



Residential, Structural and Community Pests

NC STATE UNIVERSITY

Department of Entomology
Insect Notes

CARPENTER BEES

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Carpenter bees are large, black and yellow bees frequently seen in spring hovering around the eaves of a house or the underside of a deck or porch rail. They are most often mistaken for bumble bees, but differ in that they have a black shiny tail section. The carpenter bee is so-called because of its habit of excavating tunnels in wood with its strong jaws. The [round half-inch diameter entrance holes](#) are usually found on the underside of a board. A tell-tale trace of coarse sawdust is often found on the surface beneath the hole. Wooden decks, overhangs and other exposed wood on houses are prime targets. [Painted and treated woods](#) are less preferred, but they are by no means immune to attack.

Unpainted or stained cedar, cypress and redwood shingles and siding are also attacked despite their pest-resistant reputations. Carpenter bees, like their distant relatives, the carpenter ants, differ from termites in that they do not consume the wood as food. They simply excavate tunnels for nesting sites.



Carpenter bee on a flower (J.K. Barnes, U. of Ark).

BIOLOGY

Carpenter bees overwinter as adults, often inside old nest tunnels. They emerge in April and May with the males usually the first to appear. Males can be distinguished from females by a whitish spot on the front of the face. The males do not have stingers, but they are territorial and will harass other bees and people who venture near their protected areas. Females can sting, but rarely do so unless confined in your hand or are highly agitated. They feed on plant nectar, then begin constructing new tunnels in a few weeks. The [entrance holes start upward \(or inward\)](#) for about one-half inch or more, then turn horizontally and follow the wood grain. The galleries typically run six to seven inches, but may exceed one foot. Occasionally, several bees use the same entrance hole, but they have individual galleries branching off of the main tunnel. If the same entrance hole is used for several years, tunnels may extend several feet in the wood. Inside her gallery, the female bee gradually builds a large pollen ball which serves as food for her offspring. She deposits an egg near this pollen ball and then seals off this section of tunnel with a partition made of chewed wood. She constructs additional cells in this manner until the tunnel is completely filled, [usually with six to seven cells](#) (depending on length of the tunnel). These adult bees die in a matter of weeks. The eggs hatch in a few days and the offspring complete their development in about 5 to 7 weeks. Adults begin to emerge in later summer. Although the bees remain active, feeding on pollen the general area, they do not construct new tunnels, but may be seen cleaning out old tunnels which they will use as overwintering sites when the weather turns cold.



DAMAGE

Typically, carpenter bees do not cause serious structural damage to wood unless large numbers of bees are allowed to drill many tunnels over successive years. The bees often eliminate their wastes before entering the tunnel. Yellowish-brown staining from voided fecal matter may be visible on the wood beneath the hole as seen in the picture above. [Woodpeckers](#) may damage infested wood in search of bee larvae in the tunnels. In the case of thin wood, such as siding, this damage can be severe. Holes on exposed surfaces may lead to damage by wood-decaying fungi or attack by other insects, such as carpenter ants.



CONTROL

Preventing carpenter bee damage is difficult (or nearly impossible) for several reasons. Protective insecticide sprays applied to wood surfaces are effective for only a short period even when repeated every few weeks. Since the bees are not actually eating the wood and they are active over several weeks, they are rarely exposed to lethal doses of the pesticide. Second, since virtually any exposed wood on the house could be attacked, it is difficult and usually impractical and unsafe to try applying a pesticide to all possible sites where the bees might tunnel. Trying to spray bees that are seen hovering about is not a sensible (or particularly safe) use of pesticides either. Swatting hovering bees will often prove to be just as effective.

Although it is a time-consuming and seemingly endless task, treating the entrance holes with an insecticidal spray or dust can reduce future nesting activity. Products containing carbaryl (Sevin), cyfluthrin or resmethrin among other chemicals are suitable. A list of chemicals for use against carpenter bees can be found in the [North Carolina Agricultural Chemicals Manual](#). Avoid inhaling the insecticide or contaminating your clothing with

the spray. Always stand upwind from the surface you're treating. Treated tunnels should be sealed with a small ball of aluminum foil and caulked after 24-36 hours. Since active or abandoned tunnels may be used as overwintering sites or can be re-used next spring for nesting, it is important that they be sealed. The insecticide treatment is important because it kills both the adult bee as well as any offspring as they attempt to emerge later. Simply plugging untreated tunnels with wire mesh or similar material might trap bees inside, but more resourceful bees will simply chew another exit hole.

Pest information and control recommendations presented here were developed for North Carolina and may not be appropriate for other states or regions. Any recommendations for the use of chemicals are included solely as a convenience to the reader and do not imply that insecticides are necessarily the sole or most appropriate method of control. Any mention of brand names or listing of commercial products or services in the publication does not imply endorsements by North Carolina Cooperative Extension nor discrimination against similar products or services. All recommendations for pesticide use were legal at the time of publication, but the status of pesticide registrations and use patterns are subject to change by actions of state and federal regulatory agencies. Individuals who use chemicals are responsible for using these products according to the regulations in their state and to the guidelines on the product label. Before applying any chemical, always obtain current information about its use and read the product label carefully. For assistance, contact the [Cooperative Extension Center](#) in your county.

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