



More than 100 attend Wekiwa Springs Symposium

The Florida Wildflower Foundation's third annual Florida Wildflower Symposium on Oct. 15 was a great success, with more than 100 participants. They attended two morning presentations with Jeff Norcini and Alan Franck then broke into elective workshops following lunch.

As an added bonus, the wildflowers blooming within Wekiwa Springs State Park, Apopka, where the event was held, let participants experience some of Florida's most colorful sandhill and pine uplands species.

Workshops on wildflower propagation, herbarium collection methods, fall native landscaping, natural resources management, wildflower photography and a wildflower walk were available. FWF member Bill Randolph, Maitland, captured all the fun on camera – see his shots at www.Flickr.com/FlaWildflowers. Our blog, www.FloridaWildflowerFoundation.blogspot.com, also features pictures submitted by photography workshop participants.



Walter Taylor's wildflower walk departs the Wekiwa Springs youth camp. Photo/Bill Randolph

Many thanks to our presenters: Jeff Norcini, Vince Lamb, Charlie Corbeil, Alan Franck, Walter Taylor, Paul Lammardo, Craig Huegel and Claudia Larsen.

Next year's event will be held Sept. 22, 2012 (location to come).



Enriching lives with
Florida's native wildflowers

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Wildlife study expected to yield valuable info on landscapes

The Florida Wildflower Foundation is collaborating with the University of Florida's Dr. Jaret Daniels to conduct a three-year study of how native wildlife uses urban landscapes.

The "Plant for Wildlife" study will evaluate the ability of three types of Florida urban/suburban landscapes — native plants, Florida Friendly Landscaping and exotic — to support native wildlife, including pollinators essential to Florida's ecology and economy. The comparative study will be conducted in residential communities near Gainesville.

Surveys will record the presence/absence

of a broad spectrum of species, including butterflies, insect pollinators, birds and landscape plants. Interactions (e.g., host use, etc.) between wildlife and plants also will be recorded. Results will be used to provide recommendations on best practices for urban/suburban landscaping and will be disseminated broadly through extension agents, partner organizations, and scientific and trade publications.

The Florida Wildflower Foundation has committed \$20,000 to help fund the project's first year (2012). The second and third years

will be funded by FWF and other partners through grant requests.

During Year 1, the University of Florida will complete the project design, work with partners to identify at least 50 appropriate residential landscapes, and recruit and train from 30 to 36 of those residents for the project. Data collection and analyses will be the focus of Years 2 and 3.

To volunteer your residential landscape for the project or provide funding, please contact Daniels at 352-273-2022 or jdaniels@flmnh.ufl.edu.

Save the date: Florida Wildflower & Garden Festival is March 24

This year's Florida Wildflower & Garden Festival is shaping up to be a don't-miss-it event. Vendors selling potted wildflowers, wildflower seeds, garden utensils, native plants, yard ornaments, books and more will line West Indiana Avenue in charming downtown DeLand. Joining them will be organizations such as the Florida Wildflower

Foundation, garden clubs and local chapters of the Florida Native Plant Society, all of which will have free educational materials to distribute.

Besides free wildflower and gardening presentations at the historic Athens Theatre, festival-goers can attend hands-on workshops on composting, raised-bed gardening, Florida

Friendly landscaping, natural pest control, and herb and flower gardening.

Space for vendors is still available — contact Naomi Nichols of MainStreet DeLand at (386) 738-0649 or naomimainstreet@yahoo.com. For more information on the festival, visit www.FloridaWildflowerFestival.com.

The University of Florida's "Long-term Educational Wildflower Meadow" in Gainesville is part of a larger project that included a survey to evaluate student

perceptions and attitudes about Florida native wildflowers and creation of a wildflower meadow for teaching and research. Plans call for additional planting beds, trails, wetland areas and educational displays. The project,

funded by the Florida Wildflower Foundation, began as joint effort in 2007-2008 between UF's Environmental Horticulture and Landscape Architecture departments with advice from the Florida Wildflower Growers Cooperative. Students and staff conducted the site analysis, cleared turf for planting beds and installed irrigation lines. Seeds from North and Central Florida were propagated by students to create the plants that formed the beautiful flowering display in summer 2011.

Chief advisor for the project, Dr. Hector Perez, is an assistant professor in the Environmental Horticulture Department and a founder of the Plant Restoration and Conservation Horticulture Research Consortium at UF. The meadow is on No Name Road, which is north of Fifield Hall, east of the Microbiology building and south of Lake Alice.

Dr. Perez shared his comments about the wildflower meadow in a recent interview:

What was your impression of the garden last fall?



The UF wildflower meadow in Gainesville is used for teaching and research.

We had a dazzling floral show throughout the fall despite the drought and hot weather. It was impressive to see how many of the species in the meadow thrive under such adverse conditions. I was also impressed with the number of different insect floral visitors. I have not seen so many different types of bees, bee-like insects, and beetles in a long time.

What kind of maintenance does the garden need?

The wildflower meadow was established on an abandoned field. As you can imagine, this type of site hosts many types of weed species. During late spring through summer, we are focused on trying to control emergent weeds such as nutsedge, pusley, groundnut, Bermuda grass and others. It seemed like summer lasted throughout the fall this year, so we had to be extra vigilant. My team has done a fantastic job this season of managing weeds, but this is an on-going effort. Nevertheless, it was interesting to see how the established wildflowers could outcompete some of the weeds for light and other resources.

Does research continue in the garden?

Because of the mild fall/winter, we can still harvest seeds of some species growing in the meadow. We plan to use these seeds in a study focusing on seed viability after storage under different conditions. Informally, we continually observe how wildflowers perform in terms of flowering and durability.

Is there any particular research you would like to share with us?

We have some publications due out during the next several months. One paper, published in the journal *HortTechnology* (Volume 21, pages 779-788) this December, details the results of our survey of Florida native wildflower producers and their analysis of the current native wildflower market, views on research areas vital to enhancing the industry, and activities to help increase awareness of Florida native wildflowers. A second paper, due out in early 2012 in the journal *Propagation of Ornamental Plants*, deals with vegetative propagation of various *Polygonella* species. This study investigated the effectiveness of different concentrations of a rooting hormone and rooting substrate on rooting success at sites in North, Central and South Florida. We expect that this paper will have direct applications for wildflower growers. A third paper is under consideration for publication. This paper attempts to explain the variable response of germinating *Rudbeckia mollis* seeds to different temperature scenarios. We expect that the information generated from this research will inform end-users on effective establishment strategies.

Any other comments or plans for the garden's future?

Our vision for the garden is to transform it into a center for research, education and outreach on wildflowers. Undoubtedly, this will take time, resources and great effort. I feel we have fantastic support from many wildflower enthusiasts around the state that can help make this a reality.

Dr. Perez is seeking volunteers to help with meadow maintenance, wildflower propagation, and installation of wildflowers. Contact him at heperez@ufl.edu or 352-273-4503.

Planting non-native milkweeds can result in monarch deaths *by Dr. Jaret Daniels*

The monarch butterfly is arguably the most well-known and beloved insect in North America. Besides its almost commonplace presence in gardens, it's the star of one of the world's greatest migratory events. Each fall, hundreds of millions of monarch butterflies make their long-distance journey south from the United States and Canada to overwintering sites in Mexico and California.

Sadly, these overwintering populations have experienced a steady decline in numbers during the past three decades. Monarchs are threatened by the loss and degradation of habitat, natural disease and predation, adverse weather, and the ongoing decline of both nectar and larval host plants.

Florida's native milkweeds play a particularly critical role in the migratory lifecycle by providing essential early-spring host resources for returning butterflies. The showy flowers of milkweeds also offer abundant, high-quality nectar to a wide range of other pollinators including hummingbirds and bees.

Despite their attractiveness and wildlife value, only a very small number of the 21 milkweeds

native to Florida are available in nurseries or sold from seed.

Butterflyweed (*Asclepias tuberosa*)

is by far the most commonly obtainable. Although serving as a fantastic nectar source, it is a suboptimal host and only infrequently used by monarch larvae. As a result, most gardeners purchase the non-native Tropical Milkweed (*Asclepias currasavica*) – a seemingly ubiquitous plant in the marketplace that is sometimes misidentified or misinterpreted as a native.

Because Tropical Milkweed remains green until frost throughout the Deep South, it can enable monarchs to continue breeding well into fall and winter, causing populations to persist longer in certain areas than they naturally would.

Unfortunately, prolonged breeding can foster higher than normal infection rates by a lethal protozoan parasite, *Ophryocystis elektroscirrha* (OE). It can also increase the risk of organism exposure to freezing temperatures, resulting in

More on our blog: Visit www.FloridaWildflowerFoundation.blogspot.com for information on finding native milkweeds.

the potential death of adult butterflies or immature stages.

An added danger is that some commercially grown plants may have been treated with systemic pesticides during cultivation. The application of such pesticides will make the plants toxic to monarch larvae – exasperating most butterfly gardeners.

The simple answer to this potential problem is to ask for native milkweeds at your garden center – be sure to ask for native ecotypes by their scientific names.

Together we can help provide critical host resources for monarch butterflies and increase the market for native plants at the same time.

Dr. Jaret Daniels is Assistant Director of Exhibits and Public Programs and Assistant Curator of Lepidoptera at the Florida Museum of Natural History. He is also a University of Florida-IFAS entomology professor.

Drawn to nature: Botanical art treasures stand test of time by Claudia Larsen

When it's time to identify a wildflower, most of us head for our favorite field guide and look through beautiful close-up photographs until we find our subject. Some versions are even color-coded to aid the process. I must own all the popular Florida books by now, but alongside those on my bookshelf are also several special volumes I have collected just for their beautiful hand-drawn reproductions of wildflowers.

My favorite is Caroline Dorman's *Flowers Native to the Deep South* (1958; Claitor's Bookstore, Baton Rouge, La.) In the foreword, the author writes, "It is hoped that this book will help arouse renewed interest in the preservation of our rapidly vanishing wild flowers [sic]. From too frequent picking, misdirected efforts to move them to gardens, forest fires and onslaughts of rabbits and insects, some species are becoming very rare." Doesn't her message sound familiar even after all these years? She states that all but two illustrations were drawn from a living flower (some provided by renowned botanist Dr. J.K. Small). These include 33 color plates and 102 black and white drawings. The most stunning flowers, including the white Swamp Lily (*Crinum americanum*) and the Fringed Orchid (*Habenaria ciliaris*), are set against black backgrounds that contrast beautifully and create a dramatic effect.

Flowers have been the inspiration for many artists throughout history. Early books of botanical illustrations were popularized by the infatuation with the language of flowers in which certain flowers symbolized sentiments of hope, friendship, love and, of course, secret love. In the 17th and 18th centuries "florilegiums," or flower books, became popular. They held accurate



Caroline Dorman's illustrations in *Flowers Native to the Deep South* exemplify the artistic grace of her subjects.

drawings of flower parts, stems and roots. Early printing processes included original illustrations transferred to stone or copper for printing. After the design was transferred to paper, it was hand-colored by artists.

As gardening and plant-collecting increased in popularity, so did the ownership of herbarium albums, botanical magazines and books. Privileged women hired art teachers and used instructional drawing books to aid their favorite pastime of drawing and painting with watercolors. Examples of these include "Easy Introduction to Drawing Flowers According to Nature" (James Sowerby; 1788) and "Sketches of Flowers from Nature" (Mary Lawrence; 1801). Many of these albums, which included poetry and gardening advice, were never published. Today they are anonymous works of art stored in various libraries and private collections.

Interest in nature continued to flourish in



the 19th and 20th centuries, and illustrations depicted collections of regional plants, birds and animals. In 1850, Susan Fenimore Cooper's artwork in her *Rural Hours* by a Lady reflected the natural world in upstate New York. Her contemporary, Mrs. Clarissa W. Munger Badger, published *Wildflowers of America* in 1859.

I can only imagine the beautiful landscapes experienced by Emma Homan Thayer when she created *Wildflowers of Colorado* in 1885, followed by *Wildflowers of the Pacific Coast* in 1887. She states in her book, "In the places most difficult to access, I found the most beautiful flowers. It would seem as if they wished to hide the delicate members of their family from the rude gaze of the world, sheltered in some nook of the rocks, like a miniature conservatory tenderly cared for by the fairies of the mountains."

Read more about botanical art treasures on our blog: www.FloridaWildflowerFoundation.blogspot.com.

Make a one-time donation or monthly contributions — it's easy!

You can promote the use, availability and advantages of native wildflowers by sending a contribution to the Florida Wildflower Foundation today. By supporting our education, research and planting initiatives, you'll be helping to sustain essential crop pollinators, curb water use in landscapes, reduce water and air pollution, provide wildlife habitat, and maintain a healthy environment for all Floridians.

You can have an impact at any giving level:

- \$10 provides 100 wildflower seed packets for a community event.
- \$25 puts butterfly/wildflower brochures in the hands of 100 Florida schoolchildren.
- \$50 prints hundreds of handouts for educational

events, meetings and presentations.

- \$100 sponsors a school wildflower and wildlife garden.
- \$250 plants wildflowers along 100 yards of a roadside.
- \$500 sponsors a "La Florida, Land of Flowers," community planting project.
- \$1,000 aids research that brings more native plants to market.

Visit our online contribution center at FlaWildflowers.org/donate.php. Or send your contribution to the Florida Wildflower Foundation at PO Box 941066, Maitland, FL 32794-1066.

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(r) – renewal

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Tina Drake

Seed Packets

Janet Bowers Anita Larsen

FWF launches research literature database

The Florida Wildflower Foundation recently launched an online research literature database of Florida wildflowers that draws together findings on more than 260 species.

This new tool provides research sources that can be used to protect and preserve our native wildflower species. Because many Florida species also occur elsewhere in the Southeastern U.S., we expect wide interest in the database throughout the region.

The collection, found at www.FlaWildflowers.org/Literature.php, is intended to give researchers, botanists, the nursery industry, conservation scientists, instructors and

wildflower enthusiasts a resource that lets them easily find data on specific species. They will be able to tailor searches in a variety of ways, including using key words, authors' names, and article topic.

Each data entry provides a brief synopsis of the study or article featured, along with links to records in national databases, including the USDA library and scientific journals.

The Foundation intends to keep expanding the database, which currently contains fewer than 10 percent of the state's native plants. To recommend articles or make other suggestions, email Literature@FlaWildflowers.org.

Join a movement that's growing like wildflowers!



Over the last decade, our members have raised more than \$2.6 million for Florida's native wildflowers and grasses through their membership dues and donations made through the State Wildflower license plate. By doing so, they've helped seed highways, fund community plantings, create educational materials, support important research projects, and much more.

By becoming a Florida Wildflower Foundation member, you can join the fight to preserve and conserve Florida's native wildflowers, too. To join, use the convenience of PayPal online at www.FlaWildflowers.org/membership.php or snip out this membership coupon to send with a check. Got a Florida State Wildflower license plate? Your membership is free!

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Show your Flower Power — get the plate!