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“Plants of Deep South Texas” (PDST).

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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.

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“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.

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

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.
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.)
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 crucifixion, 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 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. “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 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”

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.
LGV Native Plant Sources

See also our Sponsors on right

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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

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

www.NativePlantProject.org
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

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“Monarchs & Milkweeds”
by Carol Goolsby & Ann Vacek
The meeting is held at
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956-969-2475.

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

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