storage capacity of its rhizomes.[5]

Most problematic for Rainbow Lake area and the Adirondacks:
Japanese knotweed
Purple loosestrife
Phragmites
Wild parsnip
Garlic mustard
What else? On-going list...

Don't Plant These!
Invasive Garden Plants and Healthy Native Alternatives

Nasty	Alternative Goodie
Burning bush (winged euonymus)	native blueberry, chokecherry, highbush cranberry
Bush honeysuckle	blueberry, spicebush, inkberry, shrub dogwoods,
viburnums[6] loosestrife	bee balm, coneflower, swamp milkweed
Japanese barberry	bayberry, winterberry, highbush blueberry
Japanese spirea	sweetfern, summersweet clethra, arrowwood

What else? On-going list…

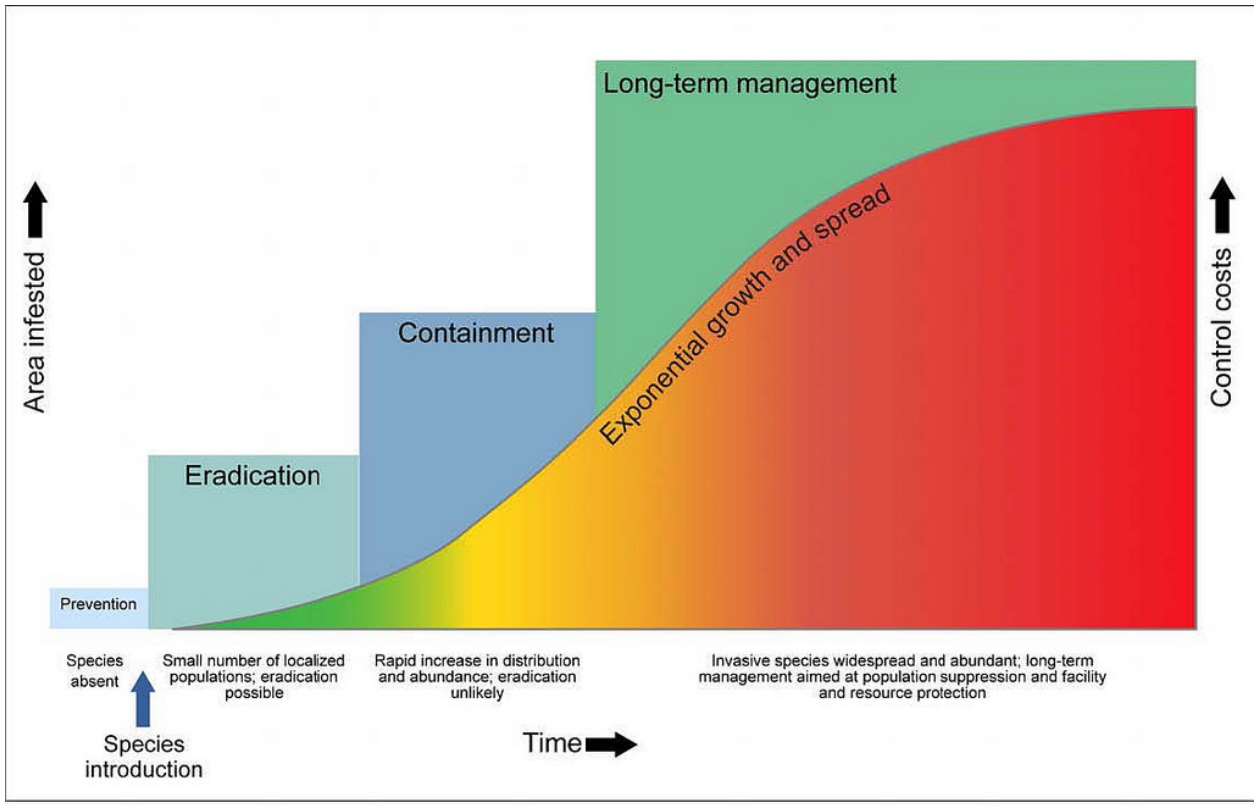
Cornell University has put together a good, although incomplete, list of common invasive ornamentals. Here's their PDF:
https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/2676/Finding_Alternatives_to_Invasive_Ornamental_Plants_in_NY.pdf

Common Non-Native Invasive Plants in our Area
These might be found in the area or your yard even if you didn't plant them:

- **Common Buckthorn**
- **Common Reed** (phragmites)
- **Exotic Bush Honeysuckles**
- **Garlic Mustard**
- **Giant Hogweed**
- **Japanese Barberry**
- **Japanese Knotweed**
- **Japanese Stiltgrass**
- **Multiflora Rose**
- **Oriental Bittersweet**
- **Swallow-Worts**
- **Tree of Heaven** [7]

NY State Prohibited and Regulated Invasive Plants
Many of these plants are already prohibited and/or regulated in New York State. Check out this PDF for some great info.
http://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf [8]

Timely Management is Important
In our area of the Adirondacks (on Rainbow Lake) we are privileged to have less of a problem than other areas. But unless we take action now it could become much harder.



Sources: National Invasive Species Council; U.S. Department of Agriculture; National Park Service; U.S. Fish and Wildlife Service; Rodgers, L, South Florida Water Management District; Department of Primary Industries, State of Victoria, Australia; and GAO. | GAO-16-49

The invasion curve provides a useful illustration of what can reasonably be done with respect to the progression of invasive species invasion. Staying within the prevention and eradication portion of the curve is a good goal for private landowners. Image from the US Government Accountability Office. [4]

ADK success story: The Knotweed Factor:
http://www.adirondacklifemag.com/blogs/2013/04/15/the-knotweed-factor/

Footnotes (all accessed 7/11/20):

1. https://rvcog.org/what-we-do/natural-resources/riparian-restoration-invasive-species-removal-and-planting-of-native-species/
2.http://www.capitalmohawkprism.org/uploads/8/1/4/0/81407728/riparianzone_march2018.pdf
3. http://www1.dec.state.ny.us/docs/lands_forests_pdf/tftismg17.pdf
4. http://www.adirondackstewardship.org/invasive-species
5. http://catskillcenter.org/blog/2016/8/30/japanese-knotweed-in-the-beaverkill
6. http://www.uvm.edu/pss/ppp/articles/honeysuckle.html#:~:text=There%20are%20many%20good%20alternatives,winterberry%2C%20serviceberry%2C%20and%20viburnums.
7. http://essex.cce.cornell.edu/environment/invasive-nuisance-species/invasive-plants/japanese-stiltgrass
8. http://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf