

Number of monarch butterflies wintering in Mexico drops 22%

March 22 2023, by MARK STEVENSON and ARMANDO SOLÍS



Monarch butterflies gather on a shrub at Piedra Herrada sanctuary in the mountains near Valle de Bravo, Mexico, Wednesday, Jan. 4, 2023. In the annual monarch population report released on Tuesday, March 21, the number of monarch butterflies wintering in the mountains of central Mexico dropped by 22%, and the number of trees lost in their favored wintering ground more than tripled compared to last year. Credit: AP Photo/Marco Ugarte, File

The number of monarch butterflies wintering in the mountains of central Mexico dropped 22% from the previous year, and the number of trees lost from their favored wintering grounds tripled.

Frost and "[extreme temperatures](#)" in the United States may have played a role in the butterfly's decline during the most recent winter season, said Humberto Peña, director of Mexico's [nature reserves](#).

Monarchs east of the Rocky Mountains in the United States and Canada overwinter in the fir forests of the western state of Michoacan, west of Mexico City. The total area they occupied this past winter dropped to 5.4 acres (2.21 hectares), from 7 acres (2.84 hectares) a year earlier.

The annual butterfly count doesn't calculate the individual number of butterflies, but rather the number of acres they cover when they clump together on tree boughs.

Gloria Tavera, conservation director of Mexico's Commission for National Protected Areas, said the area of forest cover appropriate for the butterflies that was lost rose to 145 acres (58.7 hectares), from 46.2 acres (18.8 hectares) last year.

Illegal logging has been a major threat to the pine and fir forests where the butterflies gathering in clumps to keep warm. But experts said that this year, more than half the tree loss was due to removal of dead or sick trees affected by fires, storms or pests. Tavera said a lack of rain had plunged trees into hydric stress, making them more vulnerable to diseases, pests and fires.

Jorge Rickards, Mexico director of the WWF conservation group, blamed climate change,

"The monarch butterfly is an indicator of these changes," Rickards said.

Critics say that in the past, removal of diseased trees has been used as a pretext for felling healthy trees for timber.

Tavera said she had no evidence that occurred this year, adding, "I don't think anyone is lying."

Each year the monarchs return to the United States and Canada on an annual migration that is threatened by loss of the milkweed they feed on north of the border and by deforestation in the butterfly reserves in Mexico.

Due to a myriad of factors, monarch numbers have dropped in recent years. Experts say drought, [severe weather](#) and loss of habitat—especially of the milkweed where the monarchs lay their eggs—as well as pesticide and herbicide use and [climate change](#) all pose threats to the species' migration.

Illegal logging also continues to plague the reserves, and Peña said there are plans to station National Guard troops in the reserve to prevent it.

But open, illegal tree cutting actually dropped 3.4% this year, largely due to the efforts of inhabitants to protect their forests, a change of attitude by many.

For example, on Jan. 23, the communal farm community of Crescencio Morales—once the area with the worst [illegal logging](#)—fielded its first class of trained and officially approved forest rangers.

The 58-strong forest ranger "Community Guard" of Crescencio Morales began life several years ago as a rag-tag band of farmers armed with a motley collection of weapons, before the [state government](#) offered to train and equip them.

The community's struggle began in the early 2000s, when residents fought to kick out [drug traffickers](#) and illegal loggers and redeem itself in the process.

"Back in 1998, the inhabitants of Crescencio Morales decided to set fire to the monarch butterfly colonies, in order to log the land," recalls Erasmo Álvarez Castillo, the leader of the communal, or ejido, farmers in the village.

Residents quickly saw two things: The illegal logging brought with it the incursion of drug cartels and surrounding communities were making money off tourism.

So starting around 2000, the farmers began reforesting the mountain slopes. But they still had to expel the drug gangs. It was a long and arduous fight that eventually forced the farmers to take up arms, after calls to police for help in defending the community went unanswered.

Things came to a head when the town declared itself an autonomous, self-governing municipality.

Faced with armed, rebellious farmers, the government decided to try to professionalize the community force and train it to protect the forests.

Now, with the butterflies back, the village can dream of attracting tourists.

"The land we have on the mountaintop is very beautiful. It would be good for a tourism site," Álvarez Castillo said. "The plan is to make trails, put up cabins—a tourist site without destroying the environment."

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