LOUISIANA NATIVE PLANT SOCIETY NEWS

Spring 2016
Volume 30 Issue 1

LNPS

Inside this issue

- 1 -- Field Trip, Feb. 2016
- 2-4 --Coastal Prairie Conservation Efforts
- 5,6 -- Is It True That Native Plants Need No Fertilizers? (Mycorrhiza)
- 7-9, Welcome, Monarchs!
- 10 --Announcements and Membership Form

LNPS Officers
- President, Peggy Cox
- Vice-President, Marc Pastorek
- Secretary, Beth Erwin
- Treasurer, Jackie Duncan
- Newsletter Editor, Betty Miley
- Past President, Bud WIllis
- President CANPS, Matthew Herron

Board Expiring 2017
- Rick Webb
- Matthew Herron
- Dave Banowetz

Board Expiring 2018
- Jim Foret
- Dawn McMillian
- John Mayronne

Board Expiring 2019
- Stacy Huskins
- Patrick O'Connor
- Helen Peebles

Annual Meeting Sunday Morning Walk February 7. 2016

A beautiful, sunny Sunday morning greeted about 20 folks as we visited the Catahoula Hummingbird Butterfly Garden and the Stuart Seed Nursery. We explored the garden seeing the toothache tree (host to the giant swallowtail) and dug a few Florida betony roots that a couple of adventurous folks ate. Some people laid down on the grass to gather the wonderful rays of sun. Emlyn Smith, wildlife biologist for the Catahoula Ranger District, explained the livelihood of the Red-cockaded woodpecker that nest next to the garden. The Garden is managed by Emlyn Smith and a host of volunteers.

The longleaf, loblolly, shortleaf, and slash pine species in the Stuart Seed Orchard were observed, with notice taken of the grafts made in the 1950's from superior trees in the Forest. Seeds are provided by these trees to grow seedlings that are planted in the Forest to regenerate cutover areas.

A few folks hung around and we walked down to a creek to see the big leaf magnolia. These were small trees but identifiable by the large buds. The highlight was walking around in a bottom area with large beech trees and oaks viewing lots of salamander eggs in the adjacent pools.

LDWF's Coastal Prairie Conservation Efforts

by Chris Reid, botanist, Louisiana Department of Wildlife and Fisheries

Coastal prairie is one of the rarest habitats in North America. Most of the nine million acres of prairie that stretched from Lafayette, Louisiana, to southern Texas have been plowed and converted to agriculture, or grazed beyond recognition. In recent years, several sizeable prairie remnants have been discovered in the cattle country south of Lake Charles. These remnants, which are utilized as rangeland, total about 5,000 acres. Their use as grazing lands has likely had a role in preserving them over the years.

While these prairies are recognizable to the botanist or ecologist, they do have some issues. On some sites, major prairie grasses such as little bluestem, Indian grass, and switch grass have apparently been overgrazed. The reduction in cover of these classic prairie grasses has created imbalance. Plant species that are not preferred by cattle ("increasers") have expanded, as have weedy plants that thrive on soil disturbance. Due to inadequate fire, woody encroachment is a problem on all rangeland prairie remnants documented thus far.

LDWF has partnered with three ranches in the Lake Charles area for the purpose of improving prairie habitat on these properties. Stewardship efforts so far have concentrated on the use of prescribed fire. Since the winter of 2014, LDWF staff have burned about 2,000 acres of prairie among four remnants.

Targeted herbicide applications have been performed on about 300 acres where brush forms fire-proof thickets. In addition to these restoration measures, LDWF staff are conducting botanical surveys –and ecological research on the effects of fire and grazing. LDWF is also funding research into the effects of these management practices on native pollinators. So far, this project has been funded through a State Wildlife Grant. Funding has been secured from the Environmental Protection Agency's Gulf of Mexico Program (GOMP) to continue this work for several more years. The GOMP funding will pay for heavy-handed brush control practices, including combinations of mechanical treatments and targeted herbicide application. →

Fig 1. LDWF and LSU botanists pressing plants in a prairie remnant in mid-May 2015, about six weeks post-burn. Currently, about 450 plant species have been documented from seven coastal prairie remnants in Calcasieu and Cameron Parishes. The flora of these sites is a mix of conservative prairie plants, plants that increase under grazing, and weedy plants that indicate soil disturbance. All of these sites have good estimated recovery potential since they have never been plowed and are loaded with prairie species.

These practices will be followed by prescribed fire.

LDWF's prairie restoration work is benefiting prairie plants and wildlife, including Species of Greatest Conservation Need (SGCN) as identified in the Louisiana State Wildlife Action Plan. It is also increasing the quantity and improving the quality of forage available for cows. Continued stewardship of the remaining prairies, enabled by the commitment of LDWF and partnering landowners, will enhance both ecological and economic benefits derived from these rangelands. Conservation of these coastal prairie remnants helps us to recapture a part of our natural heritage that was almost lost.

Fig 2. Coastal prairie in Cameron Parish showing wet inter-mound flats, with the person standing on a pimple mound. This picture was taken in mid-April 2015. The site was burned by LDWF in late January of that year. The mostly-dead standing brush far in the background is mainly yaupon (Ilex vomitoria) that received a herbicide application in fall of 2013.

Fig 3. The flora of pimple mounds and inter-mound flats are very different. Inter-mound flats support many wetland plants. Pimple mounds support upland plants, and some mounds could be considered sub-xeric. The two plants in this image, wooly white (*Hymenopappus artemisiifolius*; foreground) and Queen's delight (*Stillingia sylvatica*) are examples of prairie pimple mound species that indicate dry sandy soils inland.

Fig 4. LDWF staff igniting during a prescribed burn of a coastal prairie remnant in Calcasieu Parish on 4 June 2015. This remnant is situated near the intermediate marsh. Dominant grasses include marshhay cord grass (*Spartina patens*) and brownseed paspalum (*Paspalum plicatulum*). Pimple mounds are present in this area and support a drier flora.

Fig 5. Prairie shown in Fig 4 one month after the prescribed burn. The burn was effective in top-killing many waxmyrtles (*Morella cerifer*a).

Fig 6. A large stand of Texas coneflower (*Rudbeckia texana*) on a prairie remnant in Calcasieu Parish. This picture was taken on 5 June 2015; the site was burned by LDWF on 27 March.

Fig 7**. The REAL LOUISIANA!**

Coastal prairie in late October 2014; area was burned in mid-May of that year. Most of the yellow flowers are of narrow-leaf sunflower (*Helianthus angustifolius*) and sunflower beggars' ticks (*Bidens aristosa*). Kansas blazing star (*Liatris pycnostachya*) is in the foreground. The more stewardship these prairies receive, the more they start to look like prairies.

When they start to look like they are supposed to, their magic is revealed.

Is It True That Native Plants Need No Fertilizers? by Betty Miley,

Native plant gardening seems simple: find the species that are native to your locale and sow seeds or install potted plants. As many of us discover, fulfilling that feat is often iffy.

Spicebush *(Lindera benzoin),* a much-admired shrub, should, according to plant distribution maps, be suitable for many many southeastern states.

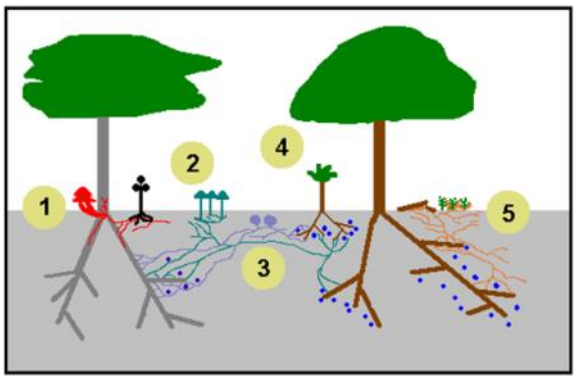
http://bonap.net/MapGallery/County/Lindera%20benzoin.png

Many butterfly enthusiasts and gardeners want to grow spicebush, which is the preferred host plant for the black and blue spicebush swallowtail butterfly. Reliable sources report that *Lindera benzoin* grows fairly readily in a variety of conditions, from full sun to dense shade, wet to moderately dry, and of course, the desirable "rich, moist, well-drained" soils.

Tell that to the legions of well-meaning gardeners and habitat restorers who have failed to get a single spicebush to survive, much less thrive. Other people have no problems with spicebush, but they can't get pawpaw (*Asimina* species) to grow, or black walnut or native azaleas (Rhododendron species), even if their sites seem to fit the growing requirements of their desired plants. Can we ever get to the root of the problem?
Restoring a site's natural ecology may require that we build from the ground up, literally.

Improving Soil Quality and Plant Health
Many native plant people find that the soils we have inherited have been severely damaged by previous owners, such as cotton farmers who tilled their land's organic "soil food web" into extinction. Just as children require a nourishing home to grow into healthy adults, so do native plants need a healthy environment where their roots can absorb nutrients that enable them to make their own food. If a plant's roots have a limited range, it may not be able to access sufficient nutrients to allow growth. Artificial fertilizers may alleviate the problem, but it is also possible that these products can "burn" a plant to death.

Building Bigger Roots with Mycorrhiza
Some plants are site specific. Their roots need minerals or other elements that they must have access to in order to survive. These plants may benefit tremendously if they join forces with various species of mycorrhiza [my-co-rye-za], which is basically a fungus (or mushroom) that grows on or within roots of other plants. Many plants form strategic relationships with these important symbiotic fungi, forming extensive colonies that allow complex transfers of moisture and nutrients such as nitrogen and phosphorus. Mycorrhiza hyphae can appear as white spidery webs under layers of decomposing leaves of oaks, which provide a source material to inoculate plant roots. →



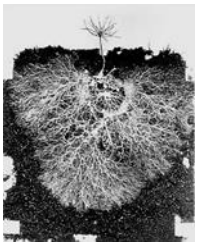
This image illustrates the complex root structure that laces together various plant species with a mesh of mycorrhiza filaments (hyphae).

More at: http://www.anbg.gov.au/fungi/images-misc/mycorrhiza/wwwg.gif

- **Advantages of mycorrhizal associations**: improved nutrient uptake, moisture balance, disease resistance, weed suppression
- Plants which benefit from soil inoculation.

These categories are somewhat general and have exceptions.

1) Endomycorrhizal (now known as Vesiclular Arbuscular Mycorrhiza, or AM or VAM): about 80 - 90% of plants, mostly shrubs and foliage plants, fruit trees
2) Ectomycorrhizal: 5 - 10% of plants, mainly oaks, conifers, beech, birch, hickory, pecan, willow, chestnut
3) Non-mycorrhizal (5% of plants which do not form associations with mycorrhizal fungi:
   Brassica family (broccoli, Brussels, cabbage, cauliflower kale
   Ericaceae family (Azalea/Rhododendron, blueberry, heath, huckleberry)
   Others: beet, carnation, mustard, orchids, rush, sedge, spinach



https://vinyasonalegre.files.wordpress.com/2014/10/complete_mycorrhiza_1.jpg

- **Introducing mycorrhiza to landscapes can be accomplished**
  - ✓ with commercially available products in granular or powder; more garden centers and online specialty companies are offering them now; only a pinch of mycorrhiza introduced to roots or seeds is needed; powders that are diluted in water make it easy to drench the entire root area
  - ✓ by collecting local soil under rotted oak and maple leaves, as well as by making starter soil with bait plants of these families: Graminacae, Leguminacae, Allium.

  Much information is available on websites, online magazines, some books.
- **Care and Feeding of Your Mycorrhiza**

  Mycorrhiza may disconnect or die when trees or other plants are disturbed by tilling and/or applications of fertilizers, herbicides, and of course fungicides.
  http://puyallup.wsu.edu/wp-content/uploads/sites/403/2015/03/mycorrhizae.pdf

On a personal note, success, at last! The last spicebush I planted, with mycorrhiza, is alive and well and making bright green leaves.

Welcome, Monarchs! by Linda Auld

Tucked away on I-49 next to roaring 18-wheelers, happy adventuring tourists and Louisiana folks, one can discover the "Welcome, Monarchs!" butterfly garden at the Boyce Louisiana Welcome Center. What was once an all green strip of St. Augustine grass surrounded by sidewalks and parking lot has been morphed into a mass of blooming colors! *"Help Bring Back the Monarchs!"* was part of my array of butterfly projects during my 2015 crusade to save a bug--the Monarch butterfly.

A huge thanks goes to Jacalyn Duncan who arranged for her friend to help prepare the garden site. The hard clay ground broke the plow blade! Their task was quite difficult but their goal was achieved. Then, after two trips to Lowe's to purchase bags of dirt, Madeline Lee, Jacalyn Duncan, and I installed the specially selected plant assortment. Lisa Norman and I returned the next morning to add bags of pine straw mulch that Lisa had raked at her mother's house.

The garden's center was planted with four different milkweeds—
Asclepias curassavica, Asclepias tuberosa, *Asclepias perennis*, and *Calotropis gigantea* or "Giant milkweed." It is not a true milkweed but Monarch caterpillars enjoy a banquet feast when eating its large leaves. An assortment of annuals and perennials combined with both native and non-native nectar plants surround the Monarch butterflies' host plants. Gaura was positioned at each corner of the bed and bright-orange zinnias bordered all four sides.
(View the complete list of plants at the end.)

Plants were all purchased from local Louisiana growers (listed in alphabetical order)
1) Dixielandscape: Melinda & Emily Taylor (Erato Street, New Orleans)
2) Fronderosa: Mary Eliott McCormick (Range Road, Ponchatoula)
3) Jenkins Farm & Nursery: Margie & Margie Ann Jenkins Nursery (Dummyline Rd., Amit)
4) Louisiana Growers: Rick Webb (Lowery Road, Amite)
5) Mizell Farm: Jim Mizell (Hwy. 25, Folsom)
6) Sunrise Trading Co.: Steve Murphy (3rd St., Kenner)

Louisiana has over 135 kinds of butterflies and over 3,000 types of moths. There are small ones, medium sized ones and large ones. Therefore, select a variety of plants that bloom at different heights to accommodate all butterfly types. Some butterflies like Hairstreaks and skippers have short tongues so provide flat flowers like lantana or Queen Anne's lace. Swallowtails and Sulphur butterflies have long tongues so they like to use tubular flowers. →

Flowers that bloom in a cluster help the butterfly to probe multiple blossoms and to conserve energy that would be used searching for more nectar sources.
Jacalyn and Lisa have been dedicated tenders of the garden ever since the installation along with Lawrence, the friendly Welcome Center worker. I was very pleased to hear Lawrence report that he sees many folks every day enjoying the garden, taking pictures and inquiring about the flowers.

After you provide the plant "invitation," you never know what surprise "visitor" will accept it to fuel up on pollen and nectar – or to lay eggs on host plants for their caterpillars to eat. The garden is the place for discovery, so enjoy your green space and welcome the many creatures that will be drawn into this oasis in the sea of St. Augustine grass and concrete.
You may contact Linda Auld at nolabuglady@gmail.com or "friend" her at **lindabarberauld**

Nectar Plants	Host Plants	to attract this butterfly:
Ageratum	*Asclepias curassavica*	Monarch
Buddleia	*Asclepias perennis*	Monarch
Cat Whiskers	*Asclepias tuberosa*	Monarch
Celosia	*Calotropis gigantea*	Monarch
Coreopsis	Dill	Black Swallowtail
Cuphea	Fennel	Black Swallowtail
Dianthus	Parsley	Black Swallowtail
Gaura	Ornamental Cabbage	Cabbage White
Gaillardia	*Senna corymbosa*	Cloudless Sulphur
Ironweed (*Vernonia* species)		
Joe Pye Weed (*Eutrochium* species)		
Lantana		
Lobelia		
Marigolds		
Melipodium		
Mexican Sunflowers		
Monarda		
Pansy		
Penstemon		
Pentas		
Phlox paniculata		
Phlox divaricata		
Porterweed		
Purple coneflowers		
Verbena		
Zinnia		

An attractive Monarch Waystation offers a profusion of colorful nectar plants. It welcomes butterflies as well as visitors who enjoy the display.

Blanketflower *Gaillardia* species

Jacalyn Duncan tending plants, 4-23-16

The "Welcome, Monarchs!" garden is open to the public at the I-49 Welcome Center in Boyce, Louisiana, near Alexandria.

Visitors will find a variety of butterflies taking nectar from many of the plants, some of which are seen here: non-native herbs such as dill, fennel, snapdragon, parsley, as well as native species such as Beard-tongue (*Penstemon* species) and the "weedy" Peppergrass (*Lepidium virginicum*).

Verbena and *Gaura* species

Purple coneflower, *Echinacea* species

Announcements

- May 14 -- Cajun Prairie Habitat Preservation Society Meeting. Tours led by Dr. Charles Allen begin at 8 am at the Duralde Restored Prairie and 10 am at the Eunice Restored Prairie, followed by lunch/meeting at Rocky's. Chris Reid will give a presentation on the Characteristics and Conservation of Coastal Prairie Rangelands in Southwest Louisiana. For more details contact Dr. Charles Allen 337-328-2252 or email native@camtel.net.
- May 28-30 -- Tours led by Dr. Charles Allen to areas around Columbia, LA to include Copenhagen Prairie, Charles Allen Nature Trail, and Catahoula National Forest. Details to follow.

The LNPS Newsletter needs YOUR input. We encourage writers to submit articles and other items of interest.

Deadlines **Spring Issue: March 31** **Summer issue: June 30**
Fall issue: September 31 **Winter issue: December 31**

Membership Form
(Checks payable to LNPS)
NOTE: Membership and donations may also be paid online at www.lnps.org

NAME_____

PHONE_____

EMAIL_____

ADDRESS_____

CITY:_____ STATE_____ZIP CODE_____

MAIL TO:
Jackie Duncan
114 Harpers Ferry Road
Boyce, LA 71409

Annual Dues:

Student/Senior	$5	Organization	$25
Individual	$10	Sustaining	$50
Family	$15	Corporate	$100

Louisiana Native Plant Society
114 Harpers Ferry Road
Boyce, LA 71409
www.lnps.org
Phone: 318-793-8064
Email: jacalynduncan@hotmail.com

The Louisiana Native Plant Society was founded in 1983 as a state-wide, non-profit organization. Its purposes are to preserve and study native plants and their habitats, to educate people about the value of native plants and the need to preserve and protect rare and endangered species, to promote the propagation and use of native plants in the landscape, and to educate people on the relationship between our native lora and wildlife.