

Zebra Mussel Alert!



Zebra mussels, small, fingernail-sized mollusks native to the Caspian Sea region of Asia, are regarded as one of the most troublesome invasive species in North America. In spite of their small size, zebra mussels clog pipelines used for water filtration, render beaches unusable, and damage boats. They also negatively impact aquatic ecosystems by harming native organisms.

Zebra mussels have been detected within a variety of moss ball products designed and sold for use in aquariums. The moss balls are sold under different brands in a variety of packaging, see sample photo of "Betta Buddy Marimo Balls".

The zebra mussel is a small shellfish named for the striped pattern of its shell. However, color patterns can vary to the point of having only dark or light-colored shells with no stripes.



Zebra mussel in moss ball

Zebra mussels have three life stages:

Larval: Live freely in the water column, allowing them to be easily transported.

Juvenile: Prefer a hard or rocky substrate, they have been known to attach to vegetation.

Adult: Can live for several days outside of water and are common hitchhikers on boats, fishing equipment and aquarium plants.



Juvenile (top) and adult zebra mussels

North Carolina State Law

15A North Carolina Administrative Code (NCAC) 10C .0211 POSSESSION OF CERTAIN FISHES

(a) It shall be unlawful to transport, purchase, possess, sell, or stock in the public or private waters of North Carolina any live individuals of: (20) zebra mussel (*Dreissena polymorpha*)

United States Federal Law

Zebra mussels (*Dreissena polymorpha*) are listed as an injurious species under federal law. The Lacey Act, 18 USC 42-43, declares importation or shipment of injurious mollusks, including zebra mussels, into the United States is illegal.



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Frequently Asked Questions

I run a pet store and have these in my store. What do I do now?

Call your headquarters office for disposal instructions or follow the disposal steps listed below.

I purchased a moss ball aquatic plant product. What do I do now?

Follow these steps:

1. Decontaminate the moss ball using ONE of the following methods, ensuring that the disposal method you choose is in compliance with state laws and animal welfare regulations:
 - Place the moss ball into a sealable plastic bag and freeze for at least 24 hours, OR
 - Place the moss ball in boiling water for at least 1 full minute, OR
 - Submerge the moss ball in chlorine bleach, diluted to one cup of bleach per gallon of water, OR
 - Submerge the moss ball in undiluted white vinegar for 20 minutes.
2. Once the decontamination step is complete, place the moss ball and any of its packaging in a sealed plastic bag and dispose in the trash.
3. If vinegar, boiling water, or bleach was used, the liquid can be disposed down a household drain — never down a storm drain where it could enter and damage local waterways.

I purchased a moss ball aquatic plant product and it's already in my aquarium. What do I do now?

1. Remove and dispose of the moss balls as directed above. Collect any fish or other living organisms and place them in another container, with water from a separate, uncontaminated water source.
2. Sterilize the contaminated aquarium water by adding 1 cup of bleach for each gallon of water. Let the water sit for at least an hour to ensure mussels are dead and then dispose the sterilized water down a household drain.
3. Clean the aquarium and all accessories (including substrate, rocks, décor, and filter media) using one of the following methods, ensuring that the disposal method you choose is in accordance with manufacturers' recommendations:
 - Boiling Method:
 - ◇ Use water that is 212 degrees F to coat the tank and all accessory surfaces and let it stand for 30 minutes before disposing of the water down the sink, OR
 - Disinfection Method:
 - ◇ Make a disinfection solution using 1 cup of bleach per gallon of water;
 - ◇ Soak the aquarium, substrate, rocks, décor, and filter media in the bleach water solution for at least an hour;
 - ◇ Rinse off all items prior to setting up the aquarium;
 - ◇ Dispose of the previously used filter media and replace with new media; and
 - ◇ Use a dechlorinating product to neutralize any residual chlorine prior to reintroducing aquatic life.
4. It is highly recommended that you do another water change within a week and continue to monitor the tank for any unusual or unexpected aquatic life.

Thank you for helping to protect our waters from invasive species!

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