Southern Mesophytic Forest

Rarity Rank: S2S3/G1G2
Synonyms: Relict Northern Hardwood Forest, Bluffland Forest, Beech-Magnolia Forest, Upland Hardwood Forest, Mixed Mesophytic Forest
Ecological Systems:
CES203.556 East Gulf Coastal Plain Southern Loess Bluff Forest
CES203.476 East Gulf Coastal Plain Southern Mesic Slope Forest

General Description:

- Range in Louisiana restricted to the northwestern Florida Parishes, primarily in the region known as the Tunica Hills
- Developed on deep, fertile, circum-neutral to slightly alkaline loessial deposits
- Highly erodible loess soils that have worn over thousands of years to form a characteristic well-dissected landscape of high, narrow ridges, steep slopes, and deep ravines
- Landscape is interlaced with streams of intermittent to continuous flow
- Topographic characteristics of the region create a relatively cool, moist micro-climate on the slopes and in the ravines
- Sustained localized populations of some characteristic Appalachian species, principally herbaceous, thought to have originally migrated south ahead of advancing glaciers in the past ice-age

Plant Community Associates

Common overstory tree species include:

Fagus grandifolia (beech),
Q. alba (white oak),
Q. michauxii (cow oak),
Liriodendron tulipifera (yellow poplar),
M. acuminata (cucumber magnolia),
Ulmus americana (American elm),
Tillia caroliniana (Carolina basswood),
Acer barbatum (Florida sugar maple),
C. cordiformis (bitternut hickory),
Celtis laevigata (hackberry),
Q. shumardii (Shumard oak),
Q. muhlenbergii (chinkapin oak),
Q. nigra (water oak),
Magnolia grandiflora (southern magnolia),
M. pyramidata (pyramid magnolia),
U. rubra (slippery elm),
Morus rubra (red mulberry),
Carya glabra (pignut hickory),
Fraxinus americana (white ash),
Platanus occidentalis (sycamore)

Characteristic midstory & understory species include:

Lindera benzoin (spice bush),
Hydrangea quercifolia (oak-leaf hydrangea),
Euonomys americanum (stawberry bush),
Cercis canadensis (red bud),
Ostrya virginiana (hop-hornbeam),
Asimina triloba (paw-paw),
H. arborescens (mountain hydrangea),
Halesia diptera (silverbell),
Sambucus canadensis (elderberry),
Arundinaria gigantea (giant cane)

Characteristic midstory & understory species continued:

Schisandra glabra (smooth woodbine),
Bignonia capreolata (cross-vine),
Trachelospermum difforme (climbing dogbane)
Vitis spp. (grapes),
Parthenocissus quinquefolia (VA creeper),

Common fern species include:

Adiantum pedatum (northern maidenhair-fern),
Deparia acrostichoides (silver glade-fern, rare),
A. felix-femina (southern lady fern),
Polystichum acrostichoides (christmas fern),
B. biternatum (southern grape-fern),
Phegopteris hexagonoptera (broad beech-fern),
Thelypteris spp. (marsh ferns),
A. pycnocarpon (glade-fern, rare),
Cystopteris protrusa (lowland brittle-fern),
Botrychium virginianum (rattlesnake fern),
Asplenium platyneuron (ebony spleenwort),
also mosses & liverworts are common

Characteristic herbaceous species include:

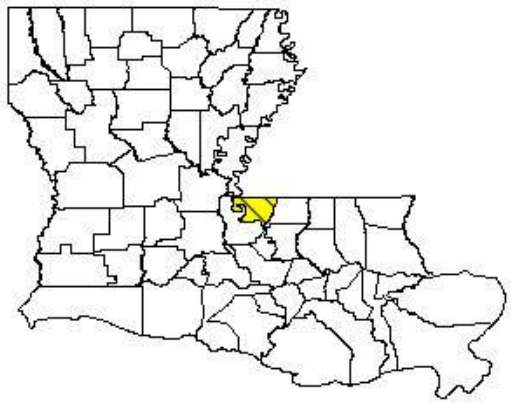
Sanicula spp. (snakeroots),
Laportea canadensis (nettle),
Trillium foetidissimum (foetid wake-robin),
Cynoglossum virginianum (hound's-tounge),
Lithospermum tuberosum (tuberous puccoon),
Pachysandra procumbens (Allegheny-spurge, rare)
Actaea pachypoda (bane-berry, rare),
Podophyllum peltatum (may-apple),
Aristilochia serpentaria (dutchman's-pipe),
Cryptotaenia canadensis (hone-wort),
Lobelia spp. (lobelias),

Federally-listed plant & animal species:

None

Range:

Restricted to the Upper East Gulf Coastal Plain in West Feliciana Parish, Louisiana.



Threats & Management Considerations:

Currently only about 25 % (50,000 to 100,000 acres) of Louisiana's southern mesophytic forests remain intact (Smith 1993). Clearing for agriculture, timber harvesting and development in West Feliciana Parish brought about loss, degradation, and fragmentation of these forests. The southern mesophytic forest type is extremely susceptible to soil damage, particulary erosion stemming from any form of disturbance, such as timber harvest, road building, and off-road vehicle use that exposes bare soil. In such cases, the very steep slopes and loess soil result in frequent landslides. Invasive and exotic species, particularly Chinese parasol tree (*Firmiana simplex*), and residential development currently threaten long-term viability of these forests.

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 southern mesophytic forests. Such management strategies should include:

- Maintain natural species composition by following appropriate hardwood management techniques
- No harvesting on steep slopes and 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
- Prohibiting off-road vehicle use or restricting use to existing trails