



# Millipedes

Fact Sheet No. 21

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## Biology and Description

Millipedes are related to trilobites, spiders and ticks, sowbugs, and crayfish, centipedes, and insects. Each group represents a different class of arthropods. Millipedes or "thousand-legged worms" include over 800 species of the class Diplopoda in North America. Adults of the common species are elongate, cylindrical, 1-2 inches long, slender, hard-shelled, dark reddish-brown to gray-black, and have about 30 body segments. They commonly have two pairs of short legs on each of the body segments except for the first three segments. The number of body segments varies according to the age and species. Some adults may have as few as 15 or as many as 150 segments.

Millipedes overwinter as adults and immatures in debris and sheltered areas under rocks, boards, and equipment. In the spring, adult females deposit up to 300 eggs in the moist soil. The white eggs hatch in about three weeks. The young resemble adults but are smaller, have fewer segments, and only three pairs of legs. As they grow, they shed their skins several times, adding additional segments and legs at each molt. It takes them from one to five years to reach maturity, and individuals may live for several years after that. Usually only one generation is produced per year. Many species are capable of producing an unpleasant odor from openings along the sides of the body, and some coil up like a watch spring when disturbed.

## Damage and Habits

Millipedes have a high moisture requirement and are usually found in damp, dark places, such as under leaves, under stones or boards, in rotting wood, and in the soil. Millipedes are useful as scavengers, feeding on decaying organic matter and often develop high populations in mulches, manure, grass clippings, leaf litter, and soils high in humus.

Millipedes will also feed on overripe fruit in contact with the soil such as strawberries, tomatoes, or melons that have developed cracks. A few will attack small roots and seedlings of bean, corn, or peas and may seriously damage tender growth on greenhouse and garden plants. They may crawl into cabbage heads, tunnel into potato tubers, beets, parsnips, or turnips. A few species of millipedes are carnivorous, eating insects, and thus should be considered beneficial.

When conditions are favorable for population build-ups, millipedes may invade structures

and become household pests, especially in basements and the damp areas of the house. Most specimens submitted are nuisance pests, either from indoor situations or outdoor situations not involving specific plants. However, a significant number of specimens do involve garden vegetables and fruits. Millipedes are occasionally found in house plants, probably due to the use of "infested" soil. Millipedes do not bite and are harmless to people, pets, and structures.

At least some millipedes are nocturnal and are active only at night. They shun light and may not be seen unless an inspection is made in the nighttime hours. Dead millipedes are often found when large numbers of them are around. A thin layer of sawdust spread smoothly on the floor of infested areas may be used to determine the source of millipedes or other nocturnal insects, since the insects will leave tracks in the sawdust. However, this technique will probably not work well in damp areas (fine sand might be used instead). Millipedes continually found indoors may be a sign that there is a water leak or moisture problem in the area where they are being found.

### **Control**

In most cases we do not recommend a control for millipedes. A few in gardens or lawns is common and seldom pose a threat to vegetation. Actually, they should be considered beneficial due to their role in breaking down organic matter in the soil. However, if large populations are present and are damaging plants or invading homes, a yard sanitation project to remove decaying vegetation, dead leaves, grass, compost, or other similar debris will help reduce their numbers.

If damage to plants is occurring, removing excess mulch from the area will reduce millipede populations. Damage to fruit and berries in contact with the soil can be avoided or decreased by harvesting before the fruit becomes overripe and by placing newspapers or plastic mulch underneath the plants. If millipedes are entering structures, the numbers can be reduced by sealing or caulking holes and cracks in the foundation and by weather-proofing doors and thresholds.

Millipedes might be collected with a technique used for earwigs in which flat objects (such as pieces of plywood) are placed on the ground. Since millipedes, as well as earwigs, like to hide under such objects in daytime, this technique might allow collection and destruction of them in garden or indoor areas.

Once millipedes are in the home they can be removed by hand or picked up with a vacuum cleaner. Household aerosol or pump formulations of residual insecticides sprayed along the baseboards and in other cracks and crevices will kill millipedes as they move over the treated surfaces.

There are over 300 Utah-registered insecticides labeled for millipede control indoors and in outdoor areas not associated with plants. About half of these are homeowner-type formulations about half are intended for commercial/professional applicators. The list of active ingredients in these products is extensive and includes acephate, bendiocarb, bifenthrin, carbaryl, chlorpyrifos, cyfluthrin, D-trans-allethrin, deltamethrin, diatomaceous earth, diazinon, esfenvalerate, lambda-cyhalothrin, permethrin, propoxur, resmethrin, and synergized pyrethrins.

For commonly affected food plants the number of active ingredients registered for millipede

control is rather limited. Some formulations of carbaryl or carbaryl plus metaldehyde are labeled for soil treatments of root crops such as potatoes, beets, parsnips, and turnips. Some formulations containing the above plus some formulations of diazinon are labeled for soil treatments to control millipedes on strawberries, tomatoes, and melons. Similarly, some formulations of the above plus some formulations of permethrin are labeled for soil treatments to control millipedes on beans, corn, and peas.

Labeling of specific products can vary even with the same active ingredients. Before purchasing or applying any product, check the label to be sure the site you want to treat is listed.

### **Precautionary Statement**

All pesticides have both benefits and risks. Benefits can be maximized and risks minimized by reading and following the labeling. Pay close attention to the directions for use and the precautionary statements. The information on pesticide labels contains both instructions and limitations. Pesticide labels are legal documents, and it is a violation of both federal and state laws to use a pesticide inconsistent with its labeling. The pesticide applicator is legally responsible for proper use. Always read and follow the label.

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