In this issue:
March Speaker, p1 below.
“Lilies of the Valley,”
Agave scabra p2-3
Echeandia sp. p4
Manfreda, Manfreda variegata p5-6
LRGV Native Plant Sources & Landscapers,
 NPP Sponsors, Upcoming Meetings p7
Membership Application (cover) p8

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

NPP March meeting/speaker:
Ken King will present “Wildflowers of Spring”
Tues., March 22nd, at 7:30pm

The Native Plant Project’s annual wildflower program will be presented by Ken King this year. Ken is coauthor of Plants of Deep South Texas, A Field Guide to the Woody and Flowering Species, which has become the must have reference book/field guide for RGV native plants since its release. Ken is the President of NPP, a recently retired educator who will always continue to teach, and one of the foremost naturalists in the Valley. The wildflowers are blooming sparsely this year due to a very dry winter. Come see our beautiful wildflowers up close.

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

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>
**“Lilies of the Valley” — by Christina Mild**

Amaryllis, Lily and Agave families have been lumped, divided, re-lumped and moved about in classification schemes. One of their unifying characters is a basal rosette of leaves. Blooms are usually held aloft on a stalk. All are monocots, with veins running parallel along the length of each leaf.

Beyond this, there is wide diversity among these otherwise-similar plants. Some have fibrous leaves, even armed with vicious thorns. Others are fleshy, some are as thin as a grass blade, and some are readily eaten by wildlife. A few, like Crow Poison (PDST p24) may be poisonous.

These are good examples of native plants to look for in spring, when some are blooming and others are reemerging into sight with new leaves.

This issue of the Sabal will focus on species which have been cultivated successfully. Each of these are good candidates to add to home gardens and to wildlife areas.

The bulk of the material which is included in this issue was previously published in my column on native plants, “Rio Delta Wild,” in the Valley Morning Star.

Unlike other Sabal issues which have focused on photography, this issue will focus on a wide array of information from various sources.

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**Agave Scabra, Rough-Leaved Agave.** PDST p17. (photo above by Dr. A. Richardson.)

Spring is often a very dry time in parts of deep south Texas, especially in the “ranch country” where *Agave scabra* can be found. I call this “Double-Decade Rough Maguey,” just because I like to make up my own common names for things. Most agaves are referred to as Century Plants, mainly because specimens which were transplanted into European gardens seemed to live for a century before they began to bloom. *Agave scabra* blooms roughly every 20 years, thus my moniker.

Many folks have difficulty discerning between Yuccas, Agaves and Aloes. Hopefully this Sabal issue will help to tell these groups of plants apart.
Agaves are native only to the Americas. Most grow on dry sites, rocky hillsides and graved plains, usually in soil of limestone or sand. For centuries, they have been admired in Europe and grown in arboreta throughout the world. Many have been cultivated around the globe to produce various fibers and other products. Local landscapes feature various agave species.

A rosette arrangement of large leaves arranged in a spiral, typical of agaves, is a common adaptation to desert or arid conditions. Even small amounts of moisture are directed down the leaves, like a channel, to the root zone.

The outer tips of almost all agave leaves have a rigid and very sharp terminal spine. Leaves are thick and succulent, storing water efficiently. A fine to heavy wax cuticle further seals the leaf from evaporative water-loss. Commonly called “magueys,” agaves have hard, rigid and very fibrous leaves. (This distinguishes agaves from closely-related aloes, with their gelatinous interior.) Many magueys have prominent sharp marginal teeth lining the leaf-edges. Armed with such protection, agave leaves often live for twelve to fifteen years, often for the entire life of the plant.

Underground stems form small buds, creating offsets or “pups,” in massive colonies. The pups are easily transplanted and grow roots quickly with a bit of initial watering.

Magueys usually bloom only once during the plant’s lifetime (monocarpic) and then die. See “Agaves, Yuccas and Related Plants,” Mary & Gary Irish, Timber Press, 2000.

Agaves have been used for centuries by Amerindians in a multitude of ways. An excellent compilation is in: “The Useful Wild Plants of Texas, Vol. I,” by Scooter Cheatham and Marshall C. Johnston, 1995. (M. C. Johnston grew up in Harlingen.)

The two agaves found in the lower Rio Grande valley are Agave scabra (rough agave) and Agave lophantha (thorn-crested agave). Both species are uncommon, found mostly in very well-drained sites in extreme western Hidalgo and Starr counties.

Agave scabra is often confused with Agave americana (Century Plant, of more western distribution, cultivated locally). Scabra, as the name implies, has a rough-textured leaf epidermis, reminiscent of shark skin. The surface of A. americana is smooth.

Agave scabra is featured in the Native Plant Project publication, “Cacti, Ground Covers and Vines.” A spectacular bloom stalk of thirteen to nineteen feet in height is produced after about eighteen years of growth. The multi-branched yellow flower stalks appear in April to June, attracting numerous pollinating insects and insect-eating birds.

The plant will grow in any soil with good drainage. Full sun is required. Growth-rate is moderate. The adult size is large: five to six and a half feet across. Because of size and dangerously-sharp edges, Agave scabra is best located away from human traffic and weed-tending.

Agave scabra can be cultivated from seed or by removal and transplanting of “pups.” Even badly-formed plants from crowded spots develop symmetry with adequate growing space.

Javelinas are courageous and feisty enough to eat the leaves, which serve as lizard-shelter. Packrats also eat the leaves.

Agave scabra hybridizes readily with other species of agave cultivated in our area. One will find much variation in local plantings.

Chris Best (of LRGV National Wildlife Refuge) told about an intense contact dermatitis that results from contact with the fresh sap of many Agave species, including but not limited to A. scabra. “I was extracting the fibers from leaves of this plant once and got the juice all over my legs … a few minutes later I wanted to rip my skin off. It lasts for hours or even days.”

Agaves are used successfully on dry, steep slopes to gracefully combat erosion.
Lily of the Lomas & Green Island Echeandia (*Echeandia* sp. PDST 26.)

Frank Gonzales gave me a nice gift around 2002, two specimens of *Echeandia* sp. I had never seen the plant growing in the wild, but I’d seen pictures and heard people talking about it. I’ve been able to cultivate the plant since that time in pots and in my front yard. At Ramsey Park, protection from rabbit munching was a necessity. Over the years, we’ve lost the delicate lilies to hungry critters. Only a securely anchored cage has allowed a recently planted specimen to survive over the past year.

Here’s what Frank Gonzales had to say about the plant: “Lila de los Llanos (another common name) is a wonderful perennial that will take full sun. This guy will bloom from March thru October. The yellow flowers attract a lot of different bees, wasps, and a few butterflies. I have seen fields of nothing but Lila de los Llanos and it’s a wonderful sight to see; 200 feet in all directions a valley of yellow flowers … the insect activity was bountiful. The flowers are small, so plant them in mass. They can also take a little bit of partial shade.”

This native lily, found on coastal lomas, has attractive yellow blooms facing downward on a thin stalk rising from a rosette base of elongated leaves. When I stumbled upon a specimen short enough to frame up nicely as a photo, I called Mike Heep right up. “I think that one’s genetically unique,” Heep noted. “They’re working out new taxonomy on it. E-mail Chris Best (who previously worked) at Santa Ana and see what he has to say.”

Chris Best provided detailed data on the plant: “As a matter of fact, I was at the Loma Preserve today with Dr. Alice Hempel, botanist from TX A & M Kingsville (TAMUK), and a graduate student, Shelley, who are studying this new taxa of *Echeandia* and comparing it to the previously described one.”

“Lila de los Llanos is *Echeandia chandleri*, (PDST p26) which is known also from the coastal bend area, as well as locations in the mountains in Mexico. It has free anthers and a relatively tall, less branched flower stalk. The newly described species is *E. texensis*, known only from Green Island and from some of the lomas at the mouth of the Rio Grande.”

“The differentiation is based on connate (fused or joined) anthers. From a distance, we also observe that it tends to have a shorter, more-branched flower stalk. There are also vegetative differences in the leaf margins … one has a hyaline margin. Best seen with a hand lens. Shelley is doing reproductive biology work on these species, and I think they will do some genetic stuff.”

“What is interesting is that we have both species on the lomas, but only one per loma. One loma will have *chandleri*, and the next loma, half a mile away, will have *texensis*.”

Here are some additional notes (2002) from Mike Heep:

“Lila de los Llanos is a nice plant to put in all by itself in a landscape. Claire (Heep’s wife) has one in the front planter, with bark mulch on the ground around it, and it’s real pretty that way. The plant is blooming continuously, has been since we planted it 6 months ago. The flower stalk is about 3 feet high. The basal rosette of leaves is attractive too. It gives you a different color of green in your landscape. Kinda light green, the color like some of the inside stalks on a bunch of celery (not the yellow ones in the very center of the stalk).”

Lily of the Lomas is worthy of study. It’s an especially pretty little plant. A number of native plant growers can provide this well behaved lily for your flower bed. It’s accustomed to the good drainage offered by coastal lomas and is hardy enough to withstand this climate.

Heep told me recently that he’s lost his specimens of *E. chandleri*. He still propagates *E. texensis*, which is equally pretty.
Manfreda, “American Aloe”

There are a number of Manfreda species found in deep South Texas, and I have a hard time telling one from the other. Common names are Runyon’s Huaco, Spotted Tuberose, Siler’s Tuberose and Mottled Tuberose. American Aloe is another common name, possibly applicable to all of them. They have somewhat fleshy leaves, which critters seem to relish, and swollen fleshy underground stems, which critters dig up where they can. The blooms of each Manfreda species are clustered on an upright stalk, which is sometimes many feet above the ground.

Any of these are worthy of a garden and all should be included in wildlife areas, if they can be protected until mature colonies have developed.

Photo right: Manfreda sp. PDST p18-19. This photo was taken at Ramsey Park, where the specimen was planted in “Runyon’s Garden. Note the wire cage around the plant. Critters have since dug under the cage and eaten the plant. So much for the best efforts of man.

Manfreda variegata, PDST p19.

The bloom of Variegated Huaco (now called Mottled Tuberose or Liverspot Lily) adorns the cover of the Native Plant Project’s Cacti, Ground Covers and Vines (of the Lower Rio Grande Valley). Following spring and summer rains, these delicate, clustered-bloom stalks once adorned the periphery of Harlingen’s Thicket. In 2002, this forty-acre tract had one of the largest remaining populations of the plant, though most have been lost to development which began in earnest in that year. Many specimens were lost to the practice of big developers to bulldoze land adjacent to what they actually own, flattening what amounted to acres belonging to the wildlife preserve.

I generally refer to the plant simply as Manfreda, and I was involved in digging many rescue specimens just in front of the bulldozers. Volunteers from throughout the valley were helping to rescue many species which were found along the edges of what became “Harlingen Thicket.” Those edges are now seas of guinea grass, which moved in pretty quickly behind the bulldozers.

Manfreda variegata is the current scientific name for this soft and thornless plant. Botanists have changed their collective minds on several occasions about how to classify it. For some time, the genus name Polianthes was used in place of Manfreda. When Dr. A. Richardson authored Plants of the Rio Grande Delta (published in 1995), Manfreda was considered part of the Amaryllis family. Botanists have since that time moved it into the Agave family, where I am happy to report that it has remained.
Huaco is probably the oldest name, handed down over many generations. Variegated Huaco has the typical, basal rosette of succulent leaves which you would expect of a lily, amaryllis, or agave. The leaves are sixteen inches long, tapered to a point, and adorned with “liver” spots reminiscent of old age. Another common name is American Aloe. Though the leaves are soft and succulent, they are thin, unlike that of commonly cultivated aloe.

Manfreda has a very long, fleshy taproot, which serves it well in this dry clime. In areas adjacent to the Harlingen Thicket, where brush was periodically removed, Manfreda continued to reappear. In the areas which were bulldozed around 2002, small plants continued to reemerge over several months, after every rain, re-grown from the remaining root.

It is thought that Manfreda is a hostplant for the Manfreda Giant Skipper, a butterfly endangered in Texas due to habitat destruction.

The distribution of Manfreda variegata is restricted to our southernmost part of Texas and adjacent Tamaulipas. That distribution is described by Dr. Richardson as Cameron and Hidalgo counties in dry, clay soils.

Dried bloom stalks help in locating Manfreda, as they stand up to six feet high and remain in place for extended periods. Seeds rattle nicely inside the pods, providing entertainment to he who finds them. They make delightful fairy wands to sprinkle sounds of good cheer on the surroundings. It is surprising that many seedpods can be found from time to time. Bloom stalks appear after spring and summer rains, looking much like a stalk of asparagus. Rabbits apparently find them quite tasty. Many emergent bloomstalks were eaten down to a nub just one day after they appeared (on the edges of what is now Harlingen Thicket). Rabbit droppings at the scene and the hasty departure of hopping balls of fur are the only evidence I can offer for this personal conclusion. It seems that rabbits also enjoy the leaves, especially at times when they show rapid, post-rain spurts of growth.

In undisturbed areas, healthy clusters of Manfreda variegata form large, attractive mounds. The plant can be propagated from seeds and divisions of root offsets. Having no success at germinating the seed, I’ve handed my collected seed over to professional native nurserymen, knowing that the plant will be readily purchased from them. In transplanting “root offsets” from clustered Manfreda, it is important to allow the root-tip to dry before planting. Succulent plants are susceptible to root rot at freshly cut exposed areas.

Manfreda adorns the cactus gardens at Weslaco’s Valley Nature Center. You can still find scattered specimens in Harlingen Thicket. A large sign indicates the parking area and walk-in entry point for the thicket. That entry point is on Taft Street, “behind” the offices of the Valley Morning Star, very near the railroad tracks, and not far from Coakley Middle School.

At Ramsey Park, we have had little success in cultivating Manfreda. It seems that the entire plant is desirable food for munchers and diggers. With time, we hope to develop a cage which will successfully protect this beautiful native representative of what was previously known as the Amaryllis family.
**LRGV Native Plant Sources**

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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.**  
2016 meetings: 4/26, 5/24

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**Above:** White Rain Lily, *Cooperia drummondii,* PDST p25.  
There are several small native lily species. Check out PDST pp24-25. These should be popping up anytime.  
Dr. A Richardson photo.
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
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NPP March meeting/speaker:
Tues., Mar. 22nd, 7:30pm

The Native Plant Project will present:

“Wildflowers of Spring”
by Ken King

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

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

In this issue: “Lilies of the Valley.”
Amaryllidaceae and Agavaceae families.
Plants with a basal rosette of leaves.
Opposites in many ways, several species in these families are good candidates for cultivating in your garden and in areas for wildlife.

No more “Weed & Feed!”
Buttercups appear in many city yards, unlike most wildflower species. However, these will immediately die out if products labelled as “Weed & Feed” are applied. The “weeds” are anything which isn’t a grass. Save the wildflowers! Make sure your gardener isn't applying a broadleaf herbicide to your lawn.

Photo by Roni Louise Rentfro.
Oenothera speciosa, PDST p341.