Missourians For Monarchs

MARCH NEWSLETTER 2018

Edited by Karen Leslie and Judy Meixner

Master Naturalists and Master Gardeners

Missourians for Monarchs
Naturalists & Gardeners
A Brief History
By
Lee Phillion

In December, 2014, Bob Lee, a member of the Confluence Chapter of Missouri Naturalists, gathered a small cadre of fellow naturalists to initiate a new project. Bob's idea was to enroll Missouri Master Naturalist and Master Gardeners across the state, along with Garden Clubs and individual gardeners in a united effort to help rebuild and maintain self-sustaining populations of all species of butterflies and pollinators. He envisioned a core group of volunteers with key functions working to assist partner groups in realizing their ideas.

Since 2014, Missourians for Monarchs-Naturalists and Gardeners (MFM-N&G) partners have played key roles in organizing the coalition of public and private organizations that was formed in 2016 under the Missourians for Monarchs banner. Our MFM-N&G partnership is a chapter member of that broader alliance.

The overarching mission of MFM-N&G is to help partners understand the causes and drivers of the significant decline in monarch and pollinator populations, and to share effective strategies for reversing this downward trend. In turn, partners are encouraged to broadly share the knowledge with fellow Missourians.

Specific actions in support of this mission include:

* Writing and managing grants for the purchase of seeds, plants and materials to create new habitat or improve established habitat by our partners.

* Providing information on propagating plants and effective planting practices.

* Sharing best practices among partners, and promoting successful efforts of our partners to the public.

* Aggregating partners' results for inclusion in national databases.

Missouri is recognized as a leader among all states for early development and implementation of a statewide plan to significantly improve donations for monarchs and pollinators, and MFM-N&G continues to play an important role in developing and implementing the Missouri Monarch and Pollinator Conservation Plan.

Missourians for Monarchs—Naturalists and Gardeners welcomes volunteers from our partner groups and the general public to participate in and to play leading roles in the partnership, where their skills and talents will be valued.

Please join our quest to preserve monarchs and pollinators. To volunteer or to have questions answered, please contact:

Bob Lee at: **rlee010@earthlink.net**

How We Can Help the Monarch Butterfly – and It Can Help Us

Published on January 29, 2018

by: Robb Fraley

Chief Technology Officer at Monsanto

In all of nature, few creatures are more spectacular than the monarch butterfly, which amazes us not only with its beauty but also with its annual multi-generational, long-distance migration.

Over the last 20 years, however, these remarkable insects have faced difficult challenges stemming from extreme weather, climate change, deforestation in Mexico, predators, and breeding habitat loss in North America. The monarch population has been in decline since the 1990s, and there are fears that without significant intervention this trend could continue. This trend – and the rising efforts to reverse it – makes for a compelling story. But the story is not just about the monarch's survival; it's also about the power of public-private partnerships and voluntary conservation efforts to bring together different sectors of society to benefit biodiversity.

Most people would agree that effort needs to be focused on the monarch's habitat because it's the variable in this plight that's most in our control. The reality is most of the problems the monarch faces are complex issues that are difficult to affect in the short term. But expanding the monarch's habitat in North America is not complicated, at least conceptually. It's a matter of planting more milkweed – the plant on which the monarch larvae, or caterpillar is completely dependent – and more nectar-containing flowers – on which the adult butterflies feed. By doing so, we can greatly strengthen the foundation these creatures need to withstand their other pressures.

One way to accomplish habitat restoration would be through a declaration by the U.S. Fish and Wildlife Service (USFWS) that the monarch butterfly, and perhaps its habitat too, are officially threatened under the Endangered Species Act. In fact, the USFWS is weighing that option, and is expected to announce its decision in June, 2019.

In the meantime, however, the USFWS is evaluating monarch conservation measures across the monarch migration route, including volunteer efforts by the agricultural sector to establish or expand habitat. If the USFWS finds these voluntary efforts are sufficiently robust, it may well determine that the threatened designation is unnecessary. That's what it did previously with the Greater Sage-grouse and the New England cottontail rabbit.

And that's the outcome that I think would be much better for farmers, agricultural and society as a whole.

On the other hand, the listing would lead to a tangle of regulations that potentially could be complex and onerous. This possibility is especially worrisome given the monarch's vast geographical range; by contrast, most species that are officially declared threatened live in a limited geographical area. The prospect of a threatened listing could leave some farmers wondering if they should *remove* milkweeds on or near their property, so they wouldn't have to deal with regulations that might affect how they work their land.

Voluntary efforts, on the other hand, would be more predictable and productive. Some might involve financial incentives. The reputation of the agriculture industry would be greatly enhanced.

But most important, I believe, a breakthrough would be achieved with implications that go far beyond the monarch itself.

In recent years, a damaging split has opened between proponents of agriculture and proponents of conservation. The agricultural camp emphasizes the importance of feeding a rapidly growing population; the conservation camp emphasizes the importance of preserving biodiversity.

The division cannot be allowed to continue. *Both* priorities are vital… and both are possible to achieve.

The new tools of modern agricultural, in my view, offer a way out of the conflict. Using them, we can emphasize both priorities. And the movement to help the monarch can only encourage us along this path.

How We Can Help the Monarch Butterfly – and It Can Help Us

(*cont.*)

To be specific: With the new digital tools we have today, farmers can know exactly where, when and how much fertilizer to apply to their fields, so they can save money, optimize fertilizer use, reduce the release of nitrous oxide (a potent greenhouse gas) and curb nutrient runoff—enabling them to reduce water pollution and eutrophication (algae overgrowth due to excess nutrients in the water).

Using these same tools, farmers can identify the nonproductive areas of their fields and convert them from cropland to conservation habitats that include milkweeds and other nectar-producing plants.

Digital ag tools are even more beneficial when integrated with biotech crops that have built-in insect protection, which reduces the amount of pesticides, farmers need to spray. From 1996-2015, this reduction decreased the environmental impact from herbicide and insecticide use by 19%. During the same period, productivity gained through biotechnology saved 429 million acres of land from cultivation (to put that into perspective, this conserved biodiversity on a combined area bigger than the state of Alaska).

Concern for the monarch should help drive the adoption of other sustainable farming practices, like cover cropping and conservation tilling, but monarchs aren't the only species that would benefit. More conservation habitat acreage would also benefit honey bees, bumblebees and other native bees and birds like the Bobolink and Bobwhite quail. And this enhanced biodiversity—besides being of value in itself—would benefit farmers by providing increased pollination, integrated pest management, and improved soil health.

As the primary corporate of the Monarch Butterfly Conservation Fund, a public-private partnership administered by the National Fish and Wildlife Fund (NFWF), we've helped fund projects that improve the availability of high-quality habitat and also increase the capacity to expand future conservation efforts.

Through gifts to Monarch Watch, a nonprofit education, conservation and research program based at the University of Kansas, we're assisting in the monitoring of the Fall migration and the production of milkweeds for free distribution along the migration paths. And as a founding member of the Monarch Collaborative, convened by the Keystone Policy Center, we're partnering with some of the top experts in biodiversity and conservation to identify practices that support healthy monarch populations, especially in agricultural landscapes.

All these efforts, and more, represent a good start. But the monarch needs more champions. State highway departments, for example, can plant milkweeds in highway medians; more homeowners can join in the movement to add monarch habitat to household gardens.

But above all, and right now, the monarch needs the cooperation of more farmers, who would benefit greatly in return. By joining these voluntary efforts to help the monarch, farmers would show that, even on our increasingly crowded planet, it is possible to feed the world and help humans thrive, while also preserving our precious inheritance of biodiversity. We can and must do both.

Missourians For Monarchs Collaborative Welcomes New Coordinator

DonnaMarie Duffin

COLUMBIA, MO—December 8, 2017, Missourians For Monarchs recently named Donnamarie Duffin as the collaborative's Monarch & Pollinator Coordinator in the state of Missouri. Donnamarie will work to coordinate the implementation of the Missouri Monarch and Pollinator Conservation Plan. This will increase habitat for monarch butterflies on public and private land, through voluntary citizen involvement and seek ways for partners, communities, and agencies to coordinate similar efforts.

"We're excited to join with more than 30 partners in the Missourians for Monarchs collaborative to make this announcement," said Casey Bergthold, Pheasant Forever and Quail Forever's Missouri State Coordinator. "Donnamarie's unique skillset, proven abilities and dedication to wildlife conservation make her an excellent selection to lead and implement our statewide plan."

The Collaborative includes conservation and agricultural organizations, state and federal agencies, as well as utilities, agribusinesses and cooperatives. Funding partners for the Coordinator include the USDA Natural Resources Conservation Service, U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, Missouri Department of Conservation, MFA Incorporated, Monsanto and Pheasants Forever and Quail Forever.

"The monarch butterfly is an iconic species that has captured the attention of millions of people across North America," said Donnamarie Duffin, Monarch & Pollinator Coordinator for the Missourians for Monarchs Collaborative. "The work we do to improve monarch butterfly habitat will benefit other pollinator and wildlife species. It will support our food production systems, improve water quality, and sustain our native plant communities. I'm looking forward to becoming an ambassador and advocate for the monarch and I am honored to be part of this historic collaborative."

Donnamarie brings nearly 20 years of professional experience in project management and coordination. She holds a B.S. degree in Management Information Systems from Goldey Beacom College in Wilmington, Delaware and a B.S. degree in Wildlife and Conservation Biology from the University of Rhode Island. Prior to joining Pheasants Forever and Quail Forever, Donnamarie served as Project Manager within various state, federal, and private sector organizations.

She joins the Collaborative having come, most recently, from the Missouri Department of Conservation, where she held several positions including the role of Missouri's State Wildlife Action Plan Coordinator. For more information about how your organization can join this effort or about the work of Missourians for Monarchs, contact Donnamarie Duffin at (401) 474-5131 or dduffin@quailforever.org.

Habitat Projects with National Fish and Wildlife Foundation Funds

By

Susan Wrasmann

Habitat Coordinator

Update on NFWF Projects 2016-2018

The winter of 2017-2018 has been light as far as storms and precipitation go, but has been plenty cold and reminds us of the kind of weather we used to count on for germinating native seed once spring arrived. Almost all native forb (wildflower) seed requires a period of cold, moist conditions to "stratify" or vernalize and break dormancy when temperature and light signal germination.

It was a happy coincidence that nearly all the Missourians for Monarchs—Naturalists and Gardeners habitat projects were ready to be seeded this winter. We applied for funding from National Fish and Wildlife Foundation along with the Missourians for Monarchs State collaborative in 2016 and 2017. The grant period for each is two years but most of the 2016 projects needed a year of site preparation and most of the 2017 projects had already been prepped. Shortly after the first of the year we submitted orders for eleven projects totaling 177 acres. The seeds are starting to arrive and land managers are happily mixing and spreading seed in time for a few more cold snaps and perhaps even some welcome snow.

What can you do if you are not a conservation area or park, but just want to convert a few acres of your property to pollinator habitat? Your best bet is to apply for funding from the USDA pollinator programs for private landowners. Your MDC Private Land Conservationist is your key to unlocking the alphabet soup of USDA programs available to you. These experts work out of the USDA offices in many counties and you can look them up on the Missouri Department of Conservation website or call your nearest USDA office. There are also many grants available for smaller projects in city parks or even green spaces in housing developments. Some, like Bayer's Feed a Bee program, have been described in past newsletters. There is a lot of attention being paid to pollinator conservation and more and more organizations and agencies are getting involved. Subscribe to Monarch Joint Venture's email or visit their website to find out all the Partners involved with monarch conservation that might offer small grants. Even Missouri Prairie Foundation offers a small grant each year.

Projects seeded this winter included:

Audubon Nature Center in Phelps County—**17 acres**
Robert M White Conservation Area in Audrain County—**10 acres**
Eagle Bluffs Conservation Area in Boone County—**15 acres**
Oak Hill School in Dent County—**3 acres**
Busch Memorial Conservation Area in St. Charles County—**20.5 acres**
Hite Prairie Conservation Area in Morgan County—**14.6 acres**
Great Rivers Greenway Dardennes Creek in St. Louis County—**30 acres**
Broemmelsiek Park in St. Charles County—**9 acres**
Moniteau Creek Conservation Area in Howard County—**18 acres**
Whetstone Creek Conservation Area in Callaway County—**20 acres**
Danville Conservation Area in Montgomery County—**20 acres**

Benefits of Being on the Rolla Park Board
or
How the Mayor's Monarch Pledge Morphed into a Natural Habitat Area at a Construction Site

By
Susan Wrasmann
Habitat Coordinator

In an example of how one thing leads to another, a group of us approached the Mayor of our city with a proposal to join the Mayor's Monarch Pledge a few years ago. The city administrator and mayor listened to our offer to help beautify the town with native plantings for monarchs and encourage homeowners to create habitat for pollinators. Presentation over, the mayor said he was pleased to hear our request because "usually people who come to us want something, and you just want to *do* something for the city. They had suggestions for city parks we could plant and paved the way for us to put in a large pollinator garden in the biggest park in town. We also got a pass to set up at the local Farmers Market for a yearly native plant sale and help promoting a fall festival at the local Audubon Bird Sanctuary and Nature Center.

About a year later, I got a call from the mayor asking if I would be willing to serve on the Rolla Park Board. Seeing no good reason to refuse, I joined and got my first taste of city politics, Well, not really politics exactly, usually our decisions are not controversial! We bring good things like new playgrounds and upgrades to park facilities. And native plants! It turns out once the door is opened all kinds of benefits accrue. This year I am working with the city on a beautification project at a major new shopping complex. Four acres will be planted this winter in native wildflowers, including milkweed, and warm season grasses. A large interpretive panel is planned along with smaller signs along a concrete pathway and bridge over a creek that runs though the project. I can't wait to share the results of these pages in a year or two!

When the mayor called again this year to ask if I would continue for a three-year term I said yes, of course!

Missouri S&T Students Plant a Biology Experiment

By

Susan Wrasmann—Habitat Coordinator

On the morning of December 2, 2017, six Missouri S&T biology students started a year-long study of pollinators by planting native forb seeds on a tenth of an acre plot near the facilities building north of Interstate 44 in Rolla. Hannah Goodman and her husband, Nate, started earlier mixing the seeds with damp sawdust and mychorrizal fungi. The sawdust acts as a carrier and keeps the seed evenly distributed. Its dampness helps particles cling to the tiniest seeds in the mix. The mycchorizae will colonize the new seedlings' roots and facilitate uptake of nutrients and water. They truly function as extensions of the root system of a plant and are one reason it is important to minimize disturbance of the soil in a prairie planting (or a backyard garden for that matter!).

When they arrived at the site, Natalie, Ari, Shasta, Bolen, and their professor, Terry Wilson, were already waiting with rakes and buckets. Hannah used a scoop to fill the buckets with 25% of the seed mixture and the rakes to divide the area into quadrants. Then they all fanned out along the top of the sloped site and began throwing seed mix like chicken feed. When they got to the first rake marker they realized the slight breeze and downward slope were making it hard to distribute evenly, so they switched directions and started again at the bottom of the slope. The project was finished within a half hour and all celebrated with Einstein bagels and coffee.

Hannah sent me an email that described the calculations she had made about the project.

" If it is of interest to you, I did some calculations based on the species of plants that we planted, the amount of seed, and the area covered (these numbers are approximated a bit, but I feel they'll work for the scope of the project).

The mix of seeds we used contain about 320 seeds per gram (seed sizes varying from small (*Monarda fistulosa*) to large (*Eryngium yuccifolium*). This is 9000 seeds per ounce, and between the prairie patch work mix you provided and the seeds from ANC, 19 ounces were spread—or 171,000 seeds.

If properly tended for the first year, the seeds, hopefully, will have a 25% success rate of germinating and growing from sprout to first bloom (I will need to go out and do a count to confirm this next year).

We planted 35 different species over 4550 square feet. Using bloom physiology for these species (average diameter, arrangement, compound flowers, shape, depth, etc.), an average value for daily nectar production was calculated—about 3.5mg nectar per square foot per day.

The sugars in nectar vary from plant to plant in their percentages to sucrose, glucose, and fructose, but on average, the composition provides about 4 calories energy per milligram. The average regional pollinator (having energy demands somewhere between a small flying insect and the intensely endothermic honeybee) uses 17 calories daily.

If our wildflower planting is successful, the area will provide quality energy and habitat for a little over 2000 pollinating insects. I think that's pretty excellent!"

Meramec Hills Master Naturalists and Missourians for Monarchs facilitated this project by helping the students collect seeds at Audubon Trails Nature Center in November. The collected seeds supplemented a one-lb. mixture from Hamilton's Native Outpost purchased with funds from the Missourians for Monarchs garden ornament sales over the last two years.

Bring Back The Monarchs
Free Milkweed for Restoration Projects
(2 acres or more)

Monarch Watch.org
Education • Conservation • Research

The Spring 2018 application is now open for habitat restoration projects located in the Monarch Milkweed Corridor. This includes most of the eastern half of the United States. Florida, Alabama, Mississippi, and Louisiana are not included in the grant at this time. Only the extreme western tip of South Carolina (ERM221) is included. As of 1 October 2017, Monarch Watch has secured funding for 100,000 milkweeds for Spring 2018. We are actively seeking more funding sources. If funding and seed become available for more areas, the application will be updated accordingly.

Non-Profit
Corporate
Private

Guidelines

Free milkweeds are for large-scale (2 acres or more) native habitat restoration only. Habitat restoration is renewing and restoring degraded, damaged, or destroyed ecosystems and habitats. Gardens or landscaped areas do not qualify as restoration. The portion of property where milkweed will be Planted must be a minimum of two acres in area.

Funding Sources

Roadsides and Trails are acceptable areas. Our recommendation for ideal monarch habitat is planting milkweed in patches of 3-4 plants, 10-13, patches per acre. Applicants must demonstrate that they have a land management plan, and that other nectar sources are either pre-existing or are included in the project. We recommend against planting large quantities of milkweed in a small area. The application is currently open to most of the eastern half of the U.S. We cannot guarantee that

Plug Specifications

Milkweed plugs are propagated in two types of flats, either 32-cell flats with a shallow well or 50-cell flats with a deep well. The minimum award is four flats. The amount of the award is dependent on funding, supply and demand, and our goal to distribute milkweeds widely across the entire Monarch Milkweed Corridor. Recipients should consider the time and effort it takes to grow large numbers of seedlings to maturity, including watering. Requests for more than 2,000 plants will be considered on a case-by-case basis.

Shipping

Recipients will be responsible for shipping and handling costs, which are modest compared the value of the plants. For most shipments, 200 plants cost $40-$60 to ship via UPS Ground, (20-30 cents per plant).
Freight charges for pallets vary by carrier and distance travelled, but are usually in line with the UPS rates.
Orders will be shipped UPS Ground on Monday or Tuesday, in order to arrive before the weekend. Expedited shipping is available for an added cost. Large quantities (2,000+ plants) will be palletized and shipped via freight or on racks in nursery trucks. A dock and pallet jack or forklift will need to be available at the delivery address.

Species Available

Recipients will receive plants grown pesticide-free, from seed collected within their ecoregion.
The species offered will depend on seed availability.

EVENTS

March thru May 2018

March 16th: Friday

Native by Design:
Woody Plants and Pollinators
7:30 am to 12:30 pm
Lewis and Clark Community College
in Godfrey, IL

March 24th: Saturday

Native Plant Sale
10:00 am to 2:00 pm
Runge Conservation Nature Center
Jefferson City, MO

April 3rd: Tuesday

MPF Kansas City Native Plant Sale
3:30 pm to 7:30 pm
Anita B. Gorman Discovery Center
Kansas City, MO

April 13th: Friday

Callery Pear Field Day
2:00 pm to 5:00 pm
Columbia, MO

April 14th: Saturday

MPF Native Plant Sale in Sedalia
10:00 am to 2:00 pm
State Fairgrounds
Sedalia, MO

April 14th: Friday

Plants with a Purpose:
Native Plants in Gardens and Landscapes
9:00 am to 4:00 pm
Northwest Missouri State University
Maryville, MO

April 21st, Saturday

MPF Kansas City Native Plant Sale
9:30 am to 2:30 pm
Anita B. Gorman Discovery Center
Kansas City, MO

April 24th, Tuesday

Evening Wildflower Walk at Carver Prairie
April 26th rain date
Led by Jerod Hueber

May 19th: Saturday

MPF Kansas City Native Plant Sale
9:30 am to 2:30 pm
Anita B. Gorman Discovery Center
Kansas City, MO

May 19th: Saturday

MPF Native Plant Sale
10:00 am to 2:00 pm
Bass Pro Shops
Columbia, MO

May 20th: Sunday

Breeding Bird Investigation
9:30 am to 12:00 pm
Chute Ridge Glade
Eagle Rock, MO

"Because life is fueled by the energy captured from the sun by plants, it will be the plants that we use in our gardens that determine what nature will be like 10, 20, and 50 years from now."
Doug Tallamy

MISSOURI BOTANICAL GARDEN

SHAW NATURE RESERVE

Butterfly House

EVENTS

March thru May 2018

March 8th, Thursday
Native Plant School:
Pruning Native Trees, Shrubs, and Vines
1:00 pm to 4:00 pm
Shaw Nature Reserve

March 9th, Friday
Advanced Composting & Troubleshooting
10:00 am to 11:30 am
Shaw Nature Reserve

March 17th, Saturday
Starting a Pollinator Garden
10:00 am to 11:30 am
MO Botanical Gardens

March 20th, Tuesday
Spring Lawn Care
ing
6 to 8 pm
MO Botanical Gardens

March 27th, April 3, 10, 17, 24. and May 1, Tuesdays
Home Landscape Design
6:30 pm to 9:00 pm
MO Botanical Gardens

April 2nd, Monday
Daffodils 101
6 to 8 pm
MO Botanical Gardens

April 2nd, Monday
Master Gardener Series:
Organic Spring Vegetables
5 to 7 pm
MO Botanical Gardens

April 3rd, Tuesday
Living Pansy Wreath
5:30 to 7 pm
MO Botanical Gardeners

April 5th, Thursday
Become a Great Gardener:
Edible Gardening in Containers
5:30 to 7:30 pm
MO Botanical Gardens

April 10th, Tuesday
Rightsizing Your Garden
6 to 8 pm
MO Botanical Gardens

April 12th, 19th, 26th, and May 3rd, Thursdays
Become A Great Gardener:
Back to Basics Garden Bootcamp
6 to 8 pm
MO Botanical Gardens

April 12th, Thursday
Native Plant School:
Native Wild Edible Plants
1 to 4 pm
Shaw Nature Reserve—Whitmire Wildflower Garden

April 14th, Saturday
Beginning Bonsai: Junipers
9 am to Noon
MO Botanical Gardens

April 16th, Monday
Made in the Shade
6 to 8 pm
MO Botanical Gardens

April 17th, Tuesday
Become a Great Gardener-Spring Container Garden-

5 to 7 pm
MO Botanical Gardens

April 17th, Tuesday
Master Gardener Series: Rain Gardens
6 to 8 pm
MO Botanical Gardens

April 17th, Tuesday
Pruning with Ben Chu
6:30 pm to 8:30 pm
MO Botanical Gardens

April 24th, Tuesday
Growing Orchids Part II
6 to 8 pm
MO Botanical Gardens

April 24th, Tuesday
Rescue your Zoysia
6 to 8 pm
MO Botanical Gardens

April 28th, Saturday
Become a Great Gardener:
Spring Container Gardening
10:00 am to Noon
Butterfly House

April 28th, Saturday
DIY—Report Your Orchids
9 to 11:00 am
MO Botanical Gardens

April 30th, Monday
Inviting Native Bees into you Garden
6 to 7:30 pm
MO Botanicals Gardens

MISSOURI BOTANICAL GARDEN

SHAW NATURE RESERVE

Butterfly House

EVENTS
March thru May 2018 (cont.)

May 2nd, Wednesday
Composting 101
6 to 7:30 pm
MO Botanical Gardens

May 5th, Saturday
Building Terrariums
10:00 am to Noon
MO Botanical Gardens

May 7th, Monday
Master Gardener Series: Organic Gardening Basics
6 to 8 pm
MO Botanical Gardens

May 7th, Monday
Neighborhood Nature: Designing for Biodivers
6 to 8 pm
MO Botanical Gardens

May 8th, Tuesday
Mother's Day Container Gardening
6 to 8 pm
MO Botanical Gardens

May 10th, Thursday
Become a Great Gardener: Low Maintenance Perennials
5:30 pm to 7:30 pm
MO Botanical Gardens

May 15th, Tuesday
Become a Great Gardener: Shade Container Garden
6 to 8 pm
MO Botanical Gardens

May 15th, 22nd, and 29th, Tuesdays
Easy Tree ID for Beginners
5 to 7 pm
MO Botanical Gardeners

May 15th, Tuesday
Lets Talk Trees
6 to 7:30 pm
MO Botanical Gardens

May 17th, Thursday
Native Plant School: Gardening under a Black Walnut
1 to 4 pm
MO Botanical Gardens

May 19th, Saturday
Episcias 101
10:00 am to Noon
MO Botanical Gardens

May 19th, Saturday
Stump– Tastic
10:00 am to Noon
MO Botanical Gardens

May 22, Tuesday
Become a Great Gardener: Summer Container Garden
6 to 8 pm
MO Botanical Gardens

May 29th, Tuesday
Become a Great Gardener: Summer Container Garden
6 to 8 pm
Butterfly House

May 31st, Thursday
Gardening for Hummingbirds
6 to 8 pm
MO Botanical Gardens

More Upcoming Events in Missouri

March thru May 2018

March 10, Saturday
Native Plant Sale and Seminar
8:00 am to 2:30 pm
Cape Girardeau Conservation Nature Center
2289 County Park Dr.
Cape Girardeau, MO
Phone: 573-290-5218 or email: jamie.koehler@mdc.mo.gov

March 17, Saturday
Naturescaping Workshop
8:00 am to 1:00 pm
Native Plant Sale
1:00pm to 4:00pm
Burr Oak Woods Nature Center
1401 NW Park Rd.
Blue Springs, MO
Call 816-228-3766 to register for
free workshop

March 31, Saturday
Partners for Native Landscape
9:00 am to 4:00 pm
Maryland Heights Community Center
Maryland Heights, MO

April 7, Saturday
Native Plant Sale
9:00 am to 2:00 pm
Springfield Conservation Nature Center
4601 S. Nature Center Way
Springfield, MO

April 14, Saturday
Westport Garden Club Native Plant Sale
9:00 am to 2:00 pm
KC Community Gardens (Swope Park)
6917 Kensington Ave.
KC, MO

April 14, Saturday
Native Plant Sale and Education Day
10:00 am to 2:00 pm
Bradford Farm Research Center
4968 S. Rangeline Rd.
Columbia, MO

April 19, Thursday
The Know Maintenance Garden
6:30 pm
Kauffman Conference Center
4801 Rockhill Rd.
KC, MO

April 21, Saturday
Native Plant Sale
9:30 am to 2:30 pm
Anita B. Gorman Discovery Center
4750 Troost Ave
KC, MO

April 28, Saturday
Burroughs Audubon Native Plant Sale
9:00 am to 2:00 pm
Backyard Bird Center
6212 NW Barry Rd.
KC, MO

May 5, Saturday
Franklin County Master Gardener's Plant Sale
Over 800 plants, Garden Shoppe, Monarch Booth,
9:00 am to 3:00 pm
JC Penny's Parking Lot
5886 Hwy 100
Washington, MO
Information: Contact Karen Leslie 573-459-2454
Email: lostmillie1@gmail.com

May 19, Saturday
Native Plant Sale
9:30 am to 2:30 pm
Anita B. Gorman Discovery Center
4750 Troost Ave
KC, MO

May 12, Saturday
Shaw Wildflower Market
9:00 am to 2:00 pm
Shaw Nature Reserve, Gray Summit, MO
Members preview sale:
Friday, 2:00pm to 7:00 pm

May 12, Saturday
Native Plant Sale
7:30am—1 pm
Rolla Downtown Farmers Market, Rolla, MO
Sponsored by Meramec Hills Master Naturalists
and Paradox Chapter of MO Native Plant Society

May 26, Saturday
Native Plant Sale
9:00 am to 2:00 pm
Wildcat Glades Conservation and Audubon Center
201 W. Rivers Dr.
Joplin, MO

Southwest Missouri and the Mayors' Monarch Pledge

Submitted by Andrea Taylor

Monarch Information Coordinator
Springfield Plateau Master Naturalist Chapter

This January, with the first Monarch butterfly sighting of the year still months away, Southwest Missourians were hard at work compiling and submitting data for the Mayors' Monarch Pledge conducted by the National Wildlife Federation (NWF). This initiative seeks to raise public awareness of the decline, with estimates as high as 90%, of the Monarch butterfly population in recent decades, while also taking steps to restore and enhance Monarch habitat. The plight of pollinators (whether they be bees or bats) in general is also addressed by this project.

Sarah Davis, with the City of Springfield, received data from a variety of groups that she included in her report to the NWF; groups like: the City of Springfield itself, the Springfield Botanical Center, the Springfield Plateau Master Naturalists, Master Gardeners of Greene County, and the Watershed Committee of the Ozarks. Overall, Springfield was able to report 40,252 individuals reached and 4.537 acres of Monarch habitat created over the last 12 months. The types of activities ranged from habitat creation and restoration on public and private lands, native plant sales, and educational programs. The City of Springfield also just launched a new link for individuals and groups to report any new pollinator habitat created (butterfly or bat) at http://arcg.is/zfiWv. I am happy to report that the reporting form is very easy and fun to use!

Photo provided by Shae Johnson

In reporting data to Sarah for the Springfield Plateau Master Naturalists as the chapter's Monarch Information Coordinator, I received detailed descriptions of the chapter sponsored project around the boathouse at the Lake Springfield Marina Park, personal gardens maintained by individual members, as well as educational and outreach projects our members are currently involved with (see photos). With the help of a 2017 "Community Conservation Grant" through the Missouri Department of Conservation, the project (regularly maintained by 7-9 of our chapter members) at Lake Springfield involves the removal of invasive bush honeysuckle, planting of native plants, and a restoration of selected areas to prairie-like conditions. Plantings near the boathouse include: Swamp Milkweed, Common Milkweed, Ozark Witch Hazel, Ninebark, Flowering Dogwood, Little Blue Stem, Sideoats, Grama, Blue Sage, Butterfly Weed, Sky Blue Aster, Fringed Poppy Mallow, Grey-headed Coneflower, Prairie Drop Seed, Foxglove Bearded Tongue, Slender Mountain Mint, Ohio Spiderwort, Lance leaf Coreopsis, Pale Purple Coneflower, Prairie Blazing Star, and Black-eyed Susan.

(Photo provided by Bob and Barbara Kipfer)

Some of our Springfield Plateau Master Naturalist members have also been instrumental in getting the City of Branson's Mayors' Monarch Pledge up and running. In the past couple of years they have been involved with plantings on city properties, media promos, and plant giveaways Chapter member Rose Atchley said that Mona Menezes with the City of Branson and Branson Mayor, Karen Best, have been incredibly supportive of the initiative. If you would like to get involved with Monarch habitat restoration in Southwest Missouri, contact one of the local participating groups or consider planting one of your own butterfly gardens today! January and February are great months to start planting milkweed!

(Photo provided by Rose Atchley)

Monarch Programs at the Springfield Botanical Gardens

By
Kelly McGowen
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Green County, Southwest Region

February 15, 2018

The Springfield Botanical Gardens, located in Springfield, Missouri, is an urban oasis of over 30 gardens nestled within a 114-acre park. As much as the gardens and green space are enjoyed by thousands of visitors per year, the star attraction is the Dr. Bill Roston Native Butterfly House. This butterfly house was the first all-native house in the state of Missouri. The mission of the butterfly house is to introduce visitors to the plethora of beautiful native butterflies and moths that call Missouri home. Visitors not only get an up close and personal look at all of the lifecycles of butterflies and moths, but they also learn about the host and nectar plants needed for their survival.

Photo by Dr. Chris Barnhart

While all of the butterflies and moths are beautiful, visitors have a special fascination with the monarch. As more and more people learn about the incredible migration of the monarch and about declining populations in the last few years, interest has certainly peaked and visitors want to learn more.

The Butterfly House is the focus of many events, including field trips, educational programs and an annual Butterfly Festival. However, the annual monarch Tagging Event is growing in popularity. In 2017, with the help of volunteers (including Master Gardener of Greene County members) over 100 monarchs were tagged, documented and released. The event was held on September 30th from 2-4 pm. Attendees came from near and far and started lining up early to ensure their chance at tagging one of the monarchs. Once tagged, they received a card with the unique tag number of their butterfly, which could be tracked online. Scouters at over-wintering sites in Mexico search and try to recover as many tags as possible and post their findings online.

Photo by Dr. Chris Barnhart

Back home at the butterfly house, those of us who work with the monarchs on a day-to-day basis find tagging day to be magical, yet bittersweet. We truly love doing this work and we wish our tagged monarchs the best as they are released to continue their long and difficult journey.

Photo by Dr. Chris Barnhart

For more info. on the Springfield Botanical Gardens or the Dr. Bill Roston Native Butterfly House, visit www.friendsofthegarden.org.

Native Settings in Joplin Welcome the Monarch Butterfly

by
Lynn Iliff Onstot
Public Information Officer of Rolla
with the help of Parks Director, Paul Bloomberg

Joplin sees hundreds of visitors each year, but none more colorful and welcome than the Monarch butterfly.

In 2017, the City of Joplin became one of 362 cities across the country to participate in the Mayor's Monarch Pledge that recognizes the significance of the monarch butterfly as an important element in nature's circle of life.

"We were thrilled that the City initiated this pledge that has increased the awareness of the monarch's role in nature," said Val Frankoski, a Missouri Master Naturalist with the Chert Glades Chapter. "With this public commitment, all who come to Joplin can enjoy beautiful gardens and opportunities to educate themselves to participate in keeping this species alive."

Frankoski and fellow Missouri Master Naturalist Sara Fisher led the charge with staff members in the Joplin Parks and Recreation Department to create several new butterfly gardens in park entrances in Joplin.

Native habitats featuring milkweed and other pollinator-friendly plants now greet the public as they enter Joplin's Ewert Park, Humphrey Park, and Leonard Park.

Frankoski said that it sometimes is the simple things in life that bring the most enjoyment. "We've all seen these butterflies come and go during their migration. Now we can help the public understand the migration, their path, and the various stages of the beautiful butterfly. And the gardens educate others on how they can participate by planting specific plants to attract this butterfly as well as others."

Butterflies became a symbol of Joplin's recovery in some respect following the EF-5 tornado that destroyed a third of its city. Stories about "butterfly people' were passed along about children and others saying they helped take care of them during the storm. Many believe that was their interpretation of angels keeping them safe.

Cunningham Park, known as the proverbial ground zero of the tornado, is now home to The Butterfly Garden and Overlook. Designed by the Hammons School of Architecture of Drury University in Springfield, this beautiful setting opened in 2013 and serves as "an open space, sacred place for individuals to work through the pain of loss of a loved one, a home, a community." The project was supported in part by a grant from the TKF Foundation, as part of the Nature Sacred National Awards program to create urban green spaces to help communities heal from natural disasters.

After Frankoski and Fisher assisted in planting this butterfly garden, their passion to increase habitats for butterflies intensified. They began to foster another small area in the park and developed a wayfinding station for monarchs. This station provided both milkweed plants, the only food monarch caterpillars can eat, and other nectar plants for adult butterflies which are needed all season, but especially in the fall to fortify them on their long migration to Mexico. It was planned initially in 2014 and has supported hundreds of butterflies since then.

This unique setting at Cunningham Park served as the first demonstration garden where visitors could see a selection of possible plant choices that they could incorporate into their own gardens to help the monarchs in various stages of their life cycle.

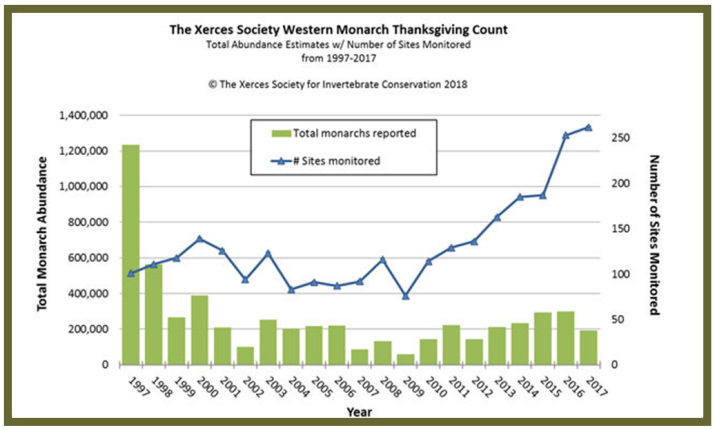
"I did not know a lot about monarch butterflies prior to the Mayors' Pledge," said Joplin Mayor Mike Seibert. "It's been amazing to see the impact and the beauty that these new native habitats have created in our community. They are not only beautiful additions but also invite a unique visitor to Joplin—the Monarch Butterfly, and we're happy that they are here."

In addition to the city parks, milkweed has also been introduced in other places in Joplin, including the wetlands of Campbell Parkway, Joplin High School landscaping, and Joplin's newest park - Mercy Park.

Very Low Numbers of Monarchs Overwintering in California may Reflect an Unusual Fall

By
Kate Hietala-Henschell
Conservation Biologist
Endangered Species Program

The Western Monarch Thanksgiving Count (WMTC) tracks the population of monarch butterflies that overwinter along the Pacific Coast in California and Baja California. Started in 1997, WMTC is one of the longest-running insect monitoring projects in the country. Continuing the tradition, this year, more than 150 enthusiastic volunteers spread out along the coast to find and count monarchs. Over the past few years, the number of sites covered has swelled thanks to the remarkable regional coordinators who dedicate much time to organizing activities, training volunteers, and of course, counting monarchs. Mia Monroe, one of the WMTC's founders, has been organizing and inspiring others for over 20 years. Other current (and past) regional coordinators that serve as local experts and invaluable resources for volunteers include Bill Shepard, Christina Garcia, Martha Nitzberg, Nick Stong, Jessica Griffiths, Charis van der Heide, Rick Hansen, Saul Riatiga, and Rachel Williams. Thanks to the efforts of many, this year's WMTC tallied a total of 192,629 monarchs. This is the lowest number counted since 2012, despite volunteers visiting nearly twice as many sites as they did last year. The total represents less than one-sixth of the 1.2 million monarchs recorded in 1997, the first year of the WMTC, and is part of a long-term downward trend in the population of monarchs overwintering in California. A study led by Cheryl Schultz, of Washington State University Vancouver, analyzed WMTC data and comparable historical data and demonstrated a dramatic population decline of over 95% since the 1980s. This is similar to the decline of over 80% seen in the monarch population that overwinters in central Mexico since the 1990s.



Fall of 2017 seems to have been a very unusual year for overwintering monarchs. We have had many reports of unseasonably warm temps., late season mating, and late occurrence of eggs and caterpillars. We do not yet know how the wildfires and associated smoke in many parts of California affected migrating or late breeding monarchs, nor whether the drenching rain and devastating mudslides that occurred soon after, had an impact. It is difficult to know if the overwintering population experienced as sharp a decline as the WMTC numbers suggest or if it was partly that the butterflies were simply late clustering in this late, warm fall (which may be increasingly common with climate change).

Even though the counts are low, we should celebrate the massive volunteer effort. This year the Xerces Society, regional coordinators, and the U.S. Fish and Wildlife hosted multiple training workshops to engage new volunteers throughout the state. The result was that a record number of people participated this year and there was better coverage of the southern California sites. We also had higher volunteer participation in the second annual New Year's Count compared to last year (results forthcoming in late-February).

Very Low Numbers of Monarchs Overwintering in California may Reflect an Unusual Fall

(Continued)

Jessica Griffiths, one of the WMTC's regional coordinators, Talking to volunteers during a pre-count training workshop (Photo: Xerces Society/Katie Hietala-Henschell)

The success of the WMTC is only possible thanks to these many volunteers and hard-working regional coordinators, including new coordinator, Saul Riatiga- is surveying in Baja, Mexico—and Rachel Williams - who led volunteers on backpacking trips to survey the small inland sites of Inyo County. Both areas were historically known to host overwintering monarchs, but have not been officially counted by volunteers as part of the WMTC for a decade or more. This year, both areas reported monarchs, although in small numbers.

The long-term data set gathered over successive counts is an immensely valuable resource that enables researchers and conservationists to address the crisis facing monarchs with accurate information about the butterfly's population. This is rare for most invertebrate species and it reflects the forethought and concern of the WMTC's founders. With this information, we can collectively act to protect and conserve monarchs and their habitat by addressing the many threats that monarchs face—from pesticide use and habitat loss to climate change and disease. With the con- continuation of engaged volunteers, public support and policy, we will continue to raise awareness and further assist monarchs on their recovery.