

ALERT: AQUATIC INVASIVE SPECIES

Zebra Mussels in Moss (Marimo) Balls

Dreissena polymorpha



What's the threat?

Zebra Mussels:

- Clog water intake pipes and other submerged equipment, costing taxpayers millions.
- Disrupt natural food chains, resulting in a disrupted food chain.
- Impact recreation when dead shells wash up on shore.
- Can survive out of the water for up to 30 days, making movement easy.
- Produce microscopic larvae called veligers that can not be seen with the human eye.

How is it spread and where is it found?

- Native to Russia, invasive mussels have hitchhiked around the world by attaching to hard surfaces.
- Watercraft have been the main pathway of introduction across Canada and the United States.
- Females can produce up to one million eggs every year, and there is no natural predator in Alberta.
- Invasive mussels have not been detected in any Alberta waterbodies, but are found in eastern Canada, and various parts of North America.

An attached mussel is an invasive mussel. If you suspect you have found invasive mussels, follow guidelines provided here and call the AIS hotline for additional questions or support.

1-855-336-BOAT (2628)

Classification: Public

REASON FOR ALERT:

Live zebra mussels have been found in moss (Marimo) balls that were imported into Alberta. Moss balls are commonly sold in pet and garden stores. Zebra mussels are listed under the *Fisheries (Alberta) Act* as a prohibited species. It is illegal to possess, release, sell or transport these species within the province.

If you purchased moss balls after January 1, 2021, they must be disposed. Follow the disposal protocol (on page 2) to protect Alberta's aquatic ecosystems.



Zebra Mussel

Description

- Shells up to 3 cm in size
- D-shaped shell
- Live up to 5 years

Don't Let it Loose

- Never release aquarium pets, water garden plants or water into Alberta waterbodies. This is illegal and has the potential to start an invasion, but you can stop it.

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Due to the risk of introduction of live zebra mussels to the environment, Alberta Government is asking the public to destroy all moss balls in their possession purchased after January 1, 2021. To safely dispose of the moss balls and ensure there is no risk to Alberta's ecosystems, follow these three steps:

Step 1: Destroy the moss balls

- Place into a plastic bag, seal and freeze (preferably in a deep freezer) for at least 24 hours.
- OR**
- Place in boiling water for at least 1 minute and then let cool.

Step 2: Dispose of moss balls

- Place it and any of its packaging in a sealed plastic bag and dispose in your household garbage.

DON'T LET IT LOOSE! To prevent zebra mussels from getting into our water bodies:

- **DO NOT** flush down the toilet
- **DO NOT** put down drain
- **DO NOT** compost

This applies to all moss balls and any aquarium/ water-garden contents (water, plants, rocks, etc).

Step 3: Treat aquarium or container contents and water

After moss balls have been removed from an aquarium or container, do not dispose of untreated water down the drain or into any residential water system or Alberta waterway. Take these additional steps:

1. Remove fish or other living organisms from the aquarium and place them in separate container, acquire water from a separate, uncontaminated water source.
 2. Sterilize the remaining contaminated water from the aquarium or container by adding 25ml of bleach per liter of water. Let the water sit for at least 15 minutes and then dispose of the sterilized water down a household drain.
 3. Clean the aquarium and accessories using one of the following methods, ensuring that the method you choose is in accordance with manufacturers' recommendations:
 - Boiling Method: Use boiling water to flush and coat the tank and all accessory surfaces and allow to sit for a minimum of 1 minute.
- OR**
- Disinfection Method: Make a disinfection solution using 25 ml of bleach per litre of water. Soak the aquarium, substrate, rocks, décor, and filter media in the bleach water solution for 15 minutes. Rinse off all items prior to setting up the aquarium. Dispose of the previously used filter media and replace with new media (see Step 1). Use a dechlorinating product to neutralize any residual chlorine prior to reintroducing aquatic life.
4. It is recommended that you do another water change within a week and continue to monitor the tank for any unusual or unexpected aquatic life.

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