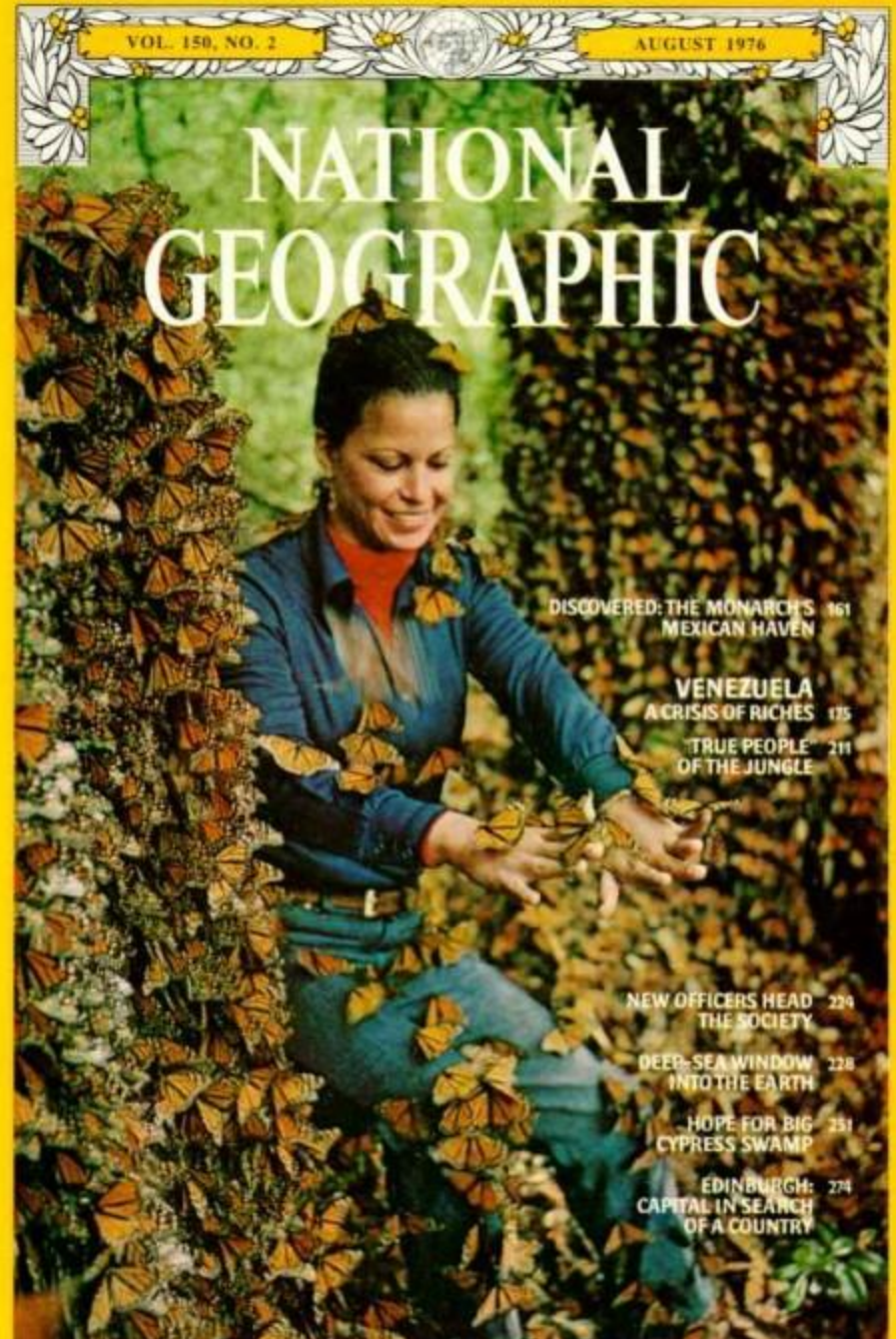


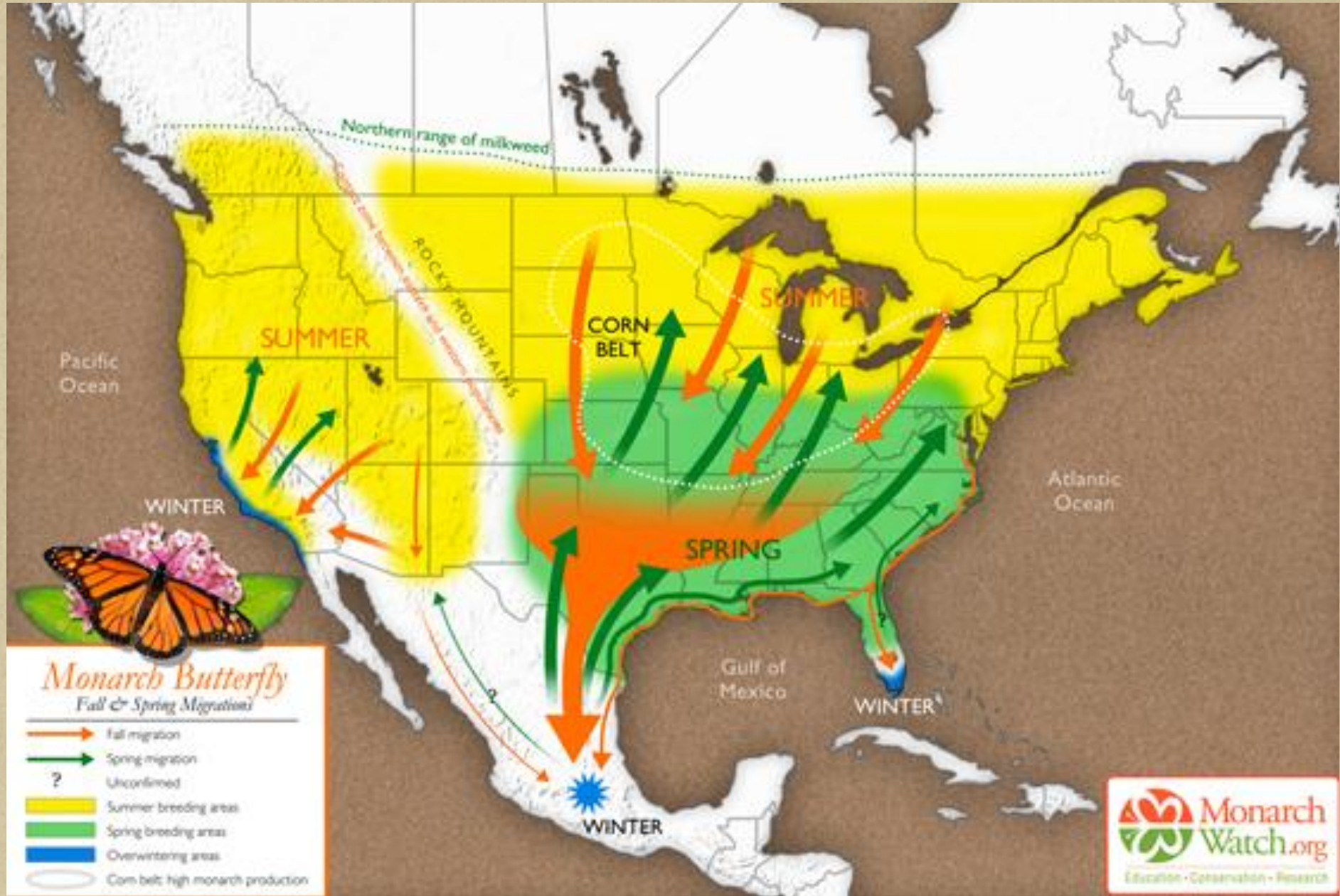
Battle for Butterflies

Grow Green Landscape Professional Training
February 3, 2017





MONARCH MIGRATION



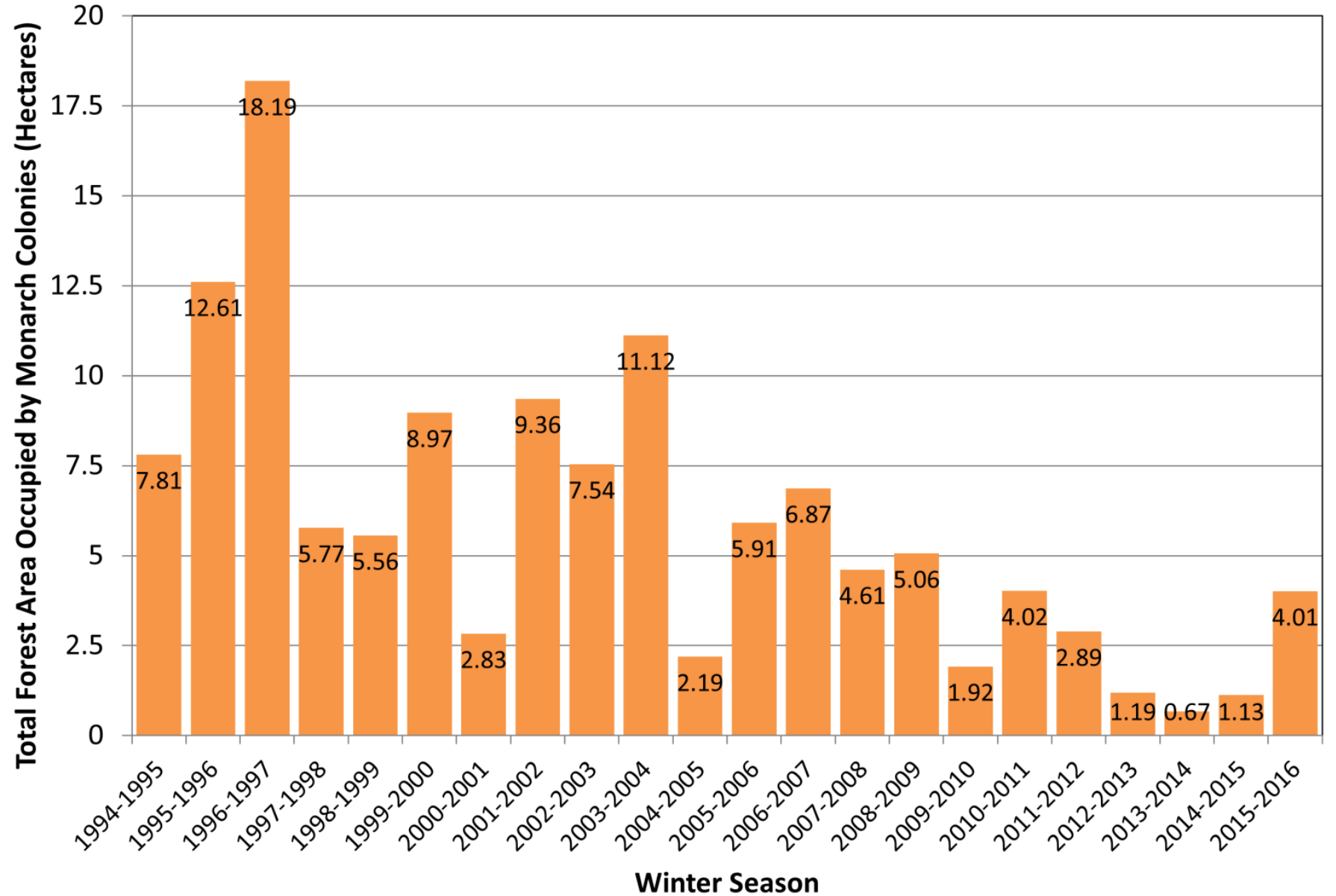
MONARCHS IN CRISIS

Monarch butterfly
populations have plummeted
more than 80%
in the last 20 years

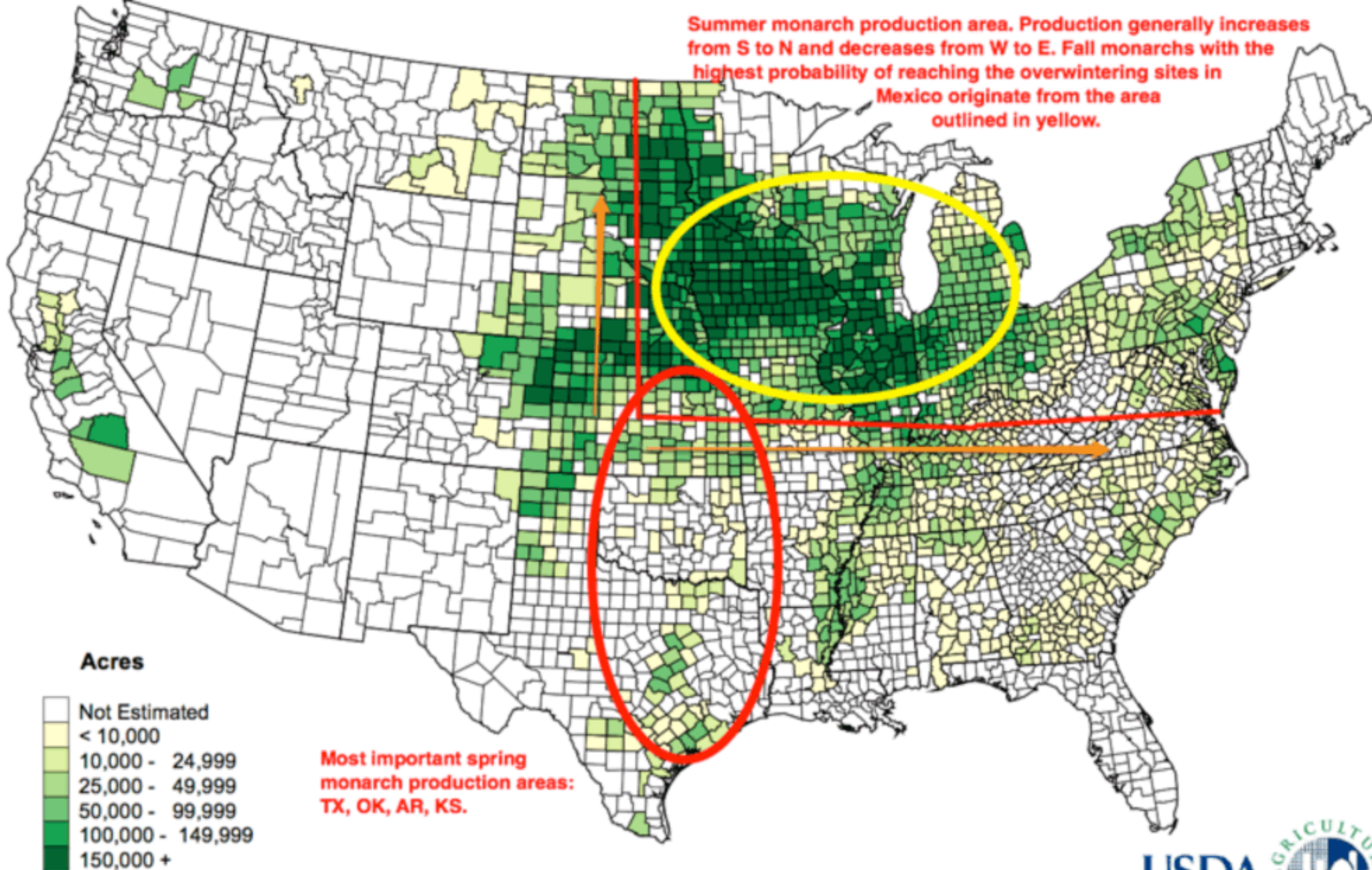


POPULATION DECLINING

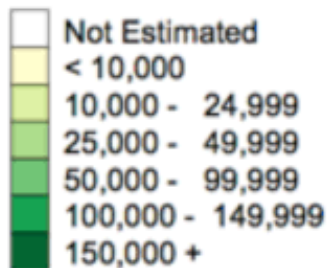
Total Area Occupied by Monarch Colonies At Overwintering Sites in Mexico
1994/1995 - 2015/2016



Summer monarch production area. Production generally increases from S to N and decreases from W to E. Fall monarchs with the highest probability of reaching the overwintering sites in Mexico originate from the area outlined in yellow.



Acres



Most important spring monarch production areas: TX, OK, AR, KS.





THREATS TO THE MONARCH

CHEMICALS: Pesticides kill monarch caterpillars & butterflies

CLIMATE CHANGE:

- Key habitat must adjust to warmer temperatures, strong storms & deeper droughts
- Climate change can alter the timing of migrations





NATIONAL POLLINATOR GARDEN NETWORK





A campaign to register a million public and private gardens and landscapes to support pollinators.



CERTIFIED
**WILDLIFE
HABITAT**



FOOD • WATER • COVER • PLACES TO RAISE YOUNG



This property is recognized for its commitment to sustainably provide the essential elements of wildlife habitat. nwf.org/garden

- Food
- Water
- Cover
- Place to Raise Young
- Sustainable Practices



MONARCH

Wranglers™

TEXAN  NATURE

MAYORS' MONARCH PLEDGE



Milkweeds for Monarchs: The St. Louis Butterfly Project

Fading Flutters

Monarch butterflies play an important pollinator role in our ecosystem. Female monarchs only lay their eggs on milkweed plants, and monarch caterpillars feed solely on milkweed. Due to the loss of milkweed, monarch populations have declined 97 percent between 1996 and 2013. We can help monarchs by planting more milkweed.



Monarch butterfly on milkweed. Photo by: [Lizbeth G. Lopez](#) (CC BY-NC-SA)



Monarch butterfly life cycle: caterpillar, chrysalis, and adult.

Monarch butterfly on milkweed. Photo by: [Lizbeth G. Lopez](#) (CC BY-NC-SA)

Milkweeds for Monarchs

The City of St. Louis has developed Milkweeds for Monarchs to help monarch butterflies flutter and flourish. This is just one of many milkweed gardens that have been planted as a part of the program to help monarchs thrive.



Sustaining People, Plants and Pollinators

Butterflies, animals and people all share a need for a high quality natural environment. Clean water, green spaces and native plants help ensure that we have the food we need and natural spaces that support our health and well-being.



A Magnificent Migration

In addition to milkweeds, monarchs need nectar to provide energy for their migratory journey and to build reserves for the winter. St. Louis is an important part of the monarch's migration path. Each fall, millions of monarch butterflies migrate to Mexico and California. In the spring, most monarchs return to their Midwest breeding areas, and the cycle starts again.

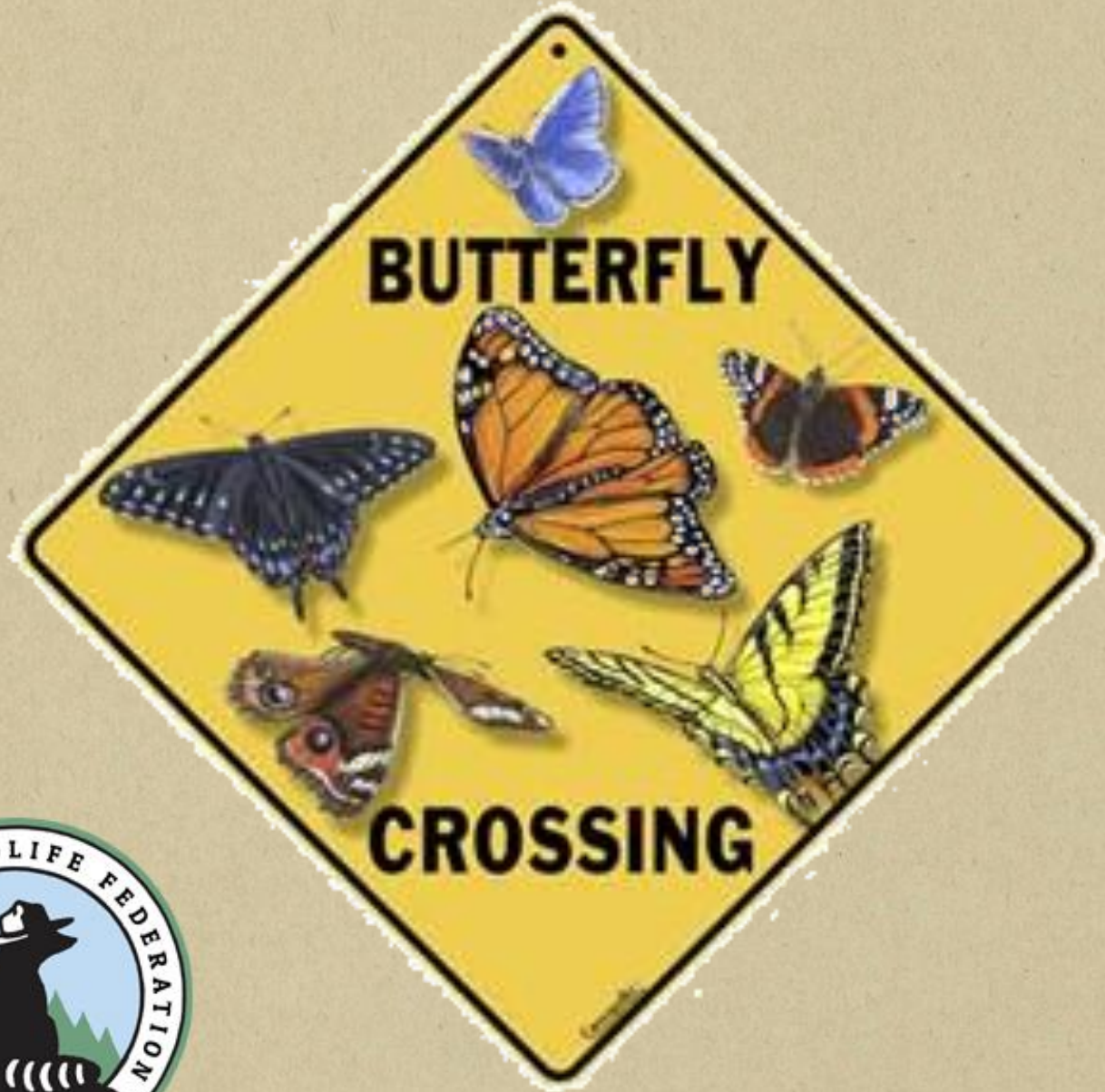


How You Can Help

There are numerous milkweed species native to St. Louis, such as butterfly weed and swamp milkweed. To help monarchs and other pollinators, use native plants in your garden, and avoid using pesticides, herbicides and fertilizers.

For more information and to learn how you can help make your own monarch garden, visit stlouis-mo.gov/sustainability.





Austin Parks Department Pollinator Challenge



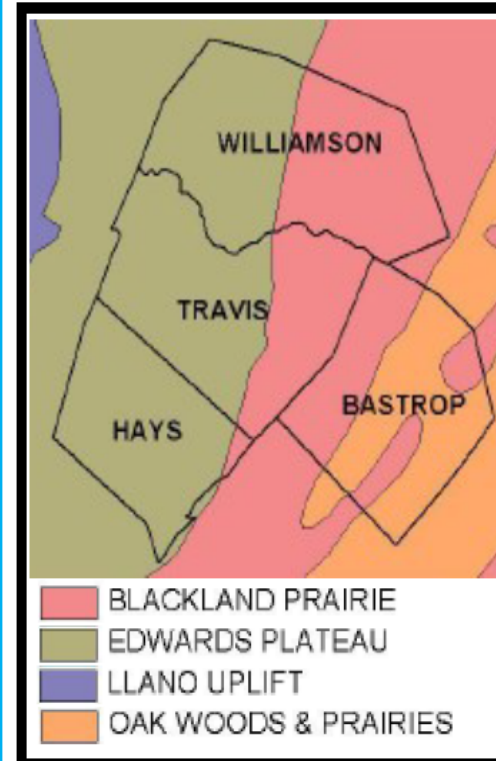


PLANTING FOR MONARCHS IN AUSTIN

IDENTIFYING THE PERFECT SITE

- ◆ 6-8 hours of sun
- ◆ Good drainage
- ◆ Protected from wind
- ◆ Nearby shaded area
- ◆ Not a high traffic area
- ◆ Easily accessible
- ◆ Nearby water source
- ◆ Structure for chrysalis

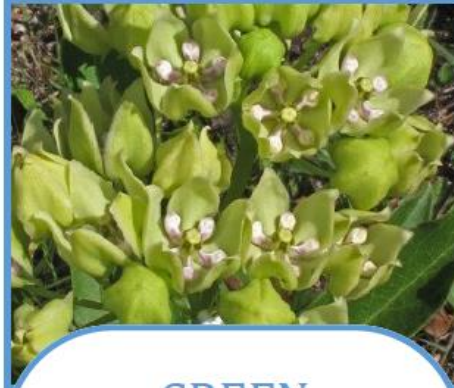
WHAT SOIL IS PRESENT?



Use the NRCS website for information on the type of soil on your property. Search for web soil survey. For tips on how to use the soil survey, visit www.groworganic.com

MILKWEED: MONARCH BABY FOOD

Monarchs cannot survive without milkweed. It is the only plant the monarch caterpillar will eat and the only plant the monarch butterfly will lay her eggs on. An ideal monarch habitat would contain several milkweed plants to ensure an abundant food source for monarch caterpillars.



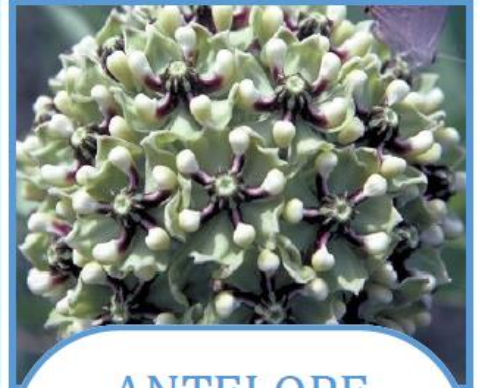
GREEN
ANTELOPEHORN

*Asclepias
viridis*, likes
full sun and
dry areas.



ZIZOTES
MILKWEED

*Asclepias
oenotheroides*,
likes full sun
and sandy
rocky soil.



ANTELOPE
HORN

*Asclepias
asperula*, likes
full sun to light
shade and
desert or sandy
areas.

NECTAR PLANTS: MONARCH BUTTERFLY FOOD



AUTUMN SAGE

Salvia greggii, likes full to partial sun and rocky soil, generally found in the Edwards Plateau. Blooms from March-Nov.



GREGG'S MISTFLOWER

Conoclinium greggii, likes morning sun or partial shade. Tolerates poor soil. Blooms from March-Nov.



NARROW-LEAF
CONEFLOWER

Echinacea angustifolia, likes full sun or partial shade and dry soil. Blooms from May-July.



PRAIRIE VERBENA

Glandularia bipinnatifida, likes partial shade and well drained soil. Blooms from March-Oct.

NECTAR PLANTS: MONARCH BUTTERFLY FOOD



MAXIMILIAN
SUNFLOWER

Helianthus maximiliani, likes full sun to partial shade and rocky or clay soil. Blooms from Aug-Nov.



BLUE MISTFLOWER

Chromolaena odorata, likes full sun to partial shade and moist sand or clay soil. Blooms from July-Dec.



ORANGE ZEXMENIA

Wedelia acapulcensis, likes full to partial sun and dry well drained soil. Blooms from May-Nov.



FROSTWEED

Verbesina virginica, likes shade and rocky soil, generally found in the Edwards Plateau. Blooms from Sept-Nov.

DEMONSTRATION GARDENS

Visit the following gardens to see what a successful monarch habitat looks like:

Webb Middle School

Mathews Elementary School

Covington Middle School

Lady Bird Johnson Wildflower Center

Austin Parks Headquarters

Zilker Botanical Gardens













MONARCH WAYSTATION



This site provides milkweeds, nectar sources, and shelter needed to sustain monarch butterflies as they migrate through North America. Certified and registered by Monarch Watch as an official Monarch Waystation.

CREATE, CONSERVE, & PROTECT MONARCH HABITATS

WWW.MONARCHWATCH.ORG

ACC gardens
NORTHBRIDGE CAMPUS

OUR MISSION:
To provide a sustainable, educational, and recreational space for the ACC community. The gardens are designed to be a source of inspiration and a place for learning and discovery.

PLANT TYPES:

- MILKWEEDS:** Milkweeds are essential for monarch butterflies. They provide a place for monarchs to lay their eggs and for their caterpillars to feed. Examples include Butterfly Milkweed, Black Milkweed, and Milkweed.
- NECTAR PLANTS:** Nectar plants provide a source of food for monarch butterflies. Examples include Butterfly Bush, Butterfly Milkweed, and Milkweed.
- SHADE PLANTS:** Shade plants provide a place for monarch butterflies to rest and shelter. Examples include Butterfly Milkweed, Black Milkweed, and Milkweed.

GET INVOLVED:
Join us for our next garden tour on [Date]. We will have a professional gardener on hand to answer your questions and provide you with a list of plants to grow at home.





Other Resources

Xerces Society: xerces.org/pollinator-conservation/plant-lists

Monarch Watch: monarchwatch.org

Monarch Joint Venture: monarchjointventure.org

Monarch Gateway: monarchgateway.org

Lady Bird Johnson Wildflower Center: wildflower.org

City of Austin: [Austintexas.gov/pollinatorchallenge](https://austintexas.gov/pollinatorchallenge)

Texas Parks & Wildlife: tpwd.texas.gov

