

## **MONITORING GUIDELINES**

### ***Varied Carpet Beetle***

*Anthrenus verbasci.*

#### **Description**

Adults: 1/10 inch to 1/8 inch long, black to grey body with a varied pattern of white, yellow and brown elongated scales attached. The last three antennal segments are slightly enlarged and form club shape.

Larvae: Yellowish brown with black and brown hairs. Up to 1/5 inch long, hairy, with three distinct pairs of hairy tufts at the tail end; three pair of thoracic legs.

Pupae: Pupal cases brownish with dark beetle inside the pupal chamber.

#### **Damage and Detection**

Only larvae cause damage to plant or animal products or textiles. The presence of cast skins is easily seen. Holes and frayed fibres in textiles also may be present. Adults are excellent fliers and are attracted to lights. The use of pheromone traps and inspections can determine the location and degree of infestation. These beetles are commonly found in nests of bees, wasps, and birds, but can also attack leather, horn, wool, hair, silk, and dead insects and is occasionally found in meal, spices, and biscuits. It is a common household pest.

#### **Life Cycle**

The female beetle will lay eggs in materials made with hair, feather or insect parts. It is a scavenger for animal proteins. Larvae will feed off the food or fibre substance for about 7-10 months depending on environment. The life cycle on average will be 11 months. Adults live for 30-45 days. One generation occurs per year depending on storage conditions. Adults actively fly when temperature is above 70°F.

#### **Lure**

Bullet lure® - Contains sex pheromone to attract male beetles. Effective duration of attraction is 8 weeks.  
Wafer Lure - Contains sex pheromone to attract male beetles. Effective duration of attraction is 8 weeks.

#### **Lure Storage**

Keep unopened foil pouches in cool storage (less than 60° F) or place in freezer for extended storage. Lures can remain frozen for up to 12 months to retain their full effectiveness for use afterwards. Shelf life of lures at room temperatures is 6 months.

#### **Trap Designs used with Lure**

Flat traps are low profile flat rectangular sticky traps that can be placed on level surfaces. Place near warm areas in closets with woolen storage or below windows for optimum catch of spring time flights.

#### **Trap Placement Techniques**

- Timing - Traps should be placed in early March, just before active flights begin. Trap through summer and fall.
- Density - It is recommended that traps be placed near materials susceptible to attack at one per every 10 feet. In large warehouses traps may be placed every 15 feet apart.
- Location - Flat traps can be placed inside drawers, under or above cabinets, inside cupboards under couches or other dark confined spaces where woolen material occurs. Traps near windows will catch spring flight beetles.

#### **Trap and Lure Maintenance**

Traps must be replaced when filled with beetles or become dusty. Traps may remain sticky for many months. Lures must be replaced every 8 weeks. The old lure should be removed from the trap. Trapped beetles should be recorded regularly on a separate monitoring Data Sheet to determine trapping trends.

#### **Expectations and Interpretations**

- 1 beetle per trap per week -- Inspection of materials susceptible to attack should be carried out.
- 3-5 beetles/ trap per week -- Serious damage is likely on a single product or location in the area of the trap.
- 10 + beetles/trap per week -- Serious wide spread damage has occurred to products or items in the storage area.

#### **Important Notes:**

Large numbers of beetles require other means of control and management to eradicate infestations. Female beetles however, may actively fly around and not be attracted to the traps.