

Spider Beetles, HYG-2117-97

Ohio State University Extension Fact Sheet

Entomology

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Spider Beetles

HYG-2117-97

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Common Name	Scientific Name
Hairy Spider Beetle	<i>Ptinus villiger</i> (Reitter)
Whitemarked Spider Beetle	<i>Ptinus fur</i> (Linnaeus)
Brown Spider Beetle	<i>Ptinus clavipes</i> Panzer
American Spider Beetle	<i>Mezium americanum</i> (Laporte)
Australian Spider Beetle	<i>Ptinus ocellus</i> Brown

Spider beetles are general scavengers. They feed on a variety of items, such as cereals, seeds, flour, meat, dried fruits and vegetables, fish food, dead insects, rodent droppings, old wood, cayenne pepper, roots, cocoa, sugar, drugs, and spices. Common sites of infestation in the house include wall voids and drop ceilings. Spider beetles are primarily warehouse pests, attacking various seeds and certain whole grains, such as wheat, barley, rye, and flax. Also, serious infestations have been found in flour and feeds, such as bran shorts and meal preparations. Larvae cause a typical "scarring" of the wood in buildings in the formation of pupal cells prior to pupation. Spider beetles sometimes become prominent cereal pests in Canada and the northern United States. Some have been found quite active even during freezing weather. They do not bite or sting humans or pets, spread diseases, or feed on or damage the house or furniture.

Identification

Adult spider beetles are minute oval or cylindrical insects with long legs resembling giant mites or small spiders. The head is often hidden when viewed from above. They are 1/16- to 3/16-inch long with long filamentous antennae (usually 11 segmented) arising on the front of the head close together at the base. Most are brownish-black with a large, globe-like abdomen and the prothorax (first segment behind the head) constricted at the base of the wing covers. Larvae are C-shaped or grub-like and cream-colored with short legs. The segmented abdomen contains many long hairs.

The hairy spider beetle is reddish-brown with two irregular-shaped white patches on each wing cover. The whitemarked spider beetle has a reddish-brown body covered with yellow hairs; the females have two white patches on each wing cover that join to form two transverse bands. The brown spider beetle is uniformly dark brown without scales on the wing covers. The American spider beetle is dark, reddish-brown to nearly black with a shining subglobular body. The Australian spider beetle is dark reddish-brown and the wing covers are covered with golden brown or yellowish hairs.



American Spider Beetle



Whitemarked Spider Beetle

Life Cycle and Habits

Adult hairy spider beetles usually appear during the spring. The female lays up to 40 eggs. Eggs are spindle-shaped, pearly, and about 1/32-inch long. Eggs may be laid on the outside of the grain sacks or in flour debris in cracks and corners. Eggs hatch into larvae that reach a body length of almost 1/8 inch. Cream-colored larvae with brown heads develop in three months and molt three times with a pupal cell in the flour debris. Larvae often bore into wood or cardboard boxes to overwinter in the pupal cell with actual pupation occurring the following spring. Some spider beetles can remain active during the cold months, especially in older buildings where sources of food have accumulated. Spider beetles may become pests in homes, warehouses, grain mills, museums, etc. They are attracted to moisture, excrement, and abandoned animal nests.

Control Measures

Spider beetles are primarily pests of cereal products, which often remain in storage for long periods. Serious infestations have been found in flour, bran feeds, and meal preparations. Sometimes, infestations are detected by the typical "scarring" of the wood in buildings by the larvae during the formation of pupal cells before pupation occurs.

Prevention

Practice strict sanitation measures. Thoroughly clean storage facilities beforehand by use of a strong suction vacuum cleaner to eliminate favorable development places. Inspect stored foods routinely and eliminate any dampness or high humidity conditions. Eliminate rodents, birds, and other insects as spider beetles feed on feces and dead insects.

Non-Chemical Extermination

The simplest and most effective control measure is to locate the source of infestation and quickly exterminate it. Use a flashlight or other light source to examine all food storage areas and food products. Dispose of heavily infested foods in wrapped, heavy-plastic bags or in sealed containers for garbage disposal service or bury deep in the soil if practical and regulations allow. If detected early, the problem may be solved.

At the time of purchase, carefully examine foods such as pancake flour, flour, cornmeal, raisins, dry dog and cat food, old tobacco, ginger, dates, red pepper, rice, and macaroni. Check the packaging date to establish freshness. Examine broken and damaged packages and boxes to avoid bringing these stored product pests accidentally into the home. Purchase seldom-used foods in small quantities to prevent long storage periods of one month or more, especially during the warm summer months. Store susceptible foods in insect-proof containers of glass, heavy-plastic or metal, ideally with screw-type lids, or store in a freezer. Use older packages first before new ones, avoid spillage in cabinets, and always keep food-storage spaces clean. Properly ventilate the storage area to discourage these moisture-loving pests.

Lightly infested or suspect foods with questionable infestations can be heated in a shallow pan in the oven at 120 degrees F for one hour or at 130 degrees F for 30 minutes, or placed in a deep freeze at 0 degrees F for four hours. Some kill infestations by placing the product in a microwave oven for five minutes. Heat-treat dried fruits or vegetables by placing them in a cheesecloth bag and dipping in boiling water for 6 to 10 seconds. Seeds saved for planting may have the germination reduced by super-heating or cooling. Sifting the food material will remove possible insect fragments, and any remaining will not cause harm if consumed. After insects are killed, contaminated food might be used outdoors during the winter months for bird feed.

Careful sanitation is the best method to avoid stored product pests. After removing all food, food packages, utensils, and dishes from the cupboard, shelves, or storage area, use a strong suction vacuum cleaner with proper attachments to clean all spilled foods (cornmeal, toaster crumbs, bits of pet food, raisins, etc.) from the cracks and crevices, and from behind and under appliances and furniture. Pull heavy appliances from the wall and scrub with soap and hot water. The ability of these insects to find a small amount of food is amazing. After shelves are thoroughly dry, cover with clean, fresh paper or foil before replacing with food or cooking utensils. Pheromone traps/lures are commonly available from: Insects Limited, Inc., 10540 Jessup Blvd., Indianapolis, IN 46280. The phone number is: 1-800-992-1991.

Insecticides

Household insecticides have no effect on insects within food packages. Pyrethroids will kill spider beetles. However, repeat treatments will be needed to control newly emerging adults. Residual labeled contact insecticides applied directly to cracks and crevices in the storage areas will help control. Dust formulations applied to wall voids and other hard-to-reach places can be effective. Before using any insecticide, always read the label, following directions and safety precautions.

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