

# The Crosby Arboretum

Mississippi State University Extension Service

Quarterly News Journal

Summer 2015

29.3

## NATIVE ST. JOHN'S WORT:

### Horticulturally Desirable Plants and Remarkable Sources of Biochemicals with Medicinal Properties

By Dr. Wayne Morris, Associate Professor of Biology, Troy University, Alabama

Globally, there are close to 500 species of St. John's worts (*Hypericum* spp.). These plants are distributed in a wide variety of habitats on every continent except Antarctica, and the architecture of St. John's wort plants reflects their adaptations to specific environments. Habit ranges from diminutive herbs to large shrubs and even small trees. The dry pineland inhabiting pineweed (*Hypericum gentianoides*) may only grow to a few inches in height, whereas the Floridian endemic *H. chapmanii* often grows in dense populations with pond cypress and can reach 15 ft in height. Mississippi has over 25 St. John's wort species that occur in habitats such as cypress swamps and marshes, frequently burned savannas and pitcher plant bogs, rich deciduous woodlands and adjacent meadows, prairies and chalk outcrops, dry pinelands, and even sandhills.

Fifteen St. John's wort species have been documented from the Crosby Arboretum natural areas. The attractive flowers most often have four or five bright yellow petals and numerous pollen-producing stamens. Exceptions from the cypress swamps are *Hypericum walteri* and *H. virginicum*, which both have pinkish flowers. The herbaceous St. John's worts naturally occurring in wetland habitats, such as *H. gymnanthum*, *H. mutilum*, and the aforementioned species, have thin, flat leaves because they are not as subject to water loss. Likewise, the shrub-sized *H. lobocarpum* of partially shaded swamp margins and creek banks not subject to frequent burns (Mill Creek natural area) has relatively broad leaves for the genus.

*Hypericum brachyphyllum* and *H. fasciculatum*, both shrubs that are indicative of fire-prone wet savanna/pond cypress swamp ecotones (Hillside Bog and Dead Tiger Creek Savanna & Hammock natural areas), have wiry branches and numerous needle-like leaves that help them conserve water in their generally more open, sunny environment. Pineweed (*H. gentianoides*) of dry pinelands has among the most extreme adaptations to conserve water. In this plant, leaves are reduced to scales, and the green stems take over the job of photosynthesis!



*Hypericum crux-andreae* (Left); *H. brachyphyllum* (Right)  
[http://www.southeasternflora.com/view\\_flora.asp?plantid=736](http://www.southeasternflora.com/view_flora.asp?plantid=736)



**Coastal Plain St. John's Wort** (*Hypericum brachyphyllum*)  
[http://www.southeasternflora.com/view\\_flora.asp?plantid=713](http://www.southeasternflora.com/view_flora.asp?plantid=713)

Several of the St. John's worts native to south Mississippi lend themselves to ornamental use. The rounded, but wiry, typically knee- to waist-high form of *Hypericum brachyphyllum* would seem well-suited as an ornamental in a rock garden (using pea gravel) in sunny, poorly-drained areas. *Hypericum lobocarpum*, in the bushy St. John's wort (*H. densiflorum*) group, does well along fences in transition areas between manicured lawns and adjacent woodlands; it really puts on a show with numerous golden blooms contrasting with its smooth green foliage in late June through early July (around the time of St. John the Baptist Day). Other species, such as cedarglade St. John's wort (*H. frondosum*), especially characteristic of central Tennessee, has flowers up to two inches across and has long been in the horticulture trade.

Recent research conducted by pharmaceutical scientists in multiple countries shows that many St. John's wort species, including those native to the southeastern United States, are sources of many of the same medicinal biochemical compounds present in the well-known Eurasian *Hypericum perforatum*, of which specific, regulated extracts are prescriptions administered by physicians in Europe. Because St. John's wort products are not regulated in the United States, they should be avoided. Hypericin is present in dark-colored glands and especially in flowers. Hyperforin is found in pale-colored glands and especially in fruits. Flavonoids, such as quercetin and rutin that are known in many fruits and vegetables, are also present. All of these compounds exhibit antidepressant effects, and are reported to improve memory, promote cardiovascular health, and show antiviral, antibacterial, anti-inflammatory, antitumor, and anticancer properties.



**Michael Wayne Morris, Ph.D.**, Associate Professor of Biology, Troy University, Troy, AL. Dr. Morris was employed at the Crosby Arboretum in the summer of 1986 through Dr. Sidney McDaniel, MSU Professor of Botany, while working on his M.S. at MSU.



## The Crosby Arboretum Mississippi State University

A regional arboretum representing the native flora of the Pearl River Drainage Basin in Mississippi and Louisiana.

Picayune, Mississippi, USA

### Director's Notebook:

This spring the Arboretum participated in a service learning project made possible through Dr. April Heiselt, Director of Mississippi State University's Center for the Advancement of Service-Learning Excellence (CASLE), who matched the Arboretum with the Intro to Print Production (Art 3913) course taught by Assistant Professor Cassie Hester, MSU Department of Art. The students each produced a poster series for three of our largest events – BugFest, Piney Woods Heritage Festival, and Forge Day. We chose poster graphics by students **Kimberlin Singletary**, **Anna Callaway**, and **Austin Grove**, in that rank order. It was not an easy choice, but thanks to input from the Foundation Board, staff and members, we look forward to begin printing professional quality posters this fall.

The Arboretum benefited from a U.S. Navy community service day in May, organized by Navy Petty Officer First Class **Andrew Ribar**, Navy Community Outreach Coordinator for Commander, Naval Meteorology and Oceanography Command at John C. Stennis Space Center. Crews pruned vegetation along the service road, bundled shingles from the Pincote Pavilion for storage, and performed trail maintenance. Grounds manager **Terry Johnson** has been hard at work with the forms for the eight bridges that he will construct with volunteer **Tom Heim** in the Swamp Forest Exhibit. A gorgeous stack of cypress lumber awaits this project. Thank you to the Arboretum members who contributed annual appeal funds to make this project possible!

Have you seen our new website? This is the result of the talents (and patience) of web developer **Andy Collins** of the Coastal Research & Extension Center in Biloxi. Anticipating the completion of the **Pinecote Pavilion's** restoration project? We should be ready for events in early June! Visit our Gift Shop for an outstanding selection of new books on foraging, native plants, sustainable gardening, pollinators, and field guides, and new work by local artists and craftspersons.

- Patricia Drackett, Director  
The Crosby Arboretum, MSU Extension Service



MSU Intro to Print Production students **Kimberlin Singletary** (L) and **Anna Callaway** (R) with their work. Kimberlin's poster will be featured this fall. Anna's graphics will also appear on a T-shirt.



### Curator's Corner:

What a pleasure it is to work in a natural setting such as The Crosby Arboretum during the spring and summer seasons. This spring has produced a good amount of rain in south Mississippi which “put a little mud on the tires;” and gave way to spectacular displays of color in our exhibits. Watching the natural areas evolve with the seasons is fascinating, especially if you are a lover of plants. The view of the savanna changes not just from week to week, but from day to day as the blooms of multiple species ebb and flow in perfect tempo.

I had the chance to visit Hillside Bog with **Pat Drackett** and others on two occasions this spring. Hillside Bog is a 70 acre, Crosby Arboretum natural area located in northern Hancock County. Upon arrival in late March, we saw a beautiful stand of longleaf pines highlighted by brown grasses, endless drifts of yellow pitcher plants with swollen flower buds, and patches of mature *Cliftonia* in full bloom. While walking the trail at Hillside in March, **Terry Johnson** pointed out a beautifully sculpted, old Cypress in the landscape. “Look close,” he told us, “and you will see a beehive that has been around for at least 20 years.” And so it was, a natural beehive in the middle of the old Cypress tree, something that I had not seen since I was a small kid.

In May, we returned to Hillside Bog for a field walk with **Dr. Wayne Morris**. The stand of longleaf pine was a flush of green; and we noted plants in the understory such as winged sumac, New Jersey tea, and sassafras. The pitcher plant blooms were complete, and a beautiful display of pitchers had pushed forth. Did you know that the pitchers are actually modified leaves? The *Cliftonia* (buckwheat tree) had finished blooming as well, whereas blooms of native *Calopogon* orchids, meadow beauties, and black-eyed Susan stole the show. The beehive was alive with a mass of bees, busy as ever, in the warmth of that May afternoon.

Yes, spring is busy. It's a good kind of busy.

(Continued on Page 3)

- Jill Diamond Mirkovich, Senior Curator  
The Crosby Arboretum, MSU Extension Service





## The Crosby Arboretum Mississippi State University

A regional arboretum representing the native flora of the Pearl River Drainage Basin in Mississippi and Louisiana.

Picayune, Mississippi, USA

## The Crosby Arboretum Foundation Inaugural Art Show Was a Huge Success!

Congratulations to the winners of our Inaugural Art Show:

### Two-dimensional art:

- 1<sup>st</sup> place, **Robin Veerkamp**, *Pitcher Plant Bog*, colored pencil;
- 2<sup>nd</sup> place, **Gail Sheasby**, *Blue Heron Stalking Dinner*, acrylic painting;
- 3<sup>rd</sup> place, **Rose Mahoney**, *Sitting Pretty*, acrylic painting.

### Three-dimensional art:

- 1<sup>st</sup> place **James Fornea**, *Bream, Crawfish Under Water*, wood carving;
- 2<sup>nd</sup> place, **John Houston**, *Mourning Dove On Branch*, wood carving;
- 3<sup>rd</sup> place, **Lynda Williams**, *Colors of Spring*, jewelry.

A special thanks goes out to all of our participating artists. Your contributions to this year's art show were priceless. We enjoyed seeing each piece on display; your work brought our program room to life. Also, a great big thank you goes out to our Volunteers and to The Crosby Arboretum Board for the time and effort in getting the Art Show up and running. Thank you all!



Robin Veerkamp, 1st place 2D



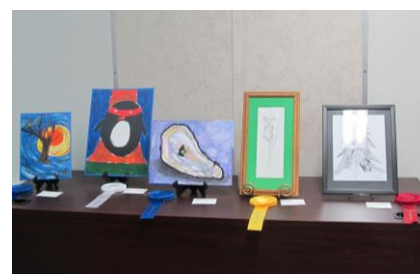
Gail Sheasby (left), 2nd place 2D



James Fornea, 1<sup>st</sup> place 3D



John Houston, 2<sup>nd</sup> place 3D



Student Artwork display.

## Curator's Corner *(Continued from Page 2)*

We danced our way through the Spring Plant Sale, the annual lecture with Rick Darke, the Inaugural Art Show, Strawberries & Cream Festival, and Wildlife Day with great success. Summer has arrived and we have more to come. Our Summer Nature Day-Camp will be held June 9 – 12, with lots of fun hands-on activities for kids. Check out our program schedule for programs such as Yoga on the Pavilion, the Summer Aquatic Sale, and All About Hummingbirds!



*The Art Show took place in the Arboretum Annex, with display boards constructed by volunteer **Tom Heim**.*

## PLANT PROFILE: Summersweet (*Clethra alnifolia*)



Image: [http://www.southeasternflora.com/View\\_Flora.asp?PlantID=706#](http://www.southeasternflora.com/View_Flora.asp?PlantID=706#)

*Clethra alnifolia*, commonly known as summersweet or coastal sweetpepperbush, is a deciduous shrub found throughout the eastern coastal regions of U.S. Summersweet grows naturally in low wet areas where the soil is acidic. It can be placed in full sun, as well as shady areas, growing 6 to 10 feet high and 4 to 6 feet wide. This wonderful native plant provides excellent landscape value to local gardeners with high adaptability to our wet pinewoods and salty conditions on the coast. Summersweet produces lovely, fragrant blooms of white attracting a range of pollinators including bees, butterflies, and hummingbirds. Try planting a *Clethra alnifolia* in your garden this year.

-Jill Diamond Mirkovich

## NATIVE PLANTS WITH SUMMER INTEREST

**Fewflower Milkweed** (*Asclepias lanceolata*)  
**American Beautyberry** (*Callicarpa americana*)  
**Le Conte's Thistle** (*Cirsium lecontei*)  
**Summersweet** (*Clethra alnifolia*)  
**Pine Lily** (*Lilium catesbaei*)  
**Goldcrest** (*Lophiola aurea*)  
**Sweetbay Magnolia** (*Magnolia virginiana*)  
**Savannah Meadowbeauty** (*Rhexia alifanus*)  
**Little Blue Stem** (*Schizachyrium scoparium*)  
**Rough Skullcap** (*Scutellaria integrifolia*)  
**Stoke's Aster** (*Stokesia laevis*)  
**Yellow-eyed Grass** (*Xyris difformis*)

The News Journal is a quarterly publication of The Crosby Arboretum, Mississippi State University Extension Service. Journal subscriptions may be obtained with membership at the Arboretum. Printed on recycled paper with  $\geq 30\%$  postconsumer waste recycled fiber. Journal may be received electronically if desired. Please send correspondence to:

Jill Mirkovich, Editor  
 The Crosby Arboretum  
 P.O. Box 1639  
 Picayune, MS 39466  
[jill.mirkovich@msstate.edu](mailto:jill.mirkovich@msstate.edu)

\*Programs of Mississippi State University Extension Service are open to all people, without regard to race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, or group affiliation.

## Membership Application

All contributions are tax deductible to the extent allowed. For more information call: (601) 799-2311 or print form online.

_____	Student (send student i.d.)	\$ 15.00
_____	Individual	30.00
_____	Family	40.00
_____	Donor	100.00
_____	Patron	250.00
_____	Benefactor	1,000.00
_____	Business	
_____	Sweetgum	100.00
_____	Sassafras	250.00
_____	Live Oak	500.00
_____	Bigleaf Magnolia	1,000.00

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Renewing?  Memberships are for one year.



MISSISSIPPI STATE  
 UNIVERSITY  
 EXTENSION SERVICE

The Crosby Arboretum  
**Mississippi State University**  
 P.O. Box 1639  
 Picayune, MS 39466-1639

# Crosby Arboretum Program Schedule

June – July 2015

## June 2015

### **CROSBY ARBORETUM GALLERY OPENING: PHOTOGRAPHY BY BILL KEITH EDWARDS**

**Friday, June 5 (Family)  
1 to 3 p.m.**

**Bill Edwards**, a resident of Carriere, MS, has been “imaging” the world around him through a lens for nearly 50 years. His goal as a photographer is to “steal” a moment in time and use it in post-production to create whatever moves his spirit in the lab; therefore, creating a final product that is much more a representation of raw emotion than raw photographic skill. Exhibit runs through August 31. Come and enjoy light refreshments. Opening event is free to members and non-members.

### **BIRDS & BIRDING (Family)**

**Saturday, June 6  
10 to 11 a.m.**

Ever wonder why birding is fast-becoming the most popular pastime in America? **Susan Epps**, avid birder and writer, will give an overview of the migrant and resident birds seen in our area, and discuss the fun aspects of birding, providing appropriate food sources, and identification tips. Suited to ages 8 and up. Members free; non-members \$5. Please register by June 5.

### **KIDS' SUMMER NATURE CAMP (Kids!)**

**Tuesday - Friday, June 9, 10, 11, & 12  
9 a.m. to 12 noon**

Children ages 6 through 12 will enjoy this fun day-camp, learning about the outdoors with hands-on lessons, games, and activities. They will leave camp with an increased appreciation and excitement for nature. Come and explore with us and learn about plants, birds, wildlife, and bugs! A \$10 non-refundable deposit is required to reserve your child's space. Cost is \$25 for members' children; \$35 for non-members. Limited to 15 registrants.

### **YOGA AND ESSENTIAL OILS ON THE PAVILION**

**Saturday, June 27 (Adults)  
9 to 10:30 a.m.**

Pure essential oils have been used for centuries by alchemists and healers to energize, repair, and relax the body and mind. Join us on the lovely Pinecote Pavilion to explore the effects of oils with a gentle yoga practice. Class to be led by **Jim Sones** and **Cheryl Backes**. Free for members, \$5 non-members. Please register by June 26.

## June Teachers' Workshops

### **PROJECT WILD: FLYING WILD**

**Thursday, June 18, 9 a.m. to 3 p.m.**

**Flying Wild** uses activities focusing on birds to teach subjects such as language arts, social science, and math and introduces students to bird conservation through standards-based classroom activities and environmental stewardship projects and encourages schools to work with conservation organizations and community groups to implement school bird conservation projects.

### **PROJECT WILD: GROWING UP WILD**

**Friday, June 19, 9 a.m. to 3 p.m.**

**Growing up WILD** features new activities designed to stimulate young children in new ways, while connecting them to nature and many of its wonders. This national early childhood initiative builds literacy skills and environmental appreciation among early learners through engaging wildlife-based educational activities. Suggested for teachers who work with ages 3-7.

*Workshops open to K-12 teachers and homeschool educators, conducted by **Jessica Eaves**, Outreach Conservation Biologist, Mississippi Museum of Natural Science. Books, registration, and CEUs are FREE. Bring a brown bag lunch. To sign up, call the Arboretum at 601-799-2311.*

## July 2015

### **AQUATIC PLANT SALE!**

**Saturday, July 11, 9 a.m. to 2 p.m.** During the sale, attend programs focused on aquatic plant species:

**POND JOURNEY TOUR** (10:00 to 11 a.m.). Enjoy a walk with **Marc Pastorek** of Pastorek Habitats, LLC, Covington, and explore the aquatic species along our Pond Journey, with a brief trek into the wet Savanna Exhibit.

### **LOUISIANA IRIS PROPAGATION & CULTURE**

(11:00 a.m. to Noon). Learn how to identify, grow and propagate Louisiana iris with **Eileen Hollander**, President of the Greater New Orleans Iris Society.

**PLANT SALE** will be held in our Greenhouse area. Come early for the best selection of non-invasive native aquatic plants, many divisions from the Arboretum exhibits. **Free admission.** Please use site Service Entrance.



# Crosby Arboretum Program Schedule

July - August 2015

## July 2015 *(continued)*

### July PLT Teachers' Workshops

#### PROJECT LEARNING TREE WORKSHOP

**Saturday, July 18, 9 a.m. to 3:30 p.m.**

One of the oldest and most successful environmental education programs, PLT offers interdisciplinary, fun, hands-on lesson plans based on sound science. This K-12 workshop will feature a "Hike Through the PLT Guide" and teamwork activities for learning the lesson plans. Cost is \$15 for the 96-lesson-plan, 400-page "PLT Pre-K-8 Activity Guide." High School teachers will receive two of PLT's five Secondary Education Modules.

#### PLT WORKSHOP: "THE SOUTHEASTERN FOREST & GLOBAL CLIMATE CHANGE"

**Saturday, July 25, 9 a.m. to 3:30 p.m.**

No matter whether you are a skeptic or believer about global climate change, you will enjoy this Secondary Education Workshop that will be unbiased, inoffensive, hands on and fun. Includes the new PLT High School Module, backed by "hard science". The USDA has identified three primary U.S. crops that may be affected by climate change; critical in the Southeast is loblolly pine. The USDA "PINEMAP" project has subcontracted the information and education portion to PLT, and through the PINEMAP program, training and material for this workshop will be FREE.

*Workshops are open to both teachers and homeschool educators, and conducted by **Harold Anderson**, State Coordinator for Mississippi Project Learning Tree. Bring a brown bag lunch. 0.6 CEUs available for each workshop for \$10. To sign up, call the Arboretum office at 601-799-2311.*

### ALL ABOUT HUMMINGBIRDS *(Family)*

**Saturday, July 25**

**10 to 11 a.m.**

**James Bell**, of The Hummer/Bird Study Group, Inc., will reveal how you can fill your yard with hummingbirds! Learn what is going on in the hummingbird's life, how they feed, why they fight so much, and simple tips and tricks to attract them, giving you a chance to enjoy the beauty of one of nature's most dazzling creations. Suited to ages 8 and up. Members free, non-member adults \$5, children \$2. Please call to register by July 24.

### SUMMER WILDFLOWER WALK *(Family)*

**Saturday, August 8**

**10 to 11 a.m.**

Families, come enjoy a summer tour of the Arboretum in the south Savanna Exhibit and pitcher plant bog. Plants of interest will be discussed along the journey, with ways to use them your home landscape, and their value to wildlife. Bring your camera, and dress for walking. Members free, non-member adults \$5, children \$2. Register by August 7.

### MONARCHS AND MILKWEED *(Family)*

**Saturday, August 22**

**10 to 11 a.m.**

**Linda Auld**, "BugLady," owner and operator of Barber Laboratories, has raised over 105 species of butterflies and moths for 39 years. She leads a project distributing milkweed (*Asclepias spp.*) seeds in Louisiana, and helps New Orleans schools to install butterfly gardens. Learn about milkweed species for our area. Members free, non-member adults \$5, children \$2. Register by August 21.

### MUSHROOM WALK *(Family)*

**Saturday, August 29**

**10 to 11:30 a.m.**

Learn about fungi's fascinating role in ecology, taxonomy, and relationship to mankind with **Dr. Juan Mata**, Associate Biology Professor, University of South Alabama, who returns for a guided mushroom walk of the Arboretum grounds. Members free, non-member adults \$5, children \$2. Please call to register by August 28.

**Reservations:** Call the Arboretum office at (601) 799-2311 for questions, and to make program reservations.

**Physical Address:** 370 Ridge Road, Picayune, MS 39466 (Note: GPS directions to the Arboretum are often inaccurate; please see our website for detailed directions.)

**Hours of Operation:** Wednesday - Sunday, 9 a.m. to 5 p.m.

**Admission Fees:** Adults, \$5; Seniors (over 55) and Military \$4; Children under 12, \$2; Arboretum members, free admission to grounds and most programs.

[www.crosbyarboretum.msstate.edu](http://www.crosbyarboretum.msstate.edu)



Programs of Mississippi State University Extension Service are open to all people, without regard to race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, or group affiliation. If you have questions regarding MSU Extension's non-discrimination policies, contact: Judy Spencer, Chief Human Resources Officer, P.O. Box 9603, Mississippi State, MS 39762, (662) 325-3713. MSU Extension will provide reasonable accommodations to persons with disabilities or special needs. Please contact the Crosby Arboretum office at (601) 799-2311 or [s.lowe@msstate.edu](mailto:s.lowe@msstate.edu) prior to a program or event to request reasonable accommodation.