

Gammarus

- 4th grade - Environments



Gammarus – Gammarus sp.

What to do when they arrive. Upon arrival, transfer into a larger container of dechlorinated or spring water, using a large baster or by pouring contents directly from the shipping jar. Keep container at room temperature out of direct sunlight. Gammarus are scavengers and feed on microscopic algae and protozoans normally found in pond water. If keeping for longer periods of time, introduce aquatic plants into the aquarium which, as they break down, will provide food.

Background. Gammarus, also called scuds and side-swimmers, are amphipods. Most amphipods are marine, but there are 50 American species living in fresh water. They live in unpolluted lakes, ponds, streams, brooks, springs, and subterranean waters.

The body of Gammarus is laterally compressed and consists of a cephalothorax (head/thorax), seven free thoracic segments, a six-segmented abdomen, and a small tail (telson). They have seven pairs of thoracic legs, some of which are adapted for swimming and some for walking. This accounts for their Latin name, amphipod: amphi meaning "both," and pod meaning "feet or legs." Their eyes are well developed, and they have two pairs of antennae.

In general, Gammarus are much more active at night than during the day hours. They crawl and walk using their legs in addition to flexing their whole bodies. When Gammarus swim, they often roll over on their side or back (hence the name side-swimmer).

Amphipods usually live close to the bottom or among submerged objects where they can hide from their predators, fish. Their environmental preference is for dark areas. They are scavengers, browsing on microscopic plants, animals, and decomposing material. Unlike brine shrimp, amphipods are not adapted for withstanding drought and other adverse environmental conditions.

Reproduction. Most Gammarus breed between February and October, depending on the water temperature. During mating, the males carry the females on their backs. Paired individuals feed and swim about for up to a week or until the female is ready to molt. The two animals separate for a short while as the female sheds her old shell. The two pair up again, and mating occurs shortly thereafter. The female keeps the fertilized eggs in a brood pouch, or marsupium, where the eggs hatch after 1 to 3 weeks. Young stay in the pouch until their mother molts again, which might be in a week or so.

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Feeding. Like daphnia, gammarus can be kept in green water (water with a high concentration of single-celled algae) at room temperature or a little cooler. Don't place them in direct sunlight. If no green water is available, they can be fed bacteria or yeast. To prepare bacteria, mash half of a hard-boiled egg yolk in 1 liter of water. Let it sit for a couple of days. The cloudy liquid will be full of bacteria. A yeast suspension can be prepared by stirring half a package of dry baker's yeast in a liter of warm water. To feed the scuds, simply remove 1/2 liter of water from the scud culture (pour it through a net to save the scuds), and put 1/2 liter of the food suspension into the scud culture. When the water clears, feed them again. *Gammarus will also survive in an aquarium with plants and snails. Feeding the tank fish food every other day will keep the scuds alive.*

What to do with them when the investigation is completed. Scuds can be kept in an aquarium of pond water with plants, or maintained as described above. *You can also return them to the district science coordinator for distribution to other schools.* Aquarium fish will also appreciate the scuds as food. Do not release into the wild unless they were collected from a local pond.