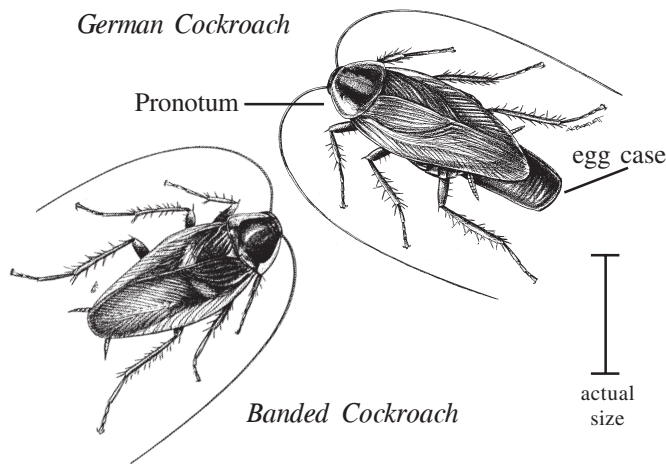


Cockroaches

There are four species of cockroaches that commonly infest homes and buildings in Maryland. They are the German Cockroach, Brown-banded Cockroach, American Cockroach and Oriental Cockroach. A fifth species, the Pennsylvania Wood Cockroach, is an occasional pest in Maryland. Each species has different habits and may be found in different areas. Therefore it is important to identify the species before attempting control.



German Cockroach (*Blattella germanica*)

The adult is about 15 mm (5/8 to 2/3 inches) long. Adults are light brown with two dark “racing stripes” on the shield (pronotum) behind the head. Immatures have two dark stripes running the length of the body. The female carries her egg case until it hatches. The average period from egg to adult is 55-68 days. They are usually found where food, moisture and warmth are available, such as the kitchen and bathroom. This is the most common species of cockroach found in homes and apartments.

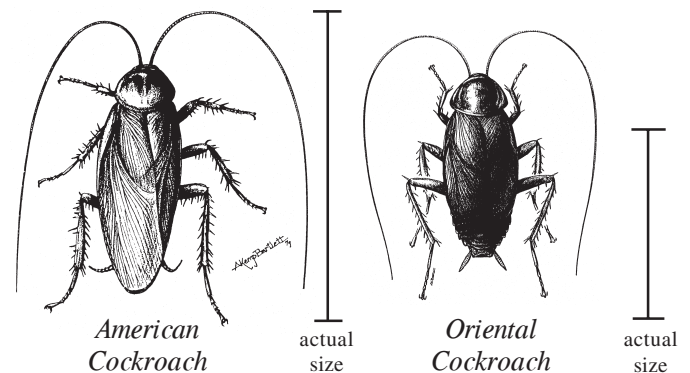
Brown-Banded Cockroach (*Supella longipalpa*)

The adult is about the same size as the German cockroach or slightly smaller, and is light brown to brown in color with faint V-shaped lighter bands on the wings. It does not have two stripes on the pronotum like the German cockroach. The female glues her egg case to ceilings, behind drawers, under furniture, or in closets or other dark places. It likes warm

places and is often found in television sets, radios, furniture, etc. Because of these habits, Brown-banded cockroaches can easily be moved in furniture, appliances, etc. from infested apartments to new homes and apartments. The development period from egg to adult can take anywhere from 95-276 days depending on environmental conditions. Adult Males can fly, but females cannot.

American Cockroach (*Periplaneta americana*)

The adult is large, about 4 cm (1 1/2 inches) long, reddish brown, with a pale band on the edge of the pronotum. The adult female carries her egg case for up to six days. The egg case is brown when laid, but turns black in 1 to 2 days. It is most common in commercial buildings rather than in homes. It is also found in sewers, garbage dumps, warehouses, etc. It likes warm, humid areas. Adults are poor to moderately good fliers in the Southern U.S but not in Maryland. American cockroaches can live outside in Maryland in the summer, especially near sewers, etc..



Oriental Cockroach (*Blatta orientalis*)

The Oriental Cockroach is commonly referred to as a “waterbug”. The adult is large, about 2.5 cm (1 inch) long, and is dark brown or black. Adult males have short wings; females do not have wings. The female deposits the egg case in a sheltered place. The period of development can range from 300-800 days. This species inhabits moist places such as damp basements, shaded yards, basement drains, etc. It fre-

quently moves into homes from outside. Outdoors it is generally found under stones, debris and leaf litter. Oriental cockroaches do not fly.

Pennsylvania Wood Cockroach (*Parcoblatta pensylvanica*)

The adult male is 7/8-1 1/8" long, females are smaller (1/2-3/4"). The color is chestnut brown, with the pronotum and wings edged in white. Males are strong fliers and are attracted to lights. Females have reduced wings and do not fly.

The Pennsylvania wood cockroach is occasionally a problem in homes in early summer. This is an outdoor species that lives under the bark of dead trees, in treeholes and wood piles. It does not breed or survive indoors. Individuals are often brought into the home in firewood or they may come in through cracks, loose-fitting screens, etc. They are attracted to lighted windows. This is the most common way they enter a home in summer.

Control:

General Habits of Cockroaches

Cockroaches are thigmotactic. That is, they like tight places. They are also nocturnal creatures, coming out of their hiding places at night in search of food and water. If cockroaches are spotted during the day, chances are the infestation is very heavy or they have been poisoned by a previous pesticide treatment. German cockroaches can move between apartments but are not common in detached homes unless they are introduced.

Sanitation

The first line of defense against cockroaches is sanitation. Cockroaches eat the same food as people and therefore sanitation is the most important control strategy. Clean up clutter, leftover food, crumbs, soft drink bottles, etc. Empty garbage before turning lights out at night or keep garbage in tied plastic bags.

Cleaning is an extremely important aspect of cockroach control. In addition to storing foods properly, clean up after food preparation, and properly store and dispose of garbage. Kitchens should be given periodic thorough cleanings. Be sure to concentrate on areas where grease accumulates such as stoves, exhaust vents and drains. Keep counters clean. Pick up pet food between feedings. Clean up dirty dishes and do not allow them to set in water overnight.

Habitat management and reducing access to food and water are very important in controlling cockroaches. All food should be stored in tight containers that roaches cannot penetrate. Cockroaches can chew through paper and cardboard. Glass jars with screw-cap lids, and strong, tight, plastic containers are ideal.

Common places for roach entry are cracks in walls, open areas around pipes, vents and windows. Seal these entry points with caulk or another sealing compound. Place screens over vents and windows. This is particularly effective in apartments where roaches can easily move from apartment to apartment along pipes and ductwork.

Habitat modification is very important in roach control. Roach survival is higher with high humidity and drinking water. Humidity can be reduced with a dehumidifier. Access to drinking water can be reduced by fixing leaky faucets and leaky pipes. Reduce sources of moisture from condensation by improving ventilation.

Traps

Sticky traps are not effective in controlling cockroaches. They should be used to monitor cockroach populations, to determine areas of activity and to evaluate the effectiveness of control measures.

Chemical Control

ALWAYS FOLLOW MANUFACTURER'S INSTRUCTIONS AND SAFETY PRECAUTIONS CAREFULLY.
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Boric Acid, Diatomaceous Earth and Silica Aerogel

All of these materials are applied as dusts and present little hazard when used according to label directions. They should be applied to cracks, crevices and wall voids. A plastic squeeze bottle works well for application. **Boric acid** is a stomach poison and **should be kept out of reach of children**. It does not repel cockroaches and is slow acting, taking 5 to 10 days to work. **Diatomaceous earth** and **silica aerogel** work by abrading the protective waxy coating on the body of the cockroach. This causes the cockroach to desiccate and die.

Insecticidal Baits

Baits are a good alternative to spraying because they reduce the amount of pesticides in the home environment. The insect is attracted to the bait and ingests the poison. They are available as gels, granules and in containerized bait stations.

Bait station placement is the most important factor in control. Always place the bait station horizontally and against a perpendicular surface, e.g. on a shelf with a side touching the back of a cabinet or on a counter with a side touching the splash board or on the floor with a side touching the wall. (Moving them out from a vertical surface, even an inch or two, defeats the purpose. Bait stations should be placed in corners where the cockroaches travel. Place the bait stations between where the cockroaches hide and their sources of food or water. Follow the package instructions for the number of stations needed and use them all at once. Use at least 10 stations in a kitchen and 2 in a bathroom. Check the stations periodically (4-6 weeks) to see if the bait has been used up. If there are cockroaches in the stations, the bait has been eaten and the stations should be replaced. Gel baits and granules should be placed into cracks and crevices where cockroaches hide.

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Reviewed by: Jay Nixon, American Pest Management

Mention of trade names in this publication does not constitute an endorsement by the Maryland Cooperative Extension.

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