

Monsters in the Yard: *Carpenter Ants*

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You may have seen one . . . an ant that's no ordinary ant. Larger and faster, these look like ants that maybe you can't squash with one stomp of your boot. These are the ants that if you don't kill them the first time, you think perhaps the colony will seek revenge. These bugs can truly become monsters in the yard. They are Carpenter Ants.

Existing as a colony, carpenter ants have four distinct castes or roles. Size varies among the castes. Queens of the colony can measure up to 1 inch. Winged males, only seen in mature colonies at certain times of the year, come in at just under an inch usually. The major worker, the most often observed of the species, tops out at three-eighths to one-half inch. The minor worker measures about one-quarter inch.

They can cause a lot of damage, particularly to wood, but not like you may think. Unlike termites, carpenter ants don't actually eat the wood; they make galleries. Their colony/gallery building enhances the decay of the wood, creating more openings for moisture, molds, fungus, and other insects to speed up the decay process. They become a pest to people when a colony invades a home, damaging the structural integrity of the wood in the home. Exterior wood such as decks, steps, and porches, and interior wood including subfloors, windows, doors and their frames are the most common targets. Weakened trees around the home also pose a safety concern to people.

Visually, carpenter ants differ from termites in a few ways. The ants have dark colored bodies, narrow waists, and bent antennae. They are also commonly seen in the open. Termites are light colored, have no visible waist constriction and straight antennae. Termites avoid light and rarely leave their colony. Also, carpenter ant galleries are different than termite galleries. Ant galleries are smooth with an almost sanded appearance. They are clean of trash and debris. Termite galleries often are rougher looking with sawdust scattered throughout. A mixture of sawdust and soil in the galleries is common with subterranean termite damage.

The diet of a carpenter ant consists of varied sources of proteins and sugars. They can forage as far as 100 yards in search of food. When foraging outdoors, they feed on living and dead insects as well as honeydew. Indoors, the ants focus on meats and fats as well as sweets (honey, syrup, jelly, and sugar). Most foraging is done starting in the early evening and can last well into the night.



Photo by Clemson University - USDA Cooperative
Extension Slide Series, Bugwood.org



White circle indicates carpenter ant in the frass (wood shavings left over from gallery making).

Nests are most often found in moist wood, including rotting stumps and trees, tree roots, wood lying on the ground, and in firewood piles. They have even been found in creosote-treated cross-ties, as the ants don't actually eat the wood. Inside buildings, nests have also been found in moist wood, often caused by plumbing leaks, cracked foundations, condensation, or poor air circulation. Moisture, whether in the wood or the nearby air, is key to hatching the colony's eggs in the nest. Although they prefer excavating moist wood, they will tunnel into sound wood when conditions are favorable.

When a colony reaches a large enough size, it may form a satellite colony to increase its forage range and worker capacity. The satellite nests do not require the moisture the parent colony does, as no eggs will be hatched here. These are often the nests found in homes in dry areas, where they are sometimes discovered in hollow-core doors and wall voids. Carpenter ants can also nest in foam insulation. The workers in these satellite nests move constantly between their nest and the parent colony.

How do you know if you have a carpenter ant infestation?

- Frass, or the trash left over from gallery making – this is a pile of wood shavings, dead ants, parts of insects, and maybe some soil. It is often found outside of nest openings, or in spider webs and window sills.
- Small windows or slit-like openings cut into infested wood – these can have piles of frass outside them.
- Sighting of major worker ants – they are mostly active at night, but can be seen during the day. A colony or nest may be within 100 yards of the sighting.
- Sometimes you can hear them in the wood. A rustling or clicking sound may be an indicator of gallery building or a nest. Tap against the wood. If you hear an increase in clicking, that's the alarm of the ants.
- A definite indicator of an active large infestation is the emergence of large winged ants in the spring. These swarms can become trapped if coming from an indoor nest. Look for them crawling out of vents or wall openings as well as trapped in spider webs.

An effective control program for carpenter ants will depend on where the colony and any satellite nests are located. Care must be taken when trying to eradicate a nest. If you don't get

them all at once, the nest could fragment and spread. Satellite nests could move to moist wood and form a new parent colony. Planning and appropriate treatment are key.

To find a colony or nest takes patience and some creativity. Following the worker ants to determine where they enter the nest is the most effective plan. Worker ants are most active during spring and summer months, usually between sunset and midnight. Ants are attracted to protein sources during the spring and early summer, and it is easier to follow them when they are carrying food. An excellent bait is tuna packed in water, not oil. Follow the ants with a red-lensed flashlight because ants can't see red light.

Once the colony or nest is found, it is possible for the homeowner to eliminate the ants. It is advised however to contact a licensed pest exterminator to handle the job. They have access to a wider selection of more effective pesticides to control this pest. The homeowner can still be very helpful in this process by locating the nest and monitoring the time and number of ants sighted.

If the homeowner decides to try to eliminate this pest themselves, here is an overview of different control methods:

- Baits – This method is generally not effective in eliminating colonies and nests of carpenter ants, as the many things they eat make it difficult to predict if they will go for the bait. Casting the bait between a satellite nest and a colony provides the best chance an ant will pick it up and carry it

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Carpenter ant deposits frass at nest opening.



Carpenter Ants

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on. If the colony or nest cannot be located, bait broadcasting may be the only method available.

- Canned insecticide sprays – Killing groups or foraging workers has no effect on the colony. More workers can be hatched or moved in from satellite nests. Some ‘barrier’ sprays may have some use, but these must be refreshed often.
- Nests in trees - Carpenter ants don’t harm or kill a tree outright. They prefer nesting in moist, already decaying wood. That’s not to say they won’t nest in the heartwood of a tree. The ants will compromise the structure of the tree until enough rots or is weakened by their excavations to fall over. Treat a nest in a tree using a dust insecticide that is labeled for use in landscape trees. Try to work the dust into the nest cavity if possible.
- Nest in walls or other voids – Dust and foaming insecticides are recommended for interior use. The effectiveness of dust in eliminating the ants depends on a couple of factors. Placement of the dust is key. The ants have to walk through it. They then ingest it while grooming. If improperly applied, the ants will detour around the affected area. Dusts can cake up in damp areas. This makes pickup by the ants difficult. Dust should be combined with other insecticides that are labeled for interior use, such as foam mentioned earlier, for effective control.
- Spot treatment of infested wood or foam panels – Care must be taken when targeting these areas as an incomplete treatment can lead to fragmenting the nest or colony and spreading the infestation. Direct spraying or injecting a liquid insecticide into the nest is the method of control recommended for these areas. For maximum effect, treat any wood nearby that is susceptible to attack as well.

Preventing a carpenter ant infestation is always preferable to dealing with one once you know you have it. These are some things a homeowner can do to reduce the chance of an infestation from occurring or reoccurring.

- New homes are susceptible to carpenter ants. Construction may have disturbed a colony, fragmenting it and forcing it to establish a new nest, close to or inside the home. Also, removal of existing trees may leave behind decaying wood



Look closely to spot a carpenter ant on this tree limb.

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that is ideal nesting material. Homeowners should check all stumps, roots, and other likely nesting areas within 100 yards of the home periodically for signs of an infestation.

- Eliminate high moisture conditions near wood. Replace moisture-damaged wood. Stored scrap wood should be kept dry and if possible elevated to allow air to circulate.

- Keep firewood away from the home and off the ground. Once this gets wet for any length of time, it becomes ideal nesting material.

- Trim any branches that touch the home or touch powerlines leading to the home. Carpenter ants will use this like a highway to travel to the home in search of food. They can drop as far as five feet to land on a roof.

- Remove stumps and roots of recently cut trees. Get rid of them before they attract a colony looking for a home. Patch or seal openings in living trees if possible. These openings, trimmed branches, or wounds, can be entrances for a colony.

- Seal as many openings from the exterior to the interior of the home as possible. Entry points for carpenter ants can include cracks in foundations, hose faucets on the outside of the home, air conditioner drains, as well as around the edges of windows and doors. Use a fine mesh screen to cover attic vents and crawl space openings.

If you see one of the big ants in your yard, it’s not necessarily time to panic. However, it is time to be aware and alert. That ant may have just been a forager from a colony or satellite nest. Remember that their foraging range is about 100 yards. Look around to see what you can do to make your yard or home less appealing to them if they decide to relocate. 🐜