

## 25. Salt Dome Hardwood Forest

**Rarity Rank:** S1/G1

**Synonyms:** None

**Ecological Systems:** CES203.466 West Gulf Coastal Plain Chenier and Upper Texas Coastal Fringe Forest and Woodland

### **General Description:**

This is an upland forest type on loess-derived silt loams of salt domes in coastal Louisiana. Area of occurrence is very restricted. The canopy is dominated by *Quercus virginiana* (live oak), *Magnolia grandiflora* (Southern magnolia), *Q. pagoda* (cherrybark oak), *Ulmus americana* (American elm), *Celtis laevigata* (hackberry), *Liquidambar styraciflua* (sweetgum), *Tilia americana* var. *caroliniana* (basswood), *Q. nigra* (water oak), and *Carya glabra* (pignut hickory). The epiphyte *Pleopeltis polypodioides* (resurrection fern) is quite common in canopy trees. The patchy to dense understory consists of *Prunus caroliniana* (cherry laurel), *Ilex vomitoria* (yaupon), *Sabal minor* (dwarf palmetto), *Callicarpa americana* (french mulberry), *Aesculus pavia* (red buckeye), and *Smilax rotundifolia* (common greenbriar). The herb layer is typically sparse and includes *Oplismenus hirtellus* ssp. *setarius* (bristle basketgrass), *Sanicula canadensis* (black snakeroot), *Malvaviscus arboreus* var. *drummondii* (wax mallow), and *Elephantopus carolinianus* (Carolina elephant's foot). Common woody vines include *Parthenocissus quinquefolia* (Virginia creeper), *Toxicodendron radicans* (poison ivy), *Vitis rotundifolia* (muscadine grape), *Rubus* spp. (blackberry), *Ampelopsis arborea* (peppervine), and *Smilax bona-nox* (saw greenbriar).



### **Current Extent and Status:**

The five salt domes, or “islands” of Louisiana are Avery, Belle Isle, Cote Blanche, Jefferson, and Weeks. Currently, Cote Blanche and Weeks support high quality forest. The condition of Belle Isle is unknown but it is suspected that there is some good habitat there. There is a 350 acre tract on Jefferson Island that is part of LDWF’s Louisiana Natural Areas Registry Program (Live Oak Garden Natural Area). However the current condition of the forest on this site is unknown. Avery Island, while quite large, supports very



little natural forest as much has been cleared and the remainder is disturbed, overrun with exotics, and affected by severe erosion. An assessment of size and quality of remaining salt dome hardwood forest is warranted.

SALT DOME HARDWOOD FOREST SPECIES OF CONSERVATION CONCERN (13)		
<b>BIRDS</b> Bald Eagle American Woodcock Yellow-billed Cuckoo Northern Parula Prothonotary Warbler	Painted Bunting Orchard Oriole  <b>BUTTERFLIES</b> Celia's Roadside Skipper Wild Indigo Duskywing	<b>MAMMALS</b> Southeastern Myotis Louisiana Black Bear Eastern Spotted Skunk  <b>REPTILES</b> Timber Rattlesnake

***Priority Species Research and Survey Needs:***

Neotropical Migrant Birds: Institute long-term surveys to monitor neotropical bird use of this habitat during migration.

Butterflies: Conduct surveys to determine the current distribution and abundance of all butterfly species, especially species of conservation concern, for inclusion in the LNHP database.

Determine the microhabitat preferences and requirements of species occurring in salt dome hardwood forests to understand how these species are utilizing the habitat to develop management recommendations.

***Species Conservation Strategies:***

1. Louisiana Black Bear: Partner with the BBCC, USFWS and continue to support the implementation of recovery efforts for this species.
2. Timber Rattlesnake: Naturally low-occurring population levels and persecution makes their persistence on isolated domes untenable. Prohibit killing or removal of timber rattlesnakes from salt domes.
3. Songbirds: Develop a monitoring program (i.e., MAPS) to assess relative abundances of songbird species in this habitat.
4. Promote the benefits of bat colonies and roost sites and develop partnerships with landowners to encourage protection of valuable sites.

***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	Toxins/ Contaminants
Commercial/industrial development		XXX			
Development/maintenance of pipelines, roads or utilities		XXX	XXX	XXX	
Invasive/alien species	XXX				
Mining practices		XXX			XXX

***Habitat Conservation Strategies:***

1. Partner with state and federal agencies, NGOs, private landowners, etc. to promote conservation and restoration of salt dome hardwood forests.
2. Provide educational information on this habitat type and its importance to species of conservation concern to landowners/land managers through technical pamphlets and the LDWF website.
3. Support NRCS and DNR efforts to stabilize shorelines and restore this habitat type.
4. Support surveys to estimate the presence of invasives plant and animal species in remaining habitat.
5. Develop strategies to address damage from feral hogs within this habitat type.

***References:***

LNHP. 1986-2004. The natural communities of Louisiana. Louisiana Natural Heritage Program, Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA.

Reese, W.D., and J. W. Thieret. 1966. Botanical study of the Five Islands of Louisiana . Castanea 31: 251-277.