

Habitat loss imperils monarch butterflies

July 26 2011, By Kathleen Pointer

If you see a monarch butterfly lighting in your backyard this year, take an extra moment to enjoy it.

The monarchs' numbers have been cut in half in recent years, some researchers say, and they put much of the blame on hardier farm crops here in the Midwest.

[Monarchs](#) lay their eggs on [milkweed](#) plants. But thanks to genetically modified corn and soybeans that withstand herbicides, farmers can now wipe out milkweed from their land without damaging their crops.

That means monarchs can no longer find milkweed on 100 million acres of farmland.

Combine that loss with deforestation in Mexico, where monarchs winter, and you have a vanishing species.

"It's clear we've lost an awful lot of habitat, mostly over the last 10 years," said Orley "Chip" Taylor, who leads Monarch Watch, based in Lawrence, Kan. "The population has declined significantly."

The nonprofit is trying to stop monarchs from disappearing entirely.

But Taylor, a University of Kansas professor of insect ecology, says we probably won't ever again see monarchs in their previous numbers.

The problem is that monarchs are now fighting [habitat loss](#) at both ends

of their range.

During the fall migration, monarchs make a lengthy move to a concentrated area in a Mexican mountain range where they spend the winter. For much of the time the butterflies hang in heavy clusters on the trees.

Those trees are being cut down at an alarming rate, a problem that's been known for years.

But a study this year says that monarchs also are in for trouble once they head north in the spring.

Since the early 2000s, herbicide-resistant soybeans and corn have become more widespread, according to the study in the journal *Insect Conservation and Diversity*. These modified crops allow farmers to spray their entire fields, eliminating unwanted plants such as milkweed without killing the corn or soybeans.

A 1996 study that Monarch Watch contributed to had already shown about half of monarchs come out of the corn belt in the Midwest. Milkweed - the only plant on which the butterflies can lay their eggs - was more difficult to remove from cornfields, and so in many areas it stayed.

The plowed fields were a good home for milkweed, Taylor said.

The monarch population declined with the rise of modified crops, he said.

"To lose that as a habitat meant losing the base that sustains the population in the Midwest," he said. "You've got to maintain resources at both ends of the system in order to keep the system going."

At least one researcher says the monarch population may be stable for now, despite the loss of habitat. But the butterfly is threatened by loss of habitats in the Midwest and Mexico, according to a study by Andrew Davis in the *Insect Conservation* journal.

In Mexico and the United States, monarchs are losing habitat at the rate of about 6,000 acres a day, estimate Jim Lovett and Ann Ryan, Monarch Watch staffers.

Monarch Watch says there are several ways to reduce the threat.

The center encourages people to create monarch way stations, or microhabitats with milkweed for monarch eggs and nectar plants for grown butterflies. The program has helped start 5,000 of these habitats.

Monarch Watch also encourages people to plant milkweed all over, including roadsides. Taylor has talked to the Kansas Department of Transportation about including milkweed among the seeds put down during revegetation efforts.

"We want to discourage the practice of making roadsides look like people's front lawns," Taylor said. "We need a new ethic in approach to a lot of our landscapes."

Taylor and the rest of Monarch Watch work year round on monarch conservation, but he says they need more help.

"This is a program with no end in sight," Taylor said. "If we're going to save this migration, we need to have a lot of partners."

The program started in 1992 as a simple tagging program to track monarchs, but it has morphed into an educational and research facility. In 2005, Taylor decided conservation needed to be a top priority.

The operation remains small. Lovett and Ryan are the only full-time staffers in a modest building on the KU campus. A "critter crew," some part-time KU students, helps care for the lab's monarch population.

The nonprofit sustains itself on private donations and the sale of promotional and educational items, including monarch rearing kits.

In 2009, Monarch Watch helped send caterpillars into space while helping schools nationwide raise monarchs in sync with those on the shuttle. The center has also worked with Disney, the Discovery Channel and National Geographic.

Lovett estimates the center issues about 200,000 butterfly tags and 2,000 monarch-rearing kits to people across the country each year. The center sends about 100 monarch-rearing kits - including unhatched monarchs - a day in the fall because people want to raise them in time for the butterflies to make the fall migration.

When the program began, Taylor sent out news releases asking for volunteers. He said the response was extraordinary.

"What we discovered is that the citizens of this country are very interested in natural phenomena and want to contribute to science," he said.

Monarch Watch's Facebook page, launched about a year ago, has nearly 6,000 followers from all over the nation. They use the page to communicate their enthusiasm for conserving the species. People post pictures, trade tips and let others know when they've started spotting monarchs.

"As butterflies go, they are a large, easy species to work with," Taylor said. "They are exceptional, and people are attracted to them."

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