



Climate Change and Invasive Species

What are invasive species?

An invasive species is a plant, insect, or animal that is not native to a particular area (in other words, it hasn't lived there in the past). Invasive species have the potential to change the natural balance of an area.

How do invasive species get to new areas?

All species move around; animals and insects walk, fly or swim in search of suitable habitats; plant species expand their range by releasing seeds that float in the wind or attach to animals. This sort of movement tends to happen slowly over time and species will only establish themselves in areas of suitable habitat (temperature, moisture, nutrients, etc.). As the north becomes warmer due to climate change, the area where new species can survive is expanding. In addition, people are moving plants, animals and insects, knowingly or unknowingly, much farther and faster than natural movements.

People spread invasive species by:

- Moving boats and motors between lakes without cleaning them
- Releasing bait fish into local waterways
- Moving wood that could be carrying forest pests
- Planting non-native species
- Releasing unwanted pets
- Carrying them on your clothes, shoes, or wheels

Are invasive species always a concern?

Not every new species that enters an area is going to have the same impact on the local environment. Some may cause little disruption, while others will have big impacts. Some invasive species are concerning because they drive out the native species in the region; others because they can impact local industries, like forestry. Some invasive species are concerning because they can impact human health.



Zebra Mussels, native to Russia, introduced through ship ballast water; they can create colonies so large that they take over fish spawning areas and beaches and can clog water intakes.



Mountain Pine Beetle; native to western North America but has been expanding its range. These insects bore into trees and, in large numbers, can lead to massive tree loss.



Giant Hogweed; native to Eurasia, introduced as a garden plant; has sap that can cause burns. It can be 2-5.5 m tall and resembles smaller native species like Angelica and Cow Parsnip.



Asian Longhorned Tick, native to Asia, arrived in the US through animal importation; it is predicted to be able to survive as far north as Ottawa and beyond with a changing climate.

How is climate change impacting invasive species?

As temperatures rise, plants and animals can move farther north; they may even be pushed out of more southern parts of their habitat ranges as temperatures there become too hot. Warmer winters mean that species who could not survive winters in the north before may be able to survive them now and establish populations. Fewer frost days in spring and fall are increasing the growing season and allowing plants to thrive in new areas.

What new species are people seeing in the north?

- Turkey vultures
- Pelicans
- Cormorants
- Bass
- Blacklegged (deer) ticks

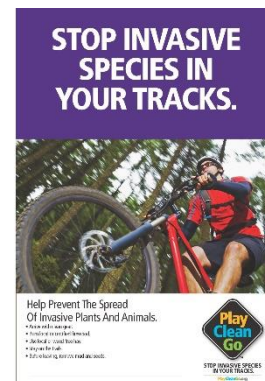
How can we prepare?

Prevention is key

People can do their part to prevent the spread of invasive species by:

- Cleaning boats and gear before bringing them from one waterway to another
- Disposing of baitfish on land
- Using local wood
- Planting native plants in gardens
- Cleaning mud and seeds off shoes and tires

Public education campaigns can help raise awareness of how our actions can contribute to the spread of invasive species and what can be done to prevent it. Ways to spread information can include signage at boat launches and other vulnerable locations, posters and brochures in public areas, education in schools, and radio and television campaigns.



Monitor

Know what is new to your area and what has the potential to come into your area. Some invasive species are monitored by provincial, federal, or community programs, but monitoring for new species is really a group effort. Within these programs and outside of them, citizen science (when area residents record or report environmental information) is an important component.

Report invasive species in your area:

- **Invading Species Hotline**
1-800-563-7711 www.invadingspecies.com
- **Early Detection and Distribution Mapping System for Ontario (EDDMapS)**
www.eddmaps.org/ontario or **as an app**

Control measures

When a new species causes or has the potential to cause major damage or disruption to the ecosystem, control measures may be needed. Control measures can be simple (like pulling and disposing of invasive plants found growing on your property) or extensive (like the sea lamprey protocol in the Great Lakes basin). How your community might deal with an invasive species can be discussed and decided before a species enters the area. That way, if a destructive invasive species does enter the region, response can be quick and, hopefully, effective.

Want to know more?

Check out <http://www.invadingspecies.com/> and <https://www.invasivespeciescentre.ca/>