Native Pond and Wetland Plants

of the Lower Rio Grande Valley, Texas

Landscape Uses and Identification

by the Native Plant Project

SCIENTIFIC NAMES OF SPECIES IN THIS BOOK

Marginals

Bacopa monnieri
Cephalanthus salicifolius
Cyperus articulatus
Echinodorus rostratus
Eleocharis obtusa
Ludwigia peploides
Marsilea macropoda
Rhyncospora colorata
Sagittaria longiloba
Scirpus validus
Trichocoronis wrightii
Typha domingensis
Vigna luteola

Emergent Areas or Bog

Borrichia frutescens
Commelina elegans & C. erecta
Coreopsis tinctoria
Eustoma exaltatum
Helenium microcephalum
Heliotropium curassavicum
Heteranthera liebmannii
Pluchea sp.
Polygonum pensylvanicum
Solidago sempervirens
Sisyrinchium angustifolium & S. biforme
Teucrium canadense & T. cubense

Deep Water

Nelumbo lutea
Nymphaea elegans
Nymphaea mexicana

This handbook is printed with soybean ink on recycled paper in 2004

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INTRODUCTION

An estimated 1,200 native flowering plant species grow in the Lower Rio Grande Valley, Texas. The Native Plant Project has selected a varied sampling of the native aquatic pond and wetland plants to be featured in this handbook.

Plants native to the Lower Rio Grande Valley have advantages over plants brought in from elsewhere. Plants from this region have the genetic factors which ensure greater probability of survival. They are preadapted having evolved to tolerate local climatic extremes, local soils, and local diseases and pests. Native plants have evolved with temperature and rainfall extremes and will require less water than exotic plants.

Using native plants helps conserve rarer species which are vanishing due to habitat clearing. Within the four-counties (Cameron, Hidalgo, Starr, and Willacy) of the Lower Rio Grande Valley over 98% of the natural habitat has been converted or cleared for urban, agricultural, or industrial use. Establishing rare species in landscapes spreads out the individuals so one catastrophe cannot take out a species all at once and also provides a reserve seed source in the event the last individuals of a species are eradicated from the natural habitat.

A few of our native pond and wetland plants may be available from nurseries in the Lower Rio Grande Valley. Rarer ones can be found only at the few nurseries specializing in Lower Rio Grande Valley natives. (See list inserted in handbook.) More and different native plants will become available if you demand them. Nurseries will provide greater selections of natives if they know there is a demand for the plants. The Native Plant Project will provide sources upon request.

Founded in 1982, the Native Plant Project's purpose is to protect and conserve the native plants (including endangered), habitats and environment of the Lower Rio Grande Valley and promote the use of local native plants in local landscapes. One method it uses is disseminating information about native plants and habitats. Its definition of a native plant is one indigenous to the four-county area of the Lower Rio Grande Valley.

The Native Plant Project encourages the protection of native plants through conserving and restoring native habitats in refuges, natural areas in parks and wildlife management areas, and private sanctuaries. It works to protect both natural habitat and human-influenced environments. It encourages the conservation of native species through inclusion in local landscaping. The Native Plant Project works cooperatively with the U.S. Fish and Wildlife Service, Texas Natural Heritage Program, Texas Parks and Wildlife Department and many private organizations toward protecting Endangered Species, including those local natives imperiled but not unlisted.

The Native Plant Project currently holds general meetings eight times per year. Members are advised of meetings, field trips and other activities through The Sabal, which conveys information on the native plants, habitats, and the environment of the lower Rio Grande Valley. The Native Plant Project periodically updates and issues lists of endangered species of the Lower Rio Grande Valley and checklists of the woody plants.

SELECTING PLANTS

The choice of a native aquatic plant, like any other plant, should be dictated by landscaping needs and the desired effect. Given the limits of purpose and site, finding an aquatic plant which will handsomely fulfill every requirement is no problem. Once a choice is made there remain only a few location and planting tips to be observed. Aquatic plants grow in three site zones. Bogs or meadows are areas that stay moist but do not have standing water. Shrubs and even trees are known to grow in this environment as evidenced by the low lying areas around resacas in the Rio Grande Valley. Emergent areas have standing water and contain plants that grow with their roots in soil but their stems and leaves above water exposed to sun and air. Cattails, arrowhead, sedges, reeds and grasses are emergent species. Deep water zones contain at least 8 inches of water at all times. Deep water plants are usually rooted with leaves floating on the surface and blooms either floating or rising above the water. Water lilies and lotus are two such plants.

• Obtaining Plants

First, get your pond and wetland plants from a reputable, reliable nurseryman. DO NOT transplant from the wild. Not only is this rarely successful, it diminishes our already threatened natural plant and animal habitats. A healthy, vigorous looking aquatic plant, purchased in a nursery, has a better survival rate than one taken from its natural habitat. Besides survival, another problem with taking plants from the wild is the introduction of undesirable elements into your pond. It is difficult to dig an aquatic plant without getting grasses or other unwanted plants in the soil.

The rising interest in using native plants in landscaping has in some cases exceeded the supply at local nurseries. Insistence and frequent inquiries on the part of the consumer may bring about enlightenment and a willingness on the retailer's part to meet the demand. Diligent searching can result in locating most of the plants listed within this publication.

• Site location

Second, most native aquatic plants need a location similar to their natural habitat. Bogs, streambeds, and ponds constructed in landscapes can replicate these sites very well. Low areas that retain water or remain moist within the landscape provide ideal conditions for many aquatic specimens. These emergent or bog sites may undergo an occasional dry period, or intermittent periods of wet and dry.

Marginal plants grow at the edge of permanent wet areas. They survive best when their roots are always covered with at least a few inches of water. Marginals are best suited to shallow shelves within ponds, or the edges of flowing streams. Deep water plants like water lilies and lotus can be planted in ponds 12 – 30 inches deep.

Be aware of the amount of sunlight your site will receive. While most marginal plants can tolerate very shady locations, lilies and lotus require at least six hours of sun a day.

PLANTING WETLAND PLANTS

• When to Plant

The best time to plant aquatics in the Rio Grande Valley is early autumn (to allow for root establishment and dormancy before any freeze) and any time after early March. Most native aquatic plants will go dormant during the winter and not emerge until warmer weather. The rule of thumb is that the deeper the water depth in which the aquatic is planted, the later it emerges. Tropical water lilies and lotus bloom much later than hardy lilies.

• Preparing the site

If no natural site exists, an artificial bog may be constructed by digging an area to a depth of 18 inches and placing a non-permeable liner in the excavation. Bring the edge of the liner to within 1 inch of the ground level and refill with excavated soil, sand or improved soil made by mixing at least 1:1 removed soil to moist peat moss or other organic material. A layer of 3 – 4 inches of gravel should be added to the top of the bog.

Construction of ponds is too lengthy a subject to be addressed in this publication. Many fine resources are available for the do-it-yourselfers or professional assistance may be needed.

• Setting plants in a bog

A hole in the prepared bog should be dug sufficiently deep and wide enough to hold the full root system. The depth of the top of the root system should NOT be lower than the top of the hole. If planted too deep the plant may not survive. Remove the plant from the container. If roots are so numerous they are encircling the soil ball, cut the root ball vertically with a sharp knife to a depth of 2 inches on opposite sides of the ball to encourage roots to grow outward. After setting the shrub in the hole, soil should be added gradually working the first bit in firmly at the base of the root ball, then filling the hole with more soil. Remove all air holes and continue to fill until you have covered the root ball to its original depth. Gravel can be added as a ground cover around bog plants.

• Setting plants in a pond

Aquatics can be planted in pots and placed in ponds at the appropriate depth. Remember to plant each plant at the same level as it was previously growing.

If a more natural pond is desired, plants may be planted in "plant bags" made of weed barrier fabric. These can be purchased from local nurseries that carry water garden supplies or you can make one by cutting a piece of fabric large enough to hold the root system of your plant with a few extra inches. Place a small amount of clay soil in the center of the fabric, position the plant's roots over the soil, then continue to add soil to cover the roots. Bring the fabric up around the roots and tuck the plant bag among the rocks in the bottom of the pond, at the appropriate depth.

Some plants require little or no soil. They root in water and draw all of the nutrients they require from the water. These plants will usually be anchored on the bottom or side of a pond and float across the surface. They may have an extensive floating root system.

PRUNING BOG PLANTS

In their native habitat, most bog plants experience periodic dry spells in which the plants will die back or go dormant. Without this naturally occurring control, bog plants can continue to grow and spread all year long and can become invasive. Most of these plants spread by runners and will fill in a bog and choke out smaller plants. Judicious removal of newly emerging plants is the best and easiest means of controlling rampant spreading.

One method of controlling the spread of under ground roots is to plant aquatics like Germander in containers that have no holes. This will slow the spreading process, but not control it completely.

PRUNING POND PLANTS

It is necessary to remove spent flowers and old leaves from water lilies on a regular basis. Dead flowers and foliage will sink to the bottom of your pond and decompose if not removed. Removal of some leaves may be necessary during periods of intense growth, an over abundance of leaves may cover too much of the pond surface.

Floating aquatics that root in the water, such as Water hyssop and Water primrose will need to be pruned back occasionally. These, like lilies, will cover too much surface if left unchecked.

PLANT COMMUNITIES OF THE LOWER RIO GRANDE VALLEY

Plant communities in the Lower Rio Grande Valley (LRGV) are part of the South Texas (or Rio Grande) Plains which constitute most of the Texas half of the Tamaulipan Biotic Province. The entire Lower Rio Grande Valley lies on the Gulf Coast Plain that extends across the LRGV and Rio Grande River to the Sierra Madre Oriental of Mexico and its surrounding area. The western part of the LRGV (Falcon Woodland) is also the easternmost part of the shrub-dominated Chihuahuan Desert. Plains and brush land plants reach the LRGV from the north, and more eastern plants line the Rio Grande. Several plants have disconnected Trans-Pecos and LRGV distributions. Coastal plants reach the LRGV from north and south. Subtropical plants also lend their unique character to the LRGV's subtropical appearance.

Water availability, soil type, and temperature are the predominate non-human determinants of the LRGV's unusually varied and unique vegetation communities and habitats. Five major plant areas include barrier islands, coastal, riparian woodlands, shrub lands (chaparrals), and sand plain grassland. Each of these five general areas consists of many diverse associations and habitats. The LRGV lacks perennial streams and few historic springs survive.

The four-county LRGV is enclosed by the Gulf Mexico on the east, waterless Sand Plain containing La Sal Viejo and La Sal Del Rey on the north, and an arbitrary (county) line on the west between Falcon Reservoir (in the Chihuahuan Desert) and the Sand Plain. The Bordas Scrap in Starr County is the major component of relief. The Rio Grande, or Rio Bravo as it is know in Mexico, separates the Texan and Tamaulipan portions of the LRGV. The nonpolitical southern boundary is another waterless area between the Rio Grande and the

Rio San Fernando. The area of the Rio Grande Delta consists of the flood plain broadening eastward, including Cameron, Willacy and southern Hidalgo Counties and a similar area in Tamaulipas, Mexico. The tree-life and water distribution somewhat characterize these five areas. The barrier islands lack trees and the few scattered shrubs never exceed one meter in height. The coastal communities have a few stunted Texas Ebony or Honey Mesquite trees on halophytic, shrub-covered lomas. Freezes permitting, characteristic Black Mangrove shrubs grow near the coastal brackish waters or marshes. The riparian woodlands and palm jungles cover open or dense shrub layers, which line the Rio Grande and it's resacas. The dry shrub lands consist of short trees and shrubs with taller trees around depressions or potholes. The Sand Plain and its bordering habitat lack trees except for isolated groupings surrounded by a sea of grass. Many shrubs in western and northern LRGV can shed leaves during drought stress and regrow them after rain.

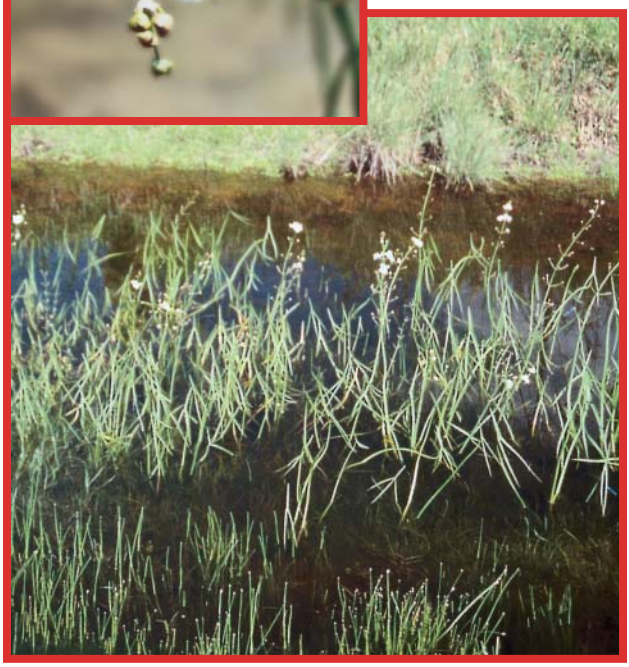
Because of little variation in temperature across the LRGV, our trees, shrubs, and plants can be grown under a wide variety of conditions with only minor modification of site and care. Riverbank-adapted plants require more water than will other natives. Where necessary, this handbook includes such modifications in hope of improving success when using one of the LRGV native plants in your landscape.

ARROWHEAD, *Flecha de Agua*

Sagittaria longiloba – Alismataceae,
Water Plantain Family

DESCRIPTION: Herbaceous, perennial flowering plant growing in shallow water or mud.

Height:	From 30 to 40 inches
Flowers:	Showy, white to pink to 3/4 inches wide on long, slender stem, spring through fall
Fruit:	Small achene
Foliage:	Leaf blades arrow shaped with very narrow lobes, to 10 inches long, and 5 inches wide
Growth rate:	Moderate to fast
REQUIREMENTS:	
Sun:	Full sun, tolerates partial shade
Soil:	Mud or shallow water
Drainage:	None
Water:	Flooded
Maintenance:	Little needed
Propagation:	Seeds and above ground roots
NATIVE HABITAT:	Wet ditches, ephemeral pools and margins of streams and ponds
WILDLIFE USE:	Browse for deer.
COMMENTS:	A wonderful showy plant that grows well in submerged pots.



BURHEAD

Echinodorus rostratus – Alismataceae,
Water Plantain Family

DESCRIPTION: Herbaceous, annual flowering plant growing in shallow water or mud.

Height:	To 30 inches
Flowers:	Showy, white, to 1/2 inch wide on an erect, multi-branched stem, spring through summer
Fruit:	Bur
Foliage:	Leaves broad and oval shaped, to 8 inches long sometimes as wide
Growth rate:	Moderate to fast
REQUIREMENTS:	
Sun	Full sun, tolerates partial shade
Soil:	Mud or shallow water
Drainage:	None
Water:	Flooded
Maintenance:	Removal of burs
Propagation:	Seeds
NATIVE HABITAT:	Wet ditches, ephemeral pools and margins of slow moving streams and ponds
WILDLIFE USE:	Browse for deer.
COMMENTS:	A wonderful showy plant that grows well in submerged pots. Needs to be planted from seed, as it is poorly tolerant of disturbance.

SEASIDE HELIOTROPE

Heliotropium curassavicum – Boraginaceae, Borage Family

DESCRIPTION: Upright, spreading, succulent perennial flowering plant growing in moist or seasonally flooded areas

Height:	From 4 to 8 inches
Flowers:	White with yellow centers, 1/10 inch wide on curved stem, all year long
Fruit:	Small, inconspicuous seed
Foliage:	Leaves to 2 1/2 inches long and 1/2 inch wide
Growth rate:	Moderate to fast
REQUIREMENTS:	
Sun:	Full sun
Soil:	Sandy soils near the coast to cracks in sidewalks
Drainage:	Well to none
Water:	Moderate
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Seaside conditions, salt and seasonal flooding
WILDLIFE USE:	Nectar source for butterflies.
COMMENTS:	A suitable flowering ground cover for the sun. Easy to establish in a small area. Very attractive when used in a rock garden setting near a pond or water feature.

DAY FLOWER & WIDOW'S TEARS

Commelina elegans Day Flower,
Commelina erecta Widow's Tears – Commelinaceae,
Spiderwort Family

DESCRIPTION: Upright, spreading, annual or perennial flowering plant growing in moist or seasonally flooded areas

Height:	From 8 inches *(C. elegans)* to 18 inches *(C. erecta)*
Flowers:	Three petaled, two lavender *(C. elegans)* or two deep blue *(C. erecta)* 1/2 to 1 inch broad, and one white much smaller, all year long
Fruit:	Small, inconspicuous
Foliage:	Leaves oval to oblong to 4 inches long with reddish stems *(C. elegans)*. Narrow and long to 7 inches with green stems *(C. erecta)*
Growth rate:	Moderate to very fast
REQUIREMENTS:	
Sun:	Full shade to partial sun
Soil:	Sandy or clay soils
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds and rooted stems
NATIVE HABITAT:	Moist, wooded areas
WILDLIFE USE:	Browse for deer; doves and quail eat seeds.
COMMENTS:	Very showy flowers open early in the morning and fade by noon. This is a robust growing plant that can easily overtake a small garden; best planted in a container or spacious woodland, pond or resaca bank.

SEA OX-EYE DAISY

Borrichia frutescens – Asteraceae, Sunflower Family

DESCRIPTION: Erect, woody, whitened perennial flowering sub-shrub

Height:	To 32 inches
Flowers:	Yellow, 1 1/8 inches broad with ray flowers 3/8 inches long, all year long
Fruit:	Small, 3 to 4 sided achene
Foliage:	Green with whitish cast, spatula-shaped 2 1/2 inches long and 1/2 inches wide
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Salty, sandy or clay soils
Drainage:	Poor
Water:	Moist to dry
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	Butterflies.
COMMENTS:	Very attractive flowering plant, best planted in mass rather than individual plants – mimicking its natural habitat.

GOLDEN WAVE, *Plains coreopsis, Calliopsis*

Coreopsis tinctoria – Asteraceae, Sunflower Family

DESCRIPTION: Erect sometimes sprawling, annual, herbaceous, showy, flowering plant with wispy stems

Height:	From 1 to 1 1/2 feet, sometimes to 4 feet
Flowers:	Yellow with maroon centers, 1inch wide, late winter through fall
Fruit:	Small achene
Foliage:	Green, narrow 1/6 inch wide and 4 inches long
Growth rate:	Moderate to fast.
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy or clay soils
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	Butterflies; browse for deer.
COMMENTS:	Golden wave is one of the most abundant late winter flowering plants. Very attractive flowers, best planted in mass rather than individual plants – mimicking its natural habitat. It is called golden wave because it turns a field into a sea of golden waves.

SNEEZEWEED, *Red and Gold Sneezeweed*

Helenium microcephalum – Asteraceae, Sunflower Family

DESCRIPTION: Annual, multi-branched herbaceous flowering sub-shrub

Height:	From 8 to 36 inches
Flowers:	Yellow with dark orange centers, to 3/8 inch broad with ray flowers to 1/4 inch long, spring through summer
Fruit:	Small achene
Foliage:	Green, narrow to 3 inches long and 1/2 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Any
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Moist soils
WILDLIFE USE:	Butterflies.
COMMENTS:	Don't be fooled by the name of this native. It will not make you sneeze. It does however bloom from April to September, if moisture is present. Re-emerges in late winter and is a great re-seeder.

SALT MARSH FLEABANE

Camphor weed, Cattle-tongue, Stinkweed, Sweet scent, Pluchea sp. – Asteraceae, Sunflower Family

DESCRIPTION: Erect, scented, annual, multi-branched herbaceous flowering sub-shrub

Height:	To 5 feet
Flowers:	Pink, violet/lavender purple, in numerous flat heads 1/2 inch tall, late spring through fall
Fruit:	Small achene
Foliage:	Green, oval shaped 6 inches long and 2 1/4 inches wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Any
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Moist soils throughout the Texas coast
WILDLIFE USE:	Butterflies and birds.
COMMENTS:	This is a fragrant plant. Requires consistently moist soil, do not let dry out between waterings.

SEASIDE GOLDENROD

Solidago sempervirens – Asteraceae, Sunflower Family

DESCRIPTION: Erect, herbaceous flowering perennial
Erect, scented, annual, multi-branched herbaceous flowering sub-shrub

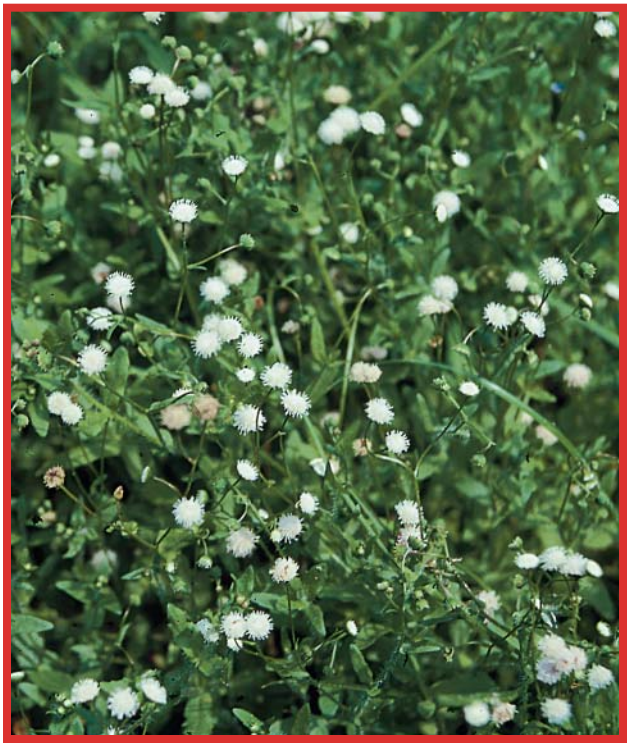
Height:	To 6 feet
Flowers:	Yellow, Christmas-tree-shaped heads curled at the top, summer through fall
Fruit:	Small achene
Foliage:	Green, linear shaped 7 inches long and 1/2 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Moist soils throughout the Texas coast
WILDLIFE USE:	Butterflies and birds.
COMMENTS:	Seaside goldenrod is easily recognized by its abundant yellow flower heads with a curl at the top on stems with grass-like leaves.

WRIGHT'S HAIRY CROWN

Wright's Trichocoronis, Trichocoronis wrightii – Asteraceae, Sunflower Family

DESCRIPTION: A leaning or falling over herbaceous flowering annual

Height:	To 2 feet
Flowers:	White or bluish in clusters, spring
Fruit:	Small achene
Foliage:	Green, oval shaped 1 inch long and 1/4 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Any
Drainage:	Poor
Water:	Moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Moist soils along resacas and roadsides
WILDLIFE USE:	Butterflies.
COMMENTS:	A very striking mounded, green plant covered in tiny white flowers. Likely will thrive and flower through summer if kept moist.

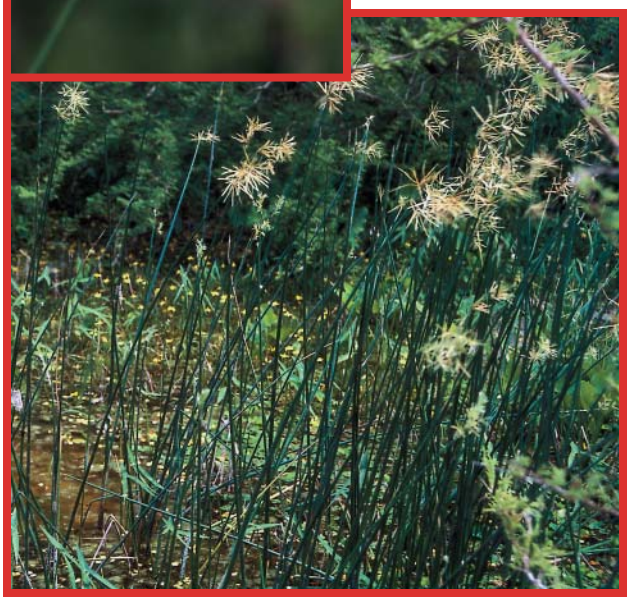


FLATSEDGE, *Jointed flat sedge*

Cyperus articulatus – Cyperaceae, Sedge Family

DESCRIPTION: Tall, reed-like, hollow stemmed perennial

Height:	To 4 1/2 feet
Flowers:	Light-brown in spikelet clusters or tassels, linear 2 to 3 inches long, late winter through fall
Fruit:	Achene 3-cornered
Foliage:	Absent
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Salty, sandy or clay soils
Drainage:	Poor
Water:	Flooded to moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	Birds eat parts of the flowers. Nutria, muskrat, and snow geese eat basal stems and rhizomes.
COMMENTS:	Look closely at the stems to see nodes and cross-hatching; it is not smooth like bulrush.



WHITE-TOPPED UMBRELLA GRASS

White topped sedge, Stargrass, Rhyncospora colorata = Dichromena colorata – Cyperaceae, Sedge Family

DESCRIPTION: Grass-like, perennial with showy white leaf-like bracts

Height:	To 2 feet
Flowers:	Light-brown and insignificant subtended by showy grass leaf-like bracts, 1/4 inch wide to 4 inches long, basal half of bract is white, late spring through fall
Fruit:	Achene 2-edged
Foliage:	Narrow and grass-like
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy
Drainage:	Medium
Water:	Shallow water to moist
Maintenance:	Little needed, remove old stems
Propagation:	Division of rootstock
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	Birds eat parts of the flowers.
COMMENTS:	White-topped umbrella grass is easy to recognize with its showy white bracts. It is easy to grow in its range and brightens any bog garden. The dried stems make good additions to dried flower arrangements.

SPIKERUSH, *Blunt spikerush*

Eleocharis obtusa – Cyperaceae, Sedge Family

DESCRIPTION: Erect, tufted, short, grass-like, annual

Height:	To 18 inches
Flowers:	Light-brown blunt spikelets 1/2 inch long, late winter through fall
Fruit:	Achene, flat with 6 barbed bristles
Foliage:	Narrow, grass-like
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy or clay soils
Drainage:	Poor
Water:	Flooded to moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland along roadside ditches and around ponds and streams
WILDLIFE USE:	Achenes are eaten by waterfowl.
COMMENTS:	In mass it is a striking plant, especially topped with its blunt spikelets.

SOFT STEM BULRUSH

Scirpus validus – Cyperaceae, Sedge Family

DESCRIPTION: Tall, reed-like, colony forming perennial

Height:	To 9 feet
Flowers:	Light to reddish-brown spikelets 1/8 inch wide and 1/2 inch long in hanging clusters or tassels, late winter through fall
Fruit:	Achene 2-sided
Foliage:	Obscure
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Salty, sandy or clay soils
Drainage:	Poor
Water:	Flooded to moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	Birds eat parts of the flowers. Ducks eat seed. Muskrats and nutria eat culm bases, rhizomes, and shoots.
COMMENTS:	This bulrush has rounded, triangular, light-green, smooth, spongy-soft stems that are 1 inch wide at the base.

BLUEBELL GENTIAN, *Catchfly gentian, Seaside gentian, Eustoma exaltatum – Gentianaceae, Gentian Family*

DESCRIPTION: Erect, annual, showy, herbaceous wildflower

Height:	To 30 inches
Flowers:	Violet, lavender, light-blue, rarely white, nearly 1 inch tall, late winter through summer
Fruit:	Capsule 5/8 inch long
Foliage:	Oval-shaped, 1 inch wide, 3 1/2 inches long
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy near the bay or inland clay soils
Drainage:	Poor
Water:	Flooded to moist
Maintenance:	Little needed
Propagation:	Seeds
NATIVE HABITAT:	Coastal prairies and marshes near the coast and inland
WILDLIFE USE:	
COMMENTS:	Eustoma means "open mouth" referring to the large throat of the flower. It prefers damp or moist soil conditions where it will grow in profusion. This attractive flower is a relative of the bluebell of central Texas.

BLUE-EYED GRASS

Sisyrinchium biforme and Sisyrinchium angustifolium – Iridaceae, Iris Family

DESCRIPTION: Erect, grass-like, herbaceous perennial

Height:	To 2 feet
Flowers:	Violet-blue or blue 1/2 inch wide Late winter through summer
Fruit:	Capsule 1/4 inch long
Foliage:	*S. angustifolium* with and *S. biforme* without leafy bracts, both with grass-like leaves 12 inches long and 1/8 inch wide
Growth rate:	Slow to moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy or clay soils
Drainage:	Good
Water:	Moist
Maintenance:	Medium: mowing to clean up dead leaves
Propagation:	Seeds
NATIVE HABITAT:	Roadsides *S. angustifolium*, sandy locations *S. biforme*
WILDLIFE USE:	Deer, quail, and turkeys eat leaves.
COMMENTS:	This clump forming showy plant may be cut back after blooming to avoid unwanted self-seeding and/or to tidy the foliage.

SEASIDE & SMALL COAST GERMANDER, *Teucrium canadense Seaside Germander – Teucriam cubense Small Coast Germander Labiatae, Mint Family*

DESCRIPTION: Erect, herbaceous perennial

Height:	To 30 inches feet
Flowers:	Pink = *T. canadense*, 1/4 to 1/2 inch long; white = *T.cubense* 1/8 to 1/2 inch long, all year
Fruit:	Nutlet
Foliage:	Simple, no dissections = *T. canadense* oval 4 1/2 inches long and 2 inches wide. Deeply lobed = *T. cubense* 2 inches long and 1 inch wide
Growth rate:	Moderate
REQUIREMENTS:	
Sun:	Full shade to partial sun
Soil:	Sandy or clay soils
Drainage:	Good
Water:	Moist
Maintenance:	Medium: can grow out of bounds easily - use container without holes
Propagation:	Seeds
NATIVE HABITAT:	Roadsides, thickets, low areas, palm groves
WILDLIFE USE:	
COMMENTS:	This clump forming, year-around blooming plant is perfect for moist places like resacas, river banks or ponds and is easily grown and maintained.

WILD COWPEA

Vigna luteola – Fabaceae, Legume Family

DESCRIPTION: Twining or trailing herbaceous perennial vine

Height:	Climbing vine
Flowers:	Yellow, up to 3/4 inch long, all seasons
Fruit:	Legume 2 inches long
Foliage:	3 leaflets, each to 2 3/4 inches long and 1 1/2 inches wide
Growth rate:	Moderate
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy or clay soils
Drainage:	Good to medium
Water:	Moist
Maintenance:	Medium: can grow out of bounds easily
Propagation:	Seeds
NATIVE HABITAT:	Roadsides, beaches, drainage ditches
WILDLIFE USE:	Browse for deer, shelter and food for quail, larval food plant for the long-tailed skipper, and nectar for butterflies.
COMMENTS:	Adds nitrogen to the soil. Ideal for resaca banks, moist roadside banks or a trellis adjacent to a pond/wet area.

WATER CLOVER, *Large-foot pepperwort*

Marsilea macropoda – Marsileaceae, Pepperwort Family

DESCRIPTION: Evergreen, herbaceous perennial ground cover

Height:	To 8 inches
Flowers:	None
Fruit:	None
Foliage:	A soft gray-green, four-leaf-clover shaped leaf , 1inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Sandy or clay soils
Drainage:	Good to poor
Water:	Wet to dry
Maintenance:	Medium: can grow out of bounds easily
Propagation:	Root division
NATIVE HABITAT:	Swamps, marshes, woodland, bogs, roadsides, resaca banks, ponds, and drainage ditches
WILDLIFE USE:	Browse for deer, javelina, and feral pigs. Bobwhite quail eat leaves.
COMMENTS:	Water clover adapts well to dry land but looks best in moist or wet areas. It's an aggressive spreader, so place it where you can control its growth. Perfect for enclosed beds, where a tough evergreen ground cover is needed. Only during extreme cold or drought will the foliage dry up and disappear; but when it warms up, and the rains resume, it springs back.

BLUE WATER LILY

Nymphaea elegans – Nymphaeaceae, Water Lily Family

DESCRIPTION: Aquatic flowering perennial herb

Height:	Floating leaves from submerged rhizomes
Flowers:	Blue, lavender or pale blue (whitish), 6 inches wide, spring, summer and fall
Fruit:	Nut-like
Foliage:	Circular, green above, 8 inches wide, and purple below but cut to center where stem attaches
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud
Drainage:	Poor
Water:	Flooded
Maintenance:	Medium: cleaning out dead leaves and flowers
Propagation:	Seeds or root division
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	The floating leaves and submerged stems give shelter and food to many wetland animals.
COMMENTS:	This showy pond plant is a must for your S. Texas pond or wet area. The best way to establish this species is to propagate by seed into small pots or constructed places. Transplantation is successful if all roots are carefully buried. More showy flowers are produced if fertilized once a month in summer.

YELLOW WATER LILY

Banana lily, Lampazo Amarillo, Nymphaea mexicana – Nymphaeaceae, Water Lily Family

DESCRIPTION: Aquatic flowering perennial herb

Height:	Floating leaves from submerged rhizomes
Flowers:	Yellow, 2 1/2 to 4 inches wide, spring, summer and fall
Fruit:	Nut-like from a decorative head
Foliage:	Circular, green above and purple below, 8 inches wide, but cut to center where stem attaches
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud
Drainage:	Poor
Water:	Flooded
Maintenance:	Medium: cleaning out dead leaves and flowers
Propagation:	Seeds or root division
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	The leaves, submerged stems and seeds give shelter and food for many wetland animals.
COMMENTS:	This showy pond plant is a must for your S. Texas pond or wet area. The best way to establish this species is to propagate by root divisions. Easiest of the lilies to relocate and re-establish. More showy flowers are produced if fertilized once a month in summer.

YELLOW WATER LOTUS

Yellow lotus, Yellow lotus lily, Pond nut Nelumbo lutea – Nelumbonaceae, Lotus Lily Family

DESCRIPTION: Aquatic flowering perennial herb

Height:	Leaves floating or held high above the water, submerged rhizomes
Flowers:	Pale yellow to yellow, 10 inches wide, late spring to summer
Fruit:	Nut-like
Foliage:	Circular, grayish-green above and green below, 12 to 24 inches wide, with stem attached to center of leaf
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud
Drainage:	Poor
Water:	Flooded
Maintenance:	Medium: can easily get out of bounds
Propagation:	Seeds or root division
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	The floating leaves and submerged stems give shelter and food for many wetland animals.
COMMENTS:	This showy pond plant is very aggressive, best if planted in a stout container, without holes, to control it from taking over your pond.

FLOATING PRIMROSE-WILLOW

Water primrose

Ludwigia peploides – Onagraceae, Primrose Family

DESCRIPTION: Aquatic flowering perennial herb

Height:	Sprawling or floating plant 3 to 4 inches high
Flowers:	Yellow, with five petals each 2 1/2 inches wide, late spring to summer
Fruit:	Capsule
Foliage:	Dark green, elongated-oval 2 1/2 inches long and 1 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud
Drainage:	Poor
Water:	Flooded
Maintenance:	Medium: can easily take over a pond. Prune back
Propagation:	Seeds or root division
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	The floating leaves and submerged stems give shelter and food for many wetland animals.
COMMENTS:	This showy pond plant is very aggressive, best if planted in a container, without holes, to control it from taking over your pond.

WATER STARGRASS

Mud plantain, Heteranthera liebmannii – Pontederiaceae, Pickerelweed Family

DESCRIPTION: Submerged, aquatic flowering perennial herb

Height:	Submerged, only flowers emerged and occasionally leaves
Flowers:	Yellow, with five petals each about 3/4 inch wide, late spring to summer
Fruit:	Tiny, inconspicuous
Foliage:	Green, elongated 6 inches long and 1/4 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud or shallow water
Drainage:	Poor
Water:	Flooded
Maintenance:	Little
Propagation:	Seeds or root division
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	The leaves and submerged stems give shelter and food for many wetland animals.
COMMENTS:	This showy pond plant is ideal for planting at the edge of your pond, resaca or wetland.

PINK SMARTWEED, *Pennsylvania smartweed, Pink knotweed, Pinkweed, Polygonum pensylvanicum – Polygonaceae, Buckwheat Family*

DESCRIPTION: Flowering herbaceous annual or perennial with jointed stems

Height:	Erect, growing to 48 inches
Flowers:	White to pink, in dense spike-like cluster 2 inches long and 1/2 inch wide, late spring to late fall
Fruit:	Shiny black achenes
Foliage:	Green, oblong and pointed 6 inches long to 1 inch wide
Growth rate:	Fast
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud or shallow water
Drainage:	Poor
Water:	High water requirement
Maintenance:	Little
Propagation:	Seeds
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	Browse for deer. Many birds and mammals eat the seeds.
COMMENTS:	This showy pond plant is ideal for planting at the edge of your pond, resaca or wetland. All smartweeds will produce a burning sensation if tasted. Or as the Germans say "smeorten", which is where the term smartweed comes from.

MEXICAN BUTTONBUSH

Mimbre, Botoncillo, Jazmin Blanco, Cephalanthus salicifolius – Rubiaceae, Madder Family

DESCRIPTION: Shrub or small tree with showy round flowering head

Height:	Erect, growing 8 to 18 feet, width 4 to 10 feet
Flowers:	White, in a dense round head 1 inch or less in diameter, late spring to summer
Fruit:	Nutlet
Foliage:	Green, elongated and pointed 5 inches long to 1/2 inch wide
Growth rate:	Medium
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud or shallow water
Drainage:	Poor
Water:	High water requirement
Maintenance:	Little
Propagation:	Seeds
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	Butterflies.
COMMENTS:	Mexican Buttonbush is rare in Texas, growing in wet soil only in extreme South Texas, Cameron and Hidalgo Counties.

WATER HYSSOP

Bacopa monnieri – Scrophulariaceae, Figwort Family

DESCRIPTION: Creeping, succulent, floating, flowering perennial

Height:	Mat-forming floating plant
Flowers:	White, light-purple, or blue to light-pink cup-shaped, to 1/2 inch long and 1/2 inch wide, spring through fall
Fruit:	capsule
Foliage:	Green, tear-drop shaped, 1/2 inch long, 1/4 inch wide
Growth rate:	Medium
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud or shallow water
Drainage:	Poor
Water:	High water requirement
Maintenance:	Medium: removal of dead stems. Prune back
Propagation:	Seeds
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	Deer, nutria, rabbits eat leaves and stems. Ducks and coots eat seeds and leaves.
COMMENTS:	This attractive, creeping, flowering plant is ideal for growing in and around rocks at the edge of your pond or wet area.

CATTAIL

Southern cat-tail

Typha domingensis – Typhaceae, Cattail Family

DESCRIPTION: Erect, clump forming reed-like, perennial plant

Height:	Tall, to 8 feet
Flowers:	Brown in dense cylinders on 8 foot stems. The male flowers are in a cluster at the top and just below is a cluster of female flowers, late spring through summer
Fruit:	Tiny, inconspicuous
Foliage:	Green, tall, narrow 8 feet long, 1 inch wide
Growth rate:	Medium
REQUIREMENTS:	
Sun:	Full sun to partial shade
Soil:	Mud or shallow water
Drainage:	Poor
Water:	High water requirement
Maintenance:	Medium: can easily over take a pond
Propagation:	Division of root system
NATIVE HABITAT:	Resaca, ponds, quiet streams, canals, ditches and swamps
WILDLIFE USE:	Many bird and animals use cattails for shelter. The red-wing blackbird uses them to nest and hide in. Deer graze on the stems and flowers.
COMMENTS:	Cattail is a very aggressive plant, best grown in a stout container, without holes, or it will take over your wet area.

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THE NATIVE PLANT PROJECT
of the Lower Rio Grande Valley

The Native Plant Project currently holds general meetings eight times per year. Members are advised of meetings, field trips, nature festivals and other activities through The Sabal, which conveys information on the native plants, habitats, and the environment of the Lower Rio Grande Valley, Texas.

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Acknowledgments
The Native Plant Project wishes to thank Gene Lester for generating this handbook along with the technical assistance of Sue Griffin. Gene Lester with the technical assistance of Joe Ideker is credited for generating the three previous handbooks; 1) Native Trees, 2) Native Shrubs, and 3) Native Plants: Cacti, Ground Covers and Vines. Thanks is given to the Board Members for producing this handbook.

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