



Carpet Beetles¹

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Carpet beetles can damage fabrics, furnishings and clothing that contain natural animal fibers such as wool, silk, hair, bristles, fur or feathers. Synthetic items are resistant to attack, but mixtures of synthetic and natural fibers can be damaged. The natural habitats of carpet beetles are nests of birds, rodents, insects, and spiders. They then can spread into homes to damage carpets, rugs, and clothing. They also may feed on pollen and can be carried into the house on cut flowers.

The black carpet, common carpet, furniture carpet, and varied carpet beetles usually infest fabrics and carpets, and are of importance.

Life Cycle

The life cycle of carpet beetles can take from three months to two years. The adult female beetles lay up to 100 eggs which hatch into larvae in one to two weeks. The larvae can develop under a wide range of temperature and humidity conditions. They tend to avoid light and actively feed in dark cracks, crevices or folds. Most frequently they are found in the closets, drawers or inside upholstered furniture. A larva requires from nine months to as much as three

years to complete its growth, depending upon climatic conditions and food. The larvae wander considerably and may be found anywhere in a building. Adults are attracted to light and often are found on windows or around flowers. The adults are good fliers and may spread in materials infested with eggs, larvae, or pupae.

Black Carpet Beetle

Black carpet beetle adults (Figure 1) are 1/8 to 1/4" in length, black in color with brown legs. The larva is slightly less than 3/8" in length; body is narrow carrot-shaped and covered with short hairs and has long terminal bristles. Their life cycle is 180 to 650 days.

These beetles inhabit in carpeting, clothing, furs, upholstered furniture, kid leather, books, bird nests, milk powders, and other articles containing animal products and natural fibers. It is also commonly found eating pollen, particularly that of spiraea.

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Figure 1. Black carpet beetle adult.

Common Carpet Beetle

Common carpet beetle adults are about 1/8" in length, gray to black in color and whitish and orange scales on the back. The larva are carrot-shaped, reddish brown in color with many black to brown hairs. Their life cycle is 77 to 110 days.

Common carpet beetles inhabit in fabrics, furnishings, and clothing retaining animal products such as wool, silk, hair, bristles, fur, feathers, etc.

Furniture Carpet Beetle

Furniture carpet beetle adults (Figure 2) are about 1/8" in length with yellow, white, and black spots dorsally and white ventrally. The larva (Figure 2) are about 3/16" long, carrot-shaped and dark red to brown in color. Their life cycle is 149 to 422 days.



Figure 2. Furniture carpet beetle larvae and adult.

These beetles inhabit in woolen upholstery and padding such as feathers and hair as well as materials containing animal products and natural fibers.

Varied Carpet Beetle

Varied carpet beetle adults (Figure 3) are about 1/8" in length, with white brown and yellowish scales dorsally and grayish-yellow scales ventrally. The larva are about 3/16" in length, carrot-shaped, with alternating light and dark brown transverse stripes. Their life cycle is 249 to 354 days.



Figure 3. Varied carpet beetle.

Varied carpet beetles inhabit in carpets, woolen goods, furs, silks and other materials containing animal products and natural fibers.

Control

Prevention

Carpet beetle larva can feed on dust and lint. Good housekeeping prevents infestations. Frequent cleaning of floors to remove dust and lint eliminates much of the available food supply, and some of the carpet beetles. However, regular cleaning will not remove dust and lint from air conditioning ducts and other inaccessible areas. Dry cleaning clothes not only removes oils and stains, it will also kill carpet beetles. Clothes should be dry cleaned regularly.

Stored materials subject to beetle damage should be thoroughly cleaned before storage. The storage area should be a chest, closet, or other container that can be tightly closed and into which moth balls or flakes are usually labeled to be placed at the rate of 1 lb. per 50 cubic feet of space (Table 1). The initial treatment should kill the carpet beetles; however, this method should not be relied upon to protect stored fabrics over an extended period of several months or more. Stored materials should be periodically sunned and brushed. Cedar chests will not kill carpet beetles.

Inspection

Find sources of carpet beetle infestations. Although carpet beetles damage fabrics in a house, they may also be found in nests built by sparrows, starlings or pigeons on or inside the house or brought in on cut flowers. Wasp nests under eaves or in attics are also common sources of carpet beetles because the larvae will feed upon the skins and larvae of wasps. Dead insects in attics or inaccessible areas may also be an important reservoir of infestation. Also, accumulations of debris in ventilation ducts in the house may be a source.

Nonchemical Control

Adult carpet beetles can be captured on sticky fly paper baited with animal products. Cedar products can be used to protect susceptible items. Newly hatched larvae die when exposed to cedar, but older larvae and adults are not affected. The heartwood of red cedar has a vapor that is toxic to larvae, but after cedar is more than 36 months old it is useless for control. Bags containing cedar chips can be replaced regularly to help provide control.

Plastic bags and tight containers can be used to store garments. These containers prevent adult beetles from laying eggs on or near susceptible clothing. But if the clothing is infested, the bags will confine the infestation to just a few items.

Cold storage has been long used to protect articles attacked by carpet beetles. Clothing, coats and sweaters stored at 40 to 42°F will be protected for long periods of time. Freezing has also been used to kill carpet beetles. Infested materials should be placed in plastic bags and loosely packed in a chest freezer at -20°F for three days. Reducing the air in the bag eliminates the formation of ice. Heat has also been used to kill or repel carpet beetle larvae. Exposure of infested items to 105°F for four hours is sufficient; placing infested items in the hottest rays of the sun causes larvae to abandon the fabric.

Chemical Control

Insecticide sprays are registered for control of carpet beetles. Indoor spot or surface treatment with insecticides (Table 2) can provide effective control of

carpet beetles, although more than one application may be necessary. Clothes should not be sprayed directly. Surfaces where clothes are stored can be sprayed and allowed to dry. Then clothes can be placed on those surfaces. When spraying or dusting rugs, closet areas, and storage areas, be sure to treat all known or suspected feeding and hiding places. Carpet beetles leaving the infested products will contact the sprayed surfaces and die.

Space sprays are also effective in killing exposed stages of carpet beetles (Table 3). These are most effective when an infestation is confined to a closet or other enclosed area. Calculate the volume of the space and treat with the recommended amounts of product. In cases where entire homes are infested, fumigation can be used. Products registered for fumigation are listed in Table 4.

Table 1. Moth balls labeled for carpet beetle management.*

Common Name	Homeowner Products*
Napthalene 99.83%	Enoz
Napthalene 99.9%	Enoz
Paraoichlorobenzene 99.6%	Enoz
* Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.	

Table 2. Carpet beetle management products labeled for crack and crevice or indoor surface treatment.*

Common Name	Homeowner Products*	Commercial Products*
Acephate		PT Orthene Crack & Crevice Pressurized Residual
Cyfluthrin	Bayer Advanced Home, Home Pest Control Indoor & Outdoor Insect Killer	PT Cy-Kick CS Controlled Release Cyfluthrin PT Cy-Kick CS Pressurized Crack & Crevice Residual Tempo 20 WP Tempo SC Ultra
Deltamethrin		DeltaDust Suspend SC Insecticide
Permethrin		Dragnet SFR Termiticide/Insecticide
Prallethrin		PT ULD SPY-300
Prallethrin, Esfenvalerate, MGK-264 synergist	Ortho Roach, Ant & Spider Killer	
Propetamphos		Catalyst
Pyrethrins		Kicker PT Tri-Die Silica & Pyrethrum Dust PT ULD BP-300
Pyrethrins and Others		PT 565 Plus XLO PT Microcare CS Controlled Release Pyrethrum PT Microcare Pressurized Pyrethrum Capsule Suspension PT Tri-Die Pressurized Silica & Pyrethrin Dust PT ULD BP-100
Pyrethrins, MGK-264, Permethrin	Ortho Ant-B-Gon	
Pyrethrins, PBO		PT P.I. Contact Insecticide PT ULD BP-50
Pyrethrins, PCO		Pyrenone 50
* Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.		

Table 3. Carpet beetle management products labeled for indoor space treatment.*

Common Name	Homeowner Products*	Commercial Products*
Pyrethrins and Others		PT Pro-Control Plus
<p>* Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.</p>		

Table 4. Carpet beetle management products labeled for fumigation treatment.*

Common Name	Homeowner Products*	Commercial Products*
Sulfuryl Fluoride		Vikane
<p>* Read label carefully to insure pest, site and commodity are listed prior to applying product. Some product labels are very restrictive.</p>		