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INSECT NOTES

KITCHEN PANTRY, STORED-FOOD PESTS

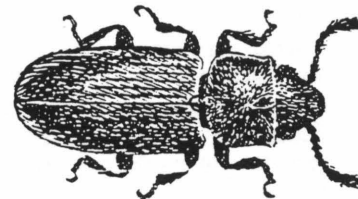
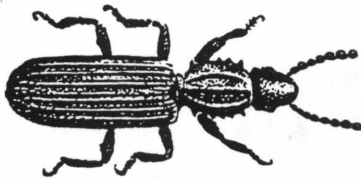
Flour, cornmeal, dry dog and cat food, beans, nuts and a variety of other stored (dry) foods are attacked by insects. There are several weevils, grain beetles, flour moths and even some mites that are common pests of household stored food. These pests can be found in the processing mills that produce and package the food, in the warehouses and stores that provide it to homemakers, and in the kitchens across the U.S. While these pests are very common, they are usually not present in large numbers. However, most homemakers consider one or two of these pests in the kitchen a serious problem.

The most common insects found infesting stored grain products include the:

- *drug store beetle*
- *flat grain beetle*
- *confused and red flour beetle*
- *sawtoothed grain beetle*
- *bean weevil*
- *mealworms*
- *spider beetles*
- *rice, granery, and been weevil*
- *Indianmeal moth*

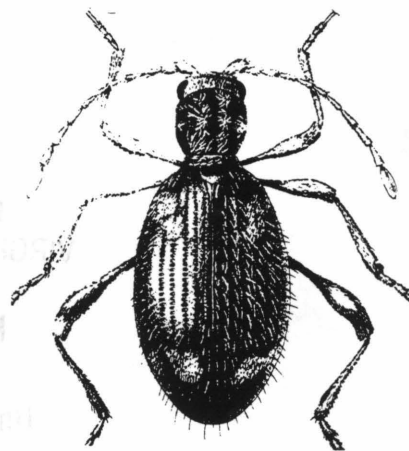
Adults and immature stages of these insects can be found in breakfast foods, meal, pet food, dried fruits, seeds and nuts, and sometimes in dried flowers.

Basic biology. Adult (beetles or moths) lay eggs on or in the food material. Development through the egg and immature stages is usually rapid in warm environments, and much slower in cool conditions. Infestations can build up from a small beginning when the conditions are favorable and the food supply abundant.



food; around the farm they can be found in animal feed.

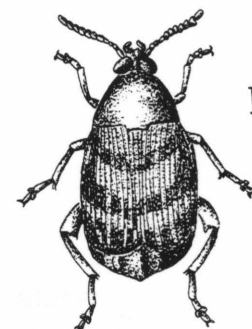
Spider beetles - These small, spider-like beetles are sometimes found associated with broken/cracked grain, and with flour. They are easily distinguished by their resemblance to spiders--and are often confused with spiders. They can occur in houses, usually not in large numbers, however.



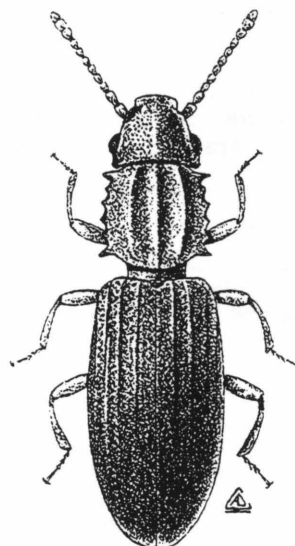
Rice and granary weevil - These small, snout-nosed beetles are some of the most important grain pests around the world. They are reddish brown to black, with distinct brown marks on the thorax. The adult rice weevil is a strong flyer and lives for about 6 months, the granary weevil does not fly. The immature stages are white and feed on corn, rice, wheat and other grains. In the house they often found in whole grains.



Bean weevil - This beetle feeds on stored beans and peas--it does not attack grain. It is about 1/8 inch long with reddish brown legs and a spotted grey-brown body. The body distinctly narrows toward the head. The immature stages are legless and live within the bean or pea--they are rarely seen. One bean can provide enough food for 20 or more beetle larvae. The adult stages feed on beans and peas, but may also attack other materials.

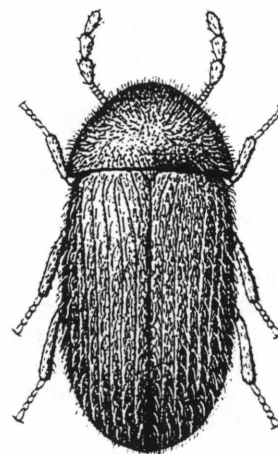


Sawtoothed grain beetle - This small, brown beetle is probably the most common stored-food infesting beetle throughout the world. The adult beetle is very active and characterized by the toothed margins of the thorax. The immature stages are yellowish-white with a brown head region. There can be several generations per year, and temperature influences this number. This beetle infests grocery stores, food warehouses, and grain storage--all parts of the manufacturing process. This insect can easily penetrate the packages (boxes and bags) of cereals, dried fruits and candy. It can feed on a great variety of food,



Control. Chemical control of these pantry pests is not usually necessary. Simply locating the infested materials and discarding them will eliminate a large part of the infestation. After removal of the infested products, the storage areas (cabinets, rooms) should be vacuumed thoroughly to remove loose flour and the insects that might be in the cracks and crevices. If chemicals are considered necessary, use an aerosol to treat the infested areas. Allow the spray to dry before replacing food material. Avoid washing the storage area before vacuuming--this may only make a paste of the loose flour and make it difficult to remove. Microwave ovens can be used to treat infested material, heating the infested flour can kill adults and immature stages.

Drug store beetle - The food habits of this small beetle are varied and unpredictable. It is known to feed on such materials as books, dried flowers, strychnine, flour, oatmeal, spices (pepper is commonly infested), and other foods. It is a common household kitchen pest, along with the cigarette beetle. It is light to dark brown, the last three segments of the antennae are enlarged.



Confused flour beetle and red flour beetle - These two beetles are very similar in appearance and habits. However, the confused flour beetle can not fly, while the red flour can. These slightly elongate beetles are reddish brown. The adults may live for a long time (as long as two years), and deposit from 300 to 400 eggs during their lifetime. The life cycle requires about 4 months when temperatures are warm. These two beetles are serious pests in flour mills, warehouses, and grocery stores. They can also feed on grain, beans, dried fruits, nuts, and chocolate.



Flat grain beetle - This is one of the smallest (1/16 inch) beetles found in stored food. It is reddish brown and with long antennae. It is usually found with other grain pests.



Mealworms (yellow mealworm, dark mealworm) - The adults are large (1/2 inch), brown to black beetles. The larval stages resemble wireworm larvae--and are familiar to people as food for aquarium animals. Although these insects are found around the world, they are rarely a major importance. In households they can be found infesting large bags of meal, in decaying straw and pet

Flat Grain Beetle
1/16 to 1/8" long

including meat, tobacco, drugs, and sugar.

Indianmeal moth - This is one of the most common moths that infest stored food. The caterpillar stage of this insect can feed on grains, meals, flour, breakfast foods, dried nuts, seeds (especially bird seed), chocolate, powdered milk, and especially dried pet foods. Infested food may show the webbing of the caterpillar stage. The adults are distinctive because they are light colored on one half and dark colored on the back half of the wings.

The adult moths usually fly at night, at least at dusk. When at rest the wings are folded over the body, and show the two-color aspect. A female moth can deposit as many as 300 eggs on or near the food attacked. The caterpillars feed for about 2 weeks, then pupate near the infested food. The adults emerge in about 30 days. There are about 4 generations per year, more when temperatures are favorable.

