



## PEST MANAGEMENT AND INSECT IDENTIFICATION SERIES

# Carpenter Bees



The living drill, as carpenter bees have been appropriately named by many homeowners, have the ability to bore into and structurally damage timbers and other painted or unpainted wooden materials. These holes are actually the nesting sites the bees use to raise their young.

The holes are drilled in the eaves of houses and barns, the handles of yard tools, lawn furniture, wooden gym sets, fences and even dead branches or stems of large reeds and plants. Infestations are first noted by the piles of fresh sawdust from the chewed wood from the tunnel. The holes are neatly chewed and 1/2 inch in diameter; each hole is identical. The tunnels initially go across the grain of the wood then turn at right angles to go with the grain and extend for 4 to 6 inches. Bees will sometimes use the same tunnels and will sometimes extend the tunnels. Some are up to 10 feet long.

This extensive and multiple tunneling in wood causes structural damage. Once the tunnel is made, the bees fill the cells with pollen and regurgitated nectar and form it into a ball about 2/3 the diameter of the tunnel. Females lay eggs on the pollen and then wall off the cell with chewed wood pulp; they repeat the process until five or six cells are completed. Each cell is about 1 inch long. The pollen in the cells is the food that the larva uses to complete its development in about 36 days.

The adult bees are sometimes confused with bumblebees, but they can be easily distinguished from one another. The carpenter bee has a fuzzy yellow thorax and a shiny black abdomen. Bumblebees have a band of yellow hairs on both the thorax

and abdomen. Bumblebees live in colonies; carpenter bees are solitary with only a single pair per tunnel. Bumblebees tend to be very aggressive when disturbed and will sting repeatedly. Carpenter bees are not aggressive and seldom sting unless caught in clothing, hair or the hands. The males, which have white faces, tend to guard the tunnels and their tendency to hover in your face and buzz about your head gives the impression of attack. This is a defensive posture the male uses to keep people away from the nesting site. Since the male has no stinger, these actions are merely for show. The female, however, does have a very painful sting.

The carpenter bees overwinter in old tunnels. Those that survive emerge in the spring and feed on nectar. Mating then begins and continues until nesting or drilling begins. There are seven species of carpenter bee in the United States. The eastern carpenter bee is the most destructive.

Although an aggravation and a nuisance, these bees are effective pollinators of many crops and flowers.

## Management

Painting the wood surfaces was initially thought to be an effective management tool, but tests have shown that, although it is not preferred, painted wood will be infested.

Where infestations exist, applying an appropriate insecticide with the addition of liquid soap into the gallery will stop the adults and control the emerging young when they develop. To allow the adult bees to make contact with the control material, do not seal the holes immediately after treating. A preventive treatment may be made using a borate formulation (Tim-bor or Bora-Care) on existing structures and using borate pressure-treated wood when building or replacing damaged wood. This treatment develops borate crystals in the wood tissue and damages the bee mandibles when they bore into the wood, causing them to look elsewhere. For more information on carpenter bees, check with your local county agent.



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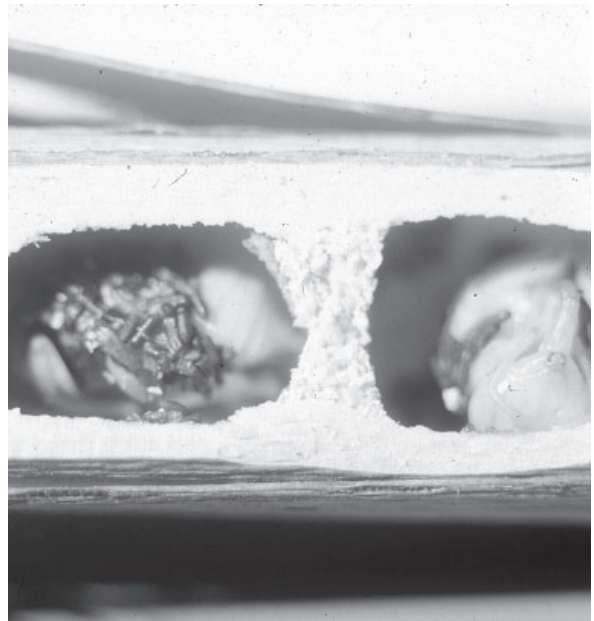
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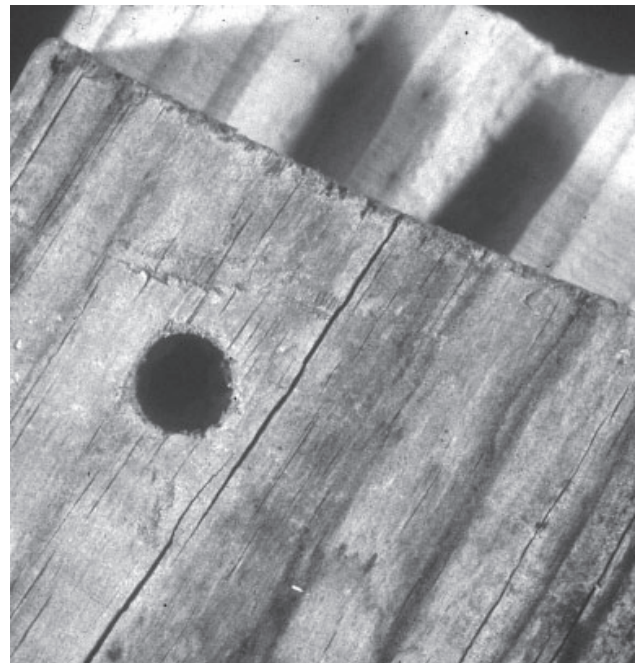
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Bee development in cells



Entrance hole to tunnel