

How to Create a Nursery for the Native Bee, *Ceratina*

Ever see sawdust in your garden and wonder, “Was a carpenter in my garden?” Well, yes, it was the native *Ceratina* or Small Carpenter Bee. Don't worry; at only $\frac{3}{8}$ of an inch in length, they're too small to drill holes in your deck. If there are dead, woody stems (like sumac or raspberries) or upright stems from last year's herbaceous plants (asters, goldenrod and purple coneflowers, as examples), these little bees will use them for nurseries!

How? The bee chews the pith from the center of the stems, hence the sawdust, tunneling into the stem. Then, she gathers pollen from nearby flowers, like *Coreopsis lanceolata*, makes it into a ball of gummy cake, inserts it at the bottom and lays an egg on it. Next, she scrapes a bit of pith from inside the stem to make a cross wall. She gathers more pollen, lays another egg and so on, up to the top of the stem.

When finished, she spends part of the day standing guard, with her butt end and stinger visible at the top, protecting her eggs from marauding ants and other predator insects. Before resting at night, she knocks down the cross walls to clean each room of any parasites. Eventually, a larva hatches from each egg and feed on the pollen cake. The baby bees grow to adulthood by late summer in the stems and continue eating through fall to survive winter.

Since they don't feed themselves, who takes care of them? Research by Dr. Sarah Lawson shows it's not just the Mama bee. She creates a helper, by underfeeding the first laid egg and larva to becomes the firstborn female bee. Born small, this “Cinderella daughter” squeezes past her siblings to serve as their nursemaid, sweeping their rooms, foraging for them and taking turns with Mama to guard them. Mama and her Cinderella daughter die before the adult bees emerge in spring, to mate and find stems for new nests.

How can you encourage these fascinating native bees to start a nursery in your garden?

1. If you have woody shrubs, break a few twigs in March to expose surfaces. Or leave raspberry canes, sturdy Coneflowers stems, etc., in fall and through winter.
2. In early March, trim them to varying heights of 6” to 24” from the ground.
3. Grow *Coreopsis lanceolata* nearby, for pollen just when the females are making nests.
4. Grow a succession of fall-blooming flowers from the Aster and Sunflower families, too, for pollen to fatten the young adults for winter.
5. Leave the stems for two years.