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Click [here](#) for a video about the life of a clothes moth

Webbing clothes moth

Webbing clothes moths were likely introduced into the United States before the 1860's. They often travel with clothing, rugs or other belongings containing wool or other natural animal products. The larval stage alone is responsible for damage to materials. The adult moths lack functional, chewing mouthparts. Damage is most often concentrated in dark areas including crevices or creases in their preferred food. Examples of these dark areas could be; under furniture and cushions, where carpets and textiles are folded and in garments under collars, cuffs and folds. Adult clothes moths are secretive and are often found in these darkened places. They will attempt to hide when disturbed and will often run, hop or fly short distances to escape. They are weak fliers compared to other moth species. The males are much more active fliers than the females. Males actively seek out female moths in order to mate. Males and females can penetrate narrow

cracks as they find their way in storage cabinets and boxes. Once mated, females look for suitable food sources to lay their eggs. The extremely small larvae can find their way into many storage containers that appear to be pest-proof making detection difficult.

Description

The larva is whitish colored with a brown to black head. Clothes moths are small, straw-colored, yellow-tan, or buff-colored insects, with narrow wings fringed with hairs. A tuft of hairs on the head is upright and coppery to reddish-gold in color. Adult length is 7-10 mm with a wingspan of about 10 mm. A webbing clothes moth infestation is often detected from damaged fabrics and by the presence of silken webs spun by the larvae, sometimes producing only scattered patches of silk. The webbing clothes moth larva spins silk as a tunnel or sheet of webbing across the attacked material under which it grazes. Damage is accompanied by webbing tubes or sheets which frequently include large amounts of frass, and infestations appear far more 'messy' than the damage caused by case-making clothes moth (*Tinea pellionella*).



Webbing and Casemaking clothes moth adult comparison. Click [here](#) for a video on how to identify your clothes moth

Food & Feeding

Generally, developmental time for the clothes moth from egg to adult in room temperature is approximately 45 days. Mating and egg laying begins almost immediately after

adults emerge from the pupa. The adult life span of the moth is 1 month. Adult moths do not feed.

Signs of Infestation

Clothes moth larvae feed on woolens, mohair, feathers, fur, hair,

leather, dead insects and dried animal carcasses. Infestations occur in clothing, carpets, rugs, furs, fabrics, blankets, stored wool products, upholstery, mounted animals, piano felts, fish meal, milk powder, and brush bristles. The larva may feed on fabrics of vegetable origin or synthetics, if the fabrics are mixed with wool, or may use such materials to construct their cocoons. Synthetics, cottons, and other plant materials are not attacked by the webbing clothes moth larvae unless these items are stained with food or body oils. Although synthetics may be ingested, they cannot be digested.

Life Cycle

Female moths can lay up to 57 small, pinhead-sized, white eggs on or near the fabric, clothing, or furnishing they infest.

Casemaking Clothes Moth

Casemaking clothes moth are worldwide in distribution. The common name of casemaking clothes moth comes from the fact that the larvae will carry a silken case with it throughout the entire larval stage until pupation. The case consists of silken material produced by the larva intertwined with fibers from the material it is feeding on. As the larva grows, it will enlarge the case by making a slit on both sides of the case and inserting triangular sections of new material. In this same fashion, it will increase the length of the case by adding new material to either end. The case is essential to pupation and if the case is removed from the larva when it is near pupation it will die. The larva will drag the case with it as it feeds. It will thrust out its head and thoracic legs and pull the case along with it. Immediately prior to pupation, the larva will often seek a protected site such as a crevice, wall or often the ceiling of the room of the infestation.

Description

Larvae are pale yellow when hatched and, as they age, turns more white with a brownish head. Larva will always drag a silken case around with it.

Adults have three dark spots on each front wing. Wings are brown/tan/gray and are long and narrow. Hind wings are fringed with long hairs. 10-14 mm wingspan

Food and Feeding

Potential foods include any feather material, woolens, rugs, felts, hair and furs (This includes animal mounts and fur garments). It is reported that it will also feed on spices, tobacco, hemp and skins. The case-making clothes moth will rarely spin a web on the material on which it is feeding. The larva of *Tinea pellionella* will feed in a random pattern over its food source, pulling its case behind it. 8

Signs of Infestation

The amount of damage done to the material is based directly on how much time it spends in any one location. Fecal pellets from the feeding larvae will drop beneath the material or fall into folds and increases in the textiles, rugs and furs. The cases for the pupating moths will often be attached to the wall or ceiling around the infested material. Sometimes the pupal cases will be attached to the material itself, attached only by a silk thread produced by the larva. Where webbing clothes moths (*Tineola bisselliella*) will often integrate their pupal cases into the fabric or fur that it feeds upon, the case for the case-making clothes moth is distinctly separate from the feeding substrate.

Life Cycle

The gravid female moth will lay 37-48 eggs randomly over potential food sources. The eggs will hatch in 4-7 days. The larval stage builds a case of silk which it enlarges as it grows. The larval stage will last from 68-87 days. Prior to pupation, the larva will often migrate to a protected area to pupate. The whole pupation period will last 9-19 days. The adult moths will only live 4-6 days. The males will be active fliers searching out the females, which generally remain stationary. A typical population will have 3-4 generations per year.

Current best Practices in Clothes Moth Management

The key to eliminating clothes moth infestations is to interrupt the clothes moth life cycle. The damaging larval stage cannot be caught in moth traps but can be eliminated via other means. The following list represents the current best practices of a moth removal program.

Heat

Clothes moth larvae and eggs can be quickly killed with high heat. Placing garments on hangers in a closed car on a hot, sunny day will eradicate the immature stages. Hanging garments in black plastic bags and hanging in direct sunlight on a hot day can achieve the same results.

Smaller items like woolen socks, mittens, scarves, hats and sweaters can be placed in a tumble dryer (without washing) and exposed to the heat on a high setting for 30 minutes.

Larger items like rugs can be placed over the porch banisters and exposed to the direct sun for a couple of hours then turned over so that all sides get exposed. Beating these rugs will also help dislodge eggs and larvae from the base of the fibers.

Cold

Clothes moth larvae and eggs can also be killed with a long exposure to freezing temperatures. Items to be frozen should be wrapped in plastic, frozen in a chest freezer at -18°C for three days. Garments can be cleaned following freezing.

Cold Storage

A good solution for Spring to Fall storage of furs is to use a cold storage service at a professional furrier or fur store.

Dry Cleaning

Expensive woolen jackets, uniforms, dresses, slacks and garments with 'dry clean only' labels should be taken to the dry cleaner.

Steam Cleaning

Upholstered furniture and carpets can be cleaned using a steam cleaner. Hot steam will kill eggs and larvae on contact.

Professional Cleaning

Large rugs should be taken out and cleaned by a professional service. They can put these rugs into large pools with cleaners, have them washed, dried and repaired if damaged.

Damaged or dirty furs should be cleaned by a furrier or fur store with this service. They have the proper cleaning agents and drying equipment to remove perspiration and other spills on the hair and fabric.

Brushing

Some garments or rugs may show signs of damage (webbing or granular debris). This may be simply removed with a fine brush. This is an important step after freezing or heating garments to remove debris. If the garment is damaged in the future, new damage will be evident compared to old damage.

Vacuuming

Regular vacuuming of the carpets and rugs including under furniture can help remove eggs and larvae over time. This keeps the population from accumulating and reduces the chances of damage. A crack and crevice tool to clean out the gaps around the edges of the rooms is extremely effective.

Prevention

After completing the large amount of cleaning, freezing and heating it would be wise to place all the clothing in 'garment bags' then have one side clear and the other side breathable fabric. These will protect and prevent further attacks from moths that may have been missed or reintroduced into the home. Other small items may be placed in sealed bags or tight containers. Make sure they are sealable on all sides and do not have 'vents'. You should also be sure that there are no active larvae in these garments or clothing before sealing them.

Trapping and Monitoring

Pheromone traps are an excellent tool to capture moths. Before and after cleaning the home and personal belongings, these traps can help monitor and evaluate the effectiveness of any cleaning efforts. Continue to monitor sensitive areas to monitor for resurgence or reintroduction.

Inspection

It is difficult to monitor every location at all times, so visual inspection is critical to see if there is activity under various spaces present in homes such as cabinets, inside a piano, cold air return duct, or other odd locations. If you see a moth, you should start looking around immediately to track down the source.

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