



Kitchen Pests

Our kitchens contain an array of stored food items that serve as welcome habitats for many insect pests. These include a variety of beetles and moths that are capable of infesting and destroying a variety of dried foods. Since many dried food items are only used occasionally, they spend a good deal of time sitting on the shelf, inviting a would-be invader to take up permanent residence.

Such pests are usually brought into the home accidentally in infested products from the food market or surplus food depot. They then spread to other products on the shelf. However, infestations are usually not discovered until the homeowner begins to observe small beetles or worms crawling across the counter top, webs in the oatmeal, the cast skins of larvae under the sink or in the cupboards, or a moth flying around the kitchen. By this time, the invaders could be well established and can cause considerable damage if not eliminated.

Stored Food Pests

Many insects are attracted to stored foods. The most common in New Hampshire are the saw-toothed grain beetle, confused flour beetle, larder beetle, Indian meal moth and various species of *dermestid* beetles. They all generally feed on the same foods and the control measures are similar.

Saw-toothed Grain Beetle

Our most common kitchen pest, the saw-toothed grain beetle (figure 1), is a slender, flat, brown beetle approximately 1/10" long. It gets its name from the six saw-tooth-like projections on either side of the thorax (midsection). Both larvae and adults feed on a variety of dried foods. The adults live an average of six to 10 months, although they may live as long as three years. Eggs laid in the food hatch in three to five days. The resulting larvae mature in about two weeks, then pupate and emerge as adults one week later. The life cycle from egg to adult is three to four months.



figure 1
Saw-toothed grain beetle

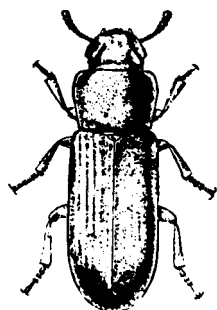


figure 2
Confused Flour Beetle

Confused Flour Beetle

The confused flour beetle (figure 2), is a reddish-brown beetle about 1/7" long with minute punctures on the head and thorax and ridges on the hind wings. The life cycle is similar to the saw-toothed grain beetle except the average confused flour beetle lives about one year and completes its life cycle in about six months. As its name suggests, this beetle is especially common in stored flour.

Carpet Beetles

As a group, Dermestid beetles are best known as scavengers that feed on animal matter such as hides, wool, silk, feathers and fur products. Several species, including the black carpet beetle (figure 3), varied

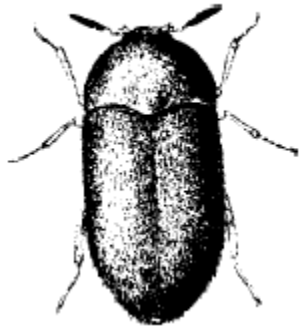


figure 3

Black Carpet Beetle

carpet beetle (figure 4), and larder beetle feed on a variety of stored foods and are common kitchen pests. The larvae are very destructive and are readily recognized by having long hairs or tufts of hair protruding from their body. They vary in color from brown to almost black and in size and shape depending upon the species involved. The adults also vary in size and color depending on the species.

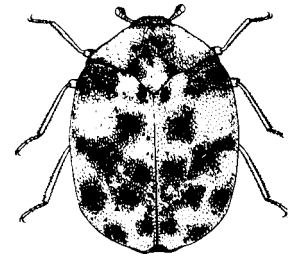


figure 4

Varied Carpet Beetle

Indian Meal Moth

The Indian meal moth (figure 5) is the most common moth in New Hampshire kitchens. The adult moth has a wingspan of about 3/4" and the forewings are banded whitish gray and copper in color. Females lay eggs on a variety of stored plant products; the eggs hatch into small whitish larvae within a few days. The larvae feed on the food and spin webs as they crawl around. This webbing is often the first evidence of an infestation. The moth completes its life cycle in six to eight weeks. When fully grown, the larvae often crawl away from their feeding site and pupate in crevices. Birdseed and wreaths of dried fruit are often overlook sources of infestation for Indian Meal Moth.

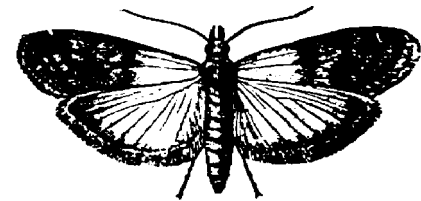


figure 5

Indian Meal Moth

Control of Stored Food Pests

Insect eggs or larvae can come into the home on many types of food products, from bulk purchases of beans, flours, grains, dried fruits and spices, to dry pet foods, bird seed. To prevent the insect pests from spreading to other foods in your cupboards and closets, seal all dry food products, including spices, breakfast cereals, flours and noodles, in airtight glass, rigid plastic or metal containers. Some beetles and moth larvae will chew through paperboard containers, waxed paper, cellophane and plastic bags to get at the food inside.

Good sanitation is important in preventing an infestation and keeping one from spreading. Spilled food that gets into cracks, under sinks, under the refrigerator and dishwasher and behind drawers will harbor insects and keep an infestation going. Vacuuming debris and cleaning cupboards regularly will help discourage an infestation from spreading should you accidentally bring these insects into your home.

If the problem is discovered early before food becomes badly infested, you can salvage the food through heat sterilization or cold treatment. Spread the contents out on a tray and heat in an oven at 130° F for 30 minutes, or place in the freezer at 0° F for four days. Repackage in tightly closed containers such as glass jars or cans. Destroy badly infested food by composting it or sealing the containers and placing them in the garbage.

In order to completely control the infestation, you must find and treat or discard all infested food sources. An infestation may extend to the basement or attic -- don't restrict your inspection to the kitchen.

Pheromone traps for stored product pests are widely available. They lure the adult males with a scent and trap them on a sticky surface. While these may be useful for detecting the presence of stored product pests, they are *not* effective as controls.

Most garden centers also sell pesticides registered for a wide range of pantry pests. Use these only with severe infestations that have spread to many food items. Be sure that the pesticide is labeled for *indoor* pantry pests. Remove all food and kitchenware from the shelves and clean thoroughly using a vacuum. Treat cracks and corners by spraying lightly. Take care not to spray food or feed. **Do not overspray.** Read the label! Allow the spray to dry before re-covering shelves with fresh paper and replacing food packages, dishes, and cookware.

Spilled Food Pests

A number of insects feed on spilled food and debris that works its way into cracks, crevices, behind kitchen appliances or under sinks and cabinets. The most common pests are ants, cockroaches, silverfish, and carpet beetle larvae and adults.

Ants

Both the large, black carpenter ant (figure 6) and the smaller, red, brown or black (figure 7) ants are attracted to sweets and other food found in the kitchen. They often come in from nests located outdoors in the ground or under the foundation. The best way to control ants is to eliminate the food and apply judicious spot treatments at entrance sites and along the ant route. If the ant nest is located within the house structure it is necessary to locate and destroy the nest. (See fact sheet on *Carpenter Ants*).

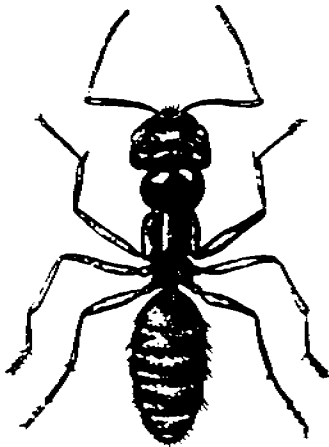


figure 6
Carpenter Ant

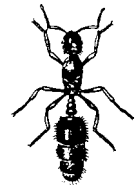


figure 7

Among the many ant baits available, the most effective are baits with the active ingredient Hydramethylnon. Most ant baits' active ingredients kills slowly, so ants bring the material back and share it with others in the nest. Gel and liquid baits may be more effective than granular products. Carpenter ants prefer sugary baits and are likely to take baits most readily in the spring.

Cockroaches

Our most common kitchen cockroach is the German cockroach (figure 8) which is slightly more than 1/2" long and is brown, with two black parallel lines just behind the head. Less common are the American (figure 9) Oriental and brown-banded cockroaches. The German cockroach will mature in 40 days and will multiply throughout the year.

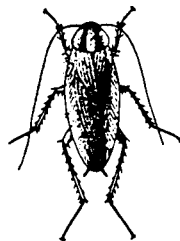


figure 8

German Cockroach

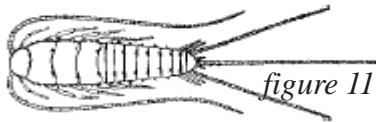


figure 9

American Cockroach

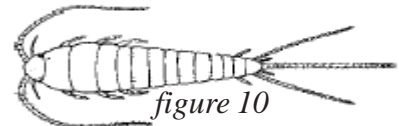
Silverfish & Firebrats

Both silverfish, (figure 10), and firebrats, (figure 11), can be found in kitchens as well as other parts of the house from the basement to the attic. In addition to spilled foods, they feed on wallpaper paste, book bindings, rayon fabrics, and starched clothing. Firebrats are found



Fire Brat

in warmer places (98° - 102° F), such as near furnaces, while silverfish like cooler (72° - 80° F) portions of the house such as kitchens, bathrooms and attics. They are silver-gray to greenish-gray in color with



Silverfish

three tail-like structures on the end of the body.

Control of Spilled Food Pests

Reduce their food supply by removing spilled food and debris. Use a vacuum cleaner to get at those hidden places behind appliances, sinks and in cupboards. Seal or caulk all cracks in walls, around baseboards, water pipes and windows.

Treat baseboards, cracks and other hiding places with pesticides that are labelled for use indoors for cockroaches and other spilled food pests. Because they do not leave a lasting residue on surfaces, aerosols do not perform well for this purpose. Do **not** contaminate food or feed with any pesticide product. Read the label!

Note: To reduce people's exposure to toxins, the U.S. Environmental Protection Agency has recently begun eliminating many pesticide products once in common use for controlling indoor insect pests. New products labelled for indoor use and available to people without pesticide applicator licenses have very low concentrations of active ingredients and may not be as effective as their more toxic predecessors.

Stop! *This publication contains pesticide recommendations that are subject to change at any time. UNH Cooperative Extension provides these recommendations only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. Because of constantly changing labels and product registration, some of the recommendations offered in this publication may no longer be legal by the time you read them. Contact the NH Division of Pesticide Control at (603) 271-3550 to check registration status. If any information in these recommendations disagrees with the label, you must disregard the recommendations and follow the label directions. No endorsement is intended for products mentioned, nor criticism intended for products not mentioned.*

Store pesticides in their original containers in a locked cabinet or shed away from food. Dispose of unused pesticides or empty containers safely, according to NH regulations. If you suspect pesticide poisoning, call the New Hampshire Poison Control Center at 1-800-562-8236.

Reviewed and edited by Dr. Alan Eaton, UNH Extension Entomologist, 9/01

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