

30. Slash Pine-Pondcypress/Hardwood Forest

Rarity Rank: S2S3/G3?

Synonyms: Slash Pine-Hardwood

Ecological Systems: CES203.375 East Gulf Coastal Plain Near-Coast Pine Flatwoods

General Description:

This natural wetland forest type is restricted to the wet acidic flatwoods on the far eastern Pleistocene prairie terraces of Louisiana's EGCP. It is found in a mosaic with longleaf pine flatwoods and savannahs, and bayhead swamps, existing in a hydrologic/topographic transitional zone between the higher, "drier" longleaf pine flatwood savannahs to the lower, wetter bayhead swamps. It may also be present on broad flats that were historically partially protected from frequent surface fires by surrounding bayheads or seeps. Soils of the slash pine/pondcypress forests are hydric, strongly acidic and nutrient poor silt loams and fine sandy loams. Two principal soils are Myatt fine sandy loam and Guyton silt loam. Surface soils are typically saturated for much of the year and shallow water may be present in the late fall/winter/early spring and after rains during the growing season.



The community seems to vary considerably in structure and somewhat in composition from one place to another, apparently as a consequence of minor variations in topography, soil conditions, and hydrologic and fire regimes (LNHP 1986-2004, Teague et al. 1995). The typically closed canopy is dominated by *Pinus elliottii* (slash pine) and *Taxodium ascendens* (pondcypress), with *Nyssa biflora* (swamp black gum) and *Magnolia virginiana* (sweetbay) as primary associates. The understory is often dense, with *Cyrilla racemiflora* (swamp cyrilla), *Ilex coriacea* (sweet gallberry), *Lyonia lucida* (fetterbush), *I. glabra* (littleleaf gallberry), *Itea virginica* (Virginia willow), *Morella heterophylla* (bigleaf waxmyrtle), and *M. cerifera* (waxmyrtle) characteristic species. *Sphagnum* spp. (sphagnum moss), *Pteridophytes* (ferns), and *Smilax* spp. (greenbriers) are common. There is minimal herbaceous undergrowth, but *Arundinaria gigantea* (switch cane) can form dense thickets, and usually there are many acid loving wetland shrubs. Scattered, depauperate specimens of herbs, more typical of sunny wet pine savannahs (e.g., *Sarracenia alata*, yellow pitcher-plant), may be observed. Pondcypress may dominate minor depressions (LNHP 1986-2004, Penfound and Watkins 1937).

Slash pine-pondcypress/hardwood forest evolved with recurrent lightning-season ground fires and regular light surface fire appears critical in maintaining this community. Both slash pine and pondcypress are fire-adapted species and can survive fires once they attain a certain size; however, neither is as fire resistant as longleaf pine. The natural fire

return interval of this community is difficult to estimate but is tentatively believed to have varied on the average between 5 and 20 years, a frequency that would periodically allow for the regeneration of slash pine and pondcypress, and associated hardwoods during the longer fire return intervals. Such a frequency would as well preclude complete dominance of the site by hardwoods (Smith 1996).

Current Extent and Status:

In the EGCP of Louisiana, the slash pine-pondcypress/hardwood community is primarily associated with pine flatwoods including eastern longleaf pine savannah and occasional bogs. Presettlement extent of this habitat is estimated at 50,000 to 100,000 acres, with only 10 to 25% currently remaining (Smith 1993, Smith 1999). The Nature Conservancy’s Abita Creek and Talisheek Preserves in St. Tammany Parish contain the only protected examples of this community type. These preserves encompass approximately 3,768 total acres which also include longleaf pine savannahs and flatwoods, seepage bogs, bayhead swamps and riparian forests. There are some examples of the slash pine-pondcypress/hardwood community on commercial timberlands and sites owned by commercial developers, however the extent of these acres is unknown.



SLASH PINE – PONDCYPRESS – HARDWOOD FOREST SPECIES OF CONSERVATION CONCERN (22)		
AMPHIBIANS	BIRDS	Hooded Warbler
Southern Dusky Salamander	Yellow-crowned Night-Heron	Orchard Oriole
Gulf Coast Mud Salamander	Swallow-tailed Kite	
Oak Toad	American Woodcock	MAMMALS
Barking Treefrog	Yellow-billed Cuckoo	Southeastern Shrew
Ornate Chorus Frog	Wood Thrush	Southeastern Myotis
Eastern Spadefoot	Yellow-throated Vireo	Long-tailed Weasel
Dusky Gopher Frog	Northern Parula	
	Prothonotary Warbler	REPTILES
	Kentucky Warbler	Pine Woods Littersnake

Priority Species Research and Survey Needs:

Southern Dusky Salamander, Gulf Coast Mud Salamander: Both species are exhibiting drastic declines in relatively pristine areas throughout their range. However, the status of neither species is being addressed by the Federal government. Initiate status surveys at reference sites to determine the extent of declines in protected sites (e.g., Talisheek Bay).

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

Yellow-billed Cuckoo: Continue to monitor populations throughout the state to establish abundance patterns.

Songbirds:

- Continue to support research on silviculture/land management practices and their effects on all songbird species.
- Develop longterm monitoring projects that focus on abundances and reproductive success (with emphasis on species of conservation concern) in this habitat type through the establishment of MAPS stations and BBS routes.

Southeastern Shrew: Considered imperiled in Louisiana. Together with Arkansas and Missouri, Louisiana represents the western edge of its range. Intensive surveys are needed to update occurrence records and abundance for inclusion in the LNHP database.

Species Conservation Strategies:

1. Swallow-tailed Kite: Implement conservation and management recommendations of SWG project T9 (Coulson 2004).
2. 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.
3. Establish monitoring systems and protocols which focus on small mammal population abundances and trends.

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
Channelization of rivers or streams					XXX
Commercial/industrial development		XXX			
Construction of ditches, drainage or diversion systems	XXX		XXX		XXX
Conversion to agriculture or other forest types		XXX		XXX	
Development/maintenance of pipelines, roads or utilities		XXX	XXX	XXX	
Fire suppression	XXX				
Incompatible forestry practices	XXX		XXX		XXX
Invasive/alien species	XXX				
Residential development		XXX	XXX	XXX	

Habitat Conservation Strategies:

1. Conduct surveys to determine the extent and condition of this habitat type with a focus on identifying the surrounding landscape context (i.e., residential developments, etc.) that might be affected by prescribed burning.
2. Work with appropriate planning commissions to provide them with LNHP data that illustrates locations of this habitat type.
3. Develop BMPs for ephemeral ponds.
4. Develop educational information regarding the importance of ephemeral ponds for species of concern and make this information available to landowners/land managers through technical pamphlets and the LDWF website.
5. Educate landowners, adjacent residents, developers, and the general public about the crucial role of prescribed burning in the management of slash pine/hardwood systems (multi-agency, multi-group effort).
6. Continue to encourage landowners to implement BMPs and adopt SFI standards in the management of this habitat type.
7. Provide additional cost share funds for landowners to drastically reduce or eliminate costs associated with conducting prescribed burns their property.
8. Promote utilization of federal cost share programs (NRCS) to address invasive species problems.

9. Work with the legislature to provide incentives (tax breaks, etc.) to landowners to retain the natural state of areas where this habitat occurs.

References:

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