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## CLOTHES MOTHS (Family Tineidae)

Clothes moths (Family Tineidae) are unusual in that they do not feed on living plants like most moths. They have instead adapted to feed on natural fibers such as fur, hair, cotton, linen, and silk. They can also feed on some synthetic fibers. In nature, clothes moths are part of the process of decomposition of animal carcasses, but in homes they are a widely recognized and undesirable household pest due to the extensive damage they can cause to textiles, fibers, and stored products.



**Fig. 1: Webbing clothes moth adult and larvae**

### Description and Life Cycle:

Two frequently encountered species are the webbing clothes moth, *Tineola bisselliella* (Fig. 1) and casemaking clothes moth, *Tinea pellionella*. Larvae are small, cream-colored, ½ inch long, with a brown head. The casemaking clothes moth larva weaves a

small protective ‘bag’ out of silk, which it hides in and carries along while feeding (Fig. 2). Larvae prefer to feed on soiled materials. Clothes moth feeding damage presents as thinning out of fabric resulting in rough-edged holes with silk mats containing fecal pellets. When the larvae are mature, they migrate away from their food to pupate and become adults.



**Fig. 2: Casemaking clothes moth ‘bags’**

Adult webbing clothes moths are tiny and golden-colored, with a ½ inch wingspan. They have a distinctive tuft of golden hairs on their heads. Adult casemaking clothes moths are dull gray and similar in size. Adults do not feed on or cause damage to fabrics. Unlike most moths, they are not attracted to light and prefer dark places.

Each female moth can lay up to 50 eggs in a lifetime. Full development from egg to adult takes between 60 to 90 days, depending on temperature and humidity. Clothes moths develop fastest in dark, warm, humid areas.

### **Prevention and Control:**

Damage occurs most frequently to textiles and natural fiber items that have been left unattended or stored improperly over long periods of time. Correct long-term storage of these items and regular cleaning is key to preventing clothes moth infestations. Items that are frequently used, maintained, and washed are rarely infested. Use a strong suction vacuum cleaner to regularly remove dust, lint and hair from baseboards, floor cracks, carpets (especially the outer 8 inches), furniture, and the inside of closets. A crevice tool is useful for this. Items that need to be stored long term must first be cleaned. Seal items in airtight plastic containers to prevent moth access. Garment bags may also be used. Cedar-lined closets and chests have minor repellent properties and are ineffective. Mothballs (naphthalene) and PDB (paradichlorobenzene) crystals can also provide additional protection in storage containers. A small paper cup taped in an upper corner of the box or suspended from the hanger of a garment bag can serve as a container for crystals or mothballs so that they are not in direct contact with textiles. Applying these products in non-airtight conditions such as closets and attics is ineffective. Before using any insecticides, read manufacturer's label carefully. Follow all directions and safety precautions, and never over apply.

Monitoring for clothes moth infestations requires careful regular examination of articles for the presence of larvae, silk cases, fecal pellets, and feeding damage. Pheromone traps are commercially available, but these are monitoring devices and will not

provide control. If moths are found, a normal washing machine cycle will kill all life stages. If the item is delicate or if it cannot be washed in a machine, handwash, brush, or shake out the article and hang it outside to air. Sun and wind exposure will repel larvae and moths. Freezing can also prove effective in removing infestations from delicate items. Place items in plastic bags and deep freeze for at least three days to kill all life stages.

Applying pesticides directly to clothing is not recommended due to the damage it might cause to garments and the risk of personal exposure to the chemicals. If additional treatment beyond systematic cleaning and appropriate storage is needed to exterminate a clothes moth infestation, call in a Pest Management Professional (PMP) for help. Licensed PMP's have access to professional grade pesticides labelled for the control of clothes moths, as well as specialized equipment that can safely deliver these pesticides to minimize exposure.