The Sabal April 2011

Volume 28, number 4

In this issue:

April Meeting of the Native Plant Project:

"Texas Native Ornamental Wetland Plants"
by John Lloyd-Reilley,

Mgr, Kika de la Garza Plant Materials Center, Kingsville

Tuesday, April 26th, at 7:30 P.M.

Valley Nature Center, 301 S. Border
(in Gibson Park), Weslaco.

(Plant photos by Shelly Maher.)
FAR LEFT: Coastal Goldenrod with Buckeye Butterfly.
LEFT: Squarestem Spikerush.
RIGHT: Swamp Sunflower.
FAR RIGHT: John Lloyd-Reilley.
COVER: Scarlet Rose Mallow.

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 - Chris Hathcock - (956)-369-1744; <Chris_Hathcock@yahoo.com>

INTRODUCTION: The Arroyo Colorado, a Threatened Riparian Wildlife Corridor. —by C. Mild

In early 2011, the International Boundary Water Commission (IBWC) announced they would soon begin clearing vegetation from the banks of the Arroyo Colorado, in order to restore the "designed" carrying capacity of that floodwater-carrying channel. IBWC stated concern for human life and property as the rationale for such clearing of vegetation.

According to IBWC figures, the arroyo should clear floodwaters three times faster than water flowed through Harlingen following Hurricane Dolly.

At a citizens' forum meeting in Mercedes on March 23, 2011, IBWC displayed a number of highly-detailed maps indicating flood-prone areas in the 4-county LRGV. Presentations were made by IBWC officials with a charged period of questions from attendees. Interested parties from myriad organizations were present. The meeting was "standing room only." **The next citizens' forum meeting is scheduled for June 22nd**, with no further details of time or place available at this date.

On March 24, IBWC sent a Certified Return Receipt "notice of cleaning activities" to property owners adjacent to the arroyo in Harlingen. In that letter, IBWC estimates the arroyo is functioning at "approximately 30% of design capacity." They state that "Cleaning activities ... will consist mainly of the removal of trash, dead trees, dead tree limbs and brush. Some minor clearing of live trees or branches may be required in some locations." (At the March 24th meeting, an IBWC engineer indicated that cleared vegetation would be chipped in place, with woodchip mulch left in the same general area.) Such "cleaning will be conducted over the next 9 months, from April 11, 2011 to December 31, 2011. ... This cleaning will be conducted under the supervision of the IBWC with an independent environmental monitor on-site as appropriate."

The local IBWC contact is "Rodolfo Montero, 956-463-5422 ext 233, <Rodolfo.Montero@ibwc.gov>".

Because the Arroyo Colorado is one of only two riparian corridors in the LRGV, this Sabal edition is focused on the "Arroyo Brush," a unique community of vegetation.

The arroyo was *designed* by Mother Nature. Humans have designated how much floodwater it "should" carry. This editor is truly frightened to imagine that floodwaters would be diverted by IBWC to flow three times faster through the city of Harlingen than the peak flow following Hurricane Dolly.

In addition, Harlingen's Ramsey Nature Park (the Arroyo Colorado Unit of the World Birding Center) is the one known area where revegetation efforts have been undertaken on the banks of the Arroyo Colorado. The threat of laborers with power tools descending upon that area is taken very seriously. Species which have been introduced on Ramsey's banks include diverse wildflowers, rare riparian Button Willow and the low-growing, colony-forming species known to protect the arroyo's banks from erosion.

Why do local efforts to control flooding impinge upon habitat while neglecting the current poor design of our yards and businesses?

It is time, in my opinion, to implement sound methods to lower floodwater runoff throughout the valley. Few homes or businesses catch rainwater from roofs; yet most of us irrigate our yards. (Texas Nature Conservancy's Southmost Preserve is a notable exception.) If you'd like to calculate how much water could be collected off your roof, go to: [http://www.save-the-rain.com/world-bank/]. On this webpage, you type in your address and an aerial view of your home pops up. You click on each corner of your roof and calculations are made automatically. A conservative estimate of the water collection off my roof in one year was sufficient to flush a toilet 15,750 times.

Few homes are designed to use grey-water from sinks, showers, bathtubs and washing machines to irrigate our lawns.

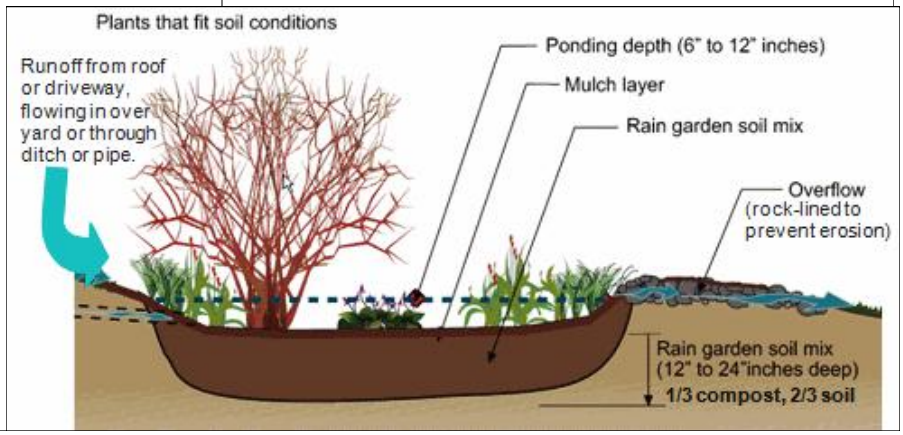
Few of our many and massive parking lots have planted islands designed to catch and hold rainwater. Most plantings are higher than the asphalt and surrounded by concrete curbing. Texas cities like Austin have more appropriately-designed parking lots, which are far prettier and more comfortable than our southern-baked asphalt.

And how about rainwater gardens for our homes? These are low-lying areas designed to catch and hold rainwater runoff, landscaped with water-loving natives which are also drought-resistant. Wendy's on Ed Carey in Harlingen has one such area in front of their store. It's a delightfully different landscape component.

It seems that local tax incentives could be used to encourage property owners to implement methods to lower the amount of water which flows into storm drains and sewer systems. After all, each city must bear the cost of handling storm runoff and treatment of sewage.

The trees, shrubs, vines and flowers in our cities would reward us in myriad ways for giving them rainwater instead of chlorinated "drinking" water.

The ultimate reward would be our sense of pride in living more gently upon the earth.



The Arroyo Colorado Brush of the Lower Rio Grande Valley, Texas

—by Michael Heep and Gene Lester

The following is reprinted from a much earlier article. For that reason, much of the taxonomy has changed. However, the older names used here will typically be listed in newer reference works as synonyms.

Red type denotes plants illustrated within this article.

Other than the Rio Grande, the Arroyo Colorado (known locally as the 'The Arroyo') is the only permanent stream in the Lower Rio Grande Valley, Texas. It is a headwater eroding stream that occupies what is believed to be a former distributary channel of the Rio Grande (Brown et al., 1980). It cuts a deep channel beginning southwest of Mercedes, Texas in eastern Hidalgo County, proceeds east northeast through Cameron County, and forms the northern boundary of Cameron County from about 12 miles west of where it drains into the Laguna Madre.

The surface sediments along the Arroyo Colorado are mostly late Pleistocene deposits, as opposed to the younger Holocene deposits on the Recent Delta between the Arroyo and the Rio Grande (Brown et al., 1980).

The descriptions of the vegetation provided here are based on reconnaissance of 42 sites of uncleared brush along the Arroyo Colorado from southwest of La Feria, Texas to near where it drains into the Laguna Madre. The size of these blocks of brush range from uncleared lots in subdivisions in the Harlingen area (about ½ acre) to larger blocks of 40 acres or more. Although some sites have been visited only once, others have been reconnoitered repeatedly over a period of about 20 years.

Complete or nearly complete coverage by brush species other than Mesquite (*Prosopis glandulosa*), Huisache (*Acacia smallii*), and Prickly Pear (*Opuntia lindheimeri*) was used as an indicator that the land had not been cleared. This hypothesis is confirmed by the presence of characteristic species in the understory that do not readily colonize disturbed land.

Cedar Elm with distinctive leaf venation.

The brush along the Arroyo Colorado is distinct from the other woodlands in the Lower Rio Grande Valley.

Although most of the common woody species in the Lower Rio Grande Valley occur in all recognized types of woodlands, the presence of particular species in the Arroyo brush give it a visibly distinct character.

Most of the Arroyo Colorado brush is a very dense mixed growth dominated by small-leafed thorny shrubs and small trees. Most of the brush would be impassable but for man-made trails that have been cut through. Many of these trails in the Harlingen area have been there for at least 35 years and are likely to be considerably older.

There is a recognizable continuum in the height and density of the brush. On much of the higher, drier land the brush is from 3 to 8 feet in height and is readily passable. In and near the drainageways the brush is higher, from 8 to 20 feet, and much denser. In some of the ravines adjoining the Arroyo Colorado channel, the vegetation is somewhat riparian, with tall Cedar Elm (*Ulmus crassifolia*), Rio Grande Ash (*Fraxinus berlandieriana*), Tepeguaje (*Leucaena pulverulenta*), Anacua (*Ehretia anacua*) and Hackberry (*Celtis laevigata*). Occasionally a specimen of the Texas Sabal Palm (*Sabal texana*) is found.

The most abundant tree and shrub species in the Arroyo brush are listed in Table 1 on the following page. Although several species are generally conspicuous and dominant at most sites; the brush is very species-rich and diverse. Virtually all species listed in Table 1 can be found in any block of brush larger than one acre.

The dominant species at almost all sites are Ebony (*Pithecellobium ebano*), Coma (*Bumelia celastrina*), and Adelia (*Adelia vaseyi*).

PHOTO BELOW:
Coma, with ripened fruit.

RIGHT:
Adelia vaseyi, hostplant for the Mexican Bluewing butterfly, resting with wings closed.

Table 1. Common Trees and Shrubs of the Arroyo Colorado in the Lower Rio Grande Valley, Texas.

Common Name	Botanical Name
Adelia	*Adelia vaseyi*
Agrito (Wolfberry)	*Lycium berlandieri*
Amargosa	*Castela texana*
Blackbrush	*Acacia rigidula*
Blue Sage	*Salvia ballotiflora*
Brasil	*Condalia hookeri*
Cenizo	*Leucophyllum frutescens*
Chapotillo	*Amyris texana*
Coma	*Bumelia celastrina*
Colima	*Zanthoxylum fagara*
Coyotillo	*Karwinskia humboldtiana*
Crucillo	*Randia rhagocarpa*
Desert Yaupon	*Schaeferia cuneifolia*
Dove Croton	*Croton humilis*
Ebony	*Pithecellobium flexicaule*
Elbowbush	*Forestiera angustifolia*
Golden Eye Daisy	*Viguiera stenoloba*
Granjeno	*Celtis pallida*
Guayacan	*Guaiacum angustifolium*
Gutta Percha	*Maytenus texana*
Hog Plum	*Colubrina texensis*
Huisachillo	*Acacia schaffneri*
Lantana	*Lantana horrida*
Lotebush	*Ziziphus obtusifolia*
Manzanita	*Malpighia glabra*
Mesquite	*Prosopis glandulosa*
Paloverde	*Cercidium texanum*
Prickly Pear	*Opuntia lindheimeri*
Snake Eyes	*Phaulothamnus spinescens*
Tasajillo	*Opuntia leptocaulis*
Texas Persimmion	*Diospyros texana*
Tenaza	*Pithecellobium pallens*
Yucca	*Yucca treculeana*

Ebony is widespread and abundant. It occurs at all sites, and is usually the largest tree species present. In the deeper brush it may form a dense canopy. It is shorter in stature and more widely scattered in the shorter brush.

Coma is also widespread along the Arroyo. At some sites it is more abundant than Ebony. It spreads by large, woody rhizomes, often forming dense, impenetrable thickets.

Adelia is locally dominant along the Arroyo, where it occurs as a multi-stemmed large shrub to 15 feet. Adelia also spreads by large, woody rhizomes, although it does not form impenetrable thickets. Adelia is a characteristic species of the Arroyo. It is neither common nor abundant in any other brush type in the Lower Rio Grande Valley.

Although Ebony, Coma, and Adelia are dominant at many sites, much of the brush is a dense mixture of these 3 species, as well as about 2 dozen others. At many sites, all of the species listed in Table 1, and some others, can be found on a single, uncleared residential lot in a subdivision.

Abundant species at almost all sites include Amargosa, Blackbrush, Cenizo, Colima, Coyotillo, Crucillo, Elbowbush, Granjeno,

Guayacan, Huisachillo, Lotebush, Snake Eyes, Prickly Pear and Texas Persimmon.

In the shorter phases of brush on higher land, Cenizo, Blackbrush, and Huisachillo are conspicuous. Two species that are generally absent from the deeper brush, Golden Eye Daisy (*Viguiera stenoloba*) and Monte de Conejo, (*Ericameria austrotexana*) are common.

Mesquite does occur in the Arroyo brush, where it is dominant in some areas. Mesquite is much more abundant on adjoining land in which the brush has been removed.

The ground layer in the Arroyo brush is composed of a characteristic set of species. In the open short brush, common subshrubs and perennial herbs include: Dalea (*Dalea thyrsiflora*), Bastardia (*Bastardia viscosa*), Malva Loca (*Malvastrum americanum*), Blue Mistflower (*Eupatorium odoratum*), Velvet Leaf (*Allowissadula lozanii*), Gutta Percha (*Maytenus texana*), Heliotrope (*Heliotropium angiospermum*), and Huaco (*Manfreda variegata*). Occasionally found in the full sun is the tropical species *Sanvitalia ocymoides*.

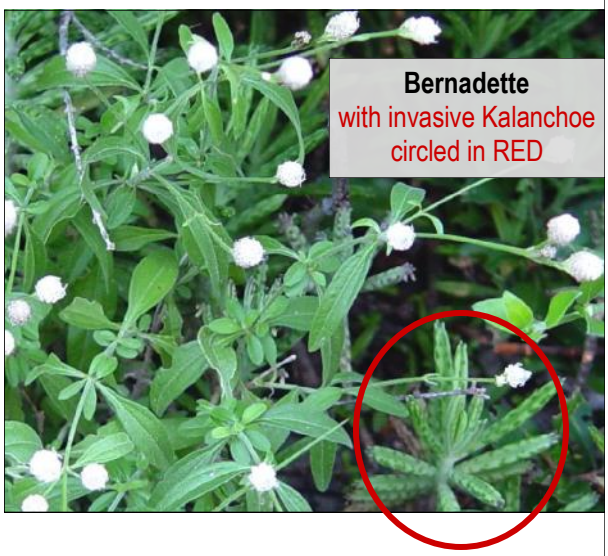
Gutta Percha (Leather Leaf)
with blooms and forming fruit.

Common grasses in open areas in the shorter brush are Buffalograss (*Buchloe dactyloides*), Red Grama (*Bouteloua trifida*), and Filly Panicum (*Panicum filipes*). At many sites, these grasses are being invaded and crowded out by two very invasive, introduced forage grasses, Common Buffelgrass (*Cenchrus ciliaris*) and Guineagrass (*Panicum maximum*).

The understory is very diverse in the shade provided by the deeper brush. Common species include: Pigeonberry (*Rivina humilis*), Scarlet Sage (*Salvia coccinea*), False Honeysuckle (*Siphonoglossa greggii*), Flor de Amanda (*Trixis inula*), Texas Nightshade (*Solanum triquetrum*), Bernadette (*Isocarpha oppositifolia*), Wild Petunia (*Ruellia* sp.) and Celosia (*Celosia nitida*). Only one grass species is usually found: Texas Bristlegrass (*Setaria texana*). Chapotillo (*Amyris texana*), is a very abundant short shrub in shade.

The cactus species, with the exception of Prickly Pear and Tasajillo (*Opuntia leptocaulis*), occur in the shade of the trees and shrubs. The most abundant species are Lady Fingers (*Echinocereus berlandieri*) and (*E. pentalophus*), Twisted Rib (*Echinocactus setispinus*), Rio Grande Valley Barrel Cactus (*Echinocactus sinuatus*), and Pincushion (*Mammillaria heyderi*). Dumpling Cactus (*Mammillaria multiceps*) is found only in deep shade, usually under the canopy of large Ebonies.

A noteworthy cactus in the Arroyo brush is Blanck's Alicoche (*Echinocereus blanckii*). It is not common in any other brush in the area, but is found all along the Arroyo. Photo on page 6.



Indio (Kalanchoe verticillata), an introduced succulent from South Africa, has become established, and is abundant and widespread. Indio was noted as common in the 1960's, and is present in shorter brush from south of La Feria to the mouth of the Arroyo.

The most common vines are: Balloon Vine (*Cardiospermum halicacabum*), Serjania (*Serjania brachycarpa*), Apaac (*Urvillea ulmacea*), Blue Passionvine (*Passiflora foetida*), and Possum Grape (*Cissus incisa*). *Passiflora suberosa* is found at almost all sites, but is not especially conspicuous. The tropical vines *Tournefortia volubilis, Pisonia aculeata*, and Noseburn (*Tragia glanduligera*) have been found in some brush sites in the Harlingen, Texas area.

Almost all of the common species in the Arroyo brush are also common in other types of brush in the Lower Rio Grande Valley. The relative abundance of particular species makes the Arroyo brush visibly distinct from any other brush type in the area.

The Arroyo brush can be viewed as an amalgam of species from other brush types:

Species common to the hotter, drier brush of Western Hidalgo County are Blackbrush, Huisachillo, Paloverde, Golden Eye Daisy, and Huaco. These species are rare or absent from the woodlands on the Recent Delta.

Species characteristic of the clay dunes, or lomas, near the coast that are common along the Arroyo are Bastardia, Dalea, and Monte de Conejo. Fiddlewood (*Citharexylum berlandieri*) is dominant on many of the lomas, and is also abundant in the Arroyo brush east of the old Paso Real stagecoach station about 7 miles northeast of Rio Hondo.

Some species characteristic of the more mesic woodlands along the resacas (old ox-bows of the Rio Grande) on the Recent Delta include Tournefortia, *Chiococca alba*, and Sierra Madre Torchwood (*Amyris madrensis*). Sierra Madre Torchwood is locally abundant in some blocks of Arroyo brush.

The abundance of Adelia is probably the most unique aspect of the Arroyo brush. Although present on the Recent Delta, it is quite rare there. We have not seen Adelia on the lomas or in the upland brush of the western region of the Lower Rio Grande Valley.

Much of the Arroyo brush has been cleared since Mike Heep first observed it in the 1960's. Most of the clearing occurred in a piecemeal fashion, with the brush being replaced by housing subdivisions. In recent years, some of the brushland has been thankfully purchased for preservation.

LITERATURE CITED

Brown, L.F. Jr., J.L. Brewton, T.J. Evans, J.H. McGowen, W.A. White, C.G. Groat, and W.L.

Fisher. 1980. Environmental geologic atlas of the Texas coastal zone – Brownsville – Harlingen area. Bureau of Economic Geology, The University of Texas at Austin, 130 pp.

Williams, D., C.M. Thompson, and J.L. Jacobs. 1977. Soil Survey of Cameron County, Texas p 6. U.S. Department of Agriculture-Soil Conservation Service and Texas Agriculture Experiment Station Weslaco, TX.

Authors: Mike Heep can be reached at <heepsnursery@gmail.com> and Gene Lester at <g-el1951@sbcglobal.net>.

Ayenia limitaris is one of several rare plants which occur in some sections of Arroyo Brush.

PHOTO above: blooms. PHOTO on right: maturing fruit and heart-shaped leaves.

Cielo Escondido, Rio Hondo, on the Arroyo Colorado

One of the least disturbed, least invaded by exotic species and most diverse parcel of land on the Arroyo Colorado is now on the market, due to the death of conservationist James Matz.

Property details can be found under MLS # 44318 [www.SueAnnsells homes.net].

Owner Georgiana Matz offered to sell the property to local conservation groups prior to placing it on the open market. At this time, there is no assurance that the unique habitat will be preserved.

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
(Susan Thompson & Betty Perez)
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
McAllen, TX 78501
(956) 682-9411

Landscaper using Natives:

Williams Wildscapes, Inc.
(Allen Williams)
750 W Sam Houston
Pharr, TX 78577
(956) 460-9864
[www.williamswildscapes.com]

NPP Board & General Meetings 2011: April 26, May 24
(Tuesdays) Board Meetings at 6:30pm. Speaker at 7:30pm.
Most meetings held at Valley Nature Ctr. (see above)

Highlights from the Board of Directors Mtg. **Mar. 22nd, 2011**

The board discussed the proposed clearing of the Arroyo Colorado by the International Water and Boundary Commission.

Throughout the month of April, McAllen public library on Main Street will feature a display about native plants designed by director Carol Goolsby.

NPP will sell plants, booklets, and memberships at the US Fish & Wildlife-sponsored Ocelot Conservation Festival to be held at Dean Porter Park in Brownsville on Sunday, May 1st from 10:30am to 5:00pm.

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

www.NativePlantProject.org

"Texas Native Ornamental Wetland Plants"
by John Lloyd-Reilley, Kingsville

Valley Nature Center, 301 S Border, Weslaco, TX
(956)969-2475

Tues., April 26th, at 7:30 p.m.

Arroyo Colorado Brush FIELD TRIP
Sat., April 30th, beginning at 8:30a.m.
Ramsey Nature Park, Loop 499, Harlingen.

Please meet at the covered tables near the bathrooms located near the entry gates.

We'll spend about an hour at Ramsey Park, then travel a short distance to The Thicket, also in Harlingen. (Maps will be provided showing the best route from Ramsey.) At about 10a.m., we'll begin our trek through The Thicket, probably in smaller groups, each with a guide.

Please wear good walking shoes, perhaps a hat and/or sunglasses. Bug repellant and sunscreen may be needed. Bring water!

A number of cacti may be in bloom!

Sponsored jointly by Native Plant Project and RGV Texas Master Naturalists.

Call Christina Mild, 454-7869, with questions.

TO: