



## Field Notes

### The Bees Who Own Me

By Nicole Reggia



I was in grade school when I first became interested in bees. A wild colony established itself in the branches of a tree in our backyard. I read with interest everything about bees and the tiny society living at our house. Now a bit older and with some space to house domestic hives, I recently decided to become a beekeeper. The reasons are both personal and environmental and stem from my love of nature and intrinsic motivation to improve the planet. Although working around 50,000 honeybees gave me some apprehension, I have to admit I'm absolutely smitten with these amazing little creatures.

Honeybees and humans have had a relationship for thousands of years. Both bees and humans originated in Africa. One of the oldest records of human and bee interactions is a rock painting found near Valencia, Spain. The painting, which dates back 8,000 years, shows a person taking honey from a nest on the side of a cliff.

Honeybees are social insects that live within a caste system. Hives are matriarchal which means that they are ruled by one female- the queen bee. Bees gather nectar from flowers and while doing so manage to pollinate every plant they touch. Food sources are communicated by scout bees to the rest of the hive. If the food source is close by, the dance is circular. If the source is further away, the bee dance is a figure-of-eight. During the bee dance, the speed and the number of "waggles" in the center of the figure-of-eight indicates how far away the food is. All these instructions are relative to the position of the sun. In addition, bees also make the architecture of the hive (the comb) which is arranged in beautiful hexagonal cells.

The products of honeybees (honey, wax, and bee pollen) are profitable and in high demand. We use these products in recipes, mead, candles and dietary supplements. In addition,

keeping bees is a relatively low maintenance activity which takes up very little room. People keep bees on rooftops in the city while others place the boxes in backyards. Beekeeping is now popular with many people considering housing hives on their properties or becoming first time beekeepers for honey production and to help out the bee population.

Honeybees are disappearing across the country and putting most fruits, nuts and vegetables at risk. The list of crops that simply won't grow without the honeybee is a long one. Avocados, cherries, onions, tomatoes, peppers, peas, pears, carrots, beans, cantaloupes, grapes, peaches, raspberries, blueberries, strawberries and all citrus, to mention only a few. Several field crops such as alfalfa, cotton and soybeans are also affected.

Beekeepers first sounded the alarm about disappearing bees in 2006 and since then, nearly one-third of all the bees in this country have vanished.

Scientists who study bee populations believe that CCD (Colony Collapse Disorder) is causing the bees to become sick. This disorder is thought to be a combination of climate, parasitic mites, new mutated viruses and exposure to pesticides which render bee immune systems too weak to survive. Bees are an environmental indicator and if they're healthy, the places they visit to gather pollen and nectar are also healthy.

Still not impressed? Well then, consider this. One in three bites of fruits and vegetables you eat is pollinated by honeybees and their pollination is critical to our food supply. In addition, the agricultural beekeeping industry is a \$16 billion dollar per year business. Not too bad for an insect.

Oh, and did I mention that they work for free?

