Freshwater Mussels

Genus: *Anondata*
Family: Uniondae
Order: Unionoida
Class: Bivalvia
Phylum: Mollusca
Kingdom: Animalia

Conditions for Customer Ownership

We are a USDA compliant facility and hold all necessary permits to transport our organisms. Each state is assisted by the USDA to determine which organisms can be transported across state lines. Some organisms may require end-user permits. Please contact your local regulatory authorities with questions or concerns. To access permit conditions, click here.

Never purchase living specimens without having a disposition strategy in place. Live specimens should not be released into the wild! Please dispose of any unwanted organisms using the guidelines below.

Primary Hazard Considerations

Always wash your hands thoroughly before and after you handle your mussels to prevent cross contamination of bacteria or other foreign substances.

Availability

Available year round, primarily collected in Massachusetts. When they arrive, let the unopened bag sit in your tank for about 20 minutes. This allows them to slowly become acclimated to your tank's water temperature. Empty the bag of water and mussels through a net into a bucket and place the mussels into the aquarium. Do not put water from the bag in your aquarium because it can contain bacteria and nitrates, which are not beneficial to your tank. Mussels range in size form 3–6 inches.

Captive Care

Habitat:

Minimum size tank should be 10-gallons or more with medium to fine substrate for burrowing. You can use gravel (470005-160) or sand for substrate. Use dechlorinating products such as Ammonia/Chlorine Detoxifier if you are using tap water, or use spring water. Temperature range should be 65°F to 70°F. Freshwater mussels do not need a filtration system unless they are kept with fish or other animals since they are living filters that help maintain a healthy aquarium. Use of any copper based medication for fish in the tank will be harmful to the mussels. Feed the mussels invertebrate feeding blocks or algae discs as needed to supplement natural algae blooms. Change 25 to 50% of the water twice a month to maintain a healthy environment.

Information

Method of Reproduction and Lifecycle: Both marine and freshwater mussels are gonochoristic, with separate male and female individuals. In the wild, male mussels release sperm into the water. The sperm are drawn into the female as she filters water for food. During the brooding period, gravid females can be identified by inspection of marsupial gills. The fertilized eggs reside within pouches of the modified gills and develop into larvae called glochidia—tiny creatures that are parasitic and must find a suitable fish host to complete their life cycle. To attract a fish host for the larvae to attach to, the female mussels display specially adapted tissues that look like fish prey. The larvae remain attached to the host for a few weeks then metamorphose to the adult stage. The young mussels are then ready to drop off the fish and begin a life in the bottom of the stream. The total lifespan of a mussel is about 3–5 years.

Wild Habitat

There are nearly 300 species of freshwater mussels in the United States, mostly within the vast watershed of the Mississippi River. Most freshwater mussels live burrowed in sand and gravel at the bottom of rivers and streams. Their diet consists of plankton suspended in the water. By drawing water inside their shells through a siphon, their gills filter out food and take in oxygen. Predators include otters, raccoon, ducks, and geese.

Disposition

We do not recommend releasing mussels into the wild. Adoption is the preferred method of disposition for live mussels.

- If the mussels must be euthanized at the end of study, follow one of these procedures:
  - Put the organism into a container or bag and freeze for 48 hours.
  - Place the organism in 70% isopropyl alcohol for 24 hours.
  - Autoclave the organism @ 121°C for 15 minutes.
- A deceased specimen should be disposed of as soon as possible. Consult your school's recommended procedures for disposal. In general, dead organisms should be handled as little as possible or with gloves, wrapped in an opaque plastic bag that is sealed (tied tightly) before being placed in a general garbage container away from students.

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