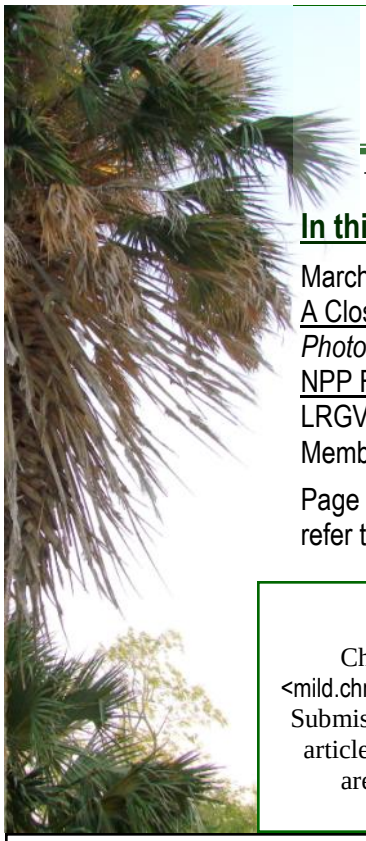


The Sabal March 2013

Volume 30, number 3

In this issue:

Page number references for each plant species refer to "Plants of Deep South Texas," (PDST).

Editor:
Christina Mild
<mild.christina@gmail.com>
Submissions of relevant articles and/or photos are welcomed.

March 2013 Mtg., Native Plant Project:

Tues., March 26, 2013: at 7:30pm

"Wildflowers of the Lower Rio Grande Valley"

by Nick Hoelscher.

Nick Hoelscher is a Texas Master Certified Nurseryman and Store Manager of Valley Garden Center. He started his career there in 1983 and became Texas Master Certified in 1986. He has served on the board of the NPP and was a Past President in the early 1990's. He treasures many types of plants but South Texas native plants are especially fascinating to him. The native plants in his yard have attracted many types of birds /wildlife and has rewarded him with years of lessons learned from his natural "oasis" of natives.

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

Photo: *Eustoma exultatum,* **Bluebell Gentian**. Appears in low places in great profusion with spring rains. In dry years, it is somewhat rare. The two large yellow oval structures are stigmas. Pollen-bearing stamens are also yellow, but smaller. PDST p 277.

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**].
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>**
President - Ken King - (956)-968-8890 - <wk_king01@yahoo.com>

Flower Parts: Blatant Sexuality -

The colorful, showy parts of flowers draw human attention, and humans tend to cultivate the largest flowers which bloom most often.

These showy flower parts direct pollinators to the location of nectar and/or pollen. They also guide pollinators in such a way that pollen, which contains the human equivalent of sperm, is deposited on the sticky female part(s) of a flower, called the **stigma**.

In the flower above, these male and female parts are not discernible; they're deep inside the throat of this bloom.

In terms of identification, the most significant parts of the bloom shown above is the **calyx** at the base of the bloom. The calyx (indicated by yellow arrows above, at three stages of bloom maturation) is composed of pointed, thickened **sepals**. These probably protect the flower parts until they are mature.

This species was discovered growing in the valley roughly ten years ago and was featured in Dr. Andrew McDonald's Jan. 22nd talk for NPP. At that time, a photo showing the sepals was not available. (Dr. McDonald requested publication of this photo as a follow-up to his brilliant talk.)

Cliff Morning Glory (photo above)

Family: Convolvulaceae

Scientific Name: *Ipomoea rupicola*

Habit: Trailing or twining vines.
Flowers: Petals grown together to form a funnel up to 3 1/8" long. Reddish to pinkish purple with dark centers. Dark lines on the large funnel indicate fold lines, where the funnel was furled together in the bloom bud.
Fruit: Brown, globose capsule subtended by dried sepals.
Bloom Period: Summer, fall.
Distribution: Cameron, Hidalgo, Willacy and Starr counties.

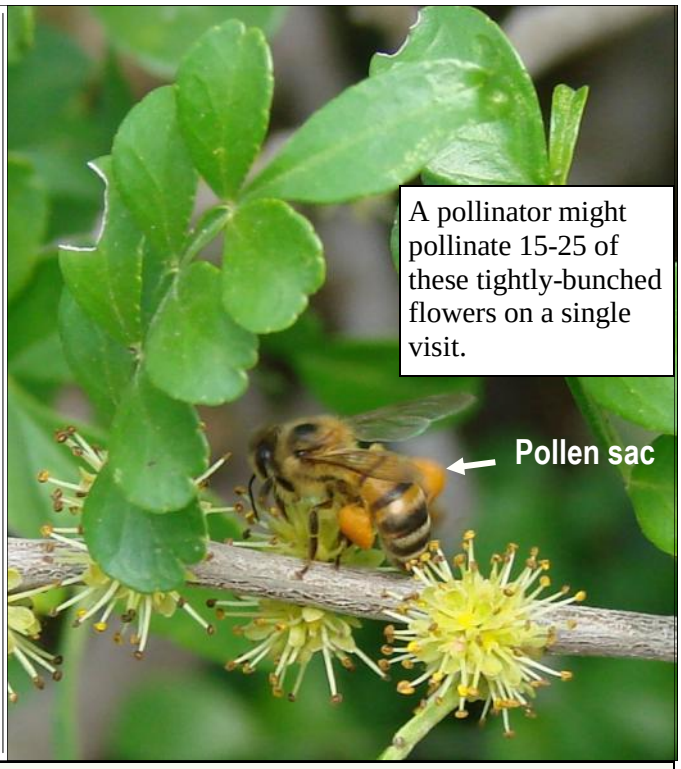
This species is discerned from other local morning glories by the **calyx** lobes that are unequal and taper to a point.

In terms of single blooms, as opposed to clusters, this is one of the largest blooms of any local natives.

*(See p. 197 in **Plants of Deep South Texas.**)*

Tiny Flowers, The Opposite Extreme:

Some plants rely upon masses of tiny flowers. These small flowers are typically loaded with pollen and attract such pollen collectors as bees. The bees in these photos are not giants. They're visiting very small tight clusters of tiny flowers. Notice the labelled pollen sacs on the bee's hind legs where pollen is collected.

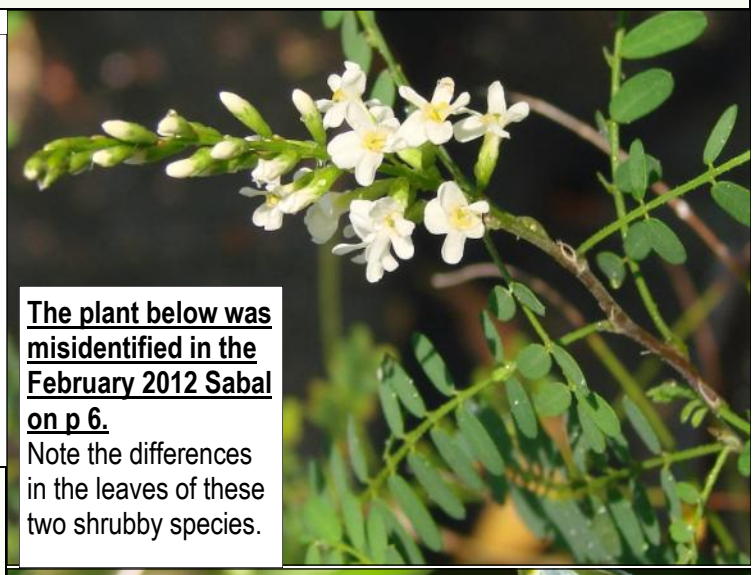


Photos above: *Zanthoxylum fagara,* **Colima**. Family Rutaceae. Well-armed with curved prickles, this citrus-scented shrub has distinctive leaves. It provides shelter for birds and is a host for the Giant Swallowtail butterfly. PDST p 377.

Tiny Flowers Arranged in Spikes:

Other plants have tiny blooms arranged along a spike. To determine the family these plants belong to, individual tiny flowers must be examined. A dissection scope, magnifying loupe, or an excellent photograph taken with "macro" mode can aid in this process.

Even tiny flowers such as these can direct a butterfly to their nectar and send pollen along to the next blooms visited by the butterfly. Markings on the blooms or special aromatic compounds may be used to attract the winged visitors.



<u>The plant below was misidentified in the February 2012 Sabal on p 6.</u>
Note the differences in the leaves of these two shrubby species.

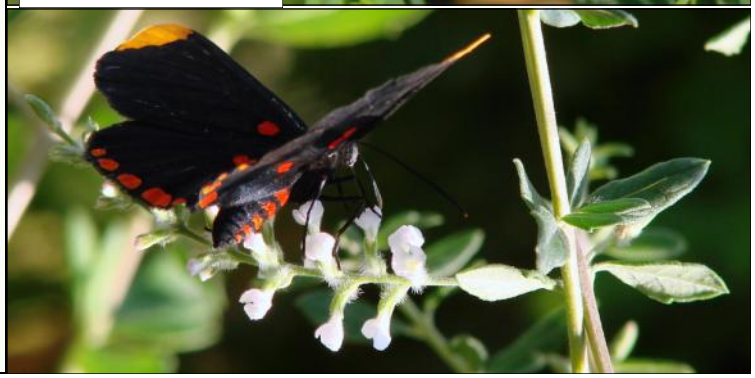
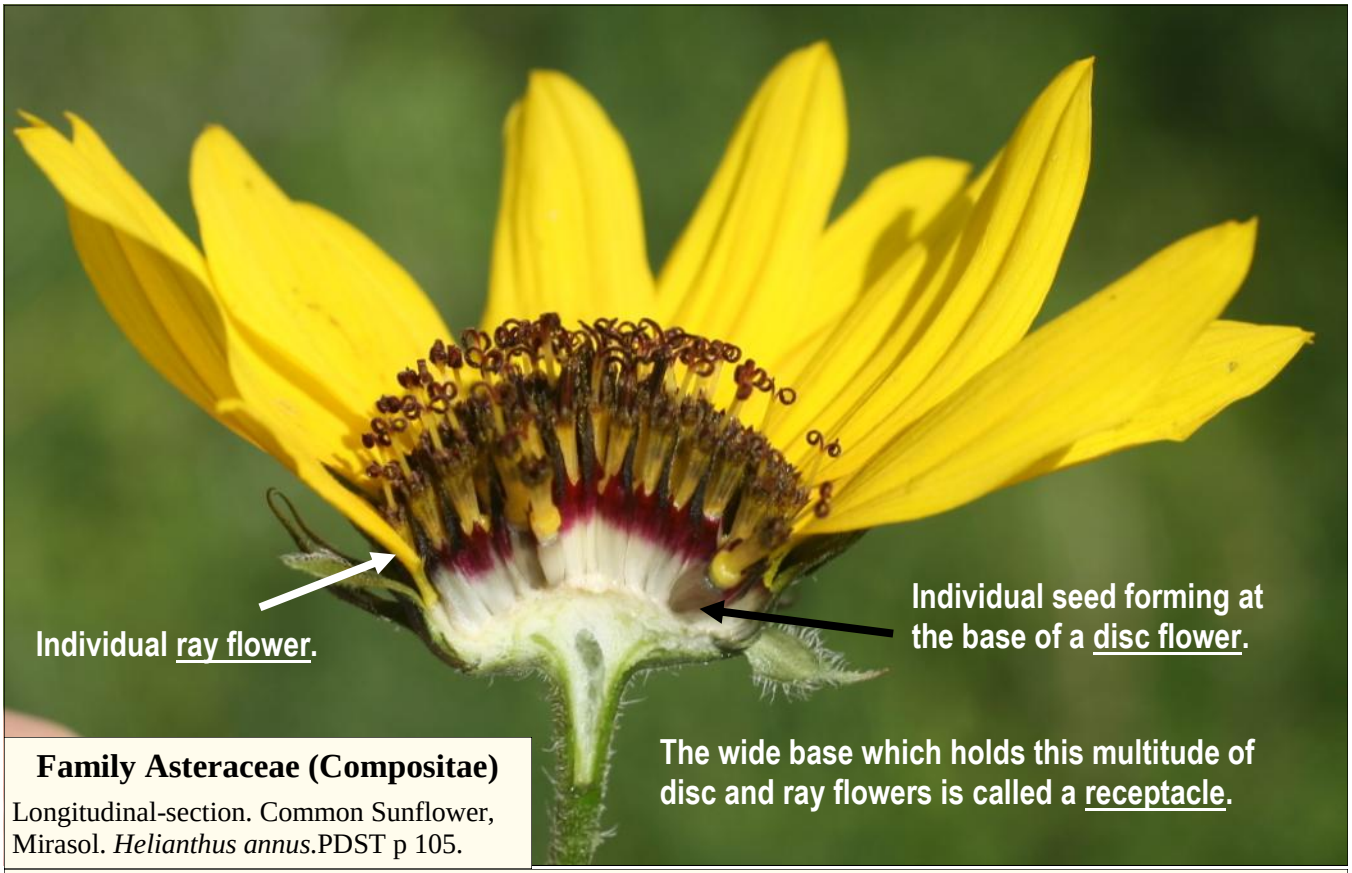


Photo top right: *Eysenhardtia texana,* **Texas Kidneywood**. Family Fabaceae. This plant is in the same leguminous "tribe" as peas and bluebonnets. Note the compound leaves (which have a pleasant aroma when crushed). PDST p 262.

Photo bottom right: *Aloysia gratissima.* **White Brush, Bee Brush.** Family: Verbenaceae. The aroma of whitebrush blooms is very pleasant, sometimes compared to vanilla. PDST p 411 describes the different leaf margins of our two varieties of this shrubby ornamental. Foliage may be toxic to livestock.



Family Asteraceae (Compositae)

Longitudinal-section. Common Sunflower, Mirasol. *Helianthus annus*.PDST p 105.

Composites have different kinds of flowers crammed onto one receptacle (looks like one flower, but is a composite of different kinds of flowers). The edible part of an artichoke is actually a receptacle.
The fruits of Composites are achenes. A sunflower "seed" is actually the fruit. Most folks spit out the ovary wall (the shell) and eat the seed (the ovule).

NPP-sponsored Fieldtrip, Saturday April 6th to Southmost Preserve in Brownsville.

Meet to carpool at 8am, from Harlingen's Home Depot parking lot
(Hwy 77 and Loop 499 Ed Carey Dr exit) **Maps will be handed out.**

We'll try to reach our destination by 9am to begin the guided tour
by Max Pons, Manager,
Nature Conservancy Southmost Preserve
10,000 Southmost Rd., Brownsville TX 78521

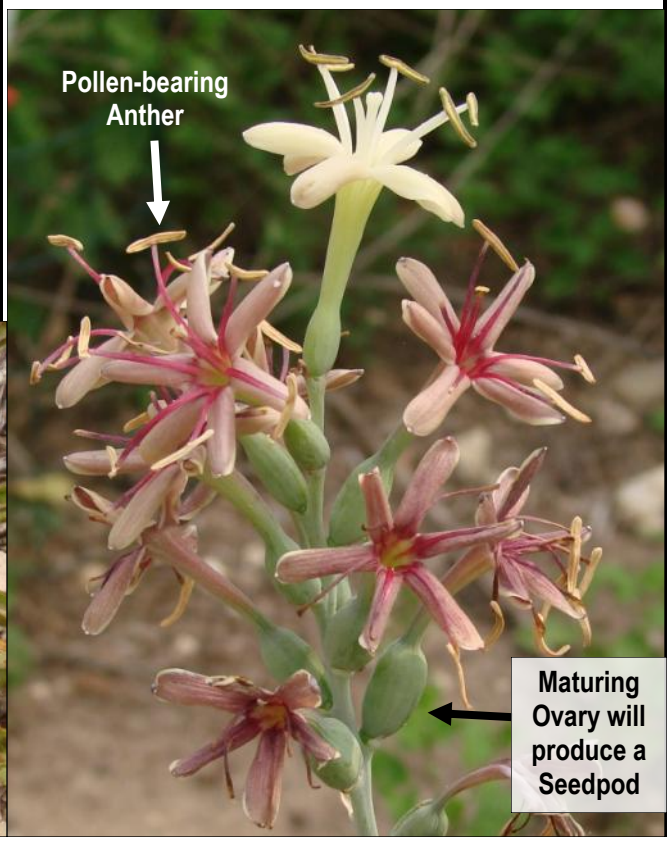
NPP Fieldtrip
8am Sat April 6th

Visits to the preserve are by appointment only.
Southmost Preserve is on a meandering bend of the Rio Grande. As part of the Boscaje de la Palma region, the 1,034-acre preserve encompasses one of the last stands of native sabal palm trees in the U.S. Many would argue that Southmost Preserve is one of the most ecologically important pieces of land remaining in the Valley.
We hope you'll join in this special opportunity to visit a truly unique piece of South Texas.

Directions: From Hwy 77 South, take the Boca Chica exit (Rt. 48, 4 and Boca Chica Hwy). Continue just past the airport. Turn south onto Rt. 511/3068/N. Indiana. This road ends at Southmost Rd (1419). Turn east (left) and take the first road that goes in toward the levee to the right. Look for **The Nature Conservancy** sign. (Sabal Palm Grove is in the opposite direction.)

Monocots, *Agavaceae* (formerly Amaryllidaceae) Unlike dicots, monocots have long leaves with parallel vein structure. Especially attractive members of this group are plants whose flowers resemble amaryllis or lilies. We have several very similar species of the **genus Manfreda.** In the photo below, one sees the basal rosette of long, tapered leaves and a central stem -like bloomstalk. **The genus Manfreda** is discussed and illustrated in PDST pp 18-19. There is considerable variation of characteristics within each species.

Photo below: Manfreda sp. inflorescence.



Well-Studied Monocot: *Yucca treculeana,* Spanish Dagger (PDST p 20): The huge inflorescence of Yucca heralds south Texas spring. Each is composed of many individual flowers, which may form a seed capsule. The process by which Yucca is fertilized is very complex.

An excerpt from **"Roadside Flowers of Texas,"** text by Howard S. Irwin, 1961, p 95:

"There are three features of considerable interest in the structure of a Yucca flower: the pollen is sticky; the pollen-receptive stigmas lie inside a cavity; the pollen-bearing anthers are remote from the stigmas. These three characteristics eliminate the likelihood of self-pollination and make necessary the carriage of pollen by some outside agent. The agent most important in this activity is the Yucca Moth, whose life history is so intimately entwined with that of the Yucca that neither can carry on without the other. The moth enters newly opened flowers, one after another, collecting pollen from the anthers, tucking it in a depression behind her head. After she has filled this receptacle, she thrusts her ovipositor into the flower ovary, lays an egg, and then takes some of her pollen load and spreads it over the stigmatic surface. This she continues to do, going from flower to flower, plant to plant. The insect egg hatches out in the developing fruit and the larva voraciously eats many of the food-rich seeds, eventually making its way to the capsule wall, where it chews a hole large enough for escape and drops to the ground on a thread. Immediately burrowing into the soil a few inches below the surface, the larva continues its development at a much slower pace, and emerges as a moth when the Yuccas bloom the following year."

(Photos left: Above: individual Yucca flower. Below: longitudinal section of developing ovary.)

It is rare to find such a detailed description of how a single species is successfully pollinated and by what. The very old wildflower book from which this account was taken is full of such surprises.

From Flower to Fruit:

It isn't often that we notice fruit as it develops within or below a bloom.

These photos almost speak for themselves. Top left shows a fresh bloom of guayacan, somewhat enlarged.

Just below is a much-enlarged bloom. From the center of the wilting bloom is a much-enlarged, green, hairy ovary maturing into a seed-containing fruit. About 12 pollen-bearing stamens are visible, surrounding the swollen ovary.

Bottom right is the very hairy green immature seedpod, with a few stamens visible in the far lower left.

On the right is a life-size, mature open seed-pod with an emerging red fruit. This red cov-ering can be easily removed from the large black seed when newly-formed. The red cov-ering may be eaten by strong-beaked birds such as the Groove-Billed Ani.

Seeds are propagated most easily when fresh.

Guayacán

Family: Zygophyllaceae
Scientific Name: *Guaiacum angustifolium*
Habit: Shrubs or small trees up to 23' tall.
Bloom Period: Spring, summer.
Distribution: Cameron, Hidalgo & Starr counties.

Thornless shrub resembles an evergreen due to the small leaflets. Excellent for landscaping. Heavily-browsed by deer. Seeds eaten by birds and other animals.

(See p. 425 PDST)

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]

Photo left. This inflorescence is already well-prepared for seed dispersal. At the base of each flower are many sticky green stalked glands. Seedpods are formed within each green calyx and any animal which ventures near carries away the seedpods. *Plumbago scandens,* **Hierba de alacran.** PDST p 352.

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)
Upcoming Meeting Dates: April 23, 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
Other donation: _____

Please print:

*Name*_____

*Address*_____

*City*_____ *State* ___

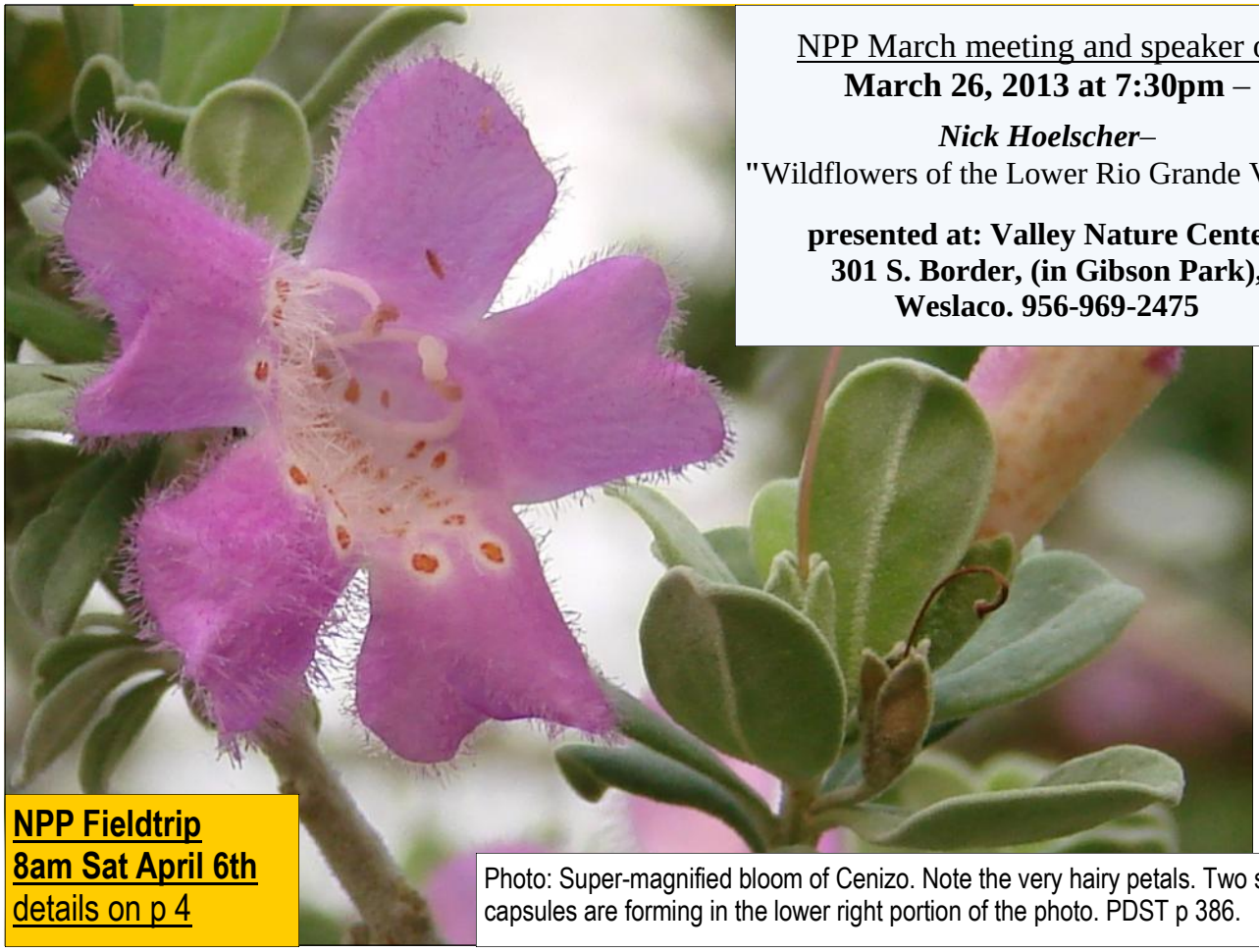
Phone _____ *Zip* _ _ _ _ _ - _ _ _ _

I'm choosing the "green option!"
Send my SABAL via .pdf file to:

Email address: _

Please mail this form with dues check payable to:
Native Plant Project, POB 2742, San Juan, TX 78589-7742

TO:



NPP March meeting and speaker on:
March 26, 2013 at 7:30pm –

Nick Hoelscher–
"Wildflowers of the Lower Rio Grande Valley"

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

NPP Fieldtrip
8am Sat April 6th
details on p 4

Photo: Super-magnified bloom of Cenizo. Note the very hairy petals. Two seed capsules are forming in the lower right portion of the photo. PDST p 386.