
SILVERFISH AND FIREBRATS

Integrated Pest Management in the Home

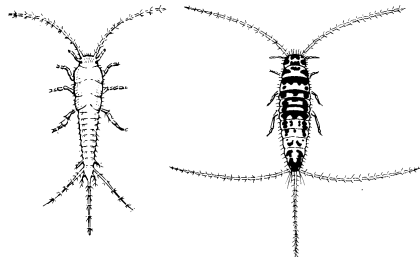


Figure 1. Silverfish (left); Firebrat (right).

If the pages and bindings of books in your bookcase have been chewed on, suspect the look-alike household pests—silverfish and firebrats.

DESCRIPTION

Silverfish are shiny, silver or pearl gray, and firebrats are shiny, mottled gray. Adults of both are slender, wingless, soft-bodied insects $\frac{1}{3}$ to $\frac{1}{2}$ inch long. They have scaly bodies that taper gradually to the rear with two slender antennae in front and three long, thin appendages in back. The presence of scales around or under the damage is a good indication that these pests are the culprits.

HABITS

During the day, both silverfish and firebrats hide. If the object they are hiding under is moved, they dart toward another hiding place. They come out at night to seek food and water. Items on their preferred menu are cereals, moist wheat flour, books, any paper on which there is glue or paste, sizing in paper (including wallpaper) and book bindings, and starch in clothing. They can live for several months without food.

WHERE FOUND

Silverfish live and develop in damp, cool places, particularly in basements and laundry rooms. Firebrats thrive best in very warm, moist places. They may be found around ovens, heating units, fireplaces, hot water pipes, the attic in summer, and near the furnace in winter. In apartments and homes, the insects crawl along pipelines and through openings in the walls or floors from basements to rooms above.

Silverfish and firebrats can be found in any part of the home. Because they are seeking food, they choose bookcases, closets, and places where books, clothing, starch, or sugar foods are available. They hide in baseboards and around window and door frames from which they seek out food sources. Sometimes they are seen in the bathtub or sink. They do not crawl up through the drain, but fall in and cannot climb up the slippery sides to escape.

Large numbers of these insects may invade new homes from surrounding wild areas, especially as these areas dry in summer. They may be brought in on lumber, wallboard, or similar products. Freshly laid cement and green lumber supply humidity, and wallpaper paste provides them with food.

MANAGEMENT

To keep silverfish and firebrats away, keep basements, laundry rooms, and bathrooms, especially shower stalls, clean and dry. Plug or putty holes or spaces around pipes. Repair leaks and drips in plumbing. Clean out closets

periodically. Collections of magazines, papers, and books provide food for them. Occasionally, move books around in a bookcase. Keep foods in containers with tight lids.

There are several kinds of commercially available products that control silverfish or firebrats: household sprays containing various pyrethroids (such as bifenthrin, tetramethrin, phenothrin), dusts, boric acid powder, and foggers are labeled for control of these pests. Insecticides are not needed, however, for the control of a few solitary insects, and their use should be reserved for large infestations. If an occasional stray firebrat or silverfish is observed, it can be killed easily with a rolled-up newspaper.

- Granular and dust baits are available and can be very effective if placed closer to the pests' shelter than other food sources.
- To use an aerosol spray, apply it directly to cracks in doors and window casings, baseboards, closets, bookcases, and places where pipes go through walls. Caution: Some sprays have oil solution bases; do not apply these near electric motors, gas pilot flames, or other places where they may start fires. Follow label directions and cautions.
- To use dusts or boric acid powder, apply them with a bulb duster, powder blower, or a plastic squeeze bottle to leave a fine layer of the material in the area to be treated. If the layer is too thick, the

surface will be slippery. Puff in places mentioned above for sprays, paying special attention to cracks and crevices. Follow label directions and cautions. Inorganic dusts such as boric acid and silica gel remain effective indefinitely in dry locations. If they get wet, they become too packed for easy pickup by the insects, so re-treat the area.

- Foggers are not generally recommended to treat silverfish and

firebrats unless the infestation is severe. Be sure to read the label directions carefully and follow all instructions.

A properly and thoroughly applied insecticide will show results in a few weeks. If control is not achieved in 2 or 3 weeks, silverfish are probably coming from untreated areas. Seek these areas out for treatment and also eliminate water sources—large populations of silverfish and firebrats

cannot be controlled unless their water sources are eliminated.

In general, bait packets have not been very successful in treating silverfish and firebrats because these pests tend not to feed on them.

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

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.

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