

PestGazette



Winter Welcomes Pests...Don't Let Them Upset Your Guests

There are many pests that threaten human health and many others that infest our food. Some bite us or cause serious allergic reactions as well as trigger asthma attacks. Many eat or taint our food, or can be a serious nuisance just by being present in large numbers. Certain “bugs” may scare your family, friends or customers who are afraid of their bites. Because some of these threats are complex, and some are rather new, you may need help from a trained Pest Management Professional (PMP). Our experts can help determine exactly what your main problem pests are, where they are breeding, provide you basic information about them, give you sources of further information, self-help advice, and in many cases, offer control strategies and assistance to begin reducing your pest problem at once.

Our technicians are qualified and ready to inspect your home or business for public health pests, as well as find and eliminate or advise you about conditions which let them breed around your home or building. We are ready to give you immediate information and assistance in controlling them and protecting yourself from diseases they may carry. We have a good support system in place to get rapid identifications, information, and control advice from state and national sources. We will also give you advice on preventive measures you can take to avoid similar pest problems in the future.

For more information about our professional pest management programs don't hesitate to call us today and schedule an appointment.

Are Cockroaches a Health Threat? You Bet.

Cockroaches can spread at least 33 kinds of bacteria, 6 kinds of parasitic worms, and 7 other human pathogens. They can pick up germs on the spines of their legs and bodies as they crawl through sewage and then carry them into food or onto cooking surfaces. Germs that roaches eat from decaying matter or sewage are protected while inside them and can remain infective for weeks longer than

if they had been exposed to cleaning agents, or sunlight and air.

Cockroaches have been around a long time. They appear to have changed very little in the past 350 million years. There are about 4,000 different named species of cockroaches in the world. The habits and



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Cockroaches (continued from page 1)



1. German Cockroach



2. American Cockroach



3. Brown-Banded Cockroach



4. Oriental Cockroach

high reproductive rate of cockroaches can lead to large populations which can spread disease, contaminate and eat our food, as well as cause allergies and trigger asthma attacks. At least 69 species can be found in the U.S, but only about 20 species cause pest problems in homes or businesses. Only four species, which are found worldwide, cause frequent and significant urban pest problems. These are the German, American, Brown-Banded, and Oriental cockroaches; in roughly that order of importance and frequency as urban pests in the U.S.

Good sanitation and habitat reduction, along with vacuuming, surveillance, a baiting program, and some sealing of cracks, can usually quickly reduce or eliminate cockroach populations. A trained, certified PMP has the knowledge and tools to evaluate the situation, identify (ID) the pest species, guide and advise customers on sanitation improvements, and accomplish any other steps needed to effectively control them.

In a recently released study of 937 inner city children, in seven U.S. cities, allergens from common pest cockroaches were present more often and caused more serious reactions in children with asthma than did the House Dust Mite or dog or cat allergens. These allergens build up in deposits of droppings, secretions, cast skins, and dead bodies of roaches. Control of cockroaches is needed in homes to help prevent build-up of dangerous amounts of their allergens. Where large cockroach populations are already well established, and in older buildings, or in buildings which allow roaches to easily move between rooms or apartments, very good sanitation by one occupant will not solve the problem. In such cases, the help of a trained, experienced, licensed PMP will probably be needed to reduce the problem, and effectively work toward eliminating the roaches.

The Furious Four

1. German Cockroach. An adult German Cockroach, *Blattella germanica* (L.), is about 5/8-inch (16 mm) long, light-to-medium brown with two dark parallel stripes the long-way on its pronotum. They breed year-round indoors in humid places at about 70°F (21°C). They produce 30-40 eggs in a capsule approximately three months after first hatching, and produce another capsule about every 28 days after that.

2. American Cockroach. The American Cockroach, *Periplaneta americana* (L.), is sometimes called the “Palmetto Bug” in tropical American areas. They are the largest of the house-infesting urban pest cockroaches at about 1.5 inches (38mm) long, with full-sized reddish brown wings and a light margin completely around their prothorax. They often live in outdoor sewers in warm areas like Florida or southern California. They can also thrive in underground streams and utility tunnels in Alaska. About 11 months after hatching each mated female can produce a capsule containing 16 eggs every four to five days until she has produced more than 50 of them. The female usually glues her egg capsule into or onto some partly hidden spot. These are the most common cockroaches on sea-going ships. They have been noted to chew off the eyelashes, eyebrows, and toenails of humans.

3. Brown-Banded Cockroach. Brown-Banded Cockroaches, *Supella longipalpa* (Serville), are slightly smaller than German cockroaches (about 1/2-inch; 13 mm long). They have two lighter bands across their dark brownish bodies. Males have full wings, which reach beyond the tip of their

rather pointed abdomens, but females have underdeveloped wings, much shorter than their broad, rounded abdomens. Within a room, these roaches tend to prefer warmer, drier, and higher locations than do any of the other urban pest roaches. They are often found in upper cabinets or in rooms other than kitchens (food preparation areas) or bathrooms. Under good conditions of moderate humidity and warm temperatures of about 80°F (27°C), these roaches can develop from hatching to adult in around 95 days. The females can begin producing egg capsules containing 19-20 eggs after about 70 more days. This species does not require as much moisture as any of the other three main urban pest roach species.

4. Oriental Cockroach. Oriental Cockroaches, *Blatta orientalis* (L.), are large, very dark (almost black, but sometimes dark reddish-brown), shiny cockroaches which live in sewers and similar wet places, eating decaying organic matter. They are sometimes called “water bugs” because they come out of drains, and “black beetle cockroaches” because of their smooth, dark bodies. Males are about 1 inch long, with wings that cover only about ¾ of their abdomen; females are about 1 ¼ inch long, and have only short stubs of wing pads. They survive best at temperatures lower than the other three main urban pest roach species, preferring a range of 68 to 84°F (20 to 29°C), and are seldom found in warmer states in the U.S. They grow slowly, needing more than 200 days to go from hatching to adult, and females take another 60 days to produce their first capsule of 16 eggs. They may go on to produce 8 to 10 egg capsules at a rate of about one every 30-40 days, depending on food, harborage, temperature and moisture conditions. ■

Food for Thought

If you notice small moths or beetles flying or crawling around in your pantry, kitchen counter or shelves, you may have stored product pests, sometimes called “pantry pests.” There are many small insects, which live in and feed on the same foods we do.

Drugstore Beetles, *Stegobium paniceum* (L.), are small reddish-brown beetles with their hard wing covers (elytra) having rows of tiny punctures and covered by short, fine yellowish hairs. One life cycle (egg-to-egg) takes about 60 – 210 days, depending on temperature, moisture, and food supply. These beetles feed on a very wide range of kinds of materials, from grain to spices, and they may even sometimes feed on leather.

Indianmeal Moths, *Plodia interpunctella* (Hubner), are among the most common stored product pests worldwide. They have a wing span (wing tip to wing tip) of 5/8 – ¾ inch. Their front wings are pale gray on the basal 1/3 and coppery on the outer 2/3. Adults do not feed but mate and lay eggs (100 – 400 per female) on or near cracked or coarsely ground grain products upon which the larvae feed. Larvae can penetrate packages and feed near the surface of the grain material. They also feed on dried fruit, nuts, or other seeds. They produce lots of webbing which covers most of the surface where they are feeding. When larvae are fully-grown, they may crawl some distance from their feeding site and pupate in cracks or crevices. A typical life cycle usually takes 25 to 135 days (egg-to-egg), and there are 4 – 6 generations per year under good conditions.

Rice Weevils, *Sitophilus oryzae* (L.), are small weevils (beetles with a snout),



Red Flour Beetle

Notice small moths or beetles flying or crawling around in your pantry, kitchen counter or shelves? You may have stored product pests...

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about 1/8 inch long with hard, reddish-brown wing covers (elytra) with rows of small punctures, and usually having four pale yellowish or white marks when seen from above. These have even been known to feed on fruits. If disturbed, adults may pull in their legs and “play ‘possum.” The life cycle (egg-to-egg) may be as short as 32 days in warm or summer conditions.

Red Flour Beetles, *Tribolium castaneum* (Herbst), are small, about 1/8 inch long, slender, reddish-brown beetles, who’s name comes from their red color. These beetles feed on a range of processed grain materials such as flour. In the U.S., these are most common in the southern states. These beetles excrete quinones into the infested material that can cause a bad taste, and may even interfere with other baking aspects (e.g., dough not raising properly), especially if infestations are heavy.

Sawtoothed Grain Beetles, *Oryzaephilus surinamensis* (L.) adults are very small, flat, brown beetles about 1/8 inch (3 mm) long with 6 teeth sticking out each side of their prothorax. These may attack an extremely wide range of (usually finely ground) grains, pasta, chocolate, etc., and can often get into packages through very small openings. They cannot attack sound grain kernels. Each female lays 45 – 285 white shiny eggs singly or in small clusters in crevices in larval food material.

Confused Flour Beetles, *Tribolium confusum* (J. duVal), are small, about 1/8 inch long, slender, reddish-brown beetles that look so similar to the red flour beetles, that their common name comes from their often being “confused” with red flour beetles. A complete life cycle (egg-to-egg) takes about 49-120 days, depending on temperature,

moisture, and food supply. These beetles feed on a range of processed grain materials such as flour. In the U.S., they are much more common in northern states than are red flour beetles.

Merchant Grain Beetles, *Oryzaephilus mercator* (Fauvel), adults are very small, flat, brown beetles about 1/8 inch (3 mm) long with 6 teeth sticking out each side of their prothorax. They have well developed wings, can fly, and are attracted to light. These beetles may attack a wide range of (usually finely ground) grains, pasta, chocolate, etc. They can get into packages through very small openings. Each female lays 22 – 190 white shiny eggs singly or in small clusters in crevices in larval food material.

Control. All stages of these stored products pests can be killed by heating infested materials to at least 140°F (60°C) for more than 1 hour, making sure that the middle of the material is held at that temperature for at least that period of time, or longer; **or** by freezing the food item throughout to 0°F (-17.7°C) or below for at least 4 days. Most foods can be eaten safely after pantry pests have been killed and removed, such as by hand or by sifting. Usually, no pesticide treatment is needed for these pests. Finding and disposing of all infested foods usually solves the problem.

You can help manage these and other pantry pests by taking the following steps. You must find the source of the infestation. Check packages you seldom use, especially such foods as cereals, grain products, nuts, flour, raisins, spices, dry pet food, and birdseed. Also make it a habit to thoroughly inspect all such items when you first bring them home after purchasing from your grocery store. ■

Pest concerns?
Don't hesitate to
call us today—we're
ready to discuss
your situation!