

Adventures in BEEKEEPING

IT'S NOT JUST THE HONEY THAT MAKES TENDING A HIVE SO REWARDING.

BY SUSAN M. BRACKNEY

THE TRUTH IS, I WOULDN'T BE A BEEKEEPER if it weren't for a strange man I'd never met who fell in love with a lady who was allergic to bees. The pair got married, and, not long after, the fellow sold his hives, honey extractor, smoker, veils, gloves, and back issues of *Bee Culture* magazine—all easily worth thousands of dollars—to a dear friend of mine for only 250 bucks. I thought it was all rather touching, not to mention quite the haul, as my friend turned right around and gifted the equipment to me.

He knew I'd always been curious about beekeeping, which, I reasoned, was surely a badass hobby, like riding motorcycles or welding. Timid and a bit mousy, I figured that beekeeping—with its mysterious veils and threats of stings—might help bolster my image. I've since learned that raising the insects is not so badass after all. My honeybees are, for the most part, gentle creatures, and beekeeping is about as dangerous as collecting state quarters.

Far more important, honeybees are in serious trouble: They're running out of habitat; being decimated by pesticides, parasitic mites, and disease; and losing their graying keepers, who pass away before passing on their apiculture knowledge.

That honeybees are neither bald-eagle majestic nor pygmy-rabbit cute hasn't helped their cause, either. But there is more to save in the environment than what lifts our spirits or touches our hearts, and it all needs our help. So in addition to my usual rinsing out recyclable bottles and planting only heirloom veggies in the garden, I ordered two pounds of bees and a queen from a mom-and-pop apiary in Alabama and have since done all I can to give *Apis mellifera* a leg up in my own backyard, in south central Indiana.

At first I was pragmatic. I leafed through the old *Bee Culture* magazines but quickly deemed the articles much too jargony.





BUZZ-WORTHY: Author Susan M. Brackney (left page) and San Francisco-based beekeeper Tom Chester (above) with their bees; a close-up of a busy hive (lower left).



head. While the wood bits cook down to glowing embers, I step into a pair of white coveralls and tape up the entryways in my sleeves and pant cuffs. Then I put on a pair of thick, rubber gloves and don a straw hat and mesh veil. Fresh punk placed on the now glowing embers and a pump of the attached bellows gets the Tin Man smoking; I use tiny puffs from this to calm the bees and direct their movements in the hive.

With a small pry bar, I take the hive apart box by box to inspect each of the comb-laden frames inside. It's a veritable city of bees here, and everyone has a job. If I'm careful, they won't pay me much attention when I stop my own work long enough to watch theirs. Some busy themselves tending to the young. Some are chewing up wax to create new comb. Some struggle with carting off the dead. I could watch from this vantage for hours, but their patience with me is limited. The tenor of their buzzing tells me when I'm starting to press my luck; what began as a major-chord hum shifts to a louder, minor-y rumble. I finish performing maintenance or collecting honey, reassemble the hive, and retreat, sweaty from the gear but absolutely exhilarated.

Still, it does hurt a little each time I harvest my bees' honey. Just over a teaspoon represents one honeybee's life's work. That's a lot of pressure! Always I thank them and tell them how proud I am of their accomplishments. And I'm careful never to take too much. In hot weather I find my bees forming a mat, or beard, on the front of the hive, beating their little wings furiously to create an air-condi-

Requeening? Reducer? Bah! Emerging badass that I was, I hurled myself into the task without instruction. But having the bees as my teachers was like being the only student in a school with 30,000 principals, each tapping a paddle in the palm of her hand. They "instructed" me with multiple stings, and, swollen and sore, I dragged myself to the library to regroup with a few beginning beekeeping books.

Things are much better between us now. Before I go to the hives that I keep in my fenced-in garden, I light some dried punk wood inside a handheld contraption vaguely reminiscent of the Tin Man's



UP IN SMOKE: Brackney soothes the bees with a hypnotizing puff of smoke to prevent any harmful stings while she works (above); Chicago goes green by putting beehives and landscaping on the roofs of its city buildings (right).

...tioning effect, but in the winter they depend on their honey stores. The queen bee nestles in the center of the hive, with the worker bees clustered around her in a ball. The bees along the outside of the ball eat honey to keep all the others warm. When the outlying bees need a break, they trade spots with bees closer to the center, and the cycle continues until spring. Many bees die during the process, but, with any luck, enough survive to keep the queen warm and well fed. And that's why I'm so cautious about how much honey I take; I'd never forgive myself if they ran out of it just so I could sweeten my tea.

SOMETIMES I WONDER if the bees have any idea what a big help they are to the rest of us. Bees visit flowers to gather not only nectar but also protein-packed pollen. They moisten and chew pollen grains, roll them into little balls, and expertly stash them in the baskets attached to their hind legs for safekeeping until they can deposit their "groceries" at the hive. Excess pollen often sticks to the honeybees' tiny hairs and is invariably transferred between male and female flowers and flower parts, ensuring the production of seeds and fruit.

This process translates to food for us. One of every three or four bites of food we eat is the result of the activity of pollinators. And it's estimated that \$15 billion in annual domestic agricultural production is directly dependent on hives, which pollinate about 90 different crops.

But the bee population is in swift decline. Back in beekeeping's heyday—around the end of World War II, when Uncle Sam was teaching GIs to keep bees—there were nearly 5 million honeybee colonies. But by the 1950s, the numbers began to plummet. Today it's estimated that there are from 2 million to 2.5 million colonies in the United States. Researchers have only recently begun to create baselines from which to measure the drop, but so far, according to Matthew Shepherd, pollinator program director for the Xerces Society for Invertebrate Conservation, the news is pretty bad no matter whom you ask: "In the last couple of years, 50 percent of the hives have died off. Some people are saying more like 70 or 80 percent. That's an incredible decline happening almost instantly."

Feral bee populations have dwindled, too. Dewey Caron, a professor of entomology and wildlife ecology at the University of Delaware, notes that along with the decline of kept hives, "we've also lost wild bees that were in trees, bees that were in old buildings, bees that were in the drier Southwest in rock caves." He adds, "Most everyone will say their numbers have declined 90 to 95 percent on the West Coast and in the Southwest, Midwest, and New England states." Only 50 years ago those wild bees were the large-and-in-charge agricultural pollinators of their day. Farmers generally took natural pollination as a given. "Back then a hive was kind of considered an insurance policy if your polli-

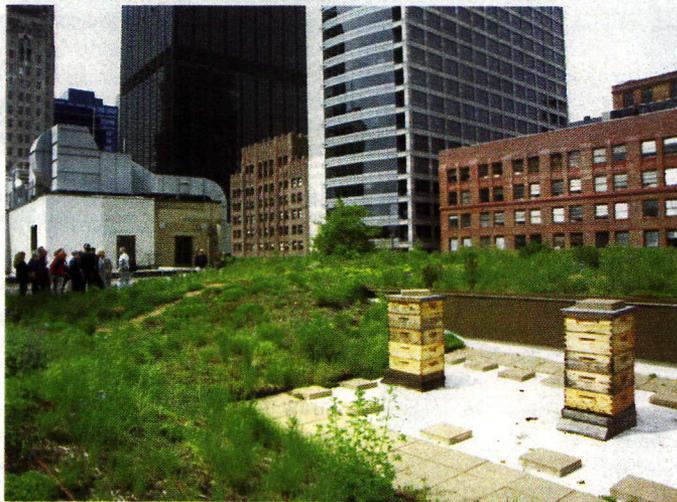
...nation failed," Shepherd explains. "Now the assumption is you get a honeybee hive because you have to."

Pesticide use is also a problem. Jerry Bromenshenk, a biologist and research professor at the University of Montana, has worked with bees for nearly 30 years and says he has never before seen so many reports of pesticide harm to managed bees, noting, "The problem is even worse for wild bees." In part, Caron adds, we have mosquitoes to thank: "In the name of public health, we've got public agencies contracting for the spraying of large areas. That didn't occur prior to West Nile virus."

Other possible reasons for the decline are parasitic mites, diseases like American foul brood, and Africanized bees, which have displaced their more docile European counterparts in the Southwest.

Lately, finding enough hives to pollinate crops like apples, blueberries, and almonds has become increasingly tricky. And we are already seeing the effects in our local produce sections. Last year 550,000 acres of almonds were grown in California's San Joaquin and Sacramento valleys, but there were barely enough honeybees to pollinate them, which drove the price of hives from \$50 to nearly twice that. Every acre of almonds requires the pollination help of at least two honeybee hives, which comes out to 1.1 million hives and huge cost increases for farmers and, ultimately, us.

"We're going to have less of that produce available to us; the quality of that produce is probably going to drop off, and more of it will have to be imported from overseas," Bromenshenk says. A hive shortage would "radically affect how efficient we are at producing our own fruits, nuts, and vegetables."



BACK IN BEEKEEPING'S HEYDAY—AROUND THE END OF WORLD WAR II, WHEN UNCLE SAM WAS TEACHING GIS TO KEEP BEES—THERE WERE NEARLY 5 MILLION HONEYBEE COLONIES.

LIKE OTHER BEEKEEPERS, I have little choice but to keep the neighborhood well stocked with fresh honey. I didn't exactly ask permission to keep my bees. And though so far it's legal in my small town, such cities as Dover, Delaware make it nearly impossible to keep bees. Others, including Minneapolis and New York City—which lumps honeybees in with the aardwolf, assorted venomous spiders, dingoes, and other prohibited wild animals in its municipal health code—outlaw it altogether (see “Guerilla Beekeepers,” right).

On the other hand, Chicago loves its bees. In 2000, Mayor Richard Daley had the roof of City Hall transformed into a lush garden, which served to absorb rainwater and provide habitat for migratory birds and butterflies. And in 2003 the rooftop became home to a couple of beehives as well. When I spoke with the mayor about those high-rise hives, he nearly gushed: “My theory is that nature can coexist in an urban environment. Many people thought it couldn't. Now you go to the roof garden and you'll see bees, grasshoppers, birds. It's amazing what you see on top of City Hall.” Currently, Chicago is home to more than 150 green roofs, and Daley hopes to see about 130 more on public and private buildings around the city in the coming years—complete with beehives. “We hope to have more of those on rooftop gardens as people take ownership of the idea,” he says.

In my town, I try to draw little attention to myself, only suiting up to work my bees during weekdays when I am sure most of my neighbors have gone to work. Despite my best intentions, though, sometimes I'm anything but discreet. For instance, twice this past spring the bees ran out of room in the hive and the colony needed to be split in half. In beekeeping parlance this is called swarming. The first time it happened, I heard what sounded like some insectile weed whacker in the sky. I remember looking up, horrified, to glimpse the errant honeybees in a cloud the size of a Ford F-150. After several minutes they formed a neat ball about 20 feet up on the limb of an old maple tree. With a basket, some rope, a rickety extension ladder, and the patience of Job, a friend and I tried to collect the swarm. After several tries we managed to brush some of the bees into the basket, but they never chose to stay there. I was convinced that the bees hated me and the home that I had tried to make for them, but when the new queen led her subjects to regroup in a low bush, I took it as a sign that they'd decided to give me another chance. I gently shook them off the branch into an empty box, placed them in a new hive, and vowed never to let them down again.

WANT TO KEEP BEES?

Before you buy your own apiculture gear and a few pounds of starter bees—and, of course, a queen—ask a local beekeeper to show you the ropes, or contact your state or county beekeeping association. For a comprehensive who's who and some beekeeping basics, visit beeculture.com.

IF YOU'D RATHER HELP FROM A DISTANCE. . .

- Offer bees plenty of nectar and pollen, with native perennial flower borders and restored meadows.
- Raise the height of your lawn mower to allow clover and other short flowers to bloom, creating more forage for bees.
- Leave around a few bare soil patches so feral bees can easily nest.
- Create habitat for solitary bees by drilling holes in mounted wood blocks.
- Avoid using pesticides. If you must use something, choose an all-natural variety with a short residue time and apply only at night when bees aren't active.
- Buy locally produced honey at your farmers' market or co-op. Doing so helps area beekeepers, and you may be helping yourself, too, because it's thought that unpasteurized honey containing pollen and nectar from your local flora can aid in mitigating some allergy symptoms.

GUERRILLA BEEKEEPERS

Beekeeping is illegal in New York City, but David Graves keeps 17 clandestine hives scattered on rooftops around the Upper West and Lower East Sides, Brooklyn, the Bronx, and Harlem. He amassed his empire by asking generous friends and strangers with flat roofs to share. All of Graves's beehives are under lock and key, and, he insists, “I've never gotten to the point where my bees were causing a problem. If someone didn't like them on a particular roof, I would just give them a jar of honey and remove the hive. And I wouldn't bring attention to myself.” Each hive can produce from 80 pounds to 140 pounds of honey, which Graves sells via the city's farmers' markets at Union Square and at 77th and Columbus. He says so far, so good: “Most everyone that I've met here in New York City is all for my keeping bees. I've never had anybody say, ‘You shouldn't do that.’”

In San Francisco, which allows beekeeping, Tom Chester has had as many as 18 hives scattered throughout the city; he has four hives in his backyard now. Even though he's well within his rights, he tries to keep a low profile: “I don't work my bees on the weekend,” he says.

I'm lucky to have two seasoned beekeepers to consult during such crises: a retired dermatologist turned gentleman farmer whom I've known since I was a girl and a white-haired octogenarian hypnotist I met recently. In contrast to the efforts I make in suiting up, years of apiculture experience have made both of them so unflappable that they could safely work their own hives in the nude if they wished. Serving as my *Apis mellifera* mystics, these old-fashioned beekeepers wouldn't necessarily label themselves “environmental activists,” but they do believe, as I do, in good stewardship of the honeybee—and, by extension, the earth.

From the Rhode Island Beekeepers to central California's Delta Bee Club, there are loose-knit groups of people a lot like us across the country. Sure, we may have our own reasons for keeping bees, and varying degrees of environmental consciousness as well, but it's a start. I like to think that younger beekeepers like me will help generate a real buzz for honeybees—celebrating them for their role in our food production more than for their ability to make honey.

With that in mind, I'm in a hurry to keep learning all I can. And who knows, by, say, 2045 maybe I'll be one of those old-fashioned beekeepers telling some young whippersnapper under my tutelage that her bees have gotten “uppity” and it might well be time to replace the queen. Meanwhile, despite all the obstacles and, yes, occasional stings, I want to see the honey jar as half full rather than half empty—and I'll do everything I can to make it so. ■