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Vegetation of the Lower Rio Grande Valley



Woody Plants of the Lower Rio Grande Valley, Texas

By Lonard, Everitt, and Judd

TREES:

MESQUITE(*Prosopis glandulosa*)Stems: A small tree shrub up to 10 m tall, usually bearing straight spines. Leaves: Bipinnately compound, alternate or occasionally fascicled, usually with one pair of pinnae and 6-17 pairs of leaflets per pinnae. Flowers: Yellowish-green, borne in cylindrical spikes. Fruit: A many-seeded, shiny-brown, yellow, occasionally spotted legume. Comments: Abundant on a variety of soil types throughout the area. Mesquite often forms dense thickets on pastures and range land where it often needs to be controlled. The legumes are an important source of food for horses, cattle, goats, deer and javelina; they are mildly poisonous to cattle and goats if eaten over a prolonged time. Mesquite provides nesting sites for several species of birds.

HACKBERRY(*Celtis laevigata*)Stems: A broad-crowned tree up to 30 m tall; bark with irregular patches of corky warts on the main trunk and older branches. Leaves: Simple, alternate, lanceolate, oblong-lanceolate or ovate-lanceolate, entire or slightly toothed, deciduous. Flowers: Small, greenish; plants monoecious - polygamous. Fruit: An orange-red to black drupe. Comments: Common on a variety of soil types throughout the area but most abundant on alluvial soils near the Rio Grande. An important ornamental whose fruit is eaten by a number of different birds and mammals. The leaves are occasionally browsed by deer and cattle. Several species of birds use this species for nesting sites, and horses relish the leaves.

MEXICAN ASH(*Fraxinus berlandieriana*)Stems: A large, unarmed tree up to 10 m tall. Leaves: Odd-pinnately compound, opposite or subopposite, usually with 3-5 leaflets, their margins entire or coarsely toothed. Flowers: Unisexual, dioecious, greenish, in clusters. Fruit: A samara. Comments: Frequent on alluvial soils of the Rio Grande Floodplain. It is widely planted and grows well in cultivation. Several species of birds and mammals utilize Mexican Ash as nesting sites.

CEDAR ELM(*Ulmus crassifolius*)Stems: A tree up to 25 m tall, often bearing twigs with opposite, corky wings. Leaves: Simple, alternate, ovate, ovate-oblong, or elliptic, serrate, deciduous. Flowers: Bisexual, red or green; borne in fascicles; flowering in summer or fall. Fruit: A green, pubescent samara. Comments: Locally common on sandy and clay loam in heavy brush near Rio Grande; infrequent along the Arroyo Colorado. This tree provides cover and nesting sites for several species of birds.

BLACK WILLOW(*Salix nigra*): A tree up to 20 m tall, with deeply fissured bark. Leaves: Similar to the above but narrowly lanceolate and bearing numerous evenly spaced teeth. Flowers and Fruit: Similar to *S. exigua*. Comments: This

large tree is common around resacas, ponds and other permanent bodies of water. Deer occasionally browse the leaves. Our species may be referred to as *S. humboldtiana* Willd. *S. humboldtiana* has sculptured markings on the capsules. Several species of birds use this tree for nesting sites.

SABAL PALM (*Sabal texana*) Stems: Similar to appearance to *Washingtonia*. Trunks robust, branched up to 15 m tall. Leaves: Simple, palmately dissected (similar to *Washingtonia*), but without prickles on the petioles. Flowers: Bisexual and in dense clusters. Fruit: A small, black drupe. Comments: Our only native palm. This rare species occurs naturally only along the Rio Grande flood plain and rescue banks in Cameron County. A small Sabal palm grove is located southeast of Brownsville at the Rabb Ranch (Audubon sanctuary). Some trees also occur along the Rescue Viejo near Olmito. It is commonly cultivated in other areas of the Rio Grande Valley even though the young seedlings are difficult to transplant. In Mexico this palm provides cover and nesting sites for several species of mammals and birds.

RETAMA (*Parkinsonia aculeate*) Stems: A tree up to 10 m tall with green branches, armed with recurved spines. Leaves: Bipinnately compound, alternate with 1-2 pairs of pinnae and numerous leaflets. Flowers: Zygomorphic, yellow, borne in racemes. Fruit: A legume, usually with constructions between the seeds. Comments: Frequent on poorly drained sites throughout the area. Deer occasionally browse the leaves and the seeds are eaten by doves. Several species of birds use this species as nesting sites. It is often planted as an ornamental, but becomes a noxious pest on many sites.

SHRUBS:

BLACK MANGROVE (*Avicenna germinans*) Stems: An unarmed maritime shrub, rarely over 1 m tall, usually bearing aerial roots (pneumatophores). Leaves: simple, opposite, lanceolate, elliptic, , or obovate, entire, usually grayish-pubescent below. Flowers: White, borne in axillary or terminal spicate clusters. Fruit: A densely pubescent, beaked capsule. Comments: Frequent on clay soils, tidal flats, and lagoons along the coast where it has some value as a soil stabilizer. It appears to be increasing rapidly in our area. Where this species is abundant, it is used as a nesting site by several species of colonial water birds.

HUISACHE (*Acacia smallii*) Stems: A spiny shrub or a small tree usually 2 to 4 m tall, with an umbrella-shaped crown. Leaves: Bipinnately compound, alternate with 2-8 pairs of pinnae and 10-25 pairs of leaflets per pinna. Flowers: Yellow, in dense globose heads. Fruit: A thick, black, glabrous legume. Comments: A common species throughout the area that occurs on a variety of soil types. Control measures are often needed when it forms dense thickets in grazing lands. Deer are known to browse the leaves and fruit. The fragrant flowers are an important source of pollen for bees. It is an important nesting species for white-winged doves.

SPINY HACKBERRY (*Caltis pallido*) Stems: A spiny, densely branched shrub occasionally to 3 m tall. Leaves: Simple, alternate, ovate, ovate-oblong, or elliptic with entire or coarsely toothed margins. Flowers: Greenish-white, monoecious or polygamous. Fruit: A yellow or orange drupe. Comments: Common throughout the area where it grows on a variety of soil types (except saline). Granjeno is a good wildlife food; the fruit is eaten by a number of

different birds and mammals while the leaves are heavily browsed by deer. Both the fruit and leaves contain about 20% crude protein.

DRY-LAND WILLOW (*Baccharis neglecta*)Stems: An unarmed, glabrous shrub 1-3m tall. Leaves: Simple, alternate, entire or remotely toothed, narrowly linear to narrowly elliptic, with a single conspicuous nerve, glabrous, glutinous. Flowers: Unisexual, dioecious, white, borne in heads. Fruit: An achene bearing white capillary bristles. Comments: Locally abundant on disturbed sites throughout the area. It often forms dense thickets in pastures and along drainage ditches where it creates a brush control problem. It is browsed by cattle where pastures are heavily grazed.

PRICKLY PEAR (*Opuntia lindheimeri*) Stems: A thicket-forming, up to 3m tall spiny cactus, with flattened, obovate or orbicular joints. Leaves: Ephemeral, usually absent. Flowers: Red, yellow or orange, solitary. Fruit: A many-seeded, red or purple berry. Comments: Abundant on a variety of soil types throughout our area. It is one of our most valuable native plants for wildlife. the fleshy pads and fruit are among the most important foods of javelina and deer. In periods of drought, cattle ranchers burn off the spines to provide forage. The fruits are eaten by several species of birds, and the Texas tortoise, *Gopherus berlandieri*. It is frequently used as nesting sites by several species of birds and the wood rat, *Neotoma micropus*. the young tender spineless pads are used as food by people in the area.

MESQUITE (*Prosopis glandulosa*)Stems: A small tree shrub up to 10 m tall, usually bearing straight spines. Leaves: Bipinnately compound, alternate or occasionally fascicled, usually with one pair of pinnae and 6-17 pairs of leaflets per pinnae. Flowers: Yellowish-green, borne in cylindrical spikes. Fruit: A many-seeded, shiny-brown, yellow, occasionally spotted legume. Comments: Abundant on a variety of soil types throughout the area. Mesquite often forms dense thickets on pastures and range land where it often needs to be controlled. The legumes are an important source of food for horses, cattle, goats, deer and javelina; they are mildly poisonous to cattle and goats if eaten over a prolonged time. Mesquite provides nesting sites for several species of birds.

MIMOSA (*Mimosa pigra*)Stems: A shrub up to 3 m high, armed with stout, usually white prickles. Leaves: Bipinnately compound, alternate with 4-12 pairs of pinnae per leaf and 20 or more pairs of leaflets per pinna. Flowers: Pink or red, borne in dense globose heads. Fruit: An 8-15 seeded legume that dehisces into several joints. Comments: Locally abundant on clay soils, in dry lake beds, resacas, and other seasonally inundated areas near the Rio Grande.

TEXAS EBONY (*Pithecellobium ebano*)Stems: A shrub or usually a tree less than 10 m tall, with dark-colored bark and zigzag branches bearing stout stipular spines. Leaves: Bipinnately compound, alternate or fascicled with 3-6 pairs of leaflets per pinna. Flowers: White, borne in dense cylindrical spikes. Fruit: A slowly maturing thick-walled, woody legume. Comments: frequent on well-drained sandy loam soils throughout the area. This species is one of our most valuable native plants and is grown extensively as an ornamental throughout South Texas. It can be propagated from scarified seeds. The mature seeds are eaten by javelina, and deer occasionally browse the leaves. Several species of birds use the trees as nesting sites.

GRASSES:

SEA-BLITE(*Suaeda conferta*)**Stems:** A subshrub, up to 1 m tall with glabrous, brittle branches. **Leaves:** Simple, glabrous, fleshy, bluish-gray, oblong. **Flowers:** Petals absent, flowers solitary or in the axils of the leaves. **Fruit:** A 1-seeded utricle. **Comments:** Frequent along bay beaches or in salt flats near the Gulf.

GLASSWORT(*Salicornia virginica*)**Stems:** Succulent, forming low-growing matlike colonies from rhizomes and trailing stems. **Leaves:** Reduced to inconspicuous, opposite scales. **Flowers:** Inconspicuous, in terminal spikes. **Fruit:** An aurticle. **Comments:** Frequent in salt marshes and tidal flats near the Gulf.

SALTWORT(*Batis maritima*)**Stems:** A low, pale-green subshrub in tidal flats and in wet areas of the coastal region. **Leaves:** Simple, opposite, thick, succulent, entire, linear or boat-shaped. **Flowers:** Unisexual, dioecious, inconspicuous, whitish in cone-like spikes. **Fruit:** Cone-shaped, fleshy, buoyant. **Comments:** Abundant on sandy beaches, mud flats and saline marshes near the Gulf. The plant is occasionally used by colonial water birds as a nesting site.

SHOREGRASS(*Monothochloe littualis*): Dioecious. Stoloniferous and rhizomatous perennials. Culmserect or geniculate, branching from a stoloniferous base; 8-15 cm tall, glabrous; internodes solid, terete in cross section; leaves basal and cauline. Sheaths closed, keeled, densely overlapping; glabrous. Ligules a fringed membrane. 0.1-0.3 mm long. Collars yellowish-white, glabrous. Blades grayish-green, in fascicles, rolled but occasionally flat near the base, 6-10 cm long, 1-3 mm wide, scabrous.

SEA OXEYE(*Borrchia frutescens*)**Stems:** An unarmed, grayish-white subshrub usually less than 1 m tall. **Leaves:** Simple, opposite, spatulate, obovate or lanceolate, pubescent, entire or slightly toothed. **Flowers:** Ray flowers yellow, disc lowers yellow. **Fruit:** An achene bearing a crown of scales. **Comments:** Very abundant on tidal and salt flats near the coast and the inland areas of poor drainage and salt accumulations. The plants are frequently used by colonial water birds as nesting sites.

GUINEA GRASS(*Panicum maximum*): Tufted, robust perennials. Culms erect, unbranched, up to 2 m tall, glabrous, terete in cross section; leaves basal and cauline. Sheaths terete, about 2/3 the length of the internodes, glabrous; margins glabrous below, appressed pilose above. Ligules a fringed membrane with hairs at the apex, 2.5-3.5 mm long. Collars brownish, finely pubescent. Blades dark green, flat or occasionally folded, 20-35 cm long, 7-20 mm wide, midrib present, mostly glabrous, but with few appressed hairs above; margins serrate. Inflorescence an open panicle, rounded or triangular, 20-45 cm long, 15-20 cm broad; peduncle glabrous; branches appressed or ascending but later spreading, numerous whorled branches at the base; spikelets absent near the base. Spikelets elliptic-lanceolate, 3.0-3.5 mm long; pedicels antorsely scabrous. Glumes purple tinged, apex blunt or obtuse; the first ovoid, .5-.6 mm long, 3-nerved; the second as long as the spikelet, 5-nerved, nerves convergent near the apex. Lemma of the sterile floret similar to the second glume. Lemma of the the

fertile floret whitish, lance-elliptic, 1.9-2.1 mm long, transversely rugose; Palea of the fertile ovate, yellow, 1.2.-1.4 mm long. Abundant in our area.

BUFFELGRASS(*Cenchrus ciliaris*): Tufted perennials. Culms erect or geniculate with hard, knot-like bases, 20-100 cm tall. Sheaths about as long as the internodes, glabrous, margins glabrous above but pilose near the base. Ligules membranous but with a ring of hairs at the apex, 1.0-1.3 mm long. Blades usually flat, 10-25 cm long, 3-7 mm wide, with scattered pustulate-based hairs above, glabrous below, margins glabrous. Inflorescence 5-12 cm long, 7-12 mm broad; rachis scabrous or pubescent. Spikelets subtended by a dense cluster or sterile bristles 4-8 mm long and soft hairs, bristles purple, spikelets dorsally compressed, lanceolate 2.5-4.5 mm long; fertile floret 1. Glumes whitish, lanceolate, membranous, glabrous, as the spikelet; the first about 1.5 mm long, 1-nerved; the second as long as the spikelet, indistinctly nerved. Lemmas awnless, white, lanceolate as long as the spikelet, 5-nerved, glabrous. Caryopses ovoid, 1.3-2.0 mm long.

COMMON REED(*Phragmites australis*)Stems: A herbaceous plant similar in growth habits to *Arundo*, up to 3 m tall; rhizomes and stolons present. Leaves: Simple, alternate, linear, slightly scabrous on the margins, mostly 1.5-5 cm broad. Inflorescence: A densely flowered panicle up to 40 cm long; differing from *Arundo* by having a glabrous lemma and pubescent rachilla. Comments: A subcosmopolitan species that occurs along the Rio Grande, canals, resacas and on barrier and spoil islands. Barrier island populations often have well developed stolons. Various species of water birds use this species for nesting and roosting sites, but it has no forage value.

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