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## Earth Matters: Pollinator decline puts world food supply at risk, experts warn

May 5, 2000  
Web posted at: 3:26 PM EDT (1926 GMT)

### In this story:

[Global recovery effort needed](#)

[Following the cactus bloom](#)

[The demand for tequila](#)



Honeybees, the primary pollinator for many food plants, have seen a drastic decrease in numbers

*From staff reports*

(CNN) -- One third of all our food -- fruits and vegetables -- would not exist without pollinators visiting flowers. But honeybees, the primary species that fertilizes food-producing plants, have suffered dramatic declines in recent years, mostly from afflictions introduced by humans.

Domestic honeybees have lost as many as one-third of their Hives and their wild cousins have become virtually extinct in many places around the world.

A variety of troubles threaten the pollinators: Endless waves of development destroy nesting and feeding grounds; pesticides decimate them along with other beneficial insects.

Agribusiness increasingly treats honeybees as a mass commodity, exposing them to uncontrollable plagues of pests, introduced through human error.

### Global recovery effort needed

Researcher Steve Buchman has seen fewer and fewer pollinators during travels that have taken

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**QUIZ**  
What is the male, pollen-producing part of a plant called?

- A. the anther
- B. the pistil
- C. the style



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him from the Sonoran Desert to the Malaysian rainforests.

"I was hearing from other floral biologists around the world and they were seeing the same thing," Buchman said.

Along with Gary Nabhan, he co-founded the Forgotten Pollinators Campaign to protect the flower fertilizers. The group seeks to bring together farmers, beekeepers and pesticide applicators, "people who don't normally talk to other," to find common ground, Buchman said.

Solving that problem, Buchman said, will require an effort that stretches from farms, orchards and backyards to the deserts of Mexico.

## Following the cactus bloom



The cardon, largest cactus on earth, is pollinated by the lesser longnosed bat

Each spring, the deserts of northern Mexico come alive. The centerpiece is the cardon. At heights sometimes over 60 feet, it's the largest cactus on Earth.

The cardon serves as a supermarket for the desert neighborhood, offering food and nectar to a diverse population of animals. But for a long time, no one knew what pollinated the cardon.

Turns out it was neither the birds nor the bees but a flying mammal that arrives under cover of darkness: the lesser longnosed bat.

When the cactus flower meets the tiny bat, the fit and the transfer of pollen are perfect. With each drink, the bat carries away thousands of pollen grains to be transported to the next flowering giant.

The grains are obtained via a tongue that's as long as the bat's entire body. The tongue has a brushy tip with fibers on the end than enable it to act like a mop, says University of Miami researcher Ted Fleming, who studies the bats.

Fleming says he fears for the future of the bats, not only because the cardon community needs them to survive, but because their migratory lifestyle puts them at risk.

In the spring, the pregnant bats follow the wave of the cardon bloom northward. After bearing their young, they head south, fueled this time by flowering agave plants. If the gaps between food patches become too large, this ancient cycle could fail.

The bats face increasing competition for agave from humans, who use the plant's roots as the source for mescal and tequila.

## The demand for tequila

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Whether it's from moonshiners or legitimate distillers, people seem to have an insatiable appetite for tequila. U.S. sales of the liquor are 15 times higher than in the 1970s.

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And with a world full of tequila drinkers to supply, people are digging up agaves at an unprecedented rate, often before the plants have a chance to bloom.

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Combine that with increased development wiping out vegetation along the coast near Acapulco, and another link is lost in the bats' nectar chain.

ARTS & ST

For the bats to survive, their food plants must be preserved along their entire migration route. If the gaps between islands of habitat get too big, the bats could starve to death.

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Fleming and other researchers say that only by managing development along the bats' migration route can the carbon and its entire desert wildlife community be saved.

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*Learn more about the "Pollinators in Peril" on CNN's Earth Matters, Sunday at 1:30 p.m. EDT*

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