



Up on the Roof: Keeping Bees on the Chicago Skyline

by SUSAN SARVER

I was already worried about the bees. But when I learned that hives of honey bees were popping up on rooftops all over Chicago, a city known for skyscrapers, fierce winds, and polar winters, it was enough to keep me awake at night. Surely bees faced enough challenges without placing them high in the sky, surrounded by glass and steel, cars and concrete, noise and asphalt. I also wondered how difficult it was for beekeepers to navigate urban obstacles with pounds of supplies to reach such lofty locations. I brought my concerns and questions to five Chicago beekeepers, who generously shared a few of their experiences up on the roof.

KNOWLEDGE AND PATIENCE REQUIRED

Bill Whitney, owner of City Bee Savers, manages hives and responds to requests to rescue swarms and remove wasps, hornets, and bees from problematic locations. Among the many hives he oversees, twelve are located on the tops of five different buildings in downtown Chicago. I was delighted to tag along one afternoon last fall as Whitney made his rooftop rounds to treat for *Varroa destructor*.

Perhaps one of the last obstacles a beekeeper expects to encounter on the way to the hive is a throng of strik-

ing teachers. While the walkout was peaceful, it brought the typical jam of pre-weekend traffic in the Chicago Loop to a complete halt. "I try to avoid Fridays," said Whitney as he calmly inched his truck forward. I learned my first lesson in big city rooftop beekeeping: Patience is mandatory.

While we waited in traffic I asked Whitney, a former advertising illustrator with an impressive portfolio, how he got started in beekeeping. He laughed and said, "It's just a hobby gone awry." He started keeping bees 27 years ago. "Like most things I get involved in, it seemed like a really cool idea," he said. "I have a big garden. I'm into composting. ... But I had no clue about what I was getting involved in. I just thought: You stick a hive out there and they go to town." Whitney quickly realized he had a lot to learn. "It's a knowledge-based process."

Whitney finds time to share his knowledge teaching classes and mentoring the less experienced in the beekeeping community. Not long ago, he came to the aid of a group of medical students keeping hives on the rooftop of a building on the University of Chicago campus. They had run into a mite problem, Whitney said. As he told this story, it naturally evolved

into a lecture on the life cycle of a varroa mite, knowledge that he uses to his advantage when treating them.

Currently, Whitney's most elevated hives are atop a fifty-story corporate building. Parking, always a challenge in downtown Chicago, was compounded by the need to haul equipment. But Whitney's friendly, easygoing demeanor has given him an in with the staff who hold the reins to free parking at the loading dock as well as the codes, fobs, and keys to navigate a series of elevators, doors and corridors. As he strolled through the lobby, his beekeeper garb and gear set him apart from the building's well-suited, high-heeled occupants, but in a good way. His presence is a reminder of the bees up above, a reassuring thought that just might help workers get through another day at the office.

The view from 599 feet above West Madison Street is spectacular, but the building provides only one wall capable of blocking the wind, which is intense even on a pleasant fall day. Whitney had positioned the four hives close to the building, weighted them down with cinder blocks and secured them with straps. With the exception of a weed that had sprouted from a port holding a light fixture, I



The hives at 540 W. Madison in Chicago are weighted down and secured to withstand the wild and relentless wind.

saw no sign of plant life anywhere on the roof. Whitney pointed to some trees and gardens down below, off the north side of the building. There's plenty for them to forage down there. "There are a lot of things we don't see that the bees will find," he said, adding, "One blossoming tree is equal to an acre of flowers."

Last year management staff put their honey — 30-35 pounds per hive — to good use. Some went into jars to serve as gifts for clients. Another batch sparked a new partnership with a local ice cream maker to produce honey ice cream. Before we left the building, the manager dished up a generous sample for us to try. I can confirm: It is delicious.

While the blossoms visible from the roof were reassuring, I asked Whitney about his plans for winter. "Preparation for winter begins at the end of March," he said. Fall is too late. It's critical to keep your mite level manageable and monitor how the bees are

balancing the hive. "Are they able to keep it warm? Are they able to keep it dry? How well are they keeping their food stores stocked?" The previous night, Whitney had taught a class on the subject and was a bit concerned he had been too harsh. "You need to pay attention all the time. Any number of things can happen that you don't even think about," he said. In the process of making routine checks, he once found half a dozen hives with the covers blown off and snow on the bees. Fortunately, they were still alive.

Whitney cautions against opening the hive when temps fall below 50 degrees. But he has gone against his own advice in an emergency. He has a system but it's tricky. "I take a space heater that uses one of those small propane tanks and then a dryer vent that I've shaped into a cone that fits the entry and then I will turn it on and warm the hive up bit, pop the lid, do the couple of things I need to do." He has managed to warm the hive for

about 20 seconds without any negative impact on the bees.

Whitney knows on a personal level that mistakes and miscalculations can be devastating. Last year, all the bees on the rooftop of the Madison building died before winter. "It was my fault," he said. "I took the honey off mid-August. They just never built their stores up, and I didn't feed them adequately." By contrast, some of his other bees got a winter vacation. For the past two winters, Whitney has loaded a number of hives onto a truck, driven them to California, and placed them in an almond grove. Moving bees through corporate buildings is no easy task. Whitney temporarily screens the hives to get them through lobbies and corridors and keeps a bee vacuum handy to capture any escapees. He uses special pallets in his truck to allow stacking the hives. Since the bees can come and go freely, he travels at night to minimize loss. Whitney gets a break from the cold too as he flies out periodically to check on them, but a broker looks after the bees day to day from mid-January through March.

Whitney has occasionally found other reasons to relocate his sky-high hives. Facility renovation temporarily shut down one building's rooftop bee project. Bees atop another fifty-story building adjacent to the Chicago River simply weren't doing well, so he moved them to a more protected area at ground level.

The final building we visited appeared to be a city bee's dream flat. On the twenty-ninth floor, two hives



Bill Whitney clears the last hurdle to reach hives on the 29th floor of a building on Chicago's Adams Street.



Clients and occupants of 540 W. Madison Street are proud of their rooftop bees and their honey.

of bees share a small, private field, shielded from wind and left wildly undisturbed by human hands. Reaching this little haven was something of an adventure. A vintage freight elevator allowed Whitney to haul equipment without traipsing through a lobby filled with people, but we had to wait for an attendant to operate it. Once we made the slow climb to the twenty-ninth floor, we hopped through a window to reach the hives. For rooftop beekeepers, flexibility is a plus.

AERIAL ENCOUNTERS

I asked Chicago beekeepers Sarah Long and Dale Cooney about some of the challenges they've faced in keeping rooftop hives. Both work with the Boston-based Best Bees Company, which offers hive installation and management services for residences and business in large urban areas around the country. For greater efficiency, they typically team up to tend the 12 Chicago rooftop hives they currently manage. Long began beekeeping in 2009 through a volunteer program at Garfield Park Conservatory. Cooney showed up at a mead-tasting event, met some beekeepers and decided the work sounded interesting, and went on to train in the Conservatory's program as well. Though Long holds a Master's degree in biology, she said, so much of beekeeping is learned from doing. "I feel like some of the beekeepers in Chicago are some of the most skilled amateur biologists I've met."

Cooney believes the interest in rooftop hives is growing. In addition to commercial buildings, he said requests come from schools, nursing homes, real estate firms, and condominiums. He anticipated managing 21 roof hives in the coming season.

Long said they try to be very strategic about installing the hives but have managed to find suitable locations in every building requesting services. "We'll have a wind break and make sure they have good exposure to southern and eastern light, to get that first light, especially in the winter to warm the hives." Protection from the wind is important, but we want to be sure there's enough air to prevent hives from becoming too damp, she said. They also keep an eye on the weather, which can change quickly, especially near the Lake. A lot of the rooftops become slippery when wet.

Most of their hives are located in buildings in the 19-50-story range.

"We have encountered some interesting microclimates downtown," said Long. "We've seen one hive really thrive from the warmth radiating off a building behind it in a kind of layered structure. Another location near a restaurant is surrounded by cooking smells that bring warmth to the hives and help take the edge off the cold." Cooney said they've noticed a difference in the presence of pollen depending on the hives' location on either the north or south side of the Chicago River.

Part of their role is making these kinds of observations. A nonprofit arm of Best Bees focuses on research to better understand and improve the health of bees. It's fascinating how they are so adaptable, said Long. Some of the company's research showed that urban bees might access as many as 265 different plants. City environments might well favor this kind of diversity and there is a tendency to avoid using as many pesticides, said Long.

Despite having to leave the roof to forage and navigate more wind, Long said, "We see them having really normal behaviors." The bees go in and out and find little garden surfaces and water. One condition that could pose special challenges is having an unmated queen. The relative isolation of a rooftop might make it difficult for her to find mates. They've had some cases in which queens might have gotten lost or not mated.

Long and Cooney have encountered a couple of unanticipated rooftop challenges, including an angry gull that appeared out of nowhere



Two hives on Adams Street share a small rooftop field.

and proceeded to dive-bomb them to protect a fledgling. Cooney had a similar experience while tending a hive solo. Just as he removed the lid, it became a scene out of a Hitchcock movie as an entire flock of gulls attacked him from all sides.

Construction projects can add to a rooftop beekeeper's workload. Cooney recalls one project that required construction materials to be delivered to the roof via helicopter. Concerned about the downdraft from rotating chopper blades harming the bees, they temporarily closed the hives. However, the delivery was ultimately scrapped due to bad weather,



Whitney prepares to open a hive to treat for mites.



Rooftops appeal to nesting birds. A protective gull goes after beekeeper Dale Cooney, who ventured a little too close to a fledgling.
Photo by Sarah Long

requiring Long and Cooney to return and reopen the hives later that day. Two subsequent attempts had to be cancelled due to the required secondary landing site being blocked, first by a protest and then by the running of the Chicago Marathon.

Patience and flexibility came in handy once again when Cooney discovered he was locked out on a roof after building staff secured the door for the Fourth of July holiday. Being

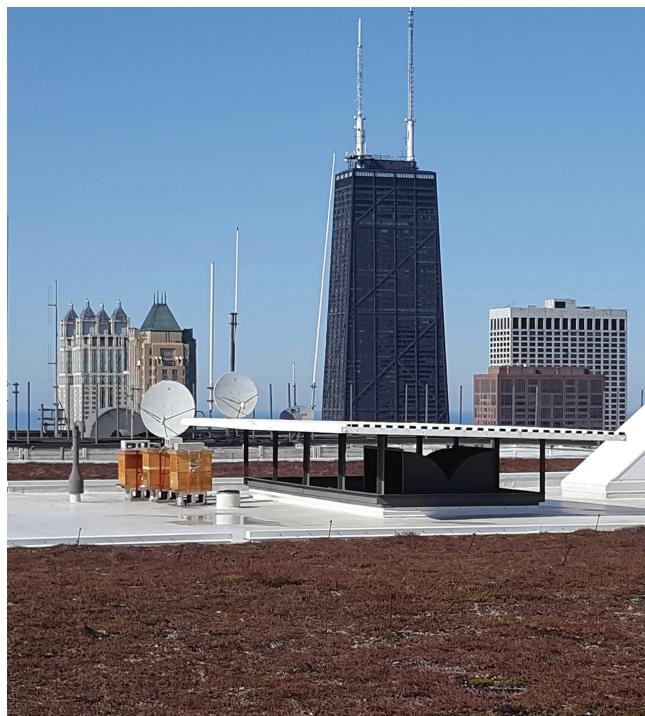
so high above the city, he couldn't get cell phone service. It was 85 degrees and it appeared he'd spend the holiday on a roof in the company of honey bees, but he tried to look on the bright side: He'd have a great view of the fireworks at Navy Pier. Then he attempted to text Long. To his surprise, the text went through, as did his subsequent rescue.

Despite the unexpected challenges of keeping bees on high, Cooney said,

"The one good thing about being up there is that no one is going to steal your hives!" He had a point.

Hives situated on the rooftops of lower buildings in the city might be vulnerable to theft or vandalism. I talked to Allen Lawrance, Associate Curator of Entomology at the Peggy Notebaert Nature Museum, and asked him about the hives they have kept on the museum's roof for about nine years. They currently maintain about a dozen hives, mostly for pollinating. It's more of a hobby activity, but one that requires a nimble beekeeper. "It can really be a challenge to just get stuff up on the roof," said Lawrance. Though the difficult-to-access second story roof sounds well out of sight and beyond reach of the public, that proved not to be the case. "We once had somebody come onto our rooftop and just knock over a bunch of hives," he said. Since increasing the level of monitoring in the area and keeping a few empty hives as decoys, there have been no further incidents.

The relatively low level of the roof does provide some protection from Chicago's infamous winds. The higher up you go the more wind is a factor, said Lawrance. They also avoid stacking their hives too high, and use mediums rather than deep brood boxes as they are lighter. But the smaller dimensions might leave the bees more vulnerable to cold. Before winter, they remove all empty frames



These rooftop hives enjoy a spectacular city view that includes Chicago's iconic John Hancock Center. Photo by Dale Cooney

to reduce the area needing heat and dress the hives in insulated plastic cozies secured with bungee cords. The Polar Vortex of January 2019 saw temperatures drop to -23 F, putting every hive in the area to the test. "It wasn't good," said Lawrance. Only a couple of hives survived.

A volunteer beekeeper maintains the hives but Lawrance, who mostly manages tropical residents of the butterfly haven, happily assists with the bees. The museum's location in Lincoln Park, on the city's north side, offers expansive green space and a wide variety of plant life. While there's no push for honey production, the harvest is sold in the gift shop and helps pay for beekeeping supplies. Despite the bounty of natural resources, they regularly deal with common challenges. The building's cracks, crevices, and gaps in the rooftop flashing make it attractive to yellow jackets. "They like to invade our hives and nectar-up, especially in the fall," Lawrance said. He bemoans the lack of shade on the roof, but reflective tops on the hives help, and the bees have access to an abundance of water provided by a nearby pond and fountain.

What Lawrance worries about most are mites. Bees will fly up to a mile or two if needed and the mites go with them. "If you want to be a good neighbor, you want to make sure you have the mites under control," said Lawrance.

HIVES AND HUMANS SOMETIMES DON'T MIX

I had the privilege of talking to veteran beekeeper John Hansen, a past recipient of two Illinois honors: Beekeeper of the Year (2008) and a Pioneer Award. Hansen, managing partner of The Hive, a beekeeping supply store, has kept bees since 1975. Though his partners at The Hive do install and maintain hives on roofs, Hansen, who turns 90 this year, maintains hives only at ground level these days and he has an assistant. He readily admitted to me that his one experience installing a hive on a Chicago rooftop ended in failure due to human factors.

Hansen recalled the specific request to install five hives on the fifth floor of a hotel near Lake Michigan. The staff had hopes of featuring honey from their own bees in the hotel restaurant. The springtime installation went smoothly, but soon thereafter, a cold snap settled in that lasted for a couple of weeks. The bees clustered

in the hive and stayed put. Anxious for spring, the hotel planted an abundance of flowers on a large, third-floor terrace, convenient for the bees. Suddenly, warm weather arrived. Just as the hotel guests were drawn outdoors to the blooming terrace, so were the bees. Not all the guests were pleased. Soon thereafter, hotel staff sent Hansen an order to remove the hives.

That ill-fated rooftop installation was a job that came through Sweet Beginnings, LLC, a subsidiary of North Lawndale Employment Network (NLEN) that assists under- and unemployed in the community, including those returning from incarceration and others who face the day-to-day hardships of living with insufficient income. Hansen worked at the organization from 2004-2014 and taught beekeeping and trained ex-offenders to manage apiaries. Workers also learned to make products from honey and other harvests from the beehive sold under the organization's for-profit arm, "beelove." Hansen and his trainees installed and managed hives in such prominent locations as O'Hare airport. At the time, Hansen knew of only one other airport that kept bees and that was in Germany where they were used to monitor air pollution.

Hansen spent most of his professional career as a tech writer in California and later a senior editor of a technology publication in Chicago. His tech background combined with his love of beekeeping has sparked some ideas over the years. "I dreamed of being able to monitor a number of beehives remotely," said Hansen. He has seen some of his ideas come to fruition, but he said, it still takes a beekeeper to visit the hive and apply a remedy. He keeps his eye on new developments. I wouldn't mind doing some research on my own, he said. "Bees are still in trouble."

It's comforting to know that bees up on the roof are largely unfazed by their penthouse positions. The hives are in good hands.

Susan Sarver is a Chicago-based writer and painter who worries about bees. Her articles and essays have appeared in various publications, including *The Portland Review*, *The Christian Science Monitor*, *Country Living* and *Reader's Digest*. More of her work can be found at www.susansarver.com.

