MISSISSIPPI NATIVE PLANT SOCIETY

10/84

A HORN ISLAND PRIMER

The San Juan, Sangre de Christo, and Beartooth Mts. of the Rockies, the Chihuahuan Desert, the Great Basin, the Blue Ridge, and the Cumberland Plateau are just a few names that characterize prominent landforms in this country. For those that have lived or even visited these regions, the mention of their name will prompt a sharp recollection of distinctive sensations found only in such environments.

The Pascagoula and Pearl River swamp in Mississippi, though much smaller and less well known, is no less an environmental treasure. Even more remarkable are Petit Bois, Horn, East Ship, West Ship and Cat Island. Unfamiliarity with this chain of barrier islands off the Mississippi coast is understandable. Being the most remote and inaccessible natural area in the state, few people have had an opportunity for a visit.

The Mississippi barrier islands are a link in a chain of about 50 islands that stretch from northern Florida westward to northern Mexico. Although they share basic environmental features, each island is distinctive owing to the complex interaction of events responsible for its formation, maintenance, and degradation. Horn Island, situated approximately 10 miles south of the coastline at Pascagoula, is the larges and probably most exemplary of the vegetation in the Mississippi barrier chain.

The Mississippi Native Plant Society field trip to Horn Island on November 3 is an unmistakable opportunity to visit one of the most novel ecosystems in our region. Administered by the U.S. Park Service-Gulf Islands National Seashore, Horn Island, along with Petit Bois Island, are Mississippi's only representative in the U.S. Wilderness System. By an act of Congress in 1978, under the authority of the 1964 Wilderness Act, Horn Island became a legally designated wilderness area. A federally protected wilderness area is defined as an area "where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain". Wilderness area must also be "affected primarily by the forces of nature with the impact of man's work substantially unnoticeable, and has outstanding opportunities for solitude or a primitive and unconfined type of recreation". The special combination of a beautiful wilderness environment with an unusual array of vegetation and plants will provide for a special field trip.

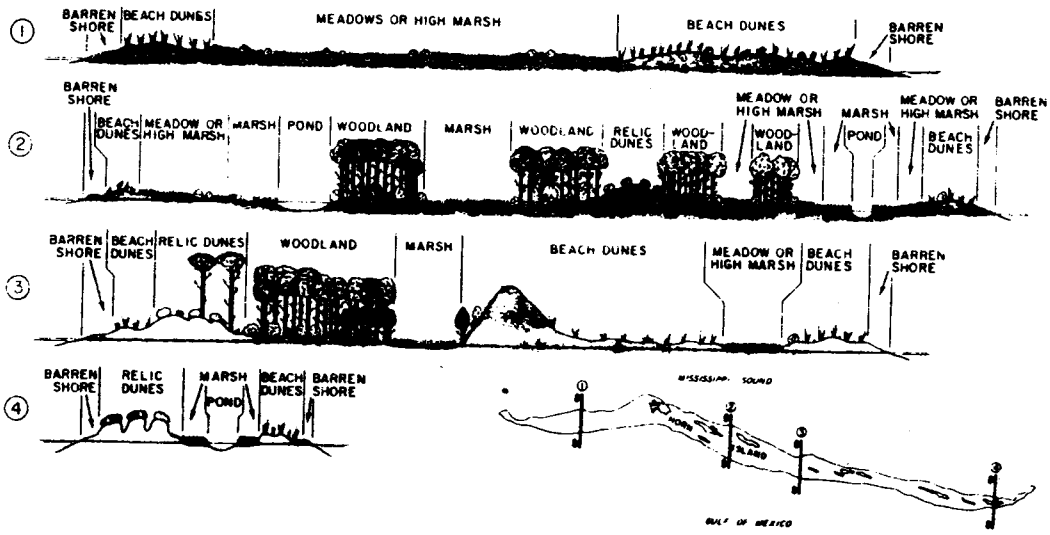
Extensive dune systems are the most obvious habitat on the island. Dune plants must tolerate salt spray, dry sandy soil, and a shifting substrate. Common dune species include sea oata (Uniola paniculata), beach grass (Panicum amarum), Andropogon maritimus (sp. of broomsedge), Ipomea stolonifera (sp. of morning glory), and Iva imbricata (sp. in sunflower family).

Relic dunes and dune ridges are remnants of what were once primary dunes near lines. Relic dunes are generally sheltered from normal storm surges and ish that affect fore- and rear dune systems. Their relative stability is in- d by additional species such as the characteristic sand rosemary (Ceratiola des) and prickly pear or cactus (Opuntia compressa).
In contrast to the dry dune habitat are the estuarine marshes and freshwater is that meander throughout the island. Needle rush (Juncus roemerianus) and ass (Spartina alterniflora) typify the salt marshes while cat-tail (Typha ifolia) dominates the lagoons and ponds.
Swales or meadows situated between dunes and marsh are indicated by the abun- of sea-myrtle (Baccharis halmifolia). Species found in dunes and marsh often mingle in these meadows.
Woodlands consist principally of slash-pine and a few widely scattered live

Although the vegetation is more diverse than suggested by the above sketch, brief description should provide suitable orientation toward the essential es of the island. Over 200 species, many of which are endemic to island and habitats, occur on Horn Island.
The boat will depart from the dock behind the Buena Vista Hotel in Biloxi at A.M. Bring lunch. Boat fare for members is $10.00/individuals, $16.00/ s, and $20.00/families. Cost for non-members is $15.00 and student non- s is $10.00. Rooms are available at the Gulf Coast Research Laboratory Dorm .00 per person per night. You must provide linen. For a dorm reservation, payment to Travis Salley, 202 N. Andrews Ave., Cleveland, MS 38732 (843-2330) tober 25. We encourage advance payment of boat fare to be mailed to Travis. Fare will be accepted dockside for those unable to make advanced reservation. of room - so come.

OFFICER NOMINATIONS

ominatingcommittee has selected the following slate for the 1985 election: Ellis-President, Marita Smith-Vice President, Travis Salley-Sec./Treasurer, e Timme-Editor. Instead of mailing ballots to the membership, the election held this year during the upcoming Horn Island field trip. If you have nations, objections, or comments on the process, please contact Robert President.



An illustration of the vegetation on Horn Island from selected cross-sections. Taken from "A Phytosociological Study of Horn and Petit Bois Islands, Mississippi" by Dr. Lionel Eleuterius

THROUGH THE NEW YORK BOTANICAL GARDEN LOOKING GLASS

Wildflowers of the United States, Volume 2, The Southeastern States
By Harold William Rickett

Thanks to the generosity of Peggy and David Rockefeller and others, Dr. Rickett has compiled unprecedented volumes of wildflowers in the United States. Volume two is a two part set of the Southeastern wildflowers. Beautiful, informative and well organized, they are intended for amateur naturalists.

Lovely photographs of wildflowers are the most enticing feature of Rickett's work. Numbered, colored plates individualize each flower and show its relationship to related species. There are six or seven photographs per plate.

The books also give a detailed plant description that is helpful in identification. Flower, fruit, leaf and stem parts are illustrated and labeled. A discussion of flower diversity and flower arrangement on the plant, essential to understanding plant taxonomy, is explained. A glossary is included. Rickett also informs the reader on the Latin binomial naming system, reminding that it is "the only practical means of dealing with the vast and varied plants of the world."

Rather than looking at masses of photographs to identify a plant, a classification system for Southeastern wildflowers is presented. The system is made up of fifteen groups of families. Grouping is based on natural relationships such as sepal and petal number, stamen arrangement and other easily distinguishable characteristics. A dichotomous key guides inquirers to a specific group. Each group is broken down into families. Genus and species are derived from more detailed examination of a plant. Although the key is the most common approach to plant identification, knowing certain characteristics can "short cut" the process. Rickett shares this information along with many other facts. A comprehensive look at his volumes yields a beautiful and wonderfully complete look at the Southeastern wildflowers that will be of great value to those who enjoy studying the flora of this region.

---Katherine P. Crump

CONFERENCE ON THE USE OF NATIVE PLANTS FOR BEAUTIFICATION PROJECTS

July 26 through July 28, I attended a conference in Cullowhee, N.C.
rning the use of native plants in beautification projects. Presentations
ed a wide range of topics from discussion of propagation to methods of
ng with state highway officials. My over-all impression was that every-
was interested in forming some sort of special interest group that can
information and resources concerning native plants.

r than try to recreate the three day event, I will try to give you a feel
iat happened by relating my impressions about the presentations and some
ies of conversation that I had with various people at Cullowhee.

event was loosely organized on purpose, and I think successfully so.
er the organizers nor the participants were sure who the audience would be
iere their interests would lay. So plenty of time was left for unorganized
rsation between participants. In a surprisingly short time, we began
ig common interests and goals among us. We all agreed that thereis a need
ore exchange of information, in the broadest context, in the uses of native
s. To that end, Western Carolina University (the host) and The Tennessee
Authority (TVA was the major source of support) will publish and
ibute to the participants a source book containing the names, addresses,
pertise of everybody who attended and submitted that information. I think
this will be a very useful book for the native plant enthusiast as well as
iment of industry personnel concerned with the uses of native plants in any
ct, from beautification to reclaimation.

re a very diverse gathering. There were large numbers of gardners, garden
ers, seedsman, nurseryman and landscapers, botanical garden and arboreta
sentatives, biologists, and bureaucrats. I haven't seen a head count, but
imate there were over 250 persons present.

most impressed by the biologists who represented TVA. They were knowledgeab
botanically and in the byzantine nature of bureaucracies. They have extensiv
edge concerning natural area management and reclaimation projects. There wer
government biologists present from several state and federal agencies, mostl
the eastern or north central states. They were very interested in finding
iat aspects of their jobs were of most interest to the rest of us.

ajority of participants were interested in promoting the use of native plants
highways. There was a considerable amount of detailed discussion of mowing
s, erosion control, and the inner workings of the civil engineers mind. The
isus was that projects should start small, as at state Welcome Centers,
ogressively include more area as expertise is gained in the management
projects. I was pleasantly surprised by how favorably people regarded
ghways of Mississippi. I don't know anything about our highway depart-
but everybody thought they were headed in the right direction. Now if
ild just eliminate the litter...

mmercial representatives were a small group trying to find out what
ers wanted and trying to find ways of promoting the use of natives in
s. They were aware of the problem posed by some operations that collect
s from the wild to sell. I spoke to several who are actively involved
pagation efforts (some quite scientifically set up). There were lively
sions about the ethics in withholding that information from the public.
a trade secret that, if divulged, will result in the loss of business?

Loss of business is very serious for them as there is such a small market for most native species.

Before I conclude, I must say how proud I was of Travis Salley. He gave a beautiful slide show (most of you are aware of his photographic talent) and an interesting and entertaining presentation. I was asked many times by others, "who is that guy?". They were sure that he was "Somebody".

There is a very large, almost completely disorganized, highly motivated bunch of native plant militants out there. Western Carolina University and The TVA successfully brought us together and started the communication needed to form a larger, perhaps national, organization of people like those that are members of The MNPS. The TVA representatives are going to try to fund a similar event in the future. WCU wants to host it, but other people who were present seem to want that responsibility as well. If another meeting takes place, I hope to attend. I also hope that all of you in our organization will attend. At this stage it is very important for all of us to look at our sister organizations, at our neighboring state officials, and each other to see what we can do as a group for the preservation and use of native plants and their natural environment.

Chris Wells

THE CACTUS OF MISSISSIPPI

The cactus family in Mississippi is represented solely by the genus Opuntia, which is characterized by succulent fleshy or thickened flat or compressed segmented joints furnished with areoles over it's surface and bearing tuffs of hair or wool, minute barbed spines colled glochids, deciduous succulent green leaves, and the presence or absence of spines. The flowers arise singly from the upper and marginal areoles and are characterized by an inferior ovary bearing a hypanthium supporting intergraded sepals and petals and attached at a point called the umbilicus to the ovary. The single style supports a lobed stigma and numerous stamens are also present. Fruits are few to many seeded and often edible. The seeds possess a hard seed coat and are margined by a corky aril.

Being poor competitors except in arid situations due to their great specialization, the Opuntias are scattered throughout the state and may be commonly found growing in habitats which are unsuitable to most other herbs, shrubs, and trees either due to aridity, a porous substrate, or salinity. The Opuntias are typically the first or an early invader into new habitats that offer greatly reduced competition and the environmental factors that favor them over other plants not so equipped to deal with aridity, among other factors. Such suitable habitats are typically badly eroded fields and roadsides, sandbanks, xeric forest clearings or roadsides, shell mounds, beaches, gravel and sand mining operations, and saline soil produced from oil well drilling operations. Owing to the great popularity of the entire cactus family, the Opuntias may be found well removed from these habitats.

Great diversity exist among the Opuntias as they are freely played upon by genetic and environmental factors. Cultivated plants often lack the characteristics of the plants found in natural habitat. Plants in shade may be totally spineless while those in full sun may have vicious spine armament. Hybrid swarms are the rule rather than the exception. Owing to these factors, botanists have in the past created far too many species and have given species status to hybrids. However, taxonomic study of the Opuntias is most difficult with all factors taken in consideration along with the very short flowering periods. I am then forced to give broad species descriptions so as to take in most of the possibilities that may be keyed. No single description can be taken as truth entirely if one is to taxonomically complete the task of discerning Mississippi's Opuntias.

ts prostrate or spreading; joints mostly small, 2.5 cm. up to 16 cm. long; es wanting or 1 to 4 per areole, mature spines white, brown, or gray.

Joints freely disarticulating; spines mostly 2 to 4 per areole . . . . . 1. O. pusilla

Joints not freely disarticulating, or disarticulating but with spines not more than 1 per areole . . . . . 2. O. humifusa

ts erect, bushy or spreading but never prostrate; joints mostly large, . up to 40cm. long; spines wanting or 1 to 10 per areole, often strong occasionally tortuous, mature spines yellow to yellow brown, occasionally e.

Joints with spines mostly over 2.5 cm. long or wanting; stigma lobes white; fruit red to purple, 4 to 7.5 cm. long, pear shaped to subbglobose, constricted at base; seeds large, 4.5 to 6.0 mm in diameter; plants of outer coastal plain, frequently cultivated . . . . . 3. O. stricta

Joints with spines mostly under 2.5 cm. long or usually wanting; stigma obes green; fruit re fiolet, pyriform to oblong, 3.5 to 6 cm. long, not constricted at base; seeds small, 3 to 4 mm. in diameter; cultivated plants, less frequently escaped from cultivation . . . . . 4. O. lindheimeri

ia pusilla - Plants of outer coastal plain in Mississippi. From North ina, Florida into West Indies into Mississippi. Old gravel and sand beaches, sandy woods near coast.

Opuntia humifusa - a viariable hybrid possessing the characteristics of . 1 but with obovoid to ovate joints; often forming spreading manifestly iny mats. Most plants in our area are actually la., but colonies are ten mixed between the species and the hybrid.

ifusa var. humifusa - joints with spines wanting or abundant on upper s, 1 per areole. Joints not glaucous or only slightly so. Plants with nt spines usually have orange to red glochids. Plants of central and east- S. into Canada, throughout Mississippi. Eroded fields, dry roadsides, odlands in clearings, sandhills, less frequently outer coastal plain.

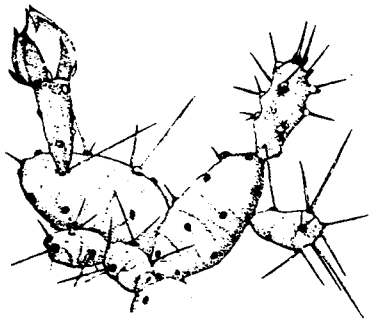
ifusa var. austrina - joints with 1 stiff pungent spine from most of the areoles, never wanting, always abundant. Joints glaucous, blue-green, roots tuberiferous. Plants of outer coastal plain of Mississippi and ew Jersey to Florida to Mississippi. Sandhills, beaches, sandy open woods oast.

usilla - hybrids with the characters of O. humifusa va. austrina, but with te, oblong to oblanceolate joints. Joints freely disarticulating or dis- lating from only young joints.

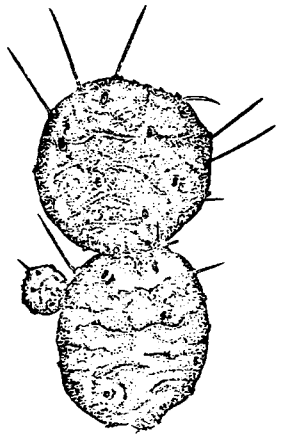
3. O. stricta - - most plants in our area are hybrids between two varieties, O. stricta var. stricta and O. stricta var. dillenii. True species are found in tropical Florida, West Indies, and along the western coast of northern South America. In Mississippi, plants occur in cultivation, on shell mounds, beaches, coastal ha-mocks, and sand dunes.

4. O. lendheimeri - very variable plants with many varieties and hybrids. Often confused with O. stricta where the ranges overlap in coastal Texas and Louisiana. Mostly cultivated plants, occasionally escaping in Mississippi. Plants are native to western coastal Louisiana and inner southern Texas.

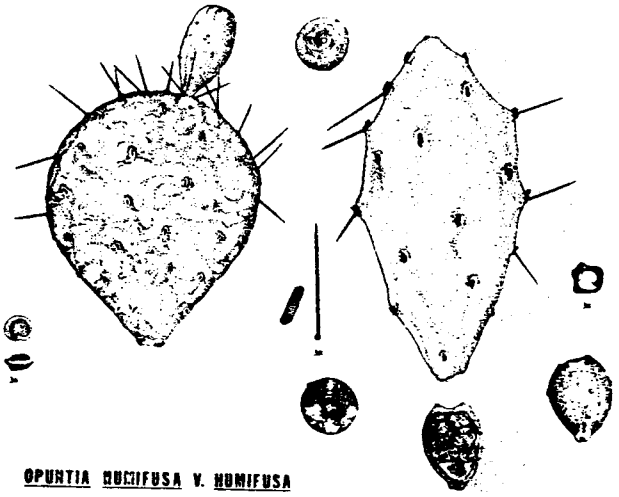
Barry Snow



Opuntia pusilla Haworth

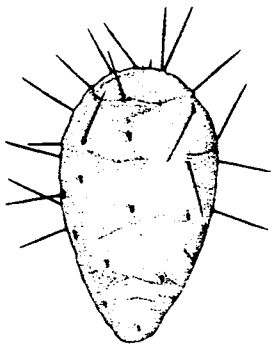


Opuntia humifusa Raf.

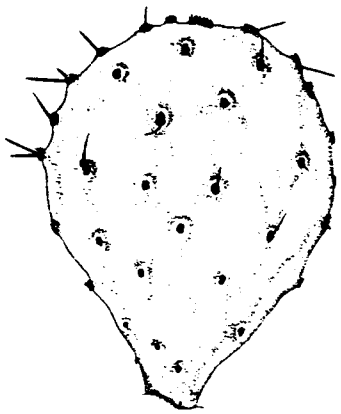


OPUNTIA HUMIFUSA V. HUMIFUSA

Opuntia stricta Haworth

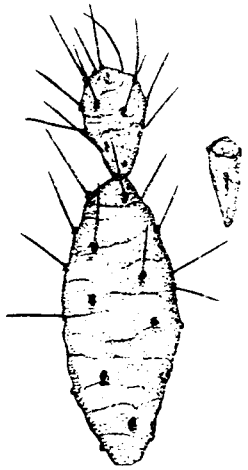


Opuntia humifusa Raf. variety austrina (Small) L.Benson

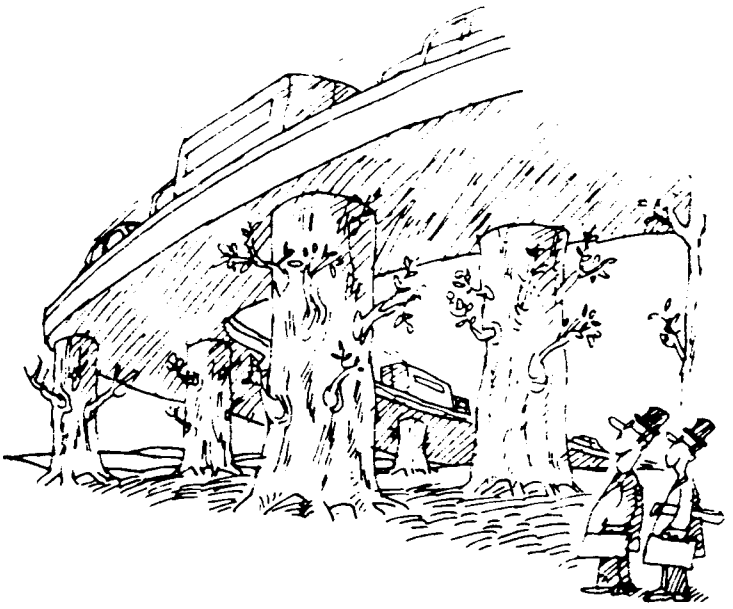


Opuntia stricta Haworth

Opuntia lindheimeri Engelm.



O. humifusa v. austrina X O. pusilla hyb.



"As you see, we've preserved as much of the centuries-old forests as possible."

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