

14. Cypress-Tupelo-Blackgum Swamp

Rarity Rank: S4/G3G5

Synonyms: Freshwater Swamp, Brake, Swamp Forest

Ecological Systems:

CES203.490 Lower Mississippi River Bottomland Depression

CES203.065 Red River Large Floodplain Forest

CES203.384 Southern Coastal Plain Nonriverine Basin Swamp

CES203.459 West Gulf Coastal Plain Near Coast Large River Swamp

General Description:

(Note: Baldcypress Swamp (S4), Baldcypress-Tupelo Swamp (S4), Tupelo-Blackgum Swamp (S4), Pondcypress/Blackgum Swamp (S1), Scrub/Shrub Swamp (S4S5), and Shrub Swamp (S4S5) are described as distinct communities in the LNHP Natural Communities of Louisiana. They are considered together here due to their floristic similarity and/or similarity in management needs.)

Cypress-Tupelo-Blackgum Swamps throughout the natural range, are forested, alluvial swamps growing on intermittently exposed soils most commonly along rivers and streams but also occurring in backswamp depressions and swales. The soils are inundated or saturated by surface water or ground water on a nearly permanent basis throughout the growing season except during periods of extreme drought. However, even deepwater swamps, with almost continuous flooding, experience seasonal fluctuations in water levels (LNHP 1986-2004). Baldcypress swamps generally occur on mucks and clays, and also silts and sands with underlying clay layers (Alfisols, Entisols, Histosols, and Inceptisols) (Conner and Buford 1998).



Cypress-Tupelo-Blackgum swamps have relatively low floristic diversity. *Taxodium distichum* (baldcypress) and *Nyssa aquatica* (tupelo gum) are co-dominants. Common associates are *Nyssa sylvatica* var. *biflora* (swamp blackgum), *Acer rubrum* var. *drummondii* (swamp red maple), *Salix nigra* (black willow), *Fraxinus profunda* (pumpkin ash), *F. pennsylvanica* (green ash), *Planera aquatica* (water elm), *Gleditsia aquatica* (water locust), *Itea virginica* (Virginia willow), and *Cephalanthus occidentalis* (buttonbush). Composition of associate species may vary widely from site to site. Undergrowth is often sparse because of low light intensity and long hydroperiod. Neither

bald cypress nor tupelo gum seeds germinate underwater, nor can young seedlings of these trees survive long submergence. Establishment of young trees can only occur during periods of exceptionally long drought. This probably explains why these species tend to occur in even-aged stands since the environmental conditions favorable for germination and establishment of saplings occur very infrequently.

Those areas dominated by tupelo and blackgum are also alluvial but occur on higher topographic positions than baldcypress dominated swamps. Baldcypress is a common associate, along with *Quercus laurifolia* (laurel oak), *Leucothoe racemosa* (leucothoe), *Cyrilla racemiflora* (swamp cyrilla), and *Cornus foemina* (swamp dogwood). *Taxodium ascendens* (pondcypress), along with swamp blackgum dominate a limited number of swamps making this natural community rare in Louisiana. This type seems to be confined to areas along the lower Pearl River, and adjoining the north shore of Lake Pontchartrain and Lake Maurepas (Smith 1999). Pondcypress/Blackgum swamps appear to occupy the backwater portions of larger swamplands, in places much removed from active stream channels. They are related to and often grade into baldcypress swamps more influenced by river flooding (Smith 1999).

Current Extent and Status:

Cypress-tupelo-blackgum swamps may be found throughout Louisiana, and sizeable areas of swamp still remain, even though the historic extent is considerably reduced. Statewide estimates of swamp loss range from 25 to 50 % of the original presettlement acreage and old-growth examples are very rare (Smith 1993, The Nature Conservancy 2004). The Atchafalaya Basin Floodway contains the greatest remaining contiguous acreage in the United States with an estimated 595,000 acres of collective swamp and bottomland hardwoods, the majority of which is privately owned. Large tracts also occur on some state LDWF WMAs with an estimated total of 97,107 acres, USFWS NWRs such as Cat Island, and properties under the administration of the COE. Some of these large swamp tracts occur in Louisiana's ECGP and are contained within the Bogue Chitto NWR and Pearl River WMA. The lower Tangipahoa River in Tangipahoa Parish, as well as, the Tickfaw and Amite Rivers in Livingston Parish and lands surrounding Lakes Pontchartrain and Maurepas also support large remaining tracts of cypress-tupelo-blackgum swamps (approximately 213,000 acres) (Governor's Science Working Group on Coastal Wetland Forest Conservation and Use 2005). Approximately 50 percent of these swamps fall on state WMAs (Joyce, Maurepas, and Manchac), and the other half are primarily privately owned. The Barataria Basin with 242,000 acres and Lake Verret area with 101,000 acres



contain extensive freshwater swamps, again in private ownership. Louisiana State Parks including Chicot, Lake Fausse Pointe, Tickfaw, and Bogue Chitto provide some small refuge for Louisiana’s swamps. A total of 4,400 acres of combined swamps and bottomland hardwood forests are registered with the Louisiana Natural Areas Registry Program. And finally, there are a few scattered local community parks containing swamps throughout the state such as Baton Rouge’s small 65 acre Bluebonnet swamp operated by Recreation and Park Commission for the Parish of East Baton Rouge.

All of Louisiana’s swamps are threatened by land loss and encroaching interests, however, the swamps of the lower Mississippi River Alluvial Plain in south central and southeastern Louisiana face additional peril from subsidence, altered hydrology, coastal erosion, and saltwater intrusion. All of these factors combine to promote rapid loss and prevent adequate regeneration of these swamps.

CYPRESS – TUPELO - BLACKGUM SWAMP SPECIES OF CONSERVATION CONCERN (18)		
AMPHIBIANS Southern Dusky Salamander	Yellow-throated Vireo Northern Parula Prothonotary Warbler Swainson's Warbler	MAMMALS Southeastern Shrew Southeastern Myotis Louisiana Black Bear Long-tailed Weasel
BIRDS Yellow-crowned Night-Heron Wood Stork Swallow-tailed Kite Bald Eagle Yellow-billed Cuckoo	Kentucky Warbler Hooded Warbler BUTTERFLIES 'Seminole' Texan Crescent	REPTILES Alligator Snapping Turtle

Priority Species Research and Survey Needs:

Southern Dusky Salamander: Apparently extirpated from numerous swamp sites throughout the State. Causes for its disappearance are unknown. Solicit assistance from interested parties to search for dusky salamanders.

Swallow-tailed Kite: Continue inventory and monitor Swallow-tailed Kites on public and private lands to fill data gaps in the distribution and abundance for inclusion in the LNHP database and Audubon nationwide database.

'Seminole' Texan Crescent: Conduct surveys to determine current distribution and abundance for inclusion in the LNHP database.

Songbirds: Continue to conduct research needed to assess silviculture/land management practices and the effects on all songbird species.

Waterbirds: Continue to conduct rookery surveys to update the LNHP database.

Species Conservation Strategies:

1. Swallow-tailed Kite: Implement conservation and management recommendations of SWG project T9 (Coulson 2004).
2. Bald Eagle: Continue with long-term monitoring of active bald eagle nests, successful breeding pairs, and fledged eagles.
3. Louisiana Black Bear: Partner with the BBCC, USFWS and continue to support the implementation of recovery efforts for this species.
4. Work with landowners to initiate or continue the implementation of PIF bird conservation plans, conservation plans developed for amphibians and reptiles, and USFWS threatened and endangered 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 Disturbance	Habitat Fragmentation	Modification of Water Levels; Changes in Natural Flow Patterns	Sedimentation
Channelization of rivers or streams					XXX	XXX
Construction of ditches, drainage or diversion systems	XXX				XXX	XXX
Development/ maintenance of pipelines, roads or utilities		XXX	XXX	XXX	XXX	XXX
Incompatible forestry practices	XXX					XXX
Invasive/alien species	XXX					
Operation of dams or reservoirs	XXX				XXX	XXX

Habitat Conservation Strategies:

1. Work with landowners/land managers to promote conservation of habitat sites that may not regenerate naturally after logging due to changes in hydrology, herbivory, and other factors. Promote use of “condition classes” as defined by the Governor’s Science Working Group on Coastal Wetland Forest Conservation and Use to identify these target swamp habitat areas in need of conservation attention.
2. Work with and support efforts of LCA, CWPPRA, and Governor’s Commission on Coastal Wetland Forest Conservation and Use regarding coastal restoration

- (specifically swamp habitat restoration, regeneration, and sustainability) and to establish and maintain long-term monitoring sites within coastal wetland forests.
3. Promote use of appropriate silvicultural techniques to restore/manage swamps for wildlife (include importance of tree species diversity, den trees for birds and mammals, etc.).
 4. Work with Cypress Legacy Program and other environmental groups to identify old-growth areas where conservation actions can be implemented.
 5. Support research to determine the importance of Spanish moss to species of conservation concern and determine if moss is declining in Louisiana.
 6. Work with adjoining states to address water management issues that affect cypress-tupelo-blackgum swamps in Louisiana.
 7. Work with COE, DU and other groups to enhance swamp hydrologic conditions to control invasives on Caddo Lake and Catahoula Lake.
 8. Work with COE to influence water levels in the Atchafalaya Basin to benefit this habitat type.
 9. Continue to monitor nuisance species (nutria, beaver, etc.) and control them as needed.
 10. Partner with state and federal agencies and other interested groups to conduct surveys and develop GIS data on the extent and condition of swamps throughout Louisiana.

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