

TECHNICAL BULLETIN: **CARPENTER BEES**



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NISUS CORPORATION TECHNICAL BULLETIN

CARPENTER BEES

ALWAYS READ, UNDERSTAND AND FOLLOW LABEL DIRECTIONS COMPLETELY BEFORE ANY APPLICATION.

Description of Two Genera: *Xylocopa* and *Ceratina* – large and small carpenter bees – are two groups that emerge in early spring and start their breeding cycle. *Xylocopa* (large carpenter bees) are generally black in color and hover around wood members, drilling holes into homes, wooden furniture, patios, gazebos and decks. Because of yellow markings on some species, they resemble and are often mistaken for bumble bees. Bumble bees tend to have hairy abdomens as compared to the black, shiny abdomen of a large carpenter bee. Another characteristic is that bumble bees are social and nest in the ground while carpenter bees are solitary.



Xylocopa, a large carpenter bee (left), compared to a bumble bee.

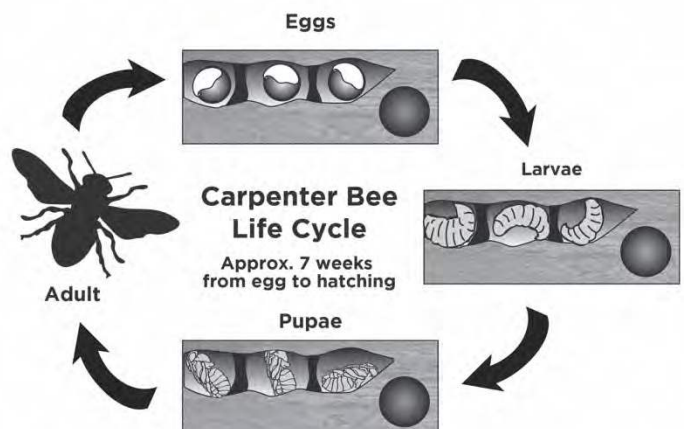
Ceratina (small carpenter bees) are distinctly different from large carpenter bees and bumble bees, and excavate tunnels in pithy stems of various bushes. They are not usually of economic importance.



A small carpenter bee (*Ceratina*)

Behavior: Large carpenter bees prefer dead trees and stumps, fallen logs and other larger natural wood pieces. However, in urban areas, decks, siding, and any type of bare wooden furniture such as play sets and other pre-fabricated construction are chosen. Most commonly carpenter bees select bare, unpainted and weathered softwoods; hard wood species tend to be less preferred.

Nests usually consist of an entrance hole that penetrates the wood $\frac{1}{2}$ to 1 inch across the grain of the wood and then turns at a 90-degree angle to follow the wood grain about 8 inches. Returning adult carpenter bees often build on existing tunnels and expand them further as desired. After tunneling is completed, the bee will create individual cells for individual rearing. Each cell is provisioned with a pollen ball food source into which she will lay an individual egg, afterwards sealing the cell. Only one generation exists per year, and as the eggs hatch in mid-summer, the larvae feed on the pollen provisions, mature and first emerge as adults in early fall.



New adult carpenter bees forage on nectar and fatten up for overwintering. Overwintering adults emerge a *second* time and mate in spring. After mating, fertilized females either re-infest old tunnels or excavate new ones for egg laying. At this time, they can bore out previously excavated

wood members even further. After provisioning nests, females will inhabit an older cell and wait for the fall emergence to occur again. Carpenter bees are territorial and will defend the same areas for breeding.

Management: Locate the wood in which the bees are active and apply an insecticidal foam or dust directly into nest openings. This is best achieved by using an aerosol foam such as iSTRIKE™ or a duster that will help push dust up into the tunnel and coat the sides. Standard



residual aerosols are good to use as well. Although carpenter bees can sting, it is unlikely, making daytime treatment feasible when it is easier to see where active holes are located. Do not plug the holes after application of materials. Adult bees should be allowed to pass freely through the nest entrance where they will

contact applied material and distribute it inside the tunnels. In addition, any potential newly matured bees emerging in fall will come in contact with material as well.



Remember – because of the life cycle, there is an opportunity to conduct *two* services for carpenter bee control. This is an excellent opportunity for an add-on service.

For more information, check out the Nisus video “iSTRIKE and Carpenter Bees” on YouTube.



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