

German Cockroach



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The German cockroach is undoubtedly the most common cockroach in apartments and restaurants in West Virginia. Furthermore, this cockroach usually tops the list as the most common household pest in the entire United States.

Identification

Cockroaches typically are flattened insects with long antennae and spiny legs. The German cockroach, *Blattella germanica*, is 1/2-inch to 5/8-inch long as an adult. It is light brown in color with two dark lengthwise stripes on the segment directly behind the head. Both males and females have fully developed wings and can fly.

Cockroaches possess incomplete metamorphosis, meaning that there are three basic life stages—egg, nymph, and adult. German cockroach nymphs resemble the adults, but are darker and smaller—only 1/8-inch when first hatched. The 1/4-inch-long egg cases are light tan; each contains about 40 eggs.

Spotting German cockroaches during the daytime is usually a sign that the infestation is so large that all the available hiding places are filled.

Biology and Habits

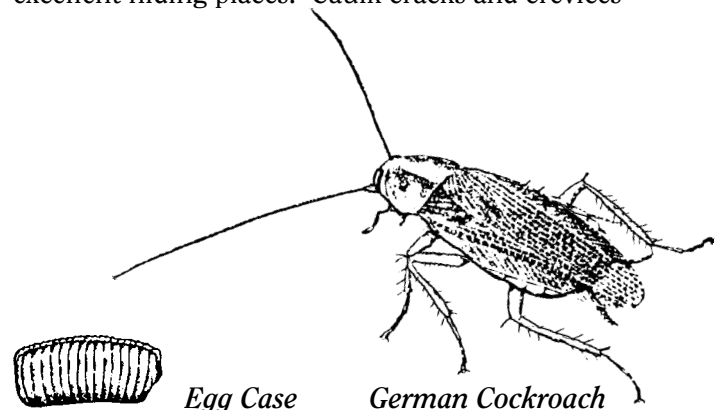
The female German cockroach carries the egg case until just before it is ready to hatch. The fact that the female carries the egg case, protecting it until just before it hatches, is one of the reasons that this insect has been so successful in its reproduction. Other reasons include the large number of eggs per egg case, the short amount of

time for development (just two or three months), and its small size and resulting ability to hide in very small cracks and crevices.

German cockroaches are found primarily in kitchens and bathrooms, where there are high levels of moisture and humidity. They are nocturnal like most cockroaches, hiding in cracks and crevices during the day, and foraging for food at night. Spotting German cockroaches during the daytime is usually a sign that the infestation is so large that all the available hiding places are filled.

Prevention Methods

Sanitation is the key to combatting German cockroach infestations. Good housekeeping, plus moisture control, will go a long way toward eliminating the three primary needs of cockroaches—food, water, and hiding places or “harborage.” You can eliminate sources of food and water by cleaning up crumbs and spills, putting away pet food after pets eat, and not leaving dirty dishes in the sink. Place your garbage outside in tightly sealed bags or in cans with tight-fitting lids—loose garbage in paper bags or cardboard boxes provides food for cockroaches. Don’t let too much refuse accumulate around the house, since piles of empty paper grocery bags or corrugated boxes provide excellent hiding places. Caulk cracks and crevices



to reduce the number of harborages in your kitchen or bathroom.

German cockroaches have been known to hitch rides into homes in bags of vegetables, cardboard boxes, and cartons of soft drinks. Inspect incoming boxes and cartons to avoid bringing them home with you.

When moving from one house or apartment to another, there are things you can do to avoid taking cockroaches with you. As you pack, inspect both the boxes and the items you are packing. Spray the outsides of packed boxes with a pyrethrin aerosol to keep cockroaches away from them until they are moved. When you reach your new home, inspect items as they are unpacked and crush any cockroaches that managed to slip through. After you've unpacked, immediately dispose of empty packing boxes outdoors.

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Control Strategies

Integrated Pest Management Program. An integrated pest management program for the German cockroach combines monitoring with sticky traps, nonchemical tactics (i.e., sanitation, caulking), and an initial treatment with a less toxic insecticide, followed by cockroach bait stations and insect growth regulators to maintain control at an acceptable level.

Cockroach sticky traps are often marketed as nontoxic cockroach control tools. They may provide a limited amount of control, but their greatest value is as a tool for monitoring. Cockroaches crossing the traps adhere to the glue and are unable to escape. Place eight traps in the kitchen and three in each bathroom, in drawers and cabinets and along walls, and check them in 24 hours. The traps will help you to pinpoint harborage areas. The key to controlling German cockroaches is to find and treat these harborages.

For the German cockroaches, this means treating **cracks** and **crevices**.

Boric acid and diatomaceous earth are both labeled for indoor use, as are pyrethroid sprays. Apply sprays to cracks and crevices, not to baseboards or other surfaces, and **do not** use them as space sprays. Use a plastic squeeze bottle or a bulb duster to apply dusts into cracks and crevices. Be certain to follow label directions and to wear a mask if you use a dust.

After treatment, additional sticky traps should tell you how your control is working. If several crack and crevice treatments are required, you should alternate using a pyrethroid spray and a dust. German cockroaches are notorious for quickly becoming resistant to pyrethroid sprays used repeatedly to control them.

Follow the initial control treatment by using bait stations to maintain control. They are available in various types and sizes and with different active ingredients. Bait stations have the advantage of decreasing both the amount of insecticide used and the likelihood of exposure to it. Place bait stations near cockroach harborages in corners and along edges. Be sure to use the number recommended in the package directions, usually two or three per 100 square feet. Never place bait stations on surfaces where an insecticide has been applied.

Insect growth regulators, or IGRs, synthetic versions of insect hormones, also are useful in German cockroach control programs. They render the cockroaches sterile so they are unable to reproduce, but don't actually kill them. Therefore, insect growth regulators should not be used alone, but once cockroach populations have been reduced, they can be a good addition to an integrated pest management program.

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