

Native Bees of the Sonoran Desert

By Tom McDonald

Honey bees, which are responsible for the pollination of over a third of our food crops, have recently been plagued with a serious disease referred to as Colony Collapse Disorder [CCD]. Starting in 2006, CCD has been responsible for the decline of 10% of bee hives. Scientist still do not completely understand what causes CCD, and the staggering loss of so many domestic colonies has encouraged farmers and gardeners alike to take a look at substituting native bees as the pollinator of choice in their croplands and landscapes.

Often called the 'forgotten pollinator', native bees number over 4,000 species with over 1,300 different species found in the Sonoran desert. We have the smallest bee in the world [Perdita minima] at less than .08th of an inch to one of the largest, the Carpenter bee [Xylocopa] up to 1.25 inches and weighing in at a whopping one gram. Most of the native bees in our area are described as solitary. Unlike honey bees, solitary bee females construct and provision their brood nests alone. A solitary bee can visit 20 times more plants in a day than a honey bee and one common species, the mason bee, can actually pollinate up to 2,000 flowers a day compared to 15 for an individual honey bee. The mason bee accomplishes this herculean task by crash landing on the bloom, scattering pollen to the wind and onto nearby flowers. Solitary bees are also more docile than colony forming bees since they have no hive to defend.

What can you do as a gardener to invite these beneficial insects to visit your garden? First educate yourself about the solitary bees living in your area. Attracting solitary bees basically comes down to providing food and shelter. You might find that you need to provide more diversity in the types of plants in your garden. A well manicured lawn has absolutely nothing to offer bees. Limit your use of broad spectrum pesticides. Those circles cut out of the leaves of your roses or bougainvilleas are not a pest but evidence that the Leaf Cutter bee is hard at work tending your garden, not an inducement to spray poison. Provide building materials and places for the bees to construct their brood tunnels.

The web site www.crownbees is a great source of supplies and information to support a solitary bee population. Want to construct a home for solitary bees? Use the internet... just type in 'build a bee hotel' and you will get plenty of options, everything from those requiring advanced engineering skills or as simple as the 'bee block' pictured here that my grandkids and I constructed in a few hours.

