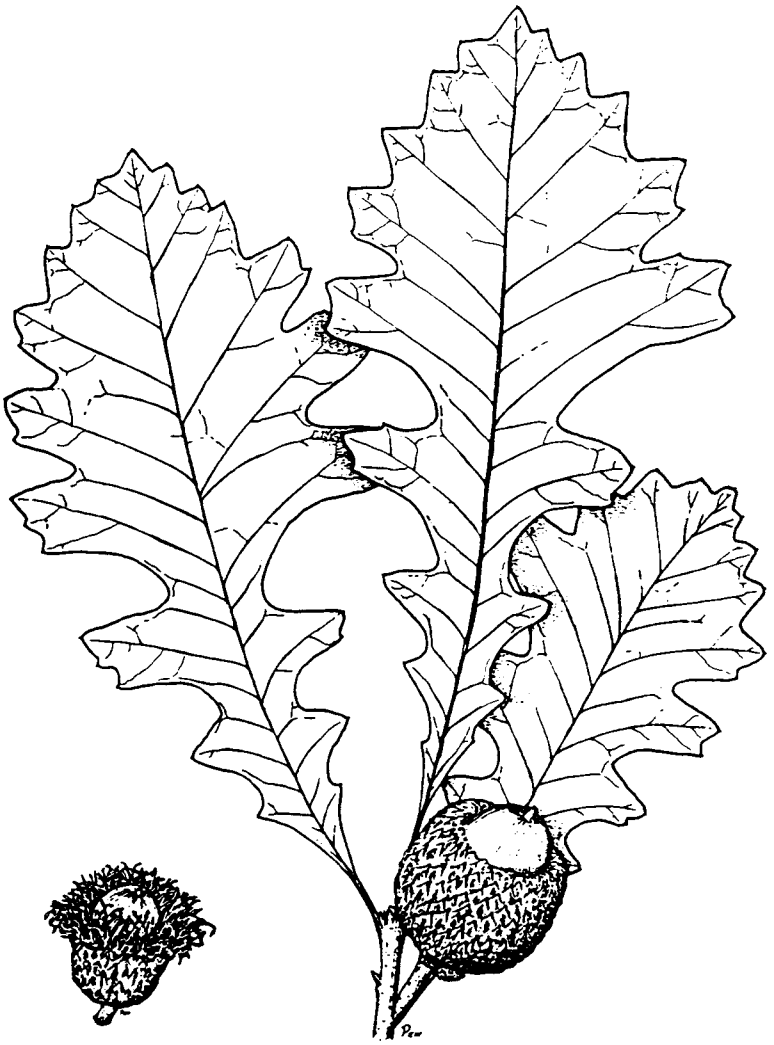
MISSISSIPPI NATIVE PLANT SOCIETY

AUGUST 1989



BUR OAK

Quercus macrocarpa

Distribution of Selected Mississippi Tree Species

by Victor A. Rudis

Imagine yourself hovering like a bird over Mississippi's rich land and water resources--its forests and cropland. You construct a mental picture of the diversity and abundance of biological communities throughout the State. You now have 'the big picture," that is, the knowledge of where to find a particular tree species or a permanent swamp, the relationship between them and nonforest areas in the State, and whether there are enough loblolly pine trees to sustain a healthy environment as well as a thriving forest industry.

As humans we cannot see, much less understand, every part of Mississippi's resources. In our lifetime we visit only parts. There are others to help us understand the "big picture" as well as count the resources to ensure that we have enough. As part of this process, the U.S. Department of Agriculture (USDA) Forest Service conducts periodic forest inventories on public and private land. In the Midsouth states (Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas), the Research Unit responsible for this activity is the Southern Forest Experiment Station's Forest Inventory and Analysis Unit (FIA) located in Starkville, Mississippi.

Surveys of public and private forests in Mississippi have been conducted every decade since the 1930's. The most recent data on forest area and timber volume have been published as FOREST STATISTICS FOR MISSISSIPPI COUNTIES 1987, USDA Forest Service, Resource Bulletin SO-129, 1987. Analytical reports on timber, water, range, wildlife habitat, and recreation resources of forests are being prepared. One aspect, the spatial distribution of selected tree species in forested areas, is featured in this article.

Rather than surveying every square inch of land, field personnel take 1 acre plot samples systematically at three mile intervals throughout the State. Tree species and related information are collected if the plot falls in timberland (forest cover, with a minimum of a 1 acre area and 120 feet wide, capable of producing at least 20 cubic feet of wood per year, and not withdrawn from timber uses). The survey typically excludes narrow forested strips along streams and right-of-ways, wooded areas within city limits, and designated wilderness areas.

A popular piece of the "big picture" is Figure 1 which illustrates the aggregation of timberland sample plots. Aggregated spaces represent the major non-timberland areas -- chiefly the croplands of the Delta region, the urban areas of Jackson and Hattiesburg, and the treeless, thin, chalky soils of the North-

eastern Prairie (northeast MS between Union and Noxubee counties) and Jackson Prairie (Hinds and Madison counties).

Species selected for illustration are those which typify particular habitats. (Habitat descriptions are from Harrar and Harrar, 1962, "Guide to Southern Trees," 2nd ed., New York: Dover Publications, Inc. 709 p.) Each dot represents a timberland location with one or more stems of a given species that is 1 inch in diameter or larger at 4.5 feet above ground.

Figure 2 illustrates selected species that correspond to a range of habitat types, from wet to dry. These are:

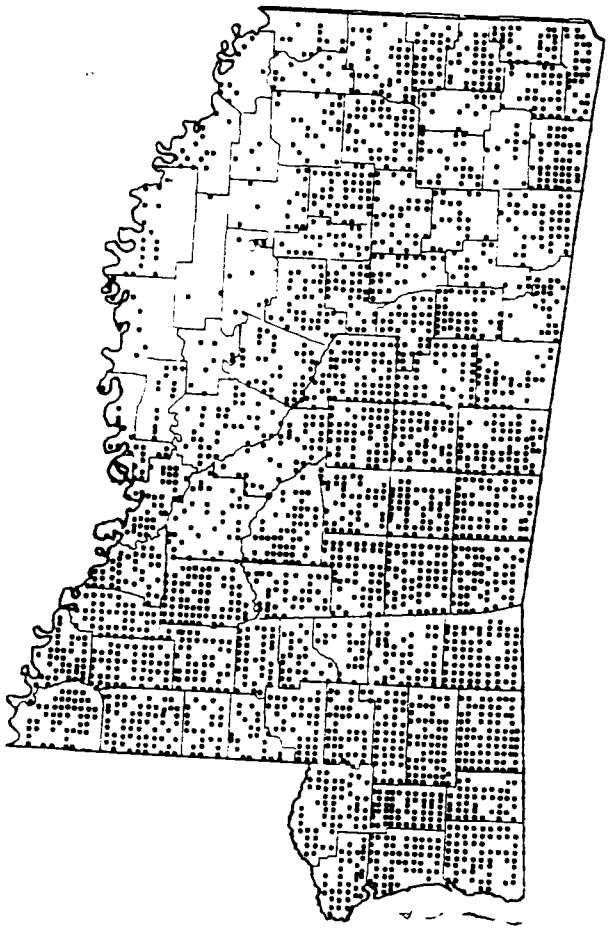
Baldcypress (Taxodium distichum) - typical of permanent swamps,
Sweetbay (Magnolia virginiana) - temporary swamps and moist, low ground,
Overcup oak (Quercus lyrata) - poorly drained, clay soils,
Laurel oak (Quercus laurifolia) - sandy soils near streams and swamps,
Redcedar (Juniperus silicicola and J. virginiana) - a variety of soils, but common chiefly on soils of limestone origin,
Blackjack oak (Quercus marilandica) - dry, sterile, sandy soils.

Pine trees dominate the forests of Mississippi, as many are planted or occur naturally in a variety of soil types. Most pine species that occur in north Mississippi are: Loblolly pine (Pinus taeda) and Shortleaf pine (Pinus echinata) (Figure 3). Shortleaf pine is common on dry upland soils, but also is found on a variety of soil types. A few pine species are more restricted in their distribution and occur mainly in south Mississippi, chiefly on Coastal Plain soils (Figure 3). These are:

Spruce pine (Pinus glabra) - moist, sandy loam soils,
Slash pine (Pinus elliottii) - low ground, swamps, and along streams, but planted elsewhere, and common on sites formerly occupied by longleaf pine,
Longleaf pine (Pinus palustris) - flat, sandy, gravelly soils, often thin soils underlain with hardpan, and on low knolls and ridges.

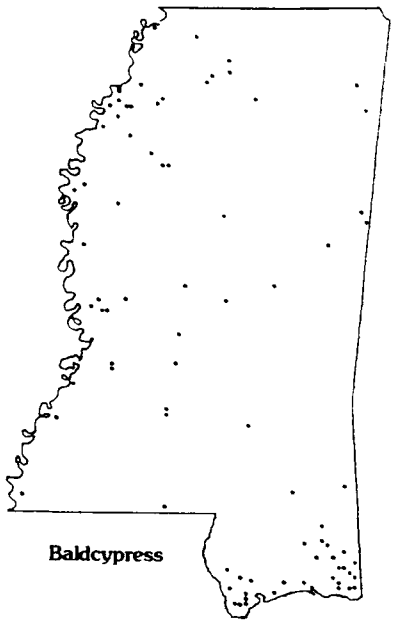
Other aspects of the "big picture" are summarized in tables and graphs in Southern Forest Experiment Station Resources Bulletins, available at USDA Depository Libraries. Additional detailed species information and related data on field observations for Mississippi and other Midsouth states are available at cost or through cooperative agreements with research institutions. Contact: Project Leader, Forest Inventory and Analysis Unit, 201 Lincoln Green, Starkville, MS 39759-0906. Telephone no. 601-324-1611.

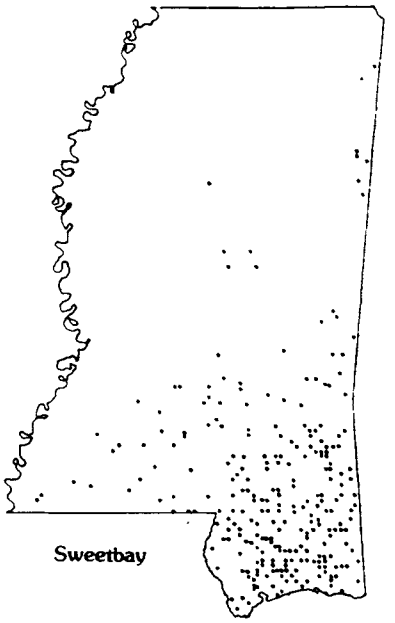
Figure 1

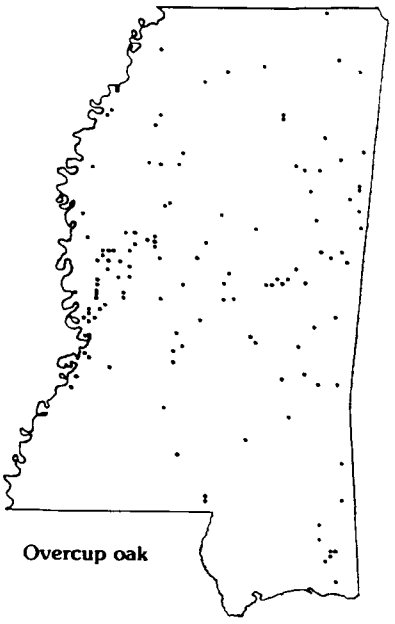


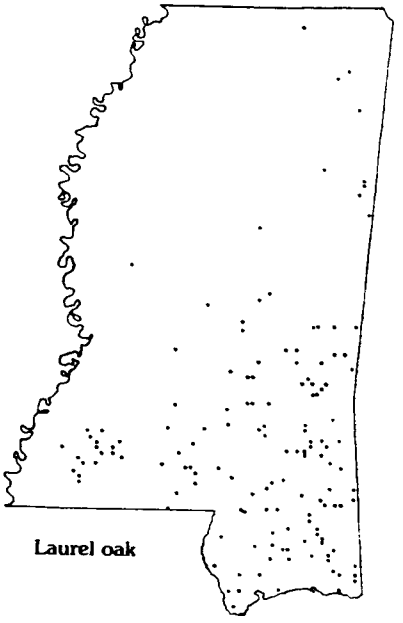
Forested areas of Mississippi

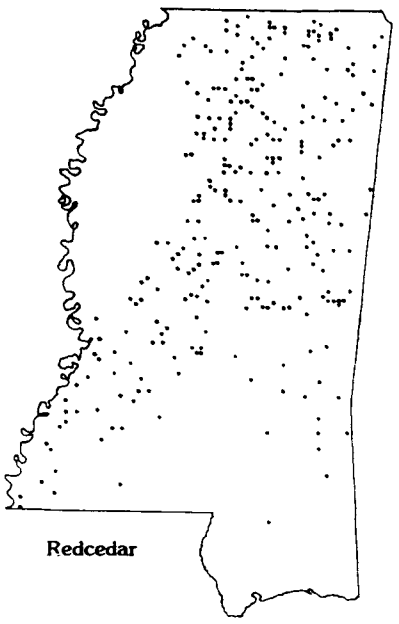
Figure 2


Baldcypress


Sweetbay


Overcup oak


Laurel oak


Redcedar

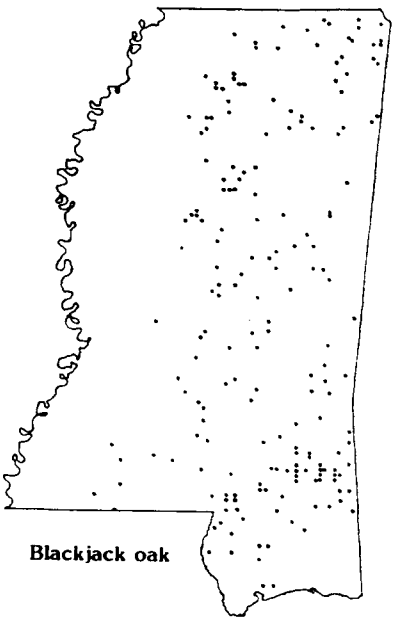
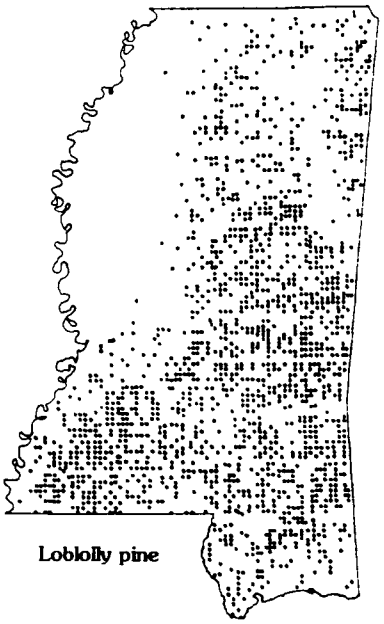
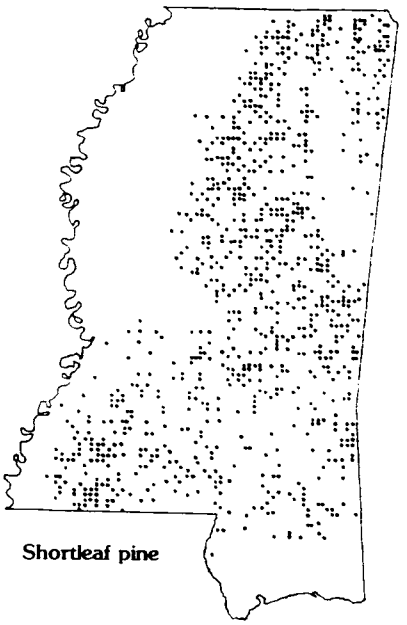
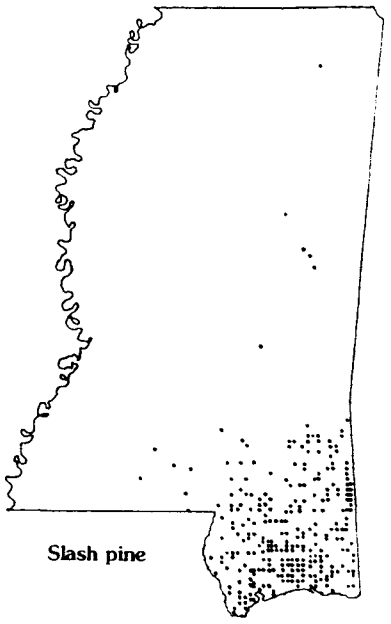
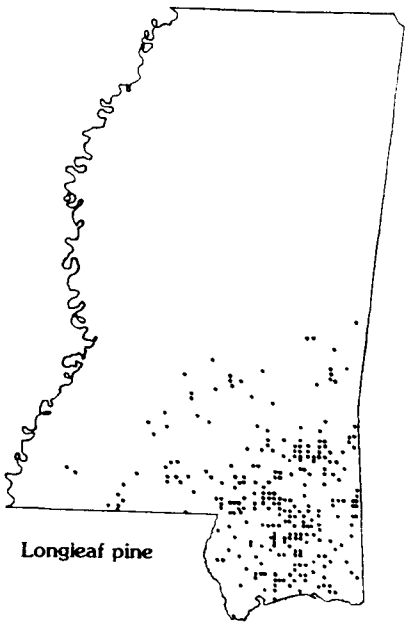

Blackjack oak

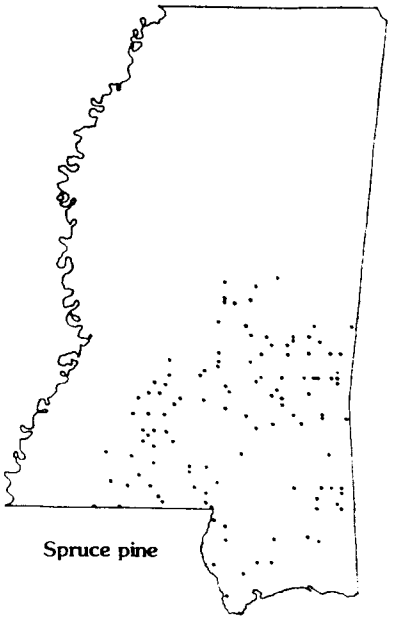
Figure 3


Loblolly pine


Shortleaf pine


Slash pine


Longleaf pine


Spruce pine

FIELD TRIP: TISHOMINGO STATE PARK
APRIL 21 & 22, 1989

The April joint meeting of the Mississippi Native Plant Society and the Alabama Wildflower Society at Tishomingo State Park brought together some 70 plus wildflower enthusiasts for the purpose of enriching their love of plants. On Friday, old friends were reunited and new friends were made during a short social. Saturday's events began with a stimulating lecture on the geological features of Tishomingo State Park by Dr. Wayne Canis. Following the lecture, the group broke up into four field trips led by Leon Bates, Randy Warren, Paul Kittle, and Steve Timme. The morning trips were successful in locating and identifying numerous species of plants and birds. Following lunch, everyone was given the opportunity to join different field trips visiting the same and different areas from those of the morning trips. Approximately 100 species of plants were observed during the various Saturday jaunts.

The evening dinner was enjoyed by all as was the entertainment that followed. Mr. Leon Bates presented one of his ever popular wildflower slide lectures. As usual, he delighted the group with his beautiful slides. The finale of the evening was a joint auction by Mr. Travis Salley representing the Mississippi Native Plant Society and Mr. George Wood representing the Alabama Wildflower Society. The spirit of biding by individuals dedicated to improving their property with native plants resulted in the collection of over $200.00, which was split between the two societies.

The weekend at Tishomingo was a botanical success and the following are thanked for their contributions: Mr. Leon Bates, botanist with TVA; Mr. Randy Warren, botany graduate student at Mississippi State University; Dr. Paul Kittle, entomologist and ornithologist at the University of North Alabama; Dr. Wayne Canis, geologist at the University of North Alabama; Mr. Travis Salley of Clevland, Mississippi; Mr. George Wood, President of the Tuscaloosa chapter of AWF; Dr. Thomas Hall, retired botanist for TVA; but most of all the membership of MNPS and the AWF. Without the enthusiasm and dedication of the membership, the success of meetings and field trips would not exist.

The following represent only a few of the more common plant species observed during the Tishomingo field trips:

Bluebells	Spring Beauty	Shooting Star
Hoary Puccoon	Chickweed	Azaleas
Yellow-eyed Grass	Columbine	Yellow Jessamine
Bird's Foot Violet	Buttercups	Blue Star
Fire Pink	Rue Anemone	Phlox
Parsley haw	Pawpaw	Verbena
Jack-In-The-Pulpit	May Apple	Bluets
Spiderwort	Corydalis	Daisy Fleabane
Peat Moss	Saxifrage	Coreopsis
Trilliums	Cinquefoil	Squaw Weed
Solomon's Seal	Wood Sorrel	Morning Glory
Bellwort	Green Violets	Sassafras
Blue-eyed Grass	Primroses	False Garlic

Steve L. Timme
Theodore M. Sperry Herbarium
Pittsburg State University, Kansas

A NEW THISTLE RECORD FOR MISSISSIPPI

Steve L. Timme
Theodore M. Sperry Herbarium
Pittsburg State University, Kansas

In May while visiting the Institute for Botanical Exploration herbarium at Mississippi State University, Faye Swan of Starkville contacted me in reference to a plant located just south of the University in Oktibbeha County. The plant was identified by myself as Silybum marianum (L.) Gaertn. (commonly known as Milk Thistle) and verified by Sidney McDaniel, Director of IBE. This species represents a new state record. A rather large population is located along the roadside and in an apparently abandoned farm lot a few miles south of Starkville.

Milk Thistle is a glabrous winter-annual or biennial that may reach a height of 9 feet. The leaves clasp the stem and are alternately arranged, reaching a length of 16 inches. The leaf margins are spinose-toothed and lobed and the blades are white-spotted along the veins. The inflorescence is typically a large single head of blue-purple tubular flowers. The involucral bracts are large, overlapping, erect to reflexed, spinose along the margin and terminated by a spine 1/2-3/4 inch long. The plant flowers from April to August.

The common name is derived from the milky sap (latex) contained within the plant. The genus name is an old Greek name used by Dioscorides to describe thistle-like plants, while the specific epithet is a name of early usage referring to Mary, the Mother of Christ. Milk Thistle is a native of the Mediterranean region and apparently was first established along the coast of the western United States, where it is considered a weed. It has become established in the northeastern United States but is rarely found southward. The Mississippi population may represent the most southern known locality for the species. Milk Thistle is quite beautiful both in structure and color. It apparently has been grown as a garden ornamental, but is generally considered a weed of disturbed sites.

OIKOS LOGOS -- THE UNIVERSAL HOUSEHOLD

Christopher J. Wells
The Crosby Arboretum

In ancient Greece, a home was more than simply a place where the family meets, eats, and sleeps after a day of winning bread as it most often is today. It was a small community of the extended family, servants, and the servants' families. Each person had duties upon which others depended for their comfort, health, or happiness. Thus, removal of people from the household caused more than unhappiness in the remaining people; it would cause disruption in the daily life-giving and sustaining work of the household.

These households tended to band together into politically, economically, and socially interdependent units that we now label as city-states. One may

imagine that a disruption in a major household could result in problems within a city-state. The Greeks were quite aware of this and wrote often about it; Sophocles wrote a series of plays about such a family--the House of Atreus.

Another oft mentioned attribute of the ancient Greeks was the awe in which they held the acquistion of knowledge and wisdom. That they differentiated the two is clearly evident in the many writings of their most learned philosophers. They gave a special significance to this combination of knowledge and wisdom--it was of divine, not earthly origin. This knowledge of the universe was manifested in words, by people.

Among German foresters, during the early days of the Industrial Revolution, came realization that living things exist in varying degrees of harmony with their environment. A German scientist called the study of this phenomenon œcology--derived from the two Greek words in the article's title.

As members of the scientific community, we are often asked what we think of "the ecology." Well, as you can see, "the ecology is fine;" it is the ecological effects of human lifestyles that is causing our environment to become increasingly inhospitable to every living thing on this planet.

We have only within the last half of this century come to the realization that, bounteous as our "household" is, it has limits in resources and resiliency. Among the more pressing problems faced by life on our planet are life's absolute dependency upon clean water and pure air. These two neccessities of life are degrading significantly more rapidly than the earth is capable of replenishing them. It is worth mentioning, though hardly surprising, that thermonuclear war would likely have a long term, detrimental effect on life, too.

A much longer range but critically important issue is the continual (and even accelerating) loss of genetic diversity of life. People are almost totally dependent upon a half-dozen species of plants--either as food for ourselves or for our livestock. Disease of a changing climate (remember the greenhouse effect?) could render some of these species unfit or unuseable.

To my mind, there is nothing more important to life on earth than for each of us to learn the biological rules of life in this, our planetary household. If we can ever convince ourselves, our children, and our leaders that we are inseparably intertwined with each other and all other life on earth, we may be able to save ourselves from ourselves. The alternative is for us to destroy our household just as the Atreides did--through our hubris.

THE HILL EXPERIMENT - PART II

Vic Rudis

I've heard from a few members about this section of the MNPS Newsletter. It seems that some of you have always had a secret desire to "go natural," with your lawn. I think we all enjoy seeing Mother Nature take over. Clusters and "waves" of one species are truly inspiring. Nature does a much better landscape design and at a lower cost than many of us realize. Every 100 square feet that is left unmowed can save about $5.00 gas plus the value of your time each year. Not factored into this savings are society benefits that accrue from increasing animal and plant diversity, providing contrasting values (admittedly variable aesthetics, depending on site conditions and personal preferences,) reducing noise, and air pollution.

The "natural area" is coming along, but slowly. The showy primrose (Oenothera speciosa) made a fine display this spring. After blooming, many of the plants appeared to shrivel up, as if diseased, or maybe they just died out after going to seed. In any case, after flowering, the foliage is a sorry site. I have spread some seeds of Coreopsis (C. auriculata) in the places formerly dominated by showy primrose, so there will be a more continuous display of flowers and decent-looking evergreen rosettes.

Plants that have come up beside the showy primrose include native clovers (Trifolium sp.), plantain, wild verbena (Verbena braziliensis), tall white asters and short blue asters (Aster sp.). Goldenrod (Solidago sp.) has finally made an appearance. It should be in bloom this fall. Most grasses have been wiped out with fusilade (POAST), but a few persist, notably some fescue and Johnsongrass with large root systems. My neighbor's Centipede grass lawn has invaded part of the area. (POAST directions say that a second or third application is needed for some individuals and species.)

Despite the variety of species listed above, I have sought to enrich the flora with seasonal-interest plants that may look out-of-place elsewhere. These include sumac (Rhus sp.), spiderwort (Tradescantia virginiana), and common milkweed (Asclepias syriaca).

I have been somewhat impatient with the progress of succession. One of my reasons for the natural area in this location is to provide screening. A section can be seen from my living room window. This "viewscape" has tall native asters, but I have also planted southern waxmyrtle (Myrica cerifera) and hazelnut (Corylus americana). Both these species normally fill-out their alloted space quickly, and have done remarkably well in this periodically

poorly-drained, but often dry soil (a thin layer of clay over chalk). Growth of these species is decidedly better in places where the clay soil is thicker.

As mentioned in the previous newsletter, I transplanted some tall native sunflower sp. (Helianthus) to the area. My son and his friends use the 10' Helianthus stalks from last year as props for imaginary battles. The stalks disintegrate after a few thrashings, so the litter problem is not as bad as it sounds.

Mynelle Gardens

"THE NATIVE PLANT GARDEN"

Felder Rushing

Each plant in this garden is for your imagination and ultimate use. It takes collective effort to get often unfamiliar native plants into acceptance and use by landscape gardners. It also takes cooperation between enthusiasts who know and value these plants, the wholesale propagators, landscape designers, retail nurserymen, garden writers, and curators of arboreta and highly visible public gardens.

Everyone involved with landscaping is aware of the value of using native plants. So long as habitat features are taken into consideration (sun or shade, soil types, moisture, etc.), native trees, shrubs, and vines can be beautiful components in any landscape. Wildflowers, including perennials and reseeding annuals, add to this rich palette of texture, form and year-round color. Hardy native plants have had thousands of years to adjust to our climate, and are usually durable performers which often have an edge over imports against pest problems.

Of course, many natives have been popular in Southern gardens, and are respected enough to be found routinely for sale in garden centers; they need almost no market promotion. However, there are many others which would also do well if only they were better-known and were available consistently. The Native Plant and Wildflower Garden, far more than a mere plant exhibit, is designed for this reason.

In each of several diverse habitats, visitors discover interesting "new" native plants, all perfectly at home, and all available commercially. The garden is not all wild, however. Selected mature trees and shrubs, along with border plants, turfgrass, even cherubs in the water garden, have been left to help in the transition of the native plant theme into other areas and uses of Mynelle Gardens. They act as important "reference points," preventing casual visitors from finding themselves in a totally

unfamiliar world. It is believed that natives are easier to "bleed" into societal acceptance when introduced alongside the plants normally found in established landscaped gardens.

Each native plant has been chosen for its desired effect in the landscape. The displays have an educational impact on gardeners and designers who can view good plants in specific setting and habitats, and who can note their growth habits, seasonal changes, and maintenance requirements. As the plants mature, the provide incentive (and sometimes propagation material) for wholesale growers to produce them for retail distribution. As each becomes more available to the gardening public, it can be promoted in its season by enthusiasts and garden writers.

To speed up this educational/marketing process and to create consumer awareness and demand, nurserymen, horticulturists, and landscape architects have already donated many mature plants (minimizing costs to the Mississippi Native Plant Society and Mynelle Gardens).

In an effort to make this educational garden practical, most of the plants have been chosen according to these criteria: potential for wide acceptance and use in Mississippi landscapes, hardiness and pest resistance, ability to be propagated and handled commercially, relative lack of current usage, and suitability to site. While most plants will remain to mature and show the natural succession of growing plants in their natural habitats, some may be replanted as needed to maintain a "young" landscape effect; still others may become so popular and available they may be removed to make room for others in need of deserved limelight.

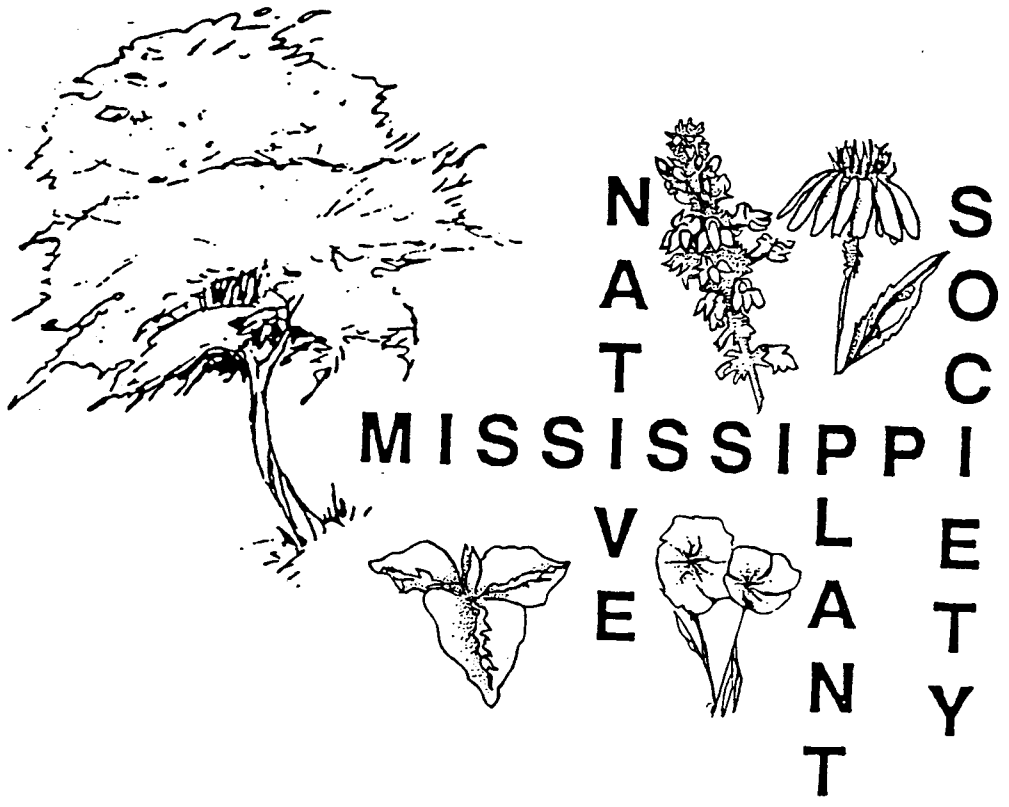
Because of its ever-changing nature, visit this realistic garden often.

NOTE FROM JACKSON

Robert Poore's design for the MNPS-sponsored Native Plant and Wildflower Garden has won the American Native Landscape Award, the most prestiguous award in the eastern half of the country. We are tentatively planning to have an educational and "hands-on" meeting at the garden (in Mynelle Gardens, Jackson) on the afternoon of Saturday, September 23, probably at 1:30 p.m. Details will be in the Clarion Ledger the Saturday before. We will be actually planting wildflowers and other native plants, from seed, transplants, and container-grown plants. — Felder Rushing

T-SHIRTS

T-shirts, described in the April issue, are still available. $10.00 plus $1.50 shipping. In addition to the standard SILVER (gray) background, we have a few Large and Extra-Large in PINK. Allow 4 to 6 weeks for delivery. Design is below. Contact: Vic Rudis 324-0430 or write MNPS, P. O. Box 2151, Starkville, MS 39759.



OFFICERS MNPS 1988-89

President: Felder Rushing, Jackson 982-6542
Vice-President: Joe McGee, Hickory 646-5402
Secretary/Treasurer: Vic Rudis, Starkville 324-1611, 324-0430
Editor and Trips Coordinator: Sidney McDaniel 325-7570

CALENDAR

September 23, 1989 Third Annual Mississippi Native Plant Conference, Jackson, MS. Contact: Felder Rushing 601-982-6542.

October 7 Field Trip near Greenwood, MS. See below for details.

October 12-14 Second Annual Knoxville Native Plant Workshop, Knoxville, TN. Contact: Sue Williams, 2308 Carriage Lane, Knoxville, TN 37920.

October 27-29 Second Annual Mid-South Native Plant Conference, Memphis, TN. Contact: Lichterman Nature Center, 5992 Quince Rd., Memphis, TN 38119.

November 10-11 Central-South Conference on the Use of Native Plants in the Landscape, Birmingham Botanical Garden, 2612 Lane Park Rd., Birmingham, AL 35223.

GREENWOOD FIELD TRIP

A large contingent of MNPS members and their guests will meet at 9 a.m. Saturday, October 7, at Cottonlandia. This park is located west of Greenwood on US Highway 82. Prominent signs should prevent anyone from getting lost. After a tour of the native plant garden there, other possible areas we may visit include Veterans Park in Greenwood, Malmaison, and areas near Sidon and in Carroll County. We will eat lunch at one of the sites, so be prepared.

There are numerous motels in Greenwood mostly located along US 82 to the east, though the Ramada Inn is located west of the city about one-half mile from Cottonlandia. If members arrive on October 6, they may meet that evening at Miss Perle McGee's residence for an informal get-together. Her house is located off 605 East Caliborne Avenue (the first street west of the bridge on Highway 82).

For any additional information one may call me at 325-7570 (from 7 a.m. to 3:30 p.m., seven days a week). —— S. McDaniel.

PRAIRIE PINECONES REVISITED

Early May 20 a small group of dedicated plant enthusiasts met for a field trip in the Starkville area. Weather was excellent and nearly 100 different plant species seen. Stops were made in the prairie to see Oenothera triloba, stemless evening primrose or "prairie pine cones," and a number of other rare plants. Later Dr. Ed Roberts guided us on the nature trail near the Oktibbeha County Hospital. He suggested that the MNPS or at least local members might be interested in establishing additional native plants. —— S. McDaniel