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Carpenter Ants

Camponotus pennsylvanicus (DeG.), *C. noveboracensis* (Fitch), and *C. nearcticus* Emery

Carpenter ants are destructive pests of wood throughout New York State. In the forest, these ants are often considered beneficial because they prey on other insects and enhance the decay of stumps and other wood debris. Unfortunately, however, given favorable conditions, they also attack wood in service and the interiors of living trees.

Carpenter ants attack wherever excessive moisture accumulates in parts of dwellings, other buildings, power poles and fence posts. Especially vulnerable are porches, roofing and areas near kitchens and bathrooms where water from leakage or condensation may be trapped and absorbed by wood. Untreated poles and building foundation timbers in contact with the ground absorb large amounts of moisture from the soil and are thus susceptible to ant colonization.

The ants enter wood through cracks or normal cleavages, such as between siding and sheathing or between flooring and sub flooring. In trees they usually enter through trunk wounds or the stubs of broken branches and extend their galleries from the decayed portion into the sound wood. The insect attack adds to the harmful effects of wood-rotting fungi, both in reducing the physical strength of the tree and in lowering the quality of the wood.

Symptoms. The presence of otherwise unexplained coarse sawdust beside a house timber, pole or tree usually indicates that carpenter ants are at work. They chew the wood into small fragments, which they discard outside the tunnel, thus forming a "nest" to use as a shelter in which to breed and from which to forage. Their food is varied. They gather sweet secretions from other insects (aphids, etc.) and plants; prey on other living insects; scavenge dead insects; and gather household foods, such as fats, sugar and other sweets. Their need to travel outside their wood tunnels in search of food (foraging trails) often reveals the location and extent of the colony.

Damage. The tunnels or galleries are principally gnawed by the workers and gradually enlarged to accommodate a growing ant colony. These galleries usually follow the soft portions of the wood, parallel to the grain. The inner surfaces of the galleries are clean and appear as if they had been coarsely sanded.

Most damage occurs during the warm summer months when carpenter ants are most active. Their outdoor activity varies with the weather, but usually they are active between the first of May and the end of September. In heated buildings ant activity may continue later in the fall and begin earlier in the spring than is usual with outdoor colonies.

Description. Carpenter ants vary in length from ¼ inch to more than ½ inch. The most common variety is black, although some of the varieties of lesser importance are partly red. In the early life of the colony, the ants produce wingless workers. After three or more years some of the ants, born with wings are reproductive males and females, swarm and mate. The females attempt to start new colonies.

Since carpenter ants are often mistaken for termites, the following characteristics are provided to help distinguish between them.

Termites eat the wood in which they live. For this reason, unlike carpenter ants, termite workers are seldom seen outside their nest tunnels

Differences Between Carpenter Ants & Termites			
	Winged Forms	**Workers**	**Larvae or Young**
Carpenter ant	Black; keep wings during swarm	Black	White; no legs and carried by workers
Termite	Dark brown; lose wings in swarm	White	White; have legs and run when nest exposed

Life Cycle. Mating takes place in flight during the late spring and early summer when winged males and females leave an old colony. The male dies soon after mating and the female, called the queen, locates a nesting place in wood. She then excavates a small chamber in which she secludes herself and lays her first eggs.

When the eggs hatch, the queen nourishes the larvae until they are fully developed. The larvae enter a pupal period within a tan-colored cocoon before becoming adults. Development from egg to adult takes about 3 months, depending on temperature conditions, during the warmer part of the year.

First-year broods are small, sometimes consisting of only 10 to 20 ants. In following years, colonies often increase to 2,000 to 3,000 ants. It is from these large colonies that winged males and females swarm, mate and start new broods.

Prevention. In the Northeast, simple and inexpensive measures to keep wood dry will reduce carpenter ant damage in buildings. It is imperative that moisture be minimized by the following measures:

1. Use construction that permits wood to shed water quickly and to dry easily.
2. Avoid placing wood in contact with the ground.
3. Separate wood from concrete or masonry with a waterproofing compound, such as coal tar or asphalt.
4. Provide adequate ventilation in damp areas.
5. Provide vapor barriers when insulating outside walls.
6. Keep gutters and downspouts clear of debris.
7. Inspect regularly to detect and repair leaks in roofing and siding, flashing around chimneys, skylights and gables.
8. Also check these danger points: wood porches, steps, columns, corner supports, and wood near “sweaty” plumbing leading to laundry rooms, bathrooms and kitchens where moisture may condense.

To prevent carpenter ant attacks in living trees, prune carefully to induce rapid healing. Good growing conditions should be maintained.

Control. Carpenter ant colonies in houses and trees may be exterminated by a thorough application of insecticides in and around the nest. However, the full effectiveness of recommended insecticides is only temporary. **Unless the source of moisture is avoided or eliminated, the wood will eventually become, or may still be, susceptible to a new attack.**

Locating and treating the nesting site cannot be overemphasized. Since these ants prefer to nest in damp or moist wood, check any areas where suspected leaks may exist. The presence of coarse sawdust or crackling sounds as the ants enlarge their tunnels may indicate the nest's location. Observing the ants as they establish foraging trails can also be helpful in locating nesting sites. They simply must leave the nest to obtain their food!

The presence of a few carpenter ants in homes in the spring does not necessarily mean that the infestation is in the structure. Early in the spring the ants become active as their nests are warmed by sunlight. Their sources of nourishment being scarce at this time of year, ants from nearby outdoor colonies often enter houses in search of food, water and possibly, even a better place to live!

Caution: Insecticides are poisonous. Follow the manufacturer's directions for mixing, and practice precautions in the use of the various materials available in your locality. Keep insecticides away from children and pets.

The information in this fact sheet was taken from a Forest Tree Insects and Diseases Leaflet prepared by Dr. John B. Simeone, Emeritus Professor, in cooperation with Dr. Lawrence P. Abrahamson, Faculty of Environmental and Forest Biology, State University of New York College of Environmental Science and Forestry and Carolyn Klass, Department of Entomology, New York State College of Agricultural and Life Sciences at Cornell University

Chemical Control. This information sheet emphasizes the importance of preventing excess moisture in wood as a necessity in both preventing infestation by, and controlling, carpenter ants. The cause of the moisture accumulation must be corrected and proper ventilation allowed. After these tasks have been performed, a period of several months may lapse before nesting tunnels presently in the wood, and the surrounding area become dry enough to be unsuitable for infestation by ants. It may also be necessary to remove and replace wood that is badly damaged by ants.

To control carpenter ants presently in the wood, or to keep the ants out of suitable nesting wood, insecticides labeled for carpenter ant control can be applied. The organic phosphates malathion, and the carbamates propoxur (Baygon), bendiocarb (Ficam), and carbaryl (Sevin), are labeled for such use[2.]

These insecticides will control the carpenter ants and provide protection against reinfestation if carefully injected in the nest area or in cracks, crevices and other openings where the ant nest is suspected to be and on surfaces over which ants are frequently seen walking to and from the nest.

[2]Mention of these products is for convenience; it does not constitute an endorsement.

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