

*Invasive Plants in  
Northeast  
Michigan's Forests*

Jennifer Muladore  
Ecologist, Huron Pines  
[www.huronpines.org](http://www.huronpines.org)



# About Huron Pines

Conserving the forests,  
lakes, and streams of  
Northeast Michigan

- Nonprofit, 501(c)(3)
- 38 years in business
- 8 full-time staff plus AmeriCorps program
- Projects include:
  - In-stream habitat
  - Land stewardship
  - Watershed planning





# Outline

- What are invasive species?
- Common/coming threats to Northeast Michigan
- Treatment options
- Huron Pines program
- What you can do



# What are invasive species?

- Live outside their historical distribution
- Potential to negatively affect native plants of the natural ecosystem, the local economy, or human health





# How do they affect forests?

- Change species distribution in floor and canopy
- Reduce available habitat
- Crowd out food sources
- Provide no food for certain life stages
- Alter wetland hydrology





# Early Detection-Rapid Response



- Our resources are still high quality
- Find invaders fast and treat them before they become a big, expensive problem
- Priority species: phragmites, buckthorn, purple loosestrife











# Invasive Species-What to Look For

- Dense populations of one type of plant— usually fast growing--“This wasn’t there before!”
- Top invaders:
  - Purple loosestrife
  - Phragmites
  - Buckthorn
  - Japanese knotweed
  - Garlic mustard





# Purple Loosestrife





# Phragmites





# Phragmites

## *Phragmites australis*

- Grows in wetlands and shorelines
- Warm-season perennial grows up to 17 feet tall
- Hollow, ridged stems
- Flat, smooth leaves, hairy ligules, leaf sheaths stay attached on dead stalks





# Phragmites

## *Phragmites australis*

- Long rhizomes grow new segments, prolific seeder
- Purple flower head in August
- Native phragmites: shorter, sparser colonies, smooth stem, leaves fall off dead stems, while living bottom of stem is bright red and exposed.





# Phragmites Treatment

- No biological control yet
- Herbicide works best
  - Hand-swiping for sparse populations or rare natives nearby
  - Spraying for dense stands

\*You may need a permit for herbicide treatment.





# Buckthorn





# Japanese Knotweed





# Japanese Knotweed

## *Polygonum cuspidatum*

- Shrublike relative of bamboo
- Leaves simple, alternate, pointed tip and flat base
- Grows in open areas and forest edges
- Tiny white flowers in fall, 3-winged fruits and dark seeds
- Semi-shade tolerant





# Japanese Knotweed

## *Polygonum cuspidatum*

- Stems hollow, glaucous
- Can grow through roads and building foundations
- Relative: giant knotweed- it can hybridize!





# Japanese Knotweed Treatment

- Herbicide is the only way
  - Spray with restricted chemicals
  
- \*You may need a permit for herbicide treatment.





# Garlic Mustard





# Other Invasives You May Recognize



Barberry



Oriental  
bittersweet



Burning bush



Multiflora  
rose



Dame's rocket



Privet





# Program Overview

Early detection and rapid response, involving

- Partnerships (CWMA)
- Inventory
- Working with landowners
- Physical/Chemical treatment
- Outreach and education







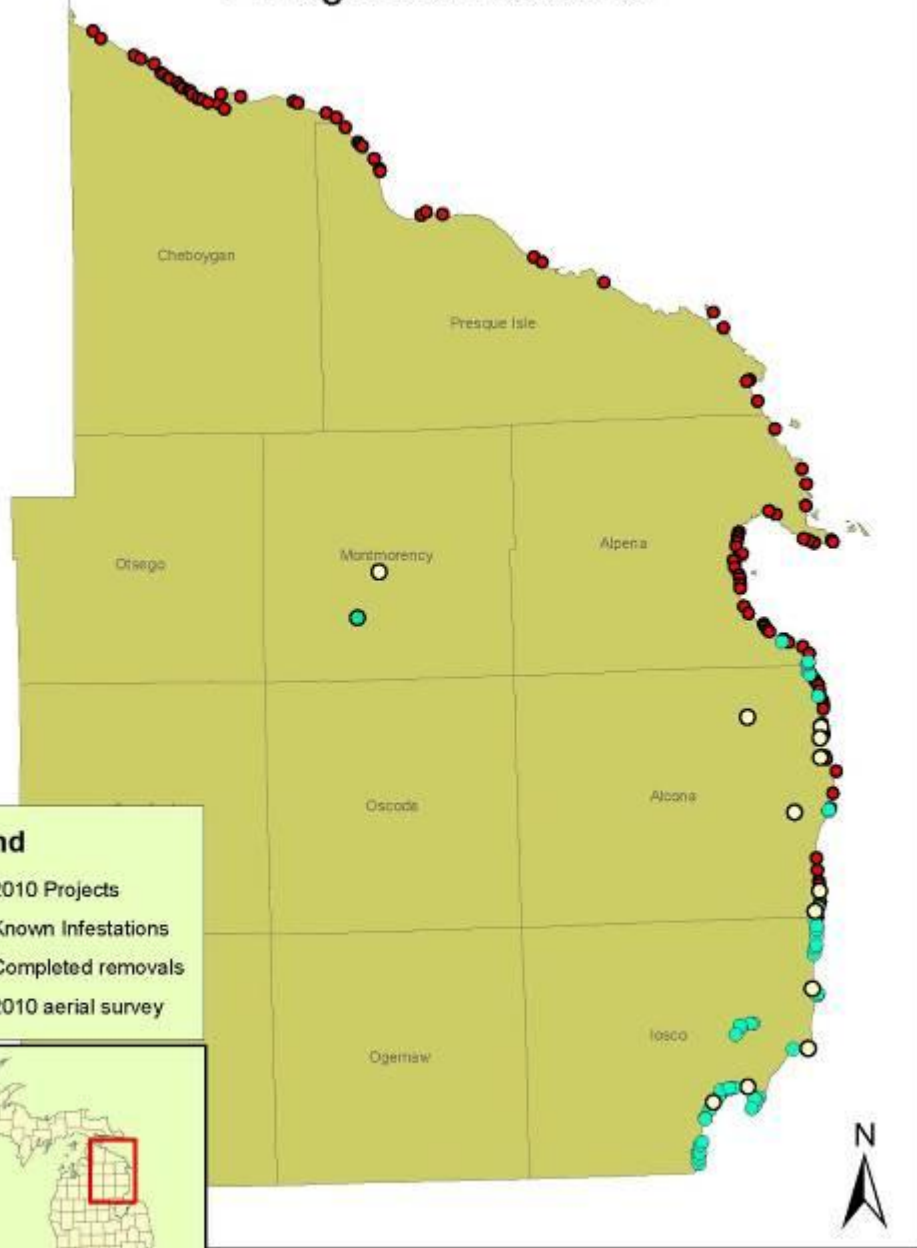
# 2010 Phragmites Inventory

- May aerial survey
- June-July ground survey
- Met private landowners, enrolled in program
- **Results: 246 patches**
  - 24 native, 222 invasive
  - 80 treated (33%)
  - Over 200 miles surveyed





# Phragmites Locations





# 2011 Program

- New partnerships
- Expansion of species, areas, outreach
- Maintain and connect past treated areas





# How Treatment Gets Done



- Initial landowner contact
- Site visit to verify invasive, collect data and estimate treatment cost and option
- Permit submitted (inland)
- Treatment scheduled and completed
- Post-treatment reporting
- Next years: site visit and further treatment





# Invasive Species-What You Can Do

## On site visits:

- Record species
- Look for nearby source populations
- Take photos
- GPS!
- Report to someone
- Provide information to landowners





# Invasive Species-What You Can Do

- Include invasive species treatment in forest plans and prioritization
- Recommend best practices that minimize the spread of invasives on-site and from one location to another. (i.e., working in clear areas first, infested last)
- Make sure contractors are aware of problem areas and best practices



# Invasive Species-Who to Contact

## Resources:

Huron Pines – [www.huronpines.org](http://www.huronpines.org)

County Conservation Districts – [www.macd.org](http://www.macd.org)

Michigan Natural Features Inventory – google MNFI

State Agencies (DNR/DEQ) – [www.michigan.gov/dnr](http://www.michigan.gov/dnr) or  
[/deq](http://www.michigan.gov/deq)

U.S. Forest Service or U.S. Fish & Wildlife Service

Midwest Invasive Species Information Network –  
[www.misin.org](http://www.misin.org)

NRCS Plants Database – google

MSU Extension – google





# Contact Info

Jennifer Muladore  
Huron Pines  
501 Norway St.  
Grayling, MI 49738

(989) 344-0753 ext. 31  
jennifer@huronpines.org

[www.huronpines.org](http://www.huronpines.org)





Thank You!

