
◊ DCLS News ◊

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DCLS Meetings: Past and Future

The August 14th meeting of the DCLS was the largest to date — with a record 85 people in attendance as they toured Dale Clark’s “Butterflies Unlimited” butterfly farm. Mild temperatures made for pleasant viewing of both live specimens in the flight cage and pinned specimens in the “museum room”. Our next meeting will be September 11th to an as yet undecided location. Watch your email and the calendar of events for

Summer Visitors to North Texas

Late summer is a great time for butterflying in north Texas as species from south Texas that we don’t normally see with great frequency begin showing up in our gardens and favorite butterfly haunts. Orange-barred Sulphurs (*Phoebis philea*) have been seen in Tarrant County with some regularity with a sighting in Denton County this week and a probably sighting in Dallas a few weeks ago. The first Zebra Longwings (*Heliconius charithonia vazquezae*) of the year are also starting to show up. Tropical Checkered Skippers (*Pyrgus oileus*) and Sickle-Winged Skippers (*Eantis tamenund*) have both put in appearances in my yard. As summer turns to autumn even more interesting leps can show up so keep your eyes open and report your findings to DCLS. For a list of what’s flying be sure to check out the “What’s on the Wing” section of the DCLS website which is updated weekly.

The Dallas County
Lepidopterists’
Society
Est. 1995



Purpose:
To provide a
forum where
people may gather who
share an
interest in
butterflies
and
moths,
whether that
interest takes the form
of
collecting,
gardening,
photography,
study or
casual
observation.

McGuire Center for Lepidoptera Opens

From Naples Daily News
August 14, 2004

Moths as big as birds and butterflies with wings like Las Vegas nights are moving to Florida, winged immigrants with a lot to accomplish in their brief lives.

By day, they will provide an exhilarating show of nature for visitors to a replicated rainforest in the new McGuire Center for Lepidoptera and Biodiversity in Gainesville.

After hours and behind the scenes, however, these winged wonders will be agents for change on a planet trying to learn more about them. A colony of some 60 curators, zoologists, graduate students — even retired lepidopterists — will be testing theories, recording flight patterns and observing their socialization and mating habits.

The center is located in the Florida Museum of Natural History. It will house office and research space for the Florida Department of Agriculture's State Collection of Arthropods and two University of Florida departments: entomology and zoology.

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Butterflies May Have Something to Say

By **JANINE YOUNG SIKES**
Gainesville Sun staff writer

If only butterflies could talk.

Maybe they can.

A University of Florida researcher has recorded a series of barely audible clicks coming from blue-and-white longwing butterflies, sounds believed to be butterfly-to-butterfly communication.

The finding adds to a small but growing number of studies suggesting that some butterfly species use sound to talk.

"It's one of those accidental discoveries that sometimes happen in science," said Mirian Hay-Roe, an entomologist at UF's Institute of Food and Agricultural Sciences who will be a post-doctoral fellow with the Florida Museum of Natural History's McGuire Center for Lepidoptera Research.

"I wasn't looking for communication in butterflies. I just noticed that these butterflies were making noise," she said.

It's not the first time scientists have heard butterfly chatter - Charles Darwin in 1874 proposed that the Hamadryas butterfly used clicking sounds to attract mates - but it is the first time anyone has heard sounds from the blue-and-white longwing.

Also known by the scientific name *Heliconius cydno*, the blue-and-white longwing is a butterfly found in South and Central America.

Adults of the species spend their days eating pollen from tropical flowers, and they congregate by the hundreds at night in trees.

Nearly 30 years ago, researchers discovered ear-like structures on the wings of *Heliconius* butterflies.

"Everybody knew this insect could hear, they just didn't know what it was listening to," said Richard Mankin, a

research entomologist with the U.S. Department of Agriculture in Gainesville.

Mankin, one of only a handful of people nationwide working in insect acoustics, collaborated with Hay-Roe to analyze the sounds. The two reported their findings earlier this year in the *Journal of Insect Behavior*.

Hay-Roe discovered the noises by happenstance while working with a different species while she was a student at the University of Texas at Austin. She was sharing greenhouse space with a researcher who was working with blue-and-white longwings.

She noticed the blue-and-white longwings seemed to be bullying her butterflies.

As they chased after the rivals, the longwings made a faint clicking sound. Further observation revealed that the butterflies often made the sound when they encountered members of their own species.

Armed with a simple tape recorder, Hay-Roe captured the sounds.

To listen to one of Hay-Roe's butterfly recordings, go to <http://cmave.usda.ufl.edu/~rmankin/soundlibrary.html#Heliconid>.

Click on "*Heliconius cydno alithea*" under the heading "Wing vibration sounds recorded in insect communication studies."



Heliconius cydno

McGuire Center for Lepidoptera Opens

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Butterflies hold a special fascination for Floridians because of the opportunities to rear and rejuvenate their species here. Nearly every serious gardener in Southwest Florida has some nectar plants for the instant ambience of butterfly visits; the enlightened also plant some green hosts for them to gobble up in their larval stages. Because the climate is kind to lepidoptera — both moths and butterflies — Florida is a stopping place for migrating monarchs, and commercial farms breed butterflies for other climates. There are 15 species exclusive to this state.

Yet butterflies have suffered severely during the state's growth, decimated by pesticides and the demolition of their breeding grounds for housing.

"Their critical importance in ecosystem food chains, nutrient recycling, pollination, as endangered species, and as sensitive environmental monitors in tropical-temperate zones cannot be overestimated," says publicity for the center, which opens today. "On the flip side, each year certain species account for billions of dollars of damage as fruit and vegetable crop pests, tree and lawn pests and as defoliating agents."

The University of Florida zoology department, which will use the state-of-the-art academic space, has earned international stripes for its lepidoptera research.

"In past 20 years our reputation grown faster in working with endangered species than even pure classification," said Thomas C. Emmel, the new center's director, who concedes that having a 4-million specimen treasury will add a new dimension to his job. Emmel, a zoology professor who joined the UF zoology department in 1968, has been more attuned to the university's programs of propagating and restoring all-but-extinct species like the Miami Blue butterfly, the Schaus Swallowtail and the Jamaica-based Homerus Swallowtail.

Still, those programs were the outgrowth of the University receiving a 2-million specimen collection from Arthur C. Allyn in 1981.

The Allyn collection and the researchers it drew "began to convince lepidopterists that Florida was an exciting place to be," Emmel recalled. Since the decision of the William W. McGuire and Nadine M. McGuire Family Foundation to fund the research and education center, more prized collections, including the state's-

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Quick Facts

The McGuire Center for Lepidoptera and Biodiversity in Gainesville has:

the second largest collection of butterfly and moth specimens — more than 4 million — in the world, second only to the Museum of Natural History in London. More than 1,032,000 specimens are here, representing 92-95 percent of all known butterfly genera.

the tallest enclosed lepidoptera habitat in the world, nearly five building stories tall at 64 feet.

the world's largest education and research facility, with 39,000 square feet of classroom and laboratory space.

FLY BY

If you'd like to visit the McGuire Center for Lepidoptera and Biodiversity, here's information:

Hours: 10 a.m. to 5 p.m.
Monday-Saturday, 1 to 5 p.m.
Sunday and state holidays, closed
Thanksgiving Day and Dec. 25.

Admission: \$7.50 adults, \$6.50 senior citizens (62 with ID), \$6.50 students (18 and older must have ID), \$4.50 youth (ages 3-12)

Information: (352) 846-2000, or online, www.flmnh.ufl.edu

Directions: From Interstate 75, take exit 384 and travel east on State Road 24 (Archer Road). Turn north (left) on State Road 121 (Southwest 34th Street). At the third traffic signal, turn east (right) on Hull Road and travel 1/4 mile. The entrance to the University of Florida Cultural Plaza is on the south (right) side of Hull Road.

McGuire Center for Lepidoptera

million-plus arthropods and a private collection of 300,000 coveted tropical butterflies, have been added. The public facility itself is one of a kind, he emphasized.

"The butterfly rainforest will be spectacular. We have live butterflies here literally from all over the world. It's a large space filled with

"For the academics who will use the center, there are laboratories for study of molecular genetics, scanning electron microscopy, image analysis and optical microscopy, physiology and specimen preparation."

wonderful landscaping, with plants that provide nectar to the butterflies. There are six waterfalls crashing down around you and five streams," he said. "This will be a fabulous public experience."

At any given time, several hundred butterflies and moths will populate its outdoor, 6,400-square-foot, screened enclosure filled with tropical and subtropical plants and flowers and a walking trail. There's more information, a trio of plasma-screen videos and fascinating facts on its Wall of Wings with thousands of scanned lepidoptera images and actual specimens from around the world. The wall is 21 feet high and 210 feet long.

Creatures christened with such names as the "Cruiser" and the "Purple King Shoemaker," "Pink Rose" and "Cattle Heart," between 55 and 65 varieties total, will be fluttering around the Rainforest at any given time. Residents will include the giant Atlas moth, with a wing span of a foot.

Surprisingly, the majority of the butterflies in the Rainforest will be reared from pupae received from

butterfly farms throughout the Americas and Asia.

For the academics who will use the center, there are laboratories for study of molecular genetics, scanning electron microscopy, image analysis and optical microscopy, physiology and specimen preparation. Classrooms and offices will house 12 faculty curators, two collection managers and staff, but with post-graduate students and other researchers, the affiliated work and study will embrace around 60 people directly.

That statistic excites Emmel almost as much as the facility.

"The number of people who are here because of this center is impressive. There are even some retired lepidopterists who have moved here because of it," he said. "These people will be talking to each other, and the synergistic results could be wonderful."



64-foot high live butterfly flight area.

The Butterfly Garden

A Glowing Red Nectar Flower for Swallowtails

by Tina Dombrowski

Salvias, or Sages, are a large genus of over 700 ornamental and culinary plants in the mint family (*Labiatae*). Frequently listed in numerous published butterfly gardening references as good nectar sources, many of the salvias also attract hummingbirds. Adaptable and variable, there is a salvia for every occasion, or every niche in the garden.

In preparation for the Butterfly Plant sale at the Texas Discovery Gardens, there were many varieties of salvias set out in the nursery sales area and surrounding garden, but one *Salvia* in particular seemed to be attracting the majority of swallowtails to its flowers. Belize Sage (*Salvia miniata*) appeared to be getting the attention and frequent visitation of Pipevine Swallowtails (*Battus philenor*). This plant deserves some attention!

Indigenous to Belize and the Chiapas province of Mexico, Belize Sage naturally occurs in shaded, high elevation sites on hillsides provided with regular moisture from fog and rainfall. According to Betsy Clebsch in "A Book of Salvias", the species name, *miniata*, means red, vermilion, or scarlet, in particular the red used in illuminating or decorating letters in a manuscript. The large reddish orange tubular flowers are strikingly vivid in color, especially against the lustrous green foliage. The plant will quickly grow to a height and width of three feet and bloom throughout the summer into early fall.

Belize Sage should be treated as an

annual plant in North Texas. Ideally it prefers four hours of morning sun, but so far, it is tolerating full sun with regular irrigation and fertilizer. It also will fit well in a shady garden location. Like most plants, it requires good drainage and soil amended with organic matter or compost. Plants readily respond to pruning and can be cut back to 6" - 8" to encourage compact, lush new growth and renewed flowering. Easily propagated by cuttings, small plants can be over-wintered indoors and set out in the garden in late spring.

Still under evaluation, Belize Sage is planted throughout the gardens and will be one of the nectar plants used in the 2004 Butterfly Exhibit during the State Fair of Texas. I have a good feeling about this plant.



Belize Sage (*Salvia miniata*)

Butterflies at the Texas Discovery Gardens during State Fair of Texas

Once again, the Texas Discovery Gardens will be flying live butterflies from around the world in their conservatory during the State Fair of Texas.

The conservatory will be filled with nectar plants for the hundreds of butterflies that will be on the wing at any given time. Over the course of the of the State Fair thousands of pupae will arrive from butterfly farmers in such exotic locations as Malaysia, Costa Rica, Ecuador, Belize, Florida and Texas.



The Bamboo Page (*Philaethria dido*)

Visitors can watch the butterflies emerge from their pupae in two “emergence boxes” located in the exhibit where they will expand and harden their wings in preparation for their first flight.

At 2:30 p.m. each day during the Fair there will also be a monarch butterfly tagging demonstration. The tagged monarchs are then released so they can migrate south for the winter. The gardens will also be alive with many native butterflies at this time of year, particularly the first and second weeks of October when the monarch migration typically peaks in north Texas.

Dates: Friday, Sept. 24 through Sunday, Oct. 17

Hours: 10 a.m. - 6 p.m. daily (last ticket sold at 5:30 p.m.).

Cost: Adults \$4, seniors (60+) \$3, children (3-11) \$2 in addition to paid admission to the State Fair of Texas. Texas Discovery Gardens members and children under 3 are admitted free to the butterfly exhibit.

Volunteer Opportunities

General Orientation and Butterfly Training is Saturday, August 28 from 9:00 a.m. to 4:00 p.m.

Plant Training is Tuesday, August 31 and docents and attend either the morning session (10:00 a.m. - noon) or the evening session (6:00 - 8:00 p.m.).

Docent training covers butterfly identification and behavior, such as nectaring, roosting, mating and more.

Docents are asked to volunteer for a minimum of three four-hour shifts during the State Fair of Texas. You will receive a Texas Discovery Gardens T-shirt and a State Fair passes (including parking) for your shifts.

Don't miss this unique and rewarding experience. Contact Melissa Martin at 214-428-7476 x 25.



Banded Orange (*Dryadula phaetusa*) one of the many species of butterflies that will be “on the wing” in the conservatory of the Texas Discovery Gardens during the State Fair of Texas this year.