



The Sabal

www.nativeplantproject.org

Research and Academic Resources Committed to Recording and Expanding the Use of Native Plants

by Gene Lester

In an effort to understand what State (University) and Federal research efforts are committed to the preservation and utilization of South Texas native plants, I have decided to explore our various locally (South Texas) placed government facilities and spotlight their efforts. In this article, Texas A&M-Kingsville's herbarium and the USDA-NRCS Kika de la Garza Plant Materials Center located at Texas A&M-Kingsville will be highlighted. Both students of native plants and practitioners (growers, ranchers, and naturalists) of

native plants should find this informative and hopefully beneficial.

Texas A&M-Kingsville Herbarium (TAIC)

by Alice Hempel

A herbarium is a museum collection of carefully pressed, dried plants mounted on heavy paper. Properly labeled with information about the plants and where they were collected, a plant specimen in a herbarium is an irreplaceable resource recording plant biodiversity and serving as a reference collection for plant identifications among other uses. A properly preserved specimen may last hundreds of years.



The Texas A&M-Kingsville Herbarium contains approximately 7,000 specimens of vascular plants. It was established shortly after the opening of South Texas Teachers College in 1925. The college name was changed to Texas College of Arts and Industry in 1929, and our official herbarium abbreviation TAIC derives from that name. In 1967 the institution became Texas A&I University and our most recent name change occurred in 1993. Throughout the years and the name changes the herbarium has remained a resource for the study of the plant life of South Texas.

Our holdings are primarily from the immediate area, predominately Kleberg, Kenedy and adjacent counties. In addition to our vascular plants, we have, through the work of Dr. Cynthia Galloway, large holdings of non-vascular plants such as mosses and lichens.

Future: The Texas A&M-Kingsville Herbarium located in South Texas, has the task of keeping up with the population of the

local flora. In the future the Herbarium hopes to give the community a better understanding of the diverse flora inhabiting South Texas. Area residents may not know it, but South Texas has some of the most diverse and prolific flora of the United States.

The herbarium is a division of the Biology department and is housed in the Biology Earth Science building on the TAMUK campus. The collection is available for study by appointment. Exchanges and



loans of specimens to other recognized botanical institutions may be arranged by contacting the curator.

Curator: Dr. Alice Hempel, Department of Biology
Campus Box 158, Texas A&M-Kingsville
Kingsville, Texas 78363 Telephone 361-593-3804
FAX 361-593-3800

USDA, NRCS, Kika de la Garza Plant Materials Center

Operated by NRCS in cooperation with Texas A&M University-Kingsville, Caesar Kleberg Wildlife Research Institute, South Texas Association, and Gulf Coast Association of SWCDs

Research, Studies, and Activities

- reducing sand dune and shoreline erosion along coastal and inland waterways
- establishing plants on saline and alkaline soils and highly disturbed sites
- developing plants and technology for improving wildlife habitat
- evaluating plants and technology for the construction and enhancement of critical wetlands
- developing plants ecotypes for the restoration of South Texas native plant communities

The Kika de la Garza Plant Materials Center is involved in the following current studies with planned completion dates between 2006 to 2010 (along with project code numbers), address the above resource issues. For more information on these studies please contact the PMC at (361) 595-1313.

Virginia Wildrye (*Elymus virginicus*). Release a cultivar of Virginia wildrye for cool-season forage in South Texas. 77A023HR

Orange Zexmenia (*Zexmenia hispida*). Release a composite collection for range seed mixes. 77A034j

Multiflowered false rhodesgrass (*Chloris pluriflora*). Release multiflowered false rhodesgrass for rangeland restoration in South Texas. 77A016h

Seacoast bluestem (*Schizachyrium scoparium* var. *littoralis*). Release an accession of seacoast bluestem for coastal range restoration. 77I028CL

Coastal Shoreline Species. Evaluate coastal shoreline species in conjunction with different geotextiles for the stabilization of coastal shoreline sites. 77I046F

Seashore dropseed (*Sporobolus virginicus*). Evaluate and provide information on the use of seashore dropseed for coastal restoration. 77I048PH

Brownseed Paspalum (*Paspalum plicatulum*). Evaluate and release information on the use of brownseed paspalum for range restoration. 77I049H

Hooded Windmillgrass (*Chloris cucullata*). Evaluate and release hooded windmillgrass. 77I052h

Pink Pappusgrass (*Pappophorum bicolor*). Release an accession of Pink pappusgrass. 77I053h

Gulf Cordgrass. Evaluate and release an accession of Gulf Cordgrass. STPMC-P-0126-WE

Desmanthus. Evaluate and release an accession of Desmanthus. STPMC-P-0134-WL

Texas Grass. Evaluate and release an accession of Texas grass. STPMC-P-0135-RA

Rio Grande Plain Ecotype Project. Release a seed mix for the Rio Grande Plain. STPMC-P-0137-RA

Texas Gulf Coast Ecotype Project. Release a composite seed mix for the Texas Gulf Coast. STPMC-P-0138-RA

Hall's Panicum. To evaluate and release an accession of Hall's Panicum.

South Texas Sand Plain Ecotype Project. Release a seed mix for the South Texas Sand Plain. STPMC-P-0140-RA	Little Bluestem. Release an ecotype suitable for South Texas. STPMC-P-0358-RA
Green Sprangletop. Release an ecotype for the Rio Grande Plain. STPMC-P-0143-RO	Switchgrass. Release. STPMC-P-0359-RA
Silver Bluestem. Release an ecotype suitable for South Texas. STPMC-P-0244-RO	Arizona Cottontop. Release an ecotype suitable for South Texas. STPMC-P-0460-RA
Frostweed. Release an ecotype suitable for South Texas. STPMC-P-0346-RA	Slender Grama. Release. STPMC-P-0461-RA
Sideoats Grama. Release an ecotype suitable for South Texas. STPMC-P-0347-RA	Texas Grama. Release. STPMC-P-0462-RA
Engelmann's Daisy. Release an ecotype suitable for South Texas. STPMC—P-0348-RA	Hairy Grama. Release an ecotype suitable for South Texas. STPMC-P-0463-RA
Awnless Bush-sunflower. Release an ecotype suitable for South Texas. STPMC-P-0349-RA	Crinkleawn. Release. STPMC-P-0564-RA
Big Bluestem. Release an ecotype suitable for the Texas Gulf Coast. STPMC-P-0350-RA	Slim Tridens. Release. STPMC-P-0565-RA
White Prairie Clover. Release an ecotype suitable for the Texas Gulf Coast. STPMC-P-0351-RA	Indian Blanket. Release. STPMC-P-0566-RA
Florida Paspalum. Release. STPMC-P-0352-RA	Mexican Hat. Release an ecotype suitable for South Texas. STPMC-P-0567-RA
Yellow Indiangrass. Release an ecotype suitable for South Texas. STPMC-P-0353-RA	Partridge Pea. Release. STPMC-P-0568-RA
Eastern Gamagrass. Release an ecotype suitable for the Texas Gulf Coast. STPMC-P-0354-RA	Clammyweed. Release an ecotype suitable for South Texas. STPMC-P-0569-RA
Prairie Acacia. Release an ecotype suitable for South Texas. STPMC-P-0355-RA	Plains Lovegrass. Release. STPMC-P-0570-RA
Golden Dalea. Release. STPMC-P-0356-RA	Gayfeather. Release. STPMC-P-0571-RA
Rattlesnake Master. Release an ecotype suitable for the Texas Gulf Coast. STPMC-P-0357-RA	

For more information about the Plant Materials Center contact John Lloyd-Reilley, Manager, USDA-NRCS, E. Kika de la Garza PMC, Kingsville, TX (361)-595-1313 or john.reilley@tx.usda.gov

INTRODUCTION TO SPECIAL ISSUE OF SCIENCE (WWW.SCIENCEMAG.ORG)

The Invisible Bouquet

by Pamela J. Hines

Of the thousands of different metabolites that plants can produce, many form a cloud around the plant. These volatile compounds reflect the metabolic complexity of plants and also serve a diversity of functions. Volatile compounds signal opportunity to insects, pathogens, and pollinators alike. In a classic case of “the enemy of my enemy is my friend,” plants being nibbled on by insect herbivores can produce volatile signals that call in other insects to prey on the herbivores. For plants that flower at night, volatiles may be a better signal than floral color or shape to draw in the best insect pollinators. Volatile signals are also read by neighboring plants and reinterpreted as instructions to adjust their own defenses. Through olfaction and, secondarily, through the combination of taste and olfaction, which we interpret as flavor, volatiles signal to mammals that what’s nearby may be food or foul. Some volatile compounds have biochemical functions, such as the antimicrobial activity of the spice clove. The prevalence of clove and similar spices in traditional food recipes

has much to do with the value of these spices for preserving food in pre-refrigeration human history. That these spices also deliver a unique flavor through their volatility serves, as well, as an overt signal of the (hopefully) better quality of the food so prepared.

In this special issue, *Science* 10 February 2006: Vol. 311. no. 5762, p. 803, *Science* explores various notes of this aromatic story. Lund and Bohlmann “The Molecular basis for wine grape quality – A volatile subject” discuss how genome, environment, and cultivation practices shape the suite of volatiles that eventually give each bottle of wine its unique flavor. Kaiser “Flowers and fungi use scents to mimic each other” illustrates how effectively certain plants and fungi can mimic each other, poaching on their insect partnerships by using volatile signals. Pichersky *et al.* “Biosynthesis of plant volatiles: nature’s diversity and ingenuity” describe the biochemistry and the evolutionary forces that combine to produce the complex suite of volatiles. Baldwin *et al.* “Volatile signaling in plant-plant interactions: “talking trees” in the genomics era” explain how plants eavesdrop on their neighbors to adjust their own reactions to ecosystem changes. And finally, Goff and Klee “Plant volatile compounds: sensory cues for health and nutritional value?” put forth a hypothesis about how volatiles fine-tune or misdirect our human responses to food.



Native Plant Rescue: **The Valley Nature Center** will rescue native plants about to be destroyed by construction companies, developers, or no longer wanted by home owners. Call 956-969-2475.

Exclusively Native plant sources:

Benito Trevino, Landscaper/Grower, Rio Grande City 956-487-4626
Valley Nature Center – Native Plants, Weslaco 956-969-2475
Mother Nature’s Creations, Harlingen 956-428-4897
Heep’s Nursery, Harlingen 956-457-6834



Nature Happenings in the Lower Rio Grande Valley, Texas

Texas State Park Tours/ World Birding Center, Mission, Texas— Lomitas Ranch Tours and other natural area tours 7:30 a.m. – 5 p.m. every Tuesday and Friday from Bentson Rio Grande State Park/World Birding Center in Mission, TX. Outings focus on native plants and their uses. Fees: \$25 per person, reservations required - call 956-519-6448. Or go to www.worldbirdingcenter.org

Sabal Palm Grove Sanctuary— Native plant presentation and tour by Joseph Krause – every weekday at 10 a.m. Pre-registration required – call 956-541-8034.

Laguna Atascosa NWR— Nature BIKE RIDES on Saturdays from 8 a.m. - 10:30 a.m. and Nature WALKS, Sundays from 8 a.m. - 10 a.m. Call for details: 956-748-3607.

Santa Ana NWR— Tram Tours of the park. Fees: \$3 for adults and \$1 for 12 years-old and under. Guided Nature WALKS are available. Call for details: 956-787-3079.

The Sabal is the Newsletter of the Native Plant Project and conveys information on the native habitats, and environment of the Lower Rio Grande Valley Texas. Co-editors: Gene Lester and Eleanor Mosimann. **You are invited to submit articles for *The Sabal*.** They can be brief or long. Articles may be edited for length and clarity. Black and white line drawings -- and colored photos or drawings -- with or without accompanying text are encouraged. We will acknowledge all submissions. Please send them, preferable in electronic form - either Word or WordPerfect, to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact Gene Lester @ 956-425-4005, or g_lester48@msn.com. See *The Sabal* and our 5 handbooks on the website:

www.nativeplantproject.org

Native Plant Project Board of Directors:

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Native Plant Project Membership Application

Regular \$15 per year Contributing \$35 per year Lifelong \$250 one time fee per individual. Members are advised of meetings, field trips, and other activities through The Sabal. Dues are paid on a calendar year basis. Send checks to Native Plant Project, P.O. Box 2742, San Juan, Texas 78589.

Name _____

Address _____

City/State/Zip _____

E-mail address _____

New Renewal Address Change

Comments/ suggestions/ speaker recommendations should be sent to: Native Plant Project, P.O. Box 2742, San Juan, TX 78589 or contact G. Lester @ 956-425-4005 or g_lester48@msn.com

Native Plant Project Meetings – April 25, 2006. **Board meeting** at 6:30 pm; **General meeting** at 7:30pm featuring: Frank Gonzales, owner of Gonzales Integrated Farms (GIF) and will present “Gardening for Wildlife in the Valley”. Frank has taught his Wildscape Gardening course in Harlingen for many years.

Board and General Meeting 2006:

January 24
February 28
March 28
April 25

May 23
September 26
October 24
November 28

Board Meeting Only 2006:

June 27 July 25 August 22

Summary of the Minutes of the NPP Board Meeting on MAR. 28, 2006. To encourage renewal of memberships, a renewal letter will be sent to all of the members who have not renewed their memberships for 2006. Work is continuing on preparing Power Point presentations of the NPP handbooks. An Endangered Species Committee consisting of Hathcock, King, and Vacek will update the NPP’s list of endangered plant species in the LRGV. The NPP will look for sponsors for printing *The Sabal* and for the paper.

Native Plant Project
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San Juan, TX 78589

