

How One Woman's Mission to 'Rewild' Urban Spaces Is Saving Native Bees

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STORY AT-A-GLANCE

- › Pollinator Advocates (PA) is an advocacy program founded by Andrea Montoya to reintroduce thousands of native plants to public spaces around Boulder, Colorado. The goal is to provide wild pollinators with a natural habitat that allows them to thrive for many generations to come
- › With 35% of the world's crops and 75% of flowering plants dependent on honeybees and other pollinators to reproduce, this type of advocacy is without a doubt one of the most crucial movements we should actively support
- › A 2022 study published in the journal Environmental Health Perspectives estimates the loss of food production due to lack of pollinators led to 427,000 excess annual deaths worldwide
- › There are small but impactful practices that you can do to help save the bees and other pollinators – more tips below

There's a small but growing movement in Boulder, Colorado, to "rewild" urban spaces by reintroducing native plants. Their goal is to provide wild pollinators with a natural habitat that allows them to thrive for many generations to come. Spearheading this mission is Andrea Montoya, whose advocacy program, Pollinator Advocates (PA),¹ aims to reintroduce thousands of native plants to public spaces around Boulder.

In an article in Modern Farmer,² Montoya says, "I am positive that [this led to] an empiric increase in the numbers of insects and hummingbirds in our neighborhoods. We are

currently working with entomologists on setting up surveys across the city."

Turning an 'Ecological Graveyard' Into a Thriving Ecosystem

A gardening enthusiast, Montoya is no stranger to the field of health care, as she spent decades working as a physician's assistant, providing support to patients with cancer and autoimmune diseases. Her life changed after her retirement in 2015, when she decided it was time for her to help heal "our Great Mother."

In 2018, while out on a walk with her grandson, Montoya came across a native bee house at the library, which triggered a deep fascination with these natural pollinators and prompted a research deep dive. She studied Ecological Sciences³ and even took courses at the University of Chicago, where she learned from local experts.

Montoya's new insights opened her eyes to the reality that her own densely packed neighborhood – a concrete jungle of houses and buildings – was an "ecological graveyard." "The more I read about these native bees and plants and ecosystems, the more I realized that the reason why pollinators were so in decline is because they lost habitat," she said.

This realization sparked her community activism. In 2019, she began giving out native plants to her neighbors and then recruited volunteers to plant in small public spaces – creating what's called "pocket parks." The process helped educate them about pollinators and their importance to a thriving ecosystem.

Montoya launched the Pollinator Advocates program in 2021. Drawing on her Polish and Mexican heritage, she harmoniously connects with people from diverse backgrounds. She has given in-depth training to nearly 50 community members. Together with these dedicated individuals, Pollinator Advocates was able to reintroduce thousands of native plants to yards and parks around the city.

Nearly Half of Our Bee Colonies Were Lost in 2023

It may seem like a small initiative. However, 35% of the world's crops (fruits, vegetables and legumes) and 75% of flowering plants rely on honeybees and other pollinators to reproduce. This type of program is one of the most crucial movements we should actively support.

The U.S. Department of Agriculture estimates that 1 out of every 3 bites of food you eat come from pollinators⁴ – and likely more if you consume a whole food diet. So, the knowledge that we're losing these insects and wildlife at an increasing rate should be a cause for alarm.

Wild honeybees, in particular, have suffered drastic population losses in the past decade. In fact, the loss of wild bees has caused farmers to rely on rented bees to help pollinate their crops. These rented bees are managed by commercial beekeepers who move their hives from one location to the next in trucks.⁵

Last year, a survey⁶ by the University of Maryland and Auburn University found that 48.2% of managed honeybee colonies were lost from April 2022 to April 2023, which is 9.2% higher than the previous year. This was nearly as high as the highest annual loss on record, which occurred between 2020 and 2021. According to an Associated Press article:⁷

"Honeybees are crucial to the food supply, pollinating more than 100 of the crops we eat, including nuts, vegetables, berries, citrus and melons. Scientists said a combination of parasites, pesticides, starvation and climate change keep causing large die-offs.

'This is a very troubling loss number when we barely manage sufficient colonies to meet pollination demands in the U.S.,' said former government bee scientist Jeff Pettis, president of the global beekeeper association Apimondia that wasn't part of the study. 'It also highlights the hard work that beekeepers must do to rebuild their colony numbers each year.'"

Millions of Human Deaths Are Linked to Loss of Pollinators

A 2022 study published in the journal *Environmental Health Perspectives*⁸ estimates that the loss of food production due to lack of pollinators led to 427,000 excess annual deaths, mostly from chronic noncommunicable diseases (NCDs), around the world.

The researchers created a model that demonstrated the impact insufficient pollination had on global human health, and found that between 3% and 5% of fruit, vegetable and nut production is lost. This causes a loss of nutrition and an increase in associated diseases. They reported:⁹

"Our results underscore the importance of pollinators for human health and increase the urgency of implementing pollinator-friendly policies to halt and reverse the trends of pollinator declines.

Diverse research investigating the optimal policies to benefit pollination have shown remarkable consensus around a short list of highly effective strategies: increase flower abundance and diversity on farms, reduce pesticide use, and preserve or restore nearby natural habitat."

In an article published in *Common Dreams*,¹⁰ Amy van Saun, senior attorney for the Center for Food Safety, comments on this study, stressing that toxic chemical pesticides are the primary culprit to the declining bee population:

"Imagine a world with no apples, melons, squash, broccoli or almonds. Three quarters of the crops we consume rely on pollinators, and if we're going to save them from extinction, scientists agree – we must ban the pesticides largely responsible for their demise."

Neonics Are the Biggest Threat to Pollinators

Unfortunately, many Americans are unaware that a majority of soybean, corn, canola and sunflower seeds planted in the U.S. are pre-coated with neonicotinoid insecticides, or "neonics."¹¹ As van Saun further elaborates in her commentary, these toxic chemicals are the most linked to pollinator decline. They are so deadly that a single corn kernel treated with them can carry enough poison to kill more than 80,000 honeybees.¹²

Neonics can also accumulate in the environment quickly, contaminating soil, surface water and groundwater, harming species that live in these ecosystems. And what's worse, neonicotinoids do not help farmers at all.

According to a 2014 investigation¹³ conducted by the U.S. Environmental Protection Agency, treating soybean seeds with neonicotinoids provides no significant financial or agricultural benefits for farmers. In an article posted on their site, Jay Feldman, executive director of the nonprofit org Beyond Pesticides, comments:¹⁴

"This report demonstrates, yet again, the need for EPA to ask the very important question of whether a chemical is truly necessary and efficacious before introducing it into the environment. And because treated seeds are mostly exempt from federal pesticide laws under the treated article provision, this oversight has allowed a dangerous chemical to be used largely unregulated, wreaking havoc on the nation's pollinators."

'It's a Chance to Right a Wrong as Humans'

Going back to local initiatives to safeguard the future of bees and other pollinators, Montoya says she takes pride in their advocacy program, seeing that it's now "bigger than she could have imagined." It's not always smooth sailing, though, and they do encounter hurdles along the way. One of the most notable challenges is helping people overcome their fear of insects.¹⁵

*"When going into communities to talk about pollinators, she starts with the less anxiety-inducing species: butterflies and hummingbirds. If the conversation is going well, she'll pull up a picture of a native bee – from the millimeter-long *Perdita minima* to metallic green sweat bees or a lumbering bumble bee. Seeing these insects in less frightening ways can open people's minds to the benefits and beauty of native pollinators."*

If you're in Boulder, consider joining the Pollinator Advocates Program; they're accepting applicants until May 5, 2024.¹⁶ Individuals 18 years old and above can join, even those

who are novices at gardening.

The program is sponsored by the city and participation is free. However, there is a time commitment on your part, so make sure you have the time before you join. The rewards are worth it, since you will contribute to improving your local community's wild pollinator habitat.

Let's Save the Bees – Three Ways You Can Help

Even people living outside Boulder can engage in small but impactful practices that help save the bees. Montoya recommends three strategies:¹⁷

- **Stop using toxic chemical pesticides and turn to natural pest management options instead** – The best pest management strategy is to create a native habitat, since there are more beneficial insects that can prey on and eliminate harmful ones.
- **When adding plants to your garden or farm, plant regionally native plants that bloom across as much of the season as possible** – "Plants that need the native soil don't really need all the nutrients in a food garden bed," Montoya advises. Make sure to put 100 to 300 feet between your native plants and veggie beds to ensure they all thrive.
- **Leave some patches of bare soil** – Many native bee species nest in the ground. Don't add mulch, thick cover crops or plastic covering to the soil.

Celebrate World Bee Day on May 20

In December 2017, the United Nations (UN) General Assembly declared May 20 as World Bee Day.¹⁸ This was initiated by the Slovenian Beekeepers' Association to raise awareness about the significant impact of bees and other pollinating insects and wildlife, most of which are threatened with extinction from manmade factors.

The date they chose also has significance, because it "coincides with the birthday of Anton Janša, who in the 18th century pioneered modern beekeeping techniques in his

native Slovenia and praised the bees for their ability to work so hard, while needing so little attention." According to the UN website:¹⁹

"The goal is to strengthen measures aimed at protecting bees and other pollinators, which would significantly contribute to solving problems related to the global food supply and eliminate hunger in developing countries. We all depend on pollinators and it is, therefore, crucial to monitor their decline and halt the loss of biodiversity."

There are several more ways you can help protect our pollinators, not only on World Bee Day but every day. Here are some suggestions from Slovenia's Ministry of Agriculture:²⁰

Plant nectar-bearing flowers in your garden, yard or balcony to help feed the bees, and be sure to avoid using toxic pesticides and herbicides that might hurt pollinators. If you have a farm, large or small, be sure to incorporate flowers that support the wild bee population. The following video, made by Project Integrated Crop Pollination, demonstrates helpful planting practices.

Buy honey and other hive products from local beekeepers to help keep them in business.

Teach your children about the importance of bees and beekeepers.

Set up a beehive.

Preserve meadows and sow wildflowers in your garden, making sure the wildflower mix you choose contains flowers native to your area. Non-native plants do not contribute as much toward the care and feeding of local insects, as they are not able to adapt and feed on whatever is available. Hybridized plants also do not provide proper nourishment and can be likened to "junk food" for insects, as they do not provide much in terms of nourishment.²¹

Wait to cut meadow grass until the nectar-bearing plants have finished blooming, so as not to rob bees of crucial nourishment.

If you're using a nontoxic pest control product, make sure to spray it when there's little to no wind, and either early in the morning or late at night, when bees are not actively foraging.

Blooming plants and trees that must be sprayed with pesticides should be mulched before spraying to avoid attracting bees.

Sources and References

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