

Badger ButterFlyer

The e-Newsletter of the Southern Wisconsin Butterfly Association **JANUARY/FEBRUARY, 2013**

WEB SITE: <http://www.naba.org/chapters/nabawba/>

1 NEXT SWBA MEETING: Tuesday, April 16 (mark your calendar!)

Meet at 7:00 p.m. in Madison at the [Warner Park Community Recreation Center](#), 1625 Northport Drive.

Public Programs:

1) Landscaping for Butterflies and other Wildlife (Larry and Emily Scheunemann)

In this 30 minute program we will learn about the landscaping of 18 acres of Conservation Reserve Program land (CRP), restored prairie and the creation of a Monarch Waystation. (Tagged Monarchs were recovered in Mexico!) Relax and enjoy pictures of flowers and butterflies as we look forward to another season of both!



2) Dragonflies of Wisconsin: (Karl Legler)

A 30 minute program. The 116 Dragonflies of Wisconsin are immensely appealing with their gigantic eyes, intricately veined wings, beautifully colorful bodies, the high-speed flight of an acrobatic aerialist, an insatiable appetite for other flying insects, and a truly fascinating sex life! We will highlight some of the most interesting species in the state.



Eastern Amberwing

3) Photo Show and Tell



Share some of your favorite butterfly, caterpillar, moth, or dragonfly photos and enjoy the photos of others. You are welcome to briefly comment about the subject of your photos. Please email up to 8 digital photos (as file attachments) to Mike Reese at mikereese@wisconsinbutterflies.org Otherwise, you can bring digital photos to the meeting on a CD or USB flash drive.

Also a brief Election of Officers

If you are interested in serving as an officer of SWBA for the next year, or would like to nominate someone else, contact the Nominating Committee Chairperson Tod Highsmith at (608) 242-1168 or at todhighsmith@me.com

Everyone is welcome to attend this free program. The meeting will last from 7:00 p.m. to 9:00 p.m. We will have displays, books, handouts and plenty of time afterwards to enjoy *delicious* snacks and refreshments, and talk with our speakers and other butterfly enthusiasts.

DIRECTIONS: On Madison's north side, from the intersection of Sherman Avenue and Northport Drive (= Hwy 113) go west on Northport Drive for about 1/4 mile, then turn south into Warner Park. Turn immediately right into the Community Center parking lot. When you enter the Community Recreation Center, we will be in the meeting room on the left.

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2 SWBA FIELD TRIPS SCHEDULE FOR 2013



American Copper

Mark your calendars!

Saturday	May 18	Butterflies of Bauer Brockway Barrens (Jackson Co.)	Mike Reese
Saturday	June 22	Butterflies of Cherokee Marsh	Dr. Douglas Buege
Saturday	June 29	Madison Butterfly Count	Karl and Dorothy Legler
Thursday	July 4	Butterflies and Dragonflies of Swamp Lovers Preserve	Tod Highsmith Leglers
Saturday	July 6	Butterflies of Sandhill State Wildlife Area (Wood Co.)	Ron Arnold
Saturday	July 13	Butterflies and Dragonflies of Summerton Bog	Dan Sonnenberg Leglers
Sunday	July 14	Birds, Butterflies and Dragonflies of Lakeshore Nature Preserve	Edgar Spalding
Saturday	July 20	Prairie Restoration for Karner Blue Butterflies	John Shillinglaw Mike Reese
Sunday	July 21	Flowers and Butterflies of Schurch-Thomson Prairie	Rich Henderson TBA
Saturday	August 10	Butterflies of Avoca/Blue River (Lower Wis. Riverway)	Mike Reese
Saturday	August 24	Butterflies and Blossoms at Pheasant Branch Conservancy	Dreux Watermolen

3 CLASS OFFERED AT OLBRICH GARDENS: GARDENING FOR POLLINATORS

Wednesday, March 20, 6:30-8:30 p.m.

Butterflies, bees, and many other pollinators provide critical ecosystem services pollinating both food crops and wildflowers alike. Unfortunately, these creatures are under threat from a variety of human impacts. Frank Hassler from Good Oak Ecological Services will discuss what you can do to make your yard a haven for bees, butterflies, hummingbirds, and the many other "little things that run the world."

Registration Deadline: March 13

Cost: \$15 (\$12 for Olbrich members) | **Course Number:** 10-26

See registration details at Olbrich's web site: www.olbrich.org/education/classes.cfm

Olbrich Botanical Gardens is located at 3330 Atwood Avenue in Madison.

4 STILL AWAITING NEWS ON WINTER MONARCH POPULATION

The count of the Monarchs overwintering in Mexico has not been released yet. Meanwhile, for our part, we should continue to plant various milkweeds (the caterpillar food plant) in gardens and on our property because the milkweed abundance has seriously declined due to habitat destruction, increased use of herbicides in

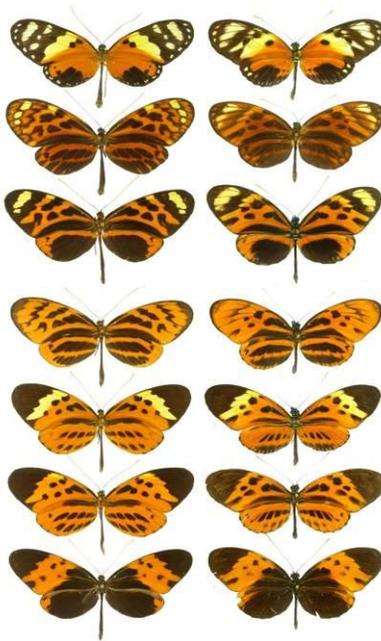
connection with planting herbicide-resistant crops, and extensive excessive roadside mowing. We can also encourage others to plant milkweeds. We can also participate in the important "citizen science" Monarch Larva Monitoring Project.

<http://www.mlmp.org/>

5 SUPERGENES OF MIMICRY

Here in Wisconsin we have both Monarchs and the look-alike Viceroy. The Viceroy mimics the Monarch because the Monarch is poisonous and birds learn to leave it alone. By closely resembling the pattern of the more common Monarch, the Viceroy also receives protection from birds. Mimicry of poisonous butterflies by palatable butterflies is called Batesian mimicry. But even if the 2nd species is itself poisonous, it is still to its advantage to mimic the other, more common, poisonous butterfly. This is because when birds have to learn only one pattern to avoid, instead of two patterns, then bird predation will be minimized. This is called Mullerian mimicry.

Seven species of butterfly in the *Milinaea* genus, living in Brazil, are poisonous due to their caterpillars eating poisonous food plants. Birds learn to avoid these 7 different species of butterfly. Another species, *Heliconius numata*, itself poisonous, mimics the pattern of these 7 different poisonous butterflies (Mullerian



The 7 different poisonous species that serve as models are on the left, and the 7 different mimetic forms of one species, *Heliconius numata*, are on the right.

mimicry). But how can a single species mimic 7 *different* poisonous butterflies? *Heliconius numata* has 7 different morphological versions, and each mimics one of the 7 poisonous models! In other words, *Heliconius numata* comes in 7 versions and *no other intermediate forms*. But how do the *Heliconius* butterflies end up with 7 different forms in a single interbreeding population? A team of French and British biologists has discovered the solution: A group of 18 genes that determine wing pattern has been combined into a "supergene". The supergene is passed on as a single unit (recombination is suppressed). The supergene comes in several different configurations of the wing genes and each version of the supergene corresponds with one of the 7 wing patterns. The reason that recombination does not cause intermediate forms to develop is that in each supergene version, at least one of the component genes is present with its DNA bases in reverse order. The reverse order prevents recombination from taking place.

Read the full article in the NY Times by clicking on the following link:

http://www.nytimes.com/2011/08/16/science/16butterfly.html?_r=0

And watch this short YouTube video describing the *Heliconius numata* polymorphism and the supergene:

<http://www.youtube.com/watch?v=hRVUFj0U4Jc>

6 Wisconsin Citizen-based Monitoring Network Conference

April 5-6, 2013

Back by popular demand, the **6th Wisconsin Citizen-based Monitoring Conference** will be held **April 5-6, 2013** at Hotel Mead in Wisconsin Rapids. The conference theme is "Making Connections" and is a joint meeting of the **Wisconsin Citizen-based Monitoring Network, Water Action Volunteers, and Master Naturalists**.

Check this website periodically for more information: <http://wiatri.net/cbm/Conference/>

7 PAINTED LADY MIGRATION

The Painted Lady is an immigrant butterfly, migrating from the Southwest into Wisconsin and northward, each summer. It is usually uncommon but sometimes it shows up in good numbers, e.g. 2012.

Like most of our immigrants, they fly north to find caterpillar food plants and breed but they can not tolerate our winter, which kills off the Wisconsin population, until the next summer when Painted Ladies again drift northward into the state. There have been some observations of southward movement in late summer/fall, but only in small numbers.

But now, research in the UK, using Citizen Science observations (10,000 observers!) and Vertical-Looking Radar (VLR), has documented a huge Painted Lady migration extending from Africa northward to the Arctic Circle and back, a **9,000 mile round-trip!** (This distance is not flown by any one individual but occurs during the year, over 6 generations of Painted Ladies.) "Once thought to be blindly led, at the mercy of the wind, into an evolutionary dead end in the lethal British winter, this amazing combination of mass-participation citizen science and cutting edge technology has shown Painted Ladies to be sophisticated travelers." They not only proved that the Painted Lady does



migrate south in autumn, but also found the reason for the paucity of observations of return migration: *Painted Ladies migrate south, out of sight, at high altitude, at an average height of 2,000 feet!*

There have been hints of this phenomenon in North America. In The Butterflies of North America (1986), by James A. Scott, it was stated that "The main puzzle regarding [Painted Lady] is the weak return flight in late summer and fall. The only return flights I have seen were to the southwest in [late-] July and [mid-] Aug. *above timberline.*" (Emphasis added.) Scott indicates that there were observations implying a migration return "at high altitude".

But now, radar technology has confirmed the high altitude flights. Vertical-Looking Radar, with custom designed software for analysis, can detect anything that moves through the beam at 15 different intervals above ground. It can determine altitude, horizontal speed, direction the insect is moving, and general body alignment. It can also use scattering properties to estimate the mass and shape.

(This research was published in the journal *Ecography*: "Multi-generational long distance migration of insects." by Stefanescu et. al., 27 authors!)

The article Vertical-Looking Radar: A New Tool for Monitoring High-Altitude Insect Migration can be downloaded by clicking on this link:

<http://www.rothamsted.ac.uk/insect-survey/documents/Vertical-Looking%20Radar.pdf>

8 NORTHERN TALLGRASS PRAIRIE LEPIDOPTERA CONSERVATION CONFERENCE Friday - Sunday, March 8 - 10, 2013

The Northern Tallgrass Prairie Lepidoptera Conservation Conference will be hosted at the Education Event Center of the Minnesota Zoo in Apple Valley, Minnesota (just outside of Minneapolis). (The conference is supported with funds from Minnesota's Clean Water, Land, and Legacy Amendment Arts and Cultural Heritage Fund.) Seeking to expand its conservation activities in Minnesota, the Minnesota Zoo launched a prairie butterfly conservation program in 2012 in recognition of the imperiled state of many prairie species and the importance of prairie in Minnesota's heritage. Partnering with multiple agencies and led by Dr. Erik Runquist, the program seeks to prevent the extinction of imperiled Minnesota prairie endemic butterflies by combining *ex situ* insurance breeding populations, wild population monitoring, population genetics, and public outreach.

Although **there is no fee to attend**, please register by contacting Erik Runquist (erik.runquist@state.mn.us) (952) 431-9562), the Minnesota Zoo's Conservation Biologist. Please **register by March 1, 2013**.

For more information click on this link: www.mnzoo.org/PrairieLepidopteraConference/index.asp

9 Volunteers Requested for Regal Fritillary and Prairie Violet Surveys

Citizen Science: Monitor a state-endangered butterfly

By Ruth Kearley

Become a Regal Fritillary monitor volunteer – do some science while enjoying nature and supporting an endangered species! The summer of 2013 will be our fourth season in a long-term program to monitor Regal Fritillary presence on remnant and restored prairies in the Military Ridge Prairie Heritage Area of eastern Iowa County and western Dane County.

The Regal Fritillary is listed as a Federal Species of Concern. Once widespread, it has nearly disappeared from east of the Mississippi. In Wisconsin it is listed as Endangered due to low or declining populations and is considered critically imperiled because of its vulnerability to extinction within the state. Occurrences have been documented in 14 counties in Wisconsin through the Natural Heritage Inventory program, but currently there are only three or four areas where potentially viable populations still persist.

To maintain the open prairie habitat these butterflies require, the land must be managed through

controlled burns, mowing, and/or mechanical clearing of woody growth, all of which have the potential to positively or negatively impact Regal Fritillary populations. The monitoring program will improve our understanding of how Regals respond to management of prairie remnants and creation of new habitat.

Would you like to participate? No previous experience is required, just a love of the outdoors and tolerance for hot sunny days. Training is provided. If possible, we are looking for a commitment over several summers. The monitoring program runs approximately June 15-July 31 with each monitoring team making three visits to their site

spaced a week or more apart. The training program has an off-site and a field component. Training opportunities will start in May. Please join us in this important endeavor! Contact Ruth Kearley (rekearley@gmail.com) or (608) 729-4050 to sign up or to learn more.



Regal Fritillary
Photo by Mike Reese

Citizen Science: Survey prairie violet populations

Enjoy spring on the prairie and do science at the same time! The caterpillars of the state-endangered Regal Fritillary butterfly eat only violet species in open habitat. We need volunteers to help with surveys to find where these violets are located and estimate their abundance on our preserves that host Regal Fritillaries. This information is crucial to determining how the violets (prairie, birds-foot, marsh, and common wood) respond to management such as burning, mowing, and grazing so we know how best to focus our efforts.

The surveys will be done in May when the violets are in bloom, on lands within the Military Ridge Prairie Heritage Area of western Dane and eastern Iowa counties. If you are interested in becoming a violet monitor trained in quantitative survey methods, contact Ruth Kearley at rekearley@gmail.com or (608) 729-4050.



10 PHOTO EXHIBIT: "Butterflies"

This is an exhibit by photographer Ann Thering at Oakwood Village West, 6205 Mineral Point Road, Madison, Wisconsin, **March 1 to April 28, 2013**. "See how the right color and angle of light can transform found insects into art."

The Badger ButterFlyer flits to you every month (every other month in winter). The next issue will be in MARCH/APRIL

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SWBA

The Southern Wisconsin Butterfly Association (SWBA) is a non-profit Wisconsin chapter of the North American Butterfly Association (NABA) which is the largest organization of people interested in butterflies. SWBA promotes public awareness, conservation and the enjoyment of butterflies through observation with close-focusing binoculars, chapter field trips, educational meetings, photography, butterfly gardening, monitoring and travel. SWBA's events are open to the public.

To become a member of SWBA simply join NABA. Membership benefits include 2 color quarterly magazines "American Butterflies" and "Butterfly Gardening". Please use the membership form on the SWBA Web site at <http://www.naba.org/chapters/nabawba/>

Our e-Newsletter, the Badger ButterFlyer, will be published monthly in spring to fall, and every other month in winter. Send any news notes to the editor, Karl Legler, at karlndot@charter.net

To stop receiving this e-Newsletter simply send an email to the above editor's address.