

## Wonderful and Woody Shrubs of the Water's Edge...and Beyond

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Riparian edges (the banks of resacas, the Arroyo Colorado, the Rio Grande and even irrigation canals), and wetlands (pond edges, low-lying areas, coastal marshes) are some of the most valuable habitats for wild creatures. They can also be peaceful, beautiful and enchanting.

*Note: For the purposes of this paper, the term **riparian** will be used to include the edges of wetlands.*

Man has much use for such places. Locally, about 96% of the habitat has been radically altered by man. The percentage of disrupted riparian habitat is probably much higher, especially since the invention of the gas motor.

The primary emphasis of revegetation in the LRGV has been to establish diverse tree and shrub populations. As butterflies came into greater focus in recent years, the many herbaceous species which provide nectar and/or larval food have been added to the list of plants on the revegetation list. Little energy has been focused on reestablishing diversity in the few riparian zones which

remain here.

Man has not relinquished his hold on most riparian edges, converting them to rolling lawns, clearing banks to keep ditches open, mowing the Arroyo Colorado's banks under the auspices of flood control, mowing pond edges just because, and other diverse and sundry alterations based on national security or the perceived hazards of alien encroachment.

Thus, some plants which were uncommon in riparian areas have become rare. Some have probably vanished. While overall diversity (vines, grasses, herbaceous plants, cacti, and woody plants) is the ultimate goal of any revegetation effort, this treatise will focus on the **least-common woody shrubs** found in riparian and wetland environments of the LRGV.

(For an overall treatment of less-threatened species, see "Aquatic and Wetland Plants of the Western Gulf Coast" by Charles D. Stutzenbaker.)

Opportunistic species which thrive on disturbance are doing quite well. A few of the most common woody riparian species are shown below.

Native nurseryman Mike Heep has worked with several private individuals to add diversity to riparian sites. He grows an extensive selection of the shrubs discussed herein. [www.heepsnursery.com]



Carolina Wolfberry (upper left)  
*Lycium carolinianum*

Sea Ox-Eye Daisy (lower left)  
*Borrchia frutescens*

Leather Leaf, Gutta Percha (below)  
*Maytenus phyllanthoides*

These 3 species occur in areas which are sometimes flooded. They are salt tolerant. (Photos on the left were copied from the web using Google's "image" search.)

Photos below by C. Mild.

Primrose Willow (below)  
*Ludwigia octovalvis*

Primrose Willow occurs mainly in places where freshwater flows, such as irrigation ditches. It can be used as an ornamental. It is locally abundant in wet soils and blooms from April to Nov.

These are just a few of the woody species which are abundant in wet areas, despite disturbance.







*Buddleja sessiliflora*  
Rio Grande Butterfly Bush  
Hierba de **Tepozan, Mispatle**

2-3 meters in height. Tolerates drought and freezes.

Leaves: elongated, fuzzy, light green.

Weak stems bend over in gentle arcs.

Yellow-green, fragrant, clustered blooms, appearing in spring through fall. (*Sessiliflora* describes the usually stalkless flowers, i.e. sessile.)

Occurrence: TX, AZ and south to Oaxaca.

Habitat: "On sand bars and banks and in palm groves along the Rio Grande in Cameron and Hidalgo counties."

"In Texas, it occurs in moist areas on the delta and floodplain of the lower Rio Grande." Soil types: calcareous, sandy, gravely or pebbly and well-drained.

Historic Use:

Leaves were prepared in a number of ways for use as poultices for sores, boils and wounds.

Larval hostplant for:

*Opsigalea blanchardi*, a moth of west Texas.

References:

Correll & Johnston. Vascular Plants of Texas.

Useful Wild Plants of Texas, vol. 2.

[<http://www.conabio.gob.mx>] translated by Frank Wiseman.



*Cephalanthus salicifolius*  
Mexican Buttonbush  
**Mimbre, Botoncillo, Jazmin Blanco**

(Closely-related to Buttonbush, *C. occidentalis*, which grows throughout Texas and much of America. Mexican Buttonbush has a narrower leaf, no wider than a man's thumb.)

Forms a nicely-rounded specimen shrub, reddish-brown branches, 8-18 ft in height.

Deciduous. Smooth leaves. (Attacked by webworms!)

White blooms packed tightly together to form an attractive rounded ball. Summer-blooming. Blooms attract butterflies and other nectaring insects.

Occurrence: from south TX into MX and Honduras.

Habitat: **Rare: along the banks of the Rio Grande in Hidalgo County.** (photo is from Anzalduas Park)

Hackberry or cedar elm woods in Cameron and Hidalgo counties. Such woods are usually adjacent to waterways. These are typically low-lying areas where rainwater tends to collect.

References:

Correll & Johnston.

[<http://aggie-horticulture.tamu.edu/ornamentals/nativeshrubs>]

**Maintaining genetic diversity** is important for healthy plant populations, just as it is for humans and other animals. A number of organizations (such as The Nature Conservancy) maintain "seed banks" in an effort to preserve rare plants for posterity. RGVCTMN members are active in collecting seed for several local native plant growers. We are also active in transplanting threatened species when possible.





*Heimia salicifolia*  
**Hachinal, Willow-Leaf Heimia**

Many-branched shrub, usually growing in colonies.  
 Narrow, elongated, smooth leaves.  
 Delicate, reddish branches.  
 Yellow blooms whenever moisture is sufficient.

Occurrence: In TX: Cameron, Hidalgo, Kleberg, Starr and Willacy counties. Southward through much of Mexico, into South American and in the West Indies.

Habitat: Moist soils along resacas, on riverbanks and in deciduous woodlands on flats on river terraces.  
 Full sun is preferred; partial shade is tolerated.

When Robert Runyon collected specimens of Hachinal in 1923 at El Jardin in Cameron County, he listed the species as “not common.” Today, it is much more likely that you’ve seen this shrub growing in a planted garden than growing in the wild. Despite the limited suitable habitat where this plant occurs in the wild, it survives quite well in cultivation.

A few specimens can be found along the Arroyo Colorado, usually in areas where rainwater flows.

An interesting account of the many ways in which Hachinal has been used is found in Dr. Vines’ “Trees, Shrubs and Woody Vines of the Southwest.”

[[www.riodeltawild.com/janune2003/Heimia%20salicifolia.pdf](http://www.riodeltawild.com/janune2003/Heimia%20salicifolia.pdf)]



*Lippia alba*  
**Hierba Negra, Sprawling Lippia**

(*alba* is a misnomer; nothing about the plant is white!)

Lanky shrub with slender, sprawling branches which root where they contact the soil.  
 Pleasantly aromatic, darkly-tinted leaves.  
 Attractive clumps of purple blooms at leaf nodes.

Occurrence: Hidalgo and Cameron counties, primarily along the lower Rio Grande drainage from Zapata to Brownsville. The plant also occurs in Wharton and Willacy counties. It is widespread in the West Indies, Mexico, South America and California. (Freeze-hardy!)

Habitat: In moist soils in woods, along drainage ditches, river banks and dry creeks. (Specimens can be found amongst the cane on the Arroyo Colorado’s banks.) This plant’s sprawling habit and tendency to root where nodes contact the soil are important factors in anchoring it to the ever-shifting “erosion-prone” substrates which comprise the arroyo’s banks.

Cultivated in the tropics for essential oils used in tea and medicine. Historic use as an anti-spasmodic, menstrual aid and stomach tonic. Demonstrated anticonvulsant activity. Ongoing chemical studies.

Hostplant for: White Peacock, Lantana Scrub-Hairstreak.  
*Hostplant definition*: a plant upon which a particular insect or insects will lay eggs, the leaves of which will be eaten by that insect’s larvae. Chemicals in the leaves may aid the adult males in locating females. They may also be toxins and may protect the larvae from being eaten.





*Pisonia aculeata*  
**Devil's-Claw, Garabato Prieto**

Large, scrambling and climbing woody shrub (vine) that rarely becomes a small tree. Moderate growth rate; may live for several decades.

Older bark is reddish-brown. Stems and branches are smooth, usually with opposite, stout, hooked spines. Lateral roots become extensive and diffuse.

Leaves are elliptical, variable in shape and thickness & fuzzy or smooth.

Occurrence: native to most of the humid tropical and subtropical areas of the world including five continents, most of the islands of the Caribbean and many of the Pacific islands. U.S. range is S. FL, LRGV.

Habitat: Along old resaca beds in Cameron County.

Propagation: to reproduce, a plant must be relatively large and reaching nearly full sunlight, usually by growing in the crowns of trees. Seeds germinate satisfactorily within the fruit, which is sticky, and clings to visiting birds. Can be slow to establish.

Few specimens remain in the wilds of the LRGV.

Much of the data above was taken from:

[<http://www.fs.fed.us/global/iitf/pdf/shrubs/Pisonia%20aculeata.pdf>]



*Pluchea carolinensis*  
 (many synonyms: *P. odorata*)  
**Cure-for-All, Sourbush**

Closely related to Marsh Fleabane, which is smaller in stature, with similar blooms.



May live 2-4 yrs, die back to the root, then re-sprout.

Large pointed light green leaves, fuzzy on both sides.

Soft, brittle stems about 3m in height, 6cm in diameter.

Blooms are pink/purplish to white and occur in tight bunches which mature to form interesting fluffy masses of seed (probably used by birds to line their nest).

Distribution: Found through much of the tropics, including much of Mexico. Native to Florida in the U.S. Recently documented in the LRGV, perhaps a range expansion. **\*Naturalized to pest status in Hawaii.** (Naturalized: reproducing successfully in the wild.)

Habitat: South of Santa Maria on an irrigation canal at the water plant. Also occurs close to the river at the Nature Conservancy's Southmost Preserve in Brownsville. Adapted to a wide variety of soils and sites. Tolerates well to poorly-drained soils, full range of soil textures, acid and alkaline, salt and salt spray, and compaction. In drier climates, it grows along streams, near mangroves, and marshes. Cannot endure overhead shade or severe competition from brush or grass.

Seeds are wind-dispersed & probably require wet, bare soil to germinate. (Germination occurred in Ramsey Park following Hurricane Dolly.) **Excellent ability to colonize and stabilize disturbed areas**, a nurse crop for later-successional species.

Source of nectar and pollen for honeybees and other insects. Historic medicinal use in Mexico. Found in herberias in Florida. Teas and poultices prepared from the leaves. Analgesic and anti-inflammatory effects demonstrated in laboratory rats.

[<http://www.fs.fed.us/global/iitf/pdf/shrubs/Pluchea%20carolinensis.pdf>]  
[www.riodeltawild.com/JanJune2004/Pluchea%](http://www.riodeltawild.com/JanJune2004/Pluchea%20)

**\*Pest status** is highly-dependent on location. Plants which are pests in irrigated fields or wet climates may be rare in the hot, dry, windy environment of southernmost Texas.





Photos: [[http://www.wildflower.org/plants/result.php?id\\_plant=rutr](http://www.wildflower.org/plants/result.php?id_plant=rutr)]

*Rubus trivialis*  
**Rio Grande Dewberry, Zarzamora**

*In years past, **Rubus riograndis** was recognized as a separate dewberry species occurring in this area. It has been “lumped” together by taxonomists with the widespread **Rubus trivialis**. It would not be surprising to see these species “split” in future if an enterprising botanist wishes to study them for publication. Botanic names have been changing more than common names in the last decade.*

Perennial, thicket-forming, prickled canes to 3'. Tasty berries are 1-3 cm. in length, ripening from green to red and finally to black. Stems trail along the ground, often rooting at nodes and stem tips. This makes our native dewberry especially effective as erosion control for arroyo banks and ponds. Prickly stems deter human traffic and provide safe haven for wildlife. Stems may require 2 yrs. growth to flower.

Distribution: Maryland south to FL, west to TX, KS.  
Habitat: Swamps, Flood plains, bottomland. Various soils, especially on undisturbed sandy banks of the Arroyo Colorado and the Rio Grande. Mike Heep finds dewberry thickets in full sun, usually in open areas where they can access plenty of seasonally-abundant water. Low spots, like seasonally-wet resaca beds in Brownsville, were covered with dewberry thickets in years past. Mowing has decimated populations of dewberry locally, often occurring before fruit can ripen. Once common, this plant is becoming rare.

Provenance: Over centuries of growing in a particular locale, species characteristics which allow survival in that locale provide an advantage which is passed on to future generations. Thus, *Rubus trivialis* grown from seed or cuttings obtained in the LRGV may have a survival advantage here over plants from the same species taken from very different locales, such as Maryland or Kansas (i.e. mail-order catalogues, K-Mart, Wal-Mart, etc.)



Large, grey-green velvety leaves reminiscent of Mexican Olive, but larger, and distinctively smelly. White, non-showy blooms. Yellow fruits about 1/2". Fast growing with brittle limbs (nonetheless supporting chachalaca). Damaged by freeze. Ragged appearance. Maximum height 30' with 6" trunk diameter. Propagation by seed or transplanted upstarts from shallow lateral roots.

Distribution: Mexico and Central Amer., northward to Kennedy Cty. in TX, FL, cultivated in CA.

Habitat: Sabal Palm Grove Sanctuary, Camp Lulu Sam's, along ditches and resaca edges.

**POSTER CHILD**: Only a decade ago, Potato Tree was regarded locally as little more than an uncommon native plant. As it has been planted by birdwatchers over that time-span, we have become aware of the high regard birds have for it. Ava Whittington, who planted it on Mike Heep's recommendation, has observed Rose-Breasted Grosbeak and Summer Tanagers foraging on her trees, as well as many of the more common local and migrating frugivores. Flycatchers visit, taking advantage of pollinators. Crimson-collared Grosbeaks frequented potato trees at Valley Nature Center and Frontera Audubon in 2005. As well as eating the fruits, birds have been observed foraging on the leaves, which are covered with dense short brownish star-shaped hairs.

Much historic medicinal use. Leaves used for cleaning.

*Solanum erianthum* (Nightshade Family)  
**Potato Tree, Salvadora**

*Solanum verbasifolium* is a previously “misapplied” name.

[<http://www.riodeltawild.com/JulyDec2003/Solanum%20eleagnifolium.pdf>]





*Sophora tomentosa*  
(Legume Family)  
**Tambalisa, Necklace Pod,  
Yellow Sophora**

[<http://nativeplantproject.tripod.com/rgvshrub.htm#Yellow%20Sophora>]

Medium height shrub (6') with soft-green, fuzzy leaves (tomentosa) and spiked clusters of yellow blooms. Seedpods resemble a string of beads.

Distribution: In TX: southward from Port Aransas. Worldwide along tropical seashores of both hemispheres.

Habitat: coastal areas from Port Aransas southward. Resists ravages of wind, sandy salt-laden soil, drought and periodic flood.

Seeds contain a powerful alkaloid. Several plant parts have historic medicinal use: reported diuretic, sudorific and purgative properties. Butterfly host plant.

Planting: Well-drained sand or loam is recommended, spacing should be three to four feet apart, partial shade or full sun are acceptable. Protection from freezing may be provided by a south-facing wall. Easily propagated by seed. Growth rate is relatively slow.

Tambalisa is one of few woody shrubs which occur on the salty sandy edges of the Laguna Madre. It grows well in cultivation under a wide range of conditions. The habitat where it can best compete is the harsh and ever-changing coastal area. It is rarely encountered elsewhere except where cultivated.



*Xylosma flexuosa*  
**Brush Holly, Coronillo**

[<http://aggie-horticulture.tamu.edu/ornamentals/nativeshrubs/xylosmaflexuosa.htm>]

[<http://nativeplantproject.tripod.com/rgvshrub.htm#Brush-Holly>]

Evergreen, thorny shrub. Height to 20', usually 5-10'. Lanky and sprawling.

Leaves are smooth, tinged with red edges when newly-emerging

Profuse, tiny white flowers.

Plants are usually either male or female, requiring one of each to bear fruit. Small, tasty fruit may appear throughout the year when moisture is sufficient. Fruit ripens from yellow to red then almost black. Fruiting occurs especially during winter months when most other fruiting plants are barren.

Tolerates shade to full sun and acid to neutral soils.

Good drainage is required. Drought tolerant.

Propagated from seed or softwood cuttings.

Distribution: grows sparsely in the brush and palm groves in extreme South Texas and up the coast to Nueces County. South thru Mexico to Venezuela.

Habitat: Palm groves, resaca banks, brushy thickets, clay lomas. Low-lying wet places.

Small mammals and birds feast on the berries, as does the author.