FROM THE EDITOR:

This is the time of year when gardeners reap the harvest of spring labors. Vegetable growers are busy processing tomatoes, squash, and beans. Native plant enthusiasts are collecting and processing seeds, weeding out undesirable plants, and planning for the busy fall and spring plant propagation and planting period.

There has not been a lot of research on native species when compared with vegetable crops or the more widely cultivated Eurasian species. A common approach to native plant propagation has been the trial-and-error method. Too often, I think, there is a failure to communicate what has already been learned by others. Running headlong without prior knowledge can be rewarding when new ways of doing things are discovered, but can be frustrating and time-consuming to many. It is always nice to know what others have found to be helpful. To help make native plant propagation a little more productive, this issue contains a "slice" of the wealth of propagation information available, in addition to our regular news.

AMATEUR AND PROFESSIONAL PROPAGATORS. Keep MNPS in mind as you collect seeds and propagate plants. Our group has a full schedule of activities planned for the near future that require your help. One is for seeds and plants of sun-loving, drought tolerant wildflowers and native grasses for the roadside wildflower meadow sponsored by MNPS, MSU Campus Landscape Dept., and the City of Starkville. Another is for woody plants and hardy perennials for a project begun at Tombigbee National Forest (see story this issue). A third is for contributions to plant sales to support statewide MNPS educational activities (including local native plant conservation and wildflower displays) and our 2-day spring field trip.

HIGH SCHOOL ESSAY CONTEST. Volunteers with ideas are needed to draft a flyer to advertise the MNPS statewide essay contest. Educators, prominent community leaders, and experienced organizers are especially needed. See May 1990 MNPS Newsletter or call Vic Rudis for details.

MYNELLE GARDENS. MNPS has pledged $150.00 for the purchase of native plant materials for a Jackson area display. A matching grant from the Garden Group of Mynelle Gardens will provide $300.00 toward landscaping the MNPS-sponsored Native Plant and Wildflower Garden.

STATE WILDFLOWER INITIATIVE. The Clarion Ledger, June 20, has an article which describes the efforts of Halla Jo Ellis and the Garden Clubs of Mississippi to establish an official wildflower for the State. Coreopsis sp. has been chosen, based on a consensus of opinion, including MNPS members. Next step is getting legislators to draft and sponsor a bill in January for action in the 1991 session. Keep up the good work, Halla Jo!
GROWING MIGHTY OAKS FROM ACORNS

The genus Quercus is one of the most far-ranging and economically important group of trees in North America. Of the 68 or so species native to the United States, over 25 are found in Mississippi. Oaks are popular landscape trees, and many residences acquire additional economic value when shaded by large, spreading oak trees.

Homeowners can easily propagate and grow their own seedlings, but the seeds require special handling. Acorns fall into the group of seeds commonly described as "recalcitrant," which means they are intolerant of dessication. While other seeds like pines, dogwood, and many wildflowers, can be stored easily in refrigerators or freezers when dried to about 10 percent moisture, recalcitrant seeds are killed if their moisture contents fall below 20 to 35 percent. (Sugar maple and red buckeye are other recalcitrant species in Mississippi.)

All acorns are not the same. Acorns of the white oak sub-genus contain about 40 percent moisture at maturity; acorns of the black/red oak sub-genus contain about 30 percent. The "lethal" limits are approximately 35 and 20 percent respectively. Storage below freezing at these moisture levels is also lethal to the acorns, so they must be stored above freezing.

Acorns can be collected from the ground after they fall, or they can be picked by hand from the branches. If collecting from the ground, ignore the first to fall -- they are typically immature or damaged by insects. If collecting from the branches, take only those acorns that slip from their cups when touched lightly. If you have to pull on an acorn to remove it, it is immature. In Mississippi, acorns generally mature in October and November. Acorns on lower branches usually ripen before those in the upper crown of the tree.
After collection, all acorns should be floated in water. Those that float should be discarded, and the sinkers kept. If acorns were collected from the ground during a very dry period, then all may float at first. Let them soak overnight, then sort the good ones from the bad. Soaking is also beneficial because it keeps the moisture content high. After floating DO NOT allow the acorns to dry. Don't even surface-dry them! Plant them immediately, or store them for later planting.

Acorns of the white oak sub-genus in Mississippi store very poorly, so they should be planted immediately after collection. A planting depth of one inch is best. Protection from rodents is usually necessary, even when the acorns are planted in containers. Covers of hardware cloth do very nicely.

Acorns of the black(red) oak sub-genus also may be planted in the fall just like the white oaks, but the dormancy in these seeds will allow storage for spring planting -- a practice that reduces exposure to rodents prior to germination. With proper care, these acorns can be stored for up to 3 years. To store them over winter (or longer), place the acorns in polyethylene bags with walls about 4 mils thick (common heavy-duty freezer bags), and place the bags in a refrigerator that is set on 34 to 40 degrees F. Thinner bags allow too much moisture loss in frost-free refrigerators, unless water is added consistently. Thicker bags or glass jars do not allow escape of the carbon dioxide that is given off by respiration. Acorns must be allowed to "breathe" during storage.

When planting time comes (March or April), put the acorns into the ground just as in fall planting. Although tender handling is necessary to avoid breaking, this is not usually a serious problem, as normal seedlings will be produced from axillary buds.

Infestation by several species of Curculio weevil is common; many larvae will emerge during cold storage. It is best to ignore them as they cannot infest other acorns once they emerge. As long as they have not destroyed the embryonic shoot or root, a seedling still can be produced.

FOR PARENTS AND TEACHERS: A great way to introduce children to the fascination of tree biology is to grow seedlings in a shallow dish of water on a windowsill. Carefully remove the outer seed coats from the acorns and place them in about 1/4 inch of tapwater, cup scar end down, and the pointed-end up. Place the dish in a windowsill that gets lots of light, and maintain the water level. Remove any acorns that begin to support lots of mold or fungi. Once they are up and growing, the small seedlings will live for weeks on food stored, plus what they produce with sunlight and their own leaves.

FOR MORE INFORMATION: Readers interested in more technical details about acorn biology should consult "Seed biology and technology of Quercus," USDA Forest Service, General Technical Report SO-66, (21 pages.) Most university libraries should have a copy. If you can't find it, the publication is available without charge from the authors: Drs. F.T. Bonner and J.A. Vozzo, Forestry Sciences Laboratory, 201 Lincoln Green, P.O. Box 906, Starkville, MS 39759-0906. -- FRANK BONNER
MNPS members from time to time have expressed concern about the incongruity of exotic plantings in otherwise "natural" parks, camping areas, and roadside rest areas on public land. Public agencies have been receptive to these concerns, but have reservations about removing established plantings for less well-known, smaller, and potentially more fragile, native species in developed areas. Changing established practices in the mind of any land manager -- private or public -- is difficult without proof of success or reducing risk in adopting alternative practices.

Under the USDA Forest Service's Challenge Cost-Share Agreement, there is an opportunity for MNPS members to assist in increasing the use of native plants in developed areas of National Forests. The MNPS and the U.S. Department of Agriculture, Forest Service, Tombigbee Ranger District, recently signed an agreement to help propagate native plants for the Tombigbee National Forest (TNF). The TNF will provide up to $300.00 to finance the purchase of propagating materials (pots, potting soil, etc.) and travel costs to-and-from the TNF for plant collecting.

The agreement provides an opportunity for MNPS members to collect seeds, take cuttings, make divisions, and to grow native plants. [A small group of responsible students headed by an active MNPS member would be eligible as well.] Half of the plants propagated under this agreement are to be returned to the TNF to enhance the "native" character of the landscape in developed areas (around the campground, swimming and boating areas, and service buildings).

MNPS and TNF desperately need your assistance in this effort. You can help by providing equipment, greenhouse space, nursery beds, organizing a collecting trip, or simply nursing along a few plants for a year until they're big enough to be planted outside. While only a part-time hobby grower, I have donated a tray of Coreopsis grandiflora, 4 Corylus americana (hazelnut), and 6 Aesculus pavia (red buckeye) -- to replace some of the exotics that had died.

Please note that the funds must be allocated prior to September 30, 1990, with propagated plants provided at a later date. If the agreement and outcome are successful, there is a chance that additional funds will be available in the future. Give me a call so that I may discuss agreement details, as well as put you in touch with TNF staff. If you think you can assist in any way, call 324-1611 (days). -- VIC RUDIS

BOOK REVIEWS: PLANT PROPAGATION


A third of the book deals with the basics of propagation by seeds, grafts, cuttings, and tissue culture. The remaining two-thirds is an encyclopedia of up-to-date propagation tips on over 1000 species, varieties, and
cultivars of woody plants -- including many native species. To me, this is its greatest value. Much of the information is distilled from more technical journals, as well as from previously unpublished tests and careful observations at the Arnold Arboretum, Penn State University, and the Georgia Botanical Garden, with which the authors have been affiliated. Articles in publications of the International Plant Propagators' Society, among others, are cited where applicable for readers interested in more details. This book would make a splendid addition to college, high school, and community libraries.


This masterful book contains a step-by-step guide to native wildflower propagation. Unlike the book by Dirr and Heuser, this one is clearly intended as in-home reference material for the general public. In addition to instructions, the book contains numerous line-drawings and many tips on cultivation and ornamental values, drawn largely from pioneering research at the North Carolina Botanical Garden. -- VIC RUDIS

NEW PUBLICATION

The United States Forest Service has recently published a series of maps illustrating the distribution of over 90 tree species or genera encountered while surveying forest resources throughout the South Central states. The areas depicted represent private and public timberland areas in Alabama, Arkansas, Louisiana, Mississippi, east Oklahoma, Tennessee, and east Texas. MNPS readers may remember similar maps for selected Mississippi tree species in the August 1989 newsletter.

The new publication is entitled "Distribution maps for Midsouth tree species," by R.C. Beltz and D.F. Bertelson. Resource Bulletin SO-151. Copies can be found at most university libraries. If not available, or if you desire a personal copy, contact the Publications Office: Southern Forest Experiment Station, Room T-10210, 701 Loyola Avenue, New Orleans, LA 70113.

[Map of White oak (Quercus alba)]
THE GROVE IN MERIDIAN

When I began teaching horticulture at Meridian Community College a few years ago, I had difficulty finding places I could take my classes to look at native plants. I was even more confused when other instructors began telling me to "Go to the Grove." The Grove, it seems, is a Meridian institution. It is an area of native plants across from Meridian High School. It was planted, I was told, by a botany teacher long ago whose goal was to represent every kind of plant which grew in Mississippi.

The Grove proved to be a useful place to take my Plant Materials class during the fall to study fall foliage color. A wide variety of trees are present including American beech, bigleaf magnolia or cowcumber, white oak, sourwood, black gum, hickory, hornbeam, tulip poplar, and cottonwood. Here my students learn the useful skills of recognizing and avoiding the poison ivy which creeps over every path.

I did not visit the Grove in Spring until this year. A friend insisted that I must get my camera and go with her to see the Atamasco lilies. I had never seen such a mass of lilies before. There were thousands -- an undulating ribbon of white that rippled among the trees. The glistening lilies were complimented perfectly by patches of blue Louisiana phlox and blue-eyed grass. We were lucky enough to experience what my friend, John Edmondson, calls "the magic hour" as the slanting late afternoon sunlight shimmered on the white petals.

Atamasco lilies (Zephyranthes atamasco) are also called wild Easter lilies. They are found in the wild mostly in moist woodlands, and, in the Grove, they seem to meander alongside a trickling glenn. They have grassy leaves and an underground bulb. The lilies are about eight inches tall and fragrant. The original planting of these lilies may have been quite small, but the lilies reseed themselves if they are happy. They are obviously well-adapted here.
The lily and phlox combination was most striking, but the Grove was also full of other less obtrusive flowers. That same day I saw trillium, the lilting stems of Solomon's seal, bellwort, deep blue spiderwort and the glossy heart-shaped leaves of wild ginger. I saw colonies of mayapples with their umbrella-like leaves and tiny cream flowers hidden beneath and the emerging fiddleheads of native ferns.

In my wanderings, I found a network of overgrown paths and several sets of rock steps. All the paths were well laid out and the steps well-constructed. I've begun piecing together a little of the history from the accounts of Jack Shank, Meridian's historian, and a few others. Meridian High School was completed in 1937, and the Grove was begun that same year. Dr. Ivy, the principal, probably conceived the idea of a living botany laboratory, and Mrs. Chiles, a self-taught botanist, was in charge of the project.

Mrs. Chiles, who was known by everyone as "Miss Annie", had already completed one community service project. She and another lady, a Mrs. Temple, had made an arboretum at Highland Park. Several of the trees at the park are still labeled with concrete markers bearing the date 1936 and an amphitheater made of rock stands close by.

Moving rocks is hard work, and tons of rocks have been moved to create both the amphitheater and the steps at the Grove. The only reason the Grove's paths are still visible is that they are all lined on both sides with rocks. How in the world did these two ladies move all those rocks?

Well, it seems that Miss Annie was not only a botanist, but a skilled motivator of teenagers. She taught a teen-aged boys' Sunday School class at First Baptist Church and recruited them into her workforce. Together with her old Dodge touring car, she transported the boys to and from the Grove, and had them transplant all the plants that were added the Grove, and to move the rocks. I'm sure those boys got a botany lesson, as well as physical exercise and practical experience in community service, as part of the deal.

Over the 43 years since its establishment, Miss Annie's lilies have multiplied with little effort. This year's Atamasco lilies have faded, the mayapples have dropped their blossoms and gone to seed. Occasionally there is talk of turning the Grove into a parking lot. Yet I am intrigued by the potential of the Grove.

In April I went to Meridian High School to meet with a group of science teachers who use the Grove, and with some members of a club considering adoption of the Grove as a public service project. Right now the Grove is only being used by a few "oddball" plant nuts like me. We hope to clear the poison ivy and wisteria off the paths so that the Grove will be used again by the community. Miss Annie made the diversity of nature accessible to her community; she also introduced a lot of kids to the wonders of plants. I'd like to see her work continue. -- GAIL BARTON
GROWING JEWELWEED FROM SEED

One of the surest signs that summer has arrived in central Mississippi is the appearance of the first few bright red-dotted, orange blossoms of touch-me-not or jewelweed. This wildflower annual is an aptly named "jewel." The brilliant corollas do seem to sparkle -- almost -- on thin, graceful, arching pedicels amid the cool, soft green of the slightly scalloped foliage.

Among the habitats where this Balsam family member is native are low, moist, shady sites along streams, swamp borders, roadside ditches, and in open woods. Flowering begins as early as June 4 in central Mississippi. Large stands often attract hummingbirds during the peak of blooming in August and early September.

Jewelweed (Impatiens capensis) is easy to grow from seed in the wildflower garden if a shady spot with moist soil is available. Plants growing in too much sun take on an anemic appearance. By locating a stand of jewelweed in late summer and checking periodically, one may collect seeds as they mature. They become blackish and visible inside the somewhat translucent capsules as they ripen.

Collecting seeds is a simple process of carefully bending the capsule-laden stem into a large paper bag, and allowing the seeds to accumulate in the bottom of the bag. Like the commonly cultivated Patient Lucy (Impatiens sp.), mature capsules explode at the slightest touch.

The seeds may be scattered the same day they are collected, in a spot where they are to be grown for overwintering. [I have been unsuccessful at storing jewelweed seeds for any length of time. Seeds stratified in moist peat moss in the refrigerator sprouted in mid-winter!] A cursory raking of the soil helps achieve better seed-soil contact. Seeds also may be lightly covered with soil or leafmold.

The seedlings, instantly recognizable in late winter or early spring, transplant easily when very small and the weather is still cool and damp. If there is a down side to growing this native plant, it is that, once grown successfully, it reseeds everywhere -- in the lawn as well as in the flower bed where originally planted. But the excess is easily shared with friends or simply pulled out, for jewelweed has a shallow root system.
Under good conditions, jewelweed grows to 30 inches, but sometimes it reaches 3 to 5 feet. Some sort of support may be desirable to prevent blowing over during gusty thunderstorms. One solution is to sow the seeds under and around small, twiggy branches left over from pruning chores; the plants then can grow up through this natural support system. However, jewelweed still will produce a profusion of blooms even when blown over on its side.

A stand of jewelweed is just the thing for the north side of a building or a dark corner of the yard that is too shady for much else to grow. A few plants also make interesting additions to a border of cardinal flower, native fern species, jack-in-the-pulpit, and other moisture-loving wildflowers. Jewelweed makes a handsome addition to more formal flower displays, as at the National Zoo in Washington, D.C. -- JOE MCGEE

ONLY NATIVE WILDFLOWERS PLEASE!

The dramatic increase in the popularity of wildflowers over the past 10 years has created considerable controversy about planting "native" vs "non-native" plant species among ecologists, environmentalists, nurserymen, and landscape designers. The controversy warrants examination.

Native wildflowers are defined as indigenous flowering plants that are capable of surviving in the wild. But how does one define "indigenous"? Opinions vary widely. In general, however, wildflower species are accepted as indigenous to a specific area in the United States if they have been growing there since at least 1850.

There are many benefits of planting only native wildflowers. Natives play a role in defining and enhancing the character of the landscape. Once established, natives are more likely to persist than non-natives. Preservation of the original, natural environment is reason enough for purists -- many of whom recommend planting only seeds collected or harvested within a 50- to 200-mile radius of a given site.

The main drawbacks of the natives-only approach are cost and availability. On a local level, purchasing special equipment for planting, harvesting, and cleaning is usually cost-prohibitive for large scale commercial production. Hand-collecting of seed in the wild is an option, particularly for small scale production. In many situations there is no other choice for the propagation of some native wildflowers. Some species, however, do not produce viable seeds in marketable quantities sufficient to make the effort practical.

Customers' taste relative to cost and availability often dictates what sells and what doesn't sell. A frequent request is for a quick, visible display that is attractive, colorful, reliable, and inexpensive. While using natives is preferable, many regions simply do not have native annuals or commercially available perennial seeds. In these situations, the use of non-native annuals and short-lived non-native perennials as so-called "nurse" crops are recommended. This is to provide first-year color and to control weeds until native wildflowers become established.
Questions abound. Which wildflowers are truly native? Which non-natives will prosper or become invasive in my area? How can I select the best mixture for my garden, meadow, or roadside? There are no easy answers. Research to meet the demand for native species is ongoing, as is research on associated wildflower planting rates, weed control, soil preparation, and maintenance.

[Adapted from: The Wildflower Group of the American Seed Trade Association, 1030 15th Street, NW, Washington, DC 20005-1593] -- VIC RUDIS. They would be delighted to hear from you if you have comments or questions.

CALANDER OF UPCOMING EVENTS

AUGUST 11 - THE 4TH ANNUAL MISSISSIPPI NATIVE PLANT CONFERENCE. Hinds Co. Extension Auditorium, Wilson Ave., near Hinds General Hospital, Jackson, MS. 12:30-5:00 PM. Talks by MS Nature Conservancy on efforts to preserve natural ecosystems, Gail Barton on native vines and other plants for specific settings, Robert Poore on creating water features in landscape designs, and a videotape presentation by Dr. Northington (Director, National Wildflower Research Center, Austin, TX) given at the 1989 Birmingham Native Plant Conference. With the Garden Group for Mynelle Gardens. Contact: Felder Rushing 601-982-6542.

LATE SEPTEMBER/OCTOBER. Plans are being made for initiation of the roadside wildflower meadow project near MSU (Feb 1990 Newsletter) as well as a field trip to a native prairie in the Starkville area. Watch your mail box for a special notice to be issued.

OCTOBER 17 - 35TH LANDSCAPE DESIGN SEMINAR. At the Wise Center Auditorium (Veterinary School), Blackjack Rd., Mississippi State University. 8:00AM-12:30 PM. Sponsored by The Garden Clubs of Mississippi, Inc. Illustrated slide lectures on the use of annuals, perennials, and ornamental grasses in the landscape; garden design; and design and use of walks, fences, shelters, and other structures in the landscape. Speakers are P. Duncan Callicott, landscape architect and horticultural consultant, Nashville, TN; and Edward C. Martin, Jr., Professor of Landscape Architecture, MSU. Registration $8. ($10. after October 2). Make checks payable to MSU, and send to: Landscape School, P.O. Drawer MQ, Miss. State, MS 39762, or call E.C. Martin 601-325-3012.

OCTOBER 26-28 - 3RD MID-SOUTH NATIVE PLANT CONFERENCE, Agricenter International, Memphis, TN. Contact: Memphis Botanic Garden, 750 Cherry Road, Memphis, TN 38117-4699. Tel. No. 901-685-1566

REQUEST FOR SEEDS. A professional plant breeder, Frank C. Moser, is trying to locate fresh seeds of wild American passionvine or maypop (Passiflora incarnata) to assess Mississippi's genetic variation. Ripe fruits should be ready about now. For those willing to help, his address is 2121 Hamilton Avenue, Alva, FL 33920. Please indicate the habitat where it was collected.
Mississippi Sierra Club, Mississippi Nature Conservancy, and similar groups.

-- Lectures, seminars, and slide shows by native plant experts, ecologists, landscape professionals, knowledgeable amateurs, and gardeners.

-- Offer Wildflowers of Mississippi by S. Lee Timme, T-shirts, and related materials for sale to promote the goals of the Society.

-- Facilitating the study of Mississippi flora and monitoring of nature preserves through newsletter announcements, networking with concerned and knowledgeable members, and awarding small grants to support research and education consistent with the Society's goals.

-- Plant and seed exchanges, creating and maintaining displays for public education and appreciation, and plant rescues in areas about to be developed.

NEWSLETTER AND MEMBERSHIP

The MISSISSIPPI NATIVE PLANT SOCIETY NEWSLETTER is published 4 times annually. In addition to a calendar of upcoming events, the newsletter contains articles on native plant propagation and identification, notes on plant and seed exchanges, landscape design, habitat preserves and descriptions, reviews of books, activities, and people associated with native and naturalized plants of Mississippi.

Membership is open to any interested individual, family, or organization. If you wish to join us, please mail the application below, indicate the class of membership desired and enclose appropriate dues.

--- MEMBERSHIP APPLICATION AND DUES NOTICE ---

Please indicate class of membership desired and enclose appropriate dues:

- Student $2.50
- Regular $5.00
- Family $7.50
- Sustaining $10.00
- Contributing $25.00
- Life $75.00

The Mississippi Native Plant Society is an organization dedicated to the scientific and educational exchange of information about native and naturalized plants occurring in the State of Mississippi.

All classes of membership receive the MNPS Newsletter. Please make checks payable to Mississippi Native Plant Society. Return this form with payment to Mississippi Native Plant Society.

Address sales and newsletter items to: Vic Rudis, Editor, Mississippi Native Plant Society, P.O. Box 2151, Starkville, MS 37959.

Be sure to include the following information with your payment:

Name ____________________________

Address ____________________________

Telephone No. (optional) ____________________________

If Mississippi, county of residence ____________________________

--- END OF MEMBERSHIP APPLICATION ---
are acquainted with the Alabama Wildflower Society.

Strengthen, promote land and garden, joint meetings
the association's goals. With the national forests.
What, to encourage local groups, to encourage tours,
the presence of native plants and
Field trips. In past years, Mississippi locations

PROGRAMS include:

their habitats

the understanding and appreciation of native plants and

PUBLIC LANDSCAPES

and habitats in diverse settings, commercial, and

need for protection

encouraging their protection, importance, ecology, and

-- Inform the public about these species and habitats,

conservation of their habitats

work for the conservation of these species and

Mississippi

and naturalized plant species and their habitats in

CAUSE are for:

appreciation for these species.

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species of the State of Mississippi and the

Mississippi Native Plant Society is the organization.

Mississippi Native Plant Society is the organization

and naturalized plant species. The overall purpose of

three decades have been people with a love for the

history, particularly the vascular flora of Mississippi.

In 1978, Mississippi's Native Plant Society was formed for

and groups interested in all aspects of

First Branch. The organization was formed for

Jackson, the Mississippi Native Plant Society. It is

as a result of a meeting called by Fred Severy, Jr. on

P.O. BOX 2451
STARKVILLE, MS 39759