

# Controlling Invasive Species is Critical for Habitat Restoration

Sarah Rang, Executive Director  
Invasive Species Centre

Nature Works  
March 2020, Toronto





# What are Invasive Species?



Plants, animals, fish, insects, fungi or microorganisms that are introduced to Canada



Cause disruption to the natural ecosystem by competing with native plants and animals for light, water, food, space and altering habitats



Depletion, and over time possible extinction, of native plants and animals, reduce biodiversity and permanently alter the landscape



# Invasive Species Centre



**Mission** The Invasive Species Centre connects stakeholders, knowledge and technology to prevent and reduce the spread of invasive species that harm Canada's environment, economy and society

The Invasive Species Centre was founded by the Governments of Canada and Ontario to act as a hub for collaboration and knowledge sharing among stakeholders

A not-for-profit organisation, we work in partnership with municipal, provincial and federal governments and many groups



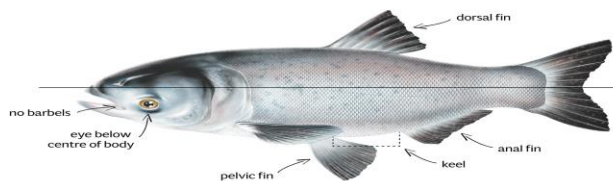
# Emerging Invasive Species Threats



- Oak Wilt Disease: Not yet in Ontario, fungus, large impacts to many oak tree species in US



- Hemlock Woolly Adelgid- Attacks Hemlock trees, currently in Niagara region



- Asian carp: Not yet in Great Lakes, Communication and education, Tench



- Aquatic Plants: Work with partners on Parrotfeather, Eurasian Millfoil, Water Chesnut, Water Soldier, Phragmites



# Economic and Ecological Impacts



Total impact of Zebra Mussels in Ontario is estimated \$75–91 million per year (Marbek, 2010); responsible for endangering/threatening eight freshwater mussel species in Ontario



Emerald Ash Borer has killed millions of trees in Ontario; 90,000 ash trees in City of Toronto alone, municipal costs \$30 million, Canadian Food inspection Agency has spent over \$30 million and cut over 130,000 trees



Competition from Garlic Mustard threatens several plant species at risk in Ontario's Carolinian forests, including American Ginseng, Drooping Trillium, False Rue-anemone, Hoary Mountain Mint, White Wood Aster, Wild Hyacinth and Wood Poppy

# Impacts of Invasives



Neighbourhood before and after Emerald Ash Borer

*Photo Credit: Rob Gordon / obtained from <http://ucanr.edu>*



# What's New? Economic Impacts of Invasives

The potential economic impacts on agriculture, fisheries, forests, healthcare, tourism and the recreation industry are estimated to be approximately

**\$3.6 billion/year in Ontario.**

- ◆ Prevention
- ◆ Detection
- ◆ Control & Management



Total estimated expenditures by municipalities and conservation authorities across Ontario:

**\$50.8 MILLION/YEAR**

Estimated average expenditure per **Ontario municipality**:

**\$218,148/YEAR**

This number includes an average **\$1,077,562/YEAR** spent by **urban areas**, **\$213,518/YEAR** spent by **counties**, and **\$28,976/YEAR** spent by **townships**.



Estimated average expenditure per **Ontario conservation authority**:

**\$314,724/YEAR**





# Increasing Communication, Training and Outreach

**Hemlock Woolly Adelgid training for land managers, Niagara region**



**Invasive Species exhibit Bushplane Heritage Museum, Sault Ste Marie**

**Oak Wilt Management Workshop for Municipal Arborists and Foresters, Windsor and Michigan**



# Supporting Boots on the Ground



**Emerald Ash Borer Monitoring,  
Thunder Bay**



**Garlic Mustard Pull, Sault Ste.  
Marie**

# Decisive action leads to successful removal



Before: June 2018



After: June 2019

The Invasive Species Centre supported swift action with Duck's Unlimited Canada to stop the spread of the invasive aquatic plant, parrotfeather, in Ontario. If this plant were to establish and spread, it could reduce biodiversity and cost millions to control annually.



## EARLY DETECTION & RAPID RESPONSE NETWORK ONTARIO

- Citizen Science Network aimed at training citizens on how to detect, report and respond to invasive species in Ontario
- Eyes on the ground approach to stopping new introductions or further spread of invasive species in Ontario
- Pilot project started in 2015, has continued to grow in Northern Ontario, looking to expand to Eastern Ontario. Join us!



Invasive  
Species  
Centre

Ontario  
Trillium  
Foundation



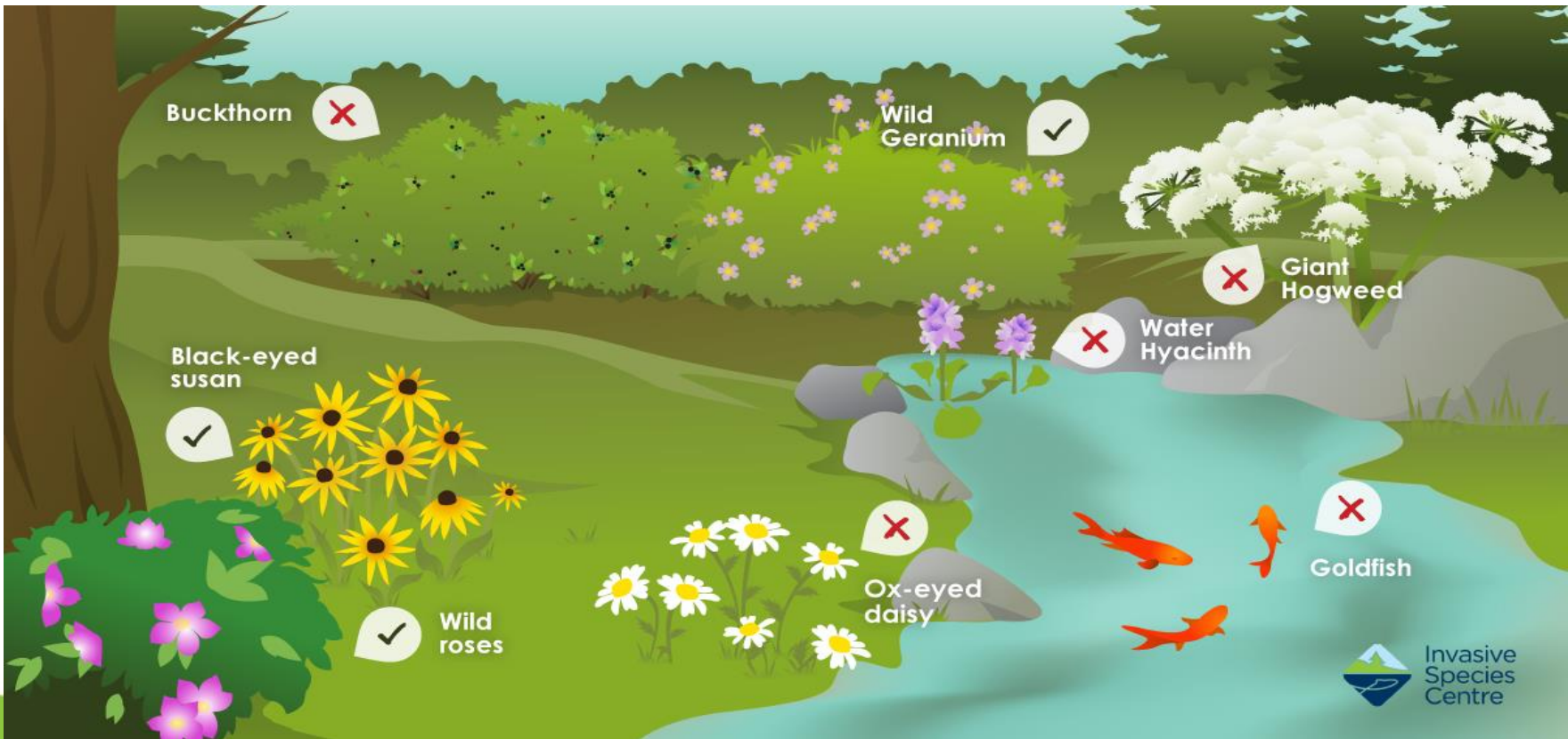
Fondation  
Trillium  
de l'Ontario





Partner Collaboration example: Try planting **these and other native species instead!** They look great, and they don't threaten Ontario's biodiversity. For more info on what plants are good for your garden check out these

**Grow Me Instead guides.**





# What ISC Could Do for You



1. One stop shop for advice on invasives



2. Help with communication and outreach



3. Help to start citizen science programs- EDRR



4. Assistance with services: risk assessment, land manager training, insect/ mussel diagnostic identification etc.



5. Convene players through workshops, events, webinars



6. Translate science into policy and action



## Contact us for more information

- Website: [Invasivespeciescentre.ca](http://Invasivespeciescentre.ca)
- Sign up for our Newsletter, Newsfeed, invitations to Webinars and Events
- Consider a project partnership
- Follow us on social media
- Call info line at 1-705- 541-5790
- [Srang@invasivespeciescentre.ca](mailto:Srang@invasivespeciescentre.ca)

or 647-521-6718

Thank you!

