

strategies for managing
**INVASIVE
PLANTS**



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Joining me:

Jeanne Scherer

UW Madison Natural Resources Institute Aquatic Invasive Species Program
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Jeanne has been gardening all her life, so when she noticed that the materials she provides to people for aquatic invasive species outreach didn't have much for gardeners, the first step was partnering with Melinda and her team to help us reach water gardeners. Later we expanded our education efforts to people doing shorelines and rain gardens. Over the years, we have expanded from identification, basic management and disposal information to more emphasis on prevention and protecting our landscapes by keeping them filled with species like native plants. This webinar and our new Landscaping Alternatives brochures are part of that effort.

Liz Tanner

Organisms in Trade (OIT) Coordinator for Wisconsin DNR
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Liz became the Organisms in Trade Coordinator for the WI DNR in 2021. Shortly after beginning her position, she learned about the successful partnership between Melinda's team and UW-Extension on educating water gardeners on invasive species topics. Recognizing a need for similar efforts with upland gardeners, Liz formed a new partnership to expand Melinda's efforts to include terrestrial topics in 2023. Liz also works with various other industries to address invasive species in the trade, including plant nurseries, pet stores, online sales, biological supply and the food trade.

Aquatic Invasive Species Outreach

Wisconsin's aquatic invasive species (AIS) program focuses on preventing the introduction of new invasive species to Wisconsin, containing the spread of invasives that are already in the state, and managing established populations when possible. In close cooperation with the Wisconsin Department of Natural Resources and Extension Lakes program, UW-Madison Division of Extension education efforts focus on working with resource professionals and citizens statewide to teach boaters, anglers and other water users the steps they should take to prevent transporting aquatic invasives to new waters. Efforts also address other potential mechanisms of introduction, including aquarium pet release and water gardening.

Invasive Species ID and Impacts

Report an Invasive Finding



AQUATIC INVASIVE SPECIES OUTREACH

Organisms in Trade Program

The sale and trade of invasive species presents a pathway for the introduction and spread of invasive species in WI. As a result, the WI DNR developed an OIT program to address this pathway. The OIT program works to educate pathway users, monitor industries for invasive species sales, and seek compliance with state regulations. Work targets many industries including garden and landscaping, pet trade, internet sales, live food trade, commercial fishing, bait dealers, biological supply and more.



What is an invasive plant?

Invasive plants are non-native plants regulated by the state, in part because they leave the boundaries of the landscape, move into natural areas and become established and are able to spread without any human intervention.

What isn't an invasive plant?

- A **weed** is a plant out of place, could be a dandelion or a desirable plant out of place
 - Common Weed Seedlings of the North Central States
- **Aggressive plants** are the bullies of the garden. They crowd out nearby plants, but stay within the confines of the landscape. These can be native or non-native plants.
- **Noxious weeds** are plants that have been identified as harmful to people, animals, crops, livestock and the environment and should be removed. Each state or province has a listing as well as the USDA.

Why Manage Invasive Plants?

- They outcompete and displace native plants causing:
 - Degradation of the natural habitat
 - Decrease diversity of plants
 - Serve as vectors for disease
- They negatively impact soil and water quality
 - Degrade soil structure
 - Increase the risk of soil erosion
 - Decrease water quality
 - ◆ Create dense patches or stagnant areas
 - * Lower oxygen levels
 - * Alter hydrology by trapping sediments
 - Contribute to climate change

- ◆ Invaded habitats release more carbon through more severe uncontrolled fires
- ◆ Invasive species reduce water flow in streams with low water levels due to persistent drought
- ◆ Invasive tree pests reduce carbon sequestration rates in forests
- ◆ Aquatic invasives decrease the resilience of green infrastructure to resist flooding and sea level rise
- ◆ Aquatic invasive species can also increase water temperature, which negatively influences the hydrologic cycle

Economic Impact - We All Pay For

- High cost of managing a species once established

Impact on Human Health

- Create habitat for disease carrying ticks
 - Honeysuckle and barberry
- Allergic reactions to invasive plants

Invasive Species Rule NR-40

"The invasive species rule creates a comprehensive, science-based system with criteria to classify invasive species into two categories: "prohibited" and "restricted." With certain exceptions, the transport, possession, transfer and introduction of prohibited species is banned.

Restricted species are also subject to a ban on transport, transfer and introduction, but possession is allowed, except for fish and crayfish. The department may issue permits for research or public display of any listed invasive species. For species other than invasive fish and crayfish, permits may also be issued for other purposes. The rule also defines the terminology used."
WI DNR



About Melinda

Nationally known gardening expert, TV/ radio host, author & columnist Melinda Myers has over 30 years of horticulture experience and has written over 20 gardening books, including Can't Miss Small Space Gardening, the recently revised Midwest Gardener's Handbook, and Jackson and Perkins' Beautiful Roses Made Easy. She hosts the nationally-syndicated "Melinda's Garden Moment" program airing on radio stations throughout the U.S. Melinda also hosts the internationally distributed Great Courses "How to Grow Anything" DVD/ Instant Video series, including the latest Food Gardening for Everyone DVD set. She is a columnist and contributing editor for Birds & Blooms magazine, and a nationally-distributed gardening column. She appears regularly as a guest expert on national and local television and radio shows.

Visit Melinda's website,
melindamyers.com

Prohibited Plants

- Rare or not present in the state, but has a large potential to cause harm. Eradication and prevention are feasible.
- Ban on transport, possession, transfer and introduction prohibited

Restricted Plants

- Already established in the state and the impacts are evident. Complete eradication is unlikely.
- Ban on transport, transfer and introduction, but possession is allowed

Avoid Adding Invasive Plants to Your Gardens, Water Features and Landscape

- Check with:
 - [Wisconsin Department of Natural Resources](#)
 - Your local Department of Natural Resources
 - University Extension Service
 - Local nature center, arboretum or botanical garden
 - invasiveplantatlas.org

When Shopping

- Purchase only from reputable sources
- Just because you can purchase a plant online doesn't mean it is allowed in WI (or your state or province)
- Shop locally whenever possible
- Avoid seasonal decorations or DIY's that may contain invasive plants

Grow Healthy Plants

- Better able to outcompete invasive plants
- Grow native plants whenever appropriate for the location

Dealing with Existing Invasive Plants

A Five Step Approach

1. Identify the plants
2. Map out the problem area and note nearby invasive populations
3. Do your research
4. Decide on best control(s) to use
5. Evaluate success and adapt as needed

Proper Identification

- [Identifying 8 Aquatic Invasive Species in Wisconsin](#)
- [Top Invasive Plants to Avoid](#)
- [Identifying Terrestrial Invasive Plants](#)
- [Invasive Plant Management Factsheets](#)
- [Wisconsin First Detector Network - Invasive Species Calendar](#)

A Few Common Misidentifications

- A. [Dame's Rocket](#) (*Hesperis matronalis*) has 4 flower petals
versus
- B. [Woodland Phlox](#) (*Phlox divaricata*) has 5 flower petals
- A. [Oriental Bittersweet](#) (*Celastrus orbiculatus*) has flowers and fruit along the stem in the leaves axils
versus
- B. [American Bittersweet](#) (*Celastrus scandens*) only has flowers and fruit at the tip of the stem
- A. [Lesser Celandine](#) (*Ficaria verna* formerly *Ranunculus ficaria*) has 8, sometimes up to 12, bright yellow petals surrounding a central disk
versus
- B. [Marsh Marigold](#) (*Caltha palustris*) has 5 to 9 yellow petals

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Managing the Problem (Control Options)

- Dress for the job
 - Protect yourself from ticks, mosquitoes and more
 - Long sleeves, long pants tucked into socks
 - Personal Safety Equipment when using pesticides
- Contain the spread
 - Cut back plants to prevent reseeding until you can remove the plant
 - ◆ **Dame's Rocket** (*Hesperis matronalis*) - deadhead before seeds form
 - ◆ **Woodland Forget-Me-Nots** (*Myosotis sylvatica*) - deadhead before seeds form
 - ◆ **Purple Loosestrife** (*Lythrum salicaria*) - deadhead before seeds form
 - ◆ **Garlic Mustard** (*Alliaria petiolata*) - just after flower stalks have elongated, before flowers appear
 - ◆ **Japanese Knotweed** (*Fallopia japonica*) - repeated cutting on small patches
 - ◆ **Yellow Flag Iris** (*Iris pseudacorus*) - removing seedheads may help slow spread
 - ◆ **Buckthorn** (*Rhamnus* spp.) - remove fruit before it ripens, repeatedly cut back and strip sprouts that form
- Properly dispose of the debris
 - Most compost piles are not hot enough to kill the seeds and even some perennial plants
 - Burning impacts air quality and may not be permitted in your community
 - Dispose of in the trash, if allowed by your municipality
- Timing of control and persistence are keys to success
 - Mowing
 - ◆ **Bishop's Goutweed** (*Aegopodium podagraria*) - regular cutting and mowing may slow the spread
 - ◆ **Crown Vetch** (*Coronilla varia*) - in late spring or twice a year (June & late August with leaf out) for several consecutive years can control spread
 - ◆ **Reed Canary Grass** (*Phalaris arundinacea*) - mow in late spring, after grass has put on some growth, repeat for consecutive years
 - Smother
 - ◆ Edge the garden bed
 - ◆ Cover with tarp, black landscape fabric or similar material
 - * Occultation for at least one full season
 - **Solarization**
 - ◆ Clear plastic
 - ◆ Edges secured to trap heat to cook tops, roots and seeds
 - ◆ During the hottest months
 - Physically remove
 - ◆ All parts of the plants, above and below ground
 - * Best done before seed set to avoid spreading seeds
 - ◆ Dig and dispose of small populations
 - * A few herbaceous plants
 - **Moneywort** (*Lysimachia nummularia*)
 - Garlic Mustard (*Alliaria petiolata*)
 - Dame's Rocket (*Hesperis matronalis*)
 - Japanese Knotweed (*Fallopia japonica*)
 - Lesser Celandine (*Ficaria verna* formerly *Ranunculus ficaria*)
 - * A few woody saplings
 - Use a garden fork or weed wrench-type tool
 - **Honeysuckle** (*Lonicera* spp.)
 - **Common Buckthorn** (*Rhamnus cathartica*)
 - **Glossy Buckthorn** (*Frangula alnus* formerly *Rhamnus frangula*)
 - **Japanese Barberry** (*Berberis thunbergii*)
 - **Burning Bush** (*Euonymus alatus*)
 - **Girdle trunk**
 - ◆ "To girdle a stem, a bladed tool is used to make a cut all the way around the circumference of the stem or trunk. The cut should be deep enough to completely penetrate the outer and inner bark (cambium). A second cut is made 3-4" above and parallel to the first, again all the way around the trunk. A bladed tool is effective at cutting or prying the inner and outer bark away between the two parallel cuts (Kilroy and Windell 1999)."

- Chemical
 - ◆ Check WI DNR or local source for recommendations on products and timing
 - ◆ WI DNR requires permit and application by certified applicator when the site is wet (wetland or immediate area next to shoreline)
 - ◆ Read and follow all label directions carefully **before** applying
 - ◆ For effective and safest control
 - * Right product
 - * Applied at the right time
 - * Repeat as directed and needed
 - * Protect nearby desirable plants
 - ◆ Foliar applications
 - ◆ Basal bark treatment
 - * Buckthorn (*Rhamnus* spp.)
 - * **Multiflora Rose** (*Rosa multiflora*)
 - * Oriental Bittersweet (*Celastrus orbiculatus*)
 - ◆ Cut stump treatment
 - * Buckthorn (*Rhamnus* spp.)
 - * Honeysuckle (*Lonicera* spp.)
 - * Burning Bush (*Euonymus alatus*)
 - * Barberry (*Berberis thunbergii*)
 - * Multiflora Rose (*Rosa multiflora*)
 - * Oriental Bittersweet (*Celastrus orbiculatus*)
 - ◆ Herbicide injections
 - * Japanese Knotweed (*Fallopia japonica*)
 - * Woody Invasive Plants
- Managing large infestations
 - Start in area with the lowest density of infestations (outliers)
 - ◆ Continually monitor areas cleared and remove any new plants as needed
 - Move toward the perimeter of the densest area of infestation
 - ◆ The goal is to contain the core infestation
 - Tackle the core - this takes the most resources and effort
- Biocontrols
 - Purple Loosestrife (*Lythrum salicaria*)
 - More research on other possibilities

- Continue to monitor and control as needed
 - It takes persistence and perseverance to manage invasive plants
- Research on Revegetation
 - The Cover It Up Project
 - ◆ Planting cleared areas with grasses, wildflowers or native woody plants
 - ◆ Suppress regrowth of invasive species

Helpful Free Resources for You and Those You Advise

- Past webinars sponsored by University of Wisconsin - Extension and Wisconsin DNR
 - Helping Gardeners Create a Landscape Free of Invasive Plants
 - ◆ Password: C4UKDzly
 - ◆ Download handout
 - Create a Beautiful Landscape Free of Invasive Plants
 - ◆ Download handout
 - Grow Beautiful Water Gardens Free of Invasive Plants
 - ◆ Password: n#wVAD9M
 - ◆ Download handout
 - Top Plants for Rain Gardens, Water Gardens, Shoreline Gardens & Those to Avoid
 - ◆ Password: &xe9hPU^
 - ◆ Download handout
- Wisconsin DNR website
- Videos
 - Identifying 8 Aquatic Invasive Species in Wisconsin
 - Top Invasive Plants to Avoid
 - Identifying Terrestrial Invasive Plants
- Publications
 - Aquatic Invasive Species Publications and Products
 - Protect Your Pond or Water Garden
 - Use Your Gardening Skills to Protect Our Native Habits
 - Landscape Alternatives for Common Invasive Wetland and Aquatic Plants

UPCOMING WEBINARS & APPEARANCES

- [Landscape Alternatives for Common Terrestrial Invasive Flowers and Grasses](#)
- [Landscape Alternatives for Invasive Trees, Shrubs and Vines of the Great Lakes Region](#)
- [Regulated Aquatic Invasive Plants in Wisconsin](#)
- [Common Wetland Invasive Plants in Wisconsin](#)
- [Invasive Species Wildcards](#)
- [Ordering WI DNR Publications](#)
- [WI DNR Aquatic Invasive Species Publications](#)
- [WI DNR Terrestrial Invasive Species Publications](#)
- [Wisconsin Invasive Species Calendar](#)
 - This resource from the Wisconsin First Detector Network can help you identify invasive plants based on the time of year and their lifecycle

Webinar February 26th

Create a Beautiful Shade Garden

Webinar February 27th

How to Select Rain Garden Plants

Webinar March 12th

Grow Pollinator-Friendly Spring and Summer Flowering Bulbs

Webinar March 19th

Be a Waterwise Gardener

March 21th-30th

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Webinar March 26th

Succession Planting and Crop Rotation

Webinar March 27th

Rain Garden Q&A

Webinar April 2nd

Container Gardens for Sun and Shade

Webinar April 10th

Reinvigorate Your Rain Garden

Webinar May 7th

Vertical Gardening

Webinar May 15th

7 Steps to Managing Water on Your Property

June 4th

Attracting Hummingbirds

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and Wisconsin DNR for Sponsoring this Webinar!*

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