

The Crosby Arboretum

Mississippi State University Extension Service

Quarterly News Journal

Winter 2019-20

34.1

NATIVE PINES OF MISSISSIPPI

In the fall news journal, five of the seven species of pines that have been documented in Mississippi were discussed: sand pine (*Pinus clausa*), shortleaf pine (*P. echinata*), spruce pine (*P. glabra*), loblolly pine (*P. taeda*), and Virginia pine (*P. virginiana*). This article will address slash pine (*P. elliottii*) and longleaf pine (*P. palustris*).

In the Deep South, slash pine is the main species grown in pine plantations. In part, this is because it is much faster growing and tolerates poor drainage better than longleaf pine. Naturally, the typical variety of slash pine can especially be found in wet flatwoods and bay swamps in the panhandle of Mississippi, and it is the signature pine on the offshore barrier islands of the Gulf Islands National Seashore. The needles are quite long (up to 9.5-10 inches) and are in 2's and 3's per fascicle in equal numbers on some trees and in mostly 2's per fascicle on other trees. Scales on the elongated female cones (up to about 6 inches) are lustrous brown.

Much of southern Mississippi, including the lower Pearl River Drainage Basin, is known as the Piney Woods, especially because of the presence of longleaf pine. Longleaf pine, the conspicuous species in the Piney Woods of southern Mississippi, is also the formerly dominant conifer that occurred in fire-prone sandhills and savannas all across the longleaf pine ecosystem stretching from extreme southeastern Virginia to central Florida and west to eastern Texas. Frequent lightning strikes (approximately at 3 to 5-year intervals) would spark these low-intensity, quickly moving fires that would be carried by a continuous ground layer of wiregrass and forbs. Adult and juvenile longleaf pine trees, unlike sand pines in their infrequently burned habitats, would typically survive these fires that benefit the whole ecosystem in the following ways: 1) Frequent fires remove vegetation



Mature slash pine (Pinus elliottii), needles and cones.

that is not fire-adapted and keep the landscape open and park-like, subsequently promoting growth of young longleaf pines and of plant species in the ground layer of vegetation, which is where most of the plant diversity exists at these sites; 2) Fires help release soil nutrients; 3) Fires enhance ethylene production, which in turn can stimulate blooming and fruiting of pineland plants, sometimes outside of the typical time-frame; and 4) Frequent fires can stimulate seed germination.

There are 3 distinct stages in the life history of longleaf pines, and these stages have special adaptations for their environment. First, for a period lasting several years, a very young longleaf pine is present in a "grass" stage that blends in with the wiregrass and other native grasses. During this stage, longleaf pines develop a very deep taproot so that they can absorb as much moisture as possible in their well-drained sandy soil. If grass stages are subjected to low-intensity fires, the terminal buds (from which future growth will arise) are insulated by the many long needles completely encircling them. Needles can be entirely burned off, and the bud can still regenerate and produce more upward growth. The downside to the grass stages of longleaf pine is that their slow upward growth is what has caused man to use other faster-growing species, such as slash pine and loblolly pine, in plantations instead. Second, as if to make up for the slow start upward, adolescent longleaf pines bolt upwards in a "rocket" stage. This is a period of rapid shoot growth; during the rocket stage, longleaf pines are vulnerable to even low-intensity fires, so they are adapted to minimize the time

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Branching, and grass stage of longleaf pine (Pinus palustris).

Part Two of a two-part series by Wayne Morris, Ph.D., Troy University. Wayne holds a M.S. in botany from MSU, with graduate work under Dr. Sidney McDaniel at the Arboretum in 1986. Photos (left) are courtesy of the Crosby Arboretum photo archives and www.SoutheasternFlora.com (above).



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 past season seems to have been one of the best in a very long time for fall color. But, when commenting on the spectacular glow, we sometimes needed to do a double take when realizing we were admiring poison ivy or poison sumac! It's been a very busy fall for events which included BugFest, the Fall Native Plant Sale, the return of Family Pawz Day, a brand new "Through the Forest" 5K Trail Run, and the 17th annual Piney Woods Heritage Festival. Event and marketing coordinator **Nickie Smith** accomplished marvelous things this fall in her promotion of Arboretum events, dramatically increasing our social media reach and gaining the support of many local businesses and community members who graciously contributed to fundraising activities. The number of Facebook likes and followers on our Facebook page have also increased significantly this past quarter.

The Arboretum recently welcomed **Julie Hunger Johnson** to the staff. She will be working part-time during the busiest periods of the week, assisting with visitors during programs and events and other projects. We're excited about the upcoming schedule of activities! Forge Day is the last Saturday in January. This winter, you can learn all about paw paws, take a walk on the Swamp Forest trail to get to know the native plant species that live here, go on a winter botany field walk, and learn how to prepare your garden for spring!

Members, we need to stress how important it is to please **check in at the office each time you visit the Arboretum** for your own safety so we will know you are here, and because the daily visitor statistics we report that reflect site use are critical to justify the continued funding for our unique facility.

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



The Woodland Exhibit was positively aglow this fall with the stunning color of poison ivy (left) and poison sumac (right).

Please join us in welcoming Julie Hunger Johnson to the Arboretum



Julie Hunger Johnson is a native New Orleanian who has resided in south Mississippi for the past 20 years. An avid nature lover, she was in 4-H and Campfire Girls as a child and received much inspiration from her grandparents' vegetable gardens and her parents' plant nursery. She loves outdoor photography and poetry and has

accumulated several awards over the years. She is a member of the Picayune Writers Guild and a contributing writer for Parents and Kids magazine. She is also a demonstrator of Native American tools, following her maternal grandfather's traditional ways of the Tunica-Biloxi Tribe. She participated in the Crosby Arboretum's first Piney Woods Heritage Festival and continues to demonstrate at museums and Pow-wows. She has worked in the pharmaceutical field and is a licensed Realtor® as well as the purchasing manager for a major industrial firm. A self-described tree hugger, she loves life and spending time with her husband and family as well as the outdoors, fishing, and music. After 23 years of visiting and participating at Crosby, she says she is elated to have become part of the team and is looking forward to furthering the success of such a great institution of nature.

Events Update: Nickie Smith

It was a busy fall at The Crosby Arboretum. Even though fall hadn't quite made its appearance yet, we had a very busy Family Pawz Day on September 28th. People and their pets came out along with some great animal activist groups and vendors to make this day a big success. October brought us our first 5K Through the Forest, as well as one of our biggest annual events, Bug Fest. Our 5K fundraising efforts will be used to maintain the grounds on the site. Over the 2-day Bug Fest event, over 400 people visited The Arboretum. Throughout all these events, we had the entry to The Arboretum lined for our Walk with the Scarecrows. November ushered in Yoga on the Pavilion which will become a monthly event. Our Piney Woods Heritage Festival was a day filled with skilled craftspeople, music, and entertainment that brought in approximately 300 people to see exhibitors demonstrate their skills. We are looking forward to 2020, where we will welcome back our classic events and bring in some new one, too! Keep watching our Facebook page for the most up-to-date info on events and programs as well as visiting our website calendar.



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Picayune, Mississippi, USA

NATIVE PINES OF MISSISSIPPI

(Continued from p. 1)

spent in this stage. Third, adult longleaf pines place their stout needle-bearing branches toward the very crowns of the trees and essentially lack limbs for most of the trunk distance; this habit places the leaves and branches out-of-reach of most fires.

Longleaf pines have the longest needles (up to 12 inches) of any pine species native to the southeastern United States, hence the common name. Needles (mostly 3's per fascicle with some 2's per fascicle) are placed at the ends of stout branches and produce what I call a "fountain" effect. (I think of longleaf pines as "supporting or giving life" – as water would -- to a multitude of living things in their habitat.) The dull brown female cones are the longest (often up to 10 inches in length) of any pine species native to the eastern United States. Trees have been recorded to live at least 400 years! Adult longleaf pines also have very thick insulating outer bark that is frequently charred from past fires. However, this bark works to protect the living tissues within.

Due to the lumber industry, habitat alteration, and lack of prescribed burning in many regions, longleaf pine has largely disappeared from many sites within its historical range. In Mississippi, longleaf pine is mostly found in xeric to mesic uplands in the southern half of the state north to about the I-20 corridor. The somewhat isolated, northernmost population in the state is in Winston County; trees here grow intermixed with upland deciduous hardwoods. As plant enthusiasts and professional botanists, we need to educate local landowners and promote planting longleaf pine in places where it has disappeared. The Crosby Arboretum of Mississippi State University does this and regularly sells longleaf pine seedlings at seasonal plant sales.

-Wayne Morris, Ph.D., Troy University



Longleaf pines have the longest needles of any pine species native to the southeastern United States.



PLANT PROFILE: WITCH HAZEL

(*Hamamelis virginiana*)

If these flower petals remind you of the popular pink-blooming, purple-leaf garden shrub known as Chinese fringe flower or *Loropetalum*, it is because this small tree is a native relative. The witch hazel along the path in front of the Visitor Center explodes on the scene every year in late fall with abundant showy, fragrant flowers, usually at the same time it is cloaked in attractive golden leaves. You will find this tree growing in woodlands and along stream banks in the eastern U.S, for example at the Arboretum's Hillside Bog Natural Area. Easy to grow in full sun to part shade, the tree prefers a moist, well-drained, rich acidic soil. Its twigs, bark, and leaves have a long history of medicinal use. Witch hazel extract is still used today for its astringent qualities and is available at pharmacies. Perhaps your grandfather applied witch hazel as an aftershave. Interestingly, the forked branches from this tree were legendary for their use in divining sources of underground water.

PLANTS WITH WINTER INTEREST:

- Big Bluestem** (*Andropogon gerardii*)
- Bushy Bluestem** (*Andropogon glomeratus*)
- American Beech** (*Fagus grandifolia*)
- Witch Hazel** (*Hamamelis virginiana*)
- Florida Anise** (*Illicium floridanum*)
- American Holly** (*Ilex opaca*)
- Goldenclub** (*Orontium aquaticum*)
- Longleaf Pine** (*Pinus palustris*)
- Southern Smilax** (*Smilax smallii*)
- Elliot's Blueberry** (*Vaccinium elliiottii*)
- Farkleberry** (*Vaccinium arboreum*)
- Netted chainfern** (*Woodwardia areolata*)

For details, see the Native Plant Database on our website.



The **Yvette Rosen Memorial Pavilion**, a gift from the Rosen Family, is currently under construction in the Gum Pond Educational Exhibit and will be completed this December.



Thanks to everyone for the many unique and creative entries displayed in our fall scarecrow exhibit! Shown here is the “Mermaid” you might have discovered gazing at the Piney Woods Pond, created by the **Livengood Family** and a golfer submitted by **Millbrook Golf & Country Club**.



Our second **Family Pawz Day** on October 28, coordinated by staff member **Sherri Lowe**, was another hit! Thank you to all who volunteered for and participated in the event: Roxann Gort, Nikki Main, Mike and June Oase, Cindy Stewart (Mikey), Katherine Furr, Harriet Greulich, Jane Costanza, Jan Mashburn, Nellie Dubuisson,

Margaret Kautz-Dubuisson, Cindy Murchison, Patti Murphy, Mary Donahue, Tammy Mokray, Terry Johnson, Paul Bounds, Pet Sense, Pearl River County SPCA, Whisper of Hope, Fixin’ the Coast, Big Eye’s Manx Cats, For Bullies Sake Bully Breed Rescue, Friends Of Hancock County Animal Shelter, Familiar Findings Tabootique, Animal Adoption Society Inc, Erin Reagan Animal Sanctuary, Senator Angela Hill, Scooters, Sho-Nuff BBQ, Kellie’s Poor Boy, H2K Nail Spa, WRJW, El Marachi, Ford Realty, Nissan of Picayune, Ryan’s, Picayune Main Street, Picayune Vet Clinic, Animal Health Clinic, Leonard Animal Hospital, and Watt’s Vet.

Crosby Arboretum MEMBERSHIP Make Great Holiday Gifts!

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Please address correspondence to:

Pat Drackett, Editor, pat.drackett@msstate.edu
The Crosby Arboretum, P.O. Box 1639, Picayune, MS 39466

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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 I.D.)	\$ 20.00
_____	Individual	35.00
_____	Individual - Senior	30.00
_____	Family	45.00
_____	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

The Crosby Arboretum

Mississippi State University
P.O. Box 1639
Picayune, MS 39466-1639

Crosby Arboretum Program Schedule

December 2019 – January 2020

YOGA ON THE PAVILION

Saturday, December 7, 9:00 to 10:30 a.m.

Bring your yoga mat and a friend and get fit while you enjoy the natural beauty surrounding the Pinecote Pavilion in a program with yoga instructor **Steven Furr**. Cost is \$2 for members, and \$5 for non-members. Reservations requested.

CHILDREN'S WORKSHOP: GROWING MICROGREENS

Saturday, December 7, 9:00 a.m. to 12:00 noon

In this workshop with Pearl River County Extension Agent **Dr. Eddie Smith**, children will learn how to grow microgreens and the benefits of eating them. The process of photosynthesis will also be covered during this hands-on program, which contains several educational activities. All supplies for the workshop will be provided. This is a free workshop for ages 8 to 18, but younger children may attend. Children must be accompanied by a parent or legal guardian. Call to pre-register and reserve your child's place.



Event & Marketing Coordinator Nickie Smith and Chris Wise, Picayune High School Cross-Country Coach, prepare for the Arboretum's October "Through the Forest" 5K Trail Run.

CHILDREN'S WORKSHOP: HOLIDAY CRAFTS

Saturday, December 14, 10:00 to 11:30 a.m.

Children will enjoy working with natural materials to complete a craft project. As children must be accompanied by an adult, there will be no minimum age requirement. Members' children \$4; non-members' children \$6 (no charge for adults). Space is limited, reservations requested.

WINTER GALLERY EXHIBIT

Photography by Nadine Phillips



Presentation & Gallery Opening

Saturday, December 7, 1:00 to 3:00 p.m.

Enjoy a short talk with **Nadine Phillips** about the positive effects of having a heartfelt connection to nature and her approach to crystallizing these moments in her photographic work. Then, attend the opening event for the winter season in the Visitor Center gallery. Nadine is a lifelong lover of nature who derives great pleasure in taking photographs. In nature, she finds a joyful awareness and will share this state of being through examples of her photography. She embodies her passion by serving as a nature mindfulness facilitator who studies the benefits of forging meaningful relationships with the natural world. Light refreshments will be served at the opening. Program and gallery opening is free to all. Exhibit is on display through February 28.

YOGA ON THE PAVILION

Saturday, January 11, 9:00 to 10:30 a.m.

Bring your yoga mat and a friend and get fit while enjoying the natural beauty surrounding the Pinecote Pavilion in this program with instructor **Steven Furr**. Cost is \$2 for members, and \$5 for non-members. Reservations requested.

FIELD WALK: SWAMP FOREST TRAIL

Saturday, January 11, 1:00 to 2:00 p.m.

Explore the forest along the Arboretum's 700' trail that meanders along the intermittent stream in the center of the Swamp Forest Educational Exhibit. Learn about the native shrubs and trees seen in this exhibit and the Gum Pond at the north end of this trail, and how to use them in your home landscape with Arboretum Director **Pat Drackett**. Members free; \$5 for non-members. Reservations requested.

PRESCRIBED BURN DEMONSTRATIONS

Thursdays & Fridays in January and February

Assist with or observe fire management techniques during prescribed burning of the Arboretum's Savanna Exhibit with Certified Burn Manager **Terry Johnson**. Call the office by 9:00 a.m. to confirm a burn will proceed. It will occur only if weather conditions are favorable. Wear old clothes/boots and bring a lunch. Free admission. Persons under the age of 18 must be accompanied by a parent or legal guardian.

Crosby Arboretum Program Schedule

January - February 2020



FORGE DAY

**Blacksmithing &
Metalworking
Demonstrations**

**Saturday
January 25**

10:00 a.m. to 2:00 p.m.

Join us for this exciting day of demonstrations by area metalworkers and craftsmen! Learn techniques and tips to get started in metalworking and try your hand at the forge (a signed waiver form is required.) Enjoy browsing the work of metal craftsmen for purchase. Members free; non-members \$5, non-members' children \$2.

WINTER BOTANY FIELD WALK

Saturday, February 8, 1:00 to 2:30 p.m.

Enjoy this introduction to winter botany on your walk through the Arboretum's exhibits with retired MSU Extension Forestry specialist **Dr. Glenn Hughes**. Learn how to identify tree and shrub specimens in the winter by characteristics of their twigs, buds, and bark. Non-members, \$5. Reservations requested.

ARBOR DAY NATIVE PLANT SALE



Saturday, February 15

10:00 a.m. to Noon (*Members admitted at 9:00 a.m.*)

To celebrate Mississippi Arbor Day, choose from a variety of trees and shrubs at this plant sale. It's a good time to plant trees and woody shrubs, so come early for the best selection! Plant professionals will be on hand to help you select the right plant for the right place on your property. **Free admission.** Arboretum greenhouse.

ALL ABOUT PAWPAWS!

Saturday, February 15, 10:00 to 11:30 a.m.

Learn the secrets to growing pawpaw (*Asimina triloba*) trees, which produce the largest native fruit in the U.S. Known as "custard apple", this curious fruit has a tropical flavor (and is related to Papaya). Mississippi Master Gardener **T.J. Testaman** will cover varieties suited to our area, how and where to plant pawpaws, grafting methods, hand pollinating, growing them from seed, and how to increase fruit yield. Members \$2. Non-members \$5. Reservations requested.

PREPARING YOUR GARDEN FOR SPRING

Saturday, February 22, 10:00 a.m. to 11:00 a.m.

Winter is normally a quiet time in the garden, but it won't be long before spring arrives and you'll be caught up in a frenzy of seed-sowing, growing, and nurturing your garden as it comes to life! Pearl River County Extension Agent **Dr. Eddie Smith** will tell you how to get your garden in order early, to help make the spring a little less hectic. Topics include selecting your garden site, maintenance, seed starting, testing and amending the soil, and the planting calendar. Members \$2. Non-members \$5. Reservations requested.

CHILDREN'S WORKSHOP: NATURE CRAFTS

Saturday, February 22, 1:00 to 2:30 p.m.

Children will enjoy this fun activity where they will be working with natural materials to complete a craft project. As children must be accompanied by an parent or legal guardian, there will be no minimum age requirement. Members' children \$4; non-members' children \$6 (no charge for adults). Space is limited, reservations requested.

Call 601-799-2311 to pre-register for programs in order to guarantee your space. Address: 370 Ridge Road, Picayune. Hours of Operation: Wed-Sun; 9 am to 5 pm.

www.crosbyarboretum.msstate.edu



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