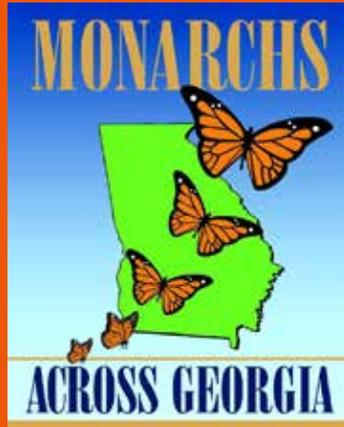


# The Chrysalis

Emerging News from Monarchs Across Georgia

A Committee of the Environmental Education Alliance of Georgia



## The Symbolic Migration Project Moves to Georgia!

The Symbolic (Monarch) Migration Project was created by and housed at Journey North for the past twenty-two years.

### *What is the Symbolic Migration?*

Each fall, students from across the globe create paper monarch butterflies to send to Mexico. The symbolic butterflies' flight is timed to correspond with the real monarchs' journey south. As the eastern population of North American monarchs is arriving in Mexico for the winter, students from the sanctuary region receive these symbolic butterflies. Sometime in March, when the real monarchs' departure from Mexico is announced, the paper butterflies return north carrying special messages from the students in Mexico.

Through this Symbolic Migration, children are united by the monarch butterfly and celebrate its spectacular migration. Children learn authentic lessons of conservation and international cooperation.

### *Why the move to Georgia?*

Climate change is not to blame for the project moving south; funding is the issue.

This summer Monarchs Across Georgia was asked to partner with Journey North so that this project could be sustained. Perhaps this was because of our existing connection with Estela Romero, Journey North's "butterfly carrier" and our own Mexico Book Project courier. We decided to accept the challenge, but we cannot do this alone.

- With each Ambassador Class Butterfly submitted, the purchase of a \$15 Passenger Ticket is required through the EEA website: <http://bit.ly/PassengerTicket>. These funds will support school visits in Mexico to deliver butterflies and conservation education.
- If you can sponsor a classroom with a \$15 donation or contribute any amount to support this project, please visit the EEA website and click on the [GIVE](#) button.
- If you live near Lilburn, Georgia (the destination address of the expected 60,000 paper monarchs by the postmark deadline of October 12, 2018) and are willing to volunteer your time to sort, record, package, and ship them to Mexico, please contact us directly at [mag@eealliance.org](mailto:mag@eealliance.org) or [symbolic-migration@eealliance.org](mailto:symbolic-migration@eealliance.org).
- We will ask for volunteers again in the spring (March 2019) when the symbolic butterflies return to Georgia for redistribution to classrooms across North America.

Read more about the Symbolic Migration on the [Journey North](#) and [EEA](#) websites.



### Upcoming Events

#### **Pollinator Symposium**

Saturday, September 22, 2018

Cost \$50 EEA member /  
\$75 non-member

#### **Topics:**

Jaret Daniels, PhD

*Roadsides and Pollinators*

Jennifer Leavey, PhD

*Urban Honey Bee Project*

Tim Spira, PhD

*Bees, Butterflies, Birds and more*

#### **Location:**

Monastery of the Holy Spirit  
2625 Highway 212 SW  
Conyers, Georgia 30094

#### **Plant Sales**

Saturday, October 13, 2018  
11am - 2pm

Blue Heron Nature Preserve  
4055 Roswell Rd NE  
Atlanta, Georgia

#### **RayDay**

Sunday, October 14, 2018  
3pm - 6pm

The Inn at Serenbe  
Chattahoochee Hills, Georgia

#### **Outdoor Learning Symposium**

October 19-20, 2018  
The Garden School  
Marietta, Georgia

#### **EEA Annual Conference**

March 8-10, 2019  
Flint RiverQuarium  
Albany, Georgia

For more information about these events or to register, please visit [www.eealliance.org/mag-events](http://www.eealliance.org/mag-events).

## Monarchs Across Georgia Pollinator Symposium

PLEASE JOIN Monarchs Across Georgia for our second Pollinator Symposium featuring renowned speakers, butterfly and nature walks, exhibitors, and demonstrations on **Saturday, September 22, 2018 from 9:00 am to 3:00 pm** at the Monastery of the Holy Spirit (Visitor Center), 2625 GA Highway 212 SW, Conyers, GA 30094.



### **Roadside Management for Pollinators**

Dr. Jaret Daniels is Associate Professor of Entomology at the University of Florida and the Director of the McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History. He will provide details of his road ecology research and the development of best practices to help native pollinators in these unique conservation systems.



### **Using Technology to Study Bees: The Georgia Tech Honey Bee Project**

Dr. Jennifer Leavey is the Integrated Science Curriculum Coordinator for the Georgia Tech College of Sciences and a faculty member in the School of Biological Sciences. As Director of the Georgia Tech Honey Bee Project, she will share how students have been using cutting-edge methods to find optimal bee habit, design devices to study bees remotely, and explore the impact of urban environments on bees.



### **Bees, Butterflies, Birds and More: Interactions Between Plants and Pollinators**

Dr. Tim Spira is a plant ecologist, native plant gardener, and professor emeritus at Clemson University where he taught plant ecology and field botany. He will discuss how plant-pollinator interactions have played an important role in generating the diversity of flowers that we see (and enjoy) in nature.

The deadline for online pre-registration is September 15, 2018. The cost is \$50.00 for EEA members and \$75.00 for non-members. Payment can be made by MasterCard or Visa online or by mailing a check. This fee includes presentations by three speakers, lunch, and participation in one afternoon session (butterfly/nature walks or demonstrations).

To register and for additional details, visit the [Monarchs Across Georgia event page](#).

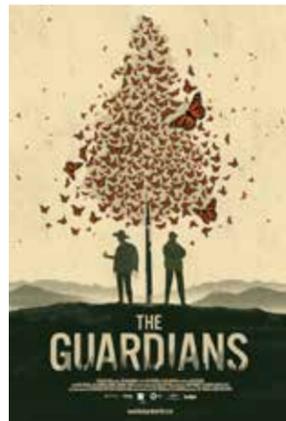
For questions concerning this event, contact Sharon McCullough at [mag@eealliance.org](mailto:mag@eealliance.org) or 706-474-0353.

## News from National Pollinator Week (June 18-24, 2018)



In honor of National Pollinator Week, Monarchs Across Georgia co-hosted the showing of the documentary film "The Guardians" with [Bee City USA Decatur](#) at Agnes Scott College on Sunday, June 24, 2018. A Q&A session followed and informational brochures were made available.

About the film: In an ancient forest in central Mexico, Oyamel trees sway with the weight of millions of monarch butterflies that coat its branches in clumps of orange and black. They make a perilous 3,000 mile journey from Canada to hibernate in this unique ecosystem each year. But the population faces collapse, hitting a record low of 33 million, down from 1 billion just twenty years ago. In the valley below, the people of Donaciano Ojeda must carve out a sustainable future in their ancestral lands that are now part of the protected Monarch Butterfly Biosphere Reserve. Once loggers of this forest, they decided twenty years ago to stop and to protect and regrow it instead. Santos, a charismatic avocado farmer, and Aristeo, a philosophical tree caretaker, are the storytellers of the community's journey as they face new threats of illegal logging, internal divisions, and their own mortality. Paralleling the lives of human and monarch, *The Guardians* is a cinematic meditation on life, death, and the lengths we go to for the next generation. [Watch the trailer here.](#)



## Flapping Wings Help Swallowtails Pollinate the Flame Azalea

*Rhododendron calendulaceum*, commonly known as the Flame Azalea, is commonly found in the Appalachian Mountains, from as far north as New York to Georgia in the south. This flower's reproductive structure has some unique features - elongated male (anther) and female (stigma) parts that are also spatially separated from one another. For the flame azalea to reproduce, a pollinator has to spread the pollen from the anther to the stigma. The distance of separation between the two reproductive structures makes it difficult for bees or other small pollinators to come into contact with both the anther and stigma.

Researchers from North Carolina State University, James Madison University, and the University of KwaZulu-Natal in South Africa studied the role of butterfly wings in pollinating flame azaleas and to evaluate which of the insects that visit the flower is the most effective pollinator. While the flowers of the flame azalea are visited by a diverse variety of insects, only two large butterflies were observed to contact both the anther and the stigma. The two butterfly species that frequented the flowers were the Eastern Tiger Swallowtail (*Papilio glaucus*) and the Great Spangled Fritillary (*Speyeria cybele*).

The researchers set up three different scenarios to track the pollination of the azaleas - (1) excluding all pollinators, (2) excluding butterflies but allowing smaller pollinators such as bees and flies, and (3) allowing all insects and pollinators to access the flowers. Pollination rates were higher by a magnitude of ten in azaleas exposed to all pollinators, including butterflies. The rate was very low in cases where all pollinators were excluded, or only butterflies were excluded.

The majority of butterflies that visited the flame azalea flowers were the swallowtails. Unlike the fritillaries, swallowtails keep moving their wings even when gathering nectar from a flower, and this motion enables them to contact both the anther and stigma of the flame azalea.



Flame Azalea (*Rhododendron calendulaceum*). Photo credit: Karan A. Rawlins, University of Georgia, [Bugwood.org](#)



Eastern Tiger Swallowtail (*Papilio glaucus*)  
Photo credit: James Holland, [Bugwood.org](#)

It was observed that the swallowtails carried a significant amount of pollen on their wings - fifty-six times more than the amount on their bodies. Furthermore, the azalea stigmas bore both pollen and wing scales. This suggests that pollen transfer from butterfly wings is a key mode of flame azalea pollination.

The findings from this research suggest that some plants may be dependent on very few insect species for pollination. Even though many species visit the flower's parts, only a few may contact both the male and female parts and cause pollination.

**Source:** Epps, M. J., Allison, S. E., & Wolfe, L. M. (2015). Reproduction in flame azalea (*Rhododendron calendulaceum*, Ericaceae): a rare case of insect wing pollination. *The American Naturalist*, 186(2), 294-301.

## Predicting the Trends of the 2018 Monarch Population

by Chip Taylor

adapted by Trecia Neal, Green Gardens Education and Designs

**Dr. Chip Taylor**, from Monarch Watch at the University of Kansas, is well known for his monarch population predictions. Every year he gathers data from many sources, such as butterfly tag records, weather, and previous year's population data, to make a prediction for the fall. In 2017 the overwintering colonies occupied an area of 2.48 hectares. For 2018, Dr. Taylor is predicting that the population will increase and expects the migration to be the strongest since 2008 (which was a year when the overwintering area was 5 hectares).

He points out that weather patterns and temperatures are critical to monarch migration and health. However, he reports the lack of evidence in the long-range forecasts to suggest that weather events in the upcoming breeding season will have a negative impact on the population growth. He suggests that 2018 may see the population increase because of favorable temperatures in the Southern region. Further, he suggests that in addition to the normal summer temperatures, May and June temperatures will be favorable for good recolonization in the northern breeding areas.

Dr. Taylor predicts a season of good monarch population in the Northeast, though not as good as last year. Although he predicts a low population in eastern Quebec and a low count of monarchs per hour at Cape May, he expects a substantial number of fall monarchs in most of Ontario. Furthermore, he expects the strongest migration from the Upper Midwest since 2008. As a result of these predictions, Dr. Taylor predicts that the overwintering population is likely to occupy 5 hectares. ◇

## Recommended Resource

### A Sting in the Tale: My Adventures with Bumblebees

by Dave Goulson

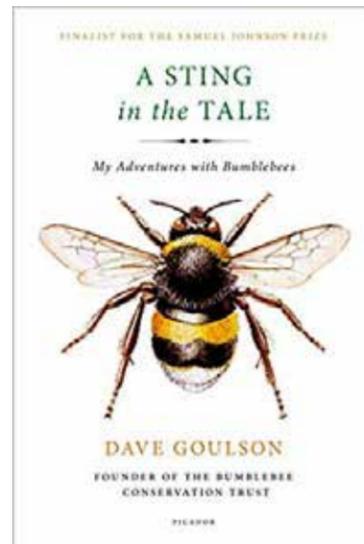
This delightful memoir will change the way you think about bumblebees! Dave Goulson fondly recalls his childhood fascination with collecting insects, raising frogs and snakes, and experiments with taxidermy. Combining stories from his childhood with a deep insight into the crucial importance of the bumble makes for an engaging read that makes the reader bee-conscious.

Goulson has used humor to make the details of cutting-edge bumblebee research a pleasure to read. He examines their life cycle, mating behaviors, evolution, genetics, navigation methods, nesting habits (since they do not build hives like honeybees), and foraging techniques (they leave smelly footprints on flowers they have drained of nectar and do not return to them).

The bumblebee's crucially important role in global food production and overall biodiversity is of course well-known, and in this book Goulson emphasizes the alarming drop in their population. He delves further into why this has happened and why we need to act on restoring their habitats. The book is also replete with jokes, personal anecdotes, and stories of his graduate students' mishaps in trying new ways of monitoring bumblebees. Goulson describes some of the astonishing efforts he and his fellow researchers take to study bumblebees, like attaching antennas to bees and collecting their feces! Even finding bees has become a challenge, as the author explains the bumblebee population has drastically reduced, and two species have become extinct in the UK in the 20th century.

You will never have a dull moment when reading about Goulson's passionate efforts to revive the bumblebee population in its native land. His description of the history of our relationship with the bumblebee and advice on what can be done to protect the bumblebee for future generations can even be described as essential reading.

[Bumblebee Conservation Trust](#) / [Amazon.com](#)



## Tribute to Dr. Lincoln Brower, renowned monarch butterfly expert

MONARCHS ACROSS GEORGIA joins naturalists across North America in paying tribute to Dr. Lincoln Brower, one of the foremost experts on the monarch butterfly. He passed away on Tuesday, July 17, 2018 after an extended illness. Dr. Brower is renowned for his research on monarch butterflies and his ardent efforts for their conservation. Lincoln Brower was born on September 10, 1931 and was fascinated by butterflies and moths from a young age. He received a bachelor's degree in biology from Princeton University in 1953 and first studied monarchs while in graduate school at Yale, where he received a Ph.D. in zoology in 1957. Dr. Brower taught at Amherst College from 1958 to 1980 and at the University of Florida from 1980 to 1997. Since 1997 he had been a research professor of biology at Sweet Briar College.

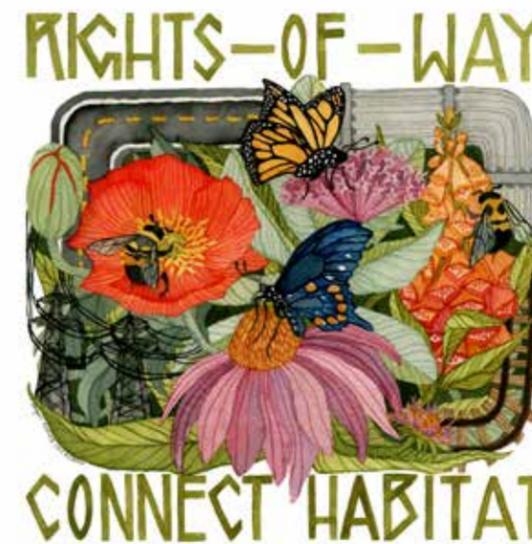
He spent six decades studying the life cycle of monarchs and led efforts to preserve the fir trees that the butterflies use as their winter habitat in Mexico. Dr. Brower recalled the first time he saw millions of monarchs at their wintering habitat in the mountains of Michoacán, Mexico and called it "one of the most marvelous sights you can behold in the biological world."

He was awestruck by the monarch's extraordinary migratory powers. He worked tirelessly to raise awareness of the threats to this spectacular migratory pattern, including the loss of trees in the Mexican winter habitat, the growing use of herbicides that eradicate milkweed, and the potential effects of climate change, which can cause the butterflies to choose other places to overwinter instead of Mexico.

He called the migratory and overwintering cycle of the monarchs "an endangered biological phenomenon" and considered the monarch to be a biological treasure that had to be cherished and protected. In 2016, Dr. Brower received the E.O. Wilson Award from the Center for Biological Diversity for his work to preserve the monarch.

In honor of Dr. Brower's extraordinary dedication to monarch conservation, the Monarch Butterfly Fund has established the [Lincoln P. Brower Award](#), an annual grant of \$3,000 USD to support undergraduate or graduate students in research on the conservation of monarch butterflies and their habitats. ◇

## Rights-Of-Way as Pollinator Habitat Havens



*A unique opportunity to develop habitats for pollinators exists all over the country – in the form of rights-of-way.*

Rights-of-way include roadsides, gas and electric transmission and distribution lines, and rail corridors that connect distant places. They form a network of linear tracts that pass through a variety of landscapes and connect smaller habitats to other favorable areas. Further, they are generally not subject to major disturbances or future development.

A new multi-sector partnership is working on develop a voluntary conservation agreement to aid monarch conservation using rights-of-way areas. This is being coordinated by the Energy Resources Center at the University of Illinois at Chicago. Twenty-six organizations across forty-five states, **including the Georgia Department of Transportation (GDOT)**, are working to develop a Candidate Conservation Agreement with Assurances (CCAA) that encourages non-federal landowners and managers to adopt measures that are beneficial to key wildlife species and pollinators.

The CCAA will encourage energy companies and transportation agencies to voluntarily adapt their land management practices to include the planting of native species that monarchs and other pollinators need. This will be incredibly beneficial to the monarch butterfly, since the primary cause for its drastic population decrease has been the loss of lands with native flowering plants including milkweed species.

For more information on this partnership, please visit <http://www.erc.uic.edu/biofuels-bioenergy/pollinator-habitat/rights-of-way-as-habitat/>.

## Fall Reminder: Choose Native Species over Tropical Milkweed

by Trecia Neal

Green Gardens Education and Designs

Due to a native milkweed shortage at nurseries, Tropical Milkweed (*Asclepias curassavica*) has, for many years, been the only milkweed available for sale for gardeners eager to help the monarch butterfly. This is slowly changing due to consumer demand. Monarchs Across Georgia (MAG) has a [list of nurseries in the southeast that sell neonicotinoid free native milkweed species](#). MAG recommends phasing out tropical milkweed whenever possible by planting native milkweed species appropriate to your area. Check out the [Guide to Georgia Milkweeds](#) for the milkweed that is native to your area.



Tropical milkweed (*Asclepias curassavica*)  
Photo credit: Ansel Oommen, [Bugwood.org](#)

Tropical milkweed causes three problems that are known at this time for monarchs:

**1) When Tropical Milkweed is planted in temperate areas, it usually does not die back in the winter.** When monarchs visit it, they deposit spores of *Ophryocystis elektroscirrha*, or OE (for more information on OE, visit [www.monarchparasites.org](http://www.monarchparasites.org)). Because Tropical Milkweed does not die back, the spore load builds up to a high level over the winter as monarchs continue to visit. The concern is that monarchs on their return spring migration will become infected. Native milkweeds die back in the fall and winter, along with the spores, and there is no danger of reinfection.

**2) Research shows that there is evidence that Tropical Milkweed is interfering with fall migration.** Because Tropical Milkweed is evergreen, monarchs are stopping and breeding when they should be continuing to Mexico. We now have a large permanent monarch colony in Florida due to the abundance of Tropical Milkweed, and there are several permanent colonies that have cropped up along the coast of Georgia and South Carolina recently. This is also happening along the coast of California, where many homeowners have planted Tropical Milkweed. I observed monarchs breeding during Christmas while I was in California on vacation when monarchs should have been overwintering.

**3) Climate change may exacerbate the problem.** Recent research has shown that higher temperatures increase cardenolide levels in Tropical Milkweeds. Normally this is the compound in the genus *Asclepias* that, when ingested, protects monarchs from predators. However, higher temperatures apparently cause Tropical Milkweed to increase its levels of cardenolides to a level that is so toxic that monarch caterpillars cannot survive them. Climate change shows no sign of improving over the upcoming years, which means that Tropical Milkweed's range could easily spread and cause more damage to the survival of the monarch population.

**Here are some ways we can help propagate native milkweed species and contribute towards monarch conservation:**

- If you currently have Tropical Milkweed in your gardens, try to cut it down twice during the growing season. Also, remove it or cut it down to the ground before migration begins in your area. This will help prevent the spread of OE.
- Plant additional native milkweed species in your garden.

*Continued on page 7*

An article entitled "Tropical Milkweed and the injurious effects of well-meaning people," written by Jeff Glassberg for the North American Butterfly Association periodical *American Butterflies* Winter 2014, has caused some confusion and gives misleading information regarding the planting of *Asclepias curassavica* for monarchs. A response to that article, written by Trecia Neal and Sonia Altizer, PhD, can be found at [this link](#) on our Resources page.

*Tropical Milkweed... Continued from page 6*

- Share this fact sheet with friends and neighbors: [Why Grow and Sell Native Milkweed?](#)
- Read the following resources: [Not All Milkweed Is Created Equal](#) and [Potential risks of growing exotic \(non-native\) milkweeds for monarchs](#)
- Participate in research efforts and citizen science programs dedicated to studying monarch ecology and conservation, such as:
  - [Monarch Health](#), where participants test wild monarchs for the protozoan parasite OE.
  - [Monarch Larva Monitoring Project](#), where citizen scientists monitor a milkweed patch for eggs and larvae.
  - [Monarch Watch](#), for which participants tag monarchs.
  - [Journey North](#), where you can report monarch and milkweed sightings.

#### Sources:

- 1) Faldyn, Matthew J., et al. "Climate Change and an Invasive, Tropical Milkweed: an Ecological Trap for Monarch Butterflies." *Ecology*, vol. 99, no. 5, 2018, pp. 1031–1038., doi:10.1002/ecy.2198.
- 2) Satterfield, D. A., et al. "Loss of Migratory Behaviour Increases Infection Risk for a Butterfly Host." *Proceedings of the Royal Society B: Biological Sciences*, vol. 282, no. 1801, 2015, pp. 20141734–20141734., doi:10.1098/rspb.2014.1734.
- 3) Venture, The Monarch Joint. "Q&A About Research Related to Tropical Milkweed and Monarch Parasites." *MJV News RSS*, [monarchjointventure.org/news-events/news/qa-about-research-related-to-tropical-milkweed-and-monarch-parasites](http://monarchjointventure.org/news-events/news/qa-about-research-related-to-tropical-milkweed-and-monarch-parasites).
- 4) Wheeler, Justin. "The Xerces Society » Blog Archive » Tropical Milkweed – a No Grow?" *The Xerces Society » Neonicotinoids and Bees*, 16 May 2018, [xerces.org/2018/04/19/tropical-milkweed-a-no-grow/](http://xerces.org/2018/04/19/tropical-milkweed-a-no-grow/).

## Pollinator Habitat Certification

Do you enjoy watching and studying caterpillars on their host plants; searching for chrysalides hidden from predators; observing butterflies and hummingbirds flitting from flower to flower? Does your schoolyard, workplace or backyard have bushes, trees and flowers that provide host plants, nectar and protection for butterflies, bees, hummingbirds and other pollinators? Is there a source of water/puddling areas for thirsty butterflies? Are there places for them to roost at night? If so, you might want to look into registering your backyard/schoolyard/workplace habitat with **Monarchs Across Georgia's Pollinator Habitat Program**. No garden is too big or too small!

For more details and to download the form, visit the [Pollinator Habitat Certification webpage](#).

### *Congratulations to the latest gardens to be certified!*

Stephanie Connolly - Blairsville, GA

Yvonne Whiten - Newnan, GA

Gail Jensen - Peachtree City, GA

Julia Maloney - Conyers, GA

Rose Barton - Gainesville, GA

Loganberry Heritage Farm - Cleveland, GA

Waterplant Permaculture Gardens - Dallas, GA

Emily and Phil Davis - Ft. Oglethorpe, GA

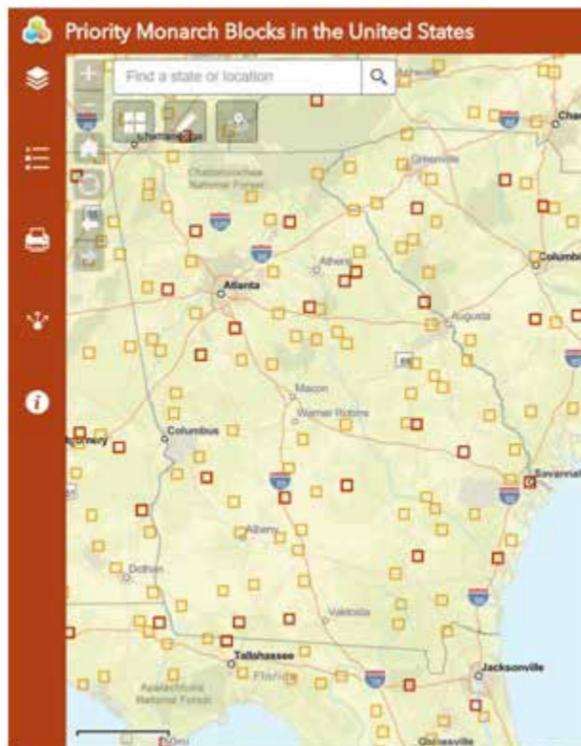
Jeffrey Johnson - Minneapolis, MN

Sagamore Hills Elementary - Atlanta, GA

## Integrated Monarch Monitoring Program: A New Citizen Science Opportunity

The Integrated Monarch Monitoring Program (IMMP) was developed by the [Monarch Conservation Science Partnership](#) (MCSP), a consortium of scientists and conservation professionals who are collectively tackling monarch conservation research questions. It is a national initiative to monitor monarch populations and habitat throughout their breeding range. The IMMP uses a spatially-balanced sampling scheme and draws from existing citizen science programs to deliver a suite of protocols that capture many aspects of habitat quality, threats, and monarch use of that habitat. Data gathered through the IMMP will contribute to existing population and habitat models that inform broad scale monarch conservation!

Citizen scientists, land managers, and researchers are all vital to this effort as researchers alone cannot cover enough ground to capture the information that is needed. We need an all-hands-on-deck approach to conserving and monitoring monarchs. Data collected using these protocols provides a snapshot of monarch activity at a given place and time. Cumulatively, these snapshots form a comprehensive picture of monarch activity and habitat availability that can be used in many ways to inform local, regional, and national conservation efforts.



The IMMP protocol is divided into several activities: Site Description, Milkweed and Blooming Plants Survey, Monarch Eggs and Larvae Survey, Adult Monarch Survey, and Tracking Parasitism and Monarch Survival. [Full descriptions](#) of these are available for review and download. Participants can choose which activities to do at a monitoring site, but they are meant to be conducted at the same site on a routine basis. The only required activity is the annual Site Description, but contributing data from additional activities will enrich the research database.

The material in this protocol is rigorous; attending an IMMP training session prior to implementing this protocol is recommended. Contact Monarchs Across Georgia at [mag@eealliance.org](mailto:mag@eealliance.org) if you are interested in hosting a training session in your area. The estimated cost of the two-day training is \$50.00 per person which includes lunch each day and a monitoring kit (backpack, clipboard, hand lens, 100-meter measuring tape, sub-plot tool, binder of printed materials), but costs can be reduced by sharing kit materials with a team of monitors, brown-bagging your lunch, etc.

At the training, we will help you select a site, *ideally* one of the **high-priority sites\*** that will provide weighted data or [a site of your own](#). Rights-of-way, Agriculture, Protected Grasslands, Unclassified Grasslands, and Developed are the available land types. Currently protocols do not consider forested land.

\*There are 19 Priority Monarch Blocks in Georgia in the top 1% (red squares) in the nation and over 50 more in the top 5% (orange squares). Each Monarch Priority Block is a 10X10 km square within which randomly assigned sampling points have been designated and are used to create monitoring plots. You can explore this map in depth at this [link](#).

Questions can be directed to [mag@eealliance.org](mailto:mag@eealliance.org).



Monarchs Across Georgia is a proud partner of

## Monarchs Across Georgia brings Estela Romero to Georgia!

**Estela Romero** is [Journey North](#)'s monarch program coordinator in Mexico. She lives in Angangueo, Michoacán where she coordinates the [Symbolic Migration](#) and serves as their local news reporter. Estela works with children in the community to report the monarch's fall arrival, send news about the monarchs' overwintering season, and announce the butterflies' departure for spring migration in March. During the winter, Estela delivers Symbolic Monarchs to hundreds of school children who live near the surrounding monarch sanctuaries.

Estela was a child living in Angangueo when the monarch overwintering sanctuaries were "discovered" in 1975. Her family has a long history living in the town as well as working with the first scientists who came to study the monarchs. She also helps Monarchs Across Georgia by purchasing and delivering books using funds collected for the [Mexico Book Project](#).

Estela will be visiting five schools in the metro-Atlanta and Athens area, speaking with students about her life experiences with the monarchs. She will also be making two public appearances during her week-long stay in Georgia. For more information about these free events, visit the links below.

Sunday, September 16, 2018  
2:00 - 4:00 pm  
[Dunwoody Nature Center](#)  
5343 Roberts Drive, Dunwoody, GA 30338

Tuesday, September 18, 2018  
7:00 pm (reception following) · Pre-registration required  
[State Botanical Garden Visitor Center](#)  
2450 S. Milledge Avenue, Athens, GA 30605



## Look for changes in the MAG awards this year!

The **MAG Service Award** recognizes significant contributions to monarch education, conservation, and/or habitat restoration in the state of Georgia. Two Service Awards are available: one for an individual engaged in formal or informal education, and another to recognize a facility.

The **Pollinator Habitat Award** will recognize a MAG certified pollinator habitat that goes above and beyond the minimal certification criteria and has been established for at least three years.

Links to the award applications and scoring rubrics will be on the awards page at [www.eealliance.org/mag-awards](http://www.eealliance.org/mag-awards). **The submission deadline is February 1, 2019.** Only one nomination per person or facility, please!

## Call for Committee Volunteers

ARE YOU INTERESTED in volunteering with the Monarchs Across Georgia (MAG) committee?

If so, please email [mag@eealliance.org](mailto:mag@eealliance.org) and let us know what volunteer opportunities interest you.

### Here are the many ways that we could use your help!

- Write newsletter articles
- Become a MAG workshop facilitator & co-facilitate workshops
- Review grant applications
- Become part of our Speakers Bureau
- Post information on our web pages
- Help with an event (children's craft or answering questions)
- Become an active committee member and coordinate a project, such as...
  - Grant Administration
  - Newsletter Editor
  - Mexico Book Project
  - Plant Sales
  - Pollinator Habitat Certification
  - Volunteer Coordination

## Power the Migration

[Monarchs Across Georgia](#) (MAG) is a committee of the 501(c)(3) nonprofit [The Environmental Education Alliance of Georgia](#) (EEA) that focuses on education about and conservation of the monarch. The monarch is a “poster child” for all butterfly and pollinator populations that are in decline. It is one of the most recognizable species in North America and has fascinated researchers and citizen scientists for decades with its incredible tri-nation migration. With the monarch currently being evaluated by the U. S. Fish and Wildlife Service for protection under the Endangered Species Act, efforts to boost its population by enhancing or restoring habitat have created more public interest in planting native milkweeds and nectar sources. Milkweeds, *Asclepias species*, are the exclusive host plant of the monarch on which it lays its eggs and its larvae eat the leaves.



Photo credit: Steven Katovich, USDA Forest Service, [Bugwood.org](#)

The [Georgia Plant Conservation Alliance](#) recently published an excellent brochure entitled [Monarch Butterflies & Georgia's Gardeners](#) which delineates the appropriate native milkweed species to be planted by eco-region, as well as those that are inappropriate (rare, non-native, etc.). But it's not just about milkweed for the monarch larvae; adult butterflies need nectar sources!

Groups or individuals who want to help the monarch and other pollinators may not yet have all the knowledge they need to plan a monarch garden that uses appropriate native plants likely to thrive in their area. There are monarch plant lists available online for whole states or broad swaths of the country, as well as some online searchable databases, but what would be really useful to the average citizen is an easily accessible group of ready-made

lists for each county in Georgia. Some counties might be ecologically similar to neighboring counties and could share identical lists, and some counties might encompass such widely different ecosystems that more than one list will be needed to cover those counties. We are asking for your help in compiling lists and creating design plans.

- **Create a monarch nectar plant list.** Create a valid list of nectar plants for the county(ies) with which you are familiar. From personal observations or a search of [iNaturalist.org](#) for photos of nectaring monarchs in your immediate area, which plants do monarchs *actually* use as nectar sources? Bear in mind that the bloom season of native plants can vary widely from place to place in a state as large as Georgia, so verifying that the plants are in bloom when the monarchs are actually present in your area is an important detail. Typically, monarchs arrive in Georgia from their Mexican overwintering sanctuaries in early April. They can persist in some areas throughout the summer and/or return in August to September on their migration south. Refer to the [Journey North Monarch Butterfly](#) archived maps (egg, larva, adult sightings) for more detail.

Once your list is assembled, label it with your name(s) (and affiliation) and the Georgia county(ies) in which you would suggest its use. Email the list to [mag@eealliance.org](mailto:mag@eealliance.org).

- **Design one or more sample monarch garden plans, complete with a suggested layout and plant list of Georgia natives that work well in your area.** A professional design is not necessary. Reference the [Monarch Watch Waystation](#) program for general guidelines.

We are looking for designs that ideally incorporate at least 100 square feet of space, contain plants that will bloom in succession to cover the whole growing season (April – October), and contain milkweeds as well as nectar plants. Nectar plants should outnumber the milkweeds for maximum efficiency in supporting monarchs. Once the garden design is complete, label it with your name(s) (and affiliation) and the Georgia county(ies) in which you would suggest its use. Email the design and list to [mag@eealliance.org](mailto:mag@eealliance.org).

Eventually, the goal is for there to be a sample monarch garden plan and native plant list (for both gardens and wilder spaces) available for each Georgia county. The plans cannot possibly be a “one size fits all” solution, but they can act as a good starting point for people who want to help save native plant and animal species by planting a garden but are not exactly sure where to start.

Though there is no set timetable for this project, submissions received by December 2018 would allow us to have them available online in preparation for spring 2019 plantings.

## SPOTLIGHTS... For Your Pollinator Garden

### Great Spangled Fritillary *Speyeria cybele*

This butterfly, belonging to the family Nymphalidae and subfamily Heliconiinae, is the most common fritillary throughout the eastern United States and can be seen in northern Georgia.

It is well known for its remarkable lifestyle. After mating, the eggs are laid in late summer on or near its host plants, the violets. Then the newly hatched caterpillars do not feed immediately, but go on to overwinter and eat the new violet leaves in spring.

The great spangled fritillary is a large butterfly that is colored tan to orange on the upperside with black scales on the forewings. The underside has large silver spots. It has a wingspan of 2.5 to 4 inches (6.3-10.1 cm). Preferred habitats include open, moist places such as fields, pastures, right-of-ways, and open woodland.

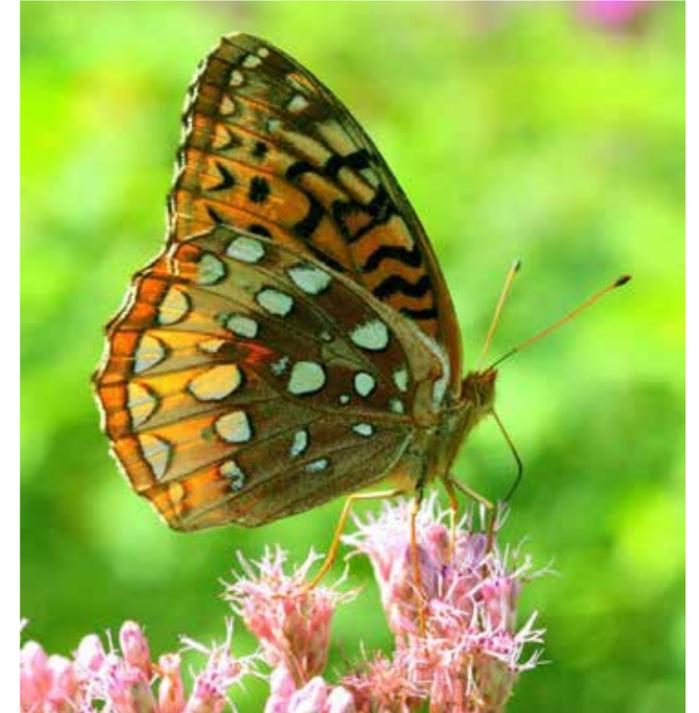


Photo credit: David Cappaert, [Bugwood.org](#)

### Flame Azalea *Rhododendron calendulaceum*

This azalea is one of the most beautiful deciduous flowering shrubs found in the Appalachian Mountains. Its flower clusters range in color from yellow to orange and sometimes may be pink, deep red, or even white. The blooms do not have a fragrance. In Georgia, it flowers in early spring.



Photo credit: William M. Ciesla, Forest Health Management International, [Bugwood.org](#)

The flame azalea is a widely cultivated species indigenous to North America, and it does well in zones 5 through 8. A shrub of azalea can grow up to 10 feet high and 15 feet wide. It grows well in open deciduous woods or in areas of part shade to full sun.

With their shallow root system, they transplant easily in spring or early fall. This plant thrives in acidic, moist, and well-drained soil. Mulch is recommended. Flame azaleas should not be collected in the wild, and gardeners should be certain that azalea and other native plants purchased for home gardens are nursery-propagated and not wild-collected.