

EDDMapS Ontario

Ontario's Invading Species Awareness Program

Spreading the word...not the species!

EDD **MapS** *Ontario*
Early Detection & Distribution Mapping System



Kyle Borrowman
Terrestrial Invasive Species Outreach Liaison

Invading Species Awareness Program



- Joint education/awareness partnership of the OFAH and the MNRF since 1992
 - Focus on education and outreach for aquatic and terrestrial invasive invertebrates, fish and plants
 - Develop and deliver programs designed to monitor the occurrence and distribution of invasive species
 - Contribute towards surveillance, control, and rapid response of invasive species (e.g., water soldier)
 - Provide education and outreach to key pathways for invasive species introductions and/or spread

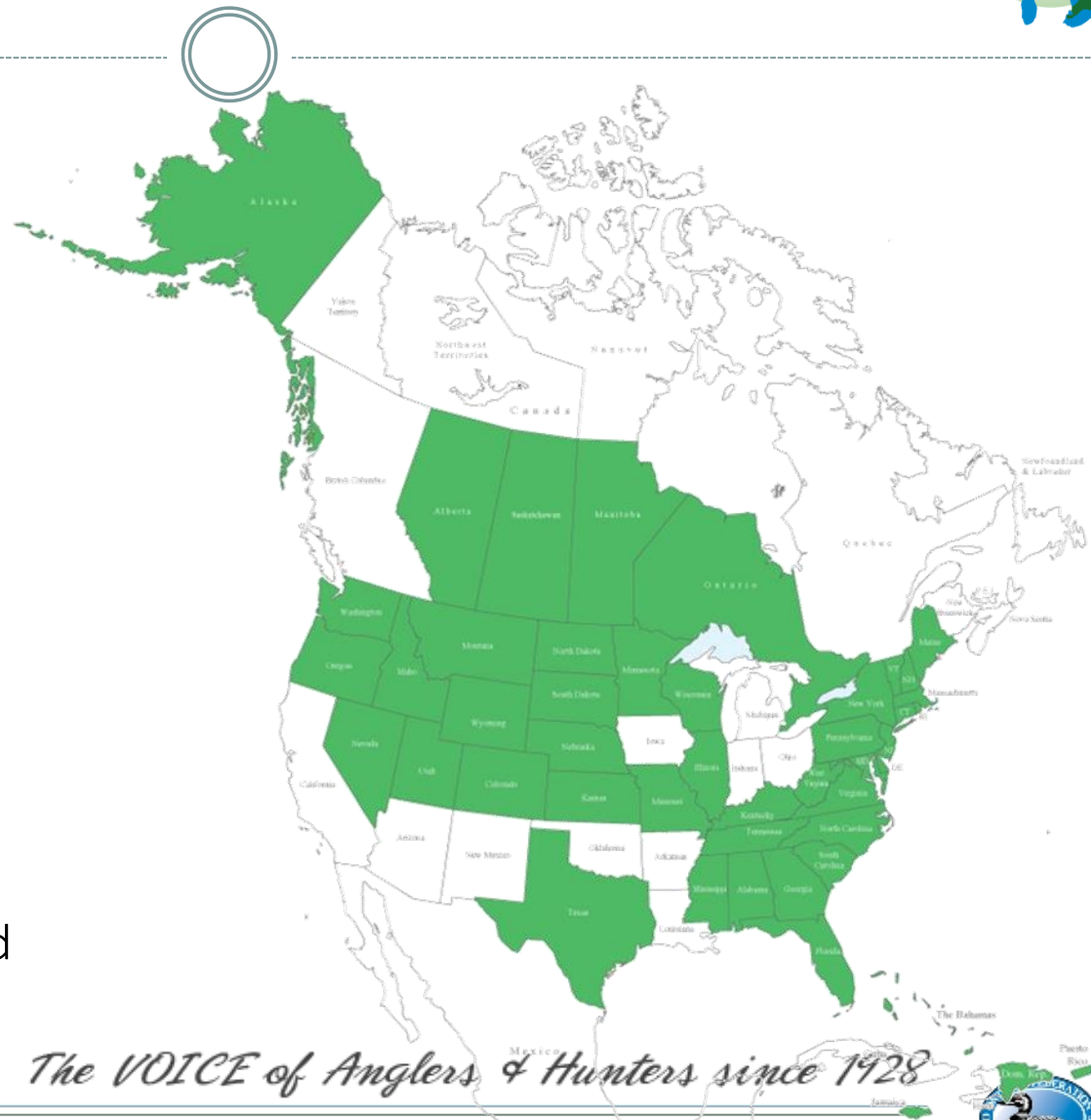


EDDMapS Ontario

EDD MapS Ontario
Early Detection & Distribution Mapping System



- Launched in 2005 by the Centre for Invasive Species and Ecosystem Health at the University of Georgia
- Adapted for Ontario and launched April 2014
- Combines data from other databases, organizations & volunteers
- Data will become the foundation for a better understanding of invasive species distribution around the world

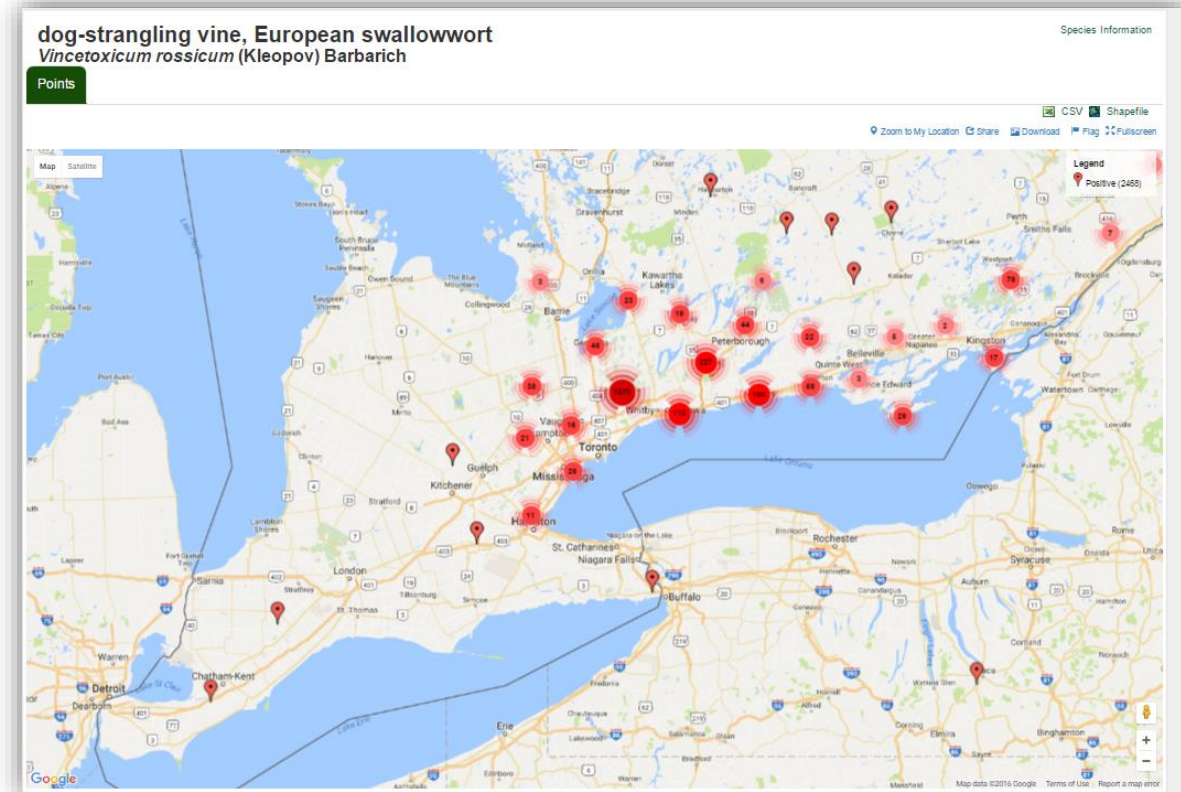


EDDMapS Ontario

EDD MapS Ontario
Early Detection & Distribution Mapping System



- Over 35,000 Reports in the EDDMapS Ontario Database
- Easily Accessible
- Verified
- Available in Real-time



EDDMapS Ontario

EDD MapS Ontario
Early Detection & Distribution Mapping System



See it, Map it

- Fast and easy – no knowledge of GIS required
- Web-based mapping of invasive species distribution to help fill gaps and identify “leading edge” ranges
- Helps Early Detection and Rapid Response with online data entry, email alerts and network of expert verifiers
- Data can be searched and downloaded



EDDMapS Ontario

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Smartphone App

The EDDMapS Ontario app brings the power of EDDMapS to your smartphone. Now you can submit invasive species observations directly with your smartphone from the field. These reports are uploaded to EDDMapS and e-mailed directly to verifiers for review.



Search for **EDDMapS Ontario**

Download under wifi connection



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See it...

- Observation
- Enter info into EDDMapS

Data immediately loaded to website

- Confirmed/Not Confirmed
- Data reviewed by verifiers

Confirmed data freely available to users

- My EDDMapS
- Interactive queries

View data and/or visualize with interactive maps

Map it...

Verification



- Timelines for verification vary by species
- Priority is given to species of high concern or high risk
- Species categories:
 - Priority species
 - ✦ Asian carp species
 - ✦ High risk species not currently known in Ontario
 - ✦ High risk species currently established in Ontario but reported outside their known distribution
 - All other species



Why include EDDMapS with management plans?

EDD MapS Ontario
Early Detection & Distribution Mapping System



How can EDDMapS can help a municipality

- Create an Invasive Species Database (framework is already in place)
- Easy reporting and verification process (roads surveys, bulk uploads)
- Simple Field Application (smartphone/tablet or spreadsheet)
- Point, line and polygon reporting
- Access to data from multiple sources
- Create “Alerts” for species of concern
- Support through ISAP Staff
- Data Downloads
- It’s FREE!!!

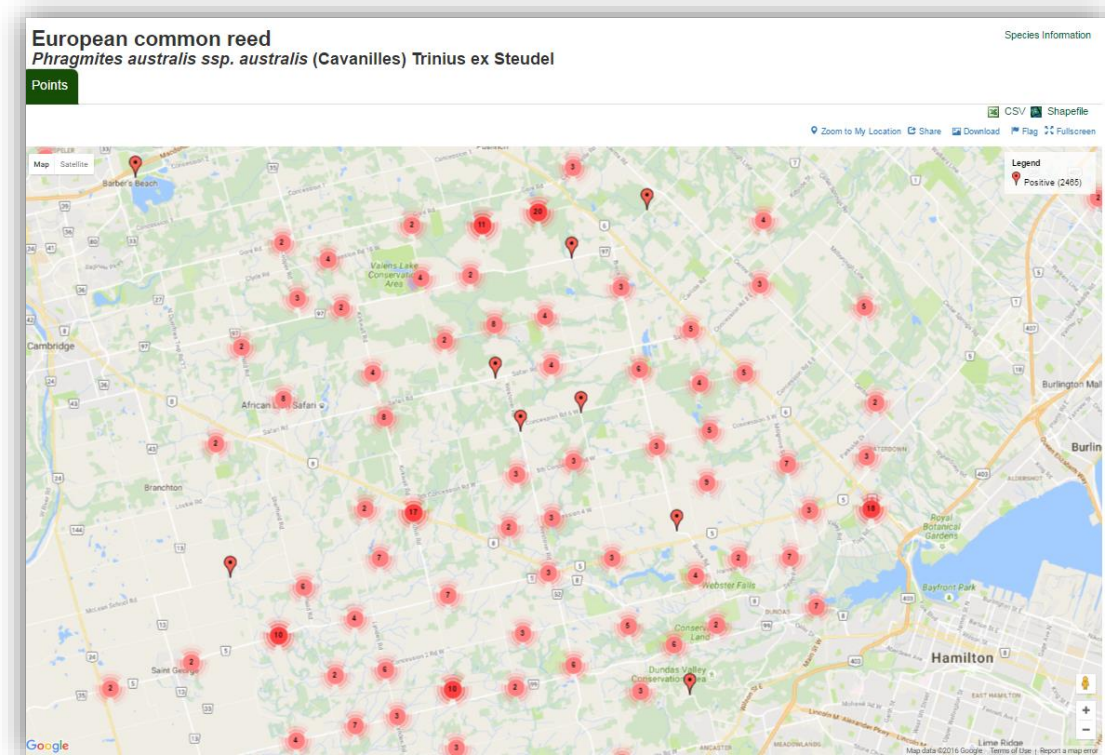


Reporting in EDDMapS



Reporting with EDDMapS

- Easy Field Reporting (e.g. City of Hamilton)
- Generate large quantities of data
 - ✦ Road Surveys
 - ✦ Citizen scientists



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Reporting in EDDMapS



Reporting with EDDMapS

- Bulk uploads
 - ✦ Upload historical or new reports
- Point, polygon and line data available
- Verification process (consult with ISAP)



Why include EDDMapS with management plans?



- Accessing and using the data:
 - Search existing species within their jurisdiction
 - Access mapping tools to query species by area (e.g. upper or lower tier)

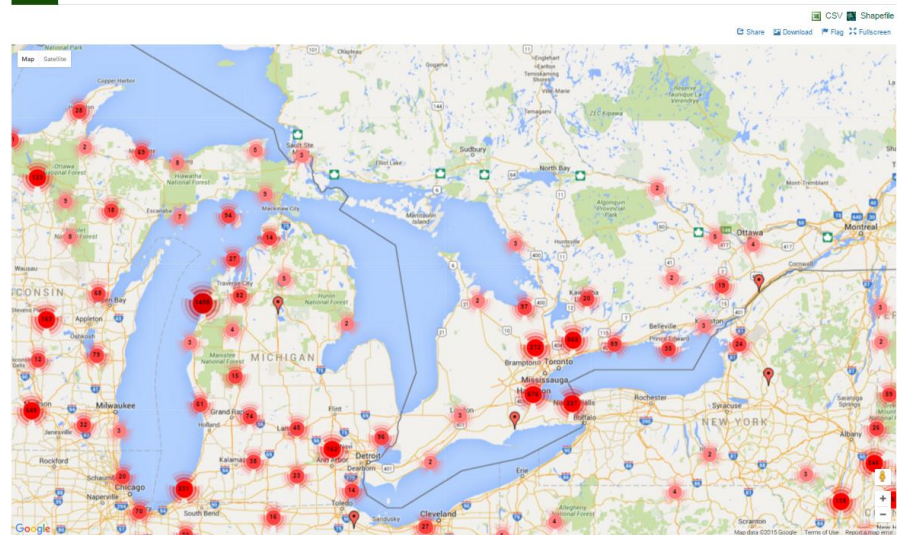
Home Report Sightings Distribution Maps Species Information Queries & Tools Training My EDDMapS About sign out

Query Species by Area

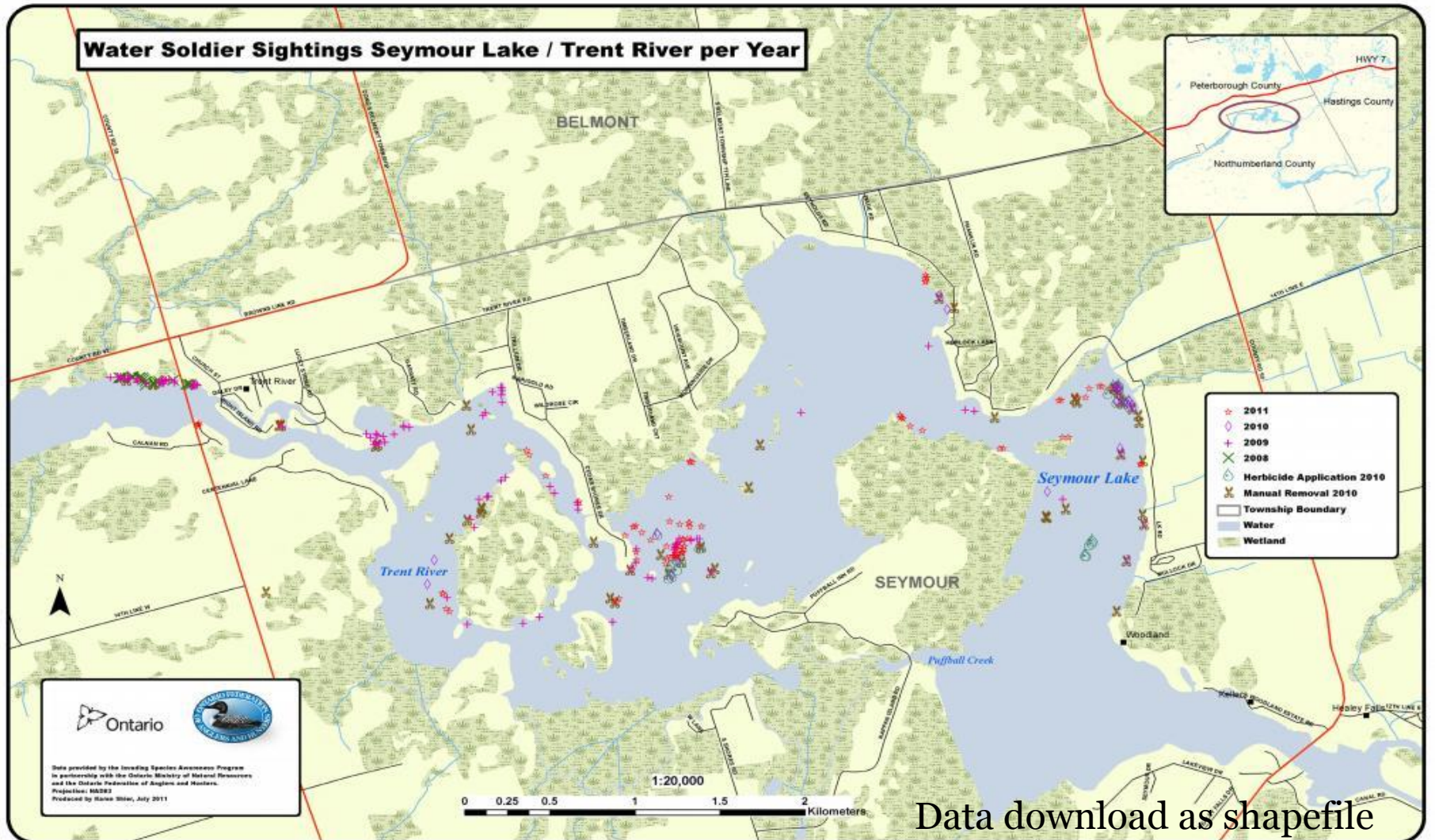
- Waterbody (lakes/rivers etc.)
- Upper Municipalities (Regional/County/District level)
- Lower Tier Municipalities (Township/City level)
- Conservation Authority Geographic Boundaries
- Provincial Parks
- Fisheries Management Zone
- MNR District Boundaries
- Conservation Areas
- Quaternary Watershed
- Tertiary Watershed
- Conservation Reserves
- First Nations Reserves
- Federal Lands

garlic mustard
Alliaria petiolata (Bieb.) Cavara & Grande

Species Information



Why include EDDMapS with management plans?



Why include EDDMapS with management plans?



- Early Detection and Rapid Response:
 - Set up “alerts” for species of concern in their area

Create Alerts

Province Alert

Ontario ▼

Plants
 Animals
 New Only - You only get an alert the first time a plant or animal is found in a county

Create Alert

Jurisdiction Alert

Ontario ▼ Select Province ▼

Plants
 Animals
 New Only - You only get an alert the first time a plant or animal is found in a Jurisdiction

Create Alert

Species Alert

New Jurisdiction Record Only - First time the species is reported in a Jurisdiction

Create Alert



EDD MapS Ontario

Early Detection & Distribution Mapping System



Home

Report Sightings

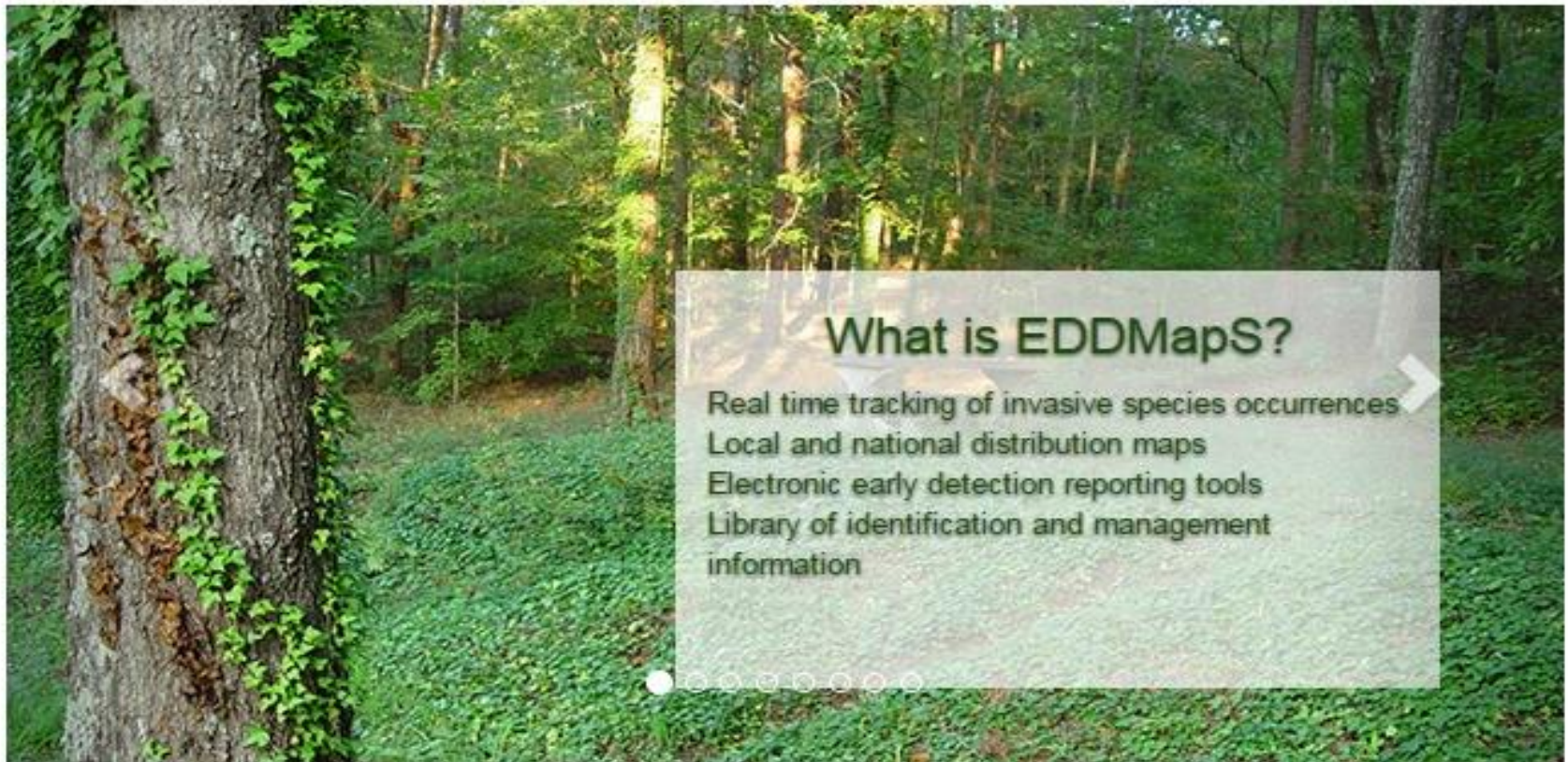
Distribution Maps

Species Information

Queries & Tools

Training

My EDDMapS



What is EDDMapS?

- Real time tracking of invasive species occurrences
- Local and national distribution maps
- Electronic early detection reporting tools
- Library of identification and management information

Reporting in EDDMapS

EDD MapS Ontario
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Home

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Queries & Tools

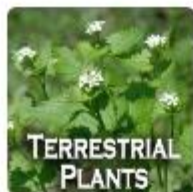
Training

My EDDMapS

About

sign out

Click on the type of species you would like to report.



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Reporting in EDDMapS



Report Page:

- Species
- Infestation
- Habitat
- Abundance
- Description
- Number of Individuals
- Location
- Image Upload
- Additional Comments



Report an Invasive Plant Occurrence

Red fields are required.

Species

Pest (P):

Infestation

Observation Date (P):

Infested Area (P):

Habitat (P):

Canopy Closure (P):

Abundance:

Plant Description:

Mature Immature In Flower Seeds Dormant/Dead

Approximate number of individuals:

Description: Adult Juvenile Unknown

Location

Province:

Jurisdiction:

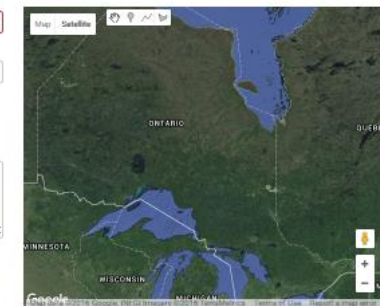
Latitude (P):

Longitude (P):

Must be expressed in Decimal Degrees (XX.XXXXX), and DMS UTM NAD83/WGS84.

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Location Description/nearest Address:



Images

For verification purposes, take at least two digital images, a close up of the species and one of the site. All photos uploaded to EDDMapS Ontario may be used by the Invasive Species Awareness Program for Educational and Promotional Purposes.

Image 1:

Image 2:

Reporting in EDDMapS



Observations:

- Standardized on-line reporting forms with custom attribute fields by taxa
- Required fields in Red
 - Observation Date
 - Habitat
 - Location
 - Include any other available information

Report an Invasive Plant Occurrence

Red fields are required.

Species

Pest (?):

Search for a species

Infestation

Observation Date (?):

06/13/2016

Info

Habitat (?):

Select One

Ca

Abundance:

Select One

Plant Description:

Mature Immature In Flower Seeds Dormant/Dead

Approximate number of individuals:

Description: Adult Juvenile Unknown

Location

Province:

Ontario

Jurisdiction:

Latitude (?):

Must be expressed in Decimal Degrees (XX.XXXX), and DATUM NAD83/WGS84.

Longitude (?):

Must be expressed in Decimal Degrees (XX.XXXX), and DATUM NAD83/WGS84.

Reporting in EDDMapS



Location Tools:

- Click and drag red marker to sighting location
- Select a Jurisdiction
- Red denotes required fields
- Latitude
- Longitude
- Conversions

Location

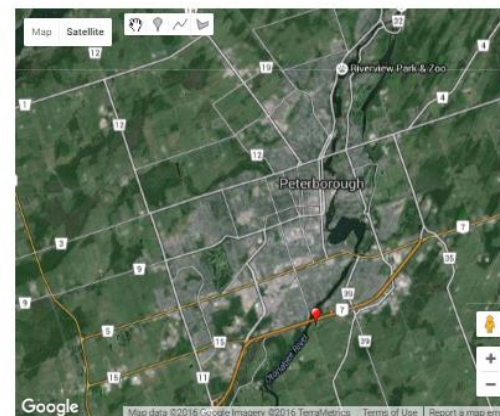
Province:

Jurisdiction:

Latitude (?):
Must be expressed in Decimal Degrees (XX.XXXX), and DATUM NAD83/WGS84.

Longitude (?):
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Image 1:
(.jpg) (Provide as much detail as possible. Do not include personal information. All information entered in this field will be displayed publicly. If the photo is not yours

Caption:

Photo by:

Image 3:
(.jpg) (Provide as much detail as possible. Do not include personal information. All information entered in this field will be displayed publicly. If the photo is not yours

Image 2:
(.jpg) (Provide as much detail as possible. Do not include personal information. All information entered in this field will be displayed publicly. If the photo is not yours

Caption:

Photo by:

Image 4:
(.jpg) (Provide as much detail as possible. Do not include personal information. All information entered in this field will be displayed publicly. If the photo is not yours





Reporting in EDDMapS

Images

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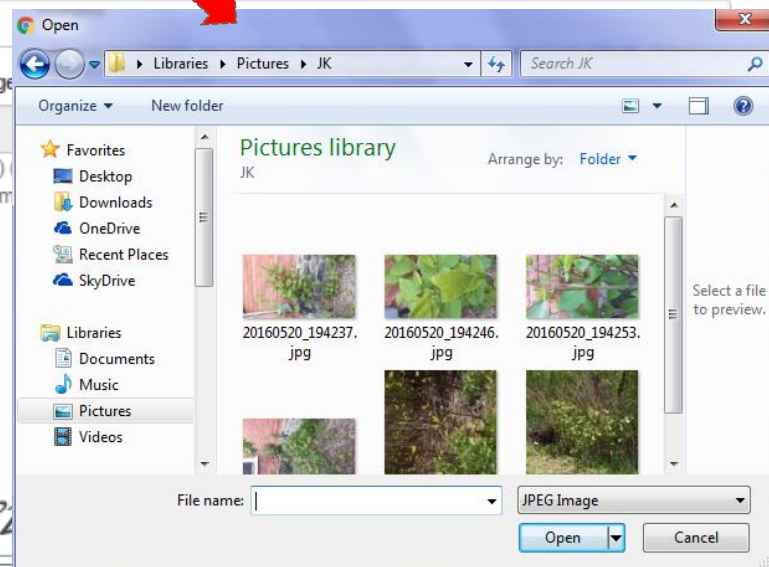
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Photo by:

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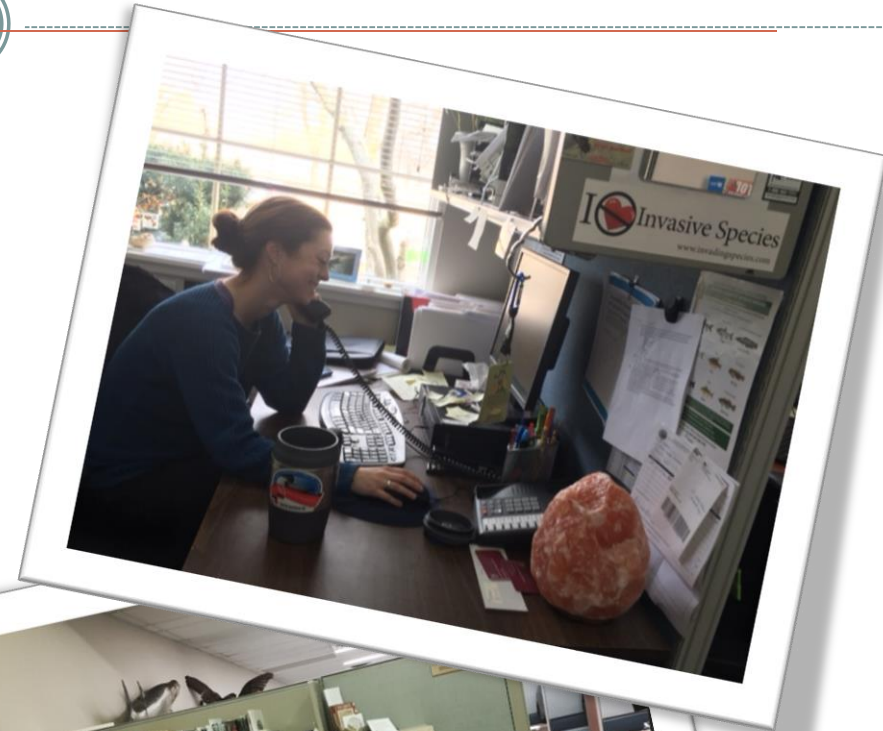
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Support Through ISAP



- Invading Species Hotline
 - Toll free number to the public
 - 1-800-563-7711
 - Provide information and receive reports of invasive species in the province
 - Mon-Fri 9-5



The VOICE of Ontario's Invasive Species Awareness Program since 1928

Educational Resources



- Over 60 educational resources available in print version
- Over 90 available for download at www.invadingspecies.com

Garlic Mustard
(*Alliaria petiolata*)

Garlic mustard is an invasive herb native to Europe. It was brought to North America in the early 1800s for use as an edible herb. Available in the early spring and high in vitamins A and C, it has a strong, distinctive smell similar to garlic. Since its arrival in North America it has spread into the wild and is now one of Ontario's most aggressive forest invaders.

Dog-Strangling Vine
(*Ipomoea pes-caprae* and *C. rossiana*)

The name "dog-strangling vine" refers to how invasive plants native to Europe (black swallowtail) and pink swallowtail. These look-alike members of the mimosoid family were introduced to the northeastern United States in the mid-1800s for use in gardens. In recent years these potential vines have spread rapidly throughout central and southern Ontario.

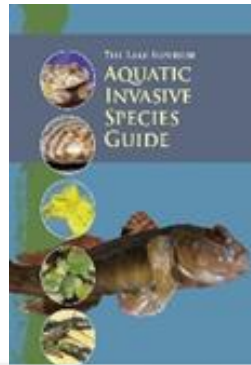
Giant Hogweed
(*Heracleum maximum*)

Giant hogweed (*Heracleum maximum*) was introduced to North America in the 1800s as a garden ornamental. It is a member of the giant family. It is a garden ornamental from southern Asia that is spreading in North America and southern Ontario. Giant hogweed has the potential to spread rapidly and poses a significant health risk to humans. It grows in old fields and riparian habitats such as open woodlands.

Similar Species: There are a number of plants that look similar to Giant hogweed such as Cow parsnip, Japanese ragwort, Woodland angelica, Yucca, Lonicera, and Queen Anne's Lace. They have a similar appearance. However, they plants are not as large as Giant hogweed, which grows up to 3 metres tall under ideal conditions. The other three also have a similar smell to Giant hogweed. Also, they do not have the very sticky sap and can be touched without skin irritation.

Distribution: Giant hogweed has a scattered distribution across southern and central Ontario, south of the line from Hamilton to Toronto.

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Asian Carps
Threatening Ontario's native fishes

Asian carps were brought here to help control the pest insects and weeds that were causing damage to crops and forests. However, they have become a major pest and are now threatening Ontario's native fishes.

Rusty Crayfish

Rusty crayfish are an invasive species that have been introduced to Ontario from the United States. They are a pest to native crayfish and can cause significant damage to aquatic ecosystems.

Eurasian Water-Milfoil

Eurasian water-milfoil is an invasive aquatic plant that has spread throughout Ontario. It forms dense, impenetrable mats that block sunlight and oxygen from reaching native plants and animals.

A Landowner's Guide to Managing and Controlling Invasive Plants in Ontario

This guide provides landowners with information on how to identify, manage, and control invasive plants in their properties. It includes a list of common invasive plants and their characteristics, as well as tips on how to prevent their spread.

ontario.ca/invadingspecies



Questions?



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www.eddmaps.org/Ontario

www.invadingspecies.com

Invading Species Hotline: 1-800-563-7711

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