Isopod Care Guide

Live Material Care Guide

Introduction

Pill bugs (*Armadillidium* sp., aka Roly Poly) and Sow bugs (*Oniscus* or *Porcellio* sp., aka potato bugs or wood lice) are frequently confused but they are very easy to distinguish from one another if you look closely. (The diagrams below show them both but letter B is the pill bug) However, either species is very easy to keep in a classroom. Also, contrary to popular belief, these animals are not "bugs" (Class Insecta) but are related to shrimp and lobster (Class Crustacea). Female pill bugs and sow bugs carry eggs in a brood pouch under the exoskeleton and are difficult to see. Development of the young into full-size adults takes approximately a year.

Background

Isopods have three main body regions—head, thorax and abdomen. They have simple eyes, seven pairs of legs and their color varies from dark gray to white. See Figure 1 for the basic isopod morphology. Their body shapes increases their fitness in their environment.

Isopods are ideal specimens for adaptation studies such as chemotaxis or phototaxis studies. Some isopods are able to roll into a ball to protect themselves from adverse conditions while others move away from the irritant or toward the more ideal environment. Isopods breathe with gills therefore they are found in areas that are dark and high humidity such as underneath stones or logs. They can also be found in moist decomposing twigs and leaves in the yard or under moist flower pots.

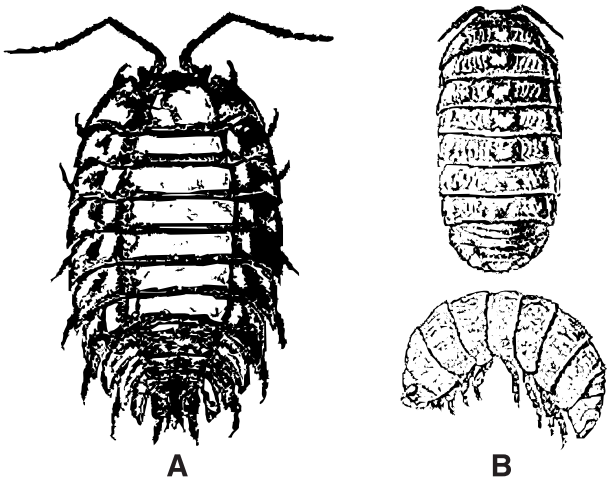

Figure 1.

Housing

Small aquaria or plastic boxes with lids are preferred in order to maintain humidity. However, if the top is not vented, the container should be regularly opened and sides wiped down to keep the inside from getting too moist. Compressed bedding or mulch works well as a bottom layer in the container. Provide some type of material—pieces of cardboard, paper egg cartons, leaves, etc.—for the "bugs" to hide under. Isopods will keep indefinitely (some species will live up to four years) as long as they are kept slightly moist at room temperature.

Slightly moistened dog chow, slices of potato, pear, apple, carrots, or lettuce leaves work well as food sources. Excess food should be removed before it begins to grow mold.

Water

Provide a water tray—Petri dish, plastic lid, etc.—with moist paper towels or cotton balls. Too much standing water may cause them to drown because they breathe using appendages on the underside of the abdomen. Use a spray bottle to

Publication No. 11042
061616

remoisten the culture periodically.

Observing/Handling

Isopods are best observed in a Petri dish under a stereoscope. To remove them from the culture container, use either a spoon or get them to climb up on a sheet of paper and then remove them.

Problems

Extreme temperatures plus mold and mildew will cause death so proper maintenance of the container is important. If low temperatures are a problem, clamping a light to the top of the container should suffice as long as it does not get too hot.

Safety Precautions

Always treat live organisms with respect and proper care. Wash hands thoroughly before leaving the lab. Follow all laboratory safety guidelines.

Tips

- Comparing the life cycles of insects and crustaceans using pill bugs could also be an interesting activity particularly if growth stages are documented with student-made diagrams or captured using microscope videocams.
- Pill bugs (or Sow bugs) may be easily collected in the wild by looking under moist leaf litter, rocks, boards, planters, etc. in the yard.

Disposal

Please consult your current *Flinn Scientific Catalog/Reference Manual* for general guidelines and specific procedures, and review all federal, state and local regulations that may apply, before proceeding. Deceased isopods may be disposed of according to Flinn Suggested Biological Waste Method VI. Never release isopods to the wild. Many species may be invasive.

The materials necessary to properly care for *Isopods* are available from Flinn Scientific, Inc.

Catalog No.	Description
LM1217	Isopods, 30
LM1218	Isopods, 100
FB1352	Compressed Bedding
FB0509	Plastic Animal Cage

Consult your *Flinn Scientific Catalog/Reference Manual* for current prices.