## The buzz of life: Notes from the farm

by Terra Brockman in the May 30, 2012 issue



PHOTOS COURTESY TERRA BROCKMAN

Your bees are in the mail," read the postcard on my sister's kitchen table.

It was not an April Fool's prank but a simple statement of fact. In a day or two the local post office would call and ask, with a slight sense of urgency, for someone to please come pick up the wood and wire box containing two pounds of honeybees.

It was appropriate that the bees were coming now, during the spring week of maximal buzz. Following weeks of unseasonably warm weather, the flowers were out in full force—as were their pollinators. The flowering crabapple in my yard was a pulsating mass of blossoms and bees, from tiny native flies, moths, orchard mason bees and leafcutter bees to heavy bumblebees, the most improbable of all flighted creatures. They launch themselves into the air like overweight cargo planes, managing to land on the lip of a petal and grab on with their six strong legs while their vibrations loosen tightly held pollen grains.

I was happy to see all the native pollinators, but sorry there were only one or two honeybees. Sorry, but not surprised, since it is difficult for a colony to remain strong enough to survive the winter after being assaulted all season by the insecticides drenching lawns and fields all around us. The very word tells you what these chemicals do—kill insects—and bees are insects. This means that most beekeepers, including my sister, can no longer overwinter their hives but need to order new package bees each spring. Someday, some say, a bee in farm country will be as rare a sight as a team of horses.

Thanks to that buzzing double shoebox we got from the post office, and a small wire cage hanging inside it, we hope that bees will be a ubiquitous sight on our farm this season. That small wire cage houses the key to all our hopes, the queen. Her box has a bee-size opening plugged with a piece of candy, which gradually dissolves under the labor of many tiny tongues. By the time the last lick liberates the queen, the whole colony will have been housed in the hive box under the locust tree on my sister Teresa's organic fruit and herb farm.

I was a teenage beekeeper, but these days it is Teresa who keeps bees to pollinate her 60-some varieties of organic fruits, from March plum blossoms to April peach, cherry, apricot and strawberry blossoms, to the later raspberry, blueberry, currant, apple and pear blossoms. Pollination by insects is called entomophily, or "insectloving," which is fitting as the insects are making it possible for the plants to have sex and, quite literally, bear fruit.

Without pollination, there would be no fruit, nor the hundreds of vegetables that are botanic fruits, coming from the flowers of tomatoes, squash, eggplants, peppers, beans, peas and many more. Without pollinators, the plants would grow but never produce edible fruit crops, and our world would quickly become a barren place.

I remember my early beekeeping days with hallucinatory clarity. I would go out to tend the hives in the mid to late morning, when most of the bees were out foraging. I remember the humid morning air, the rank smell of the weeds that I tramped down near the hive, the beads of sweat escaping from the band of my hat and slipping into my eyes. I especially remember the moment of inserting the hive tool under the hive cover.

There is something about prying open the cover of a hive that is as exciting as Indiana Jones entering an Egyptian tomb. Opening the hive opens the senses. You have to break the sticky propolis that the bees make from tree resins and saps and then use to seal the hive. That first scent, as you break the seal, is enlivening and tangy and creates a heightened awareness. Smelling the bees' glue, beeswax, musky brood, sweet and spicy honey, you inhale all the distilled essences of summer.

The buzz of hundreds of thousands of bees adds to the otherworldly feel by creating an intense concentration that is calming. You lift off the cover and set it gently next to the hive, every movement slow and deliberate, a sort of bee tai chi. You listen to the calm buzzing of bees at work, staying alert for the high-pitched warning whine of an angry bee about to launch a suicide attack. I always feel worse for the bee than for myself when I get a bee sting, knowing that the worker bee has disemboweled herself as she pulls away from my stung flesh.

When I kept bees in the early 1970s it was a simple matter of giving them enough hive space to raise brood and enough space to store honey. That, and the sun and rain and a wide array of blooming plants—from maple, elm and willow in April to goldenrod and aster in October—were all they needed. I never had to check for varroa mites, tracheal mites, nosema or foul brood. I never had to deal with divebombing planes spraying pesticides. The bees were healthy, and the ecosystem they supported and were supported by was relatively healthy.

All that has changed. When I moved back to central Illinois ten years ago and put a hive in the yard outside my house, it seemed fine through the summer and into the fall. I left the bees with plenty of honey to last the winter, and then on the first warm spring day I suited up to check on them. I put on my overalls, veil and gloves and lit the smoker. But as I approached the hive, I heard not a sound. I took out my hive tool and pried up the cover. There was no greeting, no buzzing, no breathing.

As I investigated further, lifting off the honey super and looking down into the brood chamber, what came to mind was the video footage of the scene after the agrichemical factory explosion in Bhopal, India. Thousands upon thousands of bee bodies were piled up between the frames—frames that should have contained eggs, larvae, brood in all stages of development, all gearing up for the first big gathering of pollen and nectar. Instead there was the silence of death. I felt terrible—and wondered what I had done wrong, thinking some negligence on my part had led to this tragedy. But when I asked Teresa about it, she said the same thing had happened to her hives—and to everyone else's around us.

Thirty years earlier, they too had done very little with their hives and never had a colony die. Researchers call bees "the canary in the coal mine"—if they cannot live,

soon we will not live.

A quote attributed to Albert Einstein has been popping up on the Internet: "If the bee disappeared off the surface of the globe, man would have only four years of life left. No more bees, no more pollination, no more plants, no more animals, no more people." It turns out that Einstein didn't say this, but the viral ubiquity of the sentiment says plenty.

A few weeks after the two pounds of bees and their queen were installed in their new home under the locust tree, Teresa and I choose a bright sunny day to check on them. With insecticides used all around us, and bees foraging up to five miles from the hive, we know we can't protect them fully and must hope for the best.

We don our white coveralls, elbow-length canvas gloves, and veils that fit over our straw hats. On a sunny morning, the bees are in a good mood, focused on their foraging and not on the curious humans. We crack open the hive, and that same intoxicating aroma from my early beekeeping days invades my brain. I feel my breathing and my heartbeat slow as my eyes and ears become more keen. A happy low hum rises up and a smile of relief floods my face. My eyes meet Teresa's over the hive and I read the same relief there.

We lift off the almost-empty honey supers and look down into the brood chamber. There we slowly pry up each frame, Teresa with her hive tool on one side of it and me with mine on the other. Then she grasps it, turns it on its side and examines the broad surface of the comb, looking for the queen and seeing what is in the brood cells.

Although we did not find the queen that day, we saw evidence of her work. Some frames were full of wax cells, each with a tiny white egg deposited in the bottom, lying there like a pearly grain of rice. Others frames were full of larva, some tiny, others fat and shiny, nearly bursting out of their cell. On other frames we saw the capped pupal stage. And we watched a new bee, soft and fuzzy, with crinkled-up antennae, emerge from a cell.