

# The Sabal

November 2012

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Nov. Meeting, Native Plant Project:

**Tues., Nov. 27th, 2012: at 7:30pm**

“Plants of Our Gulf Coast”

by Diann Ballesteros.

The harsh environment of the southern coastal dunes is characterized by blowing sand, harsh winds, and salty soils. Plant diversity is low when compared to other Lower Rio Grande plant communities, nevertheless many plants have managed to survive these unusual conditions. Diann will discuss these remarkable plants. After retiring from teaching school in Harlingen, Diann began a decade long involvement with various nature organizations including Texas Master Naturalist. She is a Board member of NPP. Her knowledge of native plants is extensive and her love for our Gulf Coast shines through her presentations.

**at Valley Nature Center, 301 S. Border, (in Gibson Park), Weslaco. 956-969-2475**



*Rhynchosia americana*, American Snoutbean

**The Sabal** is the newsletter of the Native Plant Project.

*It conveys information on native plants, habitats and environment of the Lower Rio Grande Valley, Texas.*

Previous **Sabal** issues are posted on our website [[www.NativePlantProject.org](http://www.NativePlantProject.org)].

Electronic versions of our **Handbooks** on recommended natives for landscaping are also posted there.

**Change of address, missing issue, or membership:** <[bwessling@rgv.rr.com](mailto:bwessling@rgv.rr.com)>

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## Some Plants of the South Texas Sand Sheet

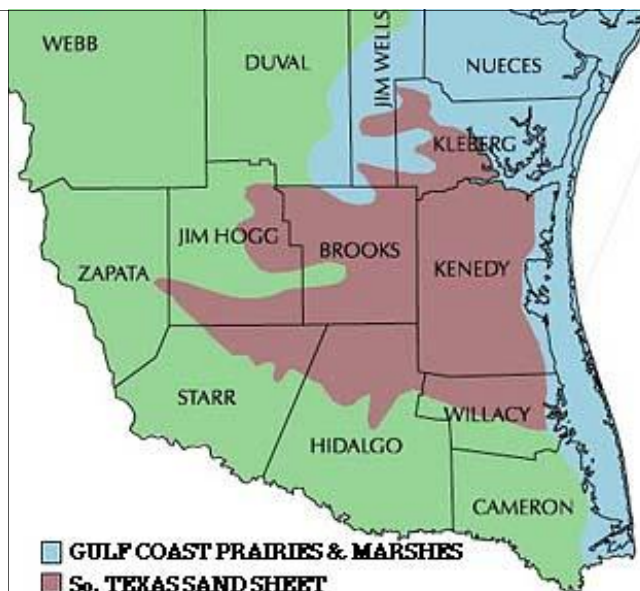
by William R. Carr,

Text & photos excerpted, with permission, from:  
[<http://www.biosci.utexas.edu/prc/DigFlora/WRC/index.html>].

The South Texas Sand Sheet, also known as the Coastal Sand Plains and the Llano Mesteño, (*Mesteño* - wild, untamed or mustang) occupies more than two million acres at the southern tip of the state, just north of the Lower Rio Grande Valley. The region is defined by a sheet of eolian (- carried by the wind) sand blown inland from the shoreline of the Gulf of Mexico during Holocene times, a sheet that covers most of Kenedy and Brooks counties as well as the northern tips of Willacy, Hidalgo and Starr counties. Although most maps place the western edge of the sand sheet in Jim Hogg County, isolated patches of Holocene sand are mapped within a few miles of the Rio Grande in northwestern Zapata County (Brewton et al., 1976) and are included for the purposes of this discussion. The eastern edge is somewhat arbitrary. Laguna Madre separates the Sand Sheet from modern barrier islands along the Gulf of Mexico, but there is no clear boundary between the Sand Sheet and the Flour Bluff Peninsula, a Pleistocene barrier island situated west of Laguna Madre in southern Nueces County.

Topography in the region is generally flat. Most parts of the sand sheet are a base-level plain with very little relief. Other parts, particularly those closer to the coast, are covered in active or stabilized dunes oriented along a northwest-southeast axis. Relief is greatest in Kenedy County, where some dunes west of Laguna Madre are as much as 50 feet tall. Elevation in the region ranges from near sea level in the east to about 800 feet near Hebbronville in the west. Drainage systems are limited, and the few wet-weather streams that arise in the western highlands typically terminate in miscellaneous lowlands rather than in Laguna Madre or the Gulf of Mexico. In flatter parts of the landscape, rainwater simply collects in and evaporates from small roundish potholes or copitas; in active dune fields, elongate swales are more common. Most of these wetlands are seasonal or intermittent, but a few are permanent. Most contain fresh water, but those lying along established drainage-ways lowest on the landscape tend to be saline. Lomas or clay dunes have developed on the downwind (northwest) side of larger ephemeral saline ponds.

Soils of the region are generally sandy. Characteristic soils of dune fields are light-colored, deep to very deep, well drained to excessively drained, neutral to slightly acid fine sand **Alfisols** and **Psamments** (*i.e.* sand



South Texas Regions  
[adapted from Texas Parks and Wildlife Maps]

*dunes*). Soils of planar areas are typically light brown, deep, moderately well drained to well drained, slightly acid fine sand **Alfisols**. In some areas, particularly where the wind-blown sand is a thin veneer over calcareous sandstone and caliche of the Goliad Formation, typical soils are reddish-brown, well drained, neutral fine sandy loam **Alfisols** (Sanders et al., 1974; Thompson, 1972; Williamson, 1993). Soils of lomas are mapped as very deep, friable, dark grayish brown, calcareous, moderately alkaline fine sandy loam **Mollisols**.

Climate in the area is considered to be humid subtropical, with hot summers and mild winters. Mean annual precipitation ranges from 20 inches in Zapata County to 30 inches in Kenedy County. The average growing season ranges from 304 days in Zapata County to 319 days in Kenedy County (Natural Fibers Information Center, 1987).

Most of the South Texas Sand Sheet is dedicated to the production of cattle and huntable wildlife. Even in the 21st Century it is a region of very large ranches and very few people. The King Ranch, for example, occupies 825,000 acres, mostly in Kenedy County, and the estimated population of Kenedy County in 2003 was 408 persons (Dallas Morning News, 2004).



## Vegetation

Several matrix-level vegetation types can be recognized within the South Texas Sand Sheet. One type is a live oak (*Quercus* sp.) woodland that covers much of the dune topography in eastern Kenedy County and extends patchily westward. The nominative oak is said to be *Quercus fusiformis*. Other components of these woodlands include **toothache-tree (*Zanthoxylum hirsutum*)**, honey mesquite (*Prosopis glandulosa*) and brasil (*Condalia hookeri*).



Toothache-tree (*Zanthoxylum hirsutum*) is an aromatic member of the Citrus family with menacing thorns. Chewing on a leaf releases compounds which provide oral pain relief.

Associated with this woodland is a tallgrass grassland dominated by seacoast bluestem (*Schizachyrium scoparium* var. *littorale*) and gulfdune paspalum (*Paspalum monostachyum*), with camphor daisy (*Heterotheca subaxillaris*) and other forbs more common on sand ridges (Diamond & Fulbright, 1990). Other important components of the grassland include brownseed paspalum (*Paspalum plicatulum*), **crinkleawn (*Trachypogon secundus*)** photo below,



Indiangrass (*Sorghastum nutans*) and big bluestem (*Andropogon gerardii*) (Diamond & Fulbright, 1990).

Another major vegetation type in the region is honey mesquite woodland, which is found on light brown fine sands and reddish-brown sandy loams of plains. In such situations, mesquite typically occurs with colima or lime prickly ash (*Zanthoxylum fagara*), brasil, prickly pear (*Opuntia* spp.) and other thorny shrubs.

Associated with this woodland is a midgrass grassland composed of love-grasses (*Eragrostis* spp.) photo right, three-awns (*Aristida* spp.), fringed signal-grass (*Urochloa ciliatissima*) and other species. The balance between the grassland and woodland components may have been influenced by historic cattle grazing.



*Eragrostis secundiflora* [Poaceae] red lovegrass.

Wetlands are common, although most are small and ephemeral. Deeper freshwater ponds and swales in the eastern part of the region have a well developed **florula** (- *flora of a small single environment*) with spikesedges (*Eleocharis cellulosa*, *E. palustris* and *E. quadrangulata*) often dominant. Other conspicuous components include arrowhead (*Sagittaria longiloba*), elegant waterlily (*Nymphaea elegans*), **yellow-eyed grass (*Xyris jupicai*, Iridaceae)** photo below



yellow-eyed grass

taken from the web, and jointed flatsedge (*Cyperus articulatus*). Shallower freshwater ponds in the western part of the region, or ponds that are actively grazed, usually have shorter vegetation consisting of short sedge spe-

cies (*Eleocharis parvula*, *E. minimus* and *Schoenoplectus saximontanus*) and burheads (*Echinodorus berteroi* and *E. tenellus*). Salt or brackish ponds typically have extensive open water rimmed by saline clay supporting sparse cover of a few halophytes, notably shoregrass (*Monanthochloe littoralis*) and white spikesedge (*Eleocharis albida*).

Also low on the landscape, mostly along drainageways near the coast, are bands of saline soils that support a variety of vegetation types. One type



is a short-stature shrubland typified by Drummond goldenweed (*Isocoma drummondii*), amargosa (*Castela erecta* ssp.

*texana*), gutta percha (*Maytenus phyllanthoides*), dwarf screwbean (*Prosopis reptans*), rubberstem (*Jatropha dioica*), horse-crippler cactus (*Echinocactus texensis*), pricklypear and stunted honey mesquite. Associated grasses include alkali sacaton, (*Sporobolus airoides*) and whorled dropseed (*Sporobolus pyramidatus*). Also present are grasslands dominated by gulf cordgrass (*Spartina spartinae*).

Other localized vegetation types are medium-stature shrublands that occur on slopes of the region's few major drainageways, often where the underlying calcareous sandstone of the Goliad Formation is exposed, and on lomas upwind from salt lakes. These communities include many shrub species that are more commonly found in Tamaulipan thornscrub to the south and west. Patterns in these shrublands have not yet been discerned.

*Echinodorus parvulus*,  
Mud-babies, Alismataceae.



*Brazoria arenaria*, Lamiaceae, Sand Brazos Mint.



### **Endemic (Native and confined to a certain region.) Plant Species**

The flora of the South Texas Sand Sheet includes about 54 taxa that are endemic to the state of Texas. Among those, *fourteen or fifteen* are essentially endemic to the Sand Sheet proper.

Bill Carr can be reached at: Acme Botanical Services, 512-459-4326, <billcarrspurge@gmail.com>



Other Examples of Biotic Diversity on the South Texas Sand Sheet (pages 5-6)



Loggerhead Shrike's prey  
photographed by A. Richardson  
near Falfurrias. Magnified.



*Croton coryi*.  
Cory's croton.  
Euphorbiaceae.

Photo by A. Richardson.  
*Polanisia erosa* subsp.  
*breviglandulosa*. Capparaceae.  
(Magnified to show detail.)



**NPP Fieldtrip**  
**Announcement !!!**  
**Dune & Beach plants**  
**Sat., Dec. 1st**

Meet at 8am at Harlingen's Home Depot pkg. lot if you wish to carpool.

From 77/83 going south, take the Olmito/FM 511 exit under the overpass going SE on FM 511. Turn east onto TX Hwy 4 (Boca Chica Rd). **There are several stores along the way for water, snacks & RR.**

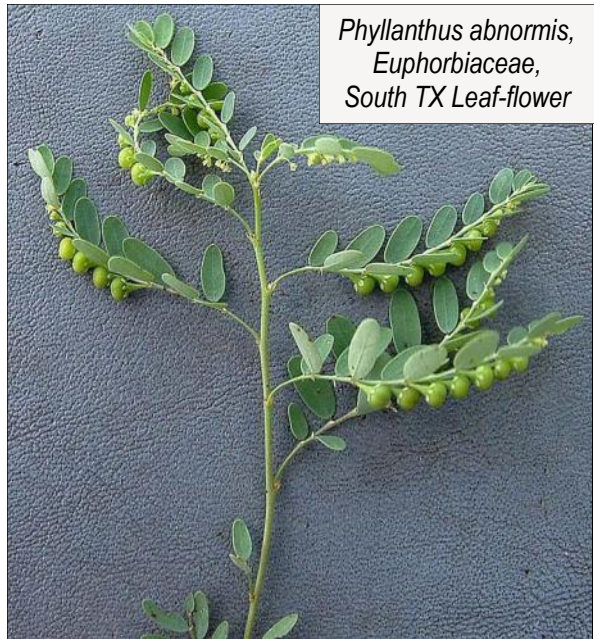
When you reach Boca Chica beach area, look for a bunch of trash cans. We'll be parking near that area. The fieldtrip should begin about 9 a.m.

**Ken King & Dr. Al Richardson will lead us.**

Call Frank Wiseman's cell:  
245-0847, if you're lost!



*Euphorbia innocua*, Velvet Spurge, Euphorbiaceae



*Phyllanthus abnormis*, Euphorbiaceae, South TX Leaf-flower



*Liatris elegans*, Asteraceae. Elegant Gayfeather. A. Richardson photo.



*Abronia ameliae*, Nyctaginaceae  
Amelia Sand Verbena

## LRGV Native Plant Sources

### **Heep's Nursery (& Landscaping)**

(Mike Heep)  
1714 S. Palm Court Drive  
Harlingen, TX 78552  
(956) 423-4513 \* By appt. only

### **Valley Nature Center**

301 S. Border Ave.  
Weslaco, TX 78596  
(956) 969-2475  
<info@valleynaturecenter.org>  
[www.valleynaturecenter.org]

### **Perez Ranch Nursery**

(Betty Perez & Susan Thompson)  
12 miles north of La Joya, TX  
(956) 580-8915  
<PerezRanchNatives@gmail.com>

### **Mother Nature's Creations**

(Billy & Sue Snider)  
2822 Nueces, Harlingen, TX 78550  
Nursery open by appointment:  
(956) 428-4897

NABA Butterfly Park  
Old Military Hwy & Butterfly Pk Dr  
Mission, TX 78552  
(956) 583-9009

Rancho Lomitas Nursery  
(Benito Trevino)  
P.O. Box 442  
Rio Grande City, TX 78582  
(956) 486-2576 \*By appt. only

Valley Garden Center  
701 E. Bus. Hwy. 83  
McAllen, TX 78501  
(956) 682-9411

### **Landscaper using Natives:**

Williams Wildscapes, Inc.  
(Allen Williams)  
750 W Sam Houston  
Pharr, TX 78577  
(956) 460-9864  
[www.williamswildscapes.com]

## *Sponsors*

### Heep's LRGV Native Plant Nursery

Owned and operated by Mike and Claire Heep  
We grow plants suited to landscaping  
and revegetation in south Texas.  
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Billy Snider, Jr.  
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NPP Board & General Meetings held at Valley Nature Center (ABOVE)

(Fourth Tuesday each month)

**Board Meetings at 6:30pm. — Speaker at 7:30pm.**

Most meetings held at Valley Nature Ctr. (see above)

**Sat., Dec. 1st, 2012 at 9am:**

**Fieldtrip to Boca Chica area.**

*(Details p.5.)*



### **Upcoming Speakers and Topics:**

**January 22, 2013** – Dr. Andrew McDonald –  
"Natural History of LRGV Morning Glories"

**February 25, 2013** – Chris Hathcock –  
"The Natural Zones of the Lower Rio Grande Valley"

Other Meeting Dates: March 25, April 22, May 28, 2013

**FROM:** NPP; POB 2742; San Juan, TX 78589

The **Native Plant Project (NPP)** has no paid staff or facilities. NPP is supported entirely by memberships and contributions.

Anyone interested in native plants is invited to join. Members receive 8 issues of **The Sabal** newsletter per year in which they are informed of all project activities and meetings.

**Meetings are held at:**

Valley Nature Center, 301 S. Border, Weslaco, TX.

**Native Plant Project Membership Application**

Regular \$20/yr.  Contributing \$45/yr

Life \$250 one time fee/person

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*Please mail this form with dues check payable to:*

Native Plant Project, POB 2742, San Juan, TX 78589-7742

**TO:**

**Tues., Nov. 27th, 2012 at 7:30pm:**

**"Plants of Our Gulf Coast"**

*by Diann Ballesteros.*

**Sat., Dec. 1st, 2012 at 9am:**

**Fieldtrip to Boca Chica beach.**

*(Details p.5.)*



Alfred Richardson photo.

**at Valley Nature Center  
301 S. Border  
(in Gibson Park), Weslaco.  
956-969-2475**