

Sawtoothed Grain Beetle

Oryzaephilus surinamensis (Linnaeus); Family: Silvanidae

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Sawtoothed grain beetle (adult). Note the tooth-like projections along the edge of the thorax. Photo UGA1233137, and enlargement, from Clemson University, USDA Cooperative Extension Slide Series, Bugwood.org

Injury

The sawtoothed grain beetle is one of the most common insects infesting grain products in the home. An infestation may begin at the time of manufacture or processing, in warehouses of food distributors in transit, on the grocers' shelves, or in the home. Most food processors and handlers make every effort to avoid insect infestations, but occasionally the efforts fail. Both the adults and the larvae feed on foods of vegetable origin, especially grain and grain products such as flour, pasta products, cereals, dried dog foods, nuts, candies, dried fruits, yeast, tobacco, and dried meats.

Description

Adults are small, about 1/10 inch long, slender, very flat, brown beetles. The thorax of the body has six sawtooth-like projections on each side, hence the name sawtoothed grain beetle. Because of the flattened shape, these beetles are able to work their way into packages of food that are apparently tightly sealed. The larvae are whitish, elongated grubs with brown heads. When full grown the larvae are 1/8 inch in length.

Life History

Adult beetles generally live for six to ten months (some may live longer). The females lay eggs loosely among foodstuffs. The eggs hatch in three to five days and the larvae crawl about feeding on pieces of the host food. After a few weeks the larvae build delicate cocoons, often joining together pieces of food. Pupation takes place in about a week and then the adults emerge.

Management

Management measures for sawtoothed grain beetles are the same as for other stored grain pests. Bringing the infestation quickly under control can help prevent losses of quantities of foods stored on kitchen and pantry shelves.

1. Carefully examine all susceptible foods that may have been exposed to infested material. Insects may even be found in paper-wrapped products that have not yet been opened in the home. All infested packages should be destroyed. There is no satisfactory way of separating the insects from the flour or meal.
2. The contents from open packages that appear to be uninfested should be transferred to glass jars or clear plastic containers with tight-fitting lids. This precaution is necessary because of the possibility that eggs or larvae of the beetles, concealed in the product when the examination was made, may continue to develop later and lead to a new infestation if not contained. The glass aids in the periodic examination of the food without having to open the container.
3. Remove all food containers and utensils from the infested areas and clean thoroughly, first with a vacuum cleaner, and then with soap and water. Special attention should be paid to cracks and corners where bits of flour, meal or spices may have accumulated.
4. In most cases a thorough clean-up will control these insects. We generally do not recommend the use of pesticides if they can be avoided, especially in food storage and preparation areas.
5. Continue to observe the area for several months after treatment. If beetles reappear, the clean-up may have been inadequate, or a newly infested package may have been brought into the kitchen.

Long-term storage of meal and flour products often leads to infestation and therefore, such products should be purchased in quantities suitable for early use unless adequate containers are employed.

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