

ILLUSTRATED FLORA OF EAST TEXAS NEWSLETTER

An Illustrated Texas Floras Project ♦ Volume 4, Number 1, June 2003



State of the Flora



The *Illustrated Flora of East Texas* Project continues to move forward! Since the last newsletter of December 2002, great strides have been made on The Flora. All plant descriptions and keys have been finished and are currently in the hands of various reviewers. One of the most time consuming jobs involved the grass family. New information necessitated reorganizing the grasses and reviewing many specimens from the BRIT herbarium. The genus *Dichanthelium*, which had been included in the genus *Panicum*, was split out and the keys were readjusted. In the sedge family, the genera *Cyperus* and *Eleocharis* also got some spiffing up with a reexamination of specimens and incorporation of information from the newly published Flora of North America Cyperaceae volume (see <http://www.fna.org/>). The introduction is finished and also currently in the hands of reviewers. It promises to be a source of information on all things botanical concerning East Texas with over 150 illustrations, figures, and maps to complement the comprehensive text.

The newest feature of The Flora not yet mentioned is the addition of Texas dot maps (with county lines) for practically all species. These maps were extracted, with permission from the recently published *Atlas of the Vascular Plants of Texas*, Volumes 1&2, by B.L. Turner et al. (See related story on page 5). Robert George is currently involved in editing the maps by adding more dots from various sources and assimilating the maps into pages that will go into The Flora.

Final Push for Funding

The Botanical Research Institute of Texas (BRIT) received a substantial and important grant from the National Fish and Wildlife Foundation—funds from the *USDA Forest Service* and *National Park Service*—for the flora project.

A proposal to the NFWF was submitted in July 2002. This past March, the Board of Directors of the National Fish and Wildlife Foundation (NFWF) approved an award of \$46,100 in federal funds to the Botanical Research Institute of Texas to support the *Illustrated Flora of East Texas* project. This award was made on the condition that these funds are matched by \$168,084 in additional non-federal funds raised by BRIT specifically for this project.

We are counting down to the final push and final months of reviews, corrections, layout, design, and actual publication. The greatest financial need is to raise approximately \$125,000 of matching funds for printing and binding (about a 1200 page book with color), and to provide electronic Web access. **We need your help** and your gift will make a difference. There are many different ways to make a gift. You can give a check, a credit card, stock, pledge, bequest, trust, memorials, installments, etc. **Thank you for your support.**

The authors and institutions (BRIT and Austin College) are most grateful to every person, foundation, and organization that has given recently or in the past to the *Illustrated Flora of East Texas* project. In

(Continued at top of next page)

addition to the NFWF grant, the following DONORS have brought us this far: Summerlee Foundation, Dallas; Texas Parks and Wildlife Dept.; Temple-Inland Foundation; The Jacob & Terese Hershey Foundation; Austin College; Texas Native Plant Society; Crenshaw Gibson Memorials; and numerous individual friends of East Texas. Many friends of Lorine Dieu Crenshaw Gibson gave gifts in memory of Lorine who loved the natural heritage of the state, especially the flora of East Texas.

By supporting the *Illustrated Flora of East Texas*

project you will have a major influence on the education and development of scientists in Texas and neighboring states. It will become an important educational resource on East Texas plants for use in training students and young scientists. Graduate and undergraduate students in many disciplines, including botany, forestry, agriculture, landscape architecture, horticulture, and medicine will find the *Flora* a valuable textbook and reference.

For more information about the East Texas Flora or to make a contribution, please contact Barney Lipscomb at 817.332.7432 or Metro 817.429.3200 x33 or by email (barney@brit.org). BRIT is a 501 (c) (3) nonprofit organization.

Botanicus Trivialis *From Coolquiz.com--formerly UselessKnowledge.com*

The longest leaf in the world belongs to the raffia palm and can reach up to 65 feet. The second longest leaf belongs to the fan palm and can reach up to 20 feet.

North Dakota is the nation's top sunflower grower, producing 50 percent of the U.S. crop. Germany uses great quantities of these in bread making and is the largest export market for U.S.-produced sunflower kernels, accounting for more than half of all kernel exports. Spain is the largest export market for U.S. in-shell sunflowers.

Oak trees are struck by lightning more often than any other tree. It has been theorized, this is one reason that the ancient Greeks considered oak trees sacred to Zeus, god of thunder and lightning.

Limelight-Robert George

Though originally from Brownsville, Texas, East Texas has always been a second home for Robert George, the project assistant for the East Texas Flora. He spent many summers and vacation days in Troup on the Smith-Cherokee county line. His days were filled with swimming in creeks and exploring with his country cousins and older brother. He was always enchanted by the "red dirt" and lush vegetation. Some of this vegetation was even right in his grandparents' front yard: a huge post oak of tremendous proportion. The trunk was easily four feet in diameter at breast height! It even served as a rocking horse of sorts, since many of the branches bent near to the ground and back up and provided a natural saddle to sit in. So it's

no wonder when he decided to enter graduate school in biology he ended up at Stephen F. Austin State University in Nacogdoches. Here, he pursued a master's degree in biology and met Elray Nixon as his major professor. Quite coincidentally, Dr. Nixon had also been the major professor of Robert's first botany professor as a freshman. It was this first professor that inspired the young Valley boy to pursue botany. However, it would seem no coincidence that he found his way to BRIT as the East Texas Flora project assistant given that he had recently moved to Fort Worth, shortly after the publication of the *Illustrated Flora of North Central Texas* and shortly before the beginning of work on the East Texas Flora.



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Price \$250 + shipping and handling

Contact Yonie Hudson 817-332-4441-x32; yhudson@brit.org or Barney Lipscomb 817-332-7432; barney@brit.org

East Texas Prints

BRIT

509 Pecan Street

Fort Worth, TEXAS 76102-4060, USA

Yucca louisianensis

New to the Flora of North Central Texas

By Matt White, Campbell, Texas

During the winter of 2002- 03 I discovered several yucca rosettes in an old pasture across the road from my house near Campbell in eastern Hunt County. I was unable to identify the plants since they were not in flower. Additionally, their leaf margins were clearly shredding into white threads, a characteristic of both *Yucca arkansana* and *Y. louisianensis*. This was an interesting discovery since I had been under the impression that there were no yuccas native to the immediate area surrounding our home. I had observed *Y. arkansana* on outcroppings of limestone and chalk in northwest Hunt County, twenty-five miles to the north and *Y. louisianensis* in deep sand as near as Wood County, an equal distance to my east. I considered the possibility that these plants were introduced and had persisted, but the location (away from old homesteads or fences) seemed to rule out that possibility.

After consulting the recent *Shinners & Mahler's Illustrated Flora of North Central Texas* I was even more intrigued and a bit surprised to learn that *Y. louisianensis* was not even recorded for the region. According to the forthcoming *Flora of East Texas* this is "the common yucca in sandy areas throughout the Pineywoods and Post Oak Savannah," but it was not known from similar habitats actually within north central Texas (See map at top of next page).

A follow up visit in late April revealed they were not yet flowering but that several scapes with forming panicles were present. By early May a total of four plants, out of three colonies, were flowering. Four additional dead stalks from previous years were nearby although these rosettes were not flowering this year. With many panicles held high about the leaves, the plants seemed clearly to key to *Y. louisianensis*.

However, in examining the plant I noticed that the panicles were glabrous or smooth not pubescent

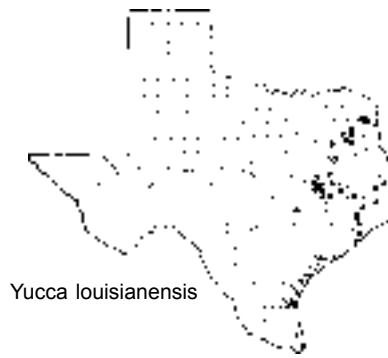
as mentioned in the keys for *Y. louisianensis*. In an article published in 1951 in the journal *Field and Laboratory*, SMU botanist Lloyd H. Shinners proposed the name *Y. freemanii* for populations exhibiting this trait. According to Shinners these individuals occurred in the northern and western portions of its range but most botanists have discounted this treatment. The authors of the forthcoming *Illustrated Flora of East Texas* however, duly note that plants with glabrous panicles are encountered, though rarely, and conclude that more study is needed on these and similar species.

The author of the recent *Yucca* accounts in the *Flora of North America* merge *Y. louisianensis* into *Y. flaccida*, a widespread species from the southeastern United States, while others have considered *Y. louisianensis* to be merely a paniced form of *Y. arkansana*, a treatment that is generally discounted. Adding to the taxonomic confusion is the fact that *Y. arkansana* is sometimes paniced. However, it might be worth noting that during my initial observation I scraped soil away from one of the plants to expose the large woody taproot that appeared to go straight down. By contrast the roots of *Y. arkansana* that I have examined are shallow and are parallel to the surface. This feature is not listed in the keys, perhaps because most museum collections do not include roots.

The location is less than a mile west of Campbell, on a deep terrace of Crockett sandy loam, with mima mounds, on the up thrown side of the Mexia-Talco Fault Line. Early pioneers called this terrace (which bisects the county extending from Commerce to Quinlan) the Hunt County Cross Timbers because it supported forests typical of the post oak savannah, including post and blackjack oaks. The site appears to have been plowed and is typical of old fields in the vicinity with *Tridens strictus* and *Schizachyrium scoparium* and a variety of more weedy species. A few relicts of *Andropogon gerardii* and *Sporobolus silveanus* indicate these grasses were once more common.

(Continued at lower right)

BRIT publishes *Atlas of the Vascular Plants of Texas*



Yucca louisianensis



The *Atlas of the Vascular Plants of Texas* is the first atlas of the Texas flora ever. The *Atlas* (volume 1: dicots; volume 2: Ferns, Gymnosperms, Monocots) provides distributional information for about 6000 taxa of vascular plants native and naturalized in the state of Texas. This is the result of 52 years of herbarium and fieldwork, beginning in 1948 at Sul Ross State University, Alpine, Texas by the senior author. In short, Billie Turner has examined personally, touched, or “pored over” an estimated several hundred thousand sheets in the preparation of the forthcoming *Atlas* volumes.

Renewed floristic studies in Texas have experienced new growth during the last 20 years. Botanists throughout the state are collecting and documenting the flora with as many as 15,000 specimens a year. The *Atlas* is a prime-source document of biological data. While the purpose of this atlas is to document plant distributions, it is a *de facto* checklist for the vascular plants of the region. This work will be most welcomed by botanists, taxonomists, conservationists, environmental consultants, researchers, as well as teachers, students, wildflower enthusiasts, and naturalists.

Billie Lee Turner was the Sidney F. and Doris Blake Centennial Professor in Systematic Botany and the Blake Collection, Section of Integrative Biology, and Director, Plant Resources Center, The University of Texas, Austin. Dr. Turner is now professor emeritus. His current research interests include systematics and all of its approaches with emphasis on the family Asteraceae, especially tropical America groups; biogeography; monography; natural hybridization; floristic studies; edaphic endemism; and biography.

Holly Nichols, Geoffrey C. Denny, and Oded Doron are former students/assistants of Dr. Turner.

Sida, Bot. Misc. No. 24, pbk. Vol. 1 \$50, 648 pp.; Vol. 2 \$40, 240 pp.; Set \$80; 7 1/2" × 10 1/2," b/w maps and color cover. 2002. Texas residents please add sales tax of \$6.60 (set); \$4.13 (vol. 1), \$3.30 (Vol. 2). Postage/Handling: USA: \$10.00 (vol. 1); \$9.50 (vol. 2); \$12.00 (set). Outside USA: \$12.50 (vol. 1); \$11.50 (vol. 2); \$25.00 (set).

A few days after observing these plants in flower I noticed a flowering yucca in a pasture with mima mounds about three miles away in the same soil type. All of these plants apparently represent an overlooked population system of *Y. louisianensis*, and are likely relicts of what was once a more widespread population in the deep sands of eastern Hunt County and perhaps formed the western limit of the species range.

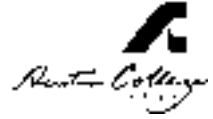
Voucher specimen: *Yucca louisianensis* Trelease. TEXAS. Hunt Co.: east central portion of county, 1/2 mile W of intersection of SH 24 and FM 499 near at Campbell, ca. 1/4 mi S in old field on Crockett sandy loam with mima mounds; population consists of three disjunct plants or colonies; rosettes with shredding leaves, flowers attached to glabrous panicles; plants ca. 5 ft tall, 17 May 2003, Matt White s.n. (BRIT).



Photo by Matt White



Illustrated Flora of East Texas
 A collaborative project of **BRIT** and the
Austin College Center for Environmental Studies
<http://www.easttexasflora.org>



Below are the individuals and organizations who have made donations to the *Illustrated Flora of East Texas* Project since the last newsletter. Their generous support helps pave the way to the completion of this project.

Sara Beckelman
 Laura Burks Bottone
 Mr. and Mrs. Henry Bruser, III
 Katherine and Charles Campbell
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 Stuart and Scott Gentling
 Mrs. Maud Huber

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 Dr. James Peck

Memorials to Lorine Dieu Crenshaw Gibson

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 Elisa Hammack

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