



Xerces Update

Donor Newsletter of the Xerces Society

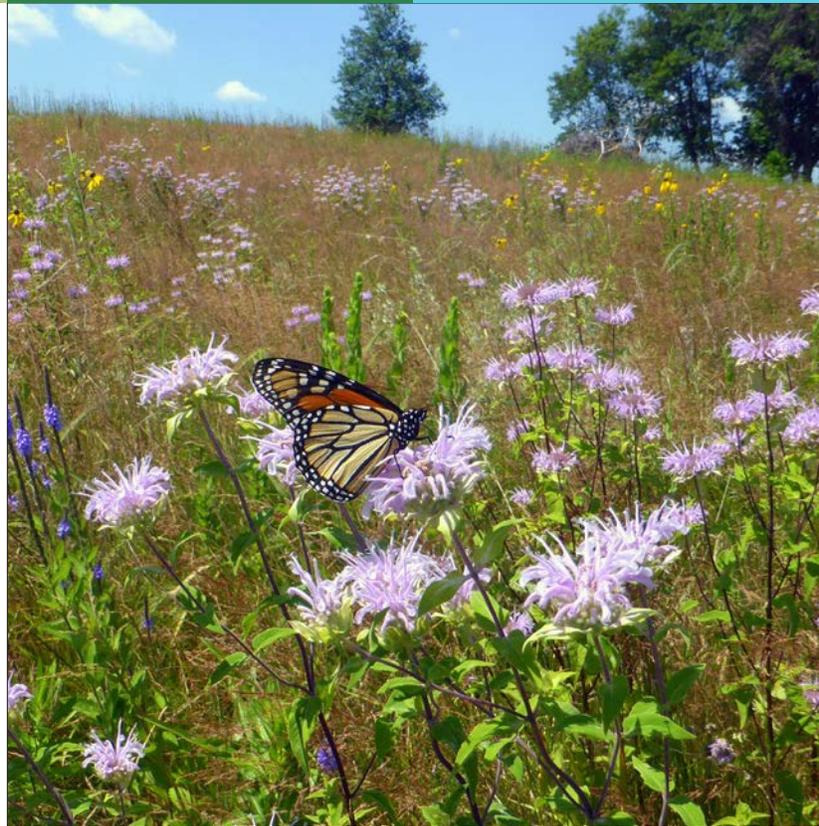
April 2019

News articles in recent weeks have carried warnings about an impending insect “Apocalypse”, and yet also stories of skies full of painted lady butterflies in California. Sometimes it is difficult to make sense of such conflicting messages. At the Xerces Society we maintain science at our core, and use evidence to guide our actions. We seek out answers to the many uncertainties about insect conservation and find ways to engage as many people as possible in addressing threats and rethinking how we care for our environment. People turn to us for guidance and practical solutions. We can only do this because of the enduring generosity of our donors and supporters. Thank you.

Matthew Shepherd, Director of Communications & Outreach

“Each species, however inconspicuous and humble it may seem to us at the moment, is a masterpiece of biology, and well worth saving.”

– E. O. Wilson



The eastern population of monarch butterflies that overwinters in Mexico is looking better than it has for some years, with a 144% increase from last year alone. This should be celebrated! It is good news and gives monarchs a fighting chance at recovery. However, we can't declare that monarchs are safe. The area monarchs occupy in Mexico is still 66% lower than it was twenty years ago—and the population of monarchs in the western states is in dire condition (see inside for more information about that). We need many more good years for real recovery. Whether you live in town or own a farm, manage a small yard or a large natural area, you can help monarchs. Plant native milkweed for caterpillars, grow lots of flowers with ample nectar for adults, and avoid pesticides. (Photograph by Xerces Society / Sarah Foltz Jordan.)



Connect, learn, discover

Our website contains a wealth of information about our work and what you can do to help invertebrates. Articles and updates are posted to our blog and you can sign up for our e-newsletter. You can also connect with us @xercessociety on Facebook, Instagram, and Twitter!

www.xerces.org

Please note our new mailing address for donations and membership renewals:

P. O. Box 97387
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(855) 232-6639 www.xerces.org



Call to Action to Help Western Monarchs

Because monarch butterflies migrate to overwintering sites, each year there is a chance to assess the health of the population. In Mexico, the size of the overwintering population is calculated by measuring the area of forest that the colonies cover. In California, where monarchs overwinter in smaller aggregations but at a greater number of sites, it is possible to count and estimate the actual number of butterflies.

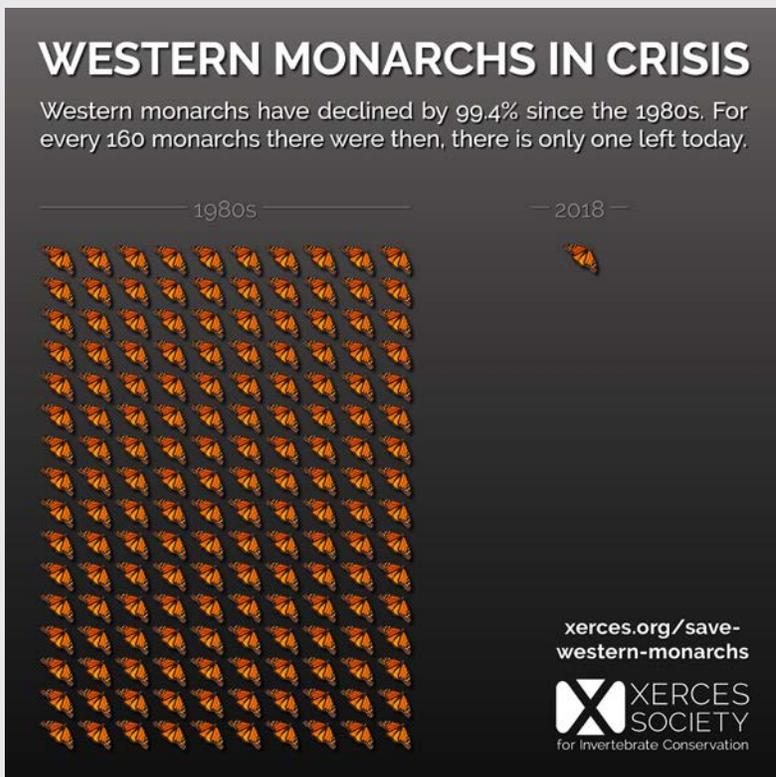
The numbers from Mexico were encouraging this winter: 6.05 hectares (14.95 acres) of colonies, a 144% increase from the prior year. The California numbers, in contrast, were terrible: an all-time record low of less than 28,500 monarchs. This number was an abrupt fall from the prior year—and a dizzying 99.4% decline from the numbers present in the 1980s. Where there were 160 butterflies 35 years ago, there is only one today.

In response, Xerces released a call to action that highlights the five most urgent conservation priorities for the western monarchs:

1. Protect and manage California overwintering sites.
2. Restore breeding and migratory habitat in California.
3. Protect monarchs and their habitat from pesticides.
4. Protect, manage, and restore summer breeding and fall migration monarch habitat outside of California.
5. Answer key research questions about how to best aid western monarch recovery.

Some of these actions can be done only at particular locations, at the overwintering sites, for example. Many of them, however, can be done anywhere, by anyone. Native milkweeds, the essential host plant for monarch caterpillars, can be planted in gardens, parks, on roadsides, under powerlines—wherever there is space. Nectar plants can also be grown anywhere, and will help fuel the adults while breeding and on their fall migration. In addition, you can help build a stronger understanding of what's happening by submitting sightings of monarchs (adults or caterpillars) or milkweeds to the Western Monarch Milkweed Mapper.

For more information about what you can do to help monarch butterflies in the western states, go to savewesternmonarchs.org.



Number of monarchs overwintering in California

1980s = 4,500,000

1990s = 1,235,000

2017 = 193,000

2018 = 28,500

savewesternmonarchs.org

MONTHLY GIVING

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Bumble bee foraging on peach blossom. (Photo: Nancy Lee Adamson.)

NATURAL HISTORY

Where Do Bees Go in Winter?

Spring is spreading across the United States. Plants are unfurling their greenery and blossoms are appearing—and with them, bees. Large, hairy bumble bees are among the first to be seen, along with smaller and comparatively drab mining bees, foraging on early blooming willows, fruit trees, and other plants. As spring progresses, mason bees, sweat bees, leafcutters, and others will become apparent. But where did they go during winter?

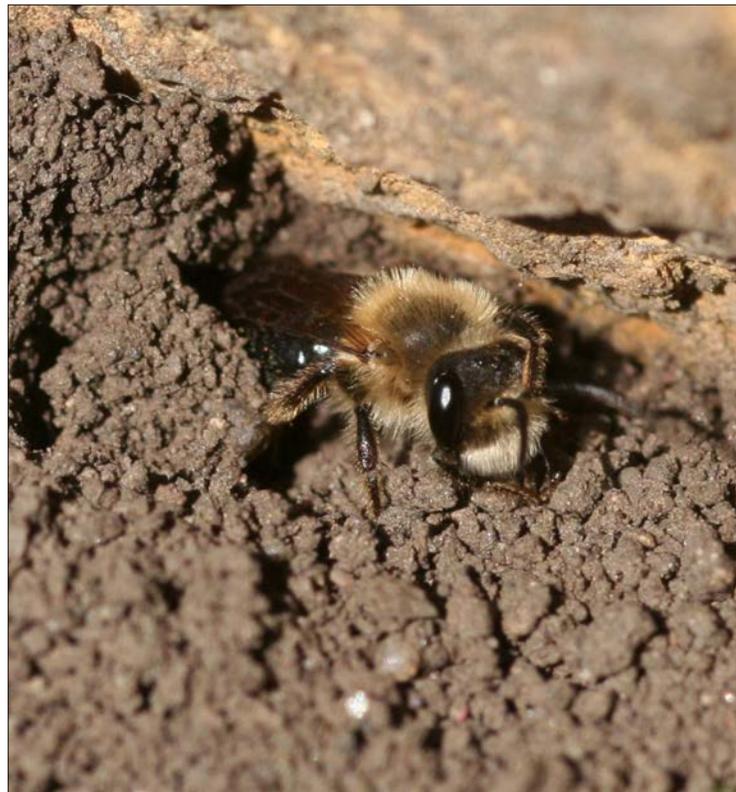
Unlike the nonnative honey bee, which keeps the colony active during winter, the 3,600 native species in the United States and Canada go dormant for much of the year. Most bees are solitary, with each female making and supplying her own nest during the spring or summer. She will die after a month or so, leaving her offspring to complete development in the nest, where they will remain until the following year. Bumble bees are unusual, because they live in a small colony, which grows through the summer. At season's end, most of the colony will die, leaving only a few mated queens to hibernate.

These are the bees that we are now seeing. Bumble bee queens are waking from hibernation and seeking a place to start their own colony, and new generations of solitary bees are emerging for a few weeks of adult life that will end with their legacy of a well-stocked nest.

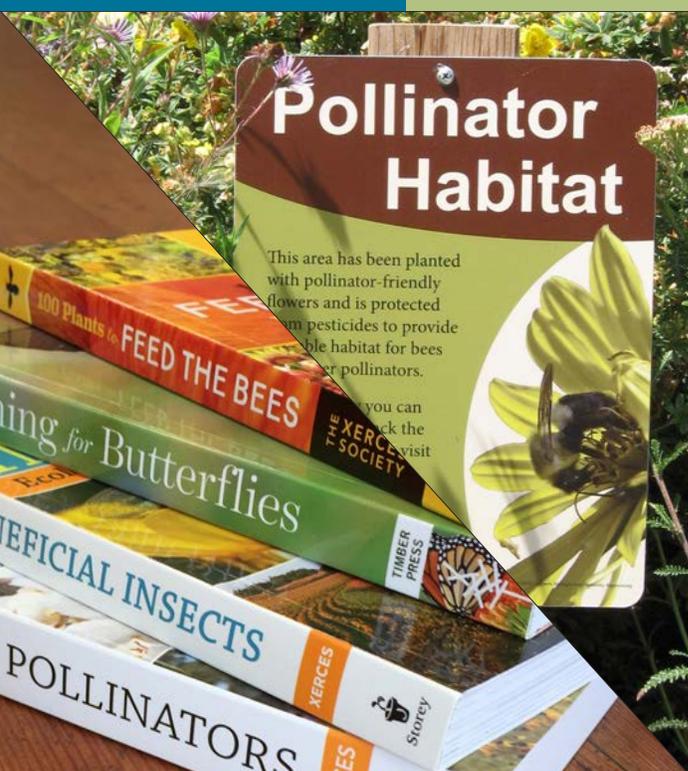
Nests are an essential aspect of pollinator habitat. About 70% of solitary bees nest in the ground, excavating narrow tunnels off which they create brood cells for their offspring. The others nest in old tree snags, hollow stems, or some other small cavity. Bumble bees like a dry space, such as an abandoned mouse nest.

Unfortunately, nests are sometimes overlooked in planting plans and garden designs—and yard maintenance. Make sure there is bare ground in which bees can dig. Don't tidy up all the messy corners of your garden; those are places bumble bees might nest. Keep broken twigs on pithy-stemmed shrubs like sumac, elderberry, or raspberry and don't cut down hollow-stemmed flowers such as aster, cup plant, and black-eyed susan. You can also make nest blocks or bundles of hollow stems like bamboo, but ensuring natural nest sites remain is a better solution.

A mining bee (genus *Andrena*) emerges from its nest tunnel. (Photo: Whitney Cranshaw, CSU, Bugwood.org.)



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Xerces in the Media

San Francisco Chronicle, 1/16/2019

California's most famous butterfly nearing death spiral

Scientists knew things were bad for the western monarch, but then “there was this other order of magnitude drop,” said Emma Pelton, a conservation biologist for the Xerces Society. “It’s mind-boggling. We’re now down below 1 percent of the historic population.”

Scientific American, 11/1/2018

As Insect Populations Decline, Scientists Are Trying to Understand Why

“The vast majority of studies that have come out in the last decade are showing a decline in populations or insect species or biomass,” says Scott Black, executive director of the Xerces Society, an invertebrate conservation nonprofit.

Washington Post, 10/15/2018

‘Hyperalarming’ study shows massive insect loss

The Portland, Ore.-based Xerces Society, a nonprofit environmental group that promotes insect conservation, recommends planting a garden with native plants that flower throughout the year.

