

Monarch Butterfly Discussion

for the
North Central Texas Stewardship Forum Webinar Series



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U.S. Fish and Wildlife Service

WHICH IS A MALE AND WHICH IS A FEMALE?



Female



Mark Musselman/National Audubon Society

Male

Tom Koerner/USFWS

Is the Monarch an Endangered Species?

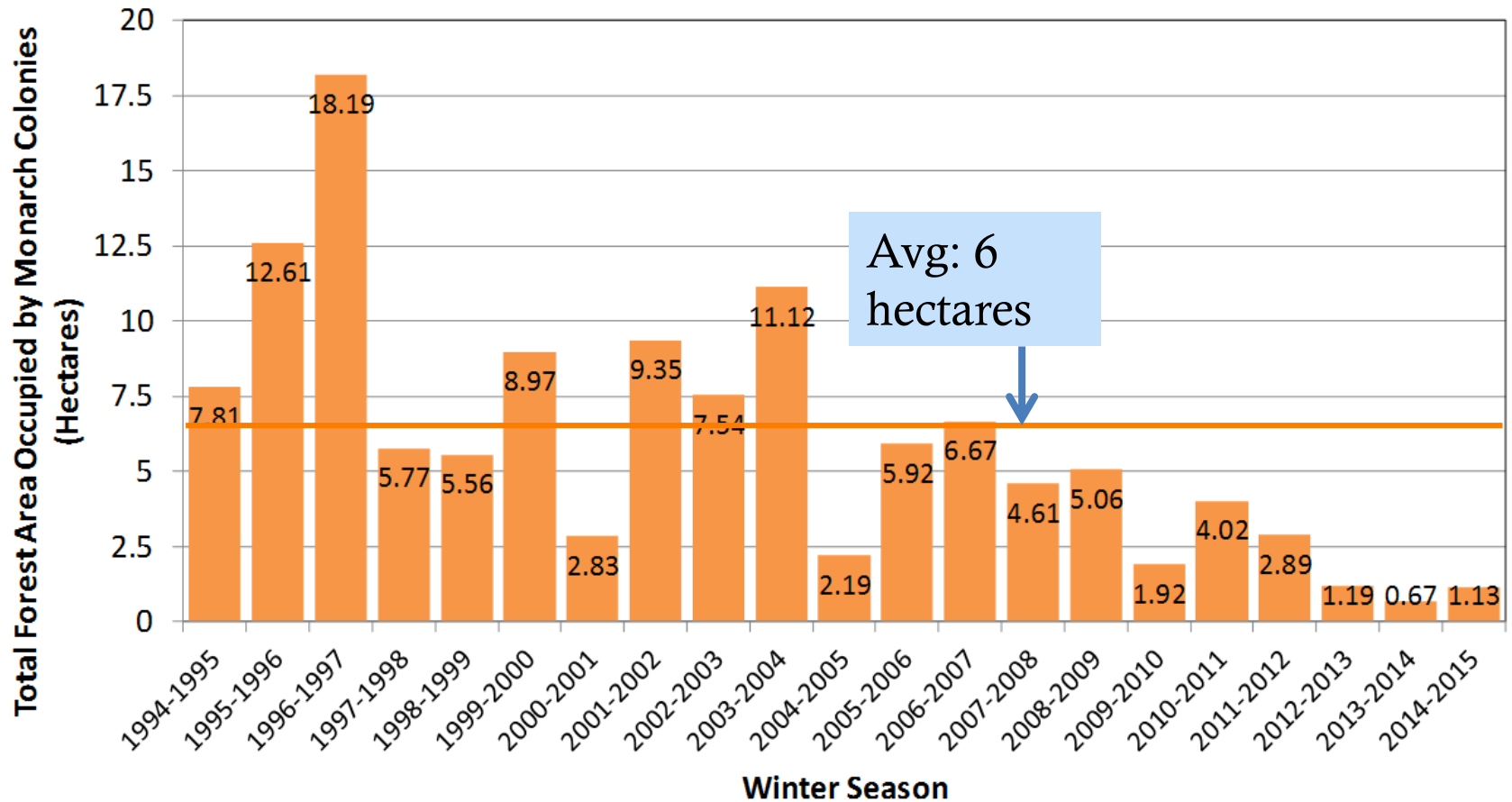
- No, monarch is not an endangered species
- A coalition of environmental groups petitioned the Fish and Wildlife Service to list the monarch butterfly as a threatened species
- Increased use of herbicide tolerant crops in breeding habitat
- Habitat loss including excessive logging in overwintering grounds

Is the Monarch an Endangered Species?

- Fish and Wildlife Service published a positive 90-day finding on December 31, 2014 in the Federal Register.
- Concluded that the petition presented substantial scientific or commercial information indicating that listed may be warranted.
- FWS initiated a status review and requested public comment through March 2, 2015.
- We specifically requested
 - (1) Any relevant aspects of the life history or behavior of the monarch butterfly that have not yet been documented; and
 - (2) Thermo-tolerance range and microclimate requirements of the monarch butterfly.

EASTERN POPULATION TRENDS

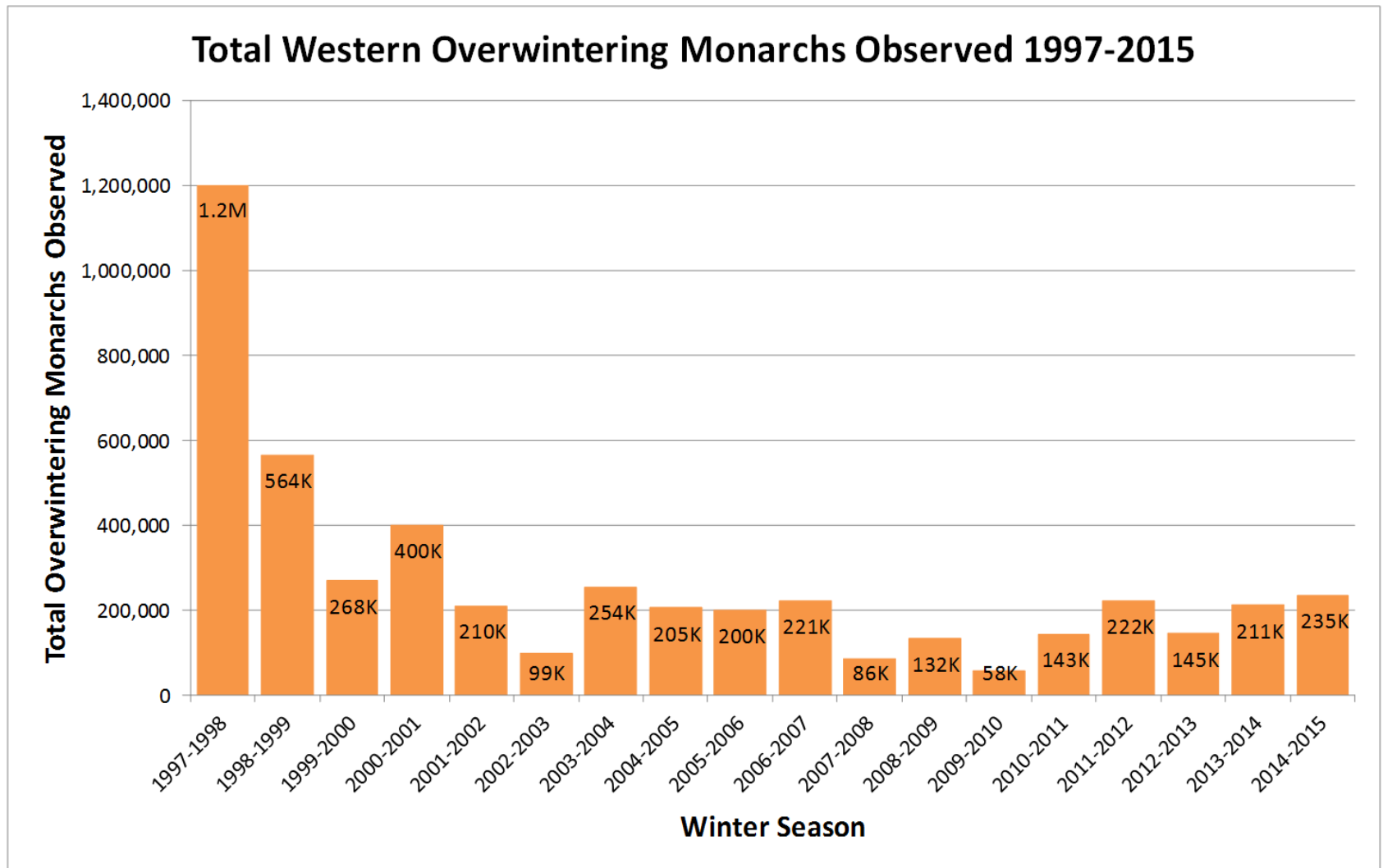
Total Area Occupied by Monarch Colonies At Overwintering Sites in Mexico
1994/1995 - 2014/2015



Plot courtesy of Monarch Joint Venture, using data from: WWF-Mexico & the Reserva de la Biosfera Mariposa Monarca (RBMM)

Photo: W. Caldwell

WESTERN POPULATION TRENDS



Plot courtesy of Monarch Joint Venture, using data from: Xerces Society's Thanksgiving Count Program

Photo: W. Caldwell

Threats

- Pesticides
- Habitat loss
- Climate
- Natural enemies
- Disease
- Invasive species:
 - Swallow-worts may crowd out native milk weed
 - Monarchs cannot feed on swallow-wort
 - Eggs laid on swallow-wort will not survive

Other Factors

- Hurricane Patricia, the largest storm on record in the Western Hemisphere, tore into rural Mexico in late October, but monarch butterflies were nowhere to be found.
- Legions of the black and orange butterflies typically migrate through the area this time of year on their return journey from summer homes in Canada, but the monarchs altered course when Patricia's heavy rains and winds of up to 200 mph headed for the mainland.
- From Greenwire News: Tuesday, October 27, 2015

FWS MONARCH CONSERVATION STRATEGY

LEADERSHIP

- Trilateral Committee
- Association of Fish & Wildlife Agencies
- National Fish & Wildlife Foundation **\$1.2 M → \$4M+**

HABITAT

- 200,000 acres of habitat restored or enhanced (FY15)
- Natural Resource Conservation Service (NRCS) and Farm Bill programs

SCIENCE

- U.S. Geological Survey Monarch Science Partnership (Powell Center)
- National Inventory & Monitoring Strategy

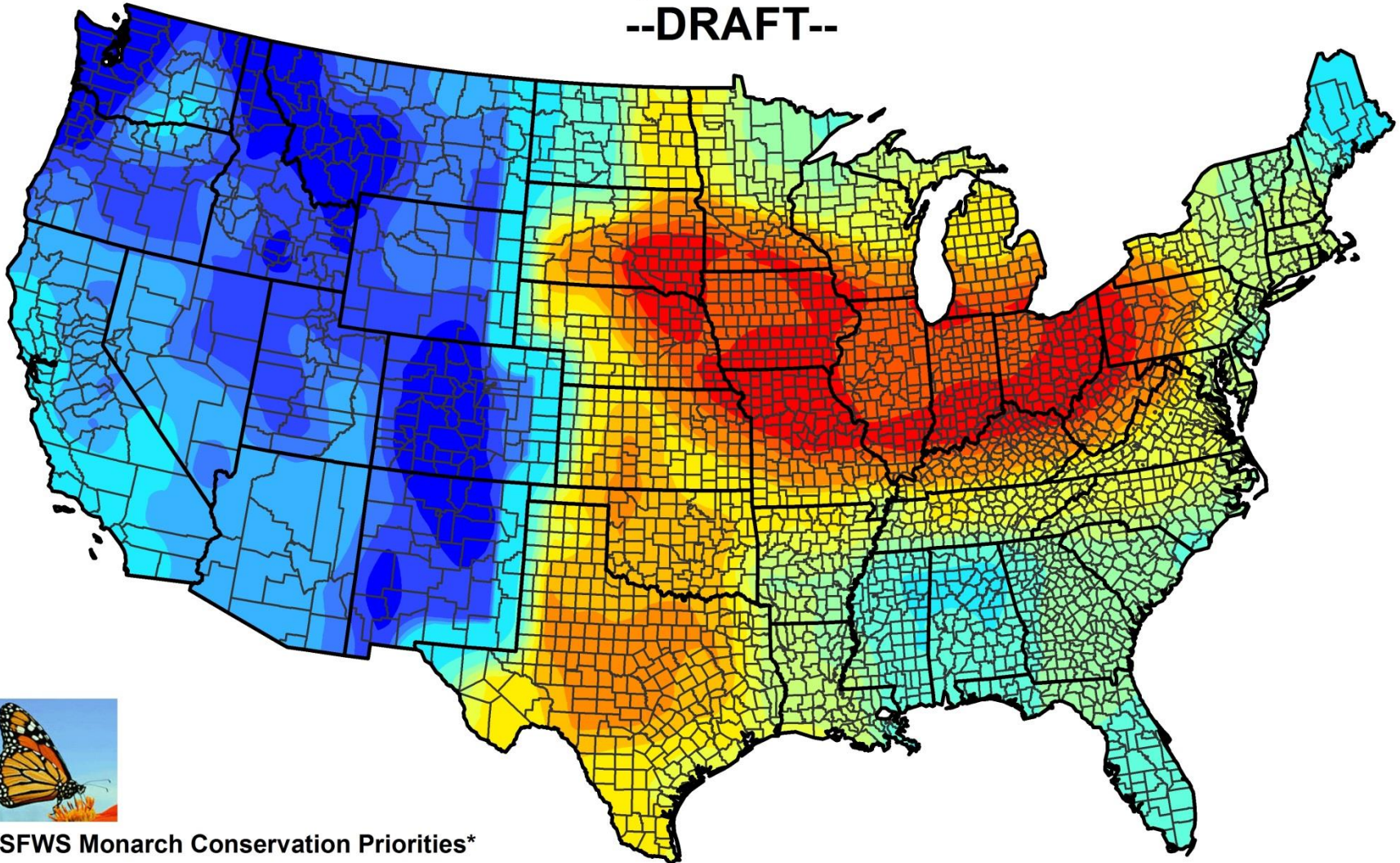
PEOPLE

- Communications Campaign
- National Wildlife Federation
- Over 750 schoolyard habitats, pollinator gardens (FY15)

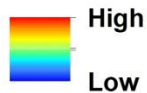


U.S. Fish & Wildlife Service

USFWS Monarch Butterfly National Conservation Priorities --DRAFT--



USFWS Monarch Conservation Priorities*



**This map is intended to inform U.S. Fish and Wildlife Service national-scale monarch butterfly conservation work. It was created using tools developed by the USGS-led Monarch Conservation Science Partnership, in this case highlighting priorities for maximizing overwintering population-level outcomes through a combination of focusing on geographic priorities, opportunity areas, and threats to be avoided. This is a DRAFT version and can be re-scaled or customized for different decisions and/or scales; updates will be ongoing, using the best available science.*

Ongoing Conservation Activities

- Fish and Wildlife Service working with partners to provide funding and technical assistance.
- Projects supported by the Southwest Region include
 - TOPMOP - the Texas and Oklahoma Pollinators and Monarch Partnership to promote outreach in both states;
 - FWS habitat improvement projects;
 - Grassland Restoration & Enhancement Program (GRIP) collaborations;
 - Seed projects in Texas and Oklahoma; and projects that engage citizen science milkweed seed collecting; and monitoring, and research in the community; and
 - Engaging youth and communities is a top priority in the Region, and monarch conservation projects provide a unique and historical opportunity to engage communities, especially young people, in conservation.

USFWS Fish and Aquatic Conservation Stations Helping to Conserve Monarchs

*Wolf Creek National Fish Hatchery, Kentucky, is
also growing milkweed*



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*To increase monarch
habitat.*



USFWS

Thank you

