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Carpenter ants, (*Camponotus* sp.)



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In Connecticut, three carpenter ant species often establish colonies in buildings. They are the black carpenter ant, *Camponotus pennsylvanicus*, (the most common building infesting ant), a smaller species of black carpenter ant, *Camponotus nearcticus* (which usually nests near window and door frames), and the red carpenter ant, *Camponotus ferrugineus* which has a reddish-brown thorax.

Description: The black carpenter ant (*C. pennsylvanicus*) is one of the largest and most common ants in New England. Workers range in size from ¼ to ½” in length, while the winged reproductive

adults range in size from ½ to ¾”. *Camponotus nearcticus* is much smaller and is not as common. Between these two in size, is the red carpenter ant.

Ant reproductives are known as “swarmers.” Citizens often confuse ant swarmers with termite swarmers. There are differences. Ant swarmers have constricted “wasp waists,” their wings are brown, and the front wings are bigger than the hind wings. Termite waists are not narrow, their wings are clear to whitish, and all the wings are the same size. Additionally, termites swarm only in the spring, while ants swarm from late spring through the summer into fall. Rarely are there exceptions.

Biology: A carpenter ant colony is populated by a queen and workers. The queen lays eggs and the workers tend to the eggs, larvae, and pupae, forage for food, excavate, clean, and protect the nest.

In establishing a colony, a fertilized young queen selects or excavates a small cavity (gallery), usually in moist or decayed wood, and lays 15 to 20 eggs. She guards the eggs until the workers

hatch. The queen's behavior then switches to egg laying, and the workers begin colony activities. As the population increases, workers often need to make more room and so they will excavate galleries into adjacent wood (and/or other materials such as insulation) especially if it is softened by water or wood rot. The coarse sawdust produced is deposited outside the nest as a "dump." Galleries are irregular in shape, usually following the grain and softer parts of the wood. Occasionally satellite/secondary colonies without the queen may establish, when environmental or physical conditions stress the primary nest. The workers in these colonies perform the same activities, as in the primary nest.

Established colonies are considered mature when the numbers of ants reach approx. 2,000 individuals. Colonies take three to six years to mature. At this time, adult reproductive winged male and female swarms, are reared. Swarming and mating occur from late spring to mid-summer. Male carpenter ants die shortly after they mate. Only one in a thousand of young fertilized queens will successfully establish a new colony. Carpenter ants are active during the warm weather months. During onset of winter, they convert their body fluids into a natural glycol to prevent tissue freeze damage and enter hibernation.

Indoor nests: Buildings located near outdoor nests, are more likely to become infested with carpenter ants. Carpenter ant nests can be found in various locations, such as cavities of un-split firewood, hollow-core doors, walls, ceilings, attics, and areas behind window frames and sills. In buildings, nests often associate with areas that have moisture issues. These locations often favor development of wood rot fungi. Such areas include attachment points of porches, chimneys, garages, and decks. Nests may also be found in and around bathrooms, more particular behind tile covered walls surrounding bathtubs, and flooring surrounding tubs and toilets.

Outdoor nests: In the natural environment, carpenter ants may be found nesting in decaying cavities of both live and dead trees, fence posts, and tree stumps. Queens usually establish nests in moist locations, but may use cavities that are structurally sound and dry. Workers can forage for food from 65 feet up to 100 yards from the nest. They feed primarily on honeydew excreted by aphids and scale insects. Other food sources may include insects (dead or live), other small invertebrates, and plant material.

Activity: Carpenter ants forage both inside and outside buildings. Nests can establish in buildings with foraging only outside making detection difficult. Foraging trails may be over foundation walls, along clothes lines, telephone or electrical lines, railings and/or tree branches that touch buildings. Foraging indoors is often seen in the kitchens, pantries, around sinks, dishwashers, and refrigerators. The ants will readily feed on many household foods. They prefer sugary foods such as jam, honey, sugar, and fruits (especially overripe fruit.), but will forage on bread crumbs, grease, and fat. Carpenter ants are generally nocturnal, and any observed daytime activity are scouts looking for sources of food.



Steve & Michele Fargan (Loloville)

Management. Control of established carpenter ant colonies, either in a building or adjacent to a building is variable depending on conditions and location. The location of a colony will determine in part, the steps taken to control the ants, even when a nest is not found.

Finding a nest: Conduct an inspection when carpenter ants are most active. This is generally late evening during spring and early summer.

- Look for sawdust “dump” piles deposited outside nests, especially in damp areas.
- Watch for ant trails and if feasible, follow these back to the nest.
- Nocturnal scratching noises in walls or voids may indicate a nest.
- Pest management professionals may flush out ants from suspected nest sites with small amounts of aerosol insecticide.

Control: The two methods for control are structural and chemical. Chemical control may be directed at either foraging ants or the nest.

Structural: Reduce potential nest sites by eliminating moisture problems. Replace and/or repair water damaged wood, leaking gutters, chimney flashing, porches, damaged roof shingles, and so on. Grade the ground to prevent any direct wood to soil contact in areas such as garages, decks, and porches. Provide adequate ventilation to enclosed areas such as crawl spaces, attics, basements (especially those with dirt floors and field stone foundations), and under porches and decks. Firewood or hollow-core doors may conceal nests, so these should be examined and if a colony is found, remove from a building.

Chemical - Baits: Baits are a combination of an attractive food mixed with a pesticide. Foraging workers carry this food back to their nest to feed other workers and the queen, eventually killing them. There are several baits registered for general ant control. These include Combat, Terro, Hot Shot, and Raid. Activity should lessen and stop after in approximately one week. Baiting ants is most effective during the spring.

Chemical - Sprays: Spraying a pesticide directly into a nest is the most effective way of managing a colony. Ready-to-spray formulations of several pyrethroid insecticides are available for use by citizens. However, some nests may be difficult to reach. If there is a hard to access nest, use the services of a licensed pest management professional. Additionally, pesticides may be put down around building foundations to repel the ant.

Before using any pesticide, please read and carefully follow the manufacturer’s instructions and precautions.