ILLUSTRATED FLORA OF EAST TEXAS
NEWSLETTER

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State of the Flora

The *Illustrated Flora of East Texas* Project is in high gear. George Diggs has been in residence at BRIT since the beginning of last summer and is now nearing the completion of the introduction to the Flora. At this point the introduction numbers about 200 pages with over 125 maps, figures, and photographs. Topics include: geology and soils of the East Texas area with discussion of current stratigraphy and geological processes, origin of the flora–explaining its composition through ecological and geological processes, settlement and presettlement conditions including the role of lumbering from its early days and explorers of the region, and a section highlighting artists who have portrayed East Texas flora. A section on the vegetation of East Texas, contributed by James Van Kley of Stephen F. Austin State University, has also been assimilated into the current manuscript.

Robert George has been working on gathering color images of plant species to be included in the color plate section. Images have been generously made available by Joe Liggio, coauthor of *Wild Orchids of Texas,* Heinz Gaylord and James Van Kley, both of Nacogdoches, Stanley and Gretchen Jones of Bryan, Ben Cox of Garland, Elray Nixon, Andy Crosthwaite, George Diggs, Robert J. O'Kennon, and Cole Weatherby. The Ladybird Johnson Wildflower Center also made available their entire digitized database of plant images. Robert has been working with the printer to make sure that the images will look their best when they are transformed from their digitized medium into the final printed medium in the illustrated flora.

This past summer two of George's students, Carolyn Wilson and Cole Weatherby, were at BRIT helping with the flora. Carolyn helped with several of the appendices and other jobs. She also rescanned many illustrations for the East Texas flora that were in the North Central Texas flora improving the overall detail. Cole continued to flesh out the appendix on commercially important timbers of East Texas. He also produced an excellent five-minute video on the East Texas Flora Project that will no doubt prove to be and already has been a very important tool for the project. In fact, it was premiered at a fund raising event in Austin last September. **Gordon May**, BRIT board member, and **Karen Williamson** hosted the event at the Zilker Club House to raise awareness and financial support for the *Illustrated Flora of East Texas* Project. Gordon and Karen invited friends to discover and learn about the East Texas flora accompanied by the inspiring Austin skyline in the background and the musical strains of a live ensemble.

Finally, in October, the Native Plant Society of Texas made a gift to The *Illustrated Flora of East Texas*. Glenn Olsen, President of the society, presented the check at the annual meeting in Houston. Glenn said, "The Native Plant Society of Texas appreciates the work that BRIT and Austin College are doing on the flora of Texas. The first volume of the *Illustrated Flora of East Texas* will be a welcome addition and we look forward to seeing it." The authors appreciate the financial support of the Native Plant Society of Texas.

Species Spotlight

Pinus echinata Mill.

Common name: shortleaf pine

Pinaceae (Pine Family)

The genus is from the ancient Latin name and the specific epithet refers to the bristly needles.

The Pine Family includes 10 genera with about 200 species. *Pinus* itself contains about 100 of the 200 species in the family. Other genera in the family include *Tsuga* (hemlocks), *Abies* (firs), *Picea* (spruces), and *Pseudotsuga*. *Pseudotsuga menziesii*, commonly known as Douglas fir is one of the most important lumber trees in the world. Though it reaches a height of 300 feet, it is frequently sold as a Christmas tree.

The genus *Pinus* is monoecious, meaning separate pollen cones and seed cones are borne on the same tree. The pollen cones are usually small, less than one half to about an inch long, and the seed bearing cones are much larger, usually several inches at maturity. The fleshy pollen cones are shed from the tree soon after releasing their pollen. As the seed-producing cones develop over a period of about two years, they become woody and produce a pair of winged seeds on each cone scale.

Pinus longaeva (Bristle-cone pine of far western North America) is among the oldest living trees, with individuals approaching 5,000 years old. This species has been important in the development of dendrochronology or tree-ring dating. When dead specimens (which can last thousands of years before decaying) are used along with living specimens a tree ring record of 8,200 years is available.

Many species of pine are cultivated for timber, pulp, and resinous products (pitch, rosin, turpentine); others are used for their edible seeds (pignons, piñon, pignolia, or pine nuts) or as ornamentals. In East Texas, the genus is widely cultivated as a source of wood products and is quite important economically. Because of the high resin content, pieces of pine heartwood resist decay for years, are quite flammable, and burn with a bright light. As a result, they have been widely used for generations across the southern U.S. as kindling. In the Big Thicket before the era of flashlights, a flaming "light'd knot" had many uses including night hunting for deer by shining the light in their eyes.

While the sandy acidic soils of the Pineywoods and to some extent those of the Post Oak Savannah are ideal for pines, the calcium-rich, basic soils of the Blackland Prairie are not well-suited for members of this genus. Pines are apparently able to inhabit these nutrient-poor, acidic soils courtesy of an associated fungus on their roots. These fungi allow an increased ability to obtain nutrients from the soil. Although pines in general do not occur naturally west of the Post Oak Savannah-Blackland Prairie boundary, they are native as far west as Lamar County in the Red River drainage where they occur on sandy, more acidic alluvium associated with that river. In addition, an isolated, disjunct, area of loblolly pines known as the "Lost Pines" occurs in Bastrop County.

Pines in the southeastern U.S., including East Texas, are susceptible to damage by *Dendroctonus frontalis* (southern pine beetle), a type of bark beetle that tunnels in the inner bark and introduces blue-stain fungi, which hasten the death of the tree by plugging the water-conducting tissues. Under some circumstances, monoculture forestry contributes to bark beetle outbreaks. Such bark beetle infestations have killed substantial areas of East Texas pine forest.

Pinus echinata is one of four pines found in East Texas, along with *Pinus palustris* (longleaf pine), *Pinus elliottii* (slash pine), and *Pinus taeda* (loblolly pine). All but slash pine are native to East Texas, which is widely naturalized. One can identify shortleaf pine by what else but its short leaves or needles! It has the shortest needles of those in East Texas measuring about 7 to 11 cm in length or about a maximum of four and one third inches long. Another characteristic of the shortleaf pine is that most of its needles are found in bundles of two. Longleaf and loblolly usually have three per bundle and slash pine usually has three but will have some with two.

Pinus echinata is found in the eastern U.S. from New York south to Florida and west to Missouri and Texas. Although this species is valuable for timber and pulpwood, it is susceptible to root rot.

Limelight-Linny Heagy

Linny was born in Indianapolis, Indiana. She lived in two converted boxcars put side by side about 10 miles from the town of Speedway, home of the Indy 500. As a child she remembers jumping over the tiny stream in the gully in front of their house and taking the steep climb to the top of the railroad tracks each year on Memorial Day and hearing the old Novi racecars as they came around the southwest turn of the famous oval track.

She spent a lot of time in the gully at the foot of the elevated railroad tracks. There on what was then the edge of the city, she would have her first contact with nature: crawdads, cattails and a pet field mouse she called Butterball. The smell of squash bugs and ground ivy and the feel of soft mud squishing between her bare feet, still come to mind after all these years.

Her parents came from country towns west of Indianapolis, but being an ambitious youth, she had a 'great expectation' for herself. Thanks to the encouragement from her high school art teacher, Elva Strouse, she acquired a scholarship to the John Herron Art Institute of Indiana University.

She has been somewhat of a maverick ever since, living in various parts of the country, even spending a year traveling around Europe, always searching and exploring, studying the flora and fauna of each place, yet pulled away by the demands of her career in advertising art. But, in 1980 she moved to Texas and found her home. With all its vastness and diversity from El Paso to Houston to the beauty of Palo Duro Canyon and Big Bend, it provides the naturalist a lifetime of exploration.

In 1990, she left the world of advertising art and turned to her first love, the natural world. No longer drawn to the sounds of the modern world speeding by, she found contentment in preserving on paper the humble beauty of nature before it vanishes forever.

So it seems she has come full circle, back to that little girl in the gully with bare feet and great expectations. She is the artist for many of the illustrations in the *Illustrated Flora of North Central Texas* and functioned as its designer and is also involved in the *Illustrated Flora of East Texas*.

Botanicus trivialis from coolquiz.com--formerly UselessKnowledge.com

The ancient Greeks believed ivy to be the sign of everlasting love.

To grow properly, orchids require moving air. They do best where there is a steady breeze.

To help them last longer, put the cut ends of chrysanthemums in very hot water for a moment and then straight into very cold.

The bulbs and leaves of the daffodil contain poisonous crystals which only a select few insects can eat without suffering an agonizing death. While squirrels and other rodents won't eat them, they may dig up the bulbs.

In one day, a full-grown oak tree expels 7 tons of water through its leaves.

Lorine Dieu Crenshaw Gibson Memorials

Lorine Gibson with Susan Roberts Battarbee and Sue John at a benefit for the East Texas flora in January 2002 in Dallas at the home of Sue and Phil John. Lorine, Susan, Sue and Ruth May (not pictured) were hosts to an evening event to increase awareness support for the East Texas flora book. BRIT's Barney Lipscomb and Austin College professor George Diggs also pictured.

The greatest gift someone can give is to give of themselves; Lorine Gibson loved giving. The passionate and never-ending interest in plants, the generous sharing of information, and the gracious giving to help others will always bring to my mind Lorine. She was in many respects like the early plant hunters and collectors…always in search of new plants, new life and new knowledge to give to others. Lorine was a conservationist at heart. Plants were a constant source of pleasure and surprise, and a continual source of interest. That is why I believe she took an interest in the *Illustrated Flora of North Central Texas* (1999), and an even more active role in the forthcoming East Texas flora book. From Big "D" to the Big Thicket there is a land of beautiful prairies interwoven with groves of timber, stately pines, hardwoods, wisteria, honeysuckle, lilies, orchids, dogwoods, and azaleas, not to mention, Texas Pride. Lorine had Texas pride and was excited about the book that would describe, picture, and characterize the beautiful plants, landscapes, and natural areas of East Texas, the area she loved so dearly and proudly called home.

The Gibson family chose BRIT for memorials to help underwrite the book that Lorine was excited about, the *Illustrated Flora of East Texas*. Thank you for giving memorials to help produce a lasting legacy of Lorine Gibson, the East Texas flora. —Barney Lipscomb

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Memorials to Lorine Dieu Crenshaw Gibson-see inside page

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