

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of
Nebraska-Lincoln Extension

Extension

1991

EC91-2503 Management of Fabric Pests

Shripat T. Kamble

University of Nebraska-Lincoln, skamble1@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>



Part of the [Agriculture Commons](#), and the [Curriculum and Instruction Commons](#)

Kamble, Shripat T., "EC91-2503 Management of Fabric Pests" (1991). *Historical Materials from University of Nebraska-Lincoln Extension*. 1560.

<https://digitalcommons.unl.edu/extensionhist/1560>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Management of Fabric Pests

Shripat T. Kamble
Associate Professor of Entomology
Extension Specialist-Pesticide Assessment



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Kenneth R. Bolen, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.





Damage

Clothes moths and carpet beetles feed on and digest wool, leather, cotton, silk, and synthetic fibers. Generally, they infest clothes, carpets, rugs, upholstery, felts, lint, blankets, linen, curtain fabrics, silk, wool, feathers, hair, horns, leather, hide, nylon, acrylic, acetate, rayon, and polyester. Clothes moths are especially attracted to garments and carpeting soiled with grease, human sweat and body oils, urine, tomato juice, milk, coffee, beef gravy, and other food stains.

Silverfish feed principally on paper products, glue, paste, wallpaper, starch, and any food products consumed by humans. In addition, they damage clothing, cotton, linen, rayon and ramie fabrics.



The common fabric destroying insects in Nebraska are clothes moths, carpet beetles, and silverfish.

Clothes Moths

Clothes moths differ from other moths because they are not generally seen flying around inside homes during the day or around lights at night. They prefer dark closets, attics, corners, or any other dark areas. Adults do not feed on clothes. Most of the damage is caused by the larvae (immatures). Two types of moths that may be encountered are the webbing and the casemaking clothes moths. A third type is the carpet or tapestry moth which is very uncommon.

The Webbing Clothes Moth: This insect is cosmopolitan and is the most likely to be found in homes. Adults are uniformly gold in color with light reddish hairs on the head. The wing span is about a half inch wide. Wings are

narrow, fringed with long hair, and do not have markings. The female lays 40 to 50 eggs that hatch in 4 to 10 days. Larvae are creamy white and may mature in 35 days to 2 1/2 years. The larva usually spins a silken feeding tube or tunnel by incorporating fibers, excrement, and cast skins. While feeding, larvae produce somewhat randomly located patches of silken webbing as they move. In severe infestations, larvae may be seen crawling on clothes, carpets, and beneath furniture. The full grown larva forms a pupa inside a cocoon and the pupal period lasts from 1 to 4 weeks. The life cycle is completed in 50 to 90 days but it can be extended up to 4 years depending on conditions of food and temperature.

The Casemaking Clothes Moth: This insect is a minor pest and is generally found in southern states. The moths are brownish and their forewings have three dark spots. This moth does not have reddish hairs on its head. The name "casemaking" is derived from the habit of the brown-headed larva to spin a silken case around its body and

carry it wherever it feeds, thrusting its head and legs out in front. The larva cannot survive without the case. This insect completes one generation per year.

The Carpet or Tapestry Moth: This moth is rare in the United States but sometimes is imported with tapestry, old carpets, upholstered seats, and furs. This moth is slightly larger than the webbing and the casemaking clothes moths. The head of this moth is white. The first 1/3 of the forewing is black and the remainder of the wing is white. This insect completes one to two generations per year.

Carpet Beetles

Adults feed on pollen and nectar and may enter homes in the spring and summer. All damage is done by the larvae. Unlike clothes moths, carpet beetle larvae do not spin silken webbings or casings. The infestation is evidenced by the presence of oval to roundish small beetles around windows, or hairy larvae near baseboards,

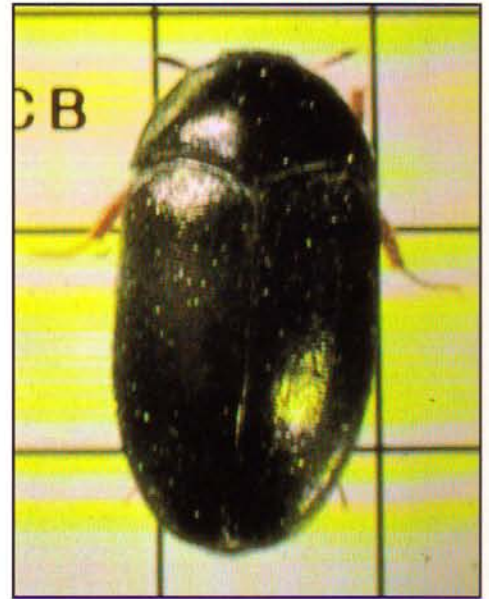


Figure 3. Black carpet beetle. Adult

moldings, in floor cracks, air ducts, closets, under furniture and beds.

Four types of carpet beetles commonly found are: 1) the black carpet beetle, 2) the varied carpet beetle, 3) the furniture carpet beetle, and 4) the common carpet beetle.

The Black Carpet Beetle: This insect is widespread and causes the most damage. Adults are shiny black to brown and about 1/8 inch long. After mating, the female lays about 50 eggs that hatch in 6-11 days. Larvae are light brown to black and their bodies are carrot-shaped, terminating in a tuft of long hairs. The larval body is covered with short, stiff hair. The larva takes from 166 to 330 days to mature and is 1/2 inch long at maturity. The pupal period is generally one to two weeks. The life cycle is completed in 6 to 12 months.

The Varied Carpet Beetle: This insect is very common in Nebraska and feeds on a great variety of plant and animal products including dead insects. Adults are smaller than the black carpet beetle. The body is rounded with patterns of white, brown, or yel-

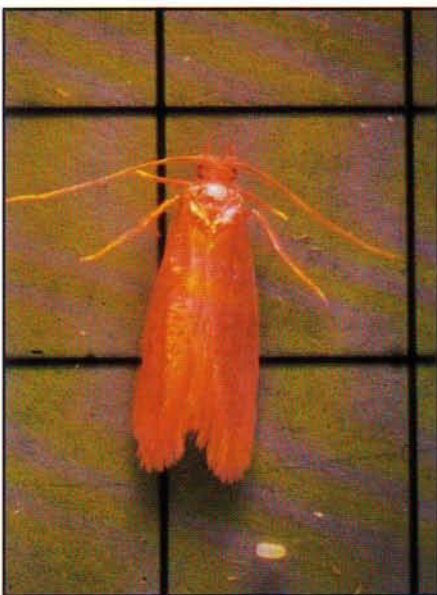


Figure 1. Webbing cloth moth. Adult

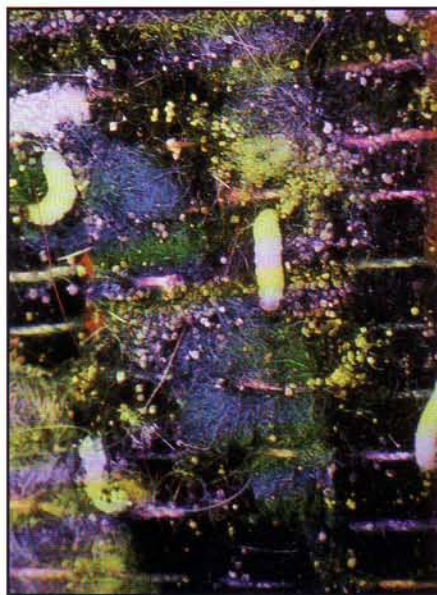


Figure 2. Webbing cloth moth. Larvae



Figure 3. Black carpet beetle. Larvae

lowish scales on forewings. After mating, the female lays about 40 eggs that hatch in 17-18 days. The larva matures in 7 to 11 months and is about 1/4 inch long. The larva appears to have a series of light and dark brown transverse stripes. All larvae are covered with short hairs and bear three pairs of hair tufts on the rear end. Their body is broadest near the rear and narrower towards the front (mouth). The pupal stage lasts from 10-13 days and the life

cycle is completed in 8 to 12 months.

The Furniture Carpet Beetle: True to its name, this insect mostly attacks upholstered furniture but it also has food habits similar to other carpet beetles. Adults are small, rounded, and blackish, with a mottle of yellow and white scales on forewings. The female lays 35 to 100 eggs which hatch in 9 to 16 days. The larva matures in 70 to 180 days and the full-grown larva is chestnut brown and covered with short hairs. The pupal stage lasts from 14 to 17 days. The life cycle is completed in 5 to 14 months.

The Common Carpet Beetle: Adults are small, rounded, gray to blackish in color, with patterns of white and orange scales on forewings. There are orange-red band scales in the middle of the back. The female lays 30 to 40 eggs that hatch in 10 to 20 days. Larvae are reddish brown, and their bodies are covered with numerous black and brown hairs. The larva appears to move rapidly rather than crawl. The larva takes 60 to 70 days to mature. The pupal stage lasts 12 to 15 days. The life cycle is completed in 77 to 110 days.



Figure 4. Varied carpet beetle. Adult

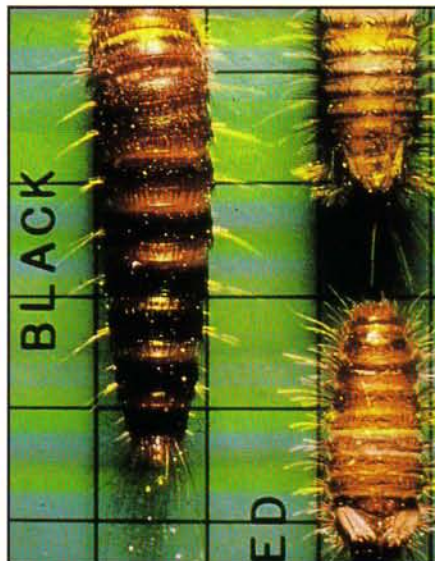
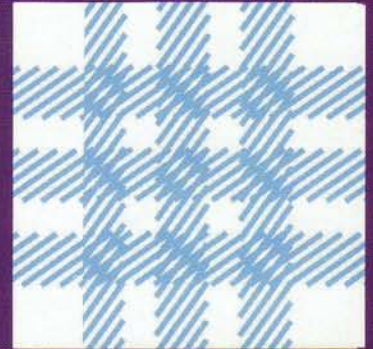


Figure 4. Varied carpet beetle. Larvae



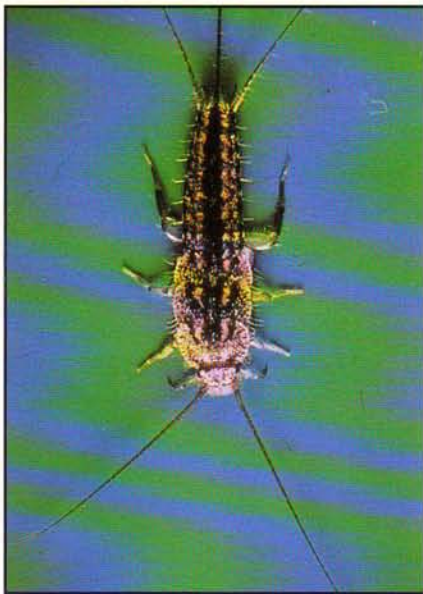


Figure 5. Silverfish

Silverfish and Firebrats

Silverfish and firebrats are often confused and are commonly referred to as silverfish. These insects feed on paper products, glues, and human foods. They also damage clothing and other fabrics.

Silverfish: Silverfish are wingless. They have flattened, slender, scale-covered bodies that are silvery with a metallic sheen. The body gradually tapers towards the rear and possesses three slender bristle tails. The female lays about 100 eggs that hatch in 14 to 60 days. The nymphs (immatures) are similar in appearance to adults except in size. The life cycle is completed in 3 to 4 months in favorable conditions; otherwise, it may take as long as 2 to 3 years.

Firebrats: This insect is slightly larger than the silverfish. Firebrats have distinct transverse brown markings on the body giving a mottled appearance. They prefer warm environment such as attics in summer, around ovens, heating ducts, fireplaces, and hot water pipes. The fe-



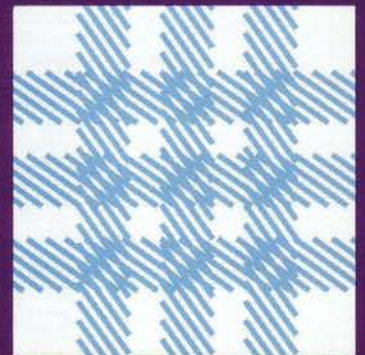
Figure 6. Firebrat


male lays about 50 eggs that hatch in 12 to 18 days. The nymphs (immatures) look like adults except for their size. The nymphs mature in 2 to 4 months and adults can survive from 1 to 2 years.

Management

Inspection: Clothes moths, carpet beetles, and silverfish tend to feed in hidden and secluded areas. During inspection, use a bright flashlight and a knife or spatula. First, inspect dark closets, neglected storage areas, and dark clothes. Larvae of carpet beetles and clothes moths may be found on furs, woolen garments, carpeting, and bedding materials. They are also found in lint, under baseboards, around door casings, around carpet edges, in and under upholstered furniture, in air ducts, and sometimes in pantries. Inspect bird nests inside and outside of the premises. Another reservoir for these pests is the accumulated animal hair where pets are kept.

Cleaning and Prevention: 1. Maintain thorough and regular cleaning of carpeting and upholstery with a





vacuum cleaner. 2. Establish a routine that involves brushing, airing, regular washing, and dry cleaning of susceptible clothing. 3. Avoid prolonged storage of discarded garments, bedding, and furs. 4. Do not store soiled clothing as it is preferred by these insects. 5. Store clothing and bedding materials with chemicals such as paradichlorobenzene (PDB). 6. Moth balls containing naphthalene are less desirable due to their persistent odor, but this chemical is effective. 7. Do not depend on cedar chests or cedar-lined closets because they are ineffective. 8. Cold vault storage of garments is an effective preventive measure.

Controlling Existing Infestations

1. *Cleaning and Vacuuming:* In case of light infestation, a vacuum cleaner with strong suction may help reduce pest infestations. During the vacuum cleaning operation, give special attention to areas under baseboards and furniture, behind door casings, dark and hard-to-reach areas, rugs, carpets, draperies, upholstered furniture, closet corners, and floor cracks.
2. *Cedar Chips, Cedar Closets and Cedar Chests:* The volatile oil called cedrol camphor from cedar will kill young larvae with fumigation action in an air-tight environment. But in most cases, cedar closets and chests are not effective because they are never sufficiently air-tight.
3. *Cold Storage:* Unless stored at freezing temperatures for over 48 hours, this process may not be effective. Temperatures of 40-45°F will reduce activity but may not kill the larvae.

4. *Insecticide Applications:* Be aware of potential staining problems when applying insecticides. Water-base sprays may cause wool to shrink and may also spot silk linings. Spray a small portion of the fabric or carpet to make sure it will not stain. If staining is not a problem, use insecticide diluted in water or deodorized kerosene oil on fabrics or carpets. Some pressurized aerosol formulations are also available. Spray carpets around baseboards and under furniture. On furniture, spray around seams, buttons, cracks, and padding areas. For silverfish, use a dust formulation in attics. Insecticides registered for these uses include:

acephate
chlorpyrifos
cyfluthrin
diazinon
naphthalene
paradichlorobenzene (PDB)
permethrins
propoxur
pyrethrins
resmethrin
sulfluramid

These insecticides will be marketed under various brand names. **Before using any insecticide products, read and follow all label directions.** If the problem persists, seek help from a professional pest control company.

