



Carpenter Ants and Their Control

Of the approximately 100 different species of ants found in Iowa, the most destructive are carpenter ants. Most carpenter ants are large and shiny black, although some species are dark brown or reddish and medium-sized. These ants can cause major structural damage when they tunnel in wood to construct their nests.

Identifying carpenter ants

Carpenter ants are some of the largest ants commonly found in Iowa. They vary in length from 1/4 inch (6 mm.) for the smallest worker to 3/4 inch (18 mm.) for a queen. All have constricted (wasplike) waists, elbowed antennae, and large abdomens, and some have wings (Figure 1).

Wingless worker carpenter ants are distinguished from other ant species by the smoothly arched shape of the top of the thorax (Figure 2).

Winged swarmer carpenter ants may be noticed in spring or late summer. These swarmers are often confused with termites because the two look similar. Figure 3 shows the differences in the waist, antennae, and wings of ants and termites.

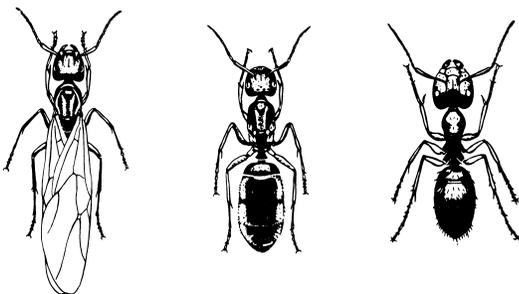


Figure 1. Carpenter ants may be winged or wingless. Size and shape of the ants also may vary.

Carpenter ant life cycle and habits

Ants have a complete life cycle of four stages, egg, larva, pupa, and adult. Also, carpenter ants are social insects that live in large colonies with overlapping generations and castes that perform different tasks. Eggs are laid by a reproductive female (queen) and hatch into white, legless, grublike larvae. The larvae live for about three weeks before transforming to pupae and then to adults. Workers are nonreproductive female adults and are the most numerous members of the colony. Workers build the nest, forage for food, and care for the queen and larvae. Mature colonies may have as many as 2,000 to 3,000 workers.

Carpenter ants are scavengers. Although they are most active between dusk and dawn, ants can be seen during the day. Inside a house, carpenter ants feed on all food scraps, especially syrups, honey, jelly, sugar, meat, grease, and fat. Outside, they feed on honeydew, plant exudates, live or dead insects, and animal carcasses. Food is carried back to the nest by workers, where it is shared with larvae, nonforaging workers, and the queen.



Figure 2. Carpenter ant workers have a smooth arch along the top of the middle body section.

Swarming. Ants with wings, called swarmers, may appear at times in the home. Swarmers are sexually developed males and females that leave a healthy, well-established colony on the slim chances of starting a new colony somewhere else. Most swarmers will die of starvation, dehydration, or be eaten by birds, dragonflies, or other predators.

Though almost all will fail, just enough succeed to spread the species and ensure its survival. All species of ants are capable of producing swarmers. Carpenter ant swarmers are recognized by their large size (body length of one-half inch or more).

Damage caused by carpenter ants

Carpenter ants do not eat wood, but instead construct their nests in wood by chewing an interconnecting series of tunnels and cavities. Wood is removed as coarse sawdust that is discarded outside the nest. The sawdust may include other debris such as dead ants and parts of insects, and other food. Carpenter ant nests are common inside stumps, logs, hollow trees, dead limbs, landscaping timbers, porch columns, windowsills, door and skylight frames, building framing, roofs, deck, and fence posts. Carpenter ants prefer naturally soft wood or wood that has been softened by moisture and decay (wood rot). The decay caused by excess moisture in the wood often is more damaging to the building structure than carpenter ants. Moisture and decay facilitate initial tunneling by the ants, but are not required for nesting. Nests may extend into dry, sound lumber and foam insulation boards. Carpenter ants may nest in existing cavities such as hollow doors or spaces around windows and doors.



Unlike the nests of termites and wood-boring beetles, ant galleries are free of soil, and powdery wood, and are mostly free of sawdust. The walls of carpenter ant nests are usually smooth to the point of appearing to have been sandpapered. Galleries do not follow the grain of the wood, unlike termite galleries.

Carpenter ants found indoors in the winter usually come from nests somewhere within the house. Ants found

indoors during spring or summer or on very warm days in winter could be invaders wandering in from outdoors, or they may be foragers from a nest in the wall or ceiling. While there is no easy way to determine the source, it does pay to check carefully before attempting any treatment.

Locating the source of carpenter ants is as important as it is difficult. It is especially challenging if you see only a few ants at one time. The best suggestion is to observe ants to see if you can detect a pattern of movement. In spring and summer, carpenter ants are more active at night, and observations after sunset, with a flashlight on the outside and inside the house, may indicate the source. The presence of sawdust is an important clue in locating carpenter ant nests.

Management of carpenter ants

Carpenter ant control can be a do-it-yourself project or a job for a professional pest control operator. Shop around and compare prices and services when selecting a pest control service.

Under ideal circumstances, the best carpenter ant control comes by locating and treating the nest (indoors or out). A small amount of insecticide sprayed or dusted directly into the nest will provide effective control. Effective treatment may require lifting molding strips or framing or drilling small holes through walls or siding to reach the nest. Nests discovered during remodeling can be sprayed to halt ant dispersal, or the ants can be collected in a vacuum and discarded. Drilling holes to inject insecticide into all wall voids may be of limited benefit, especially if the walls contain insulation. Replace damaged or decayed wood and thoroughly seal the structure to eliminate future moisture problems.

If a nest is not found, the practical alternative indoors is to treat room edges, cracks, and crevices in the areas where foraging workers are abundant and hope to reduce the population through the gradual elimination of the foragers. Outdoor perimeter treatments with residual insecticide spray or granule may also be useful when applied according to label directions to cracks, gaps, and potential entry points. Monthly spray treatments are not recommended for carpenter ant control.

Ready-to-use household insecticide products are readily available for indoor and outdoor use. Household sprays are usually identified as “ant and roach killer” or “home defense insecticide” and come in aerosol or pump dispensers. Dust insecticides containing boric acid, diatomaceous earth, and silica aerogel also can be used.

Do not use lawn and garden insecticide products indoors. Over-the-counter ant bait products that contain a sweet food may not eliminate carpenter ants. However, specially formulated carpenter ant baits available to professional pest managers have been very effective. Place bait indoors where activity has been observed or is suspected. Monitor bait and place more if it is consumed or remove it if there is no activity.

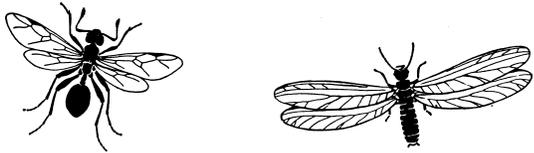


Figure 3. Winged carpenter ants have bent antennae, narrow waists, and small black wings. Winged termites have straight antennae and waists and four wings of equal size.

Carpenter ant prevention

- The following practices will help prevent carpenter ant infestations in homes.
- Correct moisture problems such as leaky roof or plumbing, poorly attached flashing, sagging rain gutters, and so forth.
- Ventilate crawl spaces to reduce wood decay.
- Replace rotted, water-damaged wood within the structure.
- Eliminate wood-to-ground contacts that lead to wood rot of lower siding boards and sill plates.
- Remove dead stumps and trees. Remove board piles and old firewood.
- Store firewood off the ground and away from the house.
- Trim trees and shrubs that touch the house.
- Patch and seal points of entry such as cracks and gaps in the foundation, loose-fitting windows, doors and screen, and shrunken, loose caulking.



Carpenter ants in trees

Carpenter ant nests are very common inside trees, especially older trees that are hollow or have a significant amount of dead limbs and branches. The nests are usually in rotted, decayed wood, although some nests may extend into sound heartwood in the center of the tree. Carpenter ants cannot eat wood. Instead, they discard sawdust outside the tree as they chew up the wood to make nest tunnels and chambers inside the tree.

Carpenter ants in trees are not directly harmful to the tree. Therefore, control is not essential for the tree's health, as the ants are only taking advantage of an existing situation of soft, weak wood in which to establish their colony. Stress, mechanical injury, environmental conditions, disease, or other insects are responsible for killing limbs or sections of the trees in which the ants can nest. Once injury has occurred, wood decay can set in if moisture is present; the wood decay allows the carpenter ants to colonize the tree. Carpenter ants use knots, cracks, holes, and old insect tunnels to access these areas.

Prepared by Donald R. Lewis, professor and extension entomologist for Iowa State University

References

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