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Silverfish and Firebrats and Their Control

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L.K. CUTKOMP

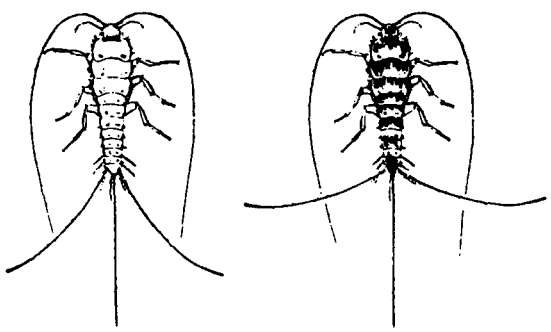
General Appearance and Habits

Both silverfish and firebrats are household pests. The firebrat is far more common as a household pest in Minnesota than the silverfish. However, these pests are very similar in general appearance and habits.

Silverfish and firebrats prefer dark places. About the only time they are seen in lighted areas is after having been disturbed. Both have characteristic quick movements, stopping at short intervals then moving on rapidly. They are not able to climb on smooth, vertical surfaces. As a result, silverfish or firebrats may get trapped in the bathtub, wash basin, or in glass trays.

The full grown insect may be from 1/4- to 1/2-inch long; the young are considerably smaller. Both silverfish and firebrats have a silver or gray colored body. But, upon close inspection, the firebrat shows a distinct mottled appearance. The bodies are thick at the front and taper to a somewhat pointed appearance at the tail.

Both of these pests have two long antennae or feelers on the head and three rather similar feelers at the tail end. The center one of these tail-end feelers is directed straight back from the tip of the body. The firebrat's two lateral hind feelers are usually held at about right angles to the middle feeler. The common silverfish can be distinguished from the firebrat by the position of the two lateral hind feelers; they are directed backward at a sharper angle and do not stick out at right angles from the body. Each of the five feelers is nearly as long as the body itself. The body of the firebrat has a mottled appearance while the silverfish has a neutral color.



Silverfish Firebrat

Life History

The firebrat thrives on hot conditions with temperatures between 90° and 110° F. At 98° F. they may pass from egg stage through their entire life cycle in about 3 months. The silverfish lives and multiplies readily at temperatures in the 75 - 85° F. range when the relative humidity is rather high.

When the temperature is in the right range these species will lay eggs in cracks or small openings, particularly along the baseboards and quarter rounds of rooms. If the pests are abundant in warm basements, the insects will breed and lay eggs along covered steam pipes or near hot air ducts where the eggs may be pushed into tiny cracks. The eggs will hatch in approximately 2 weeks in warm rooms. The little ones which hatch are identical to the adults except for the size difference.

Food and Type of Damage

These pests feed on a large variety of materials although they seem to prefer vegetable food. They may feed on starchy things, on glue, or occasionally on leather and fur; but they are more commonly found doing damage to paper or light clothing such as rayons or silks. They also attack a number of the artificial or synthetic fabrics. Under rather warm conditions, book bindings, labels, and paper sizing may be readily attacked by these pests. Under most circumstances they don't cause any serious damage to woolens or heavy carpeting.

Control

Modification of the Environment

It may be possible to change the temperature or the lighting in certain areas, which will cause the silverfish to die or to move into another area where they may be scattered or reached more easily by chemical treatment. A piece of furniture against a warmer wall of a room may provide a very suitable, dark hiding area for the silverfish. It might be feasible to move this furniture to another part of the room or to a cooler wall where the firebrats could not survive as well.

In other areas it might be possible to use a metal shield to modify the temperature around steam pipes so that the firebrats would not have such a desirable, warm, rough surface. Or, it might be possible to alter the air circulation in a room so the temperature around certain pipes could be lowered 5 to 10 degrees. This would particularly affect the habits of the firebrats. Some of these modifications may be used more readily in industrial buildings; but wherever possible, modifying the environment should be considered even in the household. Such measures are much more permanent than any chemical control.

Chemical Control

Chemical control of silverfish is somewhat similar to that employed for roaches. Control measures involve thorough spraying with a rather coarse spray, or painting with a brush, or dusting along and behind baseboards, behind shelving, bookcases, and storage areas. In warm basements, coarse sprays may be used on covered pipes or on areas which are warm or on surfaces where silverfish are present. Application of sprays or dusts should be repeated as often as necessary to maintain effective control. Generally sprays applied either with a hand or pressure sprayer or brushed on are more effective than dry

powder formulations except when powders are used on concrete. The sprays tend to soak in more rapidly on concrete and thus lose their effectiveness sooner.

Recommended Sprays and Their Dosages

Diazinon

A 1/2 percent diazinon solution for household use.

A 1/2 percent emulsion of diazinon (4 tablespoons 25-percent diazinon concentrate in 1 gallon of water).

Malathion

A 3 percent premium grade in a deodorized kerosene.

A 3 percent emulsion (3 tablespoons of 57 percent concentrate in 1 quart of water).

A 3 percent pressurized spray.

Some commercially prepared sprays may contain an additional insecticide known as pyrethrins plus a synergist. This would be an excellent combination with any one of the above mentioned insecticides.

When buying a household aerosol bomb, make certain it is recommended for crawling insects and will deliver a coarse spray which will give some residual effect on surfaces and in cracks and crevices.

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