

Are the bees still dying? The scary truth behind the continuing ‘beepocalypse’

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While the issue is less in the news cycle, many native bees are still on their way to extinction. And commercial honeybees are dying at rates that make the bee business difficult.

Twenty years ago, honeybees first started to disappear in mysteriously large numbers. Stories in the media were everywhere, as were solutions to try to save the bees. But today, you hear less about the crisis. Has it simply been drowned out by the constant hum of breaking world news, or is the bee crisis over?

There are some people who argue that we *have* “saved” the bees, while others say honeybees never needed saving in the first place. In truth, the problem hasn’t gone away.

“Our losses have been getting higher and higher over the last few years,” says Zac Browning, a fourth-generation beekeeper from North Dakota. This winter, he lost more than half of his bees. Nationwide, commercial beekeepers lost an average of 62% of their colonies last winter.

While honeybees aren’t likely to go extinct, commercial beekeeping may one day no longer be economically viable—and the same environmental pressures facing managed bees are also pushing wild pollinators toward collapse.

The situation isn’t quite the same as it was in 2006, when beekeepers started reporting a strange new phenomenon: Adult bees were suddenly disappearing from their hives. That became known as colony collapse disorder. That specific scenario is rarer now, but scores of bees have been dying off every winter since then.

“We’re still seeing unsustainable losses,” says Christina Grozinger, an entomology professor at Penn State University. Over the last two decades, beekeepers have often lost up to 30% to 40% of their colonies over the winter, and that’s “very difficult for beekeepers to manage,” she says.

They are managing their populations by “splitting” a hive to produce more bees, or by purchasing more bees when there’s a large loss. But it’s hard to keep going.

“Generally, when you lose 50% of your hives, it’s a sign that the operation is weak,” Browning says. “It’s suffering from some sort of disease or other malady. And so that’s not a recipe for having healthy bees that split well. From an economic perspective, it’s absolutely not sustainable for a beekeeping operation to lose more than 25% of its hives in one year.”

With inflation, and the interest on money borrowed to repeatedly rebuild hives, “everything compounds,” he says. “The general economic viability of the industry, and certainly the operation, is less and less. You see operations failing if they have more than 25% losses year over year. You can certainly rebuild, but you can’t sustain rebuilding every year.”

If beekeepers lose too many bees, it also makes it challenging to provide pollination services. At an almond orchard, for example, insurance companies require two hives per acre to make sure

that trees are fully pollinated. (California's almond crop uses an estimated 1.7 million hives, with 80 billion bees.) Beekeeping companies have been forced to partner with others to meet the obligations in their contracts. Browning says that's why, so far, farmers are still able to produce crops that rely on honeybees for pollination, from almonds to blueberries.

The question isn't whether honeybees will disappear, but whether the business model that supports them can survive.

For wild pollinators that don't have support from human managers, the situation is more complex. A recent *Washington Post* article argued that we've been worrying about honeybees when we should have been worrying about wild bees. All bees are dealing with a reduction in habitat and less access to the flowers they need to survive, along with more exposure to pesticides. Climate change is also affecting when flowers bloom.

Honeybees experience stress when they don't get the nutrients they need from feeding on flowers from a single crop, as well as when they travel long distances to provide pollination (some colonies are trucked 2,000 miles to pollinate almonds). They are also vulnerable to Varroa mites, a pest that causes disease. Both managed and wild honeybees face clear challenges, and most of the problems overlap. "It's not a helpful narrative, because they're really facing the same issues," Grozinger says.

When colony collapse disorder first made the headlines, it helped bring more attention to other bees—though it's true that the spotlight was still on honeybees. "I think the first thing it did was to wake up a lot of people to the fact that pollinators were really important to both agriculture and to ecosystems," says Scott Black, executive director of the nonprofit Xerces Society for Invertebrate Conservation. "So that's number one. But number two, everyone thought, 'Pollinators equal honeybees.'"

Some "solutions" that became popular to help the bees were misguided—like bee hotels, which some scientists have called "beewashing," or adding hives to corporate rooftops. But this doesn't do anything to help farmers. Since honeybees aren't native to the U.S., having them in the wrong places can mean that they overgraze flowers. Consequently, not enough pollen is left for native pollinators, Black says. (In an ideal world for native bees, maybe honeybees shouldn't have been imported to North America in the first place. It's inarguable, though, that they're a necessary part of the food system as it currently exists.)

All of the various plans to help honeybees can help wild pollinators as well. This includes reducing pesticide use—both on farms and the 40 million acres of lawns in the U.S.— and restoring wildflowers, Black says. Whatever the solution, the lack of focus on bee health isn't because the issues are fixed: Both managed and wild bees clearly need help. Hundreds of native North American pollinators are now at risk of extinction. The question isn't whether honeybees need saving. It's whether we're willing to fix the conditions that are hurting all pollinators.