



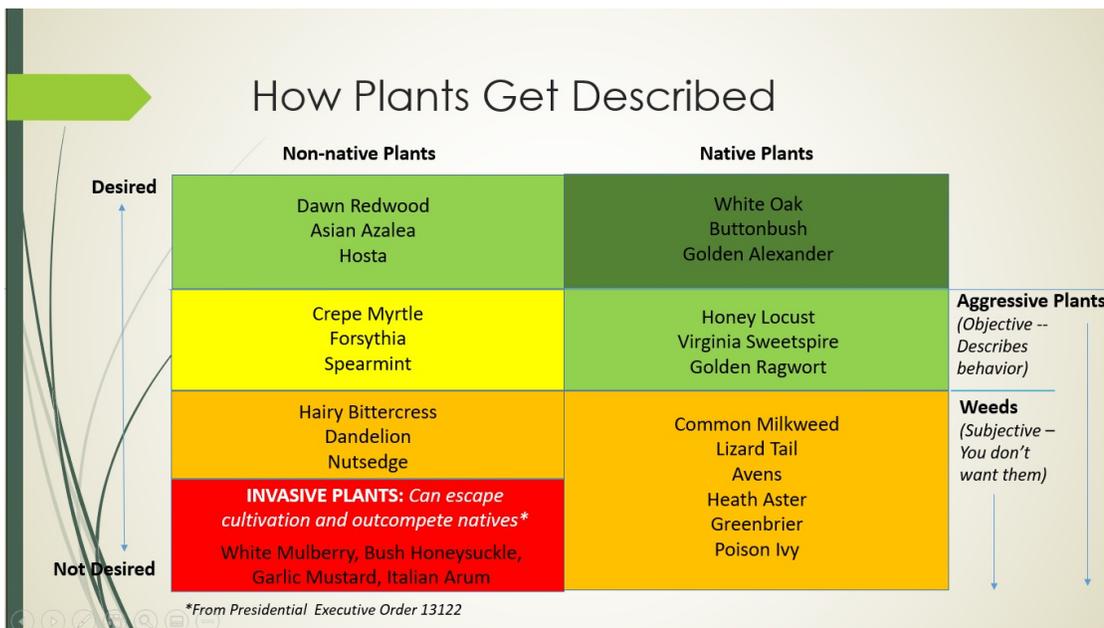
Virginia Tech • Virginia State University

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What is an Invasive?

- ▶ Many people use the terms “invasive” and “aggressive” interchangeably.
- ▶ In this presentation, we define invasives based on Executive Order 13112 created by the National Invasive Species Council and signed in 1999 by President Clinton and amended in 2016 by President Obama.
- ▶ “Invasive Species’ means, with regard to a particular ecosystem, a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal or plant health.”
- ▶ Note: This definition does not talk about how a plant behaves in a garden. It describes how it behaves when it gets out of a garden.
- ▶ Invasiveness is NOT about how a plant behaves in your garden

How Plants Get Described



Characteristics of an Invasive Plant

- ▶ It did not evolve in the place it is occurring.
- ▶ It likely evolved in a similar climate.
- ▶ It benefits from being away from the natural consumers/predators that keep it contained in its own place of origin. It may not be appealing to local wildlife.
- ▶ It has aggressive reproductive strategies that work well for it including:
 - ▶ Leafing out earlier than local plants or staying active longer in the season.
 - ▶ It puts out a lot of seed.
 - ▶ It spreads aggressively by vining, rhizomes, or other means.
- ▶ It is benefitting from the higher levels of Carbon Dioxide in the atmosphere due to climate change.
- ▶ It does not provide good nutrient support to local wildlife and support diversity. Some invasives can provide support to limited numbers of species or be attractive without providing the nutrients required by local species.
- ▶ Its invasive qualities may have taken a long time to manifest.
- ▶ It may be invasive in one location but not in others.

How Do Invasive Plants Get Into An Area?

- ▶ Sometimes by mistake.
- ▶ Often imported deliberately because:
 - ▶ They are good to eat.
 - ▶ They are thought to be good for the environment or agriculture.
 - ▶ They are beautiful.
- ▶ Many have been here for a long time. It can take a long time for a plant to build up a significant population that gets out of control.
- ▶ It's not uncommon to have various invasives show up together.

How Invasives Show Up in Your Yard

- ▶ They grow from the seed bank. The seed bank is the collection of seeds that are dormant but viable on or under your soil. These seeds are often kept in check by what is currently growing, but once that soil is disturbed or uncovered, they start growing.
- ▶ Seeds are brought in by the wind.
- ▶ Seeds are brought in by birds or other animals who eat them in one place and poop them out in your yard. Gee, thanks!
- ▶ Seeds are delivered via water – streams, runoff, etc.
- ▶ They grow over the property line from a neighbor's yard, the same way they can grow over a property line into the wild.
- ▶ They were in the yard when you bought the property.
- ▶ You planted them. Oops!

Can a Non-Native Plant Become a Native With Enough Time?

- ▶ Many non-native plants are able to, when moved to a new location, naturalize. Naturalization is the ecological phenomenon of an exotic (non-native) plant integrating into an ecosystem, reproducing and sustaining a population without human intervention.
- ▶ When we compare numbers of herbivores supported in a native community to the number of herbivores supported in the new community, naturalized plants support a fraction of the herbivores supported in their native location, even when they have been naturalized for hundreds of years.
- ▶ While it is theoretically possible for an exotic species to “become a native” and support local wildlife

like native plants, it is likely that the time-frame for coevolution is in the thousands or tens of thousands of years.

- ▶ It's all about biodiversity, allowing the myriad local species of plants and animals to thrive where they evolved.

How to Know What Plants are Invasive

- ▶ There are excellent resources and links on the Master Gardeners of Northern Virginia website: <https://mgnv.org/plants/invasive-plants/more/> More than 40 Invasive Plant Fact Sheets are available.
- ▶ Other Links include:
 - ▶ Virginia Invasive Plant Species List: <https://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>
 - ▶ Non-Native Invasive Plants of Alexandria, Virginia: <https://media.alexandriava.gov/docs-archives/recreation/parks/non-native-invasive-plants-of-the-city-of-alexandria=-virginia.pdf>
 - ▶ Non-Native Invasive Plants of Arlington County, Virginia: <https://arlingtonva.s3.amazonaws.com/wp-content/uploads/sites/13/2013/10/Invasive-Plant-List-2-19-15.pdf>
- ▶ If you want info when at a nursery, I like the Flora of Virginia app.
- ▶ Other references I used putting together this presentation are:
 - ▶ “Plant Invaders of Mid-Atlantic Natural Areas” by the National Park Service U.S. Fish and Wildlife Service.
 - ▶ “Invasive Plant Management and Identification Guide for the Mid-Atlantic States” published by The Nature Conservancy.

What's the Best Way to Make Sure You Never Plant an Invasive?

- ▶ Plant native plants

How You Can Keep Out or Get Rid of Invasives in Your Yard

- ▶ You can weed them out by hand with or without a tool.
- ▶ You can install a barrier.
- ▶ You can smother them:
 - ▶ Landscape fabric
 - ▶ Plastic sheets
 - ▶ Newspaper/cardboard covered with mulch
- ▶ You can out-compete them with healthy and abundant desired plants, particularly ground covers.
- ▶ You can use a chemical herbicide.
- ▶ *Special note:* In general, you should dispose of rhizomes, seeds, berries, bulbs and any part of an invasive plant capable of growing on its own in waste that will not be composted.

Quick Tips About Herbicides

- ▶ Generally, use herbicides as a last resort, if other methods won't work.
- ▶ Always know what the invasive is you are targeting and match the herbicide to it.
- ▶ Always read the directions and use herbicides according to instructions on the label.
- ▶ Some herbicides are very selective and kill only certain plants, some are very general and kill most or all plants.
- ▶ Herbicides have different methods of working which makes it important to match the herbicide to

the plant.

- ▶ Protect yourself and protect desired plants when using herbicides.
- ▶ There is a great chart made available by the Virginia Department of Forestry that make specific control recommendations on a number of Virginia's invasives available at https://dof.virginia.gov/wp-content/uploads/FT0031-Nonnative-Invasive-Plant-Species-Control-Treatments_pub.pdf
- ▶ A great way to research invasives and herbicides is to use "site:edu" or "site:gov" at the end of your search term.

Some Just Show Up in Your Yard

Garlic Mustard, *Alliaria petiolata*

Asiatic Dayflower, *Commelina communis*.

- ▶ Consider replacing with Spiderwort, *Tradescantia virginiana*.

Japanese Stiltgrass, *Microstegium vimineum*

Star of Bethlehem, *Ornithogalum umbellatum*

- ▶ Consider planting native Spring Beauty, *Claytonia virginica* instead.

Porcelainberry, *Ampelopsis brevipedunculata*

- ▶ Consider replacing with Crossvine, *Bignonia capreolata* (or any other native vine!)

Oriental Bittersweet, *Celastrus orbiculatus*

- ▶ Consider replacing with American Bittersweet, *Celastrus scandens*.

Japanese Honeysuckle, *Lonicera japonica*

- ▶ Consider replacing with native Trumpet Honeysuckle, *Lonicera sempervirens*.

Wineberry, *Rubus phoenicolasius*

- ▶ Consider replacing with Thornless Blackberry, *Rubus fruticosus* 'Chester'.

Bush Honeysuckle, *Lonicera maackii*

- ▶ Consider replacing with Sweet Shrub, *Calycanthus floridus* 'Athena.'

Tree of Heaven, *Alianthus altissima*

- ▶ Consider replacing with Sweetgum, *Liquidambar styraciflua*.

Hot New Invasive Insect: Spotted Lanternfly

- ▶ A webpage has been added to the Master Gardeners of Northern Virginia website with more information including a reporting form and an entire presentation: <https://mgnv.org/resources/spotted-lanternfly/>.
- ▶ If you see a Spotted Lanternfly, please take a photo, and contact the Extension Office at 703-228-6414 or mgarlalex@gmail.com

White Mulberry, *Morus alba*

- ▶ Consider replacing with Black Gum, *Nyssa sylvatica*.

Siberian Elm, *Ulmus pumila*

- ▶ Consider replacing with Red Maple, *Acer Rubrum*.

Invasives You (or a Previous Owner) Thought You Wanted

Italian Arum, *Arum Italicum*

- ▶ Consider replacing with Wild Ginger, *Asarum canadense*.

Exotic Bamboo, *Bambusa spp.*, *Phyllostachys spp.*

- ▶ Consider replacing with Arborvitae, *Thuja occidentalis*.

Japanese Knotweed, *Fallopia japonica*

- ▶ Consider Virginia Knotweed, *Persicaria virginiana* as an alternative.

English Ivy, *Hedera helix*

- ▶ On trees, cut stems at base and again higher up. Let vines die. Good information at <https://armn.org/choking-hazard/>
- ▶ Consider Golden Ragwort, *Packera aurea* instead.

Chameleon Plant, *Houttanyia cordata*

- ▶ Consider replacing with Foamflower, *Tiarella cordifolia*.

Chinese Silver Grass, *Miscanthus sinensis*

- ▶ Consider replacing with native Switchgrass. *Panicum virgatum*.

Sweet Autumn Clematis, *Clematis terniflora*

- ▶ Consider Virgin's-bower, *Clematis virginiana* as a replacement.

Periwinkle, *Vinca minor*

- ▶ Consider Woodland Phlox, *Phlox divaricata* as a replacement.

Asian Wisterias, *Wisteria floribunda* and *Wisteria sinensis*

- ▶ Consider American Wisteria, *Wisteria frutescens* as replacement.

Barberry, *Berberis thunbergii*

- ▶ Consider replacing with Virginia Sweetspire, *Itea virginica*.

Burning Bush, *Euonymus alatus*

- ▶ Consider Red Chokeberry, *Aronia arbutifolia*, as a replacement.

Privets, *Ligustrum spp.*

- ▶ Consider replacing with Inkberry, *Ilex glabra*.

Silk Tree/Mimosa, *Albizia julibrissin*

- ▶ Consider replacing with Eastern Redbud, *Cercis canadensis*.

Callery Pear, *Pyrus calleryana*

- ▶ Consider replacing with a Fringetree, *Chionanthus virginicus*.

Rose of Sharon, *Hibiscus syriacus*

- ▶ Consider replacing with Scarlet Rose-mallow, *Hibiscus coccineus*.

The Ones You Really Love...

Lilyturf, Monkey Grass, *Liriope muscari* and *L. spicata*

- ▶ Consider replacing with Christmas Fern, *Polystichum acrostichoides*.

Heavenly Bamboo, *Nandina domestica*

- ▶ Consider Strawberry Bush, *Euonymus americanus* as a replacement.

Butterfly Bush, *Buddleia davidii*

- ▶ Consider replacing with Buttonbush, *Cephalanthus occidentalis*.

Japanese Maple, *Acer palmatum*

- ▶ Consider replacing with Witch Hazel, *Hamamelis virginiana*.

Final Thoughts

- ▶ If your favorite plant just got outed as an invasive, take heart. We've all been there. Even if you can't bear to remove it, you can keep it in check and replace it if with something else if it dies.
- ▶ Keep an open mind. You may fall in love with a native plant and find that makes trading out more palatable.
- ▶ If you feel overwhelmed with invasives in your yard, pick one that you can do something about, and do that. Then move on to another one with a success under your belt.
- ▶ Start somewhere, and feel good about each invasive you remove.