

# Planaria



	<b>Brown Planaria</b>	<b>Black Planaria</b>	<b>White Planaria</b>
<b>Species:</b>	<i>tigrina</i>	<i>dorotocephala</i>	<i>fluviatilis</i>
<b>Genus:</b>	<i>Dugesia</i>	<i>Dugesia</i>	<i>Proctyla</i>
<b>Family:</b>	Planariidae	Planariidae	Dendrocoelidae
<b>Order:</b>	Tricladida	Tricladida	Tricladida
<b>Class:</b>	Turbellaria	Turbellaria	Turbellaria
<b>Phylum:</b>	Platyhelminthes	Platyhelminthes	Platyhelminthes
<b>Kingdom:</b>	Animalia	Animalia	Animalia

## **Conditions for Customer Ownership**

We hold permits allowing us to transport these organisms. To access permit conditions, [click here](#).

**Never purchase living specimens without having a disposition strategy in place.**

The USDA does not require any special permits to ship and/or receive planaria. To protect our environment please do not release planaria into the wild.

## **Primary Hazard Considerations**

You should always wash your hands thoroughly after you handle the organism or anything it has touched.

## **Availability**

Our planaria are available year round. Since planaria are a collected specimen, temporary shortages may occur due to weather conditions that prevent collection.

We over-pack each order of planaria. It is normal to have some deceased planaria in the container. You will receive at least the quantity of live planaria stated on the container.

## **Immediate Requirements**

The planaria will arrive in a small jar of spring water or pond water. The planaria can be stored in this jar in the fridge for a few weeks. No food is required during fridge storage but daily water changes are needed while in their original jar. In such a small container the water will become dirty and run out of oxygen quickly, so for long term care it is helpful to transfer the planaria to a habitat. Upon arrival, you should immediately remove the lid and gently aerate the culture using a small pipet. Replace the lid loosely and store in the refrigerator.

## **Captive Care**

### **Habitat:**

- Planaria can be very difficult to culture. Keep planaria in a covered shallow pan, dish, or aquarium. Use pond or spring water since the chlorine in tap water makes it toxic to planaria. If tap water is used it must be pre-treated with a [Water Conditioner 21 W 2316](#) as recommended on the conditioner product. While planaria can survive in standing water, the water should be aerated for long-term health. This prevents bacterial growth and increases the oxygen content of the water. Keeping an [Air Stone 21 W 2920](#) attached to an [Air Pump 21 W 2982](#), in the habitat container will achieve this. For a 30 to 100-student culture of planaria, a large bowl or 2-gallon or larger [Aquarium 21 W 2101](#) will work fine. The more water you have, the cleaner and healthier your planaria will be. Keep water at or below room temperature. To help the negatively phototactic planaria avoid light, add a cover such as a slate or broken pieces of flowerpots to the container.

### Care:

- If no food is available, a healthy planaria can survive for up to three months in the fridge without harmful effects. If you want to feed them, planaria eat living or dead animal matter. When they eat, they use their long, muscular pharynx. Feed the planaria beef or chicken liver, which can be found at your local grocery store, approximately once a week. A pea-sized portion of liver is sufficient for approximately 50 planarians for each weekly feeding. The liver can be stored frozen but allow de-thawing before feeding. Let the planarians feed for an hour or two. Remove any food that has not been eaten, and then change the water. If preferred they will also eat an equivalent sized chunk of earthworm. *Procotyla fluviatilis* (white planaria) is an exception; this species requires small living crustaceans for food.

### Information

- Method of reproduction: Planaria reproduce both sexually and asexually. There are two methods of asexual reproduction: fragmentation and spontaneous “dropping tails.” Fragmentation usually begins with a transverse constriction just behind the pharynx, which increases until the two parts separate and move away from each other. The head grows a new tail, and the tail grows a new head. Planaria in very stagnant water will frequently “drop” their tails, and the tails regenerate to form another complete animal. This condition differs in that it usually results in stunted animals, or dwarfs, which remain in this state until water conditions improve. In sexual reproduction each planaria gives and receives sperm. They can reproduce with their own gametes, or mate with another worm. Mating is desirable in order to enhance the survival of the species by altering DNA. Eggs develop inside the body and result in the production of “summer” eggs or “winter” eggs depending on temperature. Summer eggs are thin-shelled and transparent, while winter eggs are usually black and on stalks. Summer eggs tend to hatch quickly, while winter eggs take longer to hatch and they may even remain dormant throughout the winter.
- Determining sex: Planaria are hermaphroditic meaning each animal possesses complete male and female systems and gametes for sexual reproduction.

### Life Cycle

Planaria are remarkable in that they are not restricted to definite stages in their life cycle; they are always in the process of remaking themselves: through regeneration or asexual reproduction

### Wild Habitat

Planaria can be found in many parts of the world in freshwater rivers, streams, or ponds. They reside on the underside of rocks, leaves, and other objects in shallow waters as well as in aquatic vegetation such as Elodea and filamentous algae.

### Disposition

- In order to protect our environment, please store this organism in an escape proof container. Do not release this organism into the wild. If you can not keep this organism in your classroom, either donate it to another teacher or dispose of it in one of the following ways:
- Please dispose of excess living material to prevent spread into the environment. Consult with your schools to identify their preferred method of disposal.
- You can safely use one of the following methods:
  - Place planaria in a sealed container and place the container in the freezer for 48 hours.
  - Carefully wrap specimens and their containers in a biohazard bag (without containing anything sharp that might puncture the bag) and tie closed (a twist tie works well). Autoclave the bag for 30 minutes at 121 degrees C and at a pressure of 15 lbs. per square inch. Dispose of autoclaved bag as your school recommends.