

## Carpenter Bees

Carpenter bees (family Xylocopidae) are large, generally black bees. They resemble bumble bees but are smoother and shinier, and do not have yellow markings on the abdomen. Females construct tunnels in solid wood in to build their nests. Carpenter bees are generally considered beneficial insects because they help pollinate various agricultural and garden plants. However, they can become a nuisance in homes and outbuildings if a large number of them nest in structural materials. Nesting activity is indicated by the presence of round ½ in. holes and fine piles of wood debris.

Unlike honey bees and bumble bees that live in large colonies, carpenter bees are solitary nesters – females will start new nests upon maturity, rather than remaining in their mother’s nest as workers. Females can sting, but rarely do so unless held.

Carpenter bees overwinter as adults, inside old nest tunnels. They emerge in April and May to mate and start new nests. Males are usually the first to appear; they can be distinguished from females by yellowish hair on the back of the thorax or covering the entire body. The males do not have stingers, but they are territorial and will harass other bees and people who enter their territories.

Females will begin construction of their nests after mating. The entrance hole to the nest starts inward (or upward) for a short distance and then follows the grain of the wood. Nest tunnels extend for 6-12 inches.

Carpenter bees may reuse the nests for several years, in which case the tunnels may extend for several feet. The females construct brood cells for their larvae within the tunnels. The nesting female will collect pollen and nectar and form a ball of this material, called bee bread. She will lay one egg on the ball and then seal off the brood cell with a “cement” of sawdust and saliva. She will continue in this fashion constructing additional brood cells in a row, typically 6 or 7 per nest.

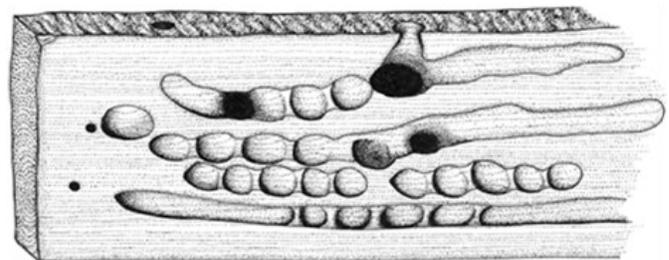
Carpenter bees are often found nesting in and around the eaves of houses, in fence posts or on the underside of a deck or porch rail. Painted or treated woods are less preferred, but are not immune to attack. Even cedar, redwood and cypress, which are considered to be pest resistant, are vulnerable. This is because the bees do not



Female carpenter bee on tidy tips. Photo by K.E. Garvey.

eat the wood, but simply excavate it. 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. Holes on exposed surfaces may lead to damage by wood-decaying fungi or to attack by other insects, such as carpenter ants.

To reduce the likelihood of damage, exposed wood surfaces should be well painted with oil-based paint or polyurethane. Commercial stains will not prevent damage. Aluminum, asphalt, vinyl siding and similar non-wood materials will not be damaged. If practical, remove and replace damaged wood with chemical pressure-treated wood to discourage nest construction. Fill unoccupied holes with steel wool and caulk to prevent their reuse. Once filled, paint or varnish the repaired surfaces. Protect rough areas, such as the ends of timbers, with wire screening or metal flashing.



Carpenter bee nest burrows. Drawing by Erin L. Kimsey.