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Varied Carpet Beetle *Anthrenus verbasci* (Linnaeus)



GENERAL INFORMATION

Anthrenus verbasci, commonly known as the varied carpet beetle, is one of the more common species of carpet beetles found in museum settings as well as homes. This cosmopolitan species comes from European origins, but can be found world-wide. Adults lay eggs on a larval food source, such as carpets, furs, or woolen fabric, preferably in dark, secluded places. Once the eggs hatch, they feed heartily on this material and cause damage. When ready to pupate, the larvae may burrow further into the food or wander and burrow elsewhere. They may also pupate within the last larval skin if no other shelter is available. Larvae do not make webs, but their shed skins and fecal pellets, which are about the size of a grain of salt, make it obvious where they have been feeding.

SIGNS OF INFESTATION

Adult beetles are good fliers and are attracted to light. Finding adult beetles on windowsills is often the first sign of infestation. By that time, the larvae have already damaged items on which they have fed. Beetle infestation occurs in many ways. In warmer climates, the creatures survive outside, providing a ready source for infestation. Often, these insects are more likely to come inside on clothes, cloth or almost anything that is brought indoors. Although carpet beetles damage fabrics indoors, they may also be found in nests built by sparrows, starlings or pigeons on or inside the building. Additionally, wasp nests under eaves or in attics are a common source of carpet beetles, as the larvae will feed upon the wasp skins and larvae. Dead insects in inaccessible areas may also be an important reservoir of infestation. Accumulations of insect debris in ventilation ducts may also be a source.



DIAGNOSTIC MORPHOLOGY

Adults:

- 1/10 – 1/8 inch long (6.4 mm)
- Wing covers (elytra) exhibit irregular pattern of white, brown, and dark yellow scales
- Wing covers of older adults are black (scales have worn off)



Immature Stage:

- About the same length as adults when mature
- Covered with dense tufts of hair that extend upright if disturbed
- Alternating light and dark brown transverse stripes

FOOD SOURCES

Larvae feed on a variety of dead animals and animal products, such as wool, silk, leather, fur, hair brushes with natural bristles, pet hair, and feathers; occasionally they feed on stored products such as certain spices and grains. They do not feed on synthetic fibers. They will also feed on linen, cotton, and rayon if these fabrics are soiled with juice, food, or animal excreta. They can be pests in cereals, stored grains, nuts, meal, Indian corn, red pepper, and similar products. Carpet beetle larvae are frequently pests of insect collections and other museum specimens.

The adult beetles do not feed on fabrics but seek out pollen and nectar. They are attracted to sunlight and are commonly found feeding on the flowers of crape myrtle, spiraea, buckwheat, and other plants that produce abundant pollen in outdoor gardens. Be careful not to bring these pests inside on cut flowers.

LIFE CYCLE

Adults can mate and reproduce without feeding, and female beetles lay approximately 40 eggs in dark and protected food-rich locations. Eggs hatch in 10-20 days. Larvae develop over a 3 – 36 month period and can molt from 5 to 12 times. The pupal stage lasts 6 – 24 days, but the adult may take up to three weeks before it emerges.

CONTROL & TREATMENT

Standard control and treatment methods for museum pests will generally control this beetle. When carpet beetles threaten products in storage areas, a monitoring program using food attractant baits directed at attracting the larval stage will give an indication of the sources of the infestation. Outdoor trapping with pheromone traps will also

yield useful information.

Fact Sheet: Varied Carpet Beetle

Photo credit: Varied carpet beetle larva with flared seti, Patrick Kelley, Insects Limited, Inc.

Photo credit: Adult varied carpet beetle, Patrick Kelley, Insects Limited, Inc.