

Logging threatens Monarch butterflies in Mexico (Update)

September 9 2013, by Mark Stevenson



In this Dec. 9, 2011, file photo a Monarch butterfly sits on a tree trunk at the Sierra Chincua Sanctuary in the mountains of Mexico's Michoacan state. A new study of the Monarch butterflies' winter nesting grounds in central Mexico shows that small-scale logging is more extensive than previously thought, and may be contributing to the threats facing the Monarch's singular migration pattern, according to a new study co-authored by Omar Vidal, the head of Mexico's chapter of the World Wildlife Fund. (AP Photo/ Marco Ugarte, File)

A new study of the Monarch butterflies' winter nesting grounds in

central Mexico says small-scale logging is worse than previously thought and may be contributing to threats facing the Monarch's singular migration pattern.

The reserve's 33,482-acre (13,550-hectare) core zone lost 41 acres (16.6 hectares) of pine and fir trees so far in 2013, about half of that because of illegal logging, said the study by Omar Vidal, head of Mexico's chapter of the World Wildlife Fund, the WWF, and other authors. The rest of the loss was due to drought or disease-control removal of trees.

Mexico's government has taken a strict stance to protect the Monarch grounds in recent years, shutting down sawmills and going after logging trucks, commercial loggers and their equipment. As a result, the reserve reached a milestone in 2012, when aerial photographs found almost no detectable deforestation due to logging over the previous year.

That finding was welcomed as a sign that officials had reined in tree-cutting, which at its peak in 2005 depleted as many as 1,140 acres (461 hectares) annually in the reserve.

But the study's comparative analysis of aerial photos taken more than a decade apart showed that small-scale logging has never gone away. Too minor to detect in year-to-year comparisons, the study found incremental losses by comparing 2001 photographs, from the first systematic aerial survey, to ones from 2011.

"Small-scale logging is a serious and growing concern for the conservation of the monarch sanctuaries," the report said.

It attributed nearly half of the total logging loss in 2012, about 10 acres (4 hectares), to small-scale logging, often by residents of mountain villages going out to get firewood or to cut beams and boards for building purposes.

Some 27,000 people live in the small agrarian communities that dot, and in many cases own, the land in the reserve. While commercial loggers can be caught and prosecuted, dealing with local impoverished residents who use or occasionally sell wood from their lands may be much tougher to combat.

"One of the main factors that will allow us to eliminate this problem are the communities themselves," said the head of Mexico's nature reserves, Luis Fueyo.

Vidal said local communities must be paid more to compensate them for not cutting down trees and for protecting and reforesting the area.

The pine and fir forests in the reserve just west of Mexico City serve as a sort of blanket for the millions of butterflies that migrate there each year from the U.S. and Canada, protecting them from rain and freezing temperatures as they cluster in huge clumps on tree boughs.

The Monarch migration is under serious threat. A report in March said the number of butterflies making it to Mexico this year had dropped 59 percent, the lowest level since comparable record-keeping began 20 years ago.

It was the third straight year of declines for the orange-and-black butterflies. Six of the last seven years have shown drops, and there are now only one-fifteenth as many butterflies as there were in 1997.

Lincoln Brower, a leading entomologist at Sweet Briar College in Virginia, wrote in a statement to The Associated Press welcomed the new study.

"I am pleased to see a new willingness to address the continuing small scale logging which, as my research group has emphasized for many

years, causes significantly negative effects on the forest micro-climate which is crucial for the butterflies' survival," he said.

But Brower added: "What still needs to be documented is the loss, alteration and protection of forest in the surrounding buffer zone ... which is more than three times the area of the core zone."

The total reserve stretches across 139,000 acres (56,259 hectares) of mountain tops and valleys, but less than one-third of that is in the highly protected core zone. Some 105,000 acres (42,707 hectares) are in the less-protected, and often deforested, buffer zone where businesses, housing and extensive roads are allowed.

Homero Aridjis, a long-time environmentalist and defender of the reserve, also pointed to a need to do more in the buffer zone.

"In addition to much stricter enforcement of the total prohibition of logging of any size or sort in the core zone, the buffer zone must be protected, as the colonies have often changed location, and the core zone cannot possibly exist as an island of trees surrounded by buildings, roads and fields," he said.

The swarms of butterflies don't necessarily return to the same exact locations each year. Sometimes, for reasons not yet clear, they gather at other hilltops, miles from previously popular wintering sites.

All the experts stressed that deforestation in Mexico isn't the only threat.

Perhaps more dangerous for the butterflies is the crowding out in the U.S. of the only plant the Monarchs lay their eggs on, the milkweed, by pesticide use and changes in crop and land-use patterns. Vidal said that while Mexico is struggling with its problems, the United States must do more as well to guarantee the health of Monarchs.

© 2013 The Associated Press. All rights reserved.

Citation: Logging threatens Monarch butterflies in Mexico (Update) (2013, September 9)
retrieved 26 April 2024 from

<https://phys.org/news/2013-09-threatens-monarch-butterflies-mexico.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.