

The Sabal

November 2013

Volume 30, number 8

In this issue:

November speaker p 1 below
Some Invasive Exotic Species of the LRGV
—by *Christina Mild*

LRGV Native Plant Sources, NPP Sponsors p 7
Membership Application (cover) p 8

Page number references for each species shown in the Sabal refer to: "Plants of Deep South Texas," (PDST). Many photos and text quotes in this issue were found on the world-wide web.

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November 2013 Mtg., Native Plant Project:

Tues., Nov. 26th, 2013, 2013: at 7:30pm

"Fungi" by Drew Bennie

Drew Bennie is a Master Naturalist and a Master Gardener who has developed an interest in Mushrooms and Fungi. Although not formally educated about Fungi, he has attended the Telluride Mushroom Festival 3 times and will share what he has learned. He will talk in general about Fungi, how they grow, and why they are so important to the environment. He will also show photos of mushrooms he found locally.

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



Left: Tiny "Bird's Nest" fungi growing on a small stick, photographed in Drew Bennie's yard.

Below: Mushroom growing in the sand at Boca Chica beach.



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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Invasive Exotics in the LRGV— by Christina Mild

First of all, we should establish that **an exotic plant** is a species that has been carried to an area, generally by humans, during recorded history.

Sometimes, exotic plants represent little threat to the natural habitat. Roses, for example, don't escape into the wild in the LRGV. Most of us can barely keep them alive in our cultivated gardens. They aren't able to reproduce in this environment without lots of help.

This isn't the case in much of the midwest with the wild rose which grows throughout forests and roadsides. That species was brought here hundreds of years ago and has rapidly reproduced since introduction.

Exotics which have been introduced from areas with a similar climate to our own hold more threat of escaping into the wild, i.e. becoming invasive.

An invasive plant is an exotic species which grows and spreads rapidly, encroaching into natural areas.

If a species cannot reproduce successfully here, the threat of spreading into the wild is rather low.

Many species which originate from the semi-tropical belt which circumnavigates the globe have been introduced successfully to our locale. On visits to the typical "tropical" greenhouse in most parts of the country and much of the world, most of us who live in the LRGV recognize many, if not most, of the "tropical" species as growing somewhere we have visited in the LRGV, a neighborhood, storefront, etc.

Because we have infrequent freezing temperatures and long growing periods, the number of plant species which can survive here with irrigation is staggering.

Beyond escape into the wild, exotic species represent environmental harm in terms of the pesticides, fungicides and other -cides used to protect the exotic plant from insects, molds, and other life-forms which are thought to detract from their beauty.

If the leaves or roots of an exotic plant are edible for native wildlife, then the species' spread may not represent a large threat. (If we had cows grazing through our wild areas, most of the invasive grasses would probably be eaten. Of course, much of the other plant diversity would decline, as well. And it is quite possible that historical overgrazing began the swift decline in native grass populations which has gone from bad to worse.)

If a species' fruit is eaten by local wildlife, especially birds, the species may spread almost unchecked, particularly if vegetative parts of the plant are generally poisonous.

We know well that animals must compete for survival, but most of us don't think about the competition

which plants endure for survival.

In general, invasive species are able to out-compete native species for one or more reasons. This is the topic of our newsletter this month.

Anything which a plant requires for life and growth enters the competition equation.

Moisture: grasses produce extensive root systems which absorb rain quickly. Other types of plants may rely on deeper penetration of rain into the soil.

Sunlight: Trees, shrubs and even grasses which grow quickly and produce sufficient shade will generally out-compete species which are shorter in stature.

Nutrients: In many areas, the topsoil is very thin. Plants which form an extensive mat-like growth to cover large areas can capture the available nutrients in areas where the topsoil is a thin layer.

Protection from short-term freezing temperatures: Invasive guinea grass, which is an incredible pest, is protected from frost by the trees under which it grows. While the mesquite which protects it loses its leaves to freezing temperatures, the guinea grass below has just enough thermal protection to survive. How unfair is that!!!

Invasive, exotic grasses. Unfortunately, we have at least 5 species of very invasive grasses, and these probably pose the greatest threat to the greatest acreage in our wild areas.

Guinea grass, buffel grass, bermuda grass, and several of the bluestems have invaded almost every natural area which remains.

Because grasses are so hard to identify correctly, we will leave this topic to a more extensive presentation, such as a PowerPoint program.

Better resources should be easily understandable and accessible on the internet (but are not) for recognizing our most problematic invasive, exotic grasses. Such states as California and Florida have much better resources in this regard.

Native grasses. We do have online resources for recognizing South Texas Native grasses. Protecting and cultivating them will be an essential element of future revegetation. To access these resources, search on "South Texas Natives" click on "Native Plant List" and select "Grasses." Photographs of the grass species which were once more plentiful here can be accessed on this website.

In this SABAL issue, we will consider several of the worst invasive (non-grass, non-aquatic) pesky plants in the LRGV and the reasons they are able to multiply and spread with such success.



Asclepiadaceae. Purple Allamanda, Rubber Vine.
Cryptostegia grandiflora. PDST p 76.
 Similar to Allamanda vines. Both are widely cultivated in the LRGV. Origin is probably Madagascar. The vines are grown in India for their milky juice, which is used to produce rubber. The milky sap can be irritating to skin and the plants are toxic to livestock. ABOVE RIGHT: twin seedpods, conjoined, pointed.

Many animals, including humans, are attracted to large blooms. For this reason, several colors of Allamanda and the closely-related and similar Mandevilla vines are widely-cultivated in the LRGV and available at many nurseries and big-box stores. The purple allamanda has escaped cultivation and is found in several local counties. It has been introduced to many areas around the world. This quote, regarding the plants' impact in Australia, mimics what is noted in south Texas: "found in Queensland in the dry tropical areas often fringing streams and river systems including adjacent hills and pastures. It smothers vegetation replacing native species, particularly in areas degraded by stock. Hinders pastoralism and reported to be toxic to livestock."

On a personal note, I've been trying to obliterate this vine on my arroyo-backed property for many years. The sap is particularly irritating, especially near the eyes, and should be avoided. Birds use the milky seed fluff to line their nests and thus help to spread the plant, which also reproduces vegetatively in record time!



Bignoniaceae. Catclaw Vine.
Macfadyena unguis-cati. (*Doxantha unguis-cati*) PDST p 140.
 Native from West Indies and Mexico to Argentina.
 This smothering vine has been grown in the LRGV since the 1930s.
 It is spreading throughout the southeastern U.S.

When the vine is in bloom it is truly beautiful, so people plant it. Because it has such potential to displace native species, it's best not to. Note the 3 "claws" in the bottom photo, which grasp onto surfaces. Catclaw Vine grows from tuberous roots, which make it difficult to eradicate once it has invaded native brush.

Category I exotic invasive in Florida. Cats claw vine is a long lived plant that grows relatively slowly. As the plant matures, typically in its second year, root tubers and stolons form. Tubers and stolons can also form at each node if the vine is creeping along the soil surface. Pursuant to its rooting abilities, a dense mat will cover the forest floor and smother native vegetation. Areas that are susceptible to invasion to cats claw include river or stream banks, near human habitations, and undisturbed hammocks.

Fruit capsules are linear and flat, roughly 20 inches long containing oblong, winged seeds that are wind-dispersed. Tubers are produced by both young and mature plants and allow for regrowth.



Control methods for woody or vining species are typically these:

Mechanical — Continuous cutting or mowing will provide eventual control, but this process could take several months or years to deplete the reserves of larger plants. During this process it is essential to prevent seed formation, seed spread and seed dispersal during removal.

Current chemical controls include cutting the stems and painting the cut ends with glyphosate (100% solution) herbicide. Triclopyr may provide good control as well (100% solution as a basal bark treatment) or 1-2% foliar spray with surfactant.

In general, there are no known biological control agents for the plants featured in this issue.



Polygonaceae. Queen's Wreath, Corona De Reina, Coral Vine. *Antigonon leptopus*. PDST p 354. Listed as a Category II invasive exotic by the Florida's Exotic Pest Plant Council. This species is native to Mexico and is often grown as a landscape plant in the southeast and Gulf regions of the United States. Coral vine is grown in the landscape as an ornamental, typically used for its vining habit to cover fences or climb trellises. It provides excellent butterfly nectar. It tolerates poor soil and a wide range of light conditions, making it a very successful invasive plant species.

There are many methods of reproduction and dispersal that aid in the survival of coral vine. Not only is coral vine a prolific seed producer, but the

seeds will float on water, dispersing the plant to new locations. Fruits and seeds are eaten and spread by wildlife such as birds, raccoons, and pigs. Underground tubers produced by coral vine will resprout if the plant is cut back or damaged by frost. *Antigonon leptopus* is a smothering vine that invades disturbed areas and forest edges, quickly covering nearby plants and structures.

Excerpted from the University of Florida IFAS Extension website. [<http://plants.ifas.ufl.edu/>]



Passifloraceae. Cultivated passionflower vine.

Fuzzy leaves, a 1" light-purple bloom and red fruit distinguish this Passionflower vine. It is highly-attractive to the gulf fritillary butterfly, and larvae are generally present, eating the leaves.



I'm a sucker for this invasive vine. I share the interest of birds in eating the tasty flesh-covered seeds inside the balloon-like red fruit. Birds which also enjoy these help to spread the plant around my yard.

This vine was especially problematic at Valley Nature Center in Weslaco, where it was planted near a demonstration garden of native shrubs. The original plants were purchased from the Austin area and identification has proved a challenge. It was especially well-watered at the Valley Nature Center's "butterfly garden" area and successfully covered many shrubs before a highly-political decision was made to remove the plant.

In my own yard, I find that it only grows well where watered frequently. However, because most of my neighbors also water their yards, the plant may be

spreading into unknown, unwanted places. Because fritillary butterflies are so successful in finding the plant, prolific growth is somewhat limited by the many hungry larvae which seem omnipresent.



Anacardiaceae. Brazilian Pepper. *Shinus terebinthifolius*.

PDST p 67. Drooping, dioecious trees up to 10' or taller.

Native to Brazil. Sold and distributed in the 1800s in Florida as an ornamental; recognized as a nuisance weed in the 1950s. Spread by the many birds and mammals which eat the fruits, which are present December through February.

Ripe fruits toxic to people; contact dermatitis may occur.

Is an enormous problem near resacas and arroyos, where it rapidly shades out any plant diversity. Growth can be so rapid that mechanical stump cutting is an enormous chore. Once established, seeds will sprout and buds will sprout from roots.



Meliaceae. Chinaberry Tree. *Melia azedarach*.

PDST p 321. *Introduced from Asia. Invasive in low or wet areas.*

Brought to the southeastern U.S. in the 1830s and later to Texas as a fast-growing ornamental and shade tree.

Produces toxins in the fruit, bark, leaves and flowers. Toxic to humans, especially ingestion of the fruit. Fruits are eaten by Red-Crowned Parrots and Chachalacas.

Chinaberry outcompetes natives due to its high resistance to insects and pathogens. Its leaf litter raises soil pH, thus altering soil conditions for other plant species and seed germination.

Also produces deep shade, deterring growth of many species.

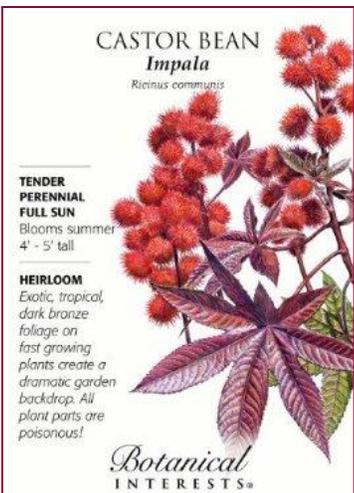
Galveston species of concern.



Tamaricaceae. Saltcedar, Tamarisk, Athel. *Tamarix ramosissima*.

PDST p 406. Native to Europe and Asia. Web search: [TexasInvasives.org]

Brought to the western U.S. in the 1800s as an ornamental. Had escaped by the late 1800s and was recognized as a watershed problem by the 1920s. High preference to riparian and wetland areas. Tolerates wide range of soil salinity and alkalinity. Once established, can tolerate drought. Secretes salt; shed leaves inhibit germination of native species. Provides some shelter, but little food, for wildlife. Saltcedar spreads vegetatively, by adventitious roots or submerged stems, and sexually. A very deep taproot allows Saltcedar to monopolize available groundwater. Once established, removal is difficult, without causing additional disturbance to streambanks where it is established. This is also true of Brazilian Pepper.



Euphorbiaceae. Castor Bean. *Ricinus communis*. Seeds resemble engorged tick.

PDST p 228. Seeds have been found in 6000 year-old Egyptian tombs. Indigenous to SE Mediterranean Basin, Eastern Africa and India.

Ricin is produced from the seeds. It's one of the deadliest natural poisons on earth and has no known antidote. The poison inhibits protein production. Seeds are grown in the Midwest U.S. for poisoning gophers, although I've seen no proof of success. Castor beans are grown as a cash crop to produce a multitude of useful products. Seeds have probably been spread locally by rail transport. They also continue to spread rapidly by floating on water. Castor bean displaces native vegetation. It exhausts soil. Not a legume, it is not a nitrogen fixer. It may cause allergic asthma.

If you simply must grow Castor Bean, consider "Impala" (*Ricinus Communis Impala*) a reddish variety of castor bean which appears to be much less invasive, although it is still highly poisonous. Don't try to carry the seeds on an airplane!



Invasive Kalanchoes. PDST pp 199-200.

These are succulent plants originating in Madagascar.

All parts of the plants contain poisons which can be fatal if ingested by infants or small pets.

They reproduce very effectively by vegetative propagation: leaves which fall off, tiny plantlets produced on the leaf edges, and lateral root structures originating from the main stalk. They can survive prolonged periods of drought with little or no water. They are killed by long periods of freezing temperatures, thus they are probably less of a problem in the coldest parts of Texas.

The initial spread of these species into native brush appears to be due to the presence of vegetative plant parts in dumped garden waste.

About 20 years ago, I dumped 3 plants into a shaded area of our arroyo brush, thinking the plants would die and the soil in the pot would not be wasted. Within a few years, as guinea grass was exterminated, the kalanchoes had spread to cover an area at least 12' square.

At present, there are 3 types of Kalanchoe present in unmanageable numbers in Harlingen Thicket, C. B. Wood Park and Arroyo Park. Mike Heep observed their presence in the 1960s. These areas have obviously been used as unofficial dumping sites for years. Invasive kalanchoes have also been a large problem at Palo Alto Battlefield and bloomstalks are often visible along the coast.

People are enthralled with these plants, especially when they produce a candelabra of coral-pink blooms.

This description of three types of invasive kalanchoe was taken from the website "Weeds of Australia:"

Mother-of-millions (*Bryophyllum delagoense*) has relatively small cylindrical (i.e. terete) leaves (usually less than 10 cm long and only 2-6 mm wide) that are always simple. These leaves are greyish in colour with some darker patches (i.e. they are variegated) and have a few teeth at their tips (i.e. apical notches). **During 1997, 125 head of cattle died after eating mother-of-millions on a travelling stock reserve near Moree, New South Wales.**

Hybrid mother-of-millions (*Bryophyllum x houghtonii*) has relatively small boat-shaped or folded leaves (4-8 cm long and 8-20 mm wide) that are always simple. These leaves are greyish or greyish-green in colour with some darker patches (i.e. they are variegated) and have numerous teeth along their margins). **This species forms dense infestations in grasslands and open woodlands in inland regions and also invades coastal habitats.**

Mother-of-thousands (*Bryophyllum daigremontianum*) has relatively large boat-shaped or folded leaves (often more than 10 cm long and 25 mm wide) that are always simple. These leaves are greyish-green in colour with some darker patches (i.e. they are variegated) and have numerous teeth along their margins (i.e. marginal notches). **On a Nov. 2013 visit to Harlingen Thicket I found massive colonies over 4' tall with leaves larger than my size 8 foot. Removal of these colonies from the one short trail I visited would have required at least 6 large dumpsters for containment. Unfortunately, seedlings also covered every square inch of soil. Upon pulling up a parent plant, many leaves and plantlets drop off, ready to root into the soil with rapidity.**

CONTROL: Betty Perez was able to rid her property near La Joya of these invasives by consistently pulling them up. She and I believe that the greater amount of precipitation allows these succulents to spread more prolifically in Harlingen than in the drier western parts of the valley.

On my Harlingen property, I've tried several extermination methods with varying degrees of success. It is very difficult to compost the plants; they remain viable after long periods in a typical compost container. On one occasion, I ground several plants to smithereens in an old blender, hoping to return the thin layer of topsoil to its source and to use the mush as a decaying mulch. Much to my horror, in a few weeks, the entire area was covered in a blanket of poisonous baby succulents. **Wherever these succulent colonies form, it is impossible for seed of native species to contact the soil and germinate. A successful method of control has not been found.**

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
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(Fourth Tuesday each month)

Board Meetings at 6:30pm. —

Speaker at 7:30pm.

2013-14 Meeting Dates:

Jan. 28th, 2014

Feb. 25th, 2014

Mar. 25th, 2014

Apr. 22nd, 2014



ABOVE: **Comelinaceae**. *Setcreasea pallida*, Purple-Heart Wandering Jew. Origin: Mexico. An invasive species often grown in yards. Unfortunately, when this is cast away into brushy areas, it often reproduces. It has no apparent use to wildlife. Grown indoors, it has been shown to substantially improve indoor air quality.

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

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NPP Oct. meeting/speaker on:
Tues., Nov. 26th, 2013, at 7:30pm

"Fungi" by Drew Bennie



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

PHOTO on Right: Thanks to the volunteers who manned NPP's booth at this year's RGV Birding Festival in Harlingen and to those who bought handbooks and plants. Mike Heep made several trips each day to replenish stock and bring specific requests.

More than 4,000 visitors from the local area attended evening shows, lectures, family activities, the silent auction, optics raffle, the raptor shows, and trade show booths.

Photo and data provided by Anita Westervelt.



This month's SABAL topic: "Invasive Exotics In the LRGV"