

MISSISSIPPI

The usual response to a query about old growth in Mississippi is a statement that Mississippi was cut from one side to the other. The term "old growth" tends to be used for any forest over 120 years old (Jones 1993); and forests may recover so rapidly that what appears today to be a climax forest may have been selectively cut less than fifty years before (Jones 1993, McGinnis 1993).

Most but not all of the land now comprising the National Forests of Mississippi was cut before the federal government purchased it in the 1930s. As of 1990 few stands in the forests were over 80 years old (Sirmon 1990), and many were younger because stands that have matured since the National Forests were created may have already been logged (McGinnis 1993). Nevertheless, "cut from one side to the other" is not quite true.

Delta and DeSoto National Forests contain large exceptions to the general youthfulness of the National Forests, as described below. In addition, eleven stands in the Homochitto Ranger District of the **Homochitto National Forest** are considered to be one hundred or more years old, and two of these may be somewhat similar in character to the original vegetation: a thick stand of Baldcypress some 32 acres in extent that originated in 1892, possibly after a blow down; and a 25-acre stand of mixed pine and hardwoods that originated in 1895 but from which pines were removed (Price 1993). The Holly Springs Ranger District in **Holly Springs National Forest** includes a 5-acre stand of Baldcypress that as far as the Forest Service is aware, has never been cut (Inmon 1993).

Revision of the management plan for the National Forests of Mississippi was initiated in early 2000, but was almost immediately interrupted by the withdrawal of funding. Public scoping will be reinitiated in 2003. The agency expects that a final plan will be published in 2006 or 2007. In March 2000, the Forest Supervisor wrote to us of inventorying and developing management strategies for old growth based on USFS definitions (Siderits 2000). The inventory began in 2000, but was stopped when funding was withdrawn and, as of January 2003, had yet to be restarted (Long 2003).

Along the **Pearl River** on the Mississippi-Louisiana border, in private hands, are Baldcypress dating back to 1546 (Cleaveland 1992 and 1993, Stahle 1996). Another small site is an unlogged hammock with Redbay, Swampbay, and Sweetbay within the 70-acre **Hillside Bog preserve** owned by Crosby Arboretum (Blake 1993).

Pockets of old growth may be found in the state's zone of very thick loess along the Mississippi River. This zone, with loess 15 or more feet deep, is a slender (15-25 miles across) "peninsula" that extends all the way from western Kentucky and Tennessee into the Tunica Hills of central Louisiana. Trees are diverse—oaks, hickories, magnolias, beeches, locusts, Loblolly Pines—with influences from bottomland hardwoods and upland types. The loess is silt-like material that is essentially wind-deposited glacial dust, often accumulated on the downwind side of big rivers. The soil erodes easily to form deep, steep-sided gullies known in Mississippi as "bayous." The steep sides of the gullies as well as the escarpment in the loess area may support pockets of unlogged forest. The

gullies may also support herbaceous plants that are Pleistocene relicts (Conrad 2003, Meier 1997). Laurel Hill Plantation and Clark Creek Natural Area, described below, are in the loess zone. Presumably other old growth pockets remain to be discovered. However, whether or not old growth is present, the fragile loess zone with its rich forests is in need of preservation.

Longleaf Pine areas that are not old growth may represent rare and valuable habitat. In Longleaf Pine ecosystems, the herbaceous layer may support hundreds of species. Thus the Longleaf is easier to restore to a site than is the ground layer; and a site with a good ground layer despite past logging is more valuable from a biological perspective than is a site that has not been logged but that has lost its natural ground layer. An example of the latter is the **Bienville Pines Scenic Area** in Bienville National Forest (Scott County), which, due to lack of fire, has a thick midstory, primarily comprised of hardwoods (Kittrell 1993, 2003). Two examples of the former in Louisiana are The Nature Conservancy's 287-acre **Willie Brown Preserve** (open to visitors by permission only; Hancock County) and portions of lands once owned by the University of Mississippi.

In the nineteenth century the US Navy owned approximately 22,000 acres of land in southern Mississippi. It cut the Longleaf for planks and masts. When steam became ascendant, the Navy donated the land to the University of Mississippi. The donation occurred before the 1920s-1930s when the general area, which was virgin timber, was clearcut. The University selectively logged its land; and, after 50 years of fire suppression, instituted burning every three years (Sorrie and Wieland 1997). As a result of the selective logging, the mature Longleaf on land that belonged to the university is relatively widely spaced, too widely for even-aged management, industry believes; but "probably 'overstocked' with regard to continuous natural regeneration." These stands have very high plant diversity in the groundcover (Brewer 2003).

The Nature Conservancy sponsored a biological review of the University lands in the 90s and recommended the maintenance of seven or eight conservation sites (Wieland 2003). They are mature, second-growth Longleaf Pine flatwoods and Longleaf Pine "claypan" savannas with pitcher plant bogs (Brewer 2003). Notable among these sites are Henley Park and Little Railroad Creek Headwaters. Both have high quality Longleaf with old-growth characteristics. Henley Park, though the site of the management and lodging facilities for university staff, has about 500 acres of mature Longleaf pine flatwoods (Brewer 2003). The 1200-acre Little Railroad Creek Headwaters (Stone County), as described by researchers in 1997, is composed of "undulating uplands dissected by numerous streamheads." Longleaf Pine woodland with a dense graminoid-herbaceous layer and a poorly-developed shrub layer is the dominant vegetation. The Longleaf are 70 or more years old. Land between the Longleaf and the drains is moist to boggy, with Slash Pine and seepage bog associations. In the drains are tupelo, magnolia, and maple, with abundant shrubs. Species diversity in the Headwaters is high, with well over 200 species in the uplands alone. Researchers ranked all three communities in Railroad Creek Headwaters "A" (Sorrie and Wieland 1997, Wieland 2003).

The University sold 20,857 acres of what Robbie Fisher of The Nature Conservancy describes as "good Longleaf Pine habitat" (2003) to DeSoto National Forest in 2000 and 2001. Before the sale, it clearcut 250 acres of Little Railroad Creek Headwaters, but in the process did not greatly disrupt the soil/herb layer except for

skidding marks (Sorrie and Wieland 1997). As of February 2003, USFS had managed the lands received from the University only by prescribed burning. No logging had been done, and the agency was in the process of developing a management plan for the land (Smistik 2003).

J. S. Brewer studied two upland hardwood “old-growth forests” in Oxford (Lafayette County). The larger, a 49-acre site called **Bailey Woods**, with abundant Sweetgum and Southern Red Oak, may possibly be unlogged. The oldest trees that were aged, White Oaks and Post Oaks, were more than 150 years old. The smaller, **Jackson Strip**, is only a narrow strip of woods along a major road. Like Bailey Woods, this site had mature trees in the 1930s. However, Brewer hypothesizes that the area before settlement supported open oak woodlands and savannas that were unlike these two forests (Brewer 2001).

Grand Bay Savanna, southeastern Mississippi (Jackson County) and southwestern Alabama (Mobile County)

An extensive, probably partially unlogged savanna, grading into an estuary. The Mississippi Wildlife Viewing Guide characterizes Grand Bay as “the largest and least disturbed wet savanna in the United States” (Miss [2002]). Cecil Frost, who remembers the site as occupying more than 100 square miles, describes marshes along the coast and Longleaf Pine growing on slight rises inland. Where the soil inland is too wet and clayey for the pine, Pond Cypress savanna, shading into dense stands of Pond Cypress, is found. Between the marshes and the pine/cypress is natural Slash Pine savanna or forest. Frost cored Slash Pine and found it “quite old and uneven aged,” and he believes that the Slash Pine is “probably old growth.” Also he thinks that some of the Longleaf Pine and Pond Cypress areas have probably never been cut (1993). J. M. Valentine describes as “pretty much pristine” maybe 20,000 acres of intermingled savanna, forest, swamp, and low pocosin within Grand Bay. Construction of roads and powerlines destroyed a much larger area of the savanna to the north, he says. To Scott Hereford, Grand Bay is as an extensive “natural” savanna, “the last remaining expanse” (1993). Will McDearmin is cautious. The trees in the savanna were probably at least selectively cut, he says; and in a few areas people have tried to grow soy beans or Slash Pine. Nevertheless, overall the ground cover “is still good” (1993). Ron Wieland of Mississippi Natural Heritage believes that the area has been logged, possibly clearcut, but that the habitat is of “exceptional quality” (2001).

The US Fish and Wildlife Service is in the process of buying land for the Grand Bay National Wildlife Refuge. The Refuge currently totals 14,000 acres; eventually it should be more than 16,000 acres in size (Miss [2002]). The Refuge overlaps with the 18,400-acre Grand Bay National Estuarine Research Reserve, established in 1999 and managed by the Mississippi Department of Marine Resources (Wieland 2003).

Mississippi Sandhill Crane National Wildlife Refuge, southeastern Mississippi (Jackson County)

Up to 3200 acres of wet savanna, divided among several areas that have possibly had a minimum of logging and some tapping for turpentine. The Refuge as a whole occupies 20,000 acres and is composed of three separate units.

The timber companies did not begin planting trees in the coastal area of Jackson County until the 1950s, according to Valentine, who is the retired Fish and Wildlife Service biologist whose research led to the establishment of the Refuge. The 3200 acres looked the same to Valentine in 1963 as it did to a state geologist in 1855 and as it appears in aerial photographs from 1942 (Valentine 1993, Smith and Valentine 1985). Deferring to Valentine for details, Hereford, the Refuge's Wildlife Biologist, agrees that the Refuge includes uncut savanna (1993). Wieland, on the other hand, doubts that there is unlogged land (2001).

This savanna is a remnant, left because Slash Pine does not grow well in the wetlands. In the 1950s and 1960s thousands of acres of wet and mesic savanna were destroyed to create Slash Pine plantations for pulpwood. Between 1942 and 1981, for ten nesting areas of the Mississippi Sandhill Crane (approximately the southern half of the county), savanna decreased from 74% to 14%, while woodland increased from 18% to 70%. Now, because the crane likes to nest in wet savanna, the US Fish and Wildlife Service is restoring the land by bulldozing the Slash Pine, burning, and hand clearing. In the past, fires set by Indians and natural fires or, in some areas, the wetness of the land probably maintained the savanna.

In the wet savanna grow scattered Longleaf Pine, Pond Cypress, and, where planted, Slash Pine. Plants in the ground layer include wiregrasses, pitcher plants, sundews, yellow-eyed grasses, Toothache Grass, clubmosses, and Golden-crest (Valentine 1993, Valentine and Noble 1970, Smith and Valentine 1985, Hereford 1993).

Sky Lake,* central Mississippi (Humphreys County)

Some 500 or 600 little-logged acres with giant old Baldcypress trees surrounding a horseshoe-shaped lake. The trunks may be 10, 12, or 14 feet in diameter. The largest has a circumference of 48 feet 10 inches. The oldest trees are well over one 1000 years in age. Below the cypress grow Water Elm, Bitter Pecan, Water Locust, and a few other species.

Sky Lake is a former distributary of the Mississippi River, now largely silted in. The area where the cypress grow is under water for at least ten months of each year. The cypress grow slowly and live long, because the water is black, with tannic acid and relatively few nutrients. Little logging took place because the area is remote and the trees were relatively inaccessible, also because the area was not settled until after the Civil War. By that time the cypress were too large to be readily cut down and hauled away. The logging that did take place was of the smaller trees (Herring 2003).

The Mississippi Department of Fisheries and Wildlife, with the help of the National Fish and Wildlife Foundation, purchased 731 acres of land and water, divided among several parcels, which is now the Sky Lake Wildlife Management Area. About 300 of these acres support old cypress. The state land is at the northern end of the lake; private parties own the land at the southern end. Most of the land in the center of the horseshoe, is also in private hands and is used for agriculture (Tindall 2003). The US Army Corps of Engineers and the US Environmental Protection Agency are acquiring land in the area, mostly fields, and reforesting it. Plans are to eventually protect 20,000 acres in state and federal ownership (Herring 2003).

DELTA NATIONAL FOREST, Delta Ranger District, in west-central Mississippi (Sharkey County)

Bottomland old growth of uncertain extent within what is now a 60,000-acre National Forest. The Forest Service purchased 13,200 acres in the Mississippi River Delta in 1936. Most of the land acquired at that time was virgin forest. In 1940, it obtained additional acreage. USFS removed timber by selective cutting between 1938 and 1960, and then began to clearcut areas. It has set aside three, or possibly four, never-logged stands. The three are Research Natural Areas; the other a Botanical Area.

The forest adjacent to them has been selectively cut and looks "much like the virgin forests--only a few inconspicuous stumps show it was once logged" (McGinnis 1993). The Forest Service does not have available the acreage of the selectively logged forest (Hunter 1993). According to Albert Meier, the Forest could include as much as 1000 acres of only "very lightly cut" forest, plus additional acres of more heavily selectively cut forest (1997). Steve Leonard indicated on a map for us a small area of old-growth hardwoods with Baldcypress in sloughs (2003).

Since the construction of a levee system on the Mississippi River in the late 19th century, the hydrology of the area has been changing. Flooding is usually less severe than it once was, a change that may have an impact on succession. Delta National Forest is the only representative of a southern floodplain forest in the entire National Forest system (McGinnis 1993, Devall and Ramp 1992). Therefore the Forest needs not only protection from logging; but also, if possible, restoration of the hydrology.

--**Cypress Bayou Botanical Area.** A forest of 320 acres, with a birth date of 1874. The area was apparently not cut, and the trees there now probably originated after fire and disease (Youngblood 1993). Dominant trees are Overcup Oak, Green Ash, Sugarberry, Bitter Pecan, and Nuttall Oak. Associated with them are Sweetgum, Box Elder, Red Maple, and American Elm. Shrubs include Swamp Privet, Swamp Snowbell, and Green Hawthorn (Covington 1986).

--**Green Ash Research Natural Area.** 70 acres of virgin bottomland hardwood forest, dominated by Nuttall Oak, American Elm, and Green Ash. Also of importance are Baldcypress, Sugarberry, and Overcup Oak. Greenbriers and an occasional Dwarf Palmetto are the main species in the sparse understory. The area is usually flooded 1-3 weeks each year with 3-4 feet of water.

--**Red Gum Research Natural Area** (also known as Sweetgum RNA). 40 virgin acres, dominated by Sweetgum, 250 to 300 years old, Box Elder, Sugarberry and American Elm. Dwarf Palmetto and Cane are the chief shrubs. Among the plants in the herbaceous layer are blackberries, sedges, honeysuckle, and grasses. The RNA supports scattered Pondberry, a species listed federally as Endangered. A clay ridge underlies the northern three-fourths of the RNA and drains into a slough at the southern end. The ridge is seldom flooded (Devall et al. 2002).

--**Overcup Oak Research Natural Area.** 40 uncut acres in which Overcup Oak, Nuttall Oak, and American Elm dominate the canopy. Red Maple, Green Ash, and Sugarberry are of intermediate importance. In the understory greenbriers and an occasional Dwarf Palmetto predominate. The ground layer is similar to that in Red Oak RNA, but sparser because of more frequent and longer periods of flooding. Overcup Oak RNA is under water each spring for one to three weeks, although the water is seldom deeper than 3 feet (Devall and Ramp 1992).

DESOTO NATIONAL FOREST, in southeastern Mississippi (Jones County)

The Forest is 506,000 acres in size. (For the lands formerly owned by the University of Mississippi, see the introduction to this chapter.)

--**Chickasawhay Ranger District.** Within the district, approximately 235 acres of bottomland and scattered pockets of pine that the Forest Service believes were spared when massive logging occurred in the area in the 1930s. As far as the Forest Service knows, these acres were never cut. Trees prominent in the bottomland include White Oak, Water Oak, Black Gum, Swamp Chestnut Oak, American Beech, Southern Red Oak, and Baldcypress. The bottomland is part of a proposed 475-acre Tiger Creek Botanical Area. Also included in the area are a pitcher plant flat, Slash Pine flats, and a small ridge with Longleaf Pine. The proposed Botanical Area will in all probability not be logged even though it enjoys no formal protection, because private land blocks USFS's access to the site. Logging it would necessitate first building a bridge with a 60 foot or 70 foot span (Barwick 2003).

According to District Ranger Brady, the forest probably has some additional old growth, or at least sites without signs of logging, up and down Thompson Creek. One such site was previously identified in Thompson Creek bottoms; but before being notified of the site's importance the Forest Service logged it, Brady says. The creek runs for 12 miles through National Forest land, and the bottom is up to one mile wide (1993).

--**Black Creek Ranger District.*** Within the district, a 148-acre site that includes a "loblolly-bay forest and associated uplands." The loblolly-bay forest is listed as a representative site in the USFS booklet "An Old-Growth Definition for Evergreen Bay Forests . . ." The author M. R. McKevlin believes "it may be appropriate to assign old-growth status to those plant communities with individuals whose propagating parts are long-lived, whether the aboveground shoot is old by currently accepted standards." The site has been nominated as a Research Natural Area (McKevlin 1996).

Pascagoula River Wildlife Management Area, in southeastern Mississippi (George and Jackson Counties)

Possible old growth of unknown extent within 36,000 acres of bottomland hardwood forests and cypress-tupelo swamps. The forests are interspersed with nearly 50 oxbow lakes, and the Pascagoula River traverses the Area for more than 30 miles (Miss [2002]).

Stahle has cored two small areas of old-growth Baldcypress on the lower Pascagoula (1993). According to Murrah, the Wildlife Management Area has had spot, selective logging, but was never clearcut. Here are Baldcypress up to 35.5 feet in circumference, and Live, Red, and Water Oak 15 feet to 20 feet around (1993). Jones described the area as a fine example of bottomland hardwoods, although portions have been high graded. Parts of the area are considered to be old-growth bottomland hardwoods or bottomland swamp hardwoods, he says (1993). Gordon, on the other hand, said that the land has been high graded four or five times and has no old growth (1993). More recently Wieland expressed the view that the area includes old growth, although significant large areas were high graded (2003).

The Mississippi Department of Wildlife, Fisheries, and Parks owns and manages the area (TNC [nd]). The forests have no lasting protection. The Area includes state-

designated Natural Areas that are “fairly protected,” but the state could remove their designation (Wieland 2003).

Laurel Hill Plantation* southwestern Mississippi (Adams County)

Old growth of uncertain extent on the escarpment of a loess bluff within a 1560-acre privately-owned plantation. The escarpment, has not been logged for 130-150 years, if ever. Trees here are typical of oak-hickory forests with added Southern Magnolia, Loblolly Pine, and abundant Water Oak. The entire property is protected by a conservation easement, which is held by both the Mississippi Department of Archives and History (because of historic buildings on the property) and the Mississippi Wildlife Fisheries Commission. By the terms of the easement, 350 acres that include the possibly uncut escarpment cannot be logged; the balance of the forest, which has been abused, can be sustainably logged (Moody 2003, Conrad 2003).

Wrenwoode Natural Area,* northeastern Mississippi (Monroe County)

Within a 176-acre property, upland forest that is possibly old growth. The Presbyterian Church bought the land in 1945 for a summer camp and conference center. The church constructed a reservoir and buildings. However, it did not disrupt the forest outside the construction area, and possibly that forest was little disrupted earlier, as the topography is rough. A seventy-foot bluff is one of the tallest in Mississippi. The forest, approximately 75% hardwood and 25% pine, is of “very high quality,” Wieland states (2003). Twenty plants that are on the Natural Heritage Program’s special plant list are found on the property. In 2002, the Presbytery of Mississippi donated the property to Wrenwoode Trust and donated a conservation easement to the Mississippi Land Trust (Cummins 2003).

Flat Rock Reserve,* southwestern corner of Mississippi (Wilkinson County)

A sixty-five-acre tract of Longleaf and Loblolly Pine that reportedly has been little logged. Ninety-year old Cletus McCurley recalls that his father and a coworker asked the Crosby Lumber and Manufacturing Company, which employed them, to set aside the tract. They wanted to save “a small area of virgin timber for people to see in later years.” St. Regis Lumber Company acquired the reserve in 1965 and Georgia-Pacific Corporation in 1985. Both St. Regis and Georgia-Pacific agreed orally to protect the reserve. In 2001, Plum Creek Timber Company acquired the reserve from Georgia-Pacific (McCraine 2002). As of January 2003, the company was trying to learn more about the history of the reserve before deciding whether to cut any of the trees (Hart 2003). The area is in need of restoration, since hardwoods have grown up (with fire suppression) and shade out pine seedlings (McCraine 2002).

Raglan Hills,* southeastern Mississippi (Forrest and Perry Counties)

Some 60 acres of possibly unlogged beech-magnolia forest along a bluff on the Leaf River. Some three hundred acres that were part of the same site as the 60 acres but across a highway from it have been logged. The site is privately owned (Gordon 1993, Wieland 2003).

Clark Creek Natural Area,* southwestern Mississippi (Wilkinson County)

Small areas of possible old-growth forest within a 7000-acre natural area with steep loess-bluff hills. J. Herring told us that the forest, though of fine quality, was logged before the state purchased it (2003). However, he also noted that the bluffs rise as much as 330 feet with 70-80% slopes. J. Conrad writes that loggers presumably took all they could but that the many ravines cut into the bluffs are so steep that they are unlikely to have been touched. The hills support a mixed hardwood-pine forest in which beech and magnolia dominate (Conrad 2003).

- Barwick, Andy, De Soto National Forest. 2003. Personal communication.
- Blake, Edward, Director, The Crosby Arboretum. 1993. Personal communication.
- Brady, Bobby J., District Ranger, Chickasawhay District of DeSoto National Forest. 1993. Personal communication.
- Brewer, J. Stephen. 2001. Current and Presettlement Tree Species Composition of Some Upland Forests in Northern Mississippi. *Journal of the Torrey Botanical Society* 128(4):332-49.
- Brewer, J. Stephen. 2003. Personal communication.
- Cleaveland, Malcolm, University of Arkansas Tree-Ring Laboratory. 1992 and 1993. Personal communications.
- Conrad, Jim. 2003. Personal communication.
- Covington, N. A., Wildlife Biologist. 1986. Cypress Bayou Botanical Area. [Proposal to establish the area.]
- Cummins, James, Wildlife Mississippi. 2003. Personal communication and document from the Mississippi Land Trust.
- Devall, Margaret and Paul F. Ramp. U.S. Forest Research Natural Areas and Protection of Old Growth in the South. 1992. *Natural Areas Journal* 12: 75-85.
- Devall, Margaret, Nathan Schiff, and Douglas Boyette. 2002. Ecology and Reproductive Biology of the Endangered Pondberry, *Lindera melissifolia* (Walt) Blume. *Natural Areas Journal* 21: 250-57.
- Fisher, Robbie, Director, Mississippi Chapter of the Nature Conservancy. 2003. Personal communications.
- Frost, Cecil, Coordinator of NCDA Plant Conservation Program. 1993. Personal communication.
- Gordon, Ken, Museum of Natural Science. 1993. Personal communications.
- Hart, Kit, Environmental Affairs Manager, Plum Creek Timber Company. 2003. Personal communication.
- Hereford, Scott G., Wildlife Biologist, Mississippi Sandhill Crane National Wildlife Refuge. 1993. Personal communication with enclosures.
- Herring, Jack, Mississippi Department of Fisheries and Wildlife (retired). 2003. Personal communication.
- Hunter, Andy, District Silviculturist. 1993. Personal communication.
- Inmon, Gerald, Holly Springs National Forest. 1993. Personal communication.
- Jones, Roger, Director of Science, Mississippi Chapter of The Nature Conservancy. 1993. Personal communication.
- Kittrell, Nefisia, Bienville National Forest. 1993. Personal communication with US Forest Service flyer and fact sheet.
- Kittrell, Nefisia, Information Assistant, Bienville National Forest. 2003. Personal communication.
- Leonard, Steve, Botanist, Gulf Coast Biological Surveys. 2003. Personal communication.

- Long, Jeff, Office of Planning, National Forests of Mississippi. 2003. Personal communication.
- McCraine, Don. 2002, Dec. 12. Man Recalls father's Hand in Creating Forest. The Natchez Democrat.
- McDearmin, Will, Grand Bay National Wildlife Refuge. 1993. Personal communication.
- McGinnis, Helen. 1993. Personal communications with pages from draft of her forthcoming guide, Hiking Mississippi, which was published by the University Press of Mississippi in 1994.
- McKevlin, Martha R. 1996. An Old-Growth Definition for Evergreen Bay Forests and Related Seral Communities. General Technical Report SRS-3. Asheville, NC: USDA Forest Service, Southern Research Station. General Technical Report SRS-3.
- Meier, Albert. 1997. Personal communication.
- Mississippi Wildlife Viewing Guide. [2002.] Mississippi Department of Wildlife, Fisheries, and Parks and eight other entities.
- Mohlenbrock, Robert H. 1984. The Field Guide to U. S. National Forests. Congdon and Weed, NY.
- Moody, Kathy, Manager, Laurel Hill. 2003. Personal communication.
- Murrah, Herman, Upper Area Manager, Pascagoula River Wildlife Management Area. 1993. Personal communication.
- Price, Charles, Homochitto National Forest. 1993. Personal communications.
- Siderits, Karl P., Forest Supervisor, National Forests of Mississippi. 2000. Personal communication.
- Sirmon, Gene A., Staff Officer, Timber, Soils and Watershed. 1990. Personal communication.
- Smistik, Robert, Integrated Resource Analyst, DeSoto National Forest. 2003. Personal communication.
- Smith, E. B. and J. M. Valentine. 1985. Habitat Changes within the Mississippi Sandhill Crane Range in Jackson County, Mississippi (1942-1984). Proceedings 1985 Crane Workshop.
- Sorrie, B. and R. Wieland. 1997. Working sheets evaluating Little Railroad Creek Headwaters.
- Stahle, David, University of Arkansas Tree-Ring Laboratory. 1993. Personal communication.
- The Nature Conservancy (TNC). [nd]. Fact Sheets on Selected Sites, supplied by Roger Jones.
- Tindall, John, Mississippi Department of Fisheries and Wildlife. 2003. Personal communication.
- Valentine, J. M. and R. E. Noble. 1970. A Colony of Sandhill Cranes in Mississippi. The Journal of Wildlife Management 34:761-68.
- Valentine, Jacob M., Biologist. 1993. Personal communication, followed by written material including a draft chapter of his forthcoming book on the Mississippi Sandhill Crane.
- Wieland, Ronald. Plant Community Ecologist, MS Natural Heritage Program. 1989. Personal communication.
- Wieland, Ronald. 2001 and 2003. Personal communication.
- Youngblood, Quentin, Delta National Forest. 1993. Personal communication.

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