Hardwood Flatwoods

_Rarity Rank_: S2S3/G2G3
_Synonyms_: Willow Oak Flats, Pin Oak Flats

_Ecological Systems:_
CES203.548 West Gulf Coastal Plain
Nonriverine Wet Hardwood Flatwoods
CES203.193 Lower Mississippi River Flatwoods
CES203.557 East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwood
CES203.278 West Gulf Coastal Plain Pine-Hardwood Flatwoods

_General Description:_
(Nota: Wet Hardwood Flatwoods and Mesic Hardwood Flatwoods are described as distinct communities in the Natural Communities of Louisiana. They are considered together here due to their similarity.)
- Wet hardwood flatwoods occur on hydric soils on poorly drained flats and depressions
- Wet flatwoods are isolated wetlands not usually affected by overbank flooding of a drainage
- Mesic hardwood flatwoods occur on non-hydric, better drained soils on higher topographic positions than wet hardwood flatwoods
- Wet hardwood flatwoods occur on Pleistocene Red River Channels in northwest Louisiana and on Pleistocene Valley Train Sediments on Macon Ridge in the northeast part of the state.
- Soils for both types are poorly drained silt loams to clays.
- On Macon Ridge principal soil series that support this community are Calhoun and Gilbert silt loams; occurrences in the Red River Valley are found on the Acadia series

_Plant Community Associates of Wet Hardwood Flatwoods_

_Common overstory tree species include:_
- _Quercus phellos_ (willow oak),
- _Carya ovata_ (shagbark hickory),
- _Ulmus crassifolia_ (cedar elm),
- _Q. lyrata_ (overcup oak),
- _Fraxinus pennsylvanica_ (green ash),
- _Ulmus americana_ (American elm),
- _Celtis laevigata_ (hackberry),
- _Q. texana_ (Nuttall oak)

_Common midstory & understory shrub species include:_
- _Ulmus alata_ (winged elm),
- _Sabal minor_ (palmetto),
- _Styrax americana_ (snowbell),
- _Planera aquatica_ (planertree)
- _U. crassifolia_ (cedar elm),
- _Ilex decidua_ (deciduous holly),
- _Forestiera acuminata_ (swamp privet)

_Common herbaceous species include:_
- _Cardamine bulbosa_ (bulbous bitter cress),
- _Clematis crispa_ (curl-flower),
- _Hymenocallis liriosome_ (spider lily),
- _Cynosciadium digitatum_ (finger dog shade),
- _Amsonia tabernaemontana_ (bluestar),
- _Ranunculus pusillus_ (low spearwort)

_Plant Community Associates of Mesic Hardwood Flatwoods_

_Common overstory tree species include:_
- _Carya alba_ (mockernut hickory),
- _Nyssa sylvatica_ (blackgum),
Common overstory tree species of mesic flatwoods continued:

- Quercus alba (white oak),
- Q. nigra (water oak),
- Liquidambar styraciflua (sweetgum),
- Q. pagoda (cherrybark oak),
- Q. michauxii (cow oak),
- Q. shumardii (Shumard oak),

Common midstory & understory species include:

- Cornus florida (flowering dogwood),
- Aralia spinosa (Devil’s walking stick),
- Acer rubrum (red maple),
- Aesculus pavia (red buckeye),
- Ostrya virginiana (eastern hop hornbeam),
- Ulmus alata (winged elm),
- Vaccinium spp. (huckleberries),
- Euonymus americana (strawberry bush),

Common herbaceous species include:

- Chasmanthium laxum var. sessiliflorum (woods oats),
- Dichanthelium spp. (panic grass),
- Podophyllum peltatum (mayapple),
- Elephantopus spp. (elephant’s foot),
- Sanicula canadensis (sanicle),
- Carex cherokeensis (Cherokee caric sedge),
- Dioscorea villosa (wild yam),
- Geum canadense (white avens),
- Agrimonia rostellata (woodland agrimony),
- Clematis virginiana (virgin’s bower),

Federally-listed plant & animal species:

None

Range:

Primarily on the Macon Ridge of northeast Louisiana within the Mississippi River Alluvial Plain ecoregion, with a few occurrences in the Upper West Gulf Coastal Plain and historical occurrence in East Baton Rouge Parish and possibly adjacent areas.

Threats & Management Considerations:

Hardwood flatwoods represent a huge data gap. Research is needed to determine more accurately its former extent in Louisiana and to identify and characterize remnants of this habitat type. Land use changes have brought about habitat destruction. Conversion to agriculture or pine plantations represent the greatest loss, while construction of roads, pipelines and utilities, invasive and exotic species, physical damage from timber harvesting, and contamination by chemicals (herbicides, fertilizers) all threaten remaining flatwoods.

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy flatwoods. Such management strategies should include:

- Preventing conversion of existing natural forests to other land uses
- Maintain natural species composition by following appropriate hardwood management techniques
- No harvesting during wet periods to prevent soil damage
- Surveying for and removal of any invasive plant species (exotics or woody) with use of spot herbicides or mechanical means
- No ditching, bedding, plowed fire lines or other soil disturbance within flatwoods or adjacent areas that may alter natural water flow patterns

For more information, please visit our web pages at

www.wlf.la.gov/wildlife/louisiana-natural-heritage-program or call 225-765-2821