



**NWT COUNCIL**  
ON INVASIVE SPECIES,  
PESTS, AND PATHOGENS



A zebra mussel.



## Zebra and Quagga Mussels

(*Dreissena polymorpha* and *Dreissena bugensis*)



A quagga mussel.  
Photo: Amy Benson, U.S.  
Geological Survey, Bugwood.org

### IMPACTS

Despite their small size, these mussels have the potential to cause serious damage to the NWT's biodiversity and aquatic ecosystems.

### BIOLOGY

Zebra and quagga mussels are small freshwater mussels. Fully grown, they are only about the size of a fingernail, and they are much smaller in earlier stages. As free-swimming larvae, called veligers, they are microscopic. Zebra and quagga mussels attach to hard surfaces, allowing them to be moved between water bodies after attaching themselves to boats hulls, trailers, and equipment.

### INTRODUCTION

Zebra and quagga mussels are native to Europe and Asia. They were first introduced to North America in the late 1980s in ballast water from cargo ships. They have since spread across Canada by adults attaching to boats, trailers, and other equipment, or by veligers being transported in boat live wells, bilges, bait buckets, engine cooling systems or any other compartment that holds water.

### MANAGEMENT

You can help prevent the spread of zebra and quagga mussels by cleaning, draining, and drying your watercraft, trailers, and equipment after each use on the water. Chemical control methods can be used on zebra and quagga mussels, as well as physical controls like water drawdowns or benthic mats, but it is very difficult to completely remove the mussels after they are introduced.

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## IDENTIFICATION

Both are small mussels, measuring only 1-3 cm long. Zebra and quagga mussels have a pattern of alternating dark and light stripes over their shells. Zebra mussels have a triangular-shaped shell with a flat underside, while quagga mussels have a more rounded appearance.



A quagga mussel (left) and a zebra mussel (right). Photo: Michigan Sea Grantt

## RANGE

In Canada, zebra and quagga mussels have been found in multiple water bodies in Quebec, Ontario, and Manitoba.

## HABITAT

Zebra mussels and quagga mussels reproduce more slowly in lower temperatures and in water with low calcium concentrations. However, these mussels are highly adaptable and can survive in lakes with a wide range of environmental conditions.



A boat propeller covered in zebra mussels.

## SIMILAR SPECIES

Two native species of mussels occur in the NWT, the fat mucket and the giant northern floater. These species both have more rounded, oval-shaped shells compared to the more angular D-shaped shells of zebra and quagga mussels. The native mussels are also larger in size, with the fat mucket growing up to 12 cm long and the giant northern floater up to 25 cm long.



Native mussels. Photo: Dwayne Lepitzki