THE SPREAD

INVASIVE SPECIES NEWS
COTTAGE EDITION

As the summer heats up, many Canadians head to the cottage, cabin, camp or campsite to make the most of the summer months. The summer outdoor experience is deeply ingrained in the Canadian cultural fabric, and substantial outlays of money, time and elbow grease have been invested in purchasing and maintaining cottages and leisure properties. These investments require protection from the threat of invasive species - plants, animals and insects that behave badly

outside of their native zones.

Invasive species, once they take hold, hurt the economy in many ways. Invasive species result in direct expenses to repair damage, such as removing and replacing trees. Invasive species also lead to foregone revenues, for example, reduced quantities of lumber or fish and diminished property values. Lastly, invasive species lead to indirect costs to society such as affecting the cost of health care when large trees that contribute to shade and air quality are removed from communities. Predicting the cost of invasive species is not an exact science. Based on some reports (Colautti et al, 2004), we could say that invasive species cost Canadians about $6/year in direct costs, but the óinvisible taxôin lost revenue and other costs amounts to over $1,000 each year for every Canadian.

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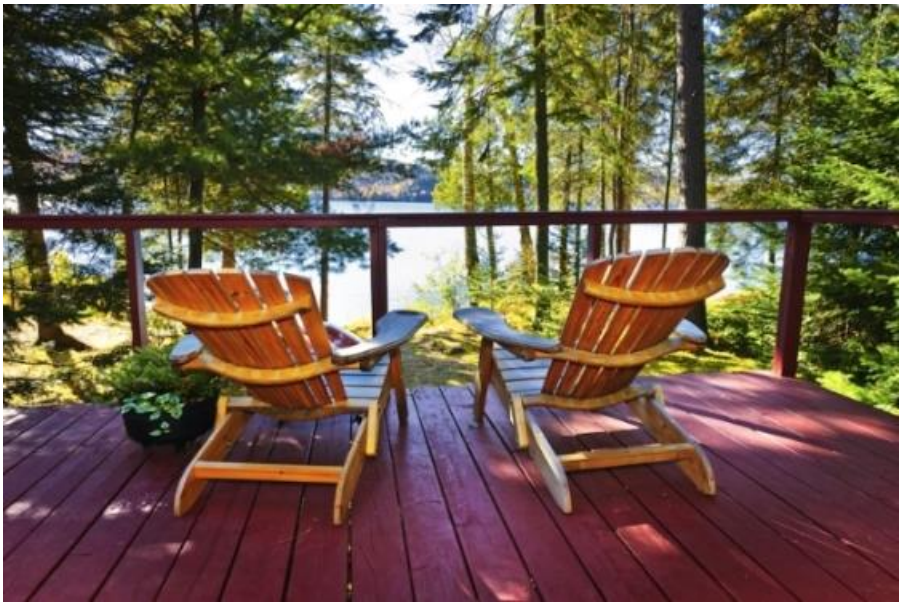
How Do Invasive Species Impact Cottage Life?



Invasive species can take over lakes, forested areas, grasslands and cottage gardens. Invasive species can permanently alter the landscape by killing trees that provide valuable shade, reducing the abundance and variety of native fish and aquatic life, squeezing out desirable plants, and clogging up waterways. In addition to their direct impact on the landscape, invasive species also hurt the pocketbooks of cottage owners by damaging private property, reducing property values, affecting health and safely, and compromising the enjoyment of recreational activities such as boating, swimming, watersports, and fishing.

Cottagers may already play host to some of the worst offenders.

On Land: Emerald Ash Borer

Emerald ash borer, native to Asia, was first discovered in North America in 2002 after being brought over in untreated wood packaging materials. Emerald ash borer kills 98% of the ash trees that it invades within five years. The range of this invasive forest pest has increased drastically since it was first introduced in Windsor, Ontario in 2002. By 2005, it had spread into Essex and Lambton counties and the municipalities of Chatham-Kent and Dutton/Dunwich. In 2006, it was detected in London, Ontario, and in 2007, in Toronto. The insect has continued to spread across Ontario, with infestations found as far north as Sault Ste. Marie, as far east as Ottawa and into Quebec. In 2013, the beetle was detected in Frontenac County and Manitoulin Island. (Distribution Map)

The cost for managing emerald ash borer continues to grow. Between 2013 and

2020, the City of Toronto will spend approximately $71.2 million to battle emerald ash borer, costing each Torontonian about $30 in direct costs to battle a single pest in a single city. This is in addition to the millions that have been spent to date in Toronto alone!

This invasive pest reduces urban and rural biodiversity. Ash trees add value to cottage properties by providing their many benefits such as increasing property values, energy savings due to shading and windbreak effects, slowing storm-water runoff, providing habitat and shelter for wildlife and enhancing air quality.

If the ash trees on your cottage property are infected, you will bear the cost to treat and/or cut and replace those trees and will have to consider the safety implications of an infected tree that could fall and injure persons and damage property. Affected ash trees can be identified by die back of branches and leaves. Ash trees will thin out at the crown (branches and leaves coming from the top of the tree), have yellow leaves and dead branches.

There are a number of options open to cottage owners when deciding to remove or when trying to save affected trees. As a starting point, cottage owners should consult the Treatment Decision Tool **(**http://gmaps.nrcan.gc.ca/apm/index.php?lang=e&m=m**)** developed by the Government of Canada that helps to calculate financial impact to the property owner by comparing the ongoing cost of tree treatment to the one-time costs of tree removal and replacement.

Firewood has been identified as an important, but preventable, method of spread for emerald ash borer from one area to another. To prevent accidentally spreading emerald ash borer and other damaging pests, get your firewood locally, burn it on-site, and do not move it to another area. Something as simple as moving a single piece of firewood could destroy millions of trees.

Many organisms, both natural and invasive, can be moved in firewood. They include invasive species such as the emerald ash borer, brown spruce longhorn beetle, Asian long-horned beetle, as well as fungi, fungus-like organisms and bacteria that can spread tree diseases such as sudden oak death and poplar canker.

A number of recent videos undertaken by the Eastern Ontario Model Forest and the Ontario Federation of Anglers and Hunters, and funded by the Invasive Species Centre, can provide useful information on preventing, identifying and dealing with emerald ash borer.

Video: Emerald Ash Borer: For Woodlot & Forest Managers

Video: Invaders in Our Forests

In the Water: Zebra Mussels

In the 1980ûs, zebra mussels were introduced into the Great Lakes by ocean-faring ships carrying contaminated ballast water.

Zebra mussels compete with other aquatic species for food causing food scarcities that in some cases can lead to declines in native populations of birds, fish and other mollusks with similar diets. Zebra mussels also squeeze out native mussels by interfering with their reproduction, feeding and movement. Zebra mussels form colonies that cling to surfaces including boats, docks, infrastructure such as water treatment and irrigation systems, and slow moving animals such as turtles, and often become deposited on beaches where their sharp shells cause hazards for users.The total cost of zebra mussels in Ontario is estimated between $75-91 million per year (Marbek, 2010).

At your cottage, zebra mussels can clog residential water intakes, and once in an intake, move into and damage the plumbing within the residence. Since mussel spawning takes place during the time of year when surface waters are above 10 degrees Celsius, cottage owners should be aware that their intake may take in mussel larvae during those months. Not all cottage owners will require a water intake filter and cottagers should monitor their intake before deciding whether a filter will be necessary.

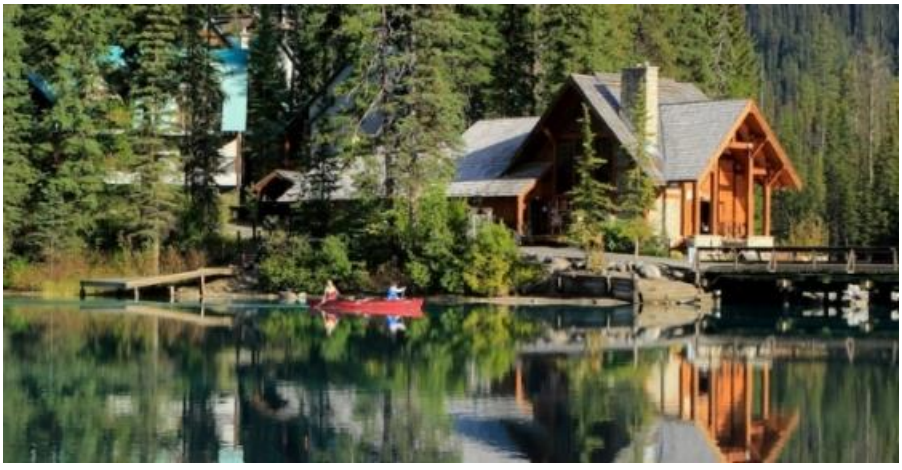
More information can be found in a comprehensive report written by Gerald L. Mackie, University of Guelph for the Georgian Bay Association. This research report (www.fourmilelake.ca/download/Zebra%20Mussels2.pdf) evaluates six products used to control zebra mussels in cottage water intakes.

To prevent the spread of zebra mussels from lake to lake, clean your boat and equipment when you leave a water body to go to a new water body.

A recent video from the Ontario Federation of Anglers and Hunters demonstrates the proper steps for decontaminating your boat to prevent the spread of invasive species from one lake to another.

Video: How to Clean Your Boat

Planting the Seed: FOCA Lake Association Invasive Species Monitoring Program



The Federation of Ontario Cottagers Associations (FOCA) recently introduced a Lake Association Invasive Species Monitoring Program (http://foca.on.ca/foca-aquatic-invasive-species-monitoring-program/). This volunteer, citizen science monitoring program will engage cottage association members in monitoring for aquatic invasive plants. New and existing educational resources will be used to educate volunteers on aquatic invasive plant identification, and how to monitor using a citizen science based aquatic plant monitoring protocol, which utilizes the Early Detection and Distribution Mapping System (EDDMapS) Ontario.

EDDMapS Ontario (link: www.eddmaps.org/ontario) developed with funding from the Invasive Species Centre, Ontario Federation of Anglers and Hunters and the Ontario Ministry of Natural Resources and Forestry, tracks the distribution of invasive species in Ontario, and allows citizens to easily report sightings. It uses technology and the convenience of smart phones, to allow everyone to participate in tracking invasive species.

Register for the program today by contacting the FOCA office at info@foca.on.ca.

Take Steps to Protect your Investment!

Cottagers can protect their important investments from the impacts of invasive

species by exercising prevention:

- **Report a suspected sighting** of an invasive species to 1-800-563-7711.
- **Participate** in the FOCA Lake Association Invasive Species Monitoring Program.
- Use non-invasive plants in your cottage gardens and consult the **Grow Me Instead** guides to find non-invasive plant and tree alternatives (http://www.ontarioinvasiveplants.ca/index.php/gardenersandhorticulturalists)
- **Don't move firewood.** Get your firewood locally.
- Inspect and **clean your boat** when changing water bodies. Remove all plants, animals and mud. Drain water from motors, live wells, bilge, ballast tanks and bait buckets. Dry your gear completely.
- **Dispose** of unused bait and worms in the trash, not in the lake.

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