

The Crosby Arboretum

Mississippi State University Extension Service

Quarterly News Journal

Summer 2018

32.3

MISSISSIPPI: HOME TO SIX NATIVE MAGNOLIA SPECIES

Globally, there are around 125 magnolia species, and these occur in two widely separated regions: eastern Asia and eastern North America south through tropical America. The climates of much of Japan and eastern China and the eastern United States are similar in that they are characterized by four seasons (winter, spring, summer, and fall) and are overall mild. Forests in the two regions have many deciduous (and some broadleaf semi-evergreen to evergreen) trees adapted for these climates, as reflected in the genus *Magnolia*. Aptly nicknamed “The Magnolia State,” Mississippi supports populations of 6 of the commonly recognized 8 magnolia species native to the United States. The deciduous species are cucumber tree (*M. acuminata*), bigleaf magnolia (*M. macrophylla*), pyramid magnolia (*M. pyramidata*), and umbrella tree (*M. tripetala*). Our familiar state tree, southern magnolia (*M. grandiflora*) has evergreen leaves, and sweetbay (*M. virginiana*) is semi-evergreen to evergreen. All are horticulturally desirable, mostly as specimen trees or in more sheltered woodland gardens. However, most people only notice the widely used southern magnolia in commercial and residential landscapes. Increasingly, other magnolia species, especially sweetbay, are being planted on college campuses, around restaurants, banks, and apartment complexes, and even in landscapes surrounding grocery stores and shopping malls to the aesthetic benefit of all who live in the Deep South.

One of the best places in the Picayune area to observe magnolias in their native habitats is the Mill Creek natural area of the Crosby Arboretum. All Mississippi species except for the umbrella tree are known to occur there. The varied terrain at Mill Creek promotes the development of a mosaic of habitats. Rich hardwood forests on bluffs above the creek support three different deciduous magnolias. Southern magnolia is conspicuous on the lower slopes, creek terrace, and floodplain, and sweetbay is primarily in swampy places such as right along the banks of creek tributaries and in seepage areas at the bases of the bluffs. If one were to travel a little farther east to the Pascagoula River bluffs in Jackson County, it is possible to encounter all 6 native magnolias along a single bluff!



M. pyramidata (left), and *M. virginiana* (right). Image sources: www.mailordermagnolias.com; Crosby Arboretum Archives.

All magnolias in our region have alternating simple leaves (each leaf with one blade and arising singly along the branches). The margins of the leaves are entire (without “teeth” or lobes), and leaves have a pair of large deciduous stipules (appendages) at the leaf stalk (petiole) bases. Foliage has aromatic oils that are evident when leaves are crushed. Flowers are large in size with fruity or spicy odors that attract mostly beetles as pollinating agents. Flowers also have their showy petal-like parts arranged in three rings (whorls); petal-like parts total 9-15 in each flower. There are many stamens (pollen-producing parts) and pistils (fruit-producing and seed-containing parts) that are spirally arranged along a central cone-like structure in each flower, with the stamens toward the base of the cone. The pistils in the “cone” open up along one surface when mature to expose brightly-colored seeds that are typically red (to pink). Songbirds such as towhees, several species of woodpeckers, and some of the larger flycatchers like kingbirds are attracted to the seeds and serve as their dispersal agents. Generally speaking, a red-on-black coloration involving plant fruits and seeds is conspicuous to vertebrate animals; in this case, the magnolia “cone” becomes blackish and the scarlet seeds stand out, each hanging literally by a thread.

The cucumber tree (*M. acuminata*) is unlike other magnolias in Mississippi in that the bell-shaped flowers (even when mature) have petals that are greenish or greenish-yellow, somewhat resembling flowers of the tulip-poplar (*Liriodendron tulipifera*). Leaves of this deciduous magnolia are mostly oval in outline and rounded at the base. Cucumber tree is distributed over much of Mississippi, except for the Delta and prairie regions. However, it is not common. Among native magnolias, it is the species to be expected on north-facing slopes and in ravines in the Loess Bluffs, especially near Grenada.



Magnolia acuminata (left), and *M. tripetala* (right).
Image source: www.SoutheasternFlora.com.

(Continued on Page 5)



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:

With spring behind us, we are focused on numerous summer projects. You will be hearing more about our greenhouse renovation, as we will soon be growing milkweed and other native species for plant sales, and for sale on the Visitor Center deck. We are planning fall propagation programs. Crosby Arboretum volunteers have worked hard this spring to keep the Pollinator Garden in tip-top shape! Thanks to **Mary Donahue**, who recently accepted the role of volunteer coordinator, we had an excellent turnout of volunteers for spring events and programs. **Jennifer Buchanan** worked diligently to reschedule Nature Discovery Day, cancelled due to weather. The event drew nearly 500 attendees! Our Gum Pond bridge project, after many years of planning, is underway, a combined effort of so many talented persons. It has allowed many MSU students in landscape architecture, landscape contracting, and architecture to learn from the detailed planning process. We are pleased that MSU landscape architecture student **Nate Lambeth** has joined us a summer intern, and he will be gaining knowledge through his involvement. Our exterior, interior, and ticket booth orientation signage will get a facelift soon, thanks to annual appeal donations from members and a Heritage Grant through the Mississippi Gulf Coast National Heritage Area. Grant funds will also fund the installation of a state historical marker through the Mississippi Department of Archives and History. Check out our many children's programs, and ways to increase your native plant knowledge this summer, as well as your photography skills. Come pay us a visit soon!

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



This model built by Professor Hans Herrmann's architecture students illustrates the 70' long bridge being constructed this summer that will span the "panhandle" of the Gum Pond.



Between our thriving Pollinator Garden, and the current greenhouse renovation project, things are really "growing" at the Arboretum!

CURATOR'S CORNER

Manmade showers bring fall flowers. At least that is what we are hoping for! Thanks to a generous donation from Crosby Arboretum Foundation board member Ruth Cook, our greenhouse is currently being repaired and refitted. New plastic and shade cloth is being attached on the frame of the greenhouse, and a new timed sprinkler/misting system is being installed inside. These new features will allow us to work with our local volunteer Master Gardeners, Master Naturalists, and MSU Extension experts to raise native plants to sell in our seasonal plant sales as well as throughout the year.

The greenhouse will be divided into sections that will allow us to germinate and grow seeds that we collect with permission from the wild or purchase from local seed sources. Additionally we will have areas to recycle, clean and store donated pots, potting mix and tools needed to make this project a success. Occasionally, we may even use the greenhouse to pot up plants that we obtain as a result of local plant rescues. In order to promote the use of native plants for sustainable landscaping, we are currently seeking funding to bring local horticulture and native plant experts together here at the arboretum to teach a course on growing and propagating native plants for profit and fun. We will also be using our site as a demonstration area for growing a variety of species of natives, especially those that are important to local pollinator species such as monarch butterflies and native bees. If you are particularly skilled in raising native plants, please consider volunteering your time to work with us.

Live Green and Prosper! Jen

*- Jennifer Buchanan, Senior Curator
The Crosby Arboretum, MSU Extension Service*



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Picayune, Mississippi, USA

NATIVE MAGNOLIAS *(Con't from Pg 1)*



M. macrophylla (left), and *M. grandiflora* (right). Images from the Crosby Arboretum Photo Archives.

Both bigleaf magnolia (*M. macrophylla*) and pyramid magnolia (*M. pyramidata*) have deciduous leaves with heart-shaped or ear-lobe shaped bases, and both species have obovate or spatulate leaves arranged in an umbrella-like fashion. However, leaves of bigleaf magnolia are notably larger and white or grayish underneath, while leaves of pyramid magnolia are pale green and smooth underneath and more tapered toward the base than bigleaf magnolia. Leaves of bigleaf magnolia are the largest of any native dicot tree in North America and can reach close to three feet long! In addition, flowers of bigleaf magnolia can measure over one foot wide when mature! Flowers have purplish to reddish spots at the bases of white (or yellow) petals, giving bigleaf magnolia what I call “Mississippi State” colors! Bigleaf magnolia especially occurs in rich woods in the Longleaf Pine Belt of Mississippi and can be locally common there; otherwise this species is known from the southern Loess Bluffs, the central and southern parts of the North Central Plateau (such as Grenada County, “The Cove” in Webster County, and Winston County), and the Tennessee River Hills. Pyramid magnolia is a local species, primarily of rich woods in the Longleaf Pine Belt, or “Piney Woods.” The umbrella tree (*M. tripetala*) also has large deciduous leaves, but they have wedge-shaped (not heart-shaped) bases and an overall elliptical outline. Umbrella tree is rare in Mississippi and is only known from rich woods in Hinds, Jackson, and Lafayette Counties, according to the USDA Plants Database.

Our evergreen magnolia species, southern magnolia and sweetbay (*M. grandiflora* and *M. virginiana*, respectively), are more well-known than the deciduous species and are quite common over much of Mississippi. Leaves of southern magnolia are larger than those of sweetbay and are green on both upper and lower surfaces (sometimes rusty brown beneath), whereas leaves of sweetbay are strikingly silvery beneath making the latter a good choice as an ornamental based on the foliage alone.

Southern magnolia is native from the latitude of I-20 and south (naturalized farther north), and sweetbay is roughly over the entire part of Mississippi southeast of the Natchez Trace, excluding the prairie regions and with a few outliers farther northwest. Caterpillars of the Palamedes swallowtail (*Papilio palamedes*) use sweetbay as a foodplant, as do caterpillars of the sweetbay silkmoth (*Callosamia securifera*), a relative of the luna moth (*Actias luna*).

- *Michael Wayne Morris, Ph.D., Professor of Biology, Troy University, Alabama*

Meet Summer Intern Nate Lambeth

MSU student is being funded through the 2017 annual appeal to Crosby Arboretum members



Nathan Lambeth grew up in the Kiln/Bay St. Louis area. A graduate of Bay High School, he earned a Horticulture Technology degree from Jones Junior College, and then transferred to Mississippi State University, where he completed his bachelor’s degree at the end of fall semester 2017. He is currently a graduate student in Landscape Architecture at Mississippi State University. Growing up, he tended an acre-sized family garden with his family, and enjoyed hunting. His father served to inspire him to pursue the study of plants. Through his coursework at junior college he became aware of the diversity and complexity of southern flora, and later was able to apply his plant knowledge studying under MSU Professors Bob Brzuszek and Tim Schauwecker. We are excited that Nathan has accepted the opportunity to work with us at the Arboretum this summer, and are particularly pleased he will be here during the time construction is beginning on the new bridge project in the Gum Pond Educational Exhibit.

GUM POND BRIDGE UNDERWAY



Hans Herrmann and **Tim Schauwecker**, MSU Associate Professors of Architecture and Landscape Architecture, along with seven 3rd-year students of Architecture and fourteen Landscape Contracting students have worked this spring with **Bob Brzuszek**, **Pat Drackett**, and University engineers to finalize the design of a pedestrian bridge spanning the Gum Pond Educational Exhibit headwater inlet. The bridge completes the walking trail surrounding the pond, and is the last major component of the exhibit built in 2010-2012 with **Five Star Restoration Grant** funding. Two year-end appeals raised \$11,470 from members for the bridge project. Led by Hans and Tim, the project has been studied as part of numerous MSU courses over the past four years. A final project design and construction concept was generated to complete this final exhibit component. This pedestrian bridge was designed, and will be constructed, in a manner befitting the high standards of design and construction which has made the Crosby Arboretum a nationally recognized touchstone for innovative Landscape Architecture and Architecture alike.

- Ruth Cook, President, Crosby Arboretum Foundation



Crosby Arboretum Summer Intern Nate Lambeth and building and grounds supervisor Terry Johnson stand in one of the recently completed forms that will be used to pour concrete one of the bridge foundations.

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Membership Application

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

_____	Student (send copy of student ID)	\$ 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



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EXTENSION

The Crosby Arboretum
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 P.O. Box 1639
 Picayune, MS 39466-1639

Name _____

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State _____ Zip _____ Phone _____

Renewing? Memberships are for one year.

Crosby Arboretum Program Schedule

June 2018



KID'S WORKSHOP: NATURE BEAD CRAFTS (Making paper beads)

**Wednesday, June 6
9:00 a.m. to Noon**

In this workshop with **Mary Beth Magee** and **Jennifer Buchanan**, children will learn how to make paper beads, an ancient craft and simple process using few supplies, most of which can be found around the house. The group will also gather items from nature to use in projects along with the eye-catching beads, creating personalized items such as bracelets, necklaces, key chains, and bookmarks. Members' children \$5; non-members children \$7. Must be accompanied by an adult. Registration required; sign up by June 3.

TRAVEL PHOTOGRAPHY: CAPTURING THE MOMENT

Saturday, June 9, 9:00 to 10:30 a.m.

Cameras are powerful tools that allow us to preserve our travel experiences. In this indoor workshop, **Dave Snyder** will help you to best capture lasting memories reflecting your own journeys. He will dispel common myths, and provide instruction on planning and documenting your trip, advice on what to take, approaches to photographing various subjects, camera angles, and post processing for work that will stand apart from a typical photograph. Reservations are requested. Members free, non-members \$5. Please sign up by June 9.

SUMMER GALLERY EXHIBIT

PHOTOGRAPHY by Dave Snyder

And Samantha Snyder Fabacher

Opening Saturday, June 9, 11:00 AM – Noon

What a perfect exhibit for the summer months! **Dave Snyder** and daughter **Samantha Snyder Fabacher** will display photographs taken during their travels that capture the "spirit of place", a visual record to be forever revisited, evoking the unique sights, smells, and sounds of the places they have experienced. A very visual person and a generalist by nature, Dave focuses on developing his ability to see and appreciate the world around him. He processes and prints his own work, which allows him artistic expression through color and detail, and to insert a little of himself into each photo. For more of Dave and Samantha's work, see skepticaldad.zenfolio.com. Opening event is **free** to the public. Light refreshments will be served. Exhibit is on display through August 31.



Summer's gallery exhibit runs through August 31 and features photography by Dave Snyder and daughter Samantha Fabacher.

CHILDREN'S WORKSHOP: INSECTS

Friday, June 15

9:00 to 11:00 a.m.

Children will enjoy this fun and educational entomology event led by Hancock County Extension Agent **Christian Stephenson**. The workshop will include a short introduction to insects and why they are important to our environment, as well as to humans. The class will go on a collecting expedition around the Arboretum grounds, and learn about insect identification tips, how to create a collection, and some fun bug facts and stories! Members' children \$3; non-members' children \$5. Children must be accompanied by parent or guardian (no charge for adults). Reservations are requested. Please register by June 14.



CHILDREN'S CRAFT WORKSHOP: NATURE JOURNALS

Thursday, June 28

10:00 to 11:30 a.m.

With all of the electronic devices we have these days, it is not always easy to get children outside to enjoy nature. Creating a nature journal is a wonderful way to inspire them to start exploring the great outdoors. In this workshop, Arboretum staff member **Kim Johnson** will guide children in creating their very own personalized nature journal. All materials will be provided. Program is limited to 20 children; registration is required. As children must be accompanied by an adult, there is no minimum age requirement. Members' children \$3; non-members' children \$5 (no charge for adults). Reservations requested. Please sign up by June 27.

Crosby Arboretum Program Schedule

June – August 2018

TEACHERS' PHENOLOGY WORKSHOPS

Thurs/Fri, June 28 & 29 or July 19 & 20

Sponsored by the University of Southern Mississippi and Mississippi State University.

These two-day teacher workshops address the influence of climate change on animal and plant populations. USM faculty and experts from state and federal agencies will cover pertinent and current facts associated with these topics. Open to upper elementary, middle school and secondary teachers of Hancock, Harrison, Jackson, George, Pearl River and Stone Counties. Includes classroom, laboratory and field based learning activities. First day is at USM Gulf Park campus, Long Beach, and second day at Crosby Arboretum; must attend both days. CEUs provided. No registration fee required. **Please note** that registration for this workshop is not through the Arboretum. Instead, contact Shelia A. Brown

KIDS' CRAFT WORKSHOP: SEED ART

Thursday, July 26, 10:00 to 11:30 a.m.

In this workshop, children will enjoy incorporating nature into their very own handmade piece of art. Arboretum staff member **Kim Johnson** will show children how to use various seeds to create a masterpiece. All materials provided. Limited to 20 children; registration required. As children must be accompanied by an adult, there is no minimum age requirement. Members' children \$3; non-members' children \$5 (no charge for adults). Reservations requested by July 25.

BEEKEEPING FOR BEGINNERS

Friday, July 27, 10:00 a.m. to Noon

Bees and gardens go hand in hand! These pollinating insects offer the benefit of increasing your yield of flowers, fruit, and seed. Pearl River County Extension Agent **Dr. Eddie Smith** will provide an introduction to how to get started with beekeeping. To be covered: native plants for bees, basic bee biology, choosing equipment, personal protective gear, common mistakes and valuable tips, how to grow your first colony of bees, and how to manage them throughout the year. Program is free to members; \$5 for non-members. Reservations requested by July 26.

SUMMER SMART LANDSCAPES: CREATING GARDENS THAT THRIVE IN SUMMER HEAT!

Saturday, August 4, 1:00 to 2:30 p.m.

Does your garden fade in the summer? Learn wise maintenance and landscaping practices to conserve resources and energy and create eco-friendly home landscapes that reduce summer maintenance needs, and native plant species that strengthen local biodiversity in this Smart Landscapes based program with Pearl River County Extension Agent **Dr. Eddie Smith** and Crosby Arboretum Director **Pat Drackett**. Reservations requested. Free for members; non-members \$5. Register by August 3.

PHOTOGRAPHY WORKSHOP: DSLR 101

Saturday, August 4, 10:00 to Noon

In this workshop, **Diana Thornton** will show you how to get your DSLR camera out of auto mode! Topics include essential everyday controls and settings, the Exposure Triangle (aperture/shutter Speed/ISO), lenses and how they affect your exposure, depth of field and composition, file types/sizes, white balance, composition and developing your "eye". Program is an outside photo walk, weather permitting. Instruction will not be camera or brand specific. Bring camera, charged batteries, memory card, extra lenses, walking shoes, and bug spray. Program limited to 6 students. Members, \$10, non-members \$15. Register by August 3.

SUMMER NATIVE PLANT FIELD WALK

Saturday, August 25

9:00 – 10:00 a.m.

Join Arboretum director **Pat Drackett** on an early morning field walk to explore what is currently blooming in the Savanna Exhibit and pitcher plant bog. Plants for wildlife, and landscape uses, will be discussed along the journey. Bring your camera and dress for walking. Members free; non-members \$5. Please register by August 24.

Program fees include the cost of admission for non-members. **Reservations:** Call the Arboretum office at (601) 799-231. **Physical Address:** 370 Ridge Road, Picayune, MS 39466. **Hours:** Wed-Sun, 9 AM – 5 PM.

Programs of Mississippi State University Extension Service are open to all people, without regard to race, color, religion, sex, national origin, age, disability, veteran's status, sexual orientation, group affiliation or any other status protected by applicable law. Mississippi State is an equal opportunity institution. Questions about equal opportunity programs or compliance should be directed to the Office of Compliance and Integrity, 56 Morgan Ave., P.O. Box 6044, Mississippi State, MS 39762, (662) 325-5839



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