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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>
Soil Edge Stabilizers.

This is a good time to venture out on a study of soggy places in deep South Texas, as a rainy fall season has blessed many areas with unusually high amounts of rain.

In a recent conversation with Mike Heep, he emphasized the importance of using locally-native species in any wetland project. There are a number of highly-invasive water-loving species which are causing huge local problems, including Hydrilla clogging irrigation canals, Water Lettuce blocking sunlight into ponds and Brazilian Pepper dominating resaca banks to the exclusion of native species. (All three, of course, are exotic invaders.)

There is really no comprehensive published guide to deep south Texas-specific natives for use in wetland areas. Such guides are usually wider in geographic scope to attract sufficient book buyers. Our best alternative (although it is a time-consuming process which your editor is grappling with at this moment) is to compare available guides with what is actually native here.

Some of this issue will be based on the content of “Your Remarkable Riparian,” (YRR) a publication of the Nueces River Authority. I find this guide to be well-written, with good explanations of the various factors impacting several types of wetlands and the role of different plants in stabilizing riparian areas. The entire publication is available online at: [http://www.nueces-ra.org/YRR/pdfs/yyrr2.pdf]

Unfortunately, many of the recommended species from that publication don’t occur in this area, thus I will be publishing alternative species which might serve the same role. This process is far from straight-forward.

Another focus of this issue will be a few species not yet included in Plants of Deep South Texas. This may help to identify species popping up in places which have been dry for several years and more recently flooded. Dr. Al Richardson and Ken King provided photos and identification for a number of species located after the publication of their wonderful field guide.

Sedges and Rushes, Cyperaceae. Many plants in this family are important wetland species.

*Sticky Flat Sedge, Cyperus elegans*. (Royal Flatsedge)

An herbaceous perennial, this sedge has fibrous roots and short rhizomes.

Culms (stems) are round or roundly 3-sided.

Fruiting (1mm sized fruit) occurs in summer.

It occurs in ditches, damp pastures, pond shores, and river-banks.

Range includes Texas, Florida, Louisiana, New Mexico, Mexico, Central America and South America.

Information from: Flora of North America [www.eFlores.org]

Ken King adds:

If you let the culm (stem) slide through your fingers, you will hear a noise caused by the sticky epidermis.

This is a very common sedge, growing to perhaps 3’ tall.

Ken grows this species in his water lily ponds. It’s an aggressive grower.

Mike Heep notes that it is tricky knowing just where to transplant wetland species. Some need to have their roots completely covered, many prefer to be right at the water’s edge, and others should be planted further away from the water. He has also “planted” by cutting off any spikelets (or other fruiting structures) and casting them over the water.

Many wetland species drop “seed” onto the water’s surface and those seeds germinate when they reach a good spot. This method eliminates the need to disrupt the soil as in transplanting.
**Sedges.** Spikerush is a common term which is misleading. Spikerushes are actually Sedges, Cyperaceae. (Bulrushes are also Sedges, another confusing term.) Not all sedges have edges.

On the right is a scan from YRR.

Spikerush (*Eleocharis* sp.) is a common plant in ditches and on pond edges.
The photo is a graphic illustration of the large mass of fibrous roots typical of rushes (Cyperaceae). That extensive root system helps to stabilize the soil.

“OBL” indicates this sedge is almost always found in very wet locations (Obligate Wetland Plant).
The Stability Rating of 6 indicates a good ability (ranking from 1=least to 9=most) to stabilize soil.

PDST includes three species of *Eleocharis*, (PDST 36-37) ranging in height from the Dwarf Spikerush at 4” to Jointed Spikerush at 39” tall.

Spikerush species obviously have traits in common. However, their growing requirements can vary widely. Excerpts from Stutzenbaker’s more comprehensive publication (below) illustrate that fact.

From: **Stutzenbaker, Charles D.** “Aquatic and Wetland Plants of the Western Gulf Coast.”

Dr. Stutzenbaker’s excellent work on wetland plants is a bit more difficult to understand than “Your Remarkable Riparian.” However, it includes a great deal of information beyond what is considered in a simpler guide.

Stutzenbaker’s treatment of Dwarf Spikerush, *Eleocharis parvula*, includes these pertinent bits of information: “Dwarf spikerush has a wide salinity tolerance and is found in fresh, intermediate and brackish marshes where salinities range from 0 to about 10 ppt. Plants grow on both organic and mineral soils but proliferate on mineral soils subject to periodic drawdowns to a moist or dry condition. ... Plants need summer drawdown to a dry or moist condition to bloom and produce seeds. Plants subjected to long-term deep flooding do not bloom and colonies eventually fade.

Stutzenbaker advises, in the case of the Jointed Spikerush, *Eleocharis equisetoides*: “Plant (entire plants) in late winter or early spring on organic soils that will be frequently flooded at a depth of 6 inches to 2.5 feet...”

For those of us accustomed to dealing only with factors like soil type, drainage, sunlight and irrigation, more variable criteria such as changing water depth and salinity can be mind-boggling. One would need intimate knowledge of a pond to predict seasonal variations in salinity according to precipitation and evaporation.

Mike Heep notes: Wetland restoration projects are often designed by landscape architects. Unfortunately, they have little experience with wetland species, their requirements, or their natural range.
Bulrush, *Scirpus sp.* (*This genus has been renamed from Scirpus to Schoenoplectus.*) **Cyperaceae.** Bulrushes have a Stability Rating of 8/9 in YRR. Bulrushes tend to form large colonies, interconnected by rhizomes. This root system is strong and capable of withstanding high-flow events. Plants consist of numerous stems, without leaves. Stems can range from sharply triangular to round. Plants range in height from 3- to 8-feet, depending on the species.

Four species of bulrush are included in PDST: Giant Bulrush, Raynal’s Upright Braided Sedge, American Bulrush and Great Braided Sedge. (PDST 38-39) Species names are: *Schoenoplectus: californicus, erectus, pungens* and *tabernaemontanae.*

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**American Bulrush,** *S. pungens,* PDST 39, stems and cone-shaped fruit, photographed by Dr. A. Richardson. Three-cornered stems are apparent in this photo. Photographed at South Padre Island, Texas. Occurs in Cameron, Hidalgo and Willacy counties.

**Great Braided Sedge,** *S. tabernaemontanae,* PDST 39. Fruiting structures photographed by Dr. A. Richardson. Occurs in freshwater wetlands in Cameron, Hidalgo and Starr counties. (Soft-stemmed Bulrush)

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**Widgeon Grass,** *Ruppia maritima.* **Ruppiaceae (Widgeonweeds).** Submerged, rooted, found in shallows around pond edges. Fine leaved and grass-like. Helps to protect edges from erosion. Although primarily coastal, inland populations occur in freshwater. Stutzenbaker provides this information: “...one of the most important aquatic plants found along the Gulf Coast. Seeds, leaves and stems are eaten by coots and ducks and dense growths provide important shelter for marine organisms, especially shrimp and blue crabs.” It may be hard to establish in new areas. The plant desiccates almost immediately when removed from the water.

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**Photos by Dr. Richardson.**

Grasses As Soil Edge Stabilizers. Poaceae.
Many grasses which occur in other areas of Texas aren’t well-suited to our unique area of the state. YRR lists Eastern gamagrass with a Stability Rating of 9, which is quite exciting. Sadly, Mike Heep says it doesn’t occur around here. Fortunately, we do have several grasses which occur along wetland edges. Heep will bring samples of several wetland grass species to illustrate his Sept. 25th talk.

Mexican Sprangletop
Leptochloa fusca.
There are several wet-loving Sprangletop grasses which Mike Heep has successfully reintro-duced to such places as ponds in Hugh Ramsey Nature Park and the Glatz property in Rio Hondo. Mexican Sprangletop is hard to differentiate from closely-related species. Heep says that you have to examine microscopic structures to do so.

Excerpt on the left is from Everitt, Drawe, Little and Lonard’s “Grasses of South Texas.”
Note the last paragraph describing occurrence and use by wildlife.

The color photo above is a good illustration of the bloomhead. Grasses are incredibly hard to photograph and illustrate.
Several Tree Species are Wetland Soil Edge Stabilizers.

Several tree species are examined by YRR. Bald Cypress is given an SR of 9.

Our local Cypress doesn’t lose the leaves in winter, unless the season is extremely dry (i.e. not seasonally bald). **Moctezuma Cypress**, *Taxodium distichum*, is our native species. PDST 15. **Taxodiaceae**.

Some of the largest of this species are located on a resaca bank in San Benito. The owner of that property was notified by irrigation officials a half-century ago that her trees were to be removed. Her response was something like “over my dead body,” and the trees remain today, glorious specimens recognized as Texas Champion Trees.

Official thinking about trees on resacas, at that time, was that they would rob the resaca of too much water.

Photo below: a massive tangle of roots of a Moctezuma Cypress, no doubt a stabilizing factor for the Rio Grande bank on which it resides. Ken King speculates that the moving waters of the river exposed the root system.

Dr. Richardson photo.
Santa Margarita ranch.

Another Soil Edge Stabilizing Tree:
**Black Willow**, *Salix nigra*. PDST 379. **Sapindaceae**.

This species has an SR of 7 and a very wide range.

From YRR: “Willow is a preferred browse plant for deer, exotics and livestock. ... Beaver are also very fond of willow as a food source.” Chachalaca run down the branches to drink. Used for nesting and roosting, especially by wading birds.

Branches are easily rooted, making this an easy plant to propagate. Stutzenbaker recommends small leafless branches to an inch in diameter pushed into moist soil in early spring.

Black Willow fruit capsules release minute, hairy tufted seeds.

Field trip Thurs., Sept. 27th, 6:30pm to the Moctezuma Cypress tree at Abram. Meet by 6:30pm in the Foy’s parking lot, near the Watermill, off the access road, Conway exit, Hwy 83, Mission. Javier DeLeon, TPWD, will lead the trip. Attendees will carpool. Organized by Elizabeth Perdomo, S TX Border Chapter TMN.

Call Elizabeth to let her know if you plan to attend: 956-358-1362
Jann Miller’s daughter, Rachel Nagy, could use some help from her plant loving friends. Both Jann and Rachel have served on the NPP board for many years. Every little bit will help. Rachel was diagnosed on her birthday with cancer. She has both leukemia and lymphoma. She’s receiving treatment at M. D. Anderson. She’ll be staying in Houston until the end of January, or longer, recuperating from a stem cell transplant donated by her sister, Sarah.

You can read more of Rachel’s story and make a donation at: [https://www.gofundme.com/raytoe](https://www.gofundme.com/raytoe)

Her address is: 1438 Garza St., Harlingen, TX 78552
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
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Native Plant Project, POB 2742, San Juan, TX 78589-7742

NPP meeting/speaker:
The Native Plant Project will present:
“Wetland Plants” —by Mike Heep
Tues., Sept. 25th, 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.

In this issue: Soil Edge Stabilizers.
Wetland Species Specific to Deep South Texas.
Comparison of some wetland plants guidebooks.

Photo above right: Hydrolea spinosa, Spiny Hydrolea, Hydrophyllaceae.
Ken King and Dr. Richardson first encountered this species in a roadside ditch on the road to Port Mansfield a few years ago. Robert Runyon located the plant in Cameron County, likely in the 1930s, and the plant had not been reported since that time. Note spines at leaf nodes and the hairy covering. This could be an attractive native ornamental for wet areas.