



Can you name the plant inside the dashed area?
Look on the last page for the answer.

LOUISIANA NATURAL AREAS REGISTRY

Quarterly Newsletter

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



Natural Areas Registry Update



We are acknowledging five new Natural Areas Registries this quarter that encompass 497 acres in four Louisiana Parishes (Allen, Cameron, Grant, and Iberville). This brings our total Registry acreage to 43,112 among 93 registry members in 31 of 64 Louisiana parishes. The owners of Bobbye and Hunter's Mixed Hardwood-Loblolly Forest, Bunch's Creek, Cow Creek, and Saint Barbara's Wetlands Natural Areas contacted our office about registering their sites. After visiting their sites, we were delighted to recognize these owners for their preservation efforts. Natural Heritage Program staff recommended that we recognize USFWS for their efforts in preserving Marceaux Island Prairie.

There is hurricane relief available for those who have not taken advantage of the programs set up to aid landowners with downed timber, replanting efforts, and agricultural loss. Contact your local Farm Service Agency (phone numbers in US Government pages of phone book) to get help from your local agent to determine what program(s) - Emergency Watershed Program (EWP), Conservation Reserve Program (CRP), or Emergency Conservation Program (ECP) to apply for and to get help and filling out forms. See web address <http://www.fsa.usda.gov/> for more information.

Bobbye and Hunter's Mixed Hardwood-Loblolly Forest Natural Area is owned by Bobbye and Hunter McNeely in Grant Parish. Their 120-acre site includes a mixed hardwood-loblolly forest and a swamp lake community at Lake Iatt. Mixed Hardwood-Loblolly Pine Forests are variable depending on elevation and



consequent moisture regime. This forest was characterized by large draping vines, little disturbance, and old-growth characteristics indicated by large

loblolly (*Pinus taeda*), that comprises 20 percent or more of the overstory in a mixture with a number of hardwood species. Succession in this community is strongly toward hardwood dominance, and it may be

considered transitional to various hardwood types. Crane fly Orchid (*Tipularia discolor*) is an interesting plant observed at the site that has a solitary leaf at the ground (see leaf and flower pictures above). Lake Iatt's swamp lake is shallow and surrounded by a swamp basin. Phytoplankton is an important biotic component that adds significantly to the overall primary productivity of swamp lakes. The higher trophic levels within swamp lakes are supported primarily by detritus

exported from the swamp forest floor. Swamp Lakes are important for waterfowl and water birds.

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Osprey (*Pandion haliaetus*) and the federally threatened/state endangered American Bald Eagle (*Haliaeetus leucocephalus*) are frequently seen feeding and nesting at Lake Iatt.

Bunch's Creek and Cow Creek Natural Areas are owned by David and Mary Ann Daigle in Allen Parish. (Pictured below is David and Chris Reid in a field of flowering Indian plantain - *Cacalia lanceolata*). Together,



these areas comprise 255 acres of two Louisiana critically imperiled plant communities, Western Acidic Longleaf Pine Savannah and Flatwoods Pond. Western Acidic Longleaf Pine Savannahs are floristically rich, herb-dominated wetlands that are naturally 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. Pine savannahs are dominated by graminoids and are floristically similar to hillside seepage bogs. In addition to graminoids, species belonging to the lily family, sunflower family, and orchid family are prominent. Club-mosses and sphagnum moss are often abundant. Flatwoods Ponds are relatively small, natural depressional wetlands embedded within current or historical longleaf pine flatwoods / savannahs of western Louisiana. They are believed to occupy swales and depressions remaining from ancient Pleistocene stream channels, and are often linear in shape, although circular and elliptic ponds are common. Generally treeless, these ponds are vegetated by a variety of obligate and facultative wetland herbaceous species, mainly tall sedges and grasses. Historically, fire maintained both of these plant

communities by killing encroaching shrubs and trees and rejuvenating the herbaceous ground cover. Wildlife like the state-rare Tiger Salamander and state endangered Red-cockaded Woodpecker are native inhabitants of these longleaf pine communities and their survival is dependent upon their continuing existence.

Marceaux Island Prairie Natural Area is owned by the USFWS on Sabine NWR in Cameron Parish. This 65-acre coastal prairie is a globally imperiled plant community that once covered approximately 2.5 million acres, but today is limited to small remnant parcels. This coastal prairie occurs on an island (ridge) that is surrounded by marsh. Vegetation is quite diverse and is dominated by grasses and an abundance of forbs. Many plants in coastal prairies are the same as those found in pine savannahs and flatwoods in areas



immediately north of the coastal prairie region. Punctate Cupgrass (*Eriochloa punctata*), a state rare plant is reported in the vicinity of Marceaux Island Prairie. Further field work is required to verify its presence on the prairie. Prescribed fire is a critically important management tool needed to reduce the encroachment of woody species. Terry Delaine, Sabine NWR manager, reported that Marceaux Island Prairie sustained no damage from Hurricane Rita in September 2005.

Saint Barbara's Wetlands Natural Area is owned by Don Ristroph in Iberville Parish. This is a 57-acre cypress swamp and bottomland hardwood forest that has old-growth characteristics. Don is pictured below on next page at the base of one of two extremely large baldcypress trees (*Taxodium distichum*) that are

estimated to be greater than 500 years old, along with other very large hardwoods that occur on the site. Baldcypress swamps and bottomland hardwood forests improve the quality of water that flows through them and they also act in flood regulation. Many aquatic food webs depend on the input of leaf litter of other organic debris that the wetland forest provides. Aquatic fauna like crawfish, aquatic insect larvae, reptiles, and amphibians are abundant.



Below are two of Louisiana's plant communities that commonly occur together in nature, Batture and Sandbars. These descriptions were taken directly from The Louisiana Wildlife Action Plan, www.wlf.louisiana.gov.

B A T T U R E

Rarity Rank: S4S5/G4G5 (Apparently secure or secure plant community globally and in Louisiana).

Synonyms: Riverfront Pioneer, Cottonwood-Willow, Black Willow, and Cottonwood plant community.

Ecological Systems:

- Mississippi River Riparian Forest
- Lower Mississippi River Bottomland and Floodplain Forest
- East Gulf Coastal Plain Large River Floodplain Forest
- Red River Large Floodplain Forest
- West Gulf Coastal Plain Large River Floodplain Forest



General Description: The batture community develops on the slope between the natural levee crest and major streams/ivers. It is a pioneer community, which is first to appear on newly formed sand bars and river margins. The area receives sands and silts with each flood. The soils are semi-permanently inundated or saturated. Soil inundation or saturation by surface water or groundwater occurs periodically for a major portion of the growing season. Such conditions typically prevail during spring and summer months with a frequency ranging from 51 to 100 years per 100 years. The total duration of time for the seasonal event(s) normally exceeds 25 percent of the growing season.

Salix nigra (black willow) comprises a majority of the stocking, and *Populus deltoides* (cottonwood) is the primary associate. Secondary species may be, depending chiefly on successional stage, *Betula nigra* (riverbirch), *Fraxinus pennsylvanica* (green ash), *Platanus occidentalis* (American sycamore), *Carya illinoensis* (pecan), *Celtis laevigata* (hackberry), *Acer rubrum* (red maple), *Forestiera acuminata* (swamp privet), *Planera aquatica* (water elm), *Ulmus americana* (American elm), *Taxodium distichum* (baldcypress), *Acer negundo* (box elder) and *Morus rubra* (red mulberry). *Salix exigua* (sandbar willow) may be common in certain sites. Batture is a community undergoing relatively rapid succession. Black willow is a temporary, short-lived pioneer species of very rapid growth. Cottonwood will outgrow willow and become dominant except where frequent and extended growing-season flooding covers the trees and limits its growth. As sediments build up in the community and succession progresses, willow and cottonwood become less dominant and secondary associates gain increasing importance in the

community. The community often succeeds into Hackberry-American Elm-Green Ash or Sycamore-Sweetgum-American Elm Bottomland Forest.

The successional sequence is a function of river meander movement rates and point bar formation. Rivers with swift meander movements over unconsolidated sands produce tapered slopes on point bars, which are first colonized by the Batture community.

Current Extent and Status: Batture occurs primarily along the Mississippi River but also along the Atchafalaya, Red, and perhaps other smaller rivers. It is apparently a secure and viable habitat in Louisiana. The acreage and number of intact sites is unknown.



BATTURE SPECIES OF CONSERVATION CONCERN (20)		
BIRDS	Northern Parula	REPTILES
Yellow-crowned Night-Heron	Prothonotary Warbler	Ringed Map Turtle
Wood Stork	Swainson's Warbler	Ouachita Map Turtle
Swallow-tailed Kite	Kentucky Warbler	Sabine Map Turtle
Bald Eagle	Hooded Warbler	Pascagoula Map Turtle
American Woodcock	Orchard Oriole	Turtle
Yellow-billed Cuckoo		Timber Rattlesnake
Wood Thrush	MAMMALS	
Yellow-throated Vireo	Long-tailed Weasel	



Priority Species Research and Survey Needs:

Swallow-tailed Kite: Continue with nesting surveys and monitoring of kites on public and private lands to fill data gaps in distribution and abundance for inclusion in LNHP database and Audubon nationwide database.

Songbirds: Continue to support research on silviculture/land management practices and their effects on all songbird species.

Long-tailed Weasel: Considered vulnerable in Louisiana. Intensive surveys needed to update occurrence records and abundance for inclusion in LNHP database. Document the habitat relationships of the long-tailed weasel and how dependent this species is upon batture habitats, relative to other habitat types.



Species Conservation Strategies:

1. Identify Important Bird Areas (IBAs) or potential IBAs and partner with Baton Rouge Audubon Society (BRAS), OAS, and the NAS to implement conservation recommendations from SWG project T27 upon completion.
2. Swallow-tailed Kite: Implement conservation and management recommendations of SWG project T9 (Coulson 2004). Picture by Sandy Mossberg.
3. Bald Eagle: Continue with long-term monitoring of active bald eagle nests, successful breeding pairs, and fledged eagles.
4. Work with landowners to initiate or continue the implementation of PIF bird conservation plans, conservation plans developed for amphibians and reptiles, and USFWS endangered and threatened species recovery plans over the next 10 years.

Threats Affecting Habitat:

The following table illustrates the threats identified for this habitat type and the sources of these threats. This represents all threats and sources of threats identified across all ecoregions of the state where this habitat occurs.

Source of Threat	Threat					
	Altered Composition / Structure	Habitat Destruction or Conversion	Habitat Fragmentation	Herbivory	Modification of Water Levels; Changes in Natural Flow Patterns	Toxins/Contaminants
Borrow pits		XXX	XXX			
Commercial/industrial development		XXX	XXX			
Construction of ditches, drainage or diversion systems		XXX	XXX			
Industrial discharge						XXX
Invasive/alien species	XXX					
Management of/for certain species	XXX			XXX		
Mining practices		XXX	XXX			
Operation of drainage or diversion systems	XXX				XXX	XXX

Habitat Conservation Strategies:

1. Work with city planning commissions and local conservation groups to promote development of batture reserves to retain natural habitats.
2. Work with LDEQ, the Environmental Protection Agency (EPA), and other federal and state agencies to fill data gaps concerning ecological system processes and water quality/discharge impacts on this habitat.
3. Work with COE and local levee boards to maintain the natural ecology of batture areas and to educate these organizations on the productivity of this habitat in meeting the needs of resident and migratory wildlife species.

References:

- COULSON, J. O. 2004. Identifying swallow-tailed kite activity centers: determining use of the state of Louisiana managed lands. Final report. Report to Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA.
- LNHP. 1986-2004. The natural communities of Louisiana. Louisiana Natural Heritage Program, Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA.

S A N D B A R S

Rarity Rank: S4S5/G4 (Apparently secure or secure plant community globally and in Louisiana).

Synonyms: River Sandbar plant community

Ecological Systems: None

General Description: A sand/gravel deposit in or adjacent to permanently flowing freshwater contained within a natural channel. They are formed from coarse to fine-drained alluvial deposits. The community structure is dependent on the mix and stability of substrate, severity and



depth of flooding, and permanent nature of the particular site. The hydrologic regime ranges from intermittently exposed to intermittently flooded. If present, vegetation is dominated by sparse to dense growth of shrubby or herbaceous plants. *Cephalanthus occidentalis* (buttonbush), and *Sambucus canadensis* (elderberry) are common shrubs, and *Salix nigra* (willow) and *Populus deltoides* (cottonwood)

are common tree species (Jones 2004). Herbs include *Scirpus* spp. (bulrush), *Carex* spp. (sedges), and *Juncus* spp. (rushes) (LNHP 1986-2004). The community is successional in nature but generally remains unforested because of repeated flood disturbance. Also due to the early successional nature of sandbars they can be invaded by exotic plant species (NatureServe 2005). These areas are critical nesting areas for the federally-endangered interior least tern (*Sterna antillarum athalassos*; adult and eggs in nest pictured above).



Current Extent and Status: Sandbar habitat within the Mississippi River has shown a general decline over the past 50 years. The U.S. Army Corps of Engineers reported a 33 % decrease in sandbar habitat in the lower Mississippi River between Memphis, Tennessee and Baton Rouge, Louisiana from 1948 to 1994 (U.S. Fish and Wildlife Service 2005). Major threats exist from channelization, water diversions, frequent and prolonged fluctuations in river water levels, changes in vegetation, and disturbance from recreational use. More research on these areas, particularly in relation to nesting tern colonies, is warranted.

SANDBARS SPECIES OF CONSERVATION CONCERN (14)		
BIRDS	Common Tern	Ringed Map Turtle
Piping Plover	Forster's Tern	Ouachita Map Turtle
American Oystercatcher	Interior Least Tern	Sabine Map Turtle
Dunlin		Pascagoula Map Turtle
Gull-billed Tern	REPTILES	Stripe-necked Musk Turtle
Caspian Tern	Alligator Snapping Turtle	

Priority Species Research and Survey Needs:

Terns: Continue to support nesting surveys and initiate research that focuses on factors (such as predation, human disturbance, etc.) effecting overall population densities.

Species Conservation Strategies:

1. Interior Least Tern:

- Implement conservation recommendations of USFWS recovery plan (USFWS 1990b).
- Work with COE to regulate water levels during breeding season.
- Determine feasibility of using abandoned barges as artificial nesting habitat (Hervey 2001).
- Provide funding to support long term efforts to locate and monitor nest colonies.

2. Map Turtles: Sandbars and beaches provide primary nesting sites, and submerged portions are used for foraging. Eliminate off-road vehicles from sandbars and beaches during nesting periods. *Graptemys oculifera* – Ringed Map Turtle (state and federally threatened) shown at right.



Threats Affecting Habitat:

The table at the right illustrates the threats identified for this habitat type and the sources of these threats. This represents all threats and sources of threats identified across all ecoregions of the state where this habitat occurs.

Habitat Conservation Strategies:

1. Determine ownership/management authority for sandbars in the Red and Mississippi rivers.
2. Support vegetation control for sandbars and research on this habitat.
3. Work with COE to develop Memorandum Of Understanding (MOU) regarding sandbar management.
4. Work with the appropriate agencies to develop limits on recreational vehicle use of this habitat.

References:

- HERVEY, H. 2001. Nesting success of least terns on the Red River of Louisiana. *The Journal of Louisiana Ornithology* 5(1):1-21.
- JONES, K. H. 2004. Population survey of the interior least tern on the Mississippi River from Cape Girardeau, Missouri to Baton Rouge, Louisiana. Report to U.S. Army Corps of Engineers, Memphis District.
- LNHP. 1986-2004. The natural communities of Louisiana. Louisiana Natural Heritage Program, Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA.
- NATURESERVE. 2005. NatureServe Explorer: An online encyclopedia of life [web application]. Version 4.2. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: June 27, 2005).

Source of Threat	Threat	
	Habitat Disturbance	Modification of Water Levels; Changes in Natural Flow Patterns
Channelization of rivers or streams		XXX
Levee or dike construction		XXX
Operation of drainage or diversion systems		XXX
Recreational use/vehicles	XXX	
Shoreline stabilization		XXX

Answer to name of on first page.

Monotropa uniflora Indian Pipe

Family - Ericaceae

White plant color because it doesn't contain chlorophyll so it cannot obtain energy from the sun. It is a native perennial saprophytic forb that hosts fungi that feed off of surrounding trees. Indian Pipe flowers from early summer to early autumn and grows in shady forests. *Monotropa* from Latin means "once-turned", reference to the flowers that face the ground early in life and turn straight upward once they begin producing seeds. The root has been used as a sedative, various nervous conditions, and externally for inflamed eyes, bunions, and warts. Photo taken by Chris Reid in Livingston Swamp.

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