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Buffalo carpet beetle

Anthrenus scrophulariae



GENERAL INFORMATION

The buffalo carpet beetle is one of several beetle species in the Dermestidae family which may cause severe damage to museum collections. It is also known as the common carpet beetle and is found worldwide but in the United States it is primarily located in the north. Like other carpet beetles of the genus *Anthrenus*, the adults are recognizable by their flat scales across a wide oval body. Similar in appearance and small size (2.5 – 3.8 mm) is the varied carpet beetle, *A. verbasci*, with a mottled pattern of white, black, and yellow scales. The buffalo carpet beetle has distinctive yellow or orange/red scales longitudinally down the back. The adults live primarily outdoors feeding on nectar and pollen, and so the main danger is the larvae which feed on animal materials such as wool, hair, fur, and preserved specimens. The larvae (2.5-5.5 mm in length) are brown in color, and segmented with three pairs thoracic legs. They have long hairs extending from the periphery of the body which give it the name ‘buffalo moth’ or ‘wooly bears’.



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DIAGNOSTIC MORPHOLOGY

Adults:

- Oval body,
- 2.5 - 3.8 mm in length
- black head, and distinct black and white scale patterns
- Elytra Scales of dorsal surface black, white and red (or yellow), distributed in a characteristic pattern. down the center of the body
- Eyes notched in front
- Antennae have 11 segments with club at the end of 3 segments



Larval Stage:

- 2.5 – 5.5 mm in length
- The larvae are brown in color and segmented.
- body with long hairs extending from the periphery



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SIGNS OF INFESTATION

Most damage occurs while the buffalo carpet beetle is in the larval stage. Textiles, fur, hair, wool, silk, and any fiber-based materials are vulnerable and may show signs of infestation with irregular shaped holes and a powdery waste byproduct around or below the losses, accompanied by the cast skins shed during metamorphosis.

FOOD SOURCES

The adults feed on nectar and pollen and are primarily found outdoors. The destruction comes from the larvae which will eat many materials found in museum collections including: textiles, fur, hair, silk, wool, etc. They may also be attracted to processed foods.

LIFE CYCLE

The eggs hatch in 10 to 20 days and appear small and white with projections so that they may adhere to surfaces. The larval period takes about 66 days at room temperature and undergoes six instars; at the sixth instar the larva has a reddish-brown coloring with dark hairs. Pupation takes place in the last larval skin and lasts 7-15 days, after which the adult emerges and remain in the larval skin for another 18 days. Once adults emerge they move outdoors to feed and mate. The average female lays 30-60 eggs.

CONTROL & TREATMENT

The best prevention of infestation is to isolate animal material specimens and keep free of dust. Extreme cold can be used as a non-chemical treatment, following Strang's CCI Notes 3/3 recommendations: seal specimen in bag and place in freezer at -20°C a minimum of 7 days, followed by thorough cleaning and documentation.



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Fact Sheet: Buffalo carpet beetle

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Fact Sheet: Prepared by students of Buffalo State University of New York, Fine Art Conservation