



The Sabal

April 2016

Volume 33, number 4

In this issue:

April Speaker, p1 below.
"Extreme Thorns" by C. Mild. Intro., p 2.
Castela erecta subsp. *texana*, Amargosa, p 3
Condalia spathulata, Squawbush, p 4
Koeberlinia spinosa, Junco, p 5
Ziziphus obtusifolia, Lotebush, p 6
LRGV Native Plant Sources & Landscapers,
NPP Sponsors, Upcoming Meetings, p 7
Membership Application (cover), p8

Plant species page #s in the Sabal refer to:
"Plants of Deep South Texas" (PDST).

Native Plant Project (NPP) Board of Directors

President: Ken King
Vice Pres: Ann Treece Vacek
Secretary: Kathy Sheldon
Treasurer: Bert Wessling
Drew Bennie
Ginger Byram
Carol Goolsby
Sande Martin
Jann Miller
Eleanor Mosimann
Rachel Nagy
Ben Nibert
Joe Lee Rubio

NPP Advisory Board

Mike Heep
Benito Trevino

Editor:

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

Editorial Advisory Board:

Mike Heep, Jan Dauphin
Ken King, Betty Perez
Eleanor Mosimann
Dr. Alfred Richardson
Ann Vacek

NPP March meeting/speaker:

Carol Goolsby and Ann Vacek will present
"Monarchs & Milkweeds"

Tues., April 26th, at 7:30pm

The speakers will discuss these organisms with a focus on monarch interactions with native milkweeds of the Lower Rio Grande Valley. Carol Goolsby is an environmental educator at Quinta Mazatlan. Ann Vacek has been studying the native plants of the LRGV for many years.

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



Monarch caterpillar on milkweed.
Photo by James Lovegren.



Asclepias oenotheroides -
prairie milkweed. PDST p 75.

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 - <wk_king01@yahoo.com>

“Extreme Thorns”

— by Christina Mild

There are a number of plants in deep south Texas which are so thorny that little else about them might be noticed. They are probably each referred to as “allthorn” at one time or another by many of us. This issue offers a closer (macro) look.

Each has relatively short, sturdy thorn-tipped branches, reminiscent of a hypodermic when they enter human flesh.

Such fortification offers good protection for nesting or hiding wildlife and understory plants.

When growing conditions are good, soft new tissues provide forage for many animals. Indeed, several of these species are rather difficult to grow as transplants: new growth is just too tempting for critters to gnaw. Wherever foragers are abundant, these species generally have a compact growth resulting from that browsing pressure.

In the more arid western parts of south Texas, leaves are typically much smaller, making plants trickier to identify.

Several of these wildly thorny species photosynthesize primarily in the epidermal tissues of their short thorn-tipped branches. Others retain small narrow toughened leaves resistant to water loss.

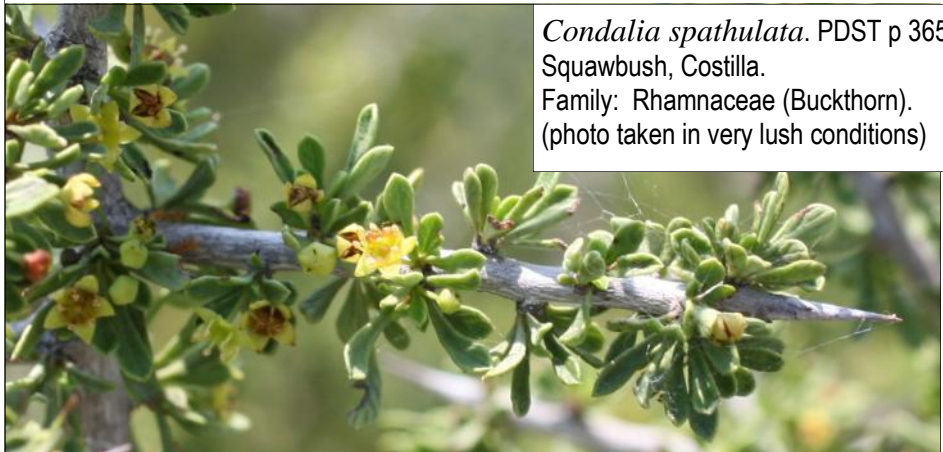
All are adapted to changing environmental conditions, including drought, cold, wind, and long, hot days.

Each has potential for xeriscaping. Weed prevention might protect the groundskeeper from puncture wounds.

Castela erecta subsp. *texana*. PDST p 390.
Amargosa, Allthorn Goatbush. Bitterbush.
Family: Simaroubaceae (Quassia).



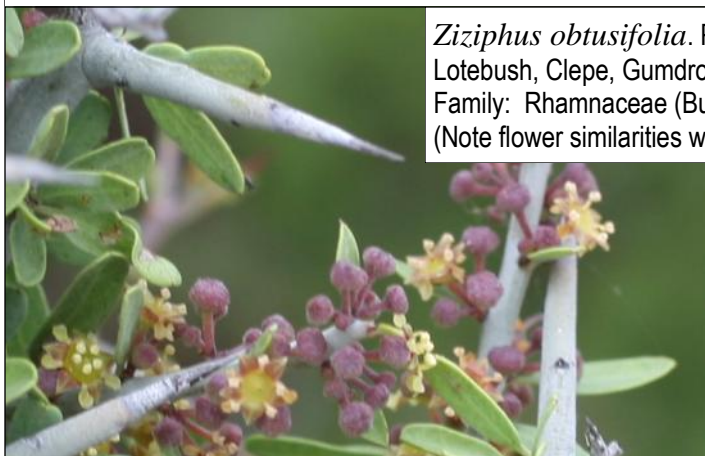
Condalia spathulata. PDST p 365.
Squawbush, Costilla.
Family: Rhamnaceae (Buckthorn).
(photo taken in very lush conditions)



Koeberlinia spinosa. PDST p 176.
Junco, Crucifixion Thorn.
Family: Capparaceae (Caper).



Ziziphus obtusifolia. PDST p 366.
Lotebush, Clepe, Gumdrop.
Family: Rhamnaceae (Buckthorn).
(Note flower similarities with Condalia above.)



Thank you to
Dr. Alfred
Richardson
for photos
on this page
and many others
in this issue.

Castela erecta subsp. *texana*. PDST p 390.
Amargosa, Allthorn Goatbush. Bitterbush.
Family: Simaroubaceae (Quassia).

Everything about amargosa is bitter, the taste of the fruit, the taste of the leaves, the pain inflicted by the thorns. That's why it's called amargosa.

Like many other bitter things in life, amargosa is memorable.

Tiny, delicate flowers adorn the plant whenever we have just a spit of rain. One sometimes finds these pinkish-yellow flowers and dark red fruit at the same time, on the same plant. The shape, contrasting colors and form of the plant remind me of oriental art and design.

The pharmaceutical properties of amargosa have been studied using chemical analysis and microscopy. "In the treatment of amoebic dysentery it has been found that a fluidacetextract in the proportion of one part in a million is sufficient to render *Entamoeba histolytica* immobile." ("Trees, Shrubs, and Woody Vines of the Southwest," Robert A. Vines. 1960.)

In the Rio Grande Valley, amargosa was used in "folk medicine" to treat dysentery. Native plant nurseryman Benito Trevino, of Rio Grande City (Starr County), remembers the remedy from childhood. Newer treatments employ several drugs in combination, with unpleasant side effects and days of taking pills.

Enormous potential for medicine lies in plant diversity. The Useful Wild Plants project is an applaudable and massive undertaking to preserve this type of knowledge for the future. (See "usefulwildplants.org.")

In the dry spring of 2001, the red "cranberry" fruit of amargosa was ripening. The fruit was a spectacular adornment on formidable, thorn-tipped angular branches.



Macro-photo
by
Jan Dauphin.

Mike Heep says that amargosa fruit always ripens in spring, whether it has rained or not.

Amargosa's ability to store water, or to extract it from parched earth, is nothing short of a miracle. The plant signifies survival through adversity. In the driest and hottest August I remember, amargosa was heavily-laden with gorgeous red fruit.

The leaves remind one of small, short evergreen needles with gray undersides. They are often appressed onto each branch and barely noticeable.



Despite the bitter taste, white-tailed deer browse the leaves and eat the fruit.

Correll and Johnston (*Manual of the Vascular Plants of Texas*, 1979) delineate the range as: "On gravelly hills and bluffs in thickets and in mesquite prairies from Terrell County south to Cameron County and east to Travis County ... also northeastern Mexico."

Amargosa can be difficult to establish, as tender new growth is apparently a treat for hungry critters.

Conservation of existing specimens may be a more practical approach for protection of the species.



Condalia spathulata. PDST p 365.
Squawbush, Costilla, Knifeleaf Snakewood.
Family: Rhamnaceae (Buckthorn).



Squawbush may well have been used by Indian “squaws” for drying laundry.

In addition to strong thorns on the end of each short branch, there are very short thorn-tipped branches protruding in every direction from almost everywhere. Once your clothing becomes caught upon it, the usefulness for securing laundry in a strong wind becomes apparent.

The overall appearance of this short shrub is well described in “A Field Guide to Common South Texas Shrubs,” first published in 1997, authored by Taylor, Rutledge and Herrera. It is as follows:

“A very spiny, impenetrable, low and wide, irregularly dome-shaped, clump-forming, evergreen shrub (10’-20’ diameter clump) with grayish-green branches. Knife-leaf condalia has small, narrow, alternate leaves (1/4”-1/2”), inconspicuous, greenish flowers and a round, black, edible fruit. It is similar in appearance to lotebush and amar-goza, except for the clump growth form.”

“Knifeleaf (snakewood) has a low browse value partly because of inaccessibility and defensive stout thorns, however new growth is occasionally browsed by white-tailed deer and livestock. The fruit is eaten by small mammals and some birds, including bobwhite and scaled quail. The thickets provide excellent protective cover for many small mammals, birds, and reptiles.”

This species is found locally in Starr county, on dry gravelly or caliche hillsides, in shallow soils and along arroyos in dry, open, brushy areas.

Compare the macro-photo of these blooms with those of *Ziziphus obtusifolia* (macro-photo on p 2), which is also in the family Rhamnaceae.

Brasil, *Condalia hookeri*, is another close relative.

(*Macro-photography by Dr. Alfred Richardson.*)



Koeberlinia spinosa. PDST p 176.
Junco, Crucifixion Thorn.
Family: Capparaceae (Caper).



Gray Hairstreak butterfly
on *Koeberlinia* blooms.

“Soft, new growth is browsed by various mammals. Quail and jackrabbits eat the fruit.”

Arturo Longoria studied blooming Junco over a spring and summer. He writes of it in “Keepers of the Wilderness,” 2000. “...when it flowers, it smells of rotting flesh...” he writes. “I discovered hundreds of flies buzzing around a dark green madness of thorns...the first bloom in late March corresponds with the proliferation of flies seen every spring ... as flies wane, ...Junco finds other pollinators ... Subsequent blooms in late April and throughout May have a faintly sweet odor that attracts bees, wasps, and moths. The final pulse bloom in

Mike Heep, who has studied the matter in considerable detail, tells me that the actual crown of thorns placed upon the head of Jesus of Galilee was likely from a *Koeberlinia* species growing near the site of the crufixion, lending credibility to the common name, Crucifixion Thorn, for *Koeberlinia spinosa*.

I prefer the folk name Junco (pronounced “hoonko”). Junco might best be described as a stiff, green mass of tangled spines.

Each spine is about 2 inches long, green except for a dry, brown tip. Junco growing in full sun develops strong, stiff spines, which enter skin with the ease and pain of a large hypodermic needle: brings a person right to attention. In more shaded locations, the spines are thinner and sometimes flexible.



After sufficient rain, junco grows

late summer entices minute insects; they are probably drawn to an odor, or perhaps color, indiscernible to the human nose and eyes.”

When one considers hordes of visitors who trek to blooms of very stinky plants in famous arboreta, the possible cash value of “Junco ecotourism” comes to mind.

It would be hard to find a plant better-adapted to our hot, dry, windy conditions. The entire surface carries on photosynthesis, without the water-wasting extravagance of leaves. Stomata on the stem and spine surfaces allow transpiration, usually carried on primarily in leaves.

Junco can grow to 25 ft., though it’s more noticeable and common as a shrub. It’s found on rocky open slopes, clay mounds, brushland and about arroyos. Mike Heep finds Junco on inland lomas, but it is oddly absent on lomas very close to the coast.



Photo left by:
Raziel Isaac Flores Burquez
and posted on the Facebook group page:
“Native Plants of the Rio Grande Valley”

tiny, transient, leaves. Masses of delicate greenish-white flowers are followed by tiny berries, the size of bb’s, which ripen from burgundy to black.

In “Common South Texas Shrubs,” 1994, Taylor, et. al., state that Junco is useful to animals in many ways.



Ziziphus obtusifolia. PDST p 366.
Lotebush, Clepe, Gumdrop.
Family: Rhamnaceae (Buckthorn).



Ziziphus obtusifolia has prominent thorn-tipped branches. After rains, lustrous foliage conceals the thorns completely. Shiny leaves soon bear evidence of insect-foraging. Bite marks appear. Entire leaves disappear.

Even in a dry, hot April, *Ziziphus obtusifolia* is often resplendent and leafy, in bloom and bearing ripening fruit. Such a miraculous plant this is!

The dark fruit of Clepe feeds many birds during south Texas' spring and summer. During this fruit-laden season, Gumdrop Tree is an appropriate common name.

Leaves vanish completely as the year progresses. For much of the year, one can best identify the plant by unusual striations on the grey or greenish-blue bark and by the many short thorn-tipped branches. These thorn tips are strong ones, sharp, pointed and dry. They easily pierce human flesh.

Locally, the leaves appear to be eaten by myriad wild creatures, which consume them rapidly. One week a large shrub is covered in shiny foliage. The next week it may be a mass of barren thorns.

The lustrous leafiness is beautiful in spring. Equal beauty is manifest in extended drought. Stark angles of barren thorny branches are striking against blue skies or the foliage of surrounding plants.

Excellent photographs of *Ziziphus obtusifolia* are found in "A Field Guide to Common South Texas Shrubs," R, Taylor, J. Rutledge and J. Herrera, 1997. This book is an excellent help in learning native shrubs, though not all LRGV shrub species are included. Taylor et. al. summarize wildlife use of Clepe.

White-tailed deer occasionally browse the leaves, as do cattle, sheep and goats. The fruit is eaten by chachalaca, gray fox, raccoon, coyote. The thorny bush gives cover and

protection for quail. Even the picky cactus wren will sometimes nest in a Lotebush.

Lotebush is a seldom-abundant but common component of shrub communities and occurs in a variety of soil types and mixed-brush communities. It is an appropriate plant choice for revegetation and landscaping throughout the valley, especially in dry places.



The gumdrops of Clepe are round, blue-black and sweet, with one large seed. The fruit is similar in shape and color to Coyotillo fruit, which causes paralysis. Coyotillo (*Karwinskia humboldtiana*) and Clepe grow happily intertwined: good reason to remain alert while sampling.

Mike Heep says he has much better luck at seed collection in parts of the valley where chachalaca are absent, as they eat the fruit before he can pick it.

I often find Clepe growing along fences in older neighborhoods. It would seem a suitable specimen plant on the mounded hills so popular in new landscapes.

Medicinally, roots were used to treat wounds on domestic animals. They were also used as a soap substitute.

LRGV Native Plant Sources

See also our
Sponsors on right

Perez Ranch Nursery

(Betty Perez)

12 miles north of La Joya, TX

(956) 580-8915

<PerezRanchNatives@gmail.com>

These vendors may sell exotics:

National Butterfly Center

Old Military Hwy/3333 Butterfly Pk Dr

Mission, TX 78572

office (956) 583-5400

Marianna Trevino Wright, Exec.Dir.

cell 956-648-7117

<mariana@nationalbutterflycenter.org>

[http://www.nationalbutterflycenter.org]

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

M&G Double D Native Plants & Seeds of South Texas, (Gail Dantzker)

956-342-5979; <gdld@att.net>

7500 N 21st St; McAllen, TX 78504

[mandgdoubled.com]

Grown at The Woods, Willacy Cty., TX.

Landscapers using Natives:

Landscaping, Etc. Inc.

Noel Villarreal

125 N. Tower Rd, Edinburg

956-874-4267, 956-316-2599

**NPP Board & General Meetings
are held at Valley Nature Center**

(see ABOVE)

(4th Tues. each month)

Brd Mtgs 6:30pm — Speaker 7:30pm.

Our next meeting: 5/24

Sponsors (Native Plant Nurseries)

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.

1714 S. Palm Court Drive, Harlingen, TX 78552

(956) 457-6834 <heep0311@yahoo.com>

[www.heepsnursery.com]



Come visit the VNC:
301 S. Border Ave.
Weslaco, TX 78596

(956) 969-2475
info@valleynaturecenter.org
www.valleynaturecenter.org

*A Secret Garden
in the Heart of the
Rio Grande Valley*



***Native Plants
for Sale***

*Watch Birds
& Butterflies*

Valley Nature Center
-6 acre Nature Park & Trails -Book & Gift Shop-
-Native Plant Nursery-Meeting Room-
-Environmental Education and Exhibit Hall-



Monk Parakeet eating Common Sunflower in Reynosa,
Mexico. Photo by Marco Vergera.
(*Helianthus annuus*, PDST p 105)

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/speaker:

Tues., April 26th, 7:30pm

The Native Plant Project will present:

“Monarchs & Milkweeds”
by Carol Goolsby
& Ann Vacek

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

Please bring any “plant unknowns”
specimens or photos. We’ll discuss
their identity at our meeting.

In this issue: “Extreme Thorns” including:

Castela erecta subsp. *texana*, Amargosa.

Condalia spathulata, Squawbush.

Koeberlinia spinosa, Junco.

Ziziphus obtusifolia, Lotebush.

Prairie milkweed releasing seed.
James Lovegren photo.

