

Monarch butterflies drop, migration may disappear (Update)

January 29 2014, by Mark Stevenson



In this Dec. 9, 2011 file photo, a Monarch butterfly perches on a tree at the Sierra Chincua Sanctuary in the mountains of Mexico's Michoacan state. The number of Monarch butterflies wintering in Mexico has plunged to its lowest level since studies began in 1993. A report released on Wednesday, Jan. 29, 2014 by the World Wildlife Fund, Mexico's Environment Department and the Natural Protected Areas Commission blames the dramatic decline on the insect's loss of habitat due to illegal logging in Mexico's mountaintop forests and the massive displacement of its food source, the milkweed plant. (AP Photo/Marco Ugarte, File)

The stunning and little-understood annual migration of millions of Monarch butterflies to spend the winter in Mexico is in danger of disappearing, experts said Wednesday, after numbers dropped to their lowest level since record-keeping began in 1993.

Their report blamed the displacement of the milkweed the species feeds on by genetically modified crops and urban sprawl in the United States, extreme weather trends and the dramatic reduction of the butterflies' habitat in Mexico due to illegal logging of the trees they depend on for shelter.

After steep and steady declines in the previous three years, the black-and-orange butterflies now cover only 1.65 acres (0.67 hectares) in the pine and fir forests west of Mexico City, compared to 2.93 acres (1.19 hectares) last year, said the report released by the World Wildlife Fund, Mexico's Environment Department and the Natural Protected Areas Commission. They covered more than 44.5 acres (18 hectares) at their recorded peak in 1996.

Because the butterflies clump together by the thousands in trees, they are counted by the area they cover.

While the Monarch is not in danger of extinction, the decline in their population now marks a statistical long-term trend and can no longer be seen as a combination of yearly or seasonal events, experts said.

The announcement followed on the heels of the 20th anniversary of the North American Free Trade Agreement, which saw the United States, Mexico and Canada sign environmental accords to protect migratory species such as the Monarch. At the time, the butterfly was adopted as the symbol of trilateral cooperation.

"Twenty years after the signing of NAFTA, the Monarch migration, the

symbol of the three countries' cooperation, is at serious risk of disappearing," said Omar Vidal, the World Wildlife Fund director in Mexico.

Lincoln Brower, a leading entomologist at Sweet Briar College in Virginia, wrote that "the migration is definitely proving to be an endangered biological phenomenon."

"The main culprit," he wrote in an email, is now genetically modified "herbicide-resistant corn and soybean crops and herbicides in the USA," which "leads to the wholesale killing of the monarch's principal food plant, common milkweed."



In this March 13, 2005 file photo, Monarch butterflies gather on a tree at the El Rosario Butterfly Sanctuary near Angangueo, Mexico. The number of Monarch butterflies wintering in Mexico has plunged to its lowest level since studies began in 1993. A report released on Jan. 29, 2014 by the World Wildlife Fund, Mexico's Environment Department and the Natural Protected Areas Commission

blames the dramatic decline on the insect's loss of habitat due to illegal logging in Mexico's mountaintop forests and the massive displacement of its food source, the milkweed plant. (AP Photo/Kirsten Luce, File)

While Mexico has made headway in reducing logging in the officially protected winter reserve, that alone cannot save the migration, wrote Karen Oberhauser, a professor at the University of Minnesota. She noted that studies indicate that the U.S. Midwest is where most of the butterflies migrate from.

"A large part of their reproductive habitat in that region has been lost due to changes in agricultural practices, mainly the explosive growth in the use of herbicide-tolerant crops," Oberhauser said.

Extreme weather—severe cold snaps, unusually heavy rains or droughts in all three countries—have also apparently played a role in the decline.

But the milkweed issue now places the spotlight firmly on the United States and President Barack Obama, who is scheduled to visit Mexico on Feb. 19, with events scheduled for Toluca, a city a few dozen miles from the butterfly reserve.

"I think President Obama should take some step to support the survival of the Monarch butterflies," said writer and environmentalist Homero Aridjis. "The governments of the United States and Canada have washed their hands of the problem, and left it all to Mexico."

It's unclear what would happen to the Monarchs if they no longer made the annual trek to Mexico, the world's biggest migration of Monarch butterflies and the second-largest insect migration, after a species of dragonfly in Africa.

There are Monarchs in many parts of the world, so they would not go extinct. The butterflies can apparently survive year-round in warmer climates, but populations in the northern United States and Canada would have to find some place to spend the bitter winters. There is also another smaller migration route that takes butterflies from the west to the coast of California, but that has registered even steeper declines.

Oberhauser noted that some Monarchs now appear to be wintering along the U.S. Gulf coast, and there has been a movement in the United States among gardeners and home owners to plant milkweed to replace some of the lost habitat. But activists say large stands of milkweed are needed along the migratory route, comparable to what once grew there. They also want local authorities in the U.S. and Canada to alter mowing schedules in parks and public spaces, to avoid cutting down milkweed during breeding seasons.

The migration is an inherited trait. No butterfly lives to make the full round-trip, and it is unclear how they remember the route back to the same patch of forest each year, a journey of thousands of miles to a forest reserve that covers 193,000 acres (56,259-hectares) in central Mexico. Some scientists think the huge masses of migrating butterflies may release chemicals that mark the migratory path and that if their numbers fall low enough, not enough chemical traces would remain and the route-marking might no longer work.

The human inhabitants of the reserve had already noted a historic change, as early as the Nov. 1-2 Day of the Dead holiday, when the butterflies usually arrive.

"They were part of the landscape of the Day of the Dead, when you could see them flitting around the graveyards," said Gloria Tavera, the director of the reserve. "This year was the first time in memory that they weren't there."

Losing the butterflies would be a blow for people such as Adolfo Rivera, a 55-year-old farmer from the town of Los Saucos who works as a guide for tourists in the Piedra Herrada wintering ground. He said the butterflies had come later and in smaller numbers this year, a fact he attributed to a rainy winter. "This is a source of pride for us, and income," Rivera said.

Butterfly guide Emilio Velazquez Moreno, 39, and other farmers in the village of Macheros, located inside the reserve, have been planting small plots of milkweed in a bid to provide food for the Monarchs if they decide to stay in Mexico year-round, which he said some do.

Sitting beside a mountainside patch of firs where the butterflies were clumping on the branches, Velazquez Moreno, a second-generation guide who has been visiting the butterflies since he was a boy, said "we have to protect this. This comes first, this is our heritage."

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