

**Sowbugs and Pillbugs***Phylum:*

Arthropoda

*Class:*

Crustacea

*Order:*

Isopoda

*Metamorphosis:*

None

*Mouthparts:*

Chewing

## Sowbugs and Pillbugs

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Sowbugs and pillbugs are often present in the garden and greenhouse environment, sometimes becoming pests of ornamental, vegetable, and greenhouse plants in our area. These animals are usually of little concern, but can sometimes become a nuisance when they invade the home. Control measures are seldom necessary, and a few precautions will usually eliminate the conditions which let them be troublesome to homeowners.



*Figure 1. Pillbug.*

### Body Form

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**Immature and Adult:** Female carry their young in a special brood pouch on the underside of the body. Small sowbugs and pillbugs molt within one day after leaving their mother and are sexually mature about six or seven weeks later. After leaving the mother's protection, young sowbugs or pillbugs are tiny, white, and quite vulnerable to water loss. After five molts, the animals become sexually mature. Sowbugs are flattish oval animals 3/16 to 3/4 inch long and gray in color. They are hard-bodied, with seven pairs of legs and one pair of antennae. At the end of the body two tail-like structures are

visible. Pillbugs look the same except their 'tails' are not visible and they are able to curl into a ball that protects them with strong outer plates. Sowbugs curl loosely when disturbed.

### Life History

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More closely related to crayfish than insects, sowbugs and pillbugs are terrestrial crustaceans that have adapted to life on dry land. These animals are able to thrive only in microclimates with high humidity levels.

<sup>1</sup>Research associate and associate professor/specialist, respectively, Entomology Program, University of Wyoming

They eat mostly decaying plant matter; infrequently they may damage tender plants. Sowbugs and pillbugs are commonly found under rocks, boards, or plant residue lying on moist soil along with centipedes, ants, earwigs, earthworms, and other invertebrates. All these organisms are important decomposers found in the topsoil. Sowbugs and pillbugs often aggregate, which helps them conserve moisture. During the winters, pillbugs and sowbugs become inactive outdoors, but may continue to breed and grow in warm sites like greenhouses or cellars. In our area, one or two generations may develop during the summers.

### **Plant Injury**

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Sowbugs and pillbugs rarely harm plants by feeding. Irregular nibbling and rasping of affected plants, along with a visibly high number of sowbugs or pillbugs, may alert people to sowbug and pillbug problems. Sowbugs and pillbugs may invade buildings, especially damp cellars and sheds, and become nuisances. Manage-



*Figure 2. Sowbug.*

ment to reduce sowbug and pillbug populations is the same in either case—reduce humidity and hiding places.

### **Management**

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Sowbugs and pillbugs are adapted to high moisture levels, so high populations can be considered symptoms of conditions optimal for their success. Unfortunately, in our arid climate, creating conditions that lower pillbug populations also may increase water demands of the plants, increase soil temperature and evaporation, lower rates of decomposition of the organic matter in the soil, and reduce the quality of the topsoil's texture and fertility. Mulches, for example, are excellent in cooling the soil and conserving water, but harbor sowbugs and pillbugs. If sowbugs and pillbugs have been problems previously, the use of mulches should be delayed as long as possible to reduce early buildup of populations in the summer. Removal of boards, stones, and plant residue from the area also reduces the number of hiding places. Boards or rocks also can be used as an attractant. These are put in the garden overnight or for a few days, then turned over during the hottest part of the day and the sowbugs and pillbugs under them are destroyed.

Sowbugs and pillbugs invading the home indicate high moisture, which if reduced removes the conditions fostering sowbugs or pillbugs. Humidity near buildings is increased by foundation plantings and leaking faucets—these will attract sowbugs and pillbugs and increase the chances the animals will enter the building in the fall. If possible, lowering the

humidity by thinning or trellising foundation plants and minimizing water leaks will lower the chance of sowbugs and pillbugs entering buildings. Irrigation techniques designed to limit water consumption, such as soaker hoses and drip irrigation, also decrease moisture while supplying the plant's needs.

As a last resort, insecticides such as diazinon, carbaryl, permethrin, and chlorpyrifos can be applied at foundation walls and in crawl spaces to limit populations.

## **Sources of further information**

*Insects that Feed on Colorado Trees and Shrubs* (PSIS-4) and *Management Recommendations for Insect Pests of Trees and Shrubs* (PSIS-5) are available from the University of Wyoming Bulletin Room, Merica Hall (307-766-2115). Other guides on horticultural pests and their control, including information on sowbug and pillbug biologies, are available from various sources. University of Wyoming or Wyoming Department of Agriculture representatives may help locate literature.

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