MILLIPEDES AND CENTIPEDES

Integrated Pest Management In and Around the Home

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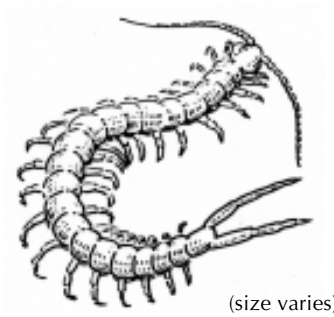

(size varies)

Figure 1. Millipede *(left)***; Centipede** *(right)***.**

Millipedes and centipedes (Fig. 1) are often seen in and around gardens and may be found wandering into homes. Unlike insects, which have three clearly defined body sections and three pairs of legs, they have numerous body segments and numerous legs. Like insects, they belong to the largest group in the animal kingdom, the arthropods, which have jointed bodies and legs and no backbone. Their bodies are covered with a shell-like covering called an exoskeleton. There are several features that distinguish a millipede from a centipede. (Table 1).

MILLIPEDES

Description

Millipedes, or "thousand-leggers," are brownish, elongated, cylindrical to slightly flattened creatures, with two (most common) or four pairs of tiny legs per body segment. Millipedes don't really have a thousand legs; even the largest ones have somewhat less than a hundred. When they walk, their legs move in an undulating wavelike manner. Adult millipedes vary from $^{1}/_{2}$ to $6^{1}/_{2}$ inches in length. When prodded or at rest, most millipedes curl up. The three species found in California are the common millipede, the bulb millipede, and the greenhouse millipede.

Millipedes may be confused with wireworms because of their similar shapes. Wireworms, however, are click beetle larvae, have only three pairs of legs, and stay underneath the soil surface.

Habitat and Importance

Millipedes normally live in and feed on rotting leaves and wood and other kinds of moist decaying plant matter. Generally, their role is a beneficial one in helping to break down dead plant matter. However, when they become numerous, they may damage sprouting seeds, seedlings, or strawberries and other ripening fruits in contact with the ground.

Sometimes individual millipedes wander from their moist living places into homes, but they usually die quickly because of the dry conditions and lack of food. Occasionally, large numbers of millipedes migrate, often uphill, as their food supply dwindles or their living places become either too wet or too dry. They may fall into swimming pools and drown.

When disturbed they do not bite, but some species exude a defensive liquid that can irritate skin or burn the eyes.

Life Cycle

Adult millipedes overwinter in the soil. Eggs are laid in clutches beneath the soil surface. The young grow gradually in size, adding segments and legs as they mature. They mature in 2 to 5 years and continue to live for several years thereafter.

Control

Millipedes seldom need to be controlled. Keep in mind that they do no damage indoors and pose no health hazard. Those that stray indoors can be swept out or picked up with a vacuum cleaner. Sealing cracks and

TABLE 1. How to Tell Millipedes and Centipedes Apart.

	Millipede	Centipede
pairs of legs/body segment	2 or 4	1
last legs extend backward	no	yes
moves rapidly	no	yes
attempts to bite	no	yes

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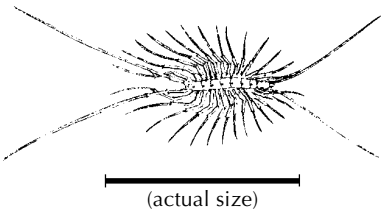

Figure 2. House centipede.

other openings to the outside helps prevent them from entering. Usually invasions are over within a few days.

Eliminating moist hiding places around the home will kill or discourage millipedes. Outdoors, this includes removing rotting wood and decaying grass and leaves from around the house's foundation. This also eliminates millipede food sources. If there is excessive moisture in subfloor crawl spaces or basements, take measures to dry out these areas.

Application of insecticides is rarely justified for millipede control. If you decide to apply pesticides, avoid materials such as diazinon and chlorpyrifos, which pose hazards to aquatic invertebrates and should not be allowed to get into storm water or sewer drains.

CENTIPEDES

Description

Centipedes, or "hundred-leggers," are elongated, flattened animals, bearing one pair of legs per body segment. The actual total number of legs in most species is closer to 30 than to 100. Adult centipedes are usually brownish and over 1 inch in length. The house centipede (Fig. 2), a species that commonly invades buildings, has long legs that enable it to run rapidly. Unlike millipedes, centipedes never coil up when disturbed.

Garden centipedes (symphylids) (Fig. 3) may be confused with true centipedes but are white, less than $^1/_4$ inch in length, and have 12 pairs of legs as adults. Symphylids live in damp soil where they sometimes attack underground portions of plants. They are associated with soils that are high in organic matter.

Habitat and Importance

Centipedes usually are found in damp, dark places, such as under stones, leaf mulch, or logs. Indoors, centipedes may occur in damp areas of basements, closets, or bathrooms, or anywhere in the home where insects occur. During the day they hide in dark cracks and crevices, coming out at night to search for insects to eat.

House centipedes are actually beneficial—they capture flies, cockroaches, and other small household pests. They never damage plants or household items.

When provoked, a few large kinds of centipedes can inflict a painful bite that may cause localized swelling, discoloration, and numbness.

Life Cycle

Adult centipedes overwinter in secluded moist places. Eggs are usually placed in damp soil in the spring and summer. Some centipede species add segments and legs as they grow; others are born with a complete set. Centipedes require 2 to 3 years to mature, and have been known to live 6 years.

Control

Centipedes seldom need to be controlled unless they become a nuisance in the home. Centipedes are predators and generally play a beneficial role in the garden. Their activities should be encouraged in the yard. Reductions in the number of household centipedes occur when their food source—other household pests—is controlled. Airing out damp places may help. Outdoors, centipede control is aided by the removal of debris as recommended for millipedes.

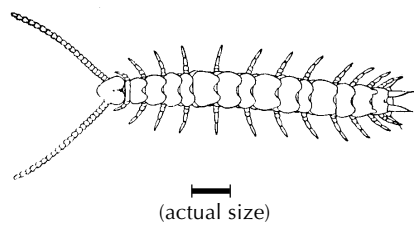

Figure 3. Garden centipede.

Although some pesticides are labeled for controlling centipedes, their use is rarely justified. Be especially careful to avoid products containing diazinon and chlorpyrifos, which pose problems for aquatic invertebrates and must be kept out of storm water or sewer drains.

COMPILED FROM:

Moore, W. S., and C. S. Koehler. 1986. *Millipedes and Centipedes.* Oakland: Univ. Calif. Div. Agric. Nat. Res. Leaflet 7172.

REFERENCE

Shelley, R. M. 1999. Centipedes and millipedes with emphasis on North American fauna. *Kansas School Naturalist.* Vol. 45, No. 3. Emporia, KS: Emporia State University. 16 pp.

For more information contact the University of California Cooperative Extension or agricultural commissioner's office in your county. See your phone book for addresses and phone numbers.

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This Pest Note is available on the World Wide Web (http://www.ipm.ucdavis.edu)

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned.

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WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits and/or vegetables ready to be picked.

Dispose of empty containers carefully. Follow label instructions for disposal. Never reuse the containers. Make sure empty containers are not accessible to children or animals. Never dispose of containers where they may contaminate water supplies or natural waterways. Do not pour down sink or toilet. Consult your county agricultural commissioner for correct ways of disposing of excess pesticides. Never burn pesticide containers.