



The Sabal

October 2018

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

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NPP meeting topic/speaker:

Growing Native Plants From Seed —by *James Lovegren*
Tues., October 23rd, at 7:30pm

James Lovegren will return as speaker this month to share some of the many secrets he and his family have discovered in germinating and growing a wide diversity of natives from seed. This project began as an Eagle Scout project which son Phillip completed in 2003. The family grows seedlings for LRGVNWRS for revegetation projects aimed at providing habitat for such animals as our endangered Ocelot. James is a valued contributor/mentor to the Facebook group "Native Plants of the Rio Grande Valley." This is your chance to meet him in person and learn about the methods he employs. James & Suzie are co-owners of L&L Growers, San Benito.

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

Far left: James & Suzie Lovegren. **Far right:** Eagle Scout Phillip & the youngest of the clan. The entire family, shown in this 2003 photo, has been active in scouting.



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>

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Summary of Mike Heep's Hints on Wetland Area Vegetation Projects — by *Christina Mild*

Mike Heep provided a lot of information on vegetation projects for wetland spaces in his September presentation for NPP. Several of the points he elaborated are fairly easy to comprehend, and they are important cost-saving and labor-saving ideas.

Heep finds that many plants are put into spots where they will not survive, despite his clear instructions about how “far” from the water’s edge they should be planted. The major misconception appears to be this. When Heep describes the appropriate distance from the “water,” he is thinking of how high above the water table the plant should be. On a relatively flat spot along the water’s edge, the horizontal distance from the water to the planting spot is roughly the same as the vertical distance from the water table to the soil surface.

When Heep gives a distance, it is often misinterpreted as only the horizontal distance between the new planting and the water’s edge. In cases where plants are placed on high banks, that horizontal distance can be appreciably less than the vertical distance down to the water table. Thus, such plants are placed “high and dry” and will likely perish. Heep illustrated this with a photo of one site with a highly elevated bank on one end of a pond. (The sort of place where you’d plant any “dry-land” species.)

Heep also recommends gathering seed heads from desirable wetland species and casting them out over the water. Many seeds will find a good place to germinate on the muddy edges of a wetland and take hold. He points out that this is much easier, less costly and less disruptive to the wetland edges than digging in holes for transplanting. It may take longer to see results, but the cost and labor savings are considerable.

And what about selection of species? Heep relates the fact that we have many species of sedges, rushes and spike sedges which are very hard to positively identify, except by a specialist in this family of plants. Heep often digs mixed colonies of these from seasonally-wet ditches or other “waste” places. “I don’t really care which of these species I’m collecting,” Heep relates. “They all do basically the same job.” That bit of wisdom certainly makes things less complicated.

“I’m probably cutting lots of contractors out of business with that advice!” Heep admits. Who has extra money to throw away on these vital projects of vegetating wetland edges? Nobody who this editor can think of.

Selecting Guinea Grass Replacements—by *Christina Mild*

Most of deep south Texas is experiencing a wetter-than-usual period of weather. For most areas, that means rapid growth of existing guinea (and buffle, Old World bluestem and other exotic invasive) grass.

Seeds which have been in the ground (perhaps for many years) are also germinating en masse.

This is a good time to pull out these exotic grasses, and other exotics, while the soil is soft.

It’s especially rewarding to remove exotics around native seedlings, saplings, shrubs, vines and even trees, as any plant which is no longer surrounded or overshadowed by competitors will show rapid improvement in overall health, fruit-bearing and blooming ability.

Wherever exotics are removed, especially those which exist en masse, covering large spaces, one needs to re-introduce natives which can quickly recolonize the newly-barren space. If nothing is introduced to the area, the most likely generation to follow will be whatever exotic pest you’ve just labored to remove.

The species you choose for replacing guinea grass (and other exotics) will depend on many factors:

—Will you be watering the space?

—Do you wish to promote a lot of diversity in species type, height, and seasonal growth?

—Are there existing plants which are relatively short or perhaps slow-growing?

—Is it a wide open space where very aggressive or tall species would be beneficial, not problematic?

—Do you need immediate results, or can you wait for seedlings to emerge from introduced seed?

—What type of soil is present? Sand, humus, heavy clay, high salinity or other high mineral content.

—What sort of drainage can you expect?

—Is the area heavily shaded? (Guinea grass grows just fine in the shade; many natives do not.)

—Are you lacking money for transplants or seeds?

—Is it likely that you’ll need to spray RoundUp on the area in the near future to halt re-growth of the invasive grasses?

For a photo of guinea grass, see the outside cover, p 8.

Reddish coloration at the base of the plant also helps with a positive I.D. See photo p 7.

Guinea Grass Replacements—*continued*

I'll begin with the most controversial subtopic, as it's been incredibly relevant to success and failure with my own revegetation projects.

—Is it likely that you'll need to spray RoundUp on the area in the near future to halt re-growth of the invasive grasses?

In most of the areas where I've worked on replacing guinea grass, it's been essential to return and spray for at least a second time to kill it off again. This is because there's an incredible amount of the exotic grass seed remaining in the soil. In any space larger than a small yard, few of us have the available labor to remove vast stands of guinea grass multiple times. And we often inadvertently leave some intact roots behind.

There are a large number of native species resistant to RoundUp. One can use these species selectively in areas where you expect to spray the area after the next rainy season to maintain guinea grass control.

Some of these species have fuzzy leaves, which appears to protect them from herbicide spray. Many mallows and crotons share these characteristics.

Dicliptera is also impervious to herbicide despite having "tender" leaves which bear no conspicuous hairs. Here are some good choices, and factors to consider in selecting between them:

—Is it also a wide open space where very aggressive, tall species would be beneficial, not problematic?

Abutilon trisulcatum, Anglestem Indian Mallow, **Amantillo**, PDST 305, is a hands-down favorite if something tall and aggressive is appropriate. John Yochum provided these attributes: it keeps guinea grass at bay, the USDA lists it only in 2 counties in the U.S., so it's rare, it hosts a bunch of butterfly caterpillars (some with limited range), has pretty little flowers (for nectarers), requires no care (!) and spreads like fire!

Tim Brush also recommends this tall mallow because unwanted individuals are easy to pull out.

A note of caution: pulling out unwanted Amantillo can be like shooting yourself in the foot. Once established en masse, it's very hard to eradicate this species from large areas. Soil disturbance such as tilling, or even pulling up mature plants, seems to encourage new specimens to pop up in the near future, whether from remaining roots or dropped seed I cannot say. Be very certain that you want this plant before you introduce it.

I established it in many areas of Ramsey Park prior to the installation of water lines. It was easy to do so by pulling up a seedling when soil was wet and transplanting it elsewhere (using nothing more than a kitchen knife to loosen the planting spot). I've also collected and spread a lot of seed, while listening to complaining birds who I believe were intent on eating that same seed.

This is a beneficial plant, but it also blocks the view of benches, appears to prohibit the growth of shorter species, discourages diversity, and can become a pest. It is, however, a permanent replacement for guinea grass.

—Do you wish to promote a lot of diversity in species type, height, or seasonal growth?

There are many other fuzzy mallows which allow diversity to thrive:

Shrubby trailside mallow, **Malva Loca**, *Malvastrum americanum*, PDST 312. This plant blooms in all seasons, despite cold or drought. Rabbits feed on the leaves. It is likely that birds consume the seeds. Mike Quinn lists this as a host plant for the Laviana White-Skipper. Grows about 4' tall and isn't overly aggressive. It allows diversity to grow around it.

This is easily introduced from rough-collected seed scattered about. It's often overlooked. It will grow in terrible soils, especially on hard and rocky trailsides where you couldn't dig even if you wanted to.

Bastardia viscosa, **Mexican Bastardia**, PDST 307, easily forms colonies and is very attractive to butterflies. It transplants easily. It's smelly when you rub against it, which may discourage people from wandering thru areas where you don't welcome foot traffic. Bastardia likes a good deal of sun; it doesn't perform well in deep shade.

Allowissadula lozanii, **Velvet-Leaf Mallow**, PDST 306, can be introduced easily by seed. It produces quantities of large seed, probably eaten by many kinds of wildlife. This species doesn't produce monocultures. It allows other diverse species to coexist. Height can be about 4'. It has beautiful dark green leaves and yellow blooms.

Most Mallows (PDST 301-321) will allow other diversity to exist around them. Few are as aggressive as Amantillo, and many will grow from wild-collected seed sown directly into a planting space. They will probably grow best in conditions similar to the area you found them growing in.

Additional species which resist damage from RoundUp while allowing diversity to exist around them:

Several Croton species form nice colonies, especially where they can be watered a bit. Crotons also have a pleasant aroma when the leaves are rubbed, making them a sensory accent along trailsides. Besides usefulness to wildlife, most crotons produce nicely tinted yellow/orange leaves from environmental stress: heat, cold, drought. Crotons produce excellent butterfly nectar, in addition to being hostplants. These crotons include:

Croton cortesianus, **Cortez' Croton**, Palillo, PDST 215, rapidly produces colonies in tended areas. Usually taller than Low Croton, ~4' and taller.

Croton humilis, **Low Croton**, PDST 217. Height is usually ~3'. Can be much taller with care. Doves are known to eat the seeds of this species.

Annual Crotons (PDST 214-220) Several croton species appear only during certain seasons, die back, then reappear when conditions are right for them. They make nice colonies which are generally rather short, perhaps 2' or so. We've established these in several areas of Ramsey Park, especially in areas remote from watering. We use transplants as well as collected seed (or collected soil from around existing colonies). Once established, these tend to reappear in their respective growing season, in the same general areas year after year. They're especially useful in areas of poor soil where it's difficult or impossible to water or amend the soil.

—Is the area heavily shaded? Is Round-Up Resistance necessary also?

Dicliptera sexangularis (older name: *vahliana*), **Dicliptera**, PDST 49. This is one of the few natives which will spread rapidly and grow well in very shady locations. Dicliptera quickly becomes a pest in gardens which are regularly watered, especially where a great deal of diversity is desired, such as butterfly gardens. It is very resistant to RoundUp. This author has only been able to slow it down a bit, even with heavy application of herbicide. The real advantage of Dicliptera is that it will spread into the understory of existing shrubs and trees, where it would be very difficult to bend, stoop and avoid thorns and brambles to pull out guinea grass. It does not grow tall enough to imperil existing shrubs and trees, although it may deter germination of other herbaceous species. Dicliptera will bloom during seasons when nectar is hard to come by, and it attracts nectarers, despite tiny bloom size. Some birds and other critters will eat the seeds. Dicliptera requires no care once established and seems to resist attack by pests. Where it becomes too prevalent, it can be easily pulled for use as a green mulch to cover barren spots elsewhere.

Think hard before you introduce Dicliptera to new areas; it may not remain long in the confined space where it is introduced. You may even think it has died out, only to find massive colonies popping up later on.

If resistance to RoundUp isn't necessary, **Plains Bristlegrass**, *Setaria leucopila*, does well in partial shade. This pretty grass can be introduced via wild-collected seed or transplants. We have enough to share at Ramsey Park.

Mike Heep also suggests **Rustyseed Paspalum**, *Paspalum langei*, an attractive native bunchgrass which tolerates shade and produces ample seed. It has done well in my wildscaped yard, especially in wetter spots.

—Are you lacking money for transplants or seeds?

—Do you wish to promote a lot of diversity in species type, height, or seasonal growth?

The limiting factor on revegetation is often funding. In a discussion of guinea grass replacement on our "**Native Plants* of the Rio Grande Valley**" Facebook page, Danny R. Castle brought up a salient point. He suggested the use of soil containing native seeds: "Moving soil as opposed to moving established plants has a higher success rate, because the soil will contain seeds that are stratified naturally."

Danny makes an excellent point. Your goal will probably be to establish as much diversity as possible. If you locate an area where native plant diversity is present (without the presence of invasive grasses), collecting soil from that area is an excellent idea. Scattering the soil in a place with similar light, drainage and soil type may result in lots of native diversity over time. When you find a place with a wide diversity of natives in evidence, there will probably be even more herbs, grasses, subshrubs and vines which appear and disappear over the course of changing seasons, droughts and wetter times. This is especially true if you find a place where wonderful humus indicates that seeds and leaves have been dropping, undisturbed, for a very long time. Who knows what treasures may spring forth over time in the future? (*This group has 542 members as of 10/18/2018)

—What type of soil is present? Sand, humus, heavy clay, high salinity or other high mineral content?

Quite often the soil where you'd like to revegetate is a place where soil quality is very poor in humus. This may be precisely why the area became available as a "nature center." In revegetating such places, you look at native diversity which survives in such conditions. Collecting seed is a great place to start in your diversity effort.

Cowpen Daisy, *Verbesina encelioides*, PDST 134, got the name for an ability to grow in terrible soil trodden by the hooves of cattle. It provides some of the best butterfly nectar available. In some areas of the world, this daisy is an introduced pest, but in our area it's a beneficial native. It has allelopathic qualities, emitting a chemical substance into the soil which discourages the growth of other plant species. This is a useful attribute in combating return of guinea grass. The blooming season is spring and fall. It grows very well from wild-collected seed, and the plant can be found on many roadsides. These days you have to collect the seed as soon as you find some blooming plants, as they'll probably be mown down the next day by our well-intending road maintenance crews. Seedlings can also be transplanted with a bit of initial watering.

Common Sunflower, Mirasol, *Helianthus annuus*, PDST 105, is another plant which does well from seed. This taller representative of the Compositae is typically taller than a person, with very scratchy stems. I cut off the entire seedhead, without bothering to remove individual "fruits." This species needs a lot of sun and space to grow. It's great for wide open areas, and smaller plants can grow around it. Once established, it will return from year to year. You'll usually find it on the edges of irrigated fields. It requires quite a lot of water.

Blue Mistflower, Spring Mistflower, *Tamaulipa azurea*, PDST 127. (Leaves shaped like right triangles.)

Crucita, Blue Mistflower, Fall Mistflower, *Chromolaena odorata*, PDST 91. (Smelly leaves. Leaves are elongated triangles.) These blue/purple-blooming butterfly nectar plants grow well from seed (but it must remain moist and near the soil surface in order to germinate) or from transplants. Both will tolerate partial shade or full sun. It's a great idea to establish mixed colonies of these mistflowers, to provide nectar almost throughout the year. Both species will grow tall and quickly enough to compete with guinea grass. They do well in a variety of soils and drainage. Once established, they will spread into colonies and reappear year after year.

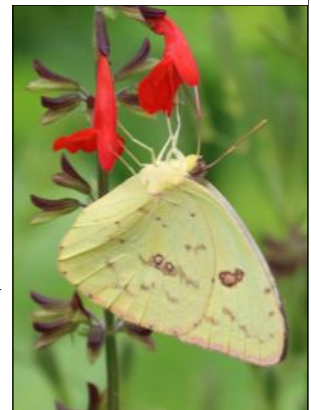
Most nature centers have sufficient plants to allow you to collect seed from them, but be certain to ask permission rather than risking a fine or other embarrassment.

—Are there existing plants which are relatively short or perhaps slow-growing?

—What sort of drainage can you expect?

Scarlet Sage, *Salvia coccinea*, PDST 288. This is a good choice to add some diversity around existing natives. It will spread to form colonies though it is not so aggressive as to overtake whatever diversity already exists. Scarlet Sage will survive in a variety of soil types, even in poorly-drained and partially-shaded clay soils. (It is not resistant to RoundUp, so make sure to remove any invasive grass parts to avoid a lot of weeding later on.) It is very attractive to butterflies and hummingbirds for the nectar, and to seed-eating birds, as well. The seed is easily collected and sown.

(Photo right by Honeylet Jones. Cloudless Sulphur on Scarlet Sage.)



—Will you be watering the space?

If you plan to water the planting area, read carefully about each species' ability to colonize. You probably want to avoid the most aggressive growers, or species which would dwarf anything you desire which is shorter.

Brush Noseburn Vine, *Tragia glanduligera*, PDST 229. This butterfly hostplant is a great addition in terms of diversity, but you won't want it in a well-watered garden. Watered spaces will always need to be weeded and trimmed, which is extremely painful when Noseburn Vine is present. It will attack your wrists above the cuffs of your gloves. If you work without gloves, you'll be in pain wherever you lack calluses, i.e. the back of your hand. Introduce it well away from watered gardens, somewhere it can climb onto a small shrub.

—Consider existing plants surrounding any garden you plan to water.

If small cacti are nearby, they'll be rapidly overgrown by grasses and germinating seedlings from nearby shrubs and trees. If granjeno or mesquite are near the garden, they will probably germinate and grow faster than anything you've recently planted.

Our discussion about guinea grass replacement species took a couple of turns when **Fragrant Beggar Ticks**, *Bidens pilosa* (*B. odorata*) PDST 89 was suggested. The National Wildflower Research Center lists the plant as native. PDST states: "It is considered by many to be an introduced species." Information about valley species is often incorrect on many websites. The best source for us is our beloved "Plants of Deep South Texas." If a species is not included there, it's a good idea to contact Ken King, Dr. Al Richardson, or Mike Heep for their input.

Ernest Herrera provided this input to clarify matters: "Invasive species" as used by most scientists, refers to a non-native species that causes harm to the ecosystem it is invading. Harm can be done in many forms, from competition, to predation, to parasitism. Crucita and red sage are both native and they're successional species, meaning that they will eventually give way to later successional species on the path to a mature habitat. Invasive species don't do that. They persist and keep native species from adding species diversity to an area. Planting only native follows in line with what federal and state parks do."

Regarding *Bidens pilosa*: It is a cosmopolitan, annual herb from tropical and Central America. Its hardiness, explosive reproductive potential, and ability to thrive in almost any environment have enabled it to establish throughout the world. It is a major crop weed, threat to native fauna, and a physical nuisance. (Photo right: **X** means invasive exotic.)

Bidens pilosa is a hardy weed capable of invading a vast range of habitats ranging from moist soil, sand, limerock, or dry, infertile soil and low to high altitudes of up to 3,600 m. It thrives in disturbed areas, high sunlight, and moderately dry soils, but is known to invade grassland, heathland, forest clearings, wetlands, plantations, streamlines, roadsides, pasture, coastal areas, and agriculture areas. *B. pilosa* is capable of surviving severe droughts. It has a required annual rainfall range of 500-3500 mm. It is tolerant to a pH range of 4-9 and high salinities of up to 100 mM NaCl. It prefers temperatures above 15°C and below 45°C but is tolerant to frosts with roots capable of withstanding and regenerating after temperatures as low as -15°C. *B. pilosa* is not fire tolerant but is known to quickly invade burnt areas.

Many people see butterflies nectaring on a plant (such as Bidens) and assume that it's a good idea to introduce that species to a "wild area" to improve the attractiveness to butterflies.

Ann Vacek provided these specific native alternatives, in lieu of planting *Bidens*:

Verbesina microptera, **Frostweed**, PDST p 134-5.

Wedelia acapulcensis var. *hispida*, **Hairy Wedelia**, PDST p 135.

Heterotheca subaxillaris, **Camphor Weed**, PDST p 108.

Rayjacksonia phyllocephala, **Camphor Daisy**, PDST p 122.

Ratibida columnifera, **Mexican Hat**, PDST p 121.

Conoclinium betonicifolium, **Betony Mistflower**, PDST p 93.

Simsia calva, **Bush Sunflower**, PDST p 124.

Phyla strigillosa and *nodiflora*. **Frogfruit**, PDST p 418-9.



Photo above: Julia's Skipper on Frogfruit, by Mike Rickard.

Ann continued with this explanation: "There are many other natives that are good nectar plants. The priority needs to be the habitat (i.e. native plants), and then the native butterflies will be provided for."

Jan Dauphin elaborated on those thoughts: "I have five of the nine natives Ann listed in my yard. Some of these are not only nectar but host plants as well. I agree with Ann's statement of (to paraphrase) plant native and they will come." Jan has an incredible butterfly list for her yard. Both she and Ann know about attracting butterflies.

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(4th Tues. each month, except thru summer)

Brd Mtgs 6:30pm — Speaker 7:30pm

2018 meeting dates: 11/27

(No meetings during summer or in December.)

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

Photo right:

Reddish coloration at the
base can help to identify
Guinea Grass.

To exterminate the plant, it's
important to remove the
root, especially the knotty
starch-storing area just be-
low the basal leaves.

This invasive exotic grass
was introduced because it
offers good cattle grazing.
Unfortunately, seeds travel
far and wide to places where
there are no cattle to eat it.



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: _____

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Native Plant Project, POB 2742, San Juan, TX 78589-7742



NPP meeting/speaker:

The Native Plant Project will present:

Growing Native Plants From Seed —by *James Lovegren*

Tues., October 23rd, at 7:30pm

The meeting is held at

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

We hope to see you there!

Feel free to bring a native plant for identification.

Photo right: Exotic, invasive "Guinea Grass." This species grows rapidly, taller than citrus trees, in the shade and in the sun, in poor soil and rich, and it's able to survive a freeze. Note the branching fruiting structure, a Christmas tree shape. Leaves are relatively wide and bright green. See photo on p 7 for more clues to identify this problematic grass.

In this issue: Guinea Grass Replacements.

Cool wet weather is a good time to remove exotic grasses, and the best time to replace them with native diversity.

