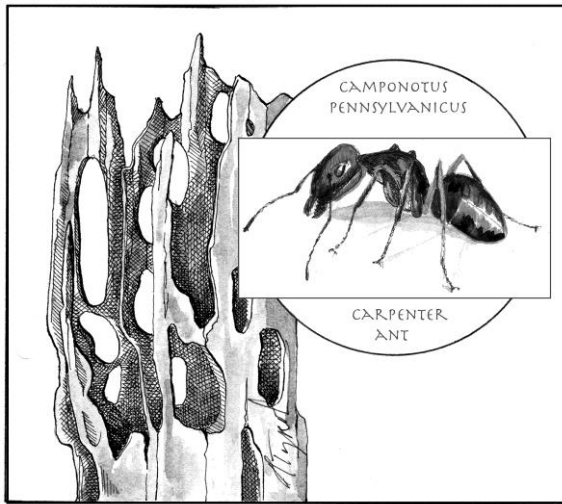


The Outside Story



Carpenter Ants By: Madeline Bodin

Mention carpenter ants, and Declan McCabe, chair of the biology department at St. Michael's College in Colchester, Vermont, thinks about the time he got a lungful of formic acid. He had taken a class into the field to survey insects. He saw a huge ant and sucked it up into his aspirator. Yes, a straw-like aspirator is an important tool for entomologists, who clearly aren't worried about getting too close to their work. He successfully captured the ant and then took a breath. His lungs burned. That big ant had used the classic ant defense of spraying formic acid.

Mention carpenter ants, and Rachel Maccini, of the University of New Hampshire (UNH) Cooperative Extension, thinks of the calls that pour into the extension's hotline each spring, each caller wondering if those ants suddenly crawling across the rug, the couch, and the kitchen counter are going to take the house down.

New England's eight or nine carpenter ant species play a variety of roles: they are indoor ants and outdoor ants, predator and prey, household pests and ecosystem architects. The one thing they aren't, is consumers of wood.

They do eat just about everything else, though, including plant juices, other insects and the "honeydew" that oozes out of aphids, which are themselves insects that suck up plant juices. In turn, carpenter ants are eaten by many creatures, including bears and woodpeckers. They are a preferred food of the crow-sized, red-topped pileated woodpecker.

Some of the most visible evidence of carpenter ants in the forest is the deep, rectangular holes in trees that pileated woodpeckers dig while searching for their favorite meal. Although these excavations are too shallow to be habitable, they are sometimes deepened by other animals to create new housing stock.

But carpenter ants do plenty of ecosystem remodeling on their own. Although they don't eat wood, they tunnel into its wet and rotten places to build galleries to rear their young, leaving piles of sawdust behind. These intricate tunnels can cause dead trees to topple and logs to fray. The ants perform a valuable recycling service by creating more surface area for organisms that actually digest wood, such as termites, fungi and bacteria.

The trouble comes when they build their nests in wood that is important to people, for example, water-damaged beams or flooring. "I prefer that my home not be recycled right now," said Alan Eaton, a professor at the UNH Cooperative

Extension. He said that three or four of the carpenter ant species are the most likely to nest in the wooden parts of your house.

According to the University of Vermont's Nicholas Gotelli, a co-author of "The Field Guide to the Ants of New England," more people are familiar the black carpenter ant (*Camponotus pennsylvanicus*). Black carpenter ant colonies can live for decades. They have 10,000 to 15,000 workers at any one time.

And just like some humans crowded into cities, black carpenter ant colonies like to raise their kids in the suburbs, in their case, satellite nests around the main nest. In winter, Gotelli said, they bulk up – acquiring up to 50 percent body fat – and seal themselves into the colony. Their natural antifreeze protects them down to temperatures of approximately 15 to 5 degrees. "They are well adapted to New England," Gotelli noted.

That impressive winter adaptation gives the trained volunteers at the UNH Cooperative Extension hotline an important clue when worried homeowners call in about a potential carpenter ant infestation, explained Maccini. If you see large ants inside your house in January or February, she said, you may have trouble. Winter activity typically means you have a nest inside your home.

If that's the case, the UNH Cooperative Extension recommends you hire a professional. Professional exterminators (or a pesticide application professional, as the extension calls them) have the tools to find the nest inside walls or beams, which is hard to do on your own.

However, prevention is much better than a pesticide cure. According to McCabe and Gotelli, removing wet and rotten wood in and around your home is an effective deterrent against carpenter ant infestations. "I don't want to spray any chemicals," said McCabe, which is big of him, since a carpenter ant sprayed a chemical at him. The goal is to stop carpenter ants from recycling our homes and keep them in the forest where they are part of the thriving web of life.

Madeline Bodin is a writer living in Andover, Vermont. The illustration for this column was drawn by Adelaide Tyrol. The Outside Story is assigned and edited by Northern Woodlands magazine, and sponsored by the Wellborn Ecology Fund of New Hampshire Charitable Foundation: wellborn@nhcf.org. A book compilation of Outside Story articles is available at <http://www.northernwoodlands.org>.

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