MuseumPests.net

A Product of the Integrated Pest Management Working Group

Webbing Clothes Moth

Tineola bisselliella (Hummel)

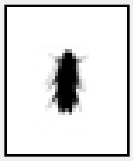
DANGER

PEST: HIGH RISK
TAKE IMMEDIATE ACTION

DIAGNOSTIC MORPHOLOGY

Adults:

- straw, buff or yellow-tan in color
- approximately 6 to 11 mm (1/4 to 1/2 inch) long
- wingspread approx. 11 mm (1/2 inch)
- wings folded and fringed with hairs
- wings golden-yellow with satiny sheen
- antennae long and slender
- upright tuft of hairs on the head is coppery to reddish-gold color



Immature Stage:

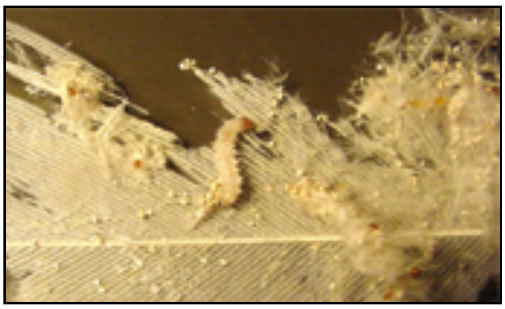
- whitish with a brown to black head
- the last instar (stage) reaches a length of 11 mm (1/2 inch)

GENERAL INFORMATION

Of the two common species of clothes moth, the cosmopolitan Tineola bisselliella is the more common species in the United States. Only the larval stage is responsible for damage to materials because of the adults lack functional, chewing mouthparts. Usually, clothes moth larvae do not wander like carpet beetle larvae, however they can occassionally be found off fabrics feeding on dust or other materials of animal origin. Damage is most often concentrated in dark areas and crevices or creases. Examples of this 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 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. They dislike sunlight and are not attracted to artificial light or black light. The males are much more active fliers than the females they seek out to mate with. Males and females can penetrate through surprisingly narrow cracks as they find their way in storage cabinets and boxes.

SIGNS OF INFESTATION

Webbing clothes moth infestations are often detected from damaged fabrics by the presence of a scattered silken webbing spun by the larvae. 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 copious webbing tubes or sheets which frequently include large amounts of frass. Webbing clothes moth infestations appear far more messy than those of the casemaking clothes moth Tinea pellionella. The holes of the clothes moth damage made by the larvae appear to be scattered about the garment and are generally small. Threadbare spots caused where fibers are chewed in carpeting are also indicative of infestation.



FOOD SOURCES

Clothes moth larvae feed on woolens, mohair, feathers, fur, hair, lint, felt, dust, and occassionally cotton, linen, silk and sythetic fibers. Infestations occur in clothing, carpets, rugs, furs, fabrics, blankets, stored wool products, upholstery, piano felts, fishmeal, milk powder, and brush bristles. The catepillar may feed on fabrics of vegetable origin or synthetics if the fabrics are mixed with wool. They may also use these materials to construct their cocoons. Synthetics, cottons and other plant materials are generally not a food source for the webbing clothes moth unless these items are stained with food, body oils, sweat and urine. The larvae can pick up valuable nutrients through the stained material. Non-animal products such as cotton batting, burlap, cotton linen, Spanish moss, flax straw or tow, palm fiber and sea moss contained in furniture have been infested but not eaten.

LIFE CYCLE

Female webbing clothes moths lay from 40 to 50 small, pinhead-sized white eggs on or near potential food sources. Eggs have an exterior gelatinous material that aids in adhering to woolen threads. so they cannot be dislodged. The eggs hatch within an average of 4 to 10 days in the summer, but can take as long as 3 weeks in the winter. The eggs cannot remain dormant for long periods of time. The length of the larval stage can vary from 35 days to 2.5 years depending on the availability of food as well as relative humidity and temperature. When ready to pupate, the larva may wanderaway from the food source to find crevices. Depending on temperature, the period required for adult emergence from the pupae can be as brief as 8 to 10 days in the summer or as long as 3 to 4 weeks in the winter. Adult moths do no feed and will die within a month.

CONTROL & TREATMENT

Standard control and treatment methods for museum pests will generally control this pest.