Invasive Species Council of Manitoba

Press Release - August 14 2017

Invasive Species Awareness Month – Manitoba

The Invasive Species Council of Manitoba (ISCM) has declared August 2017 as Invasive Species Awareness Month. In an effort to foster awareness of invasive species in Manitoba and to highlight the environmental and economic damage they can cause the ISCM would like to share the below information on an invasive plant which is spreading in Manitoba.

"The ISCM is concerned about invasive species and plays a unique and important role in promoting awareness, coordinating cooperation and stimulating action to prevent the introduction and spread of invasive species in Manitoba." ISCM

Zebra Mussels - a new aquatic invasive species in Manitoba

The Zebra Mussel (*Dreissena polymorpha*) is a small (0.6-4 cm) freshwater mussel that was first introduced into North America in 1986. It is an invasive aquatic species that is causing considerable economic and environmental damage in Manitoba. Zebra Mussels are native to the Ponto Caspian region of Eastern Europe, but began invading other European regions in the mid-1800's as trans European canal systems were developed. The initial invasion into Lake Erie was almost certainly associated with Trans-Atlantic shipping. Once established in Lake Erie, the Zebra Mussel, quickly spread to other locations around the Laurentian Great Lakes, eventually being unintentionally transported inland and colonizing >700 lakes and rivers mostly in eastern North America. The microscopic early life stage (veliger) and capacity for adults to attach on watercraft, watercraft trailers, or on aquatic plants (that snag on trailers) makes this species a very high risk for overland transport between unconnected lakes or rivers.

Hundreds of scientific studies have described the ecological impacts, and in some cases the economic impacts, of Zebra Mussels. Their ecological impacts are highly variable depending on the type of waterbody invaded and the population density established.

> In a review of their impacts on lakes and rivers Dr. Scott Higgins (IISD Experimental Lakes Area and ISCM Board Member) concluded that the introduction of zebra mussels led to ***"a profound transformation of the structure and function of whole ecosystems".***

In general, Zebra Mussels reduce the quantity of phytoplankton, which serve as the main energy source for many aquatic species and set off a series of cascading impacts to higher trophic levels such as aquatic invertebrates and fish. Zebra mussels also overgrow native mussel communities, leading to dramatic declines and in some cases local extinction. In the Laurentian Great Lakes they have also been associated with severe blooms of benthic (growing on the lake bottom) algae that foul beaches, fishing nets, water intakes. When large quantities of the algae decay, they can release noxious odours and promote potentially harmful bacteria such as *E. coli*.

Where is it found in Manitoba?

Zebra mussels were first reported in the southern Lake Winnipeg in October of 2013. They have subsequently been identified in the U.S. and Manitoba portions of the Red River, the northern basin of Lake Winnipeg (and the connecting channel between the north and south basins). A single detection of veligers identified the potential for Zebra Mussels in Cedar Lake (located west of Grand Rapids, Manitoba). A suspected single adult Zebra Mussel was detected in Singuish Lake (located in Duck Mountain Provincial Park), however subsequent monitoring has not confirmed the presence of additional adults at this location.

How do You Identify Zebra Mussels?

The identification of adult Zebra Mussels is quite easy. They are relatively small (about the length of your fingernail) bivalve mussels with a brownish black or striped pattern and a flattened side where strong byssal threads allow the attachment to hard surfaces. The species commonly attaches to aquatic plants, rocks, and infrastructure (e.g. boats, docks, piers, etc.) and can reach densities exceeding 10,000 individuals per square meter. Other bivalve mussels (outside of the genus *Dreissena*) do not attach to hard surfaces, or grow in such high densities, making Zebra Mussels (and other species within the genus) unique in terms of their appearance and preferred habitat.

Preventing introductions of Zebra Mussels

Zebra mussels have spread quickly through eastern North America for several reasons. They have a very high reproductive output, with females producing up to 1 million eggs per spawning event; early life stages (eggs, sperm, veligers) that are microscopic and can be easily transported if water is not drained from live wells, bildge systems, and other compartments that hold water on watercraft. Adults mussels readily attach to the hulls of watercraft, trailers, and aquatic plants (often tangled on watercraft trailers) and can survive out of water for several weeks.

Preventing the further spread of Zebra Mussels requires all our efforts, and in fact it is the law in Manitoba to ‘***clean, drain, dry’*** boats, trailers and other equipment being moved between water bodies. The Province of Manitoba has detailed information on how to clean your boat, trailer, and other equipment to prevent the spread of Zebra Mussels.

What to do if you find a Zebra Mussel?

If you find Zebra Mussels, particularly if they occur outside of Lake Winnipeg please report by calling 1-877-867-2470. More details can also be found by visiting manitoba.ca/StopAIS.

For more information on Invasive Species visit *http://invasivespeciesmanitoba.com/site/*
http://www.gov.mb.ca/sd/waterstewardship/stopais/pdf/ais_law_factsheet_may_2016.pdf

Or email us at: *invasivespeciescouncilmanitoba@gmail.com*

Zebra Mussels at Whitesands, south of Grand Beach. Photo provided courtesy of J. Pelc

Adult Zebra Mussels attached to a native mussel from Lake Winnipeg. Photo provided courtesy of the Province of Manitoba.

An adult Zebra Mussel. Photo provided courtesy of the Province of Manitoba.