

THE HEAT IS ON

Species feeling the effects of climate change



Monarch Butterfly

Danaus plexippus

Region:

Southwest

Area affected:

California and Mexico

Climatic change:

Extreme weather, drought

Impact:

Mass mortality

ABOUT THIS SPECIES

Monarch butterflies are perhaps our best-known and best-loved insect in the United States. The species is almost as famous for its mass migrations as it is for its striking black and orange coloration. In late autumn, millions of monarchs migrate to wintering grounds in California and Mexico, where they hibernate in masses that can completely cover the trees. In late winter, they begin the return journey north laying their eggs on milkweed plants along the way. The eggs hatch into caterpillars that feed exclusively on milkweed for a few weeks before pupating and then emerging as adult butterflies that live from two to six weeks. The cycle repeats to produce a second and third generation of similarly short-lived butterflies and then a fourth generation that emerges as winter approaches and lives much longer—six to eight months—to make the trip back to their southern wintering grounds.

DESCRIPTION OF IMPACT

Deforestation, pesticides and a host of other threats—including increasingly including extreme weather events—have taken a huge toll on the migrating monarch population. In 2002, for instance, a highly unusual severe storm hit the species' wintering grounds, where it is normally the dry season during overwintering. Following the storm the temperature dropped, and the butterflies, which can tolerate cold when dry but freeze if they get wet, died in droves. By some estimates, nearly 270 million monarchs perished—75 to 80 percent of some wintering groups. Bad weather in recent years has further eroded the population. In 2012, breeding habitat in Texas was hit with near-record heat and drought, and, in 2013 a cold snap delayed northward migration and the onset of breeding. **Surveys in 2014 found only 35 million monarchs on their wintering grounds, down from nearly a billion in the 1990s.** This massive decline—greater than 95 percent—was steep enough that the U.S. Fish and Wildlife Service recently announced that it will consider Endangered Species Act listing for migrating monarchs.

References

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