ILLUSTRATED FLORA OF EAST TEXAS
NEWSLETTER
An Illustrated Texas Floras Project ◆ Volume 2, Number 1, June 2001

State of the Flora

Progress on the flora continues to move forward. Project assistant, Robert George, has been working with George Diggs on the keys. Robert went through every species key, consulted specimens in the BRIT herbarium, and keys in other manuals and journal articles. Wording was critically examined and ambiguities were removed and syntax improved to render them more usable. The illustrations have been reexamined for accuracy and labeling has been added to clarify the identity of certain obscure parts. Additionally more than 70 illustrations have been replaced with newer more accurate ones. Based on molecular studies and other recent evidence, there has been a taxonomic shift in the Lily family since the publication of the North Central Texas flora. Many of the genera that were previously included in the Lily family have been moved to other families. For instance, the Amaryllis family, that was considered a part of the Lily family, is now once again separated. In fact, the Lily family treatment for East Texas had already been written with the genera as they were in the North Central Texas book and that portion of the manuscript is now being rearranged to reflect the most recent view of the relationships.

In late April, George made yet another trip to the Big Thicket National Preserve to do field work. This preserve, northeast of Beaumont, is one of the best remaining areas in East Texas to study the diverse flora.

In early May, Robert made a second trip to the Spring Branch Science Center herbarium, in Houston, to finish his work there. The purpose of this visit was to search for specimens of species that are known only from very few counties or whose existence in East Texas is doubtful. On Wednesday of that week he finished his work in the Houston area with a presentation on the East Texas Project at the Mercer Arboretum north of Houston proper in Humble (a must see if you've never been there!). He ended the day by arriving in Nacogdoches to continue herbarium research in the Stephen F. Austin State University herbarium. Here he may have found some interesting orchid distributions that will require further research to verify (stay tuned).

The references for the East Texas volume have been expanded in the last few months. These references will be added to those in the North Central Texas Flora and all will be included in the East Texas book to create a virtual compendium of Texas botanical references albeit somewhat tailored to East and North Central Texas.

Beginning this month George begins his summer residency at BRIT. He will be working on the large and difficult group, the grasses. Additionally, one of his students, Cole Weatherby, from Austin College, will be part of the project team. One of Cole's main goals will be to begin the search for dicot illustrations for volume two of the East Texas flora.

This summer should prove to be very productive.

Botanicus Trivialis

The majestic eastern slopes of Table Mountain in Cape Town create the home of the world-renowned Kirstenbosch Botanical Gardens. The gardens are dedicated to the preservation of the indigenous plants of South Africa. More than 6,000 different species of plant are grown here, including ancient cycads and many species of erica, pelargoniums, ferns, and rare succulents. From, Useless Knowledge.com.

The Japanese attack on Pearl Harbor is a grim reminder of the beginning of World War II. A good number of military units used botanists. "The best known projects for botanists as civilians involved the search for native supplies of strategic raw materials, particularly *Cinchona* and *Hevea*, while *Cryptostegia* and Guayule, as possible sources of latex, were grown on plantations and studied in detail." From Howard, R.A. 1994. The role of botanists during World War II in the Pacific Theatre. Bot. Rev. 60(2):197-257.

Species Spotlight

Hymenocallis liriosme (Raf.) Shinners

Common name: Spider-lily

Amaryllidaceae (Amaryllis Family)

The genus is from the Greek, *hymen,* meaning membrane, referring to the thin cup like flower tissue connecting the stamens, and *kallos* meaning beautiful. The specific epithet means fragrant lily.

The genus *Hymenocallis* has about 50 species worldwide from the southeastern United States to northeastern South America and is concentrated in Mesoamerica. Though this genus was treated in the Lily family (Liliaceae) in the North Central Texas flora, our most current information leads us to place it in the Amaryllidaceae. Interestingly enough, even though like many of the lilies, the spider lilies have large, attractive flowers, there is a paucity of hard scientific information on the group. As a result, the affinities within the group are still somewhat tentative. This may be due partly to the ephemeral nature of the flower that often fails to preserve well in herbarium specimens. At present, it not known which *Hymenocallis* species are found in East Texas and what their official botanical names will be. As a group, the spider lilies are large, showy, white-flowered plants with several flowers clustered at the end of a leafless stalk. The plants have a large bulb and long strap-shaped leaves.

Hymenocallis liriosme is one of two or three species of spider lily found in East Texas. It also ranges into Louisiana, Arkansas, and Oklahoma. The species are often distinguished by such characters as time of flowering, length of the flower tube, length of the crown or cup, and leaf shape. *Hymenocallis liriosme* is described as flowering March to May, the flower tube being 4.5-8 cm (2-3 in.), crown 2.5-3.5 cm (1-1.5 in.) long, leaves 1.8-4.2 cm (0.75-1.5 in.) wide and not wider above the middle. Like other spider lilies, *H. liriosme* is a rather large plant growing to three feet tall and is often cultivated. It can be found growing in various soils in wet bottom lands, marshes, stream banks, and ditches. As indicated above, it was named by Lloyd Shinners, professor at Southern Methodist University, who developed the herbarium and library that BRIT now holds.
(See opposite page for illustration.)

Limelight

Robert J. O'Kennon, or "Captain Bob" as he is known around BRIT, is the real renegade of the author team of the *Illustrated Flora of East Texas*. With a bachelor's degree from Duke University, he is one of those rare individuals who has attained professional status in the botanical arena through his own interest, determination, and hard work. He has discovered or described over twenty new plant species. And, besides being one of the authors of the *Illustrated Flora of North Central Texas* and the current flora of East Texas, he is involved in research on the difficult genus *Crataegus* (hawthorns). He is also our resident plant identifier. When presented with a plant to identify his first question is usually, "Where did you find this?" While there's usually no question he knows what it is, his concern is if it has been found in a new location or habitat. He then launches into various facts about the plant. As one might expect, his own backyard is host to hundreds of species of native plants. Bob also serves on the BRIT board along with being involved in several other conservation organizations. So what does Bob do in his *spare* time? He's a senior captain for American Airlines. Though not as nimble as the jet fighters he flew in Viet Nam, the jets he flies for American Airlines allow him to visit cities around the globe in such places as Europe, the Caribbean Islands, and Central and South America. You can also see some of his nature photos in the color photo section of the *Illustrated Flora of North Central Texas*. He is also the co-author of a lavishly produced coffee table book, *Texas Wildflower Portraits*, published by Texas Monthly Press.

Review abbreviated from Sida: Contributions to Botany 19: 223-224

Liggio, J. and **A.O. Liggio** (D.H. Riskind, Scientific Advisor). *Wild Orchids of Texas*. 1999. Univ. of Texas Press. i—xii, 1—228 pp.

The *Wild Orchids of Texas* is an outstanding treatment of the fifty-two species of orchids known to occur in Texas and the authors deserve high praise for such an accomplishment. It begins with a chapter giving an overview of the state's orchids emphasizing their diversity and conservation. Subsequent chapters give exceptionally clear and interesting discussions of such topics as pollination, saprophytic species, and orchid-fungal partnerships. These are followed by a detailed discussion of orchids by the main habitat in which they occur, including bogs and savannahs, open sunny habitats, forests and woodlands, and mountains and canyons. The authors have clearly given extensive thought to making the book as useful as possible to a varied audience. For example, for amateurs wanting to identify an orchid with which they are not familiar, there is a list of orchids by flower color. However, for both professional and interested lay readers, the most exceptional and enjoyable part of the book is the quality of the remarkable color photography. Joe Liggio is a gifted photographer and the approximately 90 photos are a testament not only to his artistic and technical skills but also to his intimate knowledge of orchids. Among state and regional treatments of orchids or other plant families, this is the most detailed, aesthetically pleasing, and just plain enjoyable book I've seen. From the beautiful dust jacket to the superb photography and details about orchid biology, it was clearly a labor of love for the authors. This is a book that anyone interested in Texas plants definitely should not miss.—George M. Diggs, Jr., Dept. of Biology, Austin College, Sherman, TX 75090, and Botanical Research Institute of Texas, Fort Worth, TX 76102.

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http://artemis.austinc.edu/acad/bio/gdiggs/floras.html

Below are the individuals who have made donation 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.

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Herbaria of SMU, BRIT and VDB
Lloyd Shinners' Collection in Systemic Botany