

Mississippi Native Plants and Environmental Education



The Newsletter of the Mississippi Native Plants Society and the Mississippi Environmental Education Alliance

Special Katrina Edition

Fall 2005

The **Mississippi Native Plants Society**, is a non-profit organization established in 1980 to promote the preservation of native and naturalized plants and their habitats in Mississippi through conservation, education and utilization

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Mississippi Native Plant Society Annual Meeting

When: October 8, 2005

Where: Clinton Community Nature Center, Clinton, Mississippi

8:00 Fall Plant Sale

9:30 Pancake Breakfast

10:00 Welcome

10:15 Native Plants, Pest Plants, Life on the Trail by center panel

11:15 MNPS Members Reports, Election of Officers and Board Meeting

12:30 Box Lunch on the Trails

1:45 Depart for Field Trip on the Natchez Trace

Good Oaks of Coastal Mississippi

by John Guyton, Ed.D.

As the storm surge receded carrying refrigerators, smashed homes and the countless trappings of civilization out to sea all that remained, standing tall on most of Mississippi's beaches, were the live oaks. But they had been here before and were hardened to the ravages of nature and time having survived 200 to 300 years of hurricanes, the founding and evolution of an industrialized society and the paving over of their roots. We will never know how many hurricanes they could have weathered had an approved tree clearing contractor been opening avenues through neighborhoods instead of going for the easy money cutting the historic live oaks along three miles of US Highway 90.

Virtually every live oak between Thornton Avenue and Lorraine-Cowan Road, a three mile section of the National Scenic Byway, is gone. Gulfport Mayor Brent Warr and Harrison County Supervisor Connie Rocko were horrified. A letters to the editor of the Sun Herald point out the MDOT does not like trees, reminding us what they did to Hwy 49. Ricky Lee, MDOT District Engineer, blamed it on a breakdown in communications and Wayne Brown, Transportation Commissioner for the Southern District, conceding the trees were irreplaceable said they would be replaced.

I was reminded of Aldo Leopold's famous essay, *Good Oak*, where he reflects on the 80 years of history he sawed through while building a winter wood pile from a lightning killed tree. The pile of sawdust accumulating on the snow he described as the "integrated transect of a century," and his saw cut through "decade by decade... the chronology of a lifetime, written in concentric annual rings of good oak." I suppose the scenic highway wreckers were oblivious to the live oaks' good history and status as icons of our rich coastal heritage. As their chain saws roared to life, they could have only been thinking of the easy money.

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Ants Using Lebensraum to Expand Colonies

Lebensraum in John Mayall's vernacular would translate, "room to move," and that is what the Amazonian ants (*Myrmelachista schumanni*) needed when they began creating devils gardens. Devils gardens are an enigma appearing at random in tropical forest. These gardens contain only *Duroia hirsuta* trees for hundreds of meters and some are thought to have been maintained by the ants for over 800 years and are called home by over 3 million workers and 15,000 queens. Scientists have recently discovered the ants, that use *D. Hirsuta* for both food and shelter, have been using formic acid as a herbicide to eliminate competing plant species. Researcher Megan Frederickson of Stanford described "The cultivation of devil's gardens by ants is an excellent example of niche construction" refuting the local legend that the *D. Hirsuta* trees were tended by evil forest spirits.

Formosans Possible Headed to a Home Near You

Dr. David Held, of the MSU Coastal Research and Extension Center in Biloxi, has observed trucks headed away from the coast with loads of fire wood. If these logs contain any carton (looks like lava made of dirt) and workers from a Formosan termite colony they can requeen and be back in business eating woodpiles and houses where they are off loaded. So, if your neighbor is the proud recipient of firewood from the coast, warn him, and suggest a bonfire for a fall football game - in *his* backyard.

Fun With Termites

Draw concentric circles on a piece of paper with several different blue ink pens. One is bound to work... Some inks have a pheromone the termites will follow, blindly. The old government skillcraft pens work good. So entertain the children in your neighborhood with a termite circus!

Meet Your New Editor

I've been told that I am the new Newsletter Editor. I hope you can bear with me until we get things up and running. I believe this will be a collaborative effort between the MNPS and MEEA. I am asking anyone and everyone who wants to be heard to submit articles, topic ideas, events, drawings, jokes, photographs and personal stories and lets see what comes out of the mix. – Peggy

Good Oaks of Coastal Mississippi *Continued from Page 1*

The first few revolutions of the chain cut through the protective cells of the outer bark before severing the live phloem through which sugars, produced in the leaves, flows to other parts of the tree where it is needed. The sawyer never knew when he slashed through the cambium, the live tissue that not only produces the phloem but lays down light rings in the spring and darker ones during the summer from which we can decode the climate and related history.

The full effects of Katrina had not been recorded when the 2005 ring was sawed through beginning a trip back through time. The 15 year environmental history of coastal casinos disappeared in a puff of smoke with the grinding sound of saw teeth chewing cellulose. These trees heralded the transition of the oyster and shrimp industry to a casino-tourism based economy. Actually, the oaks watched over a long history of gaming dating to the Native American *ishtaboli* or stick ball games in which betting was a common practice.

The oaks on the front beach served as first perch for innumerable bird outfalls preceding storms. Hurricane Cindy (2005) produced an insect outfall as tropical moths commonly known as black witches showed up in the area. As Hurricane George, with its 105 mph winds in 1998, approached the author headed inland leaving the mighty oaks to guard his property.

The economic doldrums of the '70's and '80's left only hurricanes Florence with gust to 75 mph in 1988, Elena in 1985 with 125 mph winds, and Frederick in 1979 to augment the histories recorded in the rings.

Without wavering the saw crossed the ring that recorded the immortal year, 1969. That year Camille, the worst hurricane to strike the US mainland, came ashore. The mighty oaks survived winds of 200 miles per hour serving as the second line of defense protecting homes and people.

Sand, that had eroded from the Appalachian mountains and passed these oaks, was dredged from the sound to create the longest man-made beach in the world in 1950 to reduce hurricane erosion and protect the sea wall. The Hurricane of 1947, a Category 2 storm with a 12 foot storm surge, was influential in this decision. Hurricanes were not named before 1950. Elvis was a frequent tourist on the coast often driving under these oaks.

Not much happened during World War II, except when a Coast Guard aircraft from Biloxi flew over these oaks on its way to engage

a German U-boat. As the first World War ended, pine was a major export and these live oaks shadowed gallons of illegal liquor being imported from the Caribbean to supply the ever popular speakeasies, in a typical southern response to prohibition. The Army Air Corp, now Keesler Air Base, began training in 1941. Eventually Hurricane Hunters would monitor tropical storms from there.

Bridges connected all of south Mississippi along Highway 90 by 1929 completing the Old Spanish Trail. Most of the coastal highway was now concrete. In 1929 these oaks had beach side seats, and shaded onlookers, for the first Blessing of the Shrimp Fleet. The arching gnarly branches of the live oaks provided valuable shade for the construction workers while they formed and poured the world's longest seawall in 1927. The concrete beach road between Gulfport and Biloxi was completed in 1927 replacing the shell road that had been completed only a decade earlier. Convicts surely enjoyed the shade and protected the oaks while building the road. These trees stood proud and strong while the Category 2 hurricane of 1916 pounded the area for 16 hours. As the chain crossed the 1912 ring the sawyer could not have understood the year's significance as the entire Mississippi gulf coast was finally connected by a shell road. A road contractors built beneath these stately oaks to take advantage of their beauty and shade. The first Mardi Gras parade had already rolled in 1908.

The 1909 hurricane demonstrated that without a seawall or protective sand beach hurricanes would continue destroying coastal roads. The road through all coastal communities had been shelled by 1908 and work crews were rushing to connect the Six Sisters or towns. In 1906 the quarantine station on Ship Island was destroyed by a hurricane with 130 mph winds.

Still mindlessly cutting back through time he reaches the turn of the century when Biloxi was known as the seafood capital of the world as the largest exporter of oysters and the coastal highway was, at best, a shady single lane.

The 1893 hurricane, with 85 mph winds, killed 1000 people and a month later bodies were still washing up on shore coming to rest under the live oaks. The entire beach road and all 25 bridges were destroyed. Sections of the road had been constructed by homeowners who had donated their property to the effort.

In 1888 Oyster Schooner races began among the industries and even today the races are popular while locals watch to see who wins the case of beer from the premium shade of the live oaks. The evaporative cooling, from transpiration, still makes the trees the best place to watch from. In 1876 a Harrison County supervisor began calling for an improved beach road. Some of the 1852 roads between Gulfport and Biloxi were paved with sawdust.

In 1828 the US government set aside and protected Naval Live Oak Groves for national security reasons. The wood was essential for wooden warships. The live oaks (*Quercus Virginiana*) proved very durable and are known for their resistance to diseases and their incredible density. Old Ironsides, the *USS Constitution*, is constructed of live oak. There are several Naval Live Oak groves along the Gulf Coast.

Unaware of the history through which he was sawing, he now struck the colors the oaks have thrived under - 6 flags. They didn't see much action during the Water Between the States but did witness Jefferson Davis retirement years on the gulf. In 1870 the oaks witnessed the US flag again proudly flying indicating Mississippi had been readmitted to the union. In 1848 the Biloxi Lighthouse, which seems as resilient as the live oaks, was erected. In 1817 Mississippi became a state and until 1860 was a favorite retreat for Southerners. During this period the Magnolia Hotel and many other famous watering holes were built to accommodate vacationing southerners and others from New Orleans who were escaping yellow fever. Many fine homes were built on the water front. The population became more diverse with immigrants from Italy, Germany, France, England and Scotland and Africa who worked in the sawmills, turpentine industry, stores, boatyards, fishing industry, brickyards and hotels. In 1810 the area became part of the short lived Republic of West Florida. In 1819 worst hurricane in 50 years pounded the coast but the oaks survived.

Continuing his cut back through time the Mississippi coast was ceded to Spain by England in 1779 which it had received it from the French in 1763. William Bartram, the first naturalist spokesperson for the US visited the area and reported on the oaks in his book *Travels*. The area served as the French capital of the new world from 1720 until 1723 around the hurricane of 1722. As the saws finally sliced through the oldest live oaks' centers they crossed the rings laid down when Pierre Le Moyne, Sieur d'Iberville landed on Gulf Coast in 1699. No doubt the Native Americans were sitting in the shade of the live oaks parents, eating acorns and oysters, while watching the sun set for centuries before the French arrived.

These mighty oaks certainly lived through interesting times ultimately surviving the highest storm surge ever recorded in the US and the most severe natural disaster in our history. The storm surge destroyed most bridges in the area and erased most of the accumulated artifacts of 300 years of civilization, but not the live oaks. The oaks, with their incredible surface area of numerous gnarly branches,

reduces the intensity of the storm surge. Their massive trunks halt the inland wash of destroyed homes, cars, boats and appliances; and they do it relentlessly, century after century, as they always have, persistently coming back to life scared but stronger after every storm. It took a clueless tree cutting crew with a chain saw to lay low these magnificent bastions against hurricanes and time that had evolved a mutualistic relationship with coastal citizens.

At least they perished in good company. Tulles-Toledano Manor, destroyed when a casino barge docked on top of it; the Historic Danzler House gone; Biloxi Yacht Club gone; Ship Island lighthouse gone again, with the ranger station and boardwalk; the Biloxi Ocean Springs bridge gone; Bay St. Louis Bridge gone; J. L. Scott Marine Education Center gutted, Seafood Museum now history; Sharkshead Souvenir City gobbled up; at least 5 casinos crapped out; the railroad sidelined; Gulfport port destroyed chickens freed, Travoli Hotel all cracked up; many fine boats sunk; New Orleans returned to wetlands, albeit temporarily; tax base gone; powerplants gone; Grass Lawn mowed down; Marine Life Oceanarium gone; Waveland gone; Gulf Coast Research Lab flooded; many insurance adjustors MIA; George Ohr museum bent out of shape; and Shearwater Pottery was all cracked up. Fortunately this crew was not cutting trees near the Gulf Park campus or they could have reaped a huge reward and unquantifiable ire harvesting the Friendship Oak! Probably a good thing for them the chickens from the port had already been plucked and the trains weren't running.

MNPS Members Speak Out

Collect Anise bush (stinkbush) fruit. Put in an open container and let dry. The seeds will pop out all during the day and night.

Give to someone but don't tell. You and I are the only ones who know this. – Earl Alford

Devil's Walking Stick - Chew a piece of bark for a tooth ache or just to see what it taste like and how it tingles your gums. – Marion Sansing

There Had Been a Whole Lot of Shaking Going On by John Guyton, Ed. D.

Thank you Jerry Lee Lewis for the title of this article! I don't think he was referring to wind shake but it certainly describes what has been happening on the southern front lately. With Katrina's recent visit there has been a lot of damage to the trees. Older boatbuilders and foresters refer to this damage as wind shake or ring shake. Boatbuilders who built wooden boats that plied the sound may have been the most astute at identifying wind shake. Identifying wind shake is important because this wood could leak!

This wood is characterized by a separation between the growth rings. Place the index finger of your right hand on top of the index finger of your left. Now curl the fingers noting how top finger moves relative to the bottom one sliding along it. When a tree is bent over a similar separation can result leaving the wood unsuitable for some purposes. For other uses this is not critical. Look at the rings of a wind damaged tree you have cut down searching for a series of pin holes along the boundary of annual growth rings. This could be wind shake. Count back to each example of wind shake and identify the responsible hurricanes or other wind events.

When looking at a wind-shaken rift sawn board, where you can see two parallel grains slowly merge revealing that they are actually part of the same ring, you may notice a longitudinal separation of the piece along the merging ring.

Severely shaken trees can fall apart when they are cut. Even the base of a tree that wind sheered the top off frequently falls apart along the growth rings when it is dried. That is why so much storm damaged timber is chipped and used for pulp. With an estimated fuel loading of 60 tons per acre (downed trees), in many Katrina visited counties, there needs to be a whole lot of chipping going on!

Rediscover EE MEEA and the Ivory-billed Woodpecker

Mississippi Environmental Education Alliance 2005 Conference October 28 – 30, 2005 Twin Lakes Conference Center, Florence, MS

Rediscover environmental education through the eyes of the Ivory-billed Woodpecker and educators from Arkansas, Indiana and Mississippi. If you are a first timer or have been with MEEA for years, join us at beautiful Twin Lakes Conference Center for an unforgettable experience.

Lee Moore - The Arkansas Nature Conservancy rediscovery of the Ivory-billed Woodpecker

Dan Massa – Team building and challenge course educator back by popular demand

Lashanda Colbert – MS Dept of Ed. Science specialist Information and overview of science curriculum

\$ 50.00 Registration Grant offered to ten teachers (first time attendance only)

Environmental Education Courses: Project Learning Tree, Project Wild, Waste in Place C.E.U. credits available

Field trips: High and low ropes, Rock climbing, Canoeing, Hayless hay ride, Bonfire

For conference information contact: John DeFillipo, MS Museum of Natural Science, 4391 South Frontage Rd., Columbus, MS 39701 Tel. 662-241-6917 or Lizardking700@yahoo.com

Resilient Coastal Plants by John and Peggy Guyton

Several years ago we began landscaping our yard with plants native to the coast. We also became very interested in the weeds that showed up in our yard, and their history. The weeds are a study in exotics and we have been considering offering a column in the MNPS newsletter since many of the weeds were important to our ancestors - and that is why they are here.

However, in this issue we thought we would report primarily on how neighborhood natives fared during Katrina. We live on English Drive in Ocean Springs, MS 0.6 miles from the Mississippi Sound of the Gulf of Mexico. To be more precise N 30° 24.123' W 088° 47.860' and right at 20 feet above sea level according to the Ocean Springs Quadrangle Topographic map and in the Halstead Bayou watershed. Our damage from Katrina was minimal, compared to so many.

Most natives fared pretty well and so did the exotics. Wind downed trees, silt and salt are the culprits. Salt from spray is deposited far inland during hurricanes and reduce plants uptake of water by absorbing the water or causing water to migrate out of plants through osmosis. We immediately watered our beds to flush the salt out.

The first thing we noticed when we returned after our evacuation was the leaves on a 3 year old red oak in our front yard appeared scorched. However, over the next few days it put on a spectacular flourish and now, a month later, its has a full compliment of leaves. The large old water oak (*Quercus nigra*) in our back yard that plays host to a variety of lichens, mistletoe and looks like a gall condominium was naked but standing tall. Our red bay (*Persea palustris*) is looking fine with just a little brown on the leaves. The long leaf pine in a neighbors yard seems to have weathered the storm with a minor yellowing but another neighbor's slash pine looks pretty bad. There is barely a shade of green in the needles on a couple branches and I am thinking about estimating its height and distance to my house. In the neighborhood we have seen a lot of downed pine trees and I wonder how many kids brought these home from Arbor Day promotions. Cypress in the bayous were completely brown but are coming back and showing some green.

Our St. John's Wort (*Hypericum densiflorum*) looked bad as we pulled into the driveway but we rushed into the house and immediately got busy cleaning up. It was the next day before we noticed they were salt burned and had gone to seed. Most are coming back and the seedlings underneath seem to be fine. Our three *Agarista populifolia* are all coming back and looking good. Henry's Garnet (*Itea virginica*) lost a lot of leaves but the new leaves are looking good. Our 2 Florida Anise (*Illicium floridanum*) has been a disappointment and with their shallow root system we weren't surprised one was blown over. However we stood it back up and both have some new leaves and we are looking forward to their continuing sweet smell. The Tensaw Hollies (*Ilex cassine*) never new we had a hurricane and continues to grow and look good. Our TiTis (*Cliftonia monophyllia*) "Van Cleave" are a little bare but have new leaves. Most of the leaves on the small arrowwood (*Viburnum dentatum asheii*) have brown edges but the new leaves are looking great. Our green briar (*Smilax*) leaves were a little salt burned but they are coming back strong. The elderberry (*Sambucus*) has really taken off and the storm had beaten it down and stripped of the last of the fruit the birds had not gotten to! The Virginia chain fern (*Woodwardia virginica*) has some brown fronds, but that may be normal, and it survived.

The yellow rose of Texas is blooming, the swamp rose is bushing out and the Lady Banks was beat down but is coming back. The gardenia started blooming immediately after the hurricane! The calla lilies have started blooming and the cast iron (*Aspidistra*) plant leaves have a few brown edges but are otherwise doing fine. We noted some totally brown just off the water but there everything was brown. The *Passiflora* leaves show no damage and it is clearly in grow mode. The miniature abelia and lantana are blooming.

The pitcher plant bogs (*Sarracenia alata*) look like they are already in deep winter mode and many of the coastal marshes have had several feet of salt water over them. I suspect they would benefit from a good fresh water flood about now. Pickerelweed (*Pontederia cordata*) and *Sagittaria lancifolia* or duck-potato are doing fine. The undergrowth on the barrier islands appears to be in very bad shape and there are a lot of trees down - especially pine.

We have noticed a Chinese tallow (*Triadica sebifera*) volunteer in our front flowerbed has shot up to over 4 feet tall in less than a month and has leaves approaching 4 inches across. This brings up an important concern for post storm monitoring and activity. Jeff Clark, Bureau Director Coastal Preserve, points out that post Katrina with bare trees and open canopies sunlight is reaching the forest floor and may favor exotics such as the Chinese tallow that often do not survive in deep dark forest. The Japanese climbing fern (*Lygodium japonicum*) laughed at the hurricane and put on another growth spurt. Unfortunately the Yellow Nutsedge (*Cyperus esculentus*) is still with us.

Membership Application or Renewal Form

Join the organization devoted to the study and appreciation of wildflowers, grasses, shrubs and trees native to the state of Mississippi. Members receive MISSISSIPPI NATIVE PLANTS, a publication that addresses scientific and gardening issues relevant to the recognition, enjoyment and conservation of our native plants and natural habitats.

Join Today!

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C/O Dr. Debora Mann

114 Auburn Drive, Clinton, MS 39056-6002

***Gulf Coast Chapter:** Meets every 4th Monday at various locations near Gulfport. For more information contact president, Edie Dreher at 228-864-2775 or mail to 100 24th St., Gulfport, MS 39507.

***Starkville Area Chapter:** For meeting times and information, contact Bob Brzuszek at rbrzuszek@lalc.msstate.edu or phone 662-325-7896.

Don't miss the Mississippi Environmental Education Conference, coming up October 28 - 30, 2005 at Twin-Lakes in Florence, MS *See notice inside!*