

Cockroaches

Diagnostic Lab Note

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Cockroaches have been a uninvited indoor guests since prehistoric times. Although most cockroaches originated from tropical climates, they have been transported around the world and are well adapted to live with people in any climate. Cockroaches are omnivorous and feed on plant and animal material that includes human and pet food and other sources of organic mater including soaps and toothpaste. Although best considered just a nuisance, cockroaches are one of the most disdained and hated insects. Roaches can contaminate food with their waste and saliva and have been implicated as carriers of bacteria that can cause food poisoning, diarrhea, dysentery and *Staphylococcus* infections. The waste and body parts of roaches can also cause significant allergy problems in some people.



Brownbanded cockroach

Cockroaches thrive in conditions of poor sanitation because of the large amount of food available. You do not get cockroaches because of poor housekeeping. Cockroaches come in on food, packages, boxes, used furniture and appliances or migrate from adjoining apartments or buildings. Once roaches become established, cleaning alone will not control them.

In Wisconsin, there are four common species and four occasional species. Cockroaches are flattened and oval-shaped, reddish-brown to black, and are from 1 1/8 to 2 inches long. They are most active at night and hide during the day in dark, damp, confined places. If disturbed they run quickly for shelter.

The most common roach in the state is the German cockroach. Adults can be up to 5/8 inch long and have two dark stripes behind the head. They are the fastest breeding roach with three to four generations per year. German roaches must have a source of free water and prefer kitchens and bathrooms. They can use plumbing lines and pipe chases to move from apartment to apartment.

Adult brownbanded cockroaches are light brown and about 1/2 inch long. They prefer areas where temperatures are at least 80 degrees so they are often seen in false ceilings and around appliance motors, light switches and picture frames. Because of their lower water needs they can be found in any room.

American cockroaches are a chestnut brown and can be over 2 inches long. They are most common in large commercial buildings like bakeries, grocery stores and hospitals. Along with the closely related

smoky brown, Australian and brown cockroaches, they can be found outdoors in warmer climates and are given names such as palmetto bug and water bug.

Oriental cockroaches are shiny black to dark brown and up to one inch in length. They prefer cool areas with high humidity and are found in damp basements, crawl spaces, and floor drains. They are seasonally active with nymphs found in spring and early summer and adults found in late summer.



Wood roach nymphs

The only native cockroaches in Wisconsin are the wood cockroaches (genus *Parcoblatta*). They are dark brown and up to 1 1/2 inch long and look a bit like small American roaches. They live under the bark of dead trees and can be brought in with firewood. Males can fly and are attracted to lights at night. Wood roaches rarely survive or breed indoors. Some problems have been seen in old, damp cabins in wooded situations.

Among the less frequent roaches include the light green Cuban cockroach that is often found in bananas. The Surinam cockroach is a plant feeding species found in greenhouses and tropical plants. Both the Australian and smoky brown roaches arrive in various shipments and pallets from the southern US.

CONTROL

You must follow certain rules to control roaches. Sanitation is the first phase in a roach control program and you should make every effort to reduce water, food and shelter available to the cockroaches. These efforts will make other control tactics more effective.

1. Place all foods or edible material in tightly sealed containers. Do not overlook pet food. Remove trash on a regular basis.
2. Clean up all areas where spilled food and crumbs may accumulate, for example, under stoves, refrigerators and behind cupboards.
3. Remove or cover wet mops or rags and repair leaking pipes and faucets. Many roach species need a source of water. Without water, species such as the German cockroach will die in a few days.
4. Eliminate hiding places. Caulk and seal any cracks or crevices roaches may hide in. Openings as small as 1/16 of an inch is enough for a roach harborage. Remove clutter such as stacked paper and boxes that provide shelter.

A number of insecticides are registered for cockroach control. These are labeled for indoor use and should list cockroaches on the label. If you use a liquid insecticide or dust, they are both more effective and it is safer to apply the materials only in cracks and crevices where cockroaches live. This will place the material where the roaches spend most of their time which will make the treatment more effective

and reduce pesticide exposure to people and pets. You may need to make a second applications thirty to forty days after the first one because eggs are not affected by the initial application. Purchase sprays, dusts or baits in a hardware, garden supply, department or grocery stores. You can also purchase hard-to-find products on the internet. Make sure the products are labeled for indoor use for cockroaches. Treat areas where roaches hide; under sinks, beneath cupboards, in any cracks and crevices. When you treat cupboards and pantries, take everything off the shelves and remove food and utensils. Replace dishes and food when the pesticide is dry. Over the counter products will include active ingredients like premethrin.,allethrin, cyfluthrin, and tetramethrin.

Boric Acid is an effective inorganic insecticide that kills roaches by working as a stomach poison. It should be applied in areas where roaches are active, such as along baseboard and behind cupboards. Boric acid does not repel roaches.



Sticky traps are a good way to monitor roach populations but they will not eliminate the problem. Some traps use food attractants or insect pheromones to enhance catches. Traps are valuable to monitor roach populations and to identifying areas of activity.

An **alternative to sprays** are the various cockroach baits that have become much more available. Plastic bait stations, gels and paste baits use small amounts of less toxic insecticides. Roaches killed by baits and their waste can kill additional roaches including fipronil, hydramethylnon, avermectin and boric acid. To be effective, baits need to be placed close to roach harborages. Sanitation is important and if other food is present, baits will not work as well. Do not spray insecticides near or on the baits.

Insect growth regulators such as Gentrol can be used to control roaches. It does not kill adult roaches, but sterilizes immature roaches and stops further reproduction. Growth regulators can be used in combination with other treatments. It will take a number of weeks to see results if growth regulators are used alone.

Roaches are more difficult to control in apartment buildings. Some sprays repel roaches and drive them to untreated areas. All units may need to be treated to prevent reinfestation; all tenants should cooperate in keeping trash rooms clean and allowing free access to pest control people.

Cockroach control can take time. An excellent in-depth COCKROACH CONTROL MANUUAL is available from University of Nebraska-Lincoln Pesticide Education Resources. The manual can be ordered or viewed on line at <http://pested.unl.edu/cocktoc.htm>.

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