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# SPRINGTAILS

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*Integrated Pest Management for Home Gardeners and Landscape Professionals*

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Springtails (order Collembola) are very small, jumping insects that sometimes alarm homeowners by appearing in large numbers in moist indoor areas such as kitchen sinks, bathtubs, and in the soil of houseplants. They may also be found outdoors in swimming pools, moist landscaped areas or vegetable gardens, and on the surface of mud puddles. They usually appear in the spring and early summer, but can be found year-round in moist environments. Because they jump when disturbed, springtails are sometimes confused with fleas. However, springtails do not bite humans or pets, nor do they spread disease or damage household furnishings. They are mainly a nuisance by their presence.

## IDENTIFICATION

Springtails are minute, wingless insects about  $\frac{1}{16}$  inch long. They lay their round eggs in small groups in moist soil, especially where organic matter is abundant. The immature stage is usually whitish, and adults tend to be whitish, bluish, or dark gray to black. The immature stage differs from the adult stage only in size and color. Springtails get their name from the ability to jump up to several inches high by means of a tail-like mechanism (furcula) tucked under the abdomen. When disturbed, this appendage functions as a spring, propelling them into the air away from the danger.

## HABITAT

Springtails live in soil, especially soil amended with compost, in leaf litter and organic mulches, and under bark or decaying wood. They feed on decaying plant material, fungi, molds, or algae. They are also found on the surface of stagnant water or on sidewalks that border flower beds or swimming pools. Mushroom houses and greenhouses also provide the

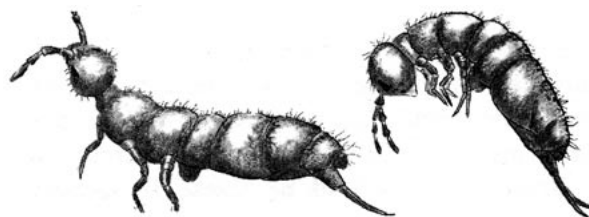
damp environment required for their development.

When their environment outdoors becomes dry, springtails search for moisture. They may invade homes or move to more favorable outdoor areas such as areas near swimming pools. They enter homes through window screens, open doors, vent pipes, or in potted plants. They may be attracted to light, entering through windows or under doors. After a hot day, they may congregate on the side of a building in tremendous numbers, increasing the chance of indoor infestation. After entering a house, they crawl in search of moisture, and are often trapped in sinks, washbasins, and bathtubs. They may also occur around floor drains, in damp basements, crawl spaces, and wall voids. They soon die after entering a home unless they find moisture.

## DAMAGE

Most springtails are harmless scavengers, feeding mainly on decaying organic matter. Some species may damage plants by chewing on the roots and leaves of seedlings. The seedlings may appear wilted and may die if damaged when young. Damage occurs as minute, rounded pits on young leaves or roots, or as irregular holes in thin leaves. Mature plants are not significantly injured. Springtails rarely cause enough damage to plants to warrant control measures.

Springtails can become a nuisance around swimming pools when they fall in and drown in large numbers, often coating the pool surface. Although unsightly in the pool, they can be safely removed without cause for



**Figure 1. Springtails are minute, wingless insects about  $\frac{1}{16}$  inch (1–2 mm) long.**

concern. Springtails will not bite or otherwise harm people or pets.

Their large populations can also make them a nuisance in homes, greenhouses, and other locations where there is a source of moisture. Their continued presence indoors is an indicator of moisture.

## MANAGEMENT

The key to managing springtails is to reduce moisture and excess organic matter in gardens, plant pots, and around building foundations. Also screen or caulk cracks that provide entryways for springtails into homes. Pesticides should not be necessary and won't provide long-term control by themselves.

### *Environmental Modification*

Outside the house, eliminate breeding sites by removing excessive mulch and moist leaves around the foundation. Low, moist places near the house or in the crawl space of the building should be dried out. Do not overwater mulched landscape plants, and let the soil dry slightly between waterings. Where springtails have been a problem in vegetable gardens, provide good drainage, reduce irrigation, and reduce application of organic amendments. Inside the home, springtails can be controlled by airing out and drying infested areas. The use of a fan

can speed up the process. Water leaks or other sources of excess moisture should be repaired. Springtails in indoor potted plants can be controlled by avoiding overwatering and by allowing the soil to dry out between waterings. Do not allow drain water to stand in saucers between waterings. In sinks and bathtubs, simply wash the insects down the drain. Never pour or spray insecticides down the drains.

### Exclusion and Sanitation

Springtails are attracted to light and are so small that they can enter houses through cracks and crevices such as around doors, utility pipes, or window screens. Repair torn screens and close up places where the springtails can enter the house, such as spaces under doors and around windows and attic or basement vents. Use caulk, weather stripping, fine-mesh screen, steel wool, or expandable foam as appropriate. Springtails that enter the

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ILLUSTRATIONS: **Fig. 1**, Moore, W. S., and C. S. Koehler. 1978. *Springtails*. Oakland: Univ. Calif. Div. Agric. Sciences. Leaflet 21038.

Produced by UC Statewide IPM Program, University of California, Davis, CA 95616

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



This publication has been anonymously peer reviewed for technical accuracy by University of California scientists and other qualified professionals. This review process was managed by the ANR Associate Editor for Pest Management.

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This material is partially based upon work supported by the Extension Service, U.S. Department of Agriculture, under special project Section 3(d),

home may be controlled by sweeping or vacuuming. Repeat as needed.

### Swimming Pools

Springtails in the pool will be removed by normal pool filtering or can be manually removed using a pool skimmer. Limiting lush vegetation and mulch around the edge of the pool may reduce recurring problems.

### Chemical Control

Insecticide sprays are generally not recommended for springtail management. They are often no more effective than vacuuming, and repeated applications may be required. At best, pesticides will provide only temporary relief if the conditions favorable for springtail development are not corrected. Pyrethroid insecticides are available for treating foundation walls around the perimeter of buildings. If required, these applications are best done by a professional. Special care must be taken to avoid run-off of pesticides from walls and foundations into storm drains, because they lead directly into creeks and rivers.

### REFERENCES

- Ebeling, W. 1978. *Urban Entomology*. Oakland: Univ. Calif. Div. Agric. Nat. Res.
- Koehler, P. G., F. M. Oi and M. L. Aparicio. 1994. *Springtails*. Gainesville: Univ. of Fla. Coop. Ext. Service, Inst. of Food and Agric. Sciences. ENY-228. Available online, <http://edis.ifas.ufl.edu/IG124>
- Moore, W. S., and C. S. Koehler. 1978. *Springtails*. Oakland: Univ. Calif. Div. Agric. Nat. Res. Leaflet 21038. Out of print. ❖

#### 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.

Pesticides applied in your home and landscape can move and contaminate creeks, rivers, and oceans. Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits or vegetables ready to be picked.

Do not place containers containing pesticide in the trash or pour pesticides down sink or toilet. Either use the pesticide according to the label or take unwanted pesticides to a Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Household Hazardous Waste Collection site nearest you. Dispose of empty containers by following label directions. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

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