West Virginia University
Extension Service

6004

Carpenter Ants

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Carpenter ants are the largest house-infesting ants in the United States. They are pests primarily in the Northeast and the Pacific Northwest, where their economic importance as wood-destroyers may exceed that of termites. Contrary to what many people think, carpenter ants don't actually **eat** wood; they simply nest in it. Their nesting habits, though, can cause problems.

Identification

Carpenter ants can be red, black, or a combination of the two. Those found in West Virginia are usually black. The most common carpenter ant species in West Virginia is the large black carpenter ant, *Camponotus pennsylvanicus*. Carpenter ants have a one-segmented pedicel or "waist," a thorax that is smoothly convex in profile, and distinctly heart-shaped heads when one views them from above. Small, or minor, workers are 5/16-inch long; large, or major, workers can be up to 7/16-inch long. Winged females or potential queens are 3/4-inch long.

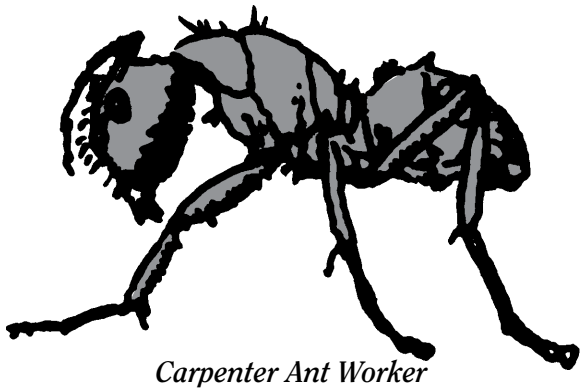
Biology and Habits

Carpenter ants are social insects, with colonies made up of several different forms or "castes." Mature colonies contain winged and wingless queens, winged males, two sizes of wingless workers, plus the immature stages (eggs, larvae, and pupae). Their primary food is the honeydew excreted by aphids. Solid food, including other insects and household scraps (sweets, meat, and pet food), makes up only a small part of their diet.

Carpenter ants swarm and mate in the spring. Swarming generally takes place after three to six years when a colony contains 3,000 or more ants. A new colony is started by a single queen. Colonies do not produce enough foraging workers to gain the attention of a homeowner until a colony is three or four years old. Consequently, they can damage a home to the point that structural repair is needed, before a homeowner even notices workers or swarmers.

Carpenter ant colonies inside homes may release swarms indoors. Carpenter ants in the house in winter or winged carpenter ants indoors at any time of year is a sign that they have a nest somewhere in the house. A few workers seen during the summer may simply be foragers from an outdoor nest.

A carpenter ant colony may contain a main nest and one or more "satellite nests." The main nest contains the queen, eggs, and small larvae. A satellite nest contains pupae, mature larvae, and workers. Ants in satellite nests are the ones that normally do structural damage to homes. Outdoor nests of carpenter ants are usually completely inactive from November through April. Indoor nests remain active at a reduced rate throughout most of the winter. Workers continue to forage for food and water, and the queen resumes egg-laying in January. The shorter pause in activity in indoor nests means that infestations in houses can grow faster and cause more damage than ants in outdoor nests.



Carpenter Ant Worker

Prevention Methods

Unless you change the conditions that attracted the ants, control measures will not have a permanent effect. Discourage entry of carpenter ants into a house by trimming tree branches away from the structure. Keep the roof and walls free of vines, tree branches, and other vegetation. Caulk spaces around pipe and utility line entrances.

Keep the depth of bark mulch to no more than 2 inches or replace it with a non-organic type, such as decorative stone chips. Examine firewood logs before purchasing and discard any infested ones. Store firewood off the ground, away from the house. Inspect and replace decaying landscape timbers.

Since carpenter ants often nest in moisture-softened wood, prevent dampness by ensuring that water drains away from the house and by providing adequate ventilation in crawl spaces and attics. If building a new home, avoid house designs with flat roofs, which are prone to drainage problems.

Control Strategies

Inspection to Locate Nests. Often more time and effort are needed to effectively control carpenter ants than other insect species. The first and most difficult step in control is locating the nest. Locating and destroying all nests within a structure is the key to successful control. Sometimes, the main nest outdoors must be found and destroyed to prevent ants from reinvading the house.

Finding a carpenter ant nest in a house can be challenging. Begin by thoroughly inspecting the property both indoors and out. Indoors, carpenter ant nests are often located in areas where the wood has gotten wet as a result of a water leak. The ants may, however, nest in perfectly dry, sound wood. Common nest sites are inside hollow-core or pocket doors, under insulation in a basement or attic, in wooden support columns, under wood siding, or in firewood logs.

Carpenter ant galleries in wood cannot be seen from the wood surface. Look for sawdustlike bits of wood resembling pencil shavings, which the ant workers push out of windowlike openings. Sometimes you can hear a faint rustling noise behind a wall as the workers move around. Try using an inverted water glass to amplify the sounds. If you think you've found a nest, spray a small amount of pyrethrin aerosol into the suspected nest location. Pyrethrins are effective at flushing insects out of hiding places.

Carpenter ant worker activity usually peaks between the hours of 8 p.m. and 4 a.m., when the temperature is from 71 degrees to 74 degrees F. Timing inspections during these hours may make the job easier. After feeding, workers will return to the nest. One recommended method is to bait them with honey and then follow them as they return to their nest.

If you do locate a nest (or nests), understand that carpenter ants cause structural damage relatively slowly. You have time to decide on the best control methods and whether you want to call in a professional or do your own control.

Pest Management Program. As with any pest management program, a combination of strategies works best for carpenter ant control. These strategies include making structural repairs and modifications to render your house less attractive to the ants, using "less toxic" chemicals, and follow-up monitoring. Inspection should continue until all nests are located. If you're still seeing ants a week or more after treatment, you probably have more than one nest.

Indoors, use a bulb-type duster to apply a desiccating dust, such as diatomaceous earth, boric acid, or silica gel, into wall voids. Remove switch plates and outlet plates to gain access to voids without drilling. Always use the proper protective clothing with pesticide dusts: neoprene gloves, goggles, and a dust mask.

Ant baits now on the market have not proven effective in controlling carpenter ants, but research is under way to develop effective ones.

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