

Scientists challenge Center for Biological Diversity report claiming wild bees near extinction

The headlines, even after years of often-hyperbolic reports about an impending ‘beepocalypse’ and other bee health problems, were startling. “Hundreds of North American bee species face extinction: study,” wrote [Reuters](#). Others, like [Voice of America](#), published similar articles. TIME Magazine even produced [a video](#) to accompany an article titled “More than 700 North American Bee Species Are Headed Toward Extinction.”

What prompted this sudden burst in journalistic angst? The articles were based on a report released by the Center for Biological Diversity (CBD) in early March, “[Pollinators in Peril: A systematic status review of North American and Hawaiian native bees](#).” According to its solo author—Kelsey Kopec—749 North American wild bee species are in decline and almost half of them are at serious risk of extinction. The culprits? Habitat destruction, pesticide use, climate change, and urbanization. The CBD called it a comprehensive, “first-of-its-kind analysis.”

“It’s a quiet but staggering crisis unfolding right under our noses that illuminates the unacceptably high cost of our careless addiction to pesticides and monoculture farming,” said Kopec. “We’re on the verge of losing hundreds of native bee species in the United States if we don’t act to save them.”

Bees have been making headlines since 2006, when a phenomenon called Colony Collapse Disorder (CCD) was first reported in honeybees in the United States. The causes of CCD remain a mystery, but entomologists believe it was probably touched off by a number of factors, including habitat shifts or threats from pests. Many critics of modern agriculture blamed, without evidence, genetically modified crops and some blamed increased use of pesticides, although the evidence for that was scant.

By 2011, the immediate CCD crisis had faded. “We don’t find it anymore,” said University of Maryland Professor Dennis vanEngelsdorp, who coined the CCD name. “No dead bees in the bee yard, in the bee apiary—evidence that that collapse happened very quickly.”

But the “beemageddon” stories have persisted, fueled by reports of higher-than-expected honeybee deaths during winters in North America and Europe in recent years. A split gradually developed between mainstream entomologists and advocacy groups. Scientists believe habitat changes, beekeeper practices, and Varroa mites are the main drivers of honeybee health problems. Groups like CBD blame pesticides, particularly a class of chemicals known as neonicotinoids.

The USDA recently announced that the number of honeybee hives in the U.S. [hit a 20-year high](#), and many advocacy groups now concede that their concerns about honeybees may have been overblown. However, after the [honeybee apocalypse failed to materialize](#), the focus of some activists turned to the health of wild bees, which are more difficult to study because they often live in remote areas and are not easily tracked. With the public sensitized to reports about struggling bee health, the CBD report claiming that many wild bee species might be on the verge of extinction was like throwing kerosene on a fire.

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What is the CBD?

The Center for Biological Diversity is a nonprofit conservation organization with more than 1.2 million members and online activists. In 2014 it generated [more than \\$14 million in support and revenue](#). Their report was alarming, so it was not surprising that many reputable news outlets trumpeted its findings.

Part of what made the report so unusual was that it was not written by a team of bee specialists or by independent entomologists, and it excluded any input or even a review from wild bee experts. Instead, this “comprehensive review of all literature” was written by a single author with no training or background in entomology.

Understandably, the report’s catastrophic claims caught the attention of many prominent people in the conservation community, who posted their reactions to listservs and on social media pages. Rather than tout the report, as did many anti-pesticide and anti-GMO groups, they raised concerns about its conclusions.

“Bee scientists are questioning this study,” wrote [Sheila Colla](#), an assistant professor at York University, [on Twitter](#). “It’s been shared widely but it’s [sic] conclusions seem unsupported.”

“This assessment does not state methods or data sources; not currently credible,” [noted Emily May](#), a pollinator conservation specialist at the Xerces Society for Invertebrate Conservation, the country’s premier bee research institution.

“This is sad. Makes it hard for public to know who to trust,” [added Amy Parachnowitsch](#)?, an assistant professor at Uppsala University.

“Was it peer reviewed?” others asked. Can more details be provided about the methodology? Why weren’t individual accounts of each of the bee species presented? Who were the scientists behind these startling findings?

[Sam Droege](#), a wildlife biologist at the United States Geological Survey (USGS), was concerned as he reviewed the data—or lack of it. Droege is one of the top native bee experts in North America. His lab in Beltsville, MD, where he is developing native bee survey techniques and monitoring programs, contains thousands of specimens that have been sent to him for identification. He also is a renowned bee photographer and co-author of [Bees: An Up-Close Look at Pollinators Around the World](#).

I recently visited Droege in his lab. He called the CBD report “extremely misleading”—so much so that it could undermine the work of bee conservationists. It did not include a “comprehensive review of all literature” as the CBD claimed; it wasn’t peer reviewed; statistical, taxonomic, and natural history problems regarding the species’ records were not addressed; the report’s claims that certain species were in decline—many of which he knows well—are false and not based on evidence; and for many of the species listed as “threatened” or “declining,” there simply is not enough data about them to accurately assess their statuses.

“I know all of the data—in fact, we generated a lot of that—and there’s statistically almost nothing you can do with the information that’s out there to talk about the status,” he said. “They didn’t explain how they determined if a bee had enough data or what that meant.”

The report concedes that there is “insufficient data” for 67 percent (2,900 out of 4,337) of wild bee species, and yet it concludes, “For many of the bee species lacking sufficient population data, it’s likely they are also declining or at risk of extinction.” But without sufficient data, Droege asked, how can one come to this—or any—conclusion? He also wondered how they even arrived at the number of species (4,337).

“In the U.S. and Canada, there are only about 3,600 valid bee names on the books. So where did they come up with those figures?”

Why did the CBD issue the report?

While the report was written in a restrained, scientific-like style, it takes a number of swipes at modern agriculture—especially the use of pesticides. One of the report’s “key findings” is that “A primary driver of [wild bee] declines is agricultural intensification, which includes habitat destruction and pesticide use.”

There is no support for that claim; it’s pure speculation. But the position is in tune with the CBD’s virulent opposition to genetically engineered crops. And CBD promotes

a number of positions out of alignment with the consensus science. Its staff consists of more lawyers than scientists, and its executive director is a former member of the radical environmentalist group [Earth First](#). Many journalists treated its report as if it were written by a serious science organization, but the CBD is actually an aggressive advocacy group with questionable views about agriculture and science.

“If someone asks me, ‘What do you know about this report?’ and I say, ‘Basically, it’s BS,’ then how does that go down?” Droege asked me, rhetorically. “People assume that CBD is filled with credible scientists, so we would rather that they do a sufficient vetting process so we could all be like, ‘Yeah, that’s a good report, their conclusions are useful,’ instead of having to say, ‘No, that’s junk, that’s junk science.’

Potentially, it takes down the credibility of all of our work and our ability to make conservation statements. It doesn’t do any good, there’s no good in that report.”

A CBD spokesperson told the members of [a pollinator listserv](#) that “This report is the first publication of a long-term pollinator research and protection project,” an indication that this is only the beginning of a new campaign against pesticides and modern agricultural practices.

If there remain any doubts about one of the prime motivations for the report, a page on the CBD website [asks for donations](#) to help save wild bees from pesticides. “Please help protect the wild bees with a donation to the Pollinator Protection Fund today,” it implores. “With your help, the Center is in court working to ban these bee-killing chemicals.”

[Richard Levine](#), co-author of *IPM for the Urban Professional: A Study Guide for the Associate Certified Entomologist*, managed the communications program at the Entomological Society of America from 2006-2016. Follow him on Twitter at [@Rich_Lev](#).

For more background on the Genetic Literacy Project, read [GLP](#) on Wikipedia.