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CARPENTER ANTS (IDENTIFICATION, BIOLOGY, AND CONTROL) - Pest Control - Environmental Health & Safety ([PRINT](#))



Above: Black Carpenter Ant: *Camponotus pennsylvanicus*



Carpenter ants are one of the most common indoor pests found in new England. When these large black or black and red ants invade buildings, they often construct their nests in moist wood. Unlike termites, carpenter ants do not eat wood, but they do damage wood as they excavate to make room for their growing colony. Carpenter ants devour scavenged insects and collect carbohydrate secretions (“honeydew”) produced by aphids feeding on outside vegetation. These ants also wander around the inside of the house looking for sweets. Carpenter ants arouse concern when worker ants or winged swarmers are discovered inside and the first thing people usually ask is “How do I get rid of them?”

Interesting Carpenter Ant Facts

- Carpenter ants tunnel through wood that has a high moisture content and spit out the wood shavings as waste into piles that look like sawdust.
- There are about 12 species of carpenter ants that are pests in North America. In Massachusetts, there are only three pest species of carpenter ants.
- Carpenter ant larvae are clumped together by J-shaped hairs and cling like Velcro to the roof of their galleries.

Identification

It is important to identify your ants. Collect a few specimens on scotch tape or in vials and send them (dead) in an envelope to your local university or extension office for identification. Worker carpenter ants from a single colony range in size from small (1/4 inch) up to large (1/2 inch). Carpenter ant queens are as large as 3/4 inch. Foraging ants are usually active on the floor as well as counters and shelves. During warmer days a number of winged ants may swarm inside and they are usually trapped near a window as they try to escape towards the sun. By the way, when you see winged ants, you can predict that the nest is probably over three years old and may have more than 3,000 workers. When termites swarm, they drop their wings immediately while carpenter ants retain their wings as they look for a new nest site.

There are three common species of carpenter ants that regularly invade homes in New England.

- The most common carpenter ant pest is *Camponotus pennsylvanicus*, the black carpenter ant. This species can be distinguished from other carpenter ant species by the dull black color of the head and body, and by a dense carpet of whitish or

yellowish hairs on the abdomen.

- The nearctic carpenter ant, *Camponotus nearcticus*, is much smaller and can be confused with the smaller workers of the black carpenter ant. This species nests in smaller cavities in the home including underneath siding, in hollow pipes and in any cavity that holds moisture.
- *Camponotus noveboracensis*, is similar in size to the black carpenter ant but is distinctly reddish or burgundy colored on the middle section of the body. This species is found in more heavily wooded or rural areas of New England.

Biology

The black carpenter ant in nature occurs primarily in forested areas, where it nests in the dead wood of standing trees, fallen logs, and in stumps. It can be found in many forest types, and is especially abundant in eastern and central Massachusetts, and at lower elevations in western Mass. In natural ecosystems, Carpenter ants play an important role in the ecologically vital process of decomposing wood back into soil. The workers are also significant predators of many small invertebrates (including forest pest species), and they maintain mutualistic relationships with aphids and coccids. They are thus highly beneficial organisms. Unfortunately, their wood-dwelling habits pre-adapt them for living in houses. In these situations only do the ants become significant pests and require control.

Carpenter ants excavate through the wood parallel to the grain. Their galleries are free of debris and appear to have “sandpaper-like” walls. The coarse shreds of wood, often called frass, are ejected out of small openings in the wood into sawdust-like piles. Often bits and pieces of dead carpenter ant fragments are mixed with the debris. If the galleries are close to the surface of the wood, and the colony size is large, the sound of the ant’s mandibles scraping along inside the wood can be faintly heard. And if the nest is disturbed, the major workers may bang their head and gaster against the sides of the galleries making a faint vibrating sound.

Carpenter ants forage predominately at night but during early spring and summer they will also forage during the day. During the first year, when colonies are small, almost all of the workers are small, minor workers. Both major workers and minor workers are out foraging when the colony size is large. Although carpenter ants have strong mandibles, they rarely come into contact with people, and when they do, instead of trying to bite, they try to escape. Carpenter ants cannot sting; instead they squirt formic acid at their enemies.

Control

NEST LOCATION

The single most important task is to locate the carpenter ant nest. Worker ants must leave the nest on a regular basis (they are most active at night during the summer) and search nearby vegetation for food. You can search the perimeter of the house along the foundation looking for ants on their return trip to the nest. Any trees with limbs or branches touching the building will allow ants to sky-bridge across and therefore all tree branches should be pruned away from the house. Follow a few workers patiently and you will find that all ants return to the same location. In a few cases there may be more than one nest in a building. Since carpenter ants nest in damp wood, usually with moisture content greater than 15 %, the number of nests may depend on the number of moisture problems. This moist wood is often found under dishwashers, along gutters that have plugged up with leaves, under the ledges of windows when the paint is peeling, under wood decks holding water against the house and next to plumbing leaks. Also nests are found along leaking chimney flashing, leaking skylights, and under bathtubs. Outside, nests occur in rotting portions of trees, dead stumps, and in wood landscaping ties. It is a good idea to remove all wood away from a building and to make sure that none of the wooden part of the house is in direct contact with the soil.

If you are having trouble locating the nest, you might try the following steps:

- 1) Start from nearby trees and other vegetation and follow ants back to the nest. Returning ants take a more direct route than ants searching for food and their abdomens are often expanded with honeydew.
- 2) Listen for chewing sounds. Carpenter ants make a scraping noise as they excavate wood for their galleries. Look for wood debris or sawdust and ant parts that are ejected from the nest.
- 3) Put out a sweet food source such as dilute honey or jam and follow ants from your bait back to their nest.

CONTROL MEASURES THAT YOU CAN DO YOURSELF

Once the nest has been located, the next step is to eliminate the ants inside. First you may want to try several measures yourself.

- 1) If you can, remove all damaged wood including the ant colony and replace with pressure treated wood. Discard the ant infested wood off site. By fixing the source of the moisture problem, you are preventing a re-infestation of ants in the future. Note however that carpenter ants may relocate their entire nest if disturbed greatly or if the moisture changes dramatically.
- 2) If you find wood in direct contact with the soil, grade the soil away from the house so that moisture does not collect against the wood.
- 3) Check gutters for accumulated leaves and debris that might be plugging the down spout. Check the down spout to make sure that water is directed away from the house at the base.

- 4) Once the exact location of the nest is known, most colonies can be eliminated with bait labeled for carpenter ant control. Be aware that many containerized baits in stores do not control carpenter ants. Baits are very effective when fresh and properly placed, and are generally preferable to contact insecticides in most situations. Permanent solutions to Carpenter ant infestations require correcting structural problems that allow moisture to dampen wood.
- 5) If only the general location of a nest is known, then the nest can still be eliminated by the use of baits. Look for baits containing toxicants that are slow acting and allow time for the bait to be spread throughout the colony and especially to the queen.

PROFESSIONAL PEST CONTROL SERVICES

If you prefer to use a pest control vendor, then the following guidelines should help you choose a reputable firm.

- 1) Obtain two or more estimates for control. The company you choose should have located the nest or probable nest site before treatment. See if both companies agree on the same nest location.
- 2) Is safety measures part of the pest control service? Are you provided with a material safety data sheet that indicates hazards and are you given a fact sheet on carpenter ants?
- 3) If the nest is successfully eliminated and the moisture problem corrected, there is little concern that you will need additional service such as a yearly or monthly service. Be wary of signing a contract that requires additional costs and service. Ask for a guarantee that the nest will be eliminated or find a different pest control firm.