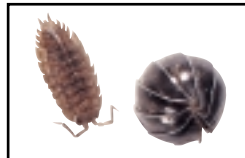


Pill Bugs and Sow Bugs



Description

Terrestrial isopods are land-dwelling crustaceans, commonly known as sow bugs (*Porcellio*), pill bugs (*Armadillidium*), and wood lice (no relation to body lice). They make excellent subjects for study.

Related to lobsters, crabs, and shrimp, pill bugs breathe with gills and require a humid environment for survival. They inhabit cool, damp places under rocks, rotting wood, and other decaying vegetation.

Their bodies consist of a head, thorax, and abdomen. The head has two antennae and simple eyes. The thorax has seven scaly segments, each containing one pair of legs.

Although similar in size, color, and life cycle, pill bugs and sow bugs are different. When threatened, pill bugs can curl up into a tight ball for protection, while sow bugs either run or remain perfectly still, appearing to be dead. Also, sow bugs have two appendages, uropods, protruding from their abdomens to take up water.

Habitat

Pill bugs may be kept in a plastic container with a slightly vented lid. Use a substrate of damp soil and decaying organic material (wood, leaves, compost, etc.) and mist the habitat to keep it humid. Place paper towels in the container to help maintain the humidity, but if mold becomes a problem, increase the ventilation or reduce the amount of water used to mist the habitat. Keep the container in a dimly lit or dark area at room temperature (68–77°F).

If a large number of pill bugs are kept in the container for long periods of time, change the soil occasionally to keep them healthy.

Care

Feed pill bugs fish food flakes, leaf litter, and pieces of potatoes, apples, or carrots. Immediately remove food that becomes moldy.

Reproduction

The female carries up to 200 eggs in a brood pouch located under her thorax. The young hatch in the pouch and stay there for about 3 weeks. They resemble the adults, except for their smaller size and paler color, and will molt 4–5 times as they grow.

Activities Using Pill Bugs and Sow Bugs

Damp vs. Dry Conditions

1. Cut a circle of filter paper in half, trimming away about $\frac{1}{4}$ inch from each half circle, so that they do not touch when placed in the bottom of a petri dish (any flat-bottomed plastic container big enough to hold the filter paper will work if petri dishes aren't available). Secure each half circle to the petri dish with a small amount of tape to keep the pill bug or sow bug from crawling under the paper (do not leave any sticky sides exposed). Wet one half of the filter paper.
2. Place the pill bugs in the middle of the petri dish and observe which condition is preferred.

Expected results: Pill bugs and sow bugs will almost always seek dampness; they are very good at finding water. Since the pill bugs dry out very easily and use gill-like structures to breathe, they require a moist environment. (They are related to lobsters and crayfish.)

Light vs. Dark Conditions:

1. Tape a dark piece of construction paper (about 4 inches by 3 inches) to one side of the top of a petri dish; the paper should extend beyond the edges of the petri dish. This piece of paper makes a "dark" side and a "light" side of the petri dish.
2. Be sure to keep a damp circle of filter paper or paper towel on the bottom of the dish. Tape it to the bottom so that the pill bug or sow bug cannot hide underneath the paper.
3. Put a pill bug in the center of the dish and leave it for 20 minutes. If it does not seem to have a preference for either side, shine a light over the uncovered side of the dish.

Expected results: Pill bugs usually tend to avoid bright light. This may be because sunlight could very quickly make a pill bug dry out.

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