Working together responding to growing threats Invasive plant Species

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Ontario Invasive Plant Council



Presentation Overview

- Invasive plants
 - Problem
 - How did they get here
 - How do they spread
- Ontario Invasive Plant Council
- Example of Invasive plants





- Plants introduced to a new ecosystem through human or other activity.
- Find an environmental niche and begin to out compete.
- No Predator, disease or climatic features to keep their populations in check.





Impacts of Invasive Plants

- Biodiversity loss
- Threaten endangered species and rare native plant communities and can alter landscapes.
- Detrimental to the economy.
- Spread rapidly and easily when introduced to new areas making invasive plant management a high priority.
- Can cause health problems.





How Do They Get Here?





Pathways: The route or progression by which a plant is dispersed.

Human Pathways:

- Tourism and Travel
- × Trade
- Recreational Activities

Natural Pathways:

- × Wind
- × Water
- × Animals



Ontario Invasive Plant Council





ONTARIO INVASIVE PLANT COUNCIL

The Ontario Invasive Plant Council (OIPC) is a non-profit organization made up of various agencies and organizations. The OIPC and it's partners are working together to create greater awareness and a coordinated effort against the threat of invasive plants.





Projects and Products



OIPC works with its partners to deliver various projects including:

•Guide with information about invasive plants: includes ID features, impacts and management options.

•Landowner workshops to assist in the development of management plans on their properties



- Best Management Practices documents for understanding the biology, identification, and control of several species;
 - Giant Hogweed,
 - Dog-strangling vine
 - Buckthorn



- Horticulture outreach through the Grow Me Instead Campaign.
 - Grow Me Instead
 - Northern Grow Me Instead Guide
 - Expanding to a nursery recognition system





A quick reference guide to

Invasive Plant Species



Field guide of invasive plants

















 Other educational materials, media releases, trailhead signs and factsheets.
 *Factsheets:

- ∗kudzu
- *****Giant Hogweed
- *Buckthorn
- *Garlic Mustard
- *Dog-Strangling Vine

*Signs

Dog-strangling vineWater soldier









600

Events





We have helped coordinate and participated in various events across the province including: Invasive plant control events



OIPC - Events

We have helped coordinate and participated in various events across the province including: Media events



OIPC - Events

We have helped coordinate and participated in various events across the province including: Landowner workshops



The OIPC hosts an Annual General Meeting and Invasive Plant Symposium every year. Includes:

- Workshops
- Tours
- Presentations
- Booth displays
- Evening social
- Network opportunities.









Don't get stuck, SAVE THE DATE...



The Ontario Invasive Plant Council is hosting it's 6th Annual General Meeting and Invasive Plants Symposium in Guelph at the Delta Hotel on:

October 16th and 17th

Presentations will be held on October 16th along with an evening social.

Field tours and workshops will be on October 17th.

More details to follow.

National & International Collaboration

- National Invasive Species Council
- Midwest Invasive Plant Network
- Member of the National EDRR Working Group
- Work with the Ontario Early Detection Network





Identifying and Controlling



Invasive plants



What is it?

Sol-season biennial herb

- 🔊 Native to Europe
- 5 First introduced in late 1800's

Pathway of Introduction and Spread

Horticultural/Medicinal trade
 Recreational activities - Bikes/ATVs
 Contaminant in soil/mulch/nursery stock

<u>Habitat</u>

8 Wide variety of soils

Garlic Mustard Alliara petiolata





Impacts

- Displaces native woodland flowers such as trout lily and trillium.
- Produces chemicals that may affect the health of nearby native plants.
- Can enter and establish itself within a healthy stable forest site.





What to look for:

- 1st year kidney shaped leaves with scalloped edges
- Crushed leaves emit a garlic smell which diminishes as the plant gets older.
- 2nd year triangular sharply toothed leaves.





What to look for:

- **•** White flowers clustered at the top of each stem.
- **Slender fruits. Each hold from 10-20 seeds.**





Photo credit: Wasyl Bakowsky



Conservation



Control:

- Mechanical pulling/cutting
- Bio-control C. Scrobicollis (weevil)
- Native species/soil modification bloodroot and mayapple have been shown to out compete garlic mustard











<u>Vincetoxicum niarum</u>

<u>What is it?</u>

- 50 Twining perennial herbaceous vine
- So Member of the milkweed family
- 🔊 Native to Eastern Europe
- ∞ Believed to have been introduced to Canada during WWII from Experimental Farms in Ottawa

Pathway of Introduction and Spread

- 6 Horticultural trade
- Seeds stuck to people/wildlife/birds
- 80 Recreational activities and machinery

<u>Habitat</u>

- 80 Prefers open sunny areas but does well in filtered
- 50 Can thrive in a wide range of habitats



Photos by: Greg Bales



Vincetoxicum niarum



- Form dense colonies that outcompete native vegetation.
- Twine and 'strangle' other plants and small trees.
- Affects prairies, alvars, shorelines, conifer plantations and natural forests.
- May have harmful effects on monarch butterfly populations





Vincetoxicum nigrum

What to look for:

 Small purple-brown flower cluster begin in June.



Black Swallowwort



There are 2 species of DSV – also known as pale swallowwort and black swallowwort – Black swallowwort is more common in the Eastern US, and Pale Swallowwort is much more common in Ontario

Photo credit: Ken Towle



Vincetoxicum nigrum

What to look for:

- Dark shiny green, oval to oblong leaves are opposite.
- Twining Stems





Control:

- Mechanical Mowing/Cutting, Pulling/Digging
- Chemical Herbicide still the most effective control – DSV is listed on the label of herbicides containing imazapyr



- Biological Controls being investigated
- Early detection is KEY!



Phragmites (Common Reed)



- Tall (up to 15ft) grass
- Dense cascading flower head
- Native common reed is rare, has red stems



Invasive *Phragmites* – Best Management Practices

2011



Pontario

ontario.ca/invasivespecies

Control

* "The most effective approach for most situations is a combination of herbicide application, cutting/rolling and prescribed burning"

* "Complete eradication of invasive Phragmites, particularly in wellestablished stands, is rarely achieved after one treatment."



Polygonum cuspidatum

<u>What is it?</u>

- 🔊 Semi-woody perennial plant
- 🔊 Native to Asia
- Introduced as a garden ornamental in the late 19th century

Pathway of Introduction and Spread

- Spreads via rhizomes, root fragments and seeds
- 🔊 Horticultural trade

<u>Habitat</u>

- 🔊 Requires sun
- So Often found growing along roadsides, railbeds, stream-banks, and woodland edges







Polygonum cuspidatum

Impacts

- Forms dense thickets preventing other species from establishing
- Incredibly difficult to control
- Perennial stems and leaves form thick layers of mulch when they die back each fall
- Shoots and roots can grow through concrete and asphalt





Polygonum cuspidatum



Bunches of small white flowers are produced in long clusters along the stem in late summer/early fall

Leaves are broad ovals with a flat base, alternately arranged



Polygonum cuspidatum





Stems are hollow and bamboo-like with reddish nodes

Young shoots are purple or reddish



Similar Species



Giant Knotweed

- Largest of the 3 invasive knotweed species
- Up to 5 m (16 ft) tall
- Leaves are 15 –40 cm (6"–16") long
- Flower clusters are very short

Bohemian Knotweed

- Hybrid species of Japanese and Giant Knotweed
- Also introduced as an ornamental species
- Flower clusters are mid-size
- Plants are 2 –3 m tall (6.5 –10 ft)





Polygonum cuspidatum

Control

- Aggressive and Persistent several methods used in unison may be required
- Mechanical Cutting, Tarping,
 Digging
- Herbicide Japanese
 Knotweed appears on the label of several Glyphosate based
 herbicides
- Biocontrol in the UK Psyllid released in phases starting in Spring/Summer of 2010









<u>Heracleum mantegazzianum</u>

What is it?

So Biennial or perennial member of the parsley family

5 First introduced in late 1800's.

Pathway of Introduction and Spread

Horticultural trade – as a garden curiosity
 Seeds float so they can spread via water

<u>Habitat</u>

So Moist, rich soil – along riverbanks and stream sides

Roadsides, trail sides, forest edges, agricultural land





<u>Heracleum mantegazzianum</u>

Impacts

- ► Reproduces by seed. Single plant can produce up to 50,000 seeds.
- Out-compete native vegetation by shading out plants.
- The hair on the stems and leaves contain a water sap which can cause photo-dermatitis.





Heracleum mantegazzianum

What to look for:

First year plants grow in a large basal rosette form



Leaves are deeply incised and serrated





Heracleum mantegazzianum

What to look for:

- Purple spotted, hollow green stem.
- Umbrella shaped cluster of white flowers







Similar Species





Cow Parsnip (Heracleum maximum)

- No purple splotches on the stem
- Hair on stem is downy, not bristly
- Leaves are not as sharply serrated
- Native to Ontario

Angelica (Angelica sinensis)

- Globular flower umbels
- Purple Stem
- Compound leaves
- Native to Ontario



Control

➤ Mechanical – cutting off seed heads, digging, mowing (doesn't control established plants – resprouts will appear), tarping

➤ Herbicide – not often able to apply due to plants proximity to water – Experiment with foliar spray of soap, salt and vinegar?





Other Invaders....



What you can do

Invasive Plant Council

ntario

- If hiking/mountain biking stay on established trails
- Clean seeds, mud and plant parts from your clothing, your pets, and your equipment before leaving an infested area
- Get involved! Report sightings, volunteer for control days, monitor when you hike
- Beware of what you plant! Never transplant species from the wild, and ask at the garden centre for non-invasive or native plants
- If you have invasive plants on your property, remove them if the infestation is manageable, or cut off the flower heads to prevent seeds from forming

Thank you!

Questions?

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