

# **HOUSEHOLD INSECTS and Their Control**

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**Cooperative Extension  
College of Agriculture  
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Pullman**

**HOUSEHOLD INSECTS AND THEIR CONTROL**

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Insects find their way into our homes no matter how careful we are with our housekeeping. Some of these insects damage food, clothing, rugs, or furniture; others carry disease.

Many household insects are easily controlled. To get rid of others, such as termites and carpet beetles, you need considerable persistence and effort. Good housekeeping and thorough sanitation are highly important as aids to control or prevent infestations of many kinds of pests.

This bulletin presents information for use by the homeowner. If pest infestations are too complex or severe for

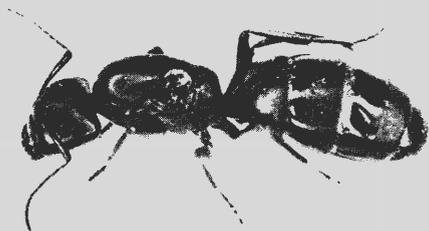
the homeowner to deal with, he or she should obtain the services of a professional pest control operator.

If, as a homeowner, you decide to use an insecticide to kill pests, you must use the correct formulation. This is the form in which the active chemical is combined with other ingredients for application. Chemicals formulated for use on agricultural crops may be too hazardous for home use. Formulations developed for use inside homes may severely damage plants because of the type of solvents present. Carefully follow directions on the pesticide container label. Do not use a pesticide in any manner that is not described on the label.

Most insecticides are suggested for use by chemical name, not brand name. Check the container label for active ingredients before you buy. In general, do not use oil-based solutions around

asphalt or vinyl tile floors. Some insecticides have other important restrictions, such as not for use on rugs, tapestries, etc. Be sure to check the label for such restrictions.

Space sprays or an aerosol bomb containing pyrethrins can be used to control flying insects inside a home. This type of spray is most effective when it can be applied directly onto the insects. Pyrethrins break down rapidly and are not satisfactory where long-lasting control is needed or where insects cannot be directly sprayed. More persistent or residual insecticides are needed to control such insects as cockroaches, ants, and termites which can seldom be directly sprayed or dusted. Satisfactory control of these insects depends on placing an insecticide deposit where they will come into contact with it hours, days, or perhaps weeks later.



CARPENTER ANT

**ANTS**

Several kinds of ants enter homes and may infest food supplies or houseplants. Some food-infesting species prefer sweet foods; others prefer grease and meats. Two major kinds of ants cause structural problems for homeowners in our area. These are carpenter ants and moisture ants. Although both kinds can be a nuisance in foodstuffs, the major concern is that they mine wooden structures. Other ants, such as thatching ants, do not mine wood but can be a pest.

Termites are sometimes mistaken for ants. Ants differ from termites in that

broadly joined to the thorax. Also, termites have long, straight, thread-like antennae, while ant antennae are elbowed or bent.

**Carpenter ants.** These ants are large and black. They tunnel in logs, stumps, and hollow trees. They become serious pests when they move indoors and tunnel building timbers. These ants are frequently confused with the dampwood termite. Both insects live in colonies and mine wood. However, carpenter ants bore in wood solely to provide living quarters and do not feed on it. They expel their borings as a fibrous sawdust from their mines.

Workers of carpenter ants are wingless, long legged, wasp waisted, black or reddish black, and about 1/2 inch long. The winged ants resemble workers in shape and color but are about 3/4 inch long and have four wings. The front pair of wings is much larger than the hind pair. Winged ants swarm on warm days in the spring or summer to start new colonies.

Usually carpenter ants enter a house through openings in the foundation. They prefer moist, rotting timbers but may mine sound, dry wood anywhere in a house. Commonly mined portions are porch pillars and supporting timbers, sills, girders, joists, studs, and window and door casings.

**Moisture ants.** These are small- to medium-sized, golden-colored ants. Like carpenter ants, they will infest wood, but they will infest only damp, wet, rotting wood such as that found in situations where wood is in continuous contact with the soil. Usually the problem can be remedied by removing the rotting timber and replacing it with sound wood.

**Control.** The following are registered materials for control of ants:

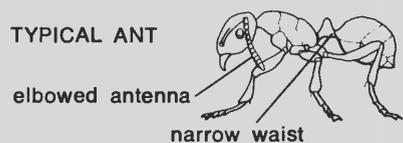
Baygon	malathion
chlordane*	pyrethrin
diazinon	Dursban

Before using any insecticide inside the home, make sure this use agrees with label instructions. Also, check that an insecticide application is actually needed. Pyrethrin may be used against individual ants. Apply chlordane, diazinon, or malathion outside around foundations in areas where ants are coming into the house. Spray Baygon around window frames, door sills, foundations, patios, or other places where ants may crawl before entering homes. Insecticide treatment may be unsatisfactory unless the ant "nest" is destroyed. Try to locate where the ants are nesting. This is sometimes outside the house, often in a tree stump or perhaps inside the house in one of the structural timbers. Apply insecticide where it will come into contact with the ants. You often need patience and persistence to get an infestation under control; it may take time and several insecticide applications.

\*EPA has cancelled all homeowner uses of chlordane. Existing stocks may, however, be sold and used in accordance with label directions. It is EPA's opinion that this is the safest and most environmentally acceptable means of disposing of this chemical.

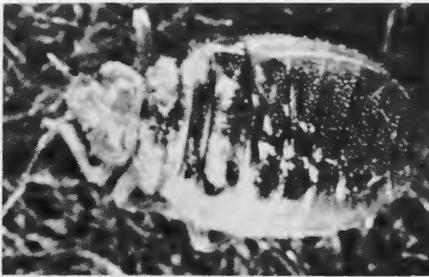


TYPICAL TERMITE



TYPICAL ANT

ants have a constricted waist where the abdomen is joined to the thorax. Termites have an abdomen that is



BED BUG

**BED BUGS**

The adult bed bug is a flat, wingless, brown insect between 1/4 inch and 3/8 inch long. Bed bugs feed by piercing

the skin and sucking blood. They appear in homes at all seasons of the year, usually hiding during the day and feeding at night.

Bed bugs may be carried into homes in clothing, baggage, or secondhand furniture. They migrate from room to room but ordinarily not from home to home.

When not feeding, bed bugs hide in the tufts of seams of mattresses, in cracks and crevices of bedsteads, or in upholstered furniture. As they become more numerous, they scatter and hide behind baseboards, window and door casings, pictures or picture moldings, loosened wallpaper, or cracks in plaster.

**Control.** Use one of the following materials for control of bed bugs:

Vapona  
pyrethrin                      malathion

Thoroughly but lightly spray bed springs and frames. Spray the sides and edges of mattresses and overstuffed furniture as well as cracks in floors and in baseboards. Apply every 30 days until no bed bugs are found alive. Sprays having pyrethrin added are of increased effectiveness because they stimulate bed bugs to leave cracks, crevices, and other harborages.



VARIED CARPET BEETLE LARVA



BLACK CARPET BEETLE ADULT

**CARPET BEETLES AND CLOTHES MOTHS**

Both carpet beetles and clothes moths feed on clothing and fibers of animal origin.

**Carpet beetles.** Several kinds of carpet beetles are found in homes. The immature carpet beetle larvae are longish, oval, and have brownish or black bristles. This is the stage that causes the damage. The larvae feed on rugs, feathers, clothing, and various foods. Damage from carpet beetles can be distinguished from that caused by clothes moths by the absence of webbing spun by moths. Cast larval skins also help identify their work.

Larvae of the carpet beetle are brown and their bodies are covered with hairs. The adults are black, mottled brown, or white, and about 3/16 inch long. In the spring they collect at windows in an effort to get outdoors and feed on pollen of spirea, goldenrod, and other plants.



CLOTHES MOTH LARVA



CLOTHES MOTH ADULT

Carpet beetle larvae wander around and may scatter from attic to basement. They can live on hair, lint, and other materials that accumulate in corners, in cracks under flooring, under radiators, and in similar places.

**Clothes moths.** This insect feeds mainly on wool, silk, fur, hair, and feathers. The moths are small—about 1/4 inch long with a wingspread of about 1/2 inch. The moth of one species, the webbing clothes moth, is buff colored. Another species, the case-making clothes moth, is similar but has indistinct dark spots on the wings.

Moths do not feed on cotton, linen, rayon, or other fabrics of vegetable origin, though they can damage such fabrics soiled with foodstuffs. Only the larvae cause damage since the adult moths do not feed.

**Prevention.** Do not permit excessive dust and lint accumulations. Give attention to hard-to-reach places such as behind radiators, baseboards, moldings, cold-

air ducts, or ventilation ducts. Vacuum cleaning is the best way to remove lint from such places.

Clothes, woolen scraps, and garments that include fur or feathers which lie for long periods on shelves or in corners, boxes, or drawers are often a source of infestation. Infestations can often be traced to old garments or wool remnants brought into the home for storage.

Do not store soiled garments. Clean all garments before storing. Stored woolens may be protected by spraying with a registered household spray. Use sprays formulated for clothing. Follow directions and observe the container label. Woolens can also be protected by storing in tight containers and adding paradichlorobenzene (PDB) or naphthalene crystals. Use 1/2 pound PDB or 1 pound naphthalene per 40 cubic feet of storage space. Special vacuum attachments for vaporizing PDB crystals are useful in treating closets. Make an effort to store clothing in a part of the home that is relatively cool and dry. Take expensive furs to a furrier for storage or treatment.

Carpet beetle larvae feed on a variety of materials including dog food and other high-protein cereals and fertilizers made of animal by-products. They may also feed on dead insects that accumulate near baseboards or in other places where they are not readily noticed.

Be particularly watchful for infestations that might start under heavy furniture that is infrequently moved.

**Control.** If possible, locate the source of infestation and treat or destroy as circumstances indicate.

After thorough cleaning, apply a registered household material. Spray around and behind baseboards, along edge of carpeting, in corners, and in other hard-to-clean places. Where infestations are under wall-to-wall carpeting, it may be necessary to loosen

and treat between rug and pad. Professional services may be required to loosen and refasten margins. Apply insecticides with a household sprayer that produces a continuous coarse mist. Pressurized containers that produce a coarse spray may also be used.

Fumigation is the most practical means of eliminating infestations in overstuffed furniture. Fumigation should be done in a fumigation chamber, and by an experienced operator.



**CLOVER MITE**

**CLOVER MITES**

Clover mites are not usually pests in homes but occasionally they move into

houses in large numbers. They do not bite humans or animals or damage home structures but they can be annoying. When squashed, they will stain walls and furnishings.

Clover mites are oval in shape, usually reddish brown, and about 3/100 inch long. They swarm over outer walls of buildings, particularly those with sunny exposures, and make their way indoors through cracks and crevices around windows, doors, and foundations. Invasions usually occur in the spring or the fall.

**Control.** Registered materials for clover mites include:

**OUTDOORS ONLY**

diazinon	malathion
kelthane	

Spray outside walls, foundation, and area 10 feet out from sides of buildings whenever mites are active. Spray surrounding foliage in this area. Repeat applications are frequently needed. If infestations are severe, control is difficult with hand equipment. Power sprayers give the coverage and spray volume needed for good control.



**COCKROACH**

**COCKROACHES**

Cockroaches are among our most disagreeable household insects. Several kinds, including the American, Australian,

Oriental, German, and brownbanded cockroach, are found in homes. The different species vary from 3/8 inch to 1 1/2 inches in length, and from tan to black in color. They are rather flat, fast-moving insects which are active at night and hide during the day.

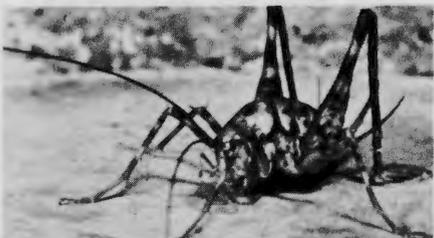
Cockroaches contaminate food and often leave a disagreeable odor on food over which they crawl. They are general feeders, and in addition to most foods, they chew bookbindings, stamps, paper, and even starched clothing.

Cleanliness, not leaving food scraps around, is perhaps the most important step in preventing the establishment of cockroaches.

**Control.** The following materials are registered for cockroach control:

diazinon	pyrethrin
malathion	Baygon
Vapona	Dursban (available in mixtures)

Treat under sink, undersides of drawers, along baseboards, and other places where there is free moisture. Vapona strips have been useful when placed in switch boxes, lockers, garbage containers, etc., in accordance with manufacturer's recommendations. Silica gel dust, alone or with additions such as pyrethrin, has been effective.



**CAMEL CRICKET**

**CRICKETS**

Field crickets or camel crickets sometimes enter houses, although they rarely

become abundant. Their chirping may annoy you, and they may chew holes in clothing and household fabrics. They may also contaminate food.

**Control.** Use one of the following, if necessary:

Baygon	Dursban spray
malathion	

Outdoors—spray around foundation and entrances to the home. Indoors— spray into cracks and crevices, around baseboards, and in other places where crickets may hide. Vacuuming may be equally as effective as a pesticide.



**CAT FLEA**

**FLEAS**

Fleas which infest homes usually come from cats and dogs. Fleas are small,

wingless, dark reddish-brown insects. They have narrow bodies and legs well developed for jumping. The small, whitish, hairy, legless larvae feed on dried animal matter lodged in cracks in the floor, under carpets, under porches where pets sleep, or any place they can obtain food. Lawns are also occasionally infested with fleas, particularly in warm, humid areas.

**Control.** These materials are registered for fleas:

<p><b>INDOORS</b> Baygon pyrethrin</p>	<p><b>OUTDOORS</b> malathion ronnel Sevin diazinon</p>
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Thorough cleaning of your home is essential, especially in cracks. Spray floors with pressurized sprays containing Baygon or pyrethrin. Avoid treating food, water, or food-serving or eating surfaces. Spray infested outdoor areas,

such as kennels and lawns, according to label directions. Keep spray away from food and water.

Commercial flea powders are readily available. Commercial flea collars for pets are also available. Carefully read label directions.



**HOUSE FLY**

**FLIES**

Several kinds of flies infest homes. Among the more important are the house fly, face fly, green bottle fly, fruit fly, stable fly, the lesser house fly, blowfly, and cluster fly. Most of these flies breed in decaying organic matter. The common house fly reproduces rapidly in such material and may carry germs to the food of man. Cluster flies

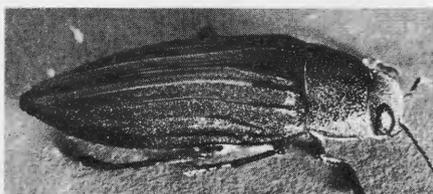
are parasitic on earthworms, and control of maggots is not practical. To prevent the adult flies from entering the home in the fall, close all openings through which they enter, such as sash-cord channels or holes where pipes enter the house. Fill all cracks around windows. Good window and door screens are essential for general prevention of flies.

**Control.** The following materials are registered for fly control:

<p><b>INDOORS</b> pyrethrin</p>	<p><b>OUTDOORS</b> diazinon malathion Vapona</p>
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Keep garbage in tight containers. Spray garbage cans frequently or use Vapona strips attached to the garbage can lid. All breeding areas, including plant and animal refuse, should be removed. Spray favored resting places and all screens and window sills with either malathion

or diazinon. Use household sprays and bombs often where flies tend to congregate. Also, there are several commercial light traps available that are effective in reducing fly numbers.



**GOLDEN BUPRESTID ADULT**

**GOLDEN BUPRESTID**

Oval-shaped holes in fir, pine, or spruce siding, window casements, flooring, or other parts of the home indicate activity of one of the flatheaded borers. The most common of these is the golden

buprestid. Adult golden buprestids are about 3/4 inch long, iridescent gold-green or blue-green, and have outside wings edged with a copper margin.

The adult beetle lays its eggs on trees, preferably those that are dead or dying, or in the cracks of freshly sawn lumber. Most of the infestations in lumber occur before manufacture. Insect mines or tunnels may be from 3 to 15 feet long, and the larva may live in the wood for 15 to 20 years before it transforms into a beetle and emerges. The larva is a white grub about 1/4 inch to 1 1/2 inches long.

**Control.** This insect is very difficult to

control in the home because of the long period the larva remains in the wood, the length of the tunnels, and the fact that infestations are not usually evident until the adult emerges. However, infestations seldom cause serious structural weakness. Exit holes in flooring or other exposed wood may be filled with plastic wood where advisable. Later, if no new emergence occurs, the damaged wood may be replaced. No chemical control is suggested.



**HOUSE CENTIPEDE**

**HOUSE CENTIPEDE**

The house centipede has a wormlike body an inch or more long with a pair

of long, slender antennae and 15 pairs of legs. It runs rapidly holding its body above the surface over which it moves.

House centipedes feed on cockroaches, flies, spiders, moths, and other small insects. They thrive in damp basements and often find their way to the upper floors.

**Control.** Since house centipedes feed on other insects, they should be regarded as beneficial. If, however, they

are considered a nuisance, a direct spray from a household insect bomb will kill individuals.



**MOSQUITO**

**MOSQUITOES**

Several kinds of mosquitoes are pests of man and are found around homes. Some species transmit malaria and others transmit encephalitis to human beings and horses. All mosquitoes breed in nonflowing water, and their eggs will not hatch unless moistened with water. The larvae must have water to develop.

**Control.** The first step in controlling mosquitoes is to eliminate their breeding areas. In general, mosquitoes are best controlled on an area-wide basis. Remove from the yard all unneeded cans, pails, jars, tires, or other objects which may hold water. Containers for storing water should be tightly covered. Keep small streams near your home free from debris or vegetation which slows the flow of water. If possible, drain or fill depressions where water collects.

These materials may be used to keep mosquitoes from breeding:

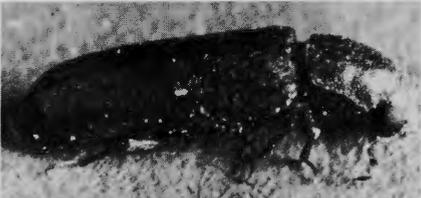
- |           |             |
|-----------|-------------|
| malathion | kerosene or |
| rotenone  | fuel oil    |

Permanent ponds or pools which do not provide humans, animals, or poultry with drinking water, or which do not contain desirable fish, may be sprayed

with malathion several times during the mosquito season. Kerosene or fuel oil alone may also be applied. Do not use any insecticide on pools or ponds until you are certain what the water is used for and until you have determined that the pesticide you plan to use is registered for your particular situation. Household insecticides containing rotenone will kill fish, as will many other pesticides, so check first before treating any body of water with pesticides for mosquito control.

Mosquitoes inside the home can be killed by direct spraying with one of the household insect aerosol bombs containing pyrethrins or rotenone.

Repellents containing DEET, 612, or Indalone will protect humans from mosquito bites for one to five hours. Use only according to label directions.



**POWDER POST BEETLE**

**POWDER POST BEETLES**

These beetles reduce wood to a powder-like dust which becomes evident as

the infestation increases. The insects are usually brought into the home in hardwood lumber used for flooring, furniture, or implement handles. Ash, oak, pecan, and hickory can become infested in lumber stockpiles, and the infestation may continue after the lumber is used in the home. These beetles are usually black or brown, elongate, and about 1/8 to 1/4 inch in length.

**Control.** The area of beetle infestation is usually limited. No chemicals for this

pest are available to homeowners; however, professional pest control operators can legally treat this pest with chemicals.

Heating small hardwood articles in an oven at 130°F. for 1½ hours or freezing the articles for 24 to 48 hours will also kill the insects. Use of heat or extreme cold, however, may warp or crack the wood, loosen joints, or injure finish.



**BOOKLICE**

**PSOCIDS OR BOOKLICE**

Psocids are flat, soft-bodied insects

about 1/16 inch long. They are white or grayish white. Because of their small size and color, they are often not noticed. They occasionally appear in starch, cereals, flour, and sugar, or may be found in paper, bookbindings and wallpaper. These insects may be annoying when they increase to large numbers. They are most likely to be found in damp, dark, warm, poorly ventilated rooms.

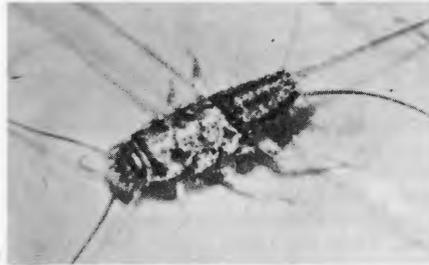
**Control.** These insecticides are registered for control:

- |           |          |
|-----------|----------|
| pyrethrin | rotenone |
|-----------|----------|

Dry out areas where you find booklice. These insects seldom are a problem in dry buildings. Spray areas where booklice are numerous. Destroy infested foods and eliminate dampness in food storage areas where possible. Store food in tight, moisture-proof containers. Eliminate hiding places such as piles of paper, infested books, and wallpaper.



SILVERFISH



FIREBRAT

**SILVERFISH AND FIREBRATS**

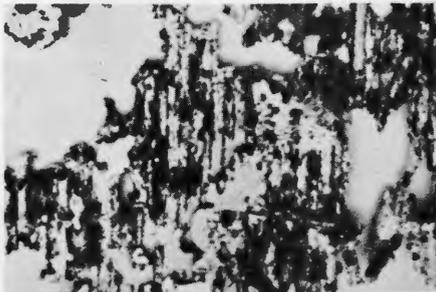
Silverfish and firebrats are wingless, scaly, fast-running insects about 1/2 inch long. Their bodies taper evenly from head to tail, and they have a pair of long antennae on the head and three long filaments that protrude from the tail. Silverfish are shiny and silver or pearl gray. They prefer warm and damp places but may be found in almost any part of the house. Firebrats are similar in appearance but mottled tan; they are most abundant around furnaces and heated water pipes. These insects feed at night on wallpaper, bookbindings, rayon fabrics, and starched clothing.

Keep old books, lumber, and wood at a minimum in the home. Clean up areas where wood or other hiding places for these insects are noticeable.

**Control.** These insecticides may be used:

- |          |           |
|----------|-----------|
| Baygon   | malathion |
| diazinon | ronnel    |

Spray in areas where silverfish or firebrats are seen. This usually is around closets, shelves, under and in sinks, and around steam pipes. Dusts are frequently more desirable to use than sprays.



SILVERFISH DAMAGE



SPIDER BEETLE

**SPIDER BEETLES**

Several kinds of spider beetles occasionally infest homes but rarely become numerous enough to cause concern. They are about 1/7 inch long and reddish to pale brown with or without white markings. They feed on cereals, cereal products, seeds, wool, and furs.

**Control.** These sprays may be used:

- |           |          |
|-----------|----------|
| pyrethrin | rotenone |
|-----------|----------|

Spray spider beetles with any household insect spray or aerosol bomb. Destroy infested foods.



DAMPWOOD TERMITE (WORKER)

**TERMITES**

Control of termites is often rather difficult, and it is advisable to have an inspection and cost estimate made by a reliable pest control operator before attempting a control program. Pest control operators may legally use certain

pesticides that are not available to the homeowner.

**Subterranean termites.** Termites are social insects. They live in nests or colonies in the soil. They often destroy wood in buildings. Each colony is made up of classes—reproductives, workers, and soldiers. Adult workers and soldiers are wingless and grayish white. They live within their tunnels in wood and soil. The reproductive adults have brown or black bodies and two pairs of long wings of equal length. Termites can be distinguished from ants by the equal length of their two pairs of wings and by their thick waistlines as contrasted to the narrow waistlines of ants.

The winged termites, about 3/8 inch long, swarm in early spring or fall. Often this is the first sign that a home is infested.

Other signs of termites are the shelter tubes or runways on the surfaces of foundation walls. Termites may be present, however, even though no shelter tubes are found.

**Control.** Termites must be close to both soil and moisture. They are most likely to infest soil beneath basementless buildings where there is poor drainage and ventilation. The first step in controlling termites is to permanently break their contact with the soil and sources of moisture such as leaky pipes. Structural changes, replacement of infested wood, mechanical barriers, and soil poisons will usually do the job. Remove and burn badly damaged infested wood and the wood immediately surrounding the infested spot. Make sure none of the wood in the structure is in contact with the ground. Every

termite infestation is different and requires individual treatment. Termite infestations in slab-on-ground construction often create particularly difficult control problems.

Soil treatments with chlordane\* provide extended protection against reinfestation. In buildings with basements or crawl spaces, dig a trench along the outside of the foundation walls. With brick or hollow block or concrete foundations, dig a trench to the footing. Place chlordane in the trench according to instructions on the pesticide label (formulations of chlordane labeled for homeowner use are becoming increasingly difficult to find).

**Dampwood termites.** These termites, unlike the subterranean types, enter

directly into dampened wood through decayed spots, cracks, or holes at swarming time. They do not require moist soil in order to exist. They do, however, require considerable moisture for their development and usually attack decaying wood exposed to considerable dampness. Although dampwood termites usually occur in decaying wood, they can extend their workings into sound wood. They are much larger than the subterranean termite, the nymphs being  $\frac{1}{2}$  inch long and the soldiers  $\frac{3}{4}$  inch long.

**Control.** Replace infested wood and correct conditions that permitted excessive moisture. Provide adequate drainage or use materials other than wood in foundation areas which cannot be protected from excessive moisture.

Use creosote-impregnated wood for house foundations and other moist areas where wood is likely to be subject to termite attack. Chlordane\* labeled for dampwood termites can be used if it can be found. Follow label directions.

\*EPA has cancelled all homeowner uses of chlordane. Existing stocks may, however, be sold and used in accordance with label directions. It is EPA's opinion that this is the safest and most environmentally acceptable means of disposing of this chemical.



GRANARY WEEVIL

#### STORED FOOD INSECTS

Several kinds of beetles, weevils, and moths infest flour, cereals, spices, and other dry food products in the home. These foods are perfect targets for insect infestation, as temperatures are usually ideal and food ample.

**Flour beetles.** Adult flour beetles are about  $\frac{1}{8}$  inch long, smooth, and reddish brown. The larvae are about  $\frac{1}{4}$  inch long, with white to yellow bodies and black heads. These insects infest flour, cereal products, and other stored foods. Infestations often develop in food products which are seldom used and remain on hand for long periods.

**Granary and rice weevils.** These two weevils are similar in appearance and habits. The adult weevils are about  $\frac{1}{8}$  inch long, dark brown, cylindrical, and have rather long snouts or beaks. The larvae are white, legless grubs. These insects prefer whole grain, but will also feed on spaghetti, macaroni, and similar foods.

**Drug store beetles.** These beetles are small, robust, oval, and light brown. They have sharply bent-down heads and this gives them a humped appearance



MEAL MOTH LARVA



MEAL MOTH ADULT

when viewed from the side. The beetles are usually about  $\frac{1}{10}$  inch long. They feed on drugs, pepper, spices, cereals, and other processed foods.

**Saw-toothed grain beetles.** This beetle is about  $\frac{1}{8}$  inch long, dark brown, slender, and flat. It has a row of saw-tooth projections along each side of the body just behind the head. The larvae, which are quite active, are yellowish white with brown markings. They are about  $\frac{1}{8}$  inch long, and have well-developed legs. This insect feeds on cereals, cereal products, nuts, dried fruits, and other products.

**Flour and meal moths.** The two most common species of flour and meal moths found in homes are the Indian meal moth and the Mediterranean flour moth. The Indian meal moth is pale gray with metallic copper-colored markings on the distal two-thirds of the forewings. The Mediterranean flour moth is gray, has forewings with wavy black lines, and dusky white hindwings with darker markings. The larvae of these moths are white or pinkish; they spin webbing throughout the food they infest. They eat cereal and cereal products, dried fruits, candies, chocolate, shelled nuts, and similar foods.

**Control.** One insecticide is recommended as an aid in control:

pyrethrin

The first step in controlling insects that infest stored foods is to find the infested material and destroy it. Remove all foods from cupboard shelves, and clean and thoroughly spray the storage area. Thorough cleanup and scrub-out of shelves and cupboards with warm water and detergent is important. Allow scrubbed shelves to dry before spraying. Do not get spray on food, dishes, or cooking utensils.

Food which has been exposed but shows no signs of infestation may be placed in shallow pans and heated in an oven for one-half hour at  $140^{\circ}\text{F}$ . Prop the oven door slightly open to prevent scorching the food. Thorough freezing will also destroy an infestation. Store uninfested foods in containers with tight-fitting lids.