

# Silverfish



Peggy K. Powell, Ph.D.  
Board Certified Entomologist

## Biology and Habits

Although the sudden slither of a silverfish is enough to frighten some people, these insects are mostly just nuisance pests in houses. Attracted to the starches and glues used on fabrics, wallpaper, stamps, and book bindings, silverfish can damage books and fabrics. Fortunately, damage usually is not severe.

Silverfish are indicators of excessive moisture. They will live in almost any part of a house, including bedrooms and living rooms, but they prefer areas with high humidity. Infestations often originate in basements or attics, but can occur in wall voids or under subflooring.

*“Silverfish are indicators of excessive moisture.”*

Silverfish are some of the most primitive insects. They are wingless and reach a length of 1/2-inch to 5/8-inch when full grown. They are broad at front, with long antennae, and taper toward the rear with three long tails. Some species are covered with scales and silver-colored, hence the name. Others are striped or mottled with gray or brown.

Silverfish are active at night and move about quickly. Because of their flattened shape, they can easily hide in small cracks and crevices. Female silverfish lay eggs in small batches in cracks or under objects. Eggs hatch in 20 to 40 days.

Silverfish exhibit incomplete metamorphosis, meaning that the young look like smaller versions of the adults and feed on the same foods. Silverfish require three to four months to develop from egg to adult. Adults live for two to three years.

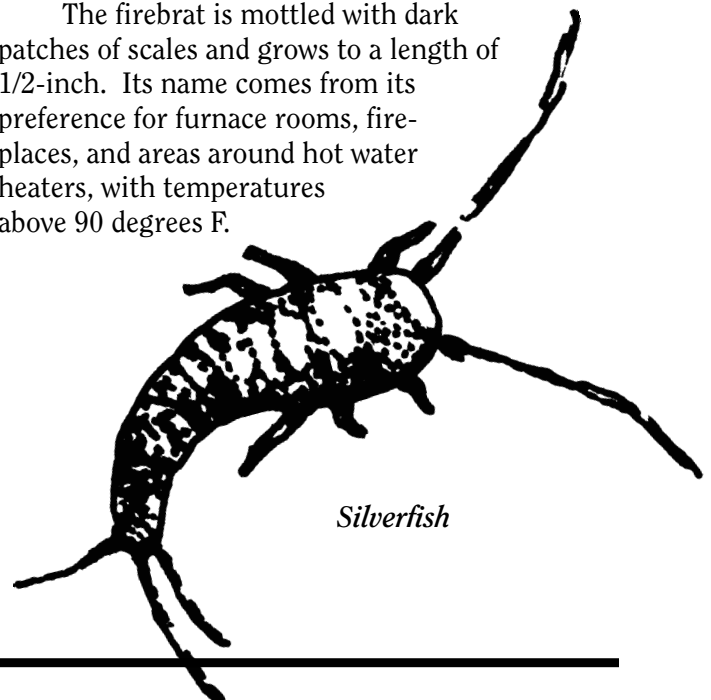
## Identification

Several different species of silverfish occur in West Virginia houses. These include the common silverfish *Lepisma saccharina*, the four-lined silverfish *Ctenolepisma quadriseriata*, and the firebrat *Thermobia domestica*.

The common silverfish is 1/2-inch long as an adult and covered with silver scales. This species is often found in the lower levels of buildings and around indoor foundation walls near water pipes. The common silverfish prefers to live in warm, moist locations, ranging from 70 to 80 degrees F and 75 to 95 percent relative humidity. It is rarely found outdoors.

The four-lined silverfish grows to 5/8-inch. Its name comes from the four dark stripes down its back. Large populations are often found in houses with wooden shake shingles. This species also lives outdoors in plant mulch and is able to tolerate either moist or dry conditions, warm or cool temperatures, both indoors and out.

The firebrat is mottled with dark patches of scales and grows to a length of 1/2-inch. Its name comes from its preference for furnace rooms, fireplaces, and areas around hot water heaters, with temperatures above 90 degrees F.



*Silverfish*

---

## Prevention Methods

Silverfish are usually introduced into houses from an outside source. Prevention of silverfish infestations should begin with sanitation. Vacuum cracks and crevices to remove dust and lint. Keep bookcases clean by vacuuming and shaking out books. Don't allow piles of old papers and magazines to accumulate. Check old books before bringing them into the house. Store starched linens in sealed plastic bags. Seal cracks and crevices with caulking compound to reduce the number of hiding places.

Make the environment less attractive by reducing the humidity with a dehumidifier. Anhydrous calcium carbonate, a dehydrating agent, is effective in removing moisture from the air in closets and other small spaces.

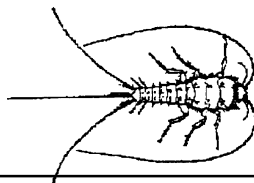
## Control Strategies

Because silverfish can survive for up to a year without food, sanitation probably won't get rid of an existing infestation but may prevent reinfestation after a silverfish population has been eliminated. Controlling silverfish can be tricky, since it is often difficult to find where they origi-

nate. Control may be easier if you identify the species of silverfish. Knowing habitat preferences may give you a better idea of where to direct control measures.

Your control program should start with a thorough inspection to try to discover where the silverfish are coming from. Using a good flashlight, look in attics and basements, in and under such things as boxes, books, and anything made of fabric or paper. Note those places where silverfish are most abundant. Also during your inspection, note any environmental conditions, such as excessive moisture, that may contribute to your silverfish problem.

Integrated pest management for silverfish combines sanitation and humidity control with the use of an insecticide dust such as boric acid, silica gel, or diatomaceous earth. Use a bulb duster to puff the dust into cracks and crevices, around moldings, and behind baseboards. If the silverfish population seems to be coming from a wall void, it may be necessary to remove outlet plates or drill small holes in walls to gain access to the void. Always use the proper protective clothing with pesticide dusts — neoprene gloves, goggles, and a dust mask — and be sure to read and follow label instructions.



---

Preparation of this document was financially aided by a grant administered by the Environmental Stewardship Initiative Team, West Virginia University Extension Service.

Programs and activities offered by the West Virginia University Cooperative Extension Service are available to all persons without regard to race, color, sex, disability, religion, age or national origin.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Rachel B. Tompkins, Director, Cooperative Extension Service, West Virginia University.

---