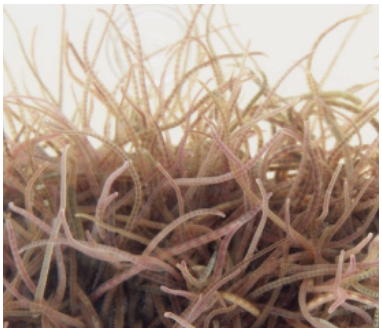
Blackworms



Species: *variegatus*
Genus: *Lumbriculus*
Family: Lumbriculidae
Order: Lumbriculida
Class: Oligochaeta
Phylum: Annilida
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 after you handle this organism.
- Blackworms are considered harmless to humans.

Availability

Blackworms are available year-round.

Arrival Care

- Your blackworms will arrive in a plastic bag with a small amount of water. The rest of the bag is filled with oxygen. An ice pack is almost always included with blackworms. This bag is packed inside a shipping box. We over-pack each order of blackworms. It is normal to have some deceased blackworms in the bag. You will receive at least the quantity of live blackworms stated on the bag.
- As soon as you receive your blackworms, cut open the bag and pour them into the container in which they will be stored. Rinse them by filling up their container with clean water, allowing the worms to settle to the bottom, and pouring the water off until it just covers them. It is normal to have reddish waste runoff from the worms. Rinse the worms multiple times until the water runs clear. After rinsing, place the container in the refrigerator for storage.

Captive Care

Habitat:

- If you do not plan on culturing your blackworms, you can store the blackworms in a container in the refrigerator. For the 30 mL quantity, an 8 oz. jar would be a sufficient storage container. For the 150 mL quantity, a shallow plastic container would be sufficient. The water should just cover the worms. You should not store the worms any deeper than ¼" as this may increase their mortality rate.
- If you do plan on culturing your blackworms, a 5–10-gallon aquarium is a sufficient size habitat. You can fill it with 2–3" of dechlorinated water. You can dechlorinate tap water by leaving it out for 24–48 hours, or adding a dechlorinating agent to it. Spring water is also suitable for blackworms. The habitat should be maintained at room temperature (68–77°F). Next, add enough strips of brown paper towel to just cover the bottom of the container. The towel serves as a fibrous substrate of decomposing material. The tank should be gently aerated with an air stone (470308-842) and air pump (470308-592). The culture water should be changed about every two weeks, and the walls of the tank should be cleaned at this time. Slowly pour ½ to ¾ of the water down a drain, being careful not to pour out the worms and paper towel. Rinse the worms and paper towel with fresh water, and refill the tank with fresh water. Add new pieces of paper towel.

- You can give your culture of blackworms a photoperiod, preferably between 14–16 hours of light and 8–10 hours of dark.

Care:

- You can feed your culture of blackworms either flake or sinking fish food every few days. Make sure the blackworms have consumed the food from the previous feeding, so that you do not overfeed.
- As the blackworms reproduce, you should harvest the excess worms to prevent overcrowding. You can gather them with a pipette, a net, or with curved tweezers.

Information

- **Method of Reproduction:** Sexual or asexual. Reproduction under laboratory conditions is always by asexual fragmentation, during which a worm spontaneously divides into two or more body fragments.
- **Determining sex:** Blackworms are hermaphrodites, and have both male and female sex organs in the first 8–10 anterior body segments.

Life Cycle

- Worms cultured under standard laboratory conditions are usually small (4–6 cm in length) compared to field-collected ones, and never reach sexual maturity or produce cocoons.
- Worms produced by asexual fragmentation undergo rapid regeneration of body segments to form a new head end, tail end, or both ends. Eventually each fragment grows into a normal-sized worm, comprising a combination of older and newer segments, representing two or more generations of development.
- Field-collected blackworms are often larger than laboratory-reared worms. Maximal body size is about 10 cm in length and 1.5 mm in diameter. Such specimens appear as sexually mature hermaphrodites.
- Worms produce transparent cocoons, each containing 4–11 fertilized eggs that undergo development with no larval stage.
- Small worms, about 1 cm in length, emerge from cocoons in about two weeks.

Wild Habitat

Blackworms are found throughout North America and Europe. They inhabit the edges of ponds, lakes, or marshes where they feed on decaying vegetation and microorganisms. Popular microhabitats include layers of decomposing leaves, submerged rotting logs, or sediments at the base of emergent vegetation, such as cattails.

Special Notes

- Blackworms' tail ends are specialized for gas exchange.
- Blackworms are a very popular food for aquarium fish.

Disposition

We do not recommend releasing any laboratory animal into the wild.

- Adoption is the preferred disposition for any living animal.
- If the worms must be euthanized at the end of study, put them into a container or bag and freeze for 48 hours.
- A deceased specimen should be disposed of as soon as possible. Consult your school's recommended procedures for disposal. In general, dead worms should be handled as little as possible or with gloves, and 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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