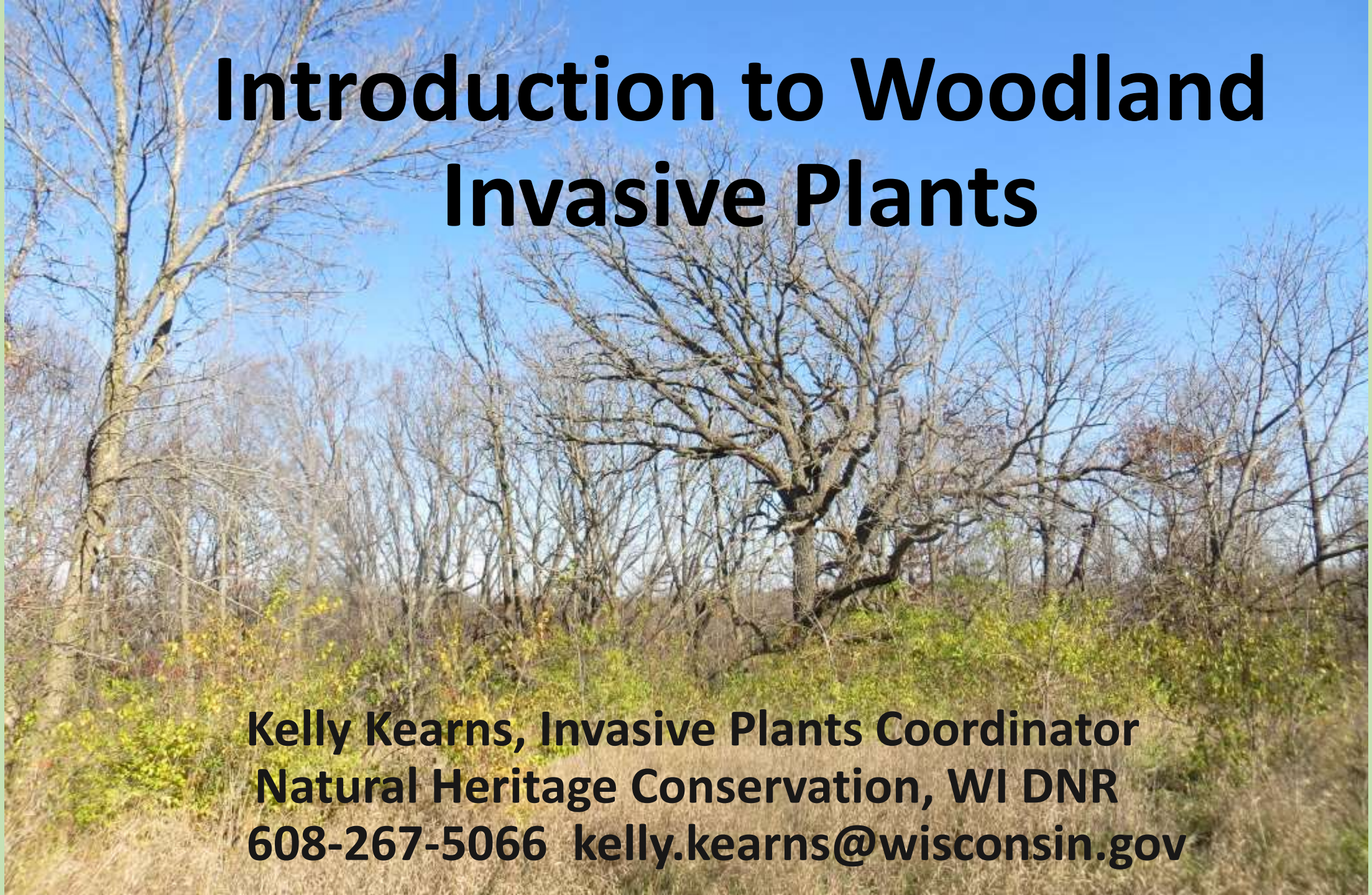
Introduction to Woodland Invasive Plants



Kelly Kearns, Invasive Plants Coordinator
Natural Heritage Conservation, WI DNR
608-267-5066 kelly.kearns@wisconsin.gov

- Basics of invasive plants
  - How can I tell if it is invasive?
  - What problems do they cause in woodlands?
    - Alter/degrade wildlife habitat
    - Kill or weaken trees
    - Create dense midstory
    - Reduces access for recreation and management
    - Reduces wildflowers
    - Human health hazards
- Identification of some common invasives and aggressive natives
  - Trees
  - Shrubs
  - Vines
  - Understory plants (just a few examples)
- Resources for more information

Invasive Plants are non-native species that become established in natural plant communities and wild areas and replace native vegetation and cause ecological harm

How do I know if a plant is invasive?

- Is it dominating the site?
- Does it appear to be spreading quickly and eliminating other plants?
- Is there evidence of insects or other organisms feeding on it?
- Do you know it to be invasive from elsewhere?

From This . . .

(One plant amidst the wildflowers)

To This !! In just a few years

(Garlic mustard will take over)

Shoot and root growth – 1 year

Canada thistle

644 ft of roots and 336 ft of shoots

Restricted

Phil Westra, Colorado State University

Ecological Impacts of Invasive Plants

- Displace native vegetation and limits tree regeneration
- Alter soil nutrients, structure and organic matter
- Degrade wildlife habitat
- May completely alter ecosystems

Eurasian Bush Honeysuckle *(Lonicera spp.)*

- Leafs out early
  - attracts nesting birds
  - nests have near 100% predation
- Slows growth of mature trees

Restricted

Common buckthorn *(Rhamnus cathartica)*

-fruits cause bird diarrhea resulting in a net energy loss

-leaves high in nitrogen, increasing weedy species

Restricted

+ Native trees and shrubs support high abundance and diversity of arthropods, which in turn support diversity of birds

- Non-natives support very few arthropods

Garlic Mustard *(Alliaria petiolata)*

- Decreases beneficial mycorrhizae
- Slows tree growth
- Prevents regeneration of native trees

Restricted

Economic Impacts of Invasive Plants

- Long-term forest production declines
- Agricultural cost of controls and loss of production
- Shoreline damage
- Structural damage
- Reduction in property values (limits uses)

Reed canary grass (*Phalaris arundinaceae*)

- Preventing tree regeneration

Japanese hops (*Humulus japonica*)

- Annual vine smothers other vegetation
- Dies back in winter exposing the shore to erosion

Prohibited/Restricted

Japanese knotweed (*Polygonum cuspidatum*)

- Breaks through asphalt, concrete and building foundations
- Forms large dense stands

Restricted

HEALTH IMPACTS OF INVASIVE PLANTS

- Human health concerns from dermally toxic and allergenic plants

- Children, pets and livestock eating toxic plants

- Pets and humans impacted by increases in Lyme's disease

Poison Ivy (Toxicodendron radicans)

Dermally toxic
native

Wild Parsnip *Pastinaca sativa*


Photo: WDNR


Photo: www.digitaljournal.com


Photo: www.wildliferanger.co.uk

Restricted

Fields + sunny roadsides

WARNING: Phytophotodermatoxic

Giant Hogweed

(Heracleum mantegazzianum)

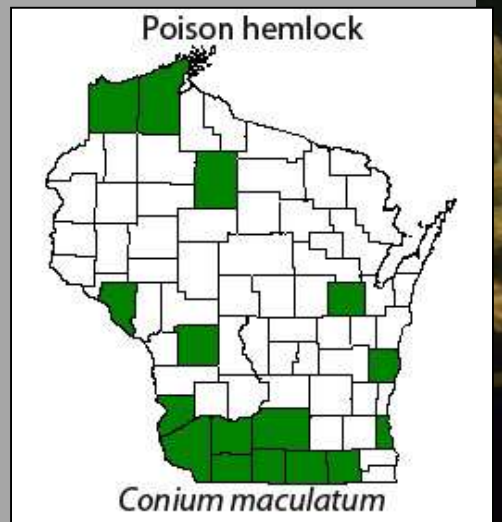
Prohibited

Poison Hemlock

(Conium maculatum)

Toxic to mammals that ingest it

Prohibited/ Restricted



Invasive shrubs increase Lyme's Disease

- Barberry and Amur honeysuckle infestations increase deer ticks infected with Lyme's disease

Regulated Categories of Invasives

Prohibited – Not yet in the state or established in pioneer stands only

Please report if found to invasive.species@wi.gov

Restricted – Already established in the state

No need to report

Regulations by category

Prohibited – No person may transport (import/move), possess, transfer (buy/sell) or introduce a prohibited species without a permit. The department may order or conduct the control effort.

Restricted – No person may transport (import/move), transfer (buy/sell) or introduce a restricted species without a permit. Control encouraged but not required.

Invasive Shrubs and Trees

- Prolific fruits dispersed by birds
- Leaf out early and hold their leaves late
  - Especially invaders of woodlands
- Many form thickets
- Most resprout if cut, unless stump-treated

Goal – Minimize seed formation,
+ remove tops and kill roots

Black Locust

(Robinia pseudoacacia)

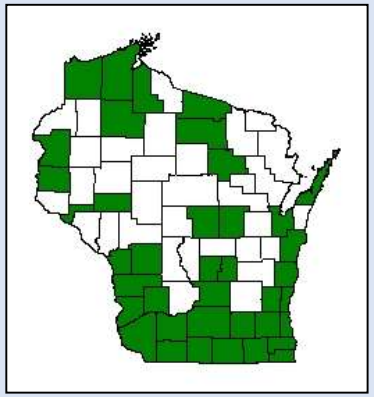
Restricted

Common buckthorn

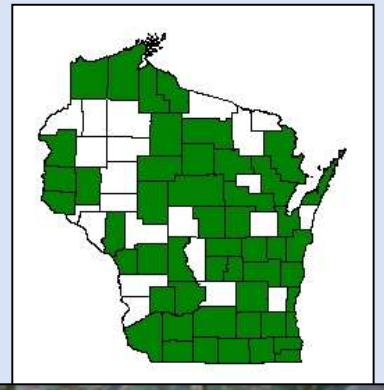
(Rhamnus cathartica)

Restricted

Morrow honeysuckle
(Lonicera morrowii)

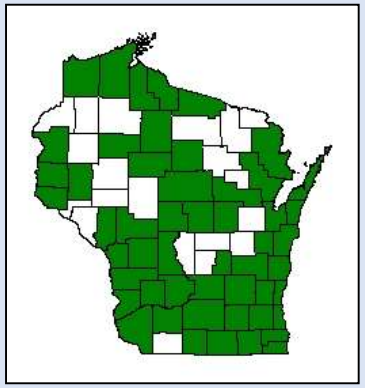


Tartarian honeysuckle
(Lonicera tatarica)

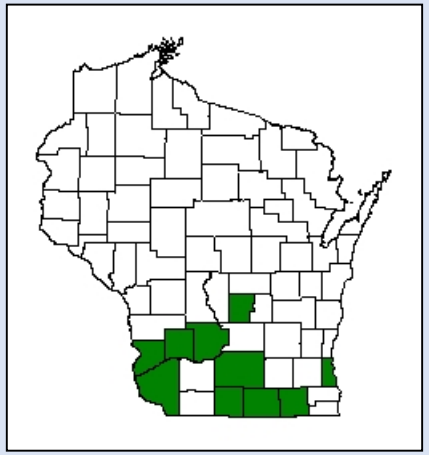


Restricted

Bell's honeysuckle
(Lonicera x bella)

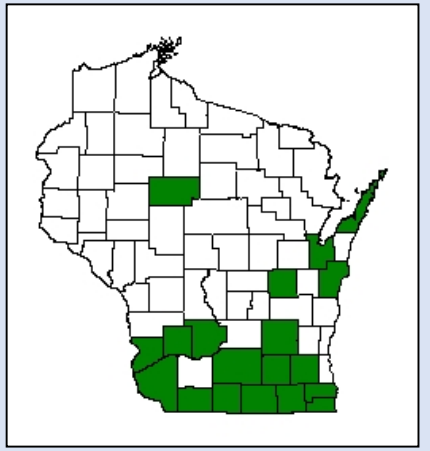


Amur honeysuckle *(Lonicera maackii)*

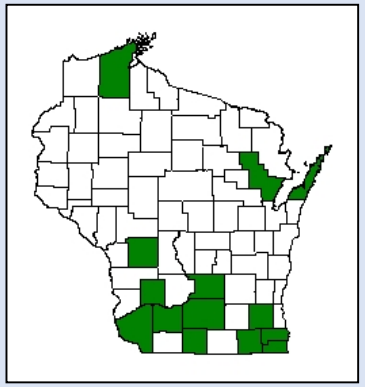


Multiflora rose *(Rosa multiflora)*

Restricted



Autumn olive *(Elaeagnus umbellata)*



Restricted

Japanese Barberry - *Berberis thunbergii*

Restricted

Prickly ash

Zanthoxylum americanum

Aggressive
(and obnoxious)
native

Native Raspberries and Blackberries

(*Rubus* species)

Black-cap raspberry (Rubus occidentalis)

Common blackberry (Rubus allegheniensis)

Red raspberry (Rubus idaeus)

Sometimes aggressive **natives**

Invasive Vines

- Most are spread widely by birds that eat their prolific fruits.
- Grow along ground or climb trees, fenceposts, etc.
- Most resprout if cut, unless stump-treated
- Difficult to mow

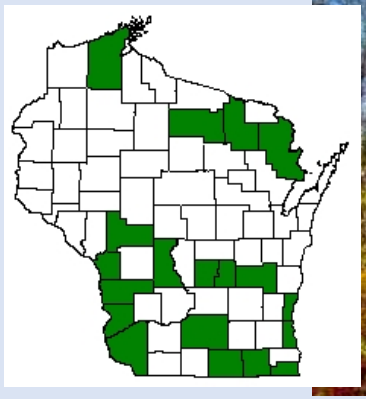
Goal – Remove tops and kill roots

Oriental bittersweet

(*Celastrus orbiculatus*)

Restricted

Native American bittersweet



Black swallow-wort

Vincetoxicum nigrum

Prohibited/Restricted

Poison Ivy (Toxicodendron radicans)

Dermally toxic
native

Virginia Creeper/Woodbine

(*Parthenocissus quinquefolia*)

Aggressive native

Herbaceous Plants (grasses and forbs)

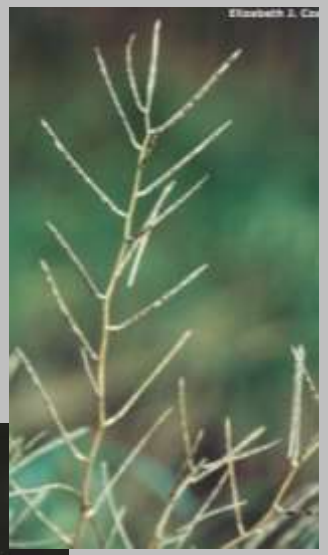
- Many species throughout state 59/145 regulated invasive plants
- Multiple growth forms – annuals, biennials, perennials
- May spread by seed or vegetatively
- Control technique varies by species and site

Garlic Mustard *(Alliaria petiolata)*

- Decreases beneficial mycorrhizae
- Slows tree growth
- Prevents regeneration of native trees
- Decreases forest litter depth





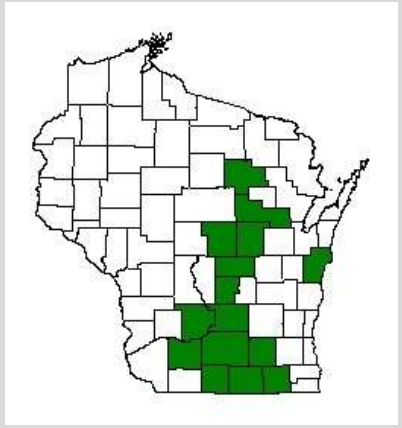



Restricted

Prohibited/Restricted

Japanese Hedgeparsley

Torilis japonica



Information Sources

- WI DNR dnr.wi.gov/invasives
- **Midwest Invasive Plant Network**
  www.mipn.org
- **Invasive Plants Association of Wisconsin**
  www.ipaw.org
- **WI First Dectectors Network**

https://fyi.uwex.edu/wifdn/

Factsheets, videos, control methods