MISSISSIPPI NATIVE PLANT SOCIETY

Sept. 1982

The Magnolia of Mississippi

The 77 woody and usually arborescent species of Magnolia occur in two principal regions of the world - Asia and eastern North America. The Asian-Eastern North American pattern of plant distribution is found with a number of tree genera conspicuous in our eastern deciduous forests, such as Carya (hickory), Sassafras, Nyssa (black gum, water tupelo), and Liquidambar (sweetgum)(to mention a few), and reveals a remarkably close floristic relationship between the two regions. Analysis of an abundant and well preserved fossil plant flora by plant geographers and paleobotanists has revealed that the historic counterpart of present-day temperate forests in eastern North America and Asia once covered an almost continuous region across all continents in the northern hemisphere dating back as far as 65 million years ago. For example, fossils of Magnolia and other temperate tree genera as Populus (poplar), Quercus (oak), Juglans (walnut), and Ulmus (elm)(just a partial list), have been recovered from southeastern Alaska, British Columbia, across Europe, and China. Temperate forests no longer occupy these as well as many other regions where the fossil record indicates a diverse temperate assemblage. Instead, a colder and more boreal or coniferous forest has replaced the temperate vegetation. In essence, a long and progressive cooling period accompanied by the formation of mountain ranges and alteration of sea levels created regional arid and cool climates that obliterated temperate forests and caused temperate vegetation to shift to more southerly latitudes. Two of the many refugia where relic tree genera now survive are in eastern North America and Asia. Their present relationship reflects their past.

With 8 species of Magnolia in eastern North America, the majoritiy occur in warm temperate and subtropical Asia. The magnolias are also temperate to subtropical in character to eastern North America, and all require a moist or mesic environment. Although a few species extend north through New York and Pennsylvania to southern Ontario, and west in the Ohio River basin, Missouri, Arkansas, and eastern Oklahoma and Texas, the magnolias are essentially trees of the southeastern deciduous forest.

The genus is well represented in Mississippi with six species. Of the remaining two, Magnolia ashei (Ashe magnolia) is very rare - only in western Florida and east Texas, and M. fraseri (Fraser magnolia, mountain magnolia) occurs along streams and valleys of the southern Appalachians.

Except in the Yazoo-Mississippi River Delta, magnolias exist throughout Mississippi, yet most are not common. Bigleaf magnolia (M. macrophylla), cucumbertree (M. acuminata), pyramid magnolia (M. pyramidata), and umbrella magnolia (M. tripetala) are usually only a minor constituent of the forest community. Characteristically, they are restricted to undisturbed, moist, steep, and sheltered slopes or ravines. They are found in regions of dissected topography such as the Tennessee River Hills, Loess Bluffs, and Pontotoc Ridge (see map). Suitable habitat exists elsewhere in Mississippi, but it is more scattered and isolated than in the forementioned regions. While most of these magnolias are certainly not common,

umbrella magnolia (M. tripetala) is unquestionably rare. Since it is known from only three sites in Mississippi, the umbrella magnolia has been classified as a threatened species of Mississippi's flora by the Mississippi Natural Heritage Program and a committee of botanists.

The subtropical and evergreen sweetbay magnolia (M. virginiana)and southern magnolia (M. grandiflora) are the only two magnolias to form a dominant or distinctive component of woody vegetation in Mississippi. Sweetbay magnolia is moat abundant on wet, peaty, organically rich, and acid soils along small stream bottoms in southern Mississippi. It also inhabits wet boggy soils of flat savannahs in extreme southern Mississippi near the coast. The community is commonly referred to as a "bay or bayhear" due to the large number of evergreen species present. Common woody associates of this wetland community include redbay (Persea borbonia, P. palustris) tupelogum (Nyssa biflora), wild olive (Osmanthus americana), red maple (Acer rubrum) ,fetter-bushes (Lyonia and Leucothoe), pond cypress (Taxodium ascendens), slash pine (Pinus elliottii), swamp cyrilla (Cyrilla racemiflora), and buckwheat tree (Cliftonia monophylla). Bayheads are restricted to the Longleaf Pine and Coastal Pine Meadows provinces in Mississippi (see map). Sweetbay magnolia extends north of these regions in Mississippi although it is uncommon and rare north of I-20.

Southern magnolia is a member of a variety of communities, including coastal stream bottoms, bayheads, and bottomland hardwoods. This species is most conspicuous in beech-magnolia forests that occupy steep, mesic, rich, ravines that are widely scattered in portions of the southern one-third of the state. Beech-magnolia forests are an unusual if not rare forest type that are rapidly dissapearing in Mississippi and the southeastern United States. Perhaps the most outstanding example of beech-magnolia is an old-growth stand known as Ragland Hills in Perry and Forrest Co.'s southeast of Hattiesburg. Whereas most deciduous forests consist of one dominant, a couple of codominant, and several minor trees, beech-magnolia communities are so rich in woody species that no clearly defined dominance exists. This pattern of species diversity and structure within beech-magnolia communities is characteristic of the rich cove forests of the Appalachian and Cumberland provinces. It is difficult to precisely give a name to these species rich forests since there is no dominance. In the Appalachians, cove forests are known as "mixed-mesophytic forests". The southern counterpart is known as "beech-magnolia". Associates to southern magnolia in beech-magnolia forests also include bigleaf and cucumber magnolia in addition to the usual tulip poplar(Liriodendron tulipifera), white oak (Quercus alba), shumard oak (Q. shumardii), water oak (Q. nigra), sweetgum (Liquidambar styraciflua), black walnut (Juglans cinera), pignut hickory (Carya glabra), shagbark hickory (C. ovata) , bitternut hickory (C. cordiformis), basswood (Tilia sp),southern red oak (Q. falcata var.pagodaefolia), chestnut oak (Q. michauxii), dogwood (Cornus florida), sassafras (Sassafras albidum), american ash (Fraxinus americana) and even others. In the steep ravines along the Pascagoula River in Jackson Co. a rich beech-magnolia type of forest exists where, due to the coastal characteristic of the drainages, all 6 species of Magnolia in Mississippi coexist. Southern magnolia also occurs in the mesophytic hardwoods of the Loess Bluffs as far north as Yazoo City. Otherwise, southern magnolia is largely confined to the Longleaf Pine Belt in Mississippi.

The magnolias are easily recognized with their distinctive flowers and fruits, and species can readily by identified using leaf charaters alone. The following is a key to the species of Magnolia in Mississippi.

1. Leaves auriculate (ear-shaped lobes) at base

    2. Leaves glaucous (whitened or distinctly white) beneath, blades pubescent (hairy) . . . . . 1. M. macrophylla Bigleaf magnolia

2. Leaves not glaucous (green) beneath, blades glabrous (no hairs) . . . . . 2. M. pyramidata
Pyramid magnolia

1. Leaves not auriculate at base

3. Leaves glaucous beneath . . . . . 3. M. virginiana
Sweetbay

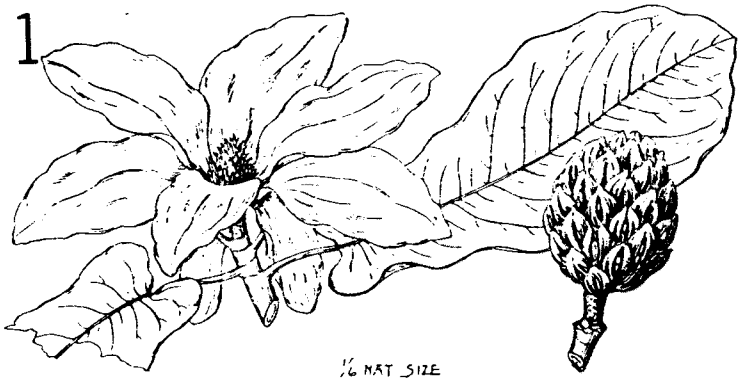
3. Leaves not glaucous beneath

4. Leaves evergreen, coriaceous (thick or leathery). . . 4. M. grandiflora
southern magnolia

4. Leaves not evergreen (deciduous), not coriaceous

5. Leaves clustered terminally (on tip) of twig . . . 5. M. tripetala
Umbrella magnolia

5. Leaves scattered on twig . . . . . 6. M. acuminata
Cucumber tree



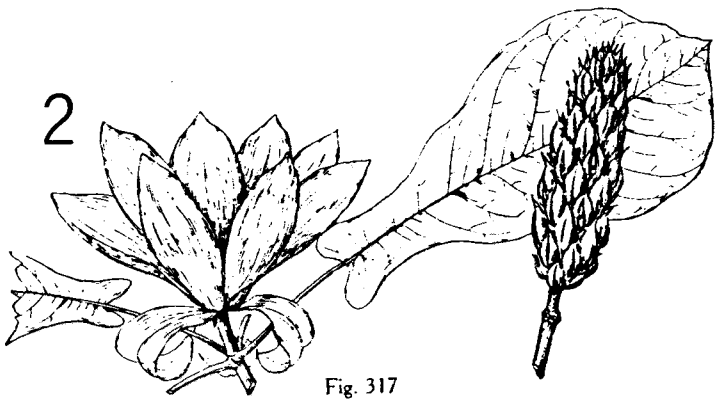
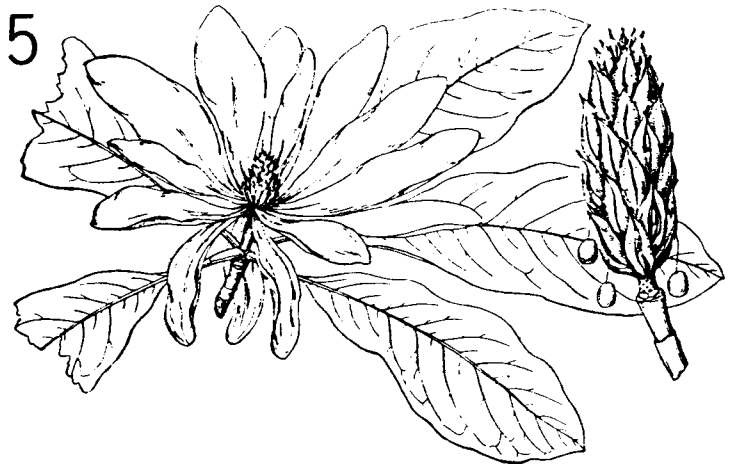


Fig. 317

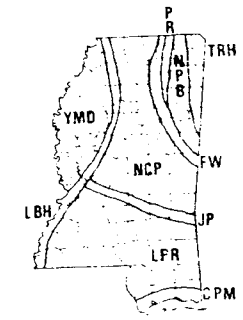








Will McDearman



PHYSIOGRAPHIC REGIONS

CPM-Coastal Pine Meadows
LPR-Longleaf Pine Region
JP-Jackson Prairie
LBH-Loess Bluff Hills
NCP-North Central Plateau
YMD-Yazoo Mississippir River Delta
FW-Flatwoods
NPB-Northeastern Prairie Belt
PR-Pontotoc Ridge
TRH-Tennessee River Hills

From the Editor

It is my opinion that an eight page newsletter is about the right length because it can be more varied in content than a shorter one. Instead of being primarily organizationally or educationally oriented it is long enough to contain a variety of articles. With eight pages, we can have a publication that will be a real treat to find in the mailbox four times each year. I am willing to work to make this happen. The newsletter is importantto me. However . . . for it to be a success it has to also be important to you. I am simply not that knowledgeable of plants, neither am I able to go on that many field trips, nor do I see that many fellow members often enough to singlehandedly write a newletter as it should be written. I will do what I can, but I really could use your help. I need:

1). . . someone to be in charge of reporting field trips. Perhaps it would be best if the leader of each trip would appoint someone to do the honors. The report should include a list of those present, a list of the plants found in each area according to their scientific and common names, along with whatever else the reporter chooses to include.

2). . . someone from each area of the state to report the personal, professional, etc. news regarding members in that area. In looking over the membership list, I see that perhaps one third to one half of our members are clustered around geographically small areas such as Starkville, Cleveland, Natchez, Jackson, Greenville, etc., whereas others are scattered all over Mississippi as well as several who live in other states. Perhaps one or two members in each clustered area could take it upon themselves to report the news in their area, whereas those of us who are scattered would report items of interest as we hear them.

3). . . members of the MNPS who are also members of other nature oriented organizations to report the coming activitiesof their groups, providing, of course, that visitors are welcome.

4). . . people to write articles about any aspect of native plant study-scientific, historical, aesthetic, medicinal, nutritional, literary, etc.

5). . . short biographical or autobiographical sketches of members of the MNPS as well as prominent (or not so prominent) botanists, naturalists, etc.

6). . . book reviews.

7). . . original poetry about native plants.

8). . . stories about experiences that you or others have had with plants such as "The Christmas I Fell Into the River While Looking for Misteltoe", or "How I Came To Love Native Plants", or "How Painfully I Failed to Develop An Immunity By Eating Poison Ivy Leaves".

9). . . articles about things not directly related to plants but relevant to their study such as how to treat red bug and tick bites, interesting places to camp, how to make a plant press, things to take on field expeditions, safety in the woods, first-aid for poison ivy, laws concerning property rights, etc.

10). . . people to type the newsletter, at least occasionally. When the possibility of me becoming the editor was being discussed, I mentioned that I do not type so Will McDearman offered to take on the responsibility of transferring my hen-scratching onto the typed page. Although Will has been faithful in fulfilling his obligation (as well as helping in many other ways) his job with the Museum of Natural Science involves field work which sometimes makes it difficult for him to get the newsletter type in time for it to go out on schedule (March 15, June 15, September 15, December 15).

11). . . letters to the editor about most anything relevant to the scope of our newsletter.

12). . . native plant crossword puzzles, line drawings, cartoons, etc.

13). . . volunteers to write regular columns about a variety of subjects.

14). . . questions about plants (thier identification, propagation, etc.) which I will either answer myself or (much more likely) submit to one of our many experts.

15). . . all those who have already promised to write articles to do it NOW.

Lovell Newby

About Beech Trees

The wooden shoes of Dutch and French peasants were made by hollowing out a block of wood, usually beech or walnut, and shaping it to fit the foot.

Because beech wood is hard, strong, very close-grained and takes a fine polish, it is used for furniture, flooring, planestocks, and tool handles. Its close grain makes it impervious to liquids and so for thousands of years it has also been used for bowls.

The habit of carving on beech trees is not a recent development. The poet Virgil wrote: "Or shall I rather the sad verse repeat, Which on the beech's bark I lately writ?"

Long years before Christ the Hindus of India wrote their ideas on beech bark and in later years battle communiques written on beech bark were carried by runners. Over 200 years ago, the American frontiersman Daniel Boone carved the following words on a beech tree near Jonesboro, Tennessee,

D Boon
Cilled A Bar
In year 1760

The native American beech has a paler bark and lighter colored leaves that its foreign relatives. It ranges from Nova Scotial to Wisconsin and southward to Florida and Texas, but the largest trees grow in the lower Ohio basin and in the southern Alleghenies. It particularly lides areas with an abundance of limestone. Given favorable conditions, it can reach a height of 120 feet and a trunk diameter of four feet, but ordinarily it doesn't grow above 80 feet.

The winter buds are about 3/4" long and golden brown. They contain not only perfectly formed leaves, but whole shoots in miniature. The flowers are seldom noticed since they are small, fade wuickly, and don't appear until the leaves are one third grown. Both pollen bearing and seed bearing flowers appear on the same tree. The seed bearing flowers form spiny green burs which contain the triangular shaped beech nuts. These burs, which serve the same function as acorn cups, break open at the time of the first severe frost dropping the tiney nuts.

The nuts are very sweet and nutritious and have long been eaten by men, animals, and birds. In parts of Europe, the dried leaves are gathered as winter forage for cattle.

These gleanings came from Trees of the South by Charlotte Hilton Green, copyright 1939, theUniversity of North Carolina Press.

Lowell Newby

Next MNPS Field Trip

The MMNS will hold a one-day field trip on Saturday, October 9 in central Mississippi. Participants should meet at 9:00 A.M. in Newton on Hwy 15 on the south side of its junction with I-20. We'll caravan toward Meridian to see some mesic ravines probably near the Chunky river. Later, we'll head east to a remnant patch of prairie, and also see a nearby stand of virgin pine. Other stops will invariably be made. As usual, bring a lunch, and dress comfortably. If there are questions, contact Dr. Sidney McDaniel (325-3120) who will be leading this fall trip.

The Mississippi Native Plant Society and the New Orleans Mycological Society will sponsor a joint field trip to the Harrison Experimental Forest, near Saucier, on the weekend of December 3-5. Although the schedule of events has not been finalized, tentative plans include a winter botany expedition led by Dr. Ken Rogers and a mushroom expedition for beginners led by Dr. Bill Cibula. Those planning to atten should beet at the Harrison Experimental Forest at 9:30 A.M. on Saturday, December 4.

Overnight accomodations can be obtained at area motels and campgrounds. Also, a limited number of rooms will be available at the Gulf Coast Research Laboratory in nearby Ocean Springs. For information concerning these rooms contact: John Izral, Rt 4, Box 111A, Ocean Springs, MS 39564, 601-826-4256.

Anyone who needs a ride, or anyone who would like to share a ride with someone else should contact Lowell Newby, Rt 4, Box 92A, Bogue Chitto, MS 39629, 601-833-3935.

Wildflower Seed

Due to last year's overwhelming response, the New England Wild Flower Society is o-fering for sale once again freshly collected seeds and spores of over 100 native plants.

This program an adjunct of the Society's world-wide botanical garden seed distribution, is intended to further the use of native plants in the home landscape. The program will continue on a year-to-year basis as long as the demand for seed remains strong.

Non-members wishing to receive the Seed Sales List should mail a stamed, self-addressed business (#10 size) envelope by Bebruary 1, 1983 to SEED SALES, New England Wild Flower Society, Garden in the Woods, Hemenway Road, Framinghag, MA 01701. No requests for lists will be honored without the stamped envelope.

"An Invitation to Our Neighbors. We are inviting members of the Mississippi Native Plant Society to join us in any and all of our meetings . . . It would be a pleasure to get to know wildflower enthusiasts from our neighboring state."

The same invitation goes from us to you, Alabamans. You can be assured of a warm welcome at all of our meetings.

More information about the coming activities of The Alabama Wildflower Society can be obtained from George Wood, Rt. 2, Box 115, Northport, Alabama 35476. Membership is open to anyone interested in Alabama plants. Dues are $4.00 a year and should be sent to: Harry L. Estes, Treasurer, Rt.7, Box 426, Cullman, Alabama 35055.

This and That

-Do you know what Jean du P. Blair, Anne Bradburn, Mr. and Mrs. Gerald Derks, Louis Freeman, Dr. and Mrs. Ronald French, Mr. and Mrs. Donald Nalty, Vivian Newman, and Dorothy Crosby have in common? Why they're all MNPS members who live in New Orleans. Other Louisianians are Mr. and Mrs. Philip J. Barbour from Baton Rouge, Mrs. Robert Griffin from Pearl River, and Stephen Harsch, Janet Ciegler and William Ellis all from Slidell. We are also fortunate to have as members from other states Josephine Robinson of Germantown, TN, and Elizabeth Hudson of Sweeney, Texas.

*John Izral, a MNPS member from Ocean Springs is the "newly volunteered editor" of The Boleten, the newsletter of the New Orleans Mycological Society.

*I recently got a lovely notecard from Joan Pitcher, a MNPS member (our vice-president even) from Natchez. Seems she has been looking high and low for a bigleaf magnolia to transplant to her home. If you can help her out, the address is 22 Sunlinda St., Natchez, MS 39120.

*The last I heard from Travis Salley of Cleveland, he was about to embark on an August vacation to Victoria, Texas, with plans to visit Elizabeth Hudson of Sweeney, Texas, on the way. How about a report on Elizabeth's garden for our next newsletter, Travis?

*I recently had the pleasure of taking a one day canoe trip down the Leaf River, near Hattiesburg, with fellow MNPS member, Barry McPhail of Jackson. We saw several waterfalls (some quite high by Mississippi standards), large numbers of ferns, and several eerie clay formations. It was an especially enjoyable trip made even more so by the fact that Barry is a Leaf River veteran, able to point out many attractions that would have otherwise been missed.

*Ain't it the truth? I read in the July newsletter of the Oktibbeha Audubon Society that Bill Cibula (a MNPS member from Bay St. Louis) gave a program to that group which was described as ". . . escellent; his slides absolutely breath taking; and the live specimens added an extra dimension".

*Speaking of the Oktibbeha Audubon Society, FRye Swan (MNPS member from Starkville) is the assistant editor and distribution chairman of their newsletter.

*Thanks to all of you who write so faithfully to send material that can be used in the newsletter. I count it a personal favor, and I get a little mushy thinking about your kindness.

Lowell Newby

Field Trip Reports

Plants seen on June 12 Field Trip

At bog north of Picayune:
1. Chrysopsis graminifolia
2. Eupatorium rotundifolium
3. Xyris caroliniana
4. Rhexia alifanus
5. Sabatia campanulata
6. Buchnera floridana
7. Rhexia lutea
8. Habenaria nivea
9. Tofielda racemosa
10. Eryngium yuccifolium
11. Lachnanthes tinctoria
12. Diodia virginiana
13. Aletris aurea
14. Tephrosia spicata
15. Stokesia laevis (Hwy26)
16. Lophiola americana
17. Linum virginianaum
18. Euphorbia corollata
19. Stylosanthes biflora
20. Sarracenia psittacina
21. Dichromena colorata
22. Eriocaulon decangulare
23. Drosera intermedia
24. Polygala lutea
25. Polygala cruciata
26. Sarracenia alata

At the Pearl River
1. Baptisia leucantha
2. Lippia nodiflora
3. Ruellia humilis
4. Saururus cernuus
5. Polygala nana
6. Phlox glaberrima
7. Polymnia uvedalia
8. Mikania cordiolia (very rare)
9. Justicia lanceolata
10. Lindernia dubia
11. Crotalaria sagittalis

At the longleaf pine area north of Purvis
1. Crotalira angulata
2. Rudbeckia serotina
3. Cnidosculus stimulosus
4. Erigeron strigosus
5. Rhynchosia tomentosa
6. Polygala grandiflora
7. Coreopsis major
8. Callirhoe papavèr
9. Silphium dentatum

John A. Izral

On Saturday, June 26, the MNPS had a field trip which began at Harned Biology Building at Mississppi State University. The trip included stops along Hwy 25 as far as Louisville, back across by Bluff Lake, stopping for a picnic at Faye Swan's lot at Land-O-Lakes. After lunch, the group proceeded to Hwy 45A stopping at a couple of points before the return trip to Starkville. During this trip, three physiographic provinces - flatwoods, black priaire, and north central hills, were visited. Thirty to forty different wildfloweres were pointed out, as well as many other plants and trees. Several different fungi were noted including agarics, bolete s, corals, stinkhorns, erthstars, horns of plenty, and chanterelles. Special thanks go to Dr. Sidney McDaniel who led the field trip.

Faye Swan

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Dr. Sidney McDaniel
Box EN
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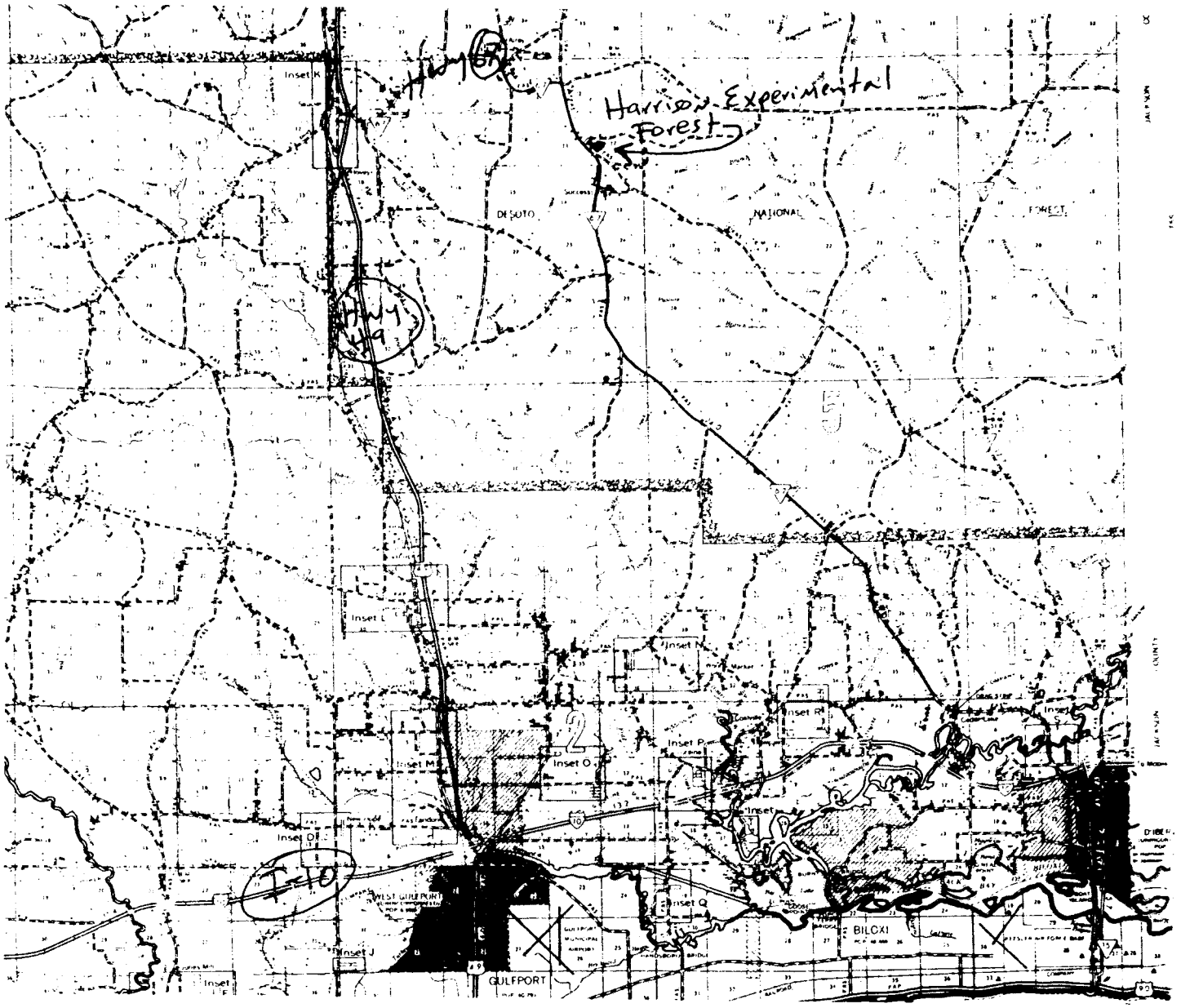
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Plant a beech tree when I go
Into God's White Fields of Snow
Plant it where the red bird calls,
Where the sunshine softly falls.

Plant it where the fireflies,
Bees, and men with tired eyes,
Turn to rest on living green,
Finding hope and light serene.



MISSISSIPPI NATIVE PLANT SOCIETY
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