

LOUISIANA NATURAL AREAS REGISTRY



Photo by Bill Love Alva, FD

Quarterly Newsletter

Vol. 4 No. 2 of 4 December 2006

Working with landowners towards
conservation of Louisiana's ecologically
sensitive lands.

Can you name the animal
above?
See last page for answer.

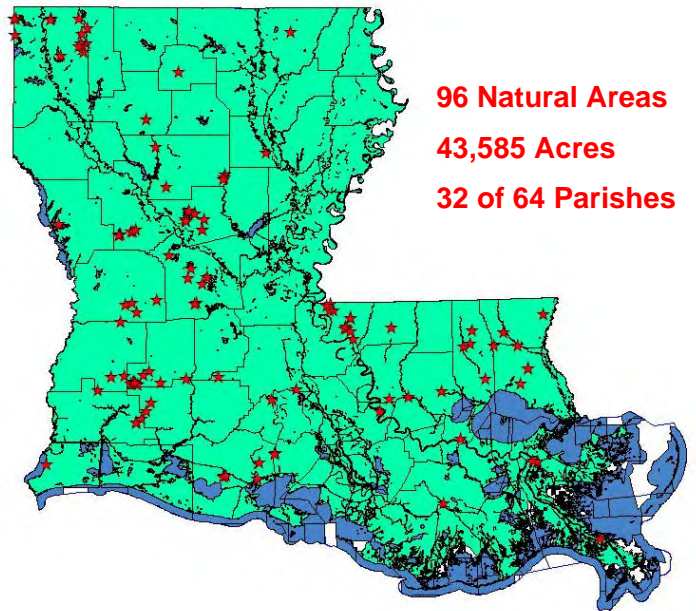
Natural Areas Registry Update



The Natural Heritage Program staff is planning a **Natural Areas Field Week** in 2007 from April 23 - 27. We have selected 5 parishes (Bossier, Beauregard, Rapides, Tangipahoa, and West Feliciana) for the event and we will visit one or more Natural Area Registry sites per field day. The purpose of this field week is to give our registry members the opportunity to learn about other plant communities in our state and to see how active land management can improve and conserve their natural areas. Registration is open to all registry members and their friends. So, if you know someone who is interested in learning more about the Natural Areas Registry Program and the Natural Heritage Program (LNHP), please invite them to any or all of the field days. Drinks and a light snacks will be supplied by LNHP. See the registration insert for more information. Please return bottom portion to Judy Jones by January 15, 2007 if you're interesting in attending any or all events.

The Natural Areas Registry Program is steadily growing and is nearing 100 registries. Red Stars on the map of Louisiana to the right represent 96 Registered Natural Areas that comprise 43,585 acres in 32 of 64 parishes. We are acknowledging three new Natural Areas Registries this quarter that capture 410 acres in three Louisiana Parishes (Beauregard, East Feliciana, and Vermilion). David Daigle with Cypress Creek Flatwoods Natural Area contacted LNHP about our interest in registering a longleaf pine forest with Brimstone soil. Isis Longo with Sprucewood Farm Natural Area contacted me about our interest in her

spruce pine forest along Comite River. We contacted Ron Miguez with Turkey Island West Natural Area this summer to get permission to search for a state-rare fern that was located in the vicinity many years ago. We did not find the fern our botanist did find the state rare three-lobed coneflower (*Rudbeckia triloba*). We were delighted to recognize all of these areas for their preservation efforts after visiting their sites.



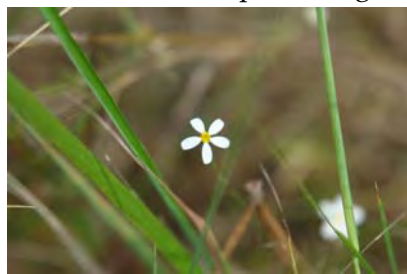
Cypress Creek Flatwoods Natural Area is a 331-acre site owned by David R. Daigle, John C. "Chad" Thielen, William D. Blake, and Oliver G. "Rick" Richard III with Calcasieu Conservation Land Company, LLC in Beauregard Parish. It consists of a western saline longleaf pine savannah. Pine Savannahs are floristically rich, herb-dominated wetlands that are sparsely stocked

with longleaf pine (*Pinus palustris*). Wet savannahs occupy the poorly drained and seasonally saturated / flooded depressional areas and low flats, while the non-wetland flatwoods occupy the better drained slight rises, low ridges and "pimple mounds" (only southwest Louisiana). Herbaceous vegetation of pine savannahs is very diverse, dominated by graminoids, and is similar to vegetation that occurs on hillside bogs.

Various additional species belonging to the lily family, sunflower family, and orchid family are prominent. Club-mosses and sphagnum moss are often abundant. Brimstone silt loam soil occurs on the northern part of Cypress Creek Flatwoods Natural



Area. Certain plant species that are found on Brimstone sites versus alkaline sites and may include stunted and or sparse vegetation. Historically, fire



maintained this plant community by killing encroaching shrubs and trees and rejuvenating the herbaceous ground cover. Three state-rare plants have been found on this site – Arkansas least daisy (*Chaetopappa asteroides*) shown above at left, shortbeak beaksedge (*Rhynchospora nitens*) shown above, and southeastern panic grass (*Panicum tenerum*).

Sprucewood Farm Natural Area is a 67-acre site owned by Isis Longo, Lynette Ligon, and Erin Hobgood in East Feliciana Parish. It consists of two community types: small stream forest with intermittent streams and the state and globally rare spruce pine hardwood forest. Comite River borders the site. Small stream forests are relatively narrow wetland forests occurring along small rivers and large creeks. They are seasonally flooded for brief periods. The percentage of sand, silt, calcareous clay, acidic clay, and organic material in the soil is highly variable (depending on local geology) and has a significant effect on species composition. Spruce pine-hardwood flatwoods are a natural mixed forest community indigenous to the



western Florida Parishes in southeast Louisiana.

Spruce pine (*Pinus glabra*) is prevalent over loblolly pine (*Pinus taeda*).

Hardwoods usually dominate the forest, but spruce pine can dominate areas within the stand. Soils are significantly

higher in nutrient levels than those historically supporting longleaf pine (*Pinus palustris*) communities that occupy similar hydrologic settings immediately to the east. Historically, fire was probably very rare as the component plant species are not fire adapted and fuel conditions are not conducive to fire.

Turkey Island West Natural Area is a 12-acre site owned by Ron Miguez in Vermilion Parish. It consists of two plant communities: a Baldcypress Swamp and the critically imperiled Live Oak Forest. Baldcypress Swamps improve the quality of water that flows through them, serve as nursery areas for many estuarine dependent species, and act in flood regulation. Many aquatic food webs depend on the input of leaf litter of other organic debris that the wetland forest provides and aquatic fauna like crawfish, aquatic insect larvae, reptiles, and amphibians are abundant. Live Oak Forests occur on natural levees or frontlands and on islands within marshes and swamps. This natural community type is rare in Louisiana.

Live Oak Forests function as important wildlife habitat and serves as vital resting habitat for neotropical migratory birds. Hundreds of



different bird species use these forests as a stop-over on

their way north during spring and fall migration. A state rare plant, Three-lobed Coneflower (*Rudbeckia triloba*), shown at lower right on previous page, is

located in the forest that formed on the spoil bank of Youngs Coulee.

WHAT IS A NATURAL AREA?

Identifying and helping landowners protect their natural areas is one of the jobs of the Louisiana Natural Heritage Program. However, we have determined that a natural area does not mean the same thing to everyone, whether they are a forester, wildlife biologist, or a private landowner. Therefore, we have attempted to describe below what a natural area is as accepted by the LNHP.

What is a Natural Area? Natural Areas registered with the Louisiana Natural Areas Program must support rare, threatened or endangered plants or animals, state significant natural communities, or high quality common elements. The state's registry program encourages voluntary conservation of significant natural lands in both private and public ownership. Landowners of natural sites placed on the registry play a crucial role in the conservation of the natural heritage resources found on their properties. Species and natural communities are often lost simply because a landowner is unaware of their existence and management needs.

Often people think that the term "natural area" means that a piece of land must be left alone, and not managed to be natural. However, in most cases, the opposite is true. Natural areas must be managed using specific guidelines in order to preserve and/or restore natural communities or wildlife habitats occurring on the site. As Louisiana was settled, the natural environment and natural processes that maintained our biological communities were drastically altered. We now must battle factors such as invasion by exotic species, fire exclusion, altered streams and water systems, landscapes fragmented by roads, pipelines, and development, as well as many other threats in order to manage and maintain the character of our state's natural areas. A natural community that is out of balance in composition, structure and function, or that has been highly altered from its original condition, can be brought back toward natural balance through a carefully devised management regimen.

Louisiana Natural Heritage Program (LNHP) staff provides registry landowners with a biological

assessment of their property, and develop specific management suggestions to retain the natural character of their property and ensure long-term survival of the natural heritage resources. The following are general management guidelines that can be applied to managing any natural area. Each Natural Area in the program should also have individualized management guides for the particular species or natural communities found on that specific site.

What does managing my Natural Area mean? The practice of **Natural Area management** means doing what is necessary to maintain or promote the natural integrity of the ecosystem that is present or should be present on any piece of ground, considering site factors such as surface geology, soils, topography, hydrology and geographic location.

It means determining what natural communities (habitats) were originally present on the site, considering the above factors, and working to maintain the natural integrity of that habitat, if it is still present, or working to promote and restore those natural conditions that have been lost or degraded through past land use practices.

The natural integrity of an ecosystem is probably best assessed by evaluating the composition, structure, and functions of the current habitat on site and comparing these to the composition, structure and functions of the system originally present.

Restoration/Maintenance of the system is really what natural area management is about.

Implementing Natural Area management... Some ways to implement management of your natural area site are:

- * Maintain/restore historical natural community composition and structure.
- * **Do not convert natural forests**, or those forests that are similar to their pre-European condition to commercial plantation forests.

* **Do not convert natural prairies or grasslands** (not even small portions) to food plots, or agricultural plantings. Avoid disturbance of the groundcover.

* Favor a full natural balance of species that would be expected at a site given site factors. For example, with forested sites do not "push" the area to be overly stocked with commercially desirable trees or selected wildlife trees if this upsets the natural balance of species. Do not intentionally eliminate species indigenous to a site.

* Natural forest management often includes environmentally sensitive timber harvest. If timber removal is necessary, practice methods that duplicate as nearly as possible natural disturbance regimes under which our forest systems evolved. The great majority of natural disturbances are small-scale events (e.g., lightning strike mortality, thunderstorm down-bursts, small-scale insect infestations) that operate at scales of less than an acre to only a few acres. An all-aged (uneven-aged) management system such as single-tree/small group selection, appears to best duplicate these events.

* Consider surrounding landscape conditions when formulating management plans. If this tract supports an indigenous habitat type that is largely missing from the general landscape (for example, shortleaf pine-hardwood forests, longleaf pine forests, or older natural forests of any type), it is important to maintain this condition on as much of the tract as possible.

* "Edge" is not utopia for all wildlife. While most early successional species prosper when much edge is introduced, plants and animals adapted to forest interior conditions usually have problems. It is important to maintain relatively large blocks of mature natural forest for these species. There is currently a super-abundance of "edge" and early successional habitat in the state. Older natural forests are becoming scarce, particularly patches larger than 100 acres.

* Maintain old-growth natural forests where possible.

* Fire is critical in maintaining/restoring many natural community types. Use prescribed fire as appropriate for different ecosystems and their inclusions. Some recommended fire intervals are:

coastal, calcareous prairies

- once every 1 - 3 years

longleaf pine and included communities

- once every 1 - 3 years

shortleaf pine-hardwood forest

- once every 5 - 15 years

mixed hardwood-loblolly forest

- once every 20 - 40 years

* Use growing-season fires when possible; our natural ecosystems evolved under a regime of fires started by lightning, mainly in the spring and summer. Apply most fires in the spring, in the interval mid-April to late June. Growing-season fires can be rotated with dormant-season fires.

* Use natural fire breaks such as streams, branch bottoms or other embedded wetland breaks, and allow the fire to create its own ecotonal patterns on the landscape as it originally did. By avoiding or minimizing the use of plowed fire breaks, you minimize erosion and soil movement, and maintain the natural integrity of your property.

* Do not mechanically or chemically disturb unique areas (e.g., bogs, seeps, temporary natural ponds, deep sandy spots, prairies or forests on calcareous clays, glades, shortleaf pine, longleaf pine, etc.) that may be present.

* Do not disturb stream-side zones; do not disturb steep slopes above streams.

* Maintain/restore historical hydrologic patterns, to the extent practicable.

* Practice state-of-the-art prevention/detection/control of southern pine beetle problems. Be ever vigilant in detection and control of the beetles.

* Monitor for rare species and habitats found on your property and working with LNHP, devise specialized management for any rare species or habitats present.

* Retain snags and low-vigor/damaged trees within the stand. These are natural components of natural forests and are important for various ecological reasons.

* Likewise, large downed woody material (e.g., rotting logs) are important parts of naturally functioning forests. A tree has fulfilled only a portion of its ecological function in a forest at the time it dies.

* Control/remove aggressive non-native plant species that are displacing native vegetation. Some of the worst are Japanese honeysuckle, privet-hedge, Chinese tallow tree, and Japanese climbing fern (bridle-veil fern). Careful use of appropriate herbicides will probably be necessary to accomplish this.

Remember, these are only general guidelines that will require site-by-site interpretation and application by professional biologists/ecologists. The Louisiana Natural Heritage Program can provide additional specific management recommendations tailored to your particular Natural Area. Contact Judy Jones at 225-765-2822 or jjones@wlf.louisiana.gov

Below is Ouachita Basin, which is one of 12 aquatic freshwater habitats that are distinguished by drainage basins (Atchafalaya, Barataria, Calcasieu, Mermentau, Mississippi, Ouachita, Pearl, Ponchartrain, Red, Sabine, Terrebonne, and Vermilion – Teche Basins). You can learn more about each of these on Louisiana Wildlife and Fisheries as part of the Wildlife Action Plan at <http://www.wlf.state.la.us/experience/wildlifeactionplan/wildlifeplandetails/>.

OUACHITA BASIN

General Description:

The Ouachita River system is the principal drainage for south Arkansas and northeast Louisiana, draining an approximate area of 26,000 square miles. The source of the river is found in the Ouachita Mountains of west-central Arkansas near the Oklahoma border. The river flows south through northeast Louisiana and joins with the Tensas River north of the town of Jonesville to form the Black River, which empties into the Red River. The total length of the river is 542 miles. In Louisiana, the Ouachita Basin covers 10,000 square miles of drainage area (LDEQ 1993), which mostly consists of rich alluvial plains cultivated in soybeans, cotton, and corn. The northwest corner of the basin is forested in pine, much of which is commercially harvested. Bayou Bartholomew and Bayou D'Arbonne are the major tributaries of the Ouachita.



There are two lock and dams on the Ouachita in

Louisiana. The Jonesville and Columbia lock and dams were constructed by the COE and opened to navigation in 1972. Each structure impounds a slack-water pool approximately 100 miles long. Benefits to fish and wildlife of the Ouachita-Black navigation project in Louisiana include the Catahoula Diversion Channel and Control Structure and the Little River Closure Dam. The diversion channel and structure and closure dams are located in the Jonesville Lock and Dam pool southwest of Jonesville. The diversion channel diverts flows from Catahoula Lake into Black River, downstream from the lock and dam. The control structure is used to regulate the flow entering the diversion channel from the lake. The closure dam is located on Little River. These features allow for regulation of stages in the lake to permit its continued use as a resting and feeding area for migratory waterfowl (COE 1998).

There are roughly 118 species of freshwater fishes (W. Kelso, personal communication), 49 species of mussels (Vidrine 1993), and 19 species of crawfish (J. Walls, personal communication) found within the Ouachita Basin.

Water Quality:

The 2004 Water Quality Inventory Report (LDEQ 2004) indicated that 22% of the 61 water body subsegments within the basin were fully supporting their three primary designated uses. However, 76% of the subsegments were not supporting their designated use for fish and wildlife propagation. The suspected causes for these water quality problems include: metals, pesticides, nutrients, fecal coliform, organic enrichment and low concentration of dissolved oxygen, oil and grease, non-native aquatic plants, sedimentation/siltation, and turbidity. The suspected sources of the water quality problems include: home sewage systems, agriculture, silviculture, urban storm water runoff, surface mining, and dredging.

OUACHITA BASIN SPECIES OF CONSERVATION CONCERN (24)			
CRUSTACEANS	Bluehead Shiner	Pink Mucket	Rabbitsfoot
	Vernal Crawfish	Fatmucket	Monkeyface
	Elegant Crawfish	White Heelsplitter	Squawfoot
	MUSSELS	Mucket	
		Black Sandshell	
FRESHWATER FISH	Western Fanshell	Hickorynut	REPTILES
	Paddlefish	Pyramid Pigtoe	Alligator Snapping Turtle
	Bigeye Shiner	Fat Pocketbook	Ouachita Map Turtle
	Steelcolor Shiner	Ebonysshell	
		Ouachita Kidneyshell	

Alligator Snapping Turtle *Macrocllemys temminckii*



The alligator snapping turtle spends most of its time lying quietly on the bottom, where its dark, rough body is well

concealed. Here it performs a remarkable feat of luring fishes into reach by lying with the mouth agape and wriggling a peculiar wormlike appendage that projects from the tongue. Commercial turtle dealers report serious depletion of alligator turtles.

Paddlefish (*Polyodon spathula*)



The paddlefish is an ancient, mostly cartilaginous fish with smooth skin. It is a close relative of sturgeons. Historically, the paddlefish was

widely distributed throughout the basin, but presently occurs only in large numbers where it is intensively managed. Over fishing by the late 1890's, habitat losses from the construction of dams, and watershed development and alteration had caused a severe decline in many stocks.

Threats Affecting Basin:

The following table illustrates the threats identified for the Ouachita Basin and the sources of these threats.

Source of Threat	Threat									
	Altered Composition/ Structure	Altered Water Quality	Competition for Resources	Habitat Destruction or Conversion	Habitat Disturbance	Habitat Fragmentation	Modification of Water Levels; Changes in Natural Flow Patterns	Nutrient Loading	Sedimentation	Toxins/ Contaminants
Channelization of rivers or streams				XXX	XXX	XXX			XXX	
Construction of ditches, drainage or diversion systems				XXX	XXX	XXX	XXX		XXX	
Construction of navigable waterways				XXX	XXX		XXX		XXX	
Conversion to agriculture or other forest types				XXX			XXX	XXX	XXX	
Crop production practices		XXX	XXX	XXX	XXX		XXX	XXX		XXX
Dam construction	XXX			XXX	XXX		XXX		XXX	
Development/maintenance of pipelines, roads or utilities				XXX	XXX	XXX	XXX		XXX	
Incompatible forestry practices				XXX	XXX				XXX	XXX
Industrial discharge		XXX								XXX
Invasive/alien species			XXX							
Levee or dike construction				XXX	XXX		XXX		XXX	
Livestock production practices		XXX			XXX			XXX	XXX	
Oil or gas drilling					XXX	XXX				
Operation of dams or reservoirs					XXX		XXX		XXX	
Operation of drainage or diversion systems					XXX		XXX		XXX	
Mining practices				XXX	XXX				XXX	XXX
Residential development		XXX		XXX	XXX	XXX		XXX		
Wetland fill					XXX				XXX	

References:

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY. 1993. Nonpoint Source Pollution Assessment Report. Website. <http://nonpoint.deq.state.la.us/assess39.html>.

———. 2004. Louisiana Water Quality Inventory: Integrated Report. Water Quality Assessment Division, Standards Assessment and Nonpoint Source Section. Baton Rouge, LA. 110 pp.

U.S. ARMY CORPS OF ENGINEERS. 1998. Water resources development in Louisiana. U.S. Army Corps of Engineers, New Orleans District. 191 pp.

VIDRINE, M. F. 1993. The historical distribution of freshwater mussels in Louisiana. Gail Q. Vidrine Collectables. Eunice, LA. 225 pp.

OPERATION OAK PROGRAM

The National Wild Turkey Federation (NWTF) is very proud to announce the continued expansion of its Operation Oak Program. A partnership between the Natural Resources Conservation Service (NRCS) and the NWTF has made 15,000 select oak seedlings available FREE to private landowners in Louisiana. These native seedlings are grown under a specialized nursery protocol at the Flint River Nursery in Georgia. The result of this nursery protocol is a large, vigorous seedling with high survivability, high growth potential, and the potential to produce mast in approximately 10 years.

The roots on these seedlings are very large and will require a hand-held or tractor mounted auger for planting. Participants will also be required to pick up their seedlings from a centralized location in the state.

Pick up locations and dates will be determined and announced before trees are available in February.

Private landowners interested in participating in the FREE program should complete the insert application form and mail, e-mail or fax it back to the attention of:

Kay Morris
 Operation Oak
 P.O. Box 530
 Edgefield, SC 29824
kmorris@nwtf.net
 Fax (803) 637-9180

Applications must be received in Edgefield on or before January 1, 2006. NWTF staff will review all applications and provide seedlings to as many interested landowners as possible.

WILDFLOWER SEED PACKETS

The Cajun Prairie Society (non profit) has several pounds of seeds available in their mix of more than 50 native prairie species of grasses and forbs with Louisiana genetics only. The cost is \$50.00 per pound. These seeds were harvested from the Eunice sites or the Duralde areas and all with Louisiana genetics. Contact Dr. Charles Allen at native@camtel.net (337) 328-2252.

The Cajun Prairie Society has arranged for the harvesting of seeds from Duralde, which includes mostly little bluestem with mostly Texas genetics. The seeds came originally from Attwater Prairie Chicken Refuge. These seeds are available at \$25.00 per pound. All monies from the sale of Duralde seeds will be used to improve the Duralde site.

Marc Pastorek of Meadow Makers has several mixes and several individual seeds. He will be on line soon with seeds for sale but you may get a head start and email or call him now. His seeds were collected mainly in Louisiana and Mississippi. You can contact Marc at cell (504) 296-8162 or marcpastorek@bellsouth.net.

Answer to animal on first page.

Ringed Sawback (=Map) Turtle (*Graptemys oculifera*)
Federally and State Threatened.

Endemic to Pearl and Bogue Chitto River drainages in Louisiana and Mississippi. Have prominent dorsal spines in juveniles and males but less so in females. Small turtle 4.7" to 8.7" that reach maturity at age 5. Eat primarily insects but also eat small fish, mollusks, and carrion. Prefer clean rivers with moderate current, open canopy, and numerous nesting beaches and basking logs. Declining because of natural and man-made changes in river hydrology. This decreases availability of exposed sandbars and lower water quality decreases food supply.

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We acknowledged five new Natural Areas Registries that encompassed 497 acres. Total Registry acreage was 43,112 for 93 Registries in 31 of 64 parishes. We covered Batture and Sandbar communities.

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