

Insects

Clothes Moths

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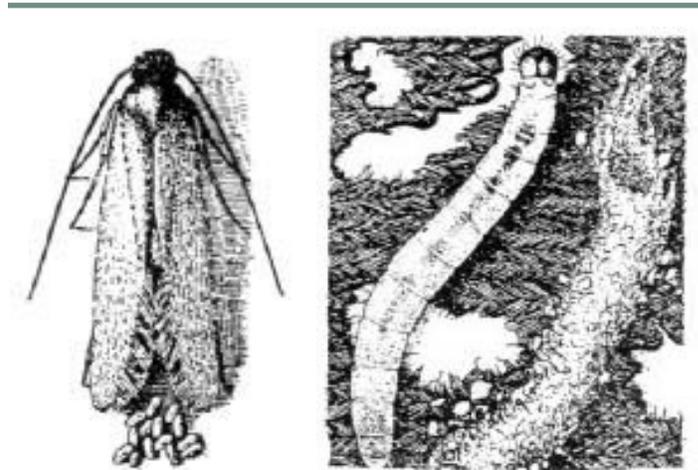
Originally developed by Harry E. Williams, former Professor Emeritus, Entomology and Plant Pathology

Clothes moth larvae feed on wool, feathers, fur, hair, leather, lint, dust and paper and occasionally cotton, linen, silk and synthetic fibers. They are especially damaging to fabric stained with beverages, urine, and oil from hair and sweat. Most damage is done to articles left undisturbed for a long time such as carpets under heavy furniture and clothing in storage. Three clothes moths are encountered in Tennessee: webbing clothes moth, *Tineola bisselliella* (Hummel), casemaking clothes moth, *Tinea pellionella* L., and carpet or tapestry moth, *Trichophagatapedzella* (L.).

Identification

Adult webbing clothes moths have a wingspread of about an inch. The buff colored moth with a satiny sheen is about 1/4 inch long with wings folded. Hairs on the head are upright and reddish gold. Eggs are oval, ivory and about 1/24 inch long. Larvae are shiny, creamy white with a brown head, and up to 1/2 inch long. They spin long threads and construct tunnels of silk.

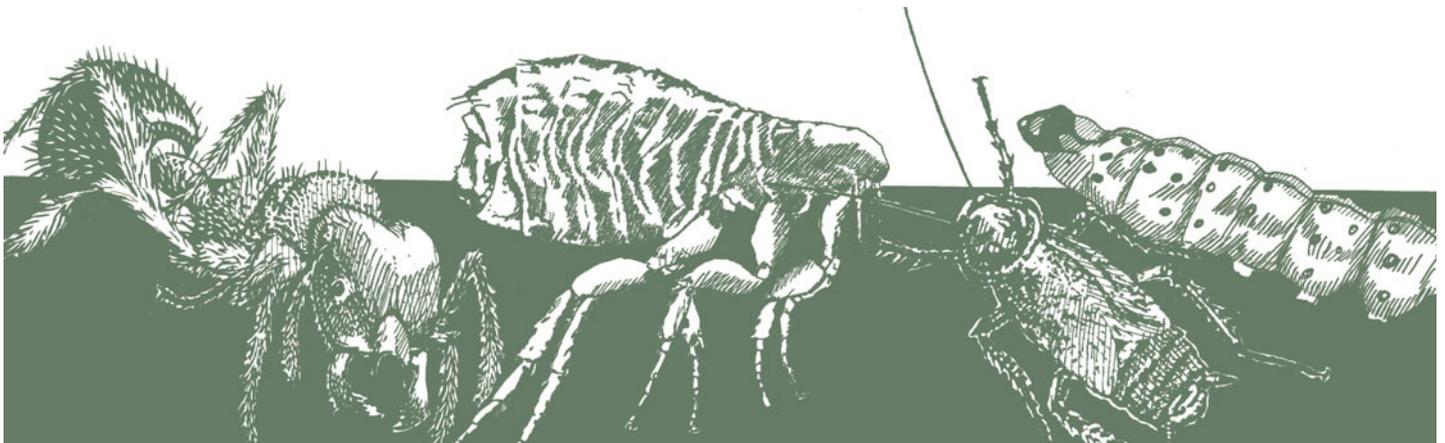
Adult casemaking clothes moths have a 1/2 -inch wingspread. Forewings are yellowish-brown, and there are three distinct, dark dots on each wing. Hind wings are smaller, lighter and fringed with hair and scales. Eggs are whitish and larvae are opaque-white with brown heads. The larva spins a small silken case around itself and carries it while feeding.

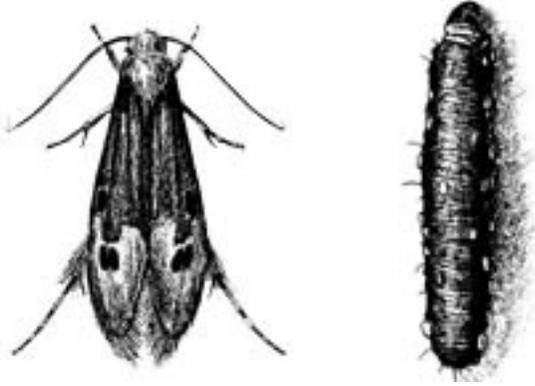


Webbing Clothes Moth and Eggs

Larva and Larval Damage

Adult carpet or tapestry moths are larger than webbing or casemaking clothes moths at 1/3 to 5/12 inch long with a 3/4 inch wingspread. Adults have white heads, with the first third of the front wings black and the lower two-thirds creamy white. Hind wings are pale gray. Larvae are small, creamy white caterpillars with dark heads.





Casemaking clothes moth adult and larva
Figure Sources: (Lyon 1997)

Life Cycle and Habits

Clothes moths rarely fly to light at night and instead prefer darkness. Any clothes moths fluttering around the house are probably males, as females travel by either running or hopping, especially webbing clothes moth females. Female webbing clothes moths lay from 40 to 50 eggs that hatch in four to 21 days. Larvae prefer to feed on soiled material, spinning silken mats or tunnels and incorporating textile fragments and bits of feces into the construction. The pupal case is silk with bits of fiber and excrement attached to the outside. The life cycle is about 65 to 90 days.

The casemaking clothes moth is less common than the webbing clothes moth. Larvae spin a small, silken case around themselves as they feed. This cigar-shaped case enlarges as the larva grows. When the larva crawls, its head, thorax and three pairs of legs outside the case drag it along. It does not spin a web of silk over the food material, but eats clean-cut holes, usually in more than one spot. Females live about 30 days and lay 100 to 300 eggs. The larval stage lasts 50 or more days, and the pupal stage is passed in the case or cocoon. There are about two generations per year.

Adult carpet tapestry moths are rarely found. Females lay 60 to 100 eggs in a lifetime, and the larva develops in about three months as it builds silken tubes or burrows through infested materials such as hair-stuffed furniture, tapestries, old carpets, furs and feathers.

Control Measures

Prevention: Good housekeeping is critical in preventing or controlling clothes moth damage. Regular use of a strong suction vacuum cleaner with proper attachments to remove lint, hair and dust from floor cracks, baseboards, air ducts and carpets is necessary. Keep closets and dresser drawers clean. Regularly clean rugs where they fit close to the baseboards. Launder and dry clean clothes and other items before storage because egg-laying clothes moths are

attracted to soiled articles. Frequent use of woolens and other animal fiber clothing almost assures no damage from clothes moth larvae.

Typically, cedar-lined closets do not seal sufficiently to retain cedar oil and are not very effective in controlling clothes moths. Cedar chests may be slightly more effective because they seal better; but, the oil of cedar still evaporates. Any box or bag that is tight and can be sealed is a good storage container. Layer garments in storage containers with effective moth balls or flakes that have been placed between sheets of white paper. The paper is added in an attempt to prevent clothing from being damaged by direct contact with these products. Naphthalene and paradichlorobenzene (PDB), although thought of as moth “repellents,” do not repel clothes moths and under proper conditions have a mild fumigant action. Never combine naphthalene and PDB in the same container. Avoid exposure to these products and read the label directions very carefully regarding use and safety. Do not use dry cleaning bags, garbage bags or other containers that will allow vapors to leak into the occupied room. Plastic storage containers should be made of polyolefins such as polyethylene and polypropylene, to prevent reaction with these products. Be sure that all cloth goods are dry cleaned, washed, pressed with a hot iron, sunned or brushed prior to storage. Fur storage in cold vaults is effective.

Inspection: Locate and clean/remove the source of infestation before treatment. Larvae prefer to feed in secluded, dark places. Use a flashlight and nail file to check for woolen lint and hair under baseboards, in and under upholstered furniture seldom moved, in air ducts, in carpets at the corners of the room and along edges, in stored clothing and in other places not readily accessible. Adult moths do not feed in fabrics but may be seen in darkened corners at night. Pheromone traps can be hung in areas such as closets or near Oriental rugs that are susceptible to webbing clothes moth attack and may aid in the detection of a previously unnoticed infestation. Pheromone traps may be found through mail order catalogs.

Caution

Carpets can be discolored with insecticides

Exercise caution to prevent carpet discoloration following the use of insecticides on carpets. Spot test a small area in an inconspicuous location to ensure this does not happen. See the pesticide label for further precautions pertaining to pesticide use.

Insecticides: After thoroughly cleaning many of the susceptible items such as rugs, rug pads, under heavy furniture and carpets (especially around the edges), spot spray surfaces where these insects were seen. Sprays can also be applied to edges of wall-to-wall carpeting in closets, corners, cracks, baseboards, molding and other hiding places. Before using insecticides, read the label and follow directions. Heavy and hard-to-reach infestations are best controlled by a professional pest control operator.

Fumigation is usually not necessary in a home. Occasionally, professionals may need to fumigate a museum or similar locations. Only the certified technician supervised by a licensed pest control applicator may use fumigants such as sulfuryl fluoride (Vikane). However, a dosage six times that used for drywood termites is needed and a second fumigation about a month later is suggested after egg hatch.

Alternative methods of control are being explored. Freezing may be used as an alternative to fumigation. In-

festations can be placed in a polyethylene bag and the air removed to reduce ice crystal formation. Freezing at -4 F for 48 hours will destroy insects if the bags were loosely placed in a chest freezer. Thaw the specimens in a refrigerator before removing from the plastic bag (Katz 1997).

For specific pesticide suggestions, see UT Extension PB1690 Insect and Plant Disease Control Manual at <http://eppserver.ag.utk.edu/redbook/sections/structural.htm>.

Sources

Drlik, T. 1995. Readers Column. IPM Practitioner. Volume XVII (6), July.

Katz, H.L. 1997. Clothes Moths. In , A. Mallis [ed.], Handbook of Pest Control: The Behavior, Life History, and Control of Household Pests

Lyon, W.F. 1997. HYG-2107-97. Clothes Moths. Ohio Cooperative Extension <http://ohioline.osu.edu/hyg-fact/2000/2107.html>

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store, or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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