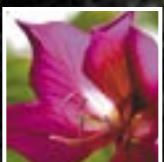
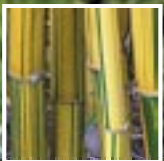


Creating the Tropical Look: *Low-care tropicals for the Upper Gulf Coast of Texas*



*Agri***LIFE** EXTENSION
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Galveston County Office
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Galveston County Extension Agent - Horticulture
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for the Upper Gulf
Coast of Texas*

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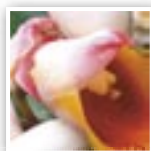
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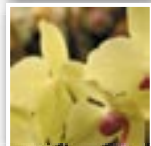
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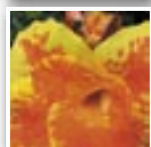
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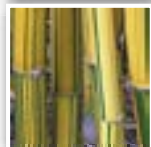
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Introduction

To enjoy lush, colorful foliage and dramatic floral displays, gardeners along the Upper Gulf Coast of Texas are lucky. They can add to their gardens tropical-looking plants that grow in temperate, subtropical and tropical climates. All plants described in this book are available locally and require no, little or manageable cold-weather protection.

The USDA plant hardiness zones for the Upper Gulf Coast of Texas are generally recognized to be zones 9a and 9b. Zone 9a cold-weather temperatures are 20 to 25 degrees Fahrenheit; zone 9b, 25 to 30 degrees Fahrenheit. Although these zones help as guidelines, many local gardeners have learned that in some areas of the Upper Gulf Coast of Texas, such as Galveston Island, the temperature more closely conforms to zone 10a, 30 to 35 degrees Fahrenheit. Further, as our climate warms, winters are shorter than they used to be. The first freeze in this area occurs around the middle of December. The last freeze date occurs about the middle of March. Gardeners use this knowledge to judge when to set out warm-weather plants and when to protect them.

Our Master Gardeners and other local gardening experts also are knowledgeable about natural microclimates and how to create them or take advantage of them. A warm-temperature plant can survive on the south side of the house or next to a brick wall. But in the open or on the north side of the house, that plant will surely freeze. Temperatures in Dickinson, League City, Santa Fe, San Leon, or Galveston Island all vary slightly, and a difference of two to three degrees Fahrenheit can affect the survival of a plant.

By learning the native origin of the plant, its growing requirements, and where to place it in the garden, gardeners along the Upper Gulf Coast of Texas can confidently grow any of the plants discussed in this book.



Humans have had a connection with gingers for thousands of years. *Zingiber officinale* has been cultivated for at least 2,000 years, and is included in 2nd century BC Roman books of cooking and farming. It has always been considered a highly valued spice. Turmeric spice evolved from *Curcuma longa* ginger, and has an even longer history — over 4,000 years. These two ginger species alone have provided edible, folkloric, herbal, and medicinal value for most of the recorded history of mankind.

In Victorian England, gingers were grown for their flamboyant and sometimes beautifully perfumed flowers in greenhouses, but in time the plants fell victim to increased heating costs, ending the tropical plant craze. Recent interest in tropical plants has once again brought gingers to the forefront. This versatile group can be used in many different tropical-style settings. They can be an accent in woodland gardens, around ponds, in borders, with shrubs or under trees. Gardeners in the Upper Texas Gulf Coast of Texas are fortunate to be able to cultivate an amazing array of gingers.

Alpinia

Alpinia (Al-PIN-ee-uh)

Named in honor of the 16th century botanist Prospero Apinio, *Alpinia* is the largest genus in the Zingiberaceae family, with more than 230 species. Most species originate in Southeast Asia, and most varieties are tropical and sensitive to cold. Alpinias bloom in the second year of growth, but even if the bloom is absent, the foliage is striking.

Shell Ginger

A. zerumbet (zer-UM-bet)

Shell ginger is the largest of the root-hardy Alpinias, growing to eight to 10 feet. It blooms on the previous year's canes. The foliage, noted for its beauty, is often aromatic. Shell ginger requires light sun to shade and adequate moisture.

Variegated shell ginger is grown as a foliage plant and is the most popular variegated ginger. A dwarf version is also available.



Shell Ginger



Variegated Shell Ginger

Costus

Costus (KOS-tus)

Costus, with at least 70 species, is the largest of the Costaceae family. These plants have leaves arranged in a spiral around a stem that grows from six to 10 feet tall. Some varieties attract hummingbirds, and others attract bees. *Costus* gingers need three to five hours of direct sun, along with fertile, organic, moist, and well-drained soil. They do not like standing in water. *Costus* is the only ginger that can be propagated by stem cuttings. However, the most common way is by rhizome division.

Crepe Ginger

C. speciosus (spee-see-OH-sus)

There are two distinct varieties of crepe ginger. One has a red/burgundy pinecone-shaped flower at the top. Another is called variegated crepe ginger and has white blooms resembling crepe fabric. Crepe Ginger can also be grown as a container plant, growing five to seven feet and producing its best blooms in full sun.

Red Tower

C. barbatus (bar-BAY-tus)

This plant produces a combination of red bracts and yellow flowers. It blooms in the spring. It can grow in filtered shade, reaching a height of seven feet and is sensitive to frost.

Spiral Ginger

C. woodsii (wood-SO-nee)

This spiral ginger grows to 24 to 36 inches tall in sun or partial shade and blooms all year. Flower tips produce a honey-like ginger nectar attractive to bees, butterflies and hummingbirds. This plant is cold hardy to 30°F.



Crepe Ginger



Red Tower



Spiral Ginger



Alimanda

Curcuma

Curcuma (KER-koo-muh)

Native to Southeast Asia, curcumas, also called hidden gingers, are used as spices, vegetables, coloring agents, perfumes, oils, and medicines. They are also widely grown as ornamentals.

There are spring and summer curcumas. The spring variety blooms before the leaves appear. The summer curcumas bloom from summer until early fall and has leaves taller than the flower stem, obscuring the flower. Curcumas are superb foliage plants, with tough, banana-like leaves that turn yellow and begin to drop in the fall. Curcumas foliage can be protected from the sun by planting it in light shade. Keep the soil evenly moist, and plants will grow from one to seven feet tall. Most propagation is by rhizome division.

Alimanda

C. alimanda (al-ih-MAN-da)

This hidden ginger has a reddish/orange bloom and prefers shade. It is an excellent cut flower and stays fresh for an extended period.



Purple Prince

Purple Prince

C. 'Purple Prince'

Curcuma 'Purple Prince' is a hybrid and grows two to three feet tall. It prefers light shade to some sun and produces beautiful foot-long flower stalks with maroon bracts and smaller flowers in late summer.

Giant Plume Ginger

C. elata (el-AH-tuh)

The flower stalk develops into a brilliant bright pink torch before the banana-like leaves emerge. At heights up to eight feet, this is the tallest and one of the hardiest curcumas cultivated. Bright filtered light and well-drained soil are recommended.



Giant Plume Ginger

Globba

Globba (GLAH-buh)

The genus consists of 40 to 100 species. Globbas are rarely more than 24 inches tall, with inch-long flowers. The plant is quite distinctive and ornamental as the dangling flowers swing and sway in even a light breeze, appearing to be dancing. Globbas require moisture and a well-drained soil. They prefer shade or part shade, though some have been seen blooming and thriving in full sun. They die to the ground in the fall and don't re-emerge until late spring. Propagation is by stem cutting (place it horizontally in a vase of water and watch for emerging sprouts), clump division during the growing season, and by cutting and planting dormant rhizome pieces. These gingers spread naturally when their beige-white bulbils fall to the ground and appear the following season as a plant.



Mauve Dancing Lady

Mauve Dancing Lady

G. winitii (win-IT-ee-eye)

This plant reaches two feet and has purple bracts with yellow flowers. It is excellent as a cut flower and lasts for weeks in a floral arrangement. It needs moist soil, some shade, and good drainage.

Purple Globe Ginger

G. globulifera (GLOB-yoo-LIF-era)

This is an 18 to 24-inch shade lover, with purple blooms all summer. The long-lasting flowers can be used in floral arrangements. Light shade is suggested, as well as consistent soil moisture.



Purple Globe Ginger

Yellow Dancing Lady

G. schomburgkii (shom-BURG-key-eye)

This easy-to-grow ginger is readily available at nurseries. It grows to three feet high in light or dappled shade, but can take some direct sun. Well-drained soil high in organic matter is recommended.



Yellow Dancing Lady

Hedychium

Hedychium (*hed-EE-kee-um*)

Hedychium gets its name “butterfly ginger” because of the shape of its flowers. This genus consists of 50 species today; all but one are native to southeastern Asia. Thanks to its delightful fragrance, this is a popular ginger to humans, butterflies and moths. On the Upper Gulf Coast of Texas, butterfly ginger blooms from summer into fall.

Partial shade to full sun is recommended for butterfly gingers. They are more tolerant of full sun and wet (poorly drained) soil than other gingers, and thrive here and tolerant conflict. These are the first gingers to emerge in the spring, reaching a height of three to eight feet. Plants bloom on new growth, so stems should be cut back to ground level at the end of their growing season.

Propagation is by root cuttings (horizontally placed on the ground, and covered with two inches of leaf mulch) or stem-cuttings. It is such a hardy ginger that some consider this plant to be invasive.



Orange Bottlebrush Ginger

Orange Bottlebrush Ginger

H. coccinium (*kok-SIN-ee-em*)

Common in the Upper Gulf Coast of Texas, orange bottlebrush originated in the Himalayas. Tall, symmetrical-looking plants grow from six to 10 feet and bloom from late summer until October. The bright red-orange flowers are fragrant, attracting both hummingbirds and butterflies. Give orange bottlebrush sun to partial shade and well-drained soil high in organic matter.

Variegated Butterfly Ginger

H. 'Dr. Moy' (*Dock-tore MO-ee*)

This variegated butterfly ginger was hybridized by retired botanist Dr. Ying Doon Moy of San Antonio. Partial sun and well-drained soil high in organic matter are recommended. This ginger will grow four to five feet tall. It has a large, slightly fragrant flower head that is peach-orange with a darker orange in the center.



Variegated Butterfly Ginger

White Butterfly Ginger

H. coronarium (kor-ob-NAR-ee-um)

This is the most frequently cultivated and best known of the ornamental gingers, and it adds a tropical look to gardens with its beautiful white flowers appearing towards the top of eight foot stalks. The flower produces a deep gardenia-like fragrance, especially in the evening, attracting sphinx moths. Butterflies are attracted to the flower. Plant in full sun only if water is abundant; otherwise, brown leaf tips and curled leaves may develop. This plant may need staking if the flower heads get too heavy.

Yellow Butterfly Ginger

H. flavescens (flav-ES-enz)

This ginger has dark green foliage. It is the hardiest of all gingers. The flowers are light yellow with darker yellow centers. Yellow butterfly ginger prefers part shade with well-drained soil high in organic matter. It tends to lean and arch as it grows to six to eight feet and may need to be staked. As the clump becomes larger, it will support itself.



White Butterfly Ginger



Yellow Butterfly Ginger

Kaempferia

Kaempferia (kamp-FER-ee-uh)

Kaempferia, also known as peacock ginger, is a native of Asia and China. The genus has about 50 species grown primarily for their decorative foliage instead of their flowers. Several species are grown for medicinal value. The dramatically patterned and colorful leaves give them their name. Kaempferias range in size from prostrate to two feet. They are grown in partial shade, though some varieties thrive in partial sun. Dormant in winter, kaempferia emerges in May and blooms until fall. Some kaempferias bloom in spring before the leaves emerge. One ginger expert discussing kaempferias said, "Plant it high or watch it die!" Some call kaempferia the South's hosta.

Grande

K. 'Grande' (GRAN-day)

This 24 inch tall ginger has beautiful, sturdy eight-inch wide leaves and violet and white flowers that burst forth in late spring before the foliage emerge. Flowers are the largest in the genus. 'Grande' needs shade and moist, well-drained soil. It is dormant in winter. Leaves are similar to silver spot.

Silver Spot

K. pulchra (PUL-kruh)

Silver spot is a low-growing ginger, no more than half a foot tall. It has tough six-inch broad leaves that are dark green with bands of silver across them. After the leaves appear in late spring, lavender flowers begin to bloom and continue until fall. Partial to full shade is recommended, along with evenly moist soil.

Tropical Crocus, Resurrection Lily

K. rotunda (ro-TUN-duh)

The flowers of this ginger emerge from the ground before any foliage, thus giving it its name 'crocus'. This is an erect, two foot species, inappropriate as a groundcover. Tropical crocus prefers shade and moist well-drained soil.



Silver Spot



Tropical Crocus

Zingiber

Zingiber (Zing-ee-ber)

The genus *Zingiber*, also known as culinary ginger, has up to 150 species native to Asia. Most are tropical or subtropical. *Zingiber* has been cultivated for at least 2,000 years. In addition to culinary uses, different species of *zingiber* are used for medicinal purposes around the world. In the United States, gardeners know it best as the culinary ginger used to add spicy flavor to foods. The rhizome is the edible portion.

Edible Ginger

Z. officinale (oh-fiss-ih-NAH-lee)

This is the ginger that is most commonly used in cooking. The rhizomes can be planted, but plants grown from store-bought rhizomes will vary widely. Plants are hardy, but need full sun, good drainage, and fertile soil. It takes about 12 months from planting a rhizome to the harvest. A balanced fertilizer such as 13-13-13 is recommended during the growth period. This plant can reach three feet.

Pinecone Ginger, Shampoo Ginger

Z. zerumbet (ZER-um-bet)

Known as pinecone ginger in the southern United States for the flower's resemblance to a pine cone, it is known elsewhere as shampoo ginger because the pine cone oozes a sticky, milky residue that is used as shampoo by some native cultures. It is also used in some modern, commercial shampoos. As an ornamental, the leaf stalk reaches about six feet. Flower spikes emerge from the ground. Grown in partial shade to full sun, it should be planted in well-drained soil high in organic matter. This pinecone ginger provides superb, long-lasting cut flower spikes for floral arrangements.



Edible Ginger



Pinecone Ginger

Gingers

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Shell Ginger / <i>A. zerumbet</i>	4 to 8 feet	sun to partial shade	late spring/early summer
Crepe Ginger / <i>C. speciosus</i>	6 to 10 feet	3 to 5 hours of direct sun	spring
Red Tower / <i>Costus barbatus</i>	6 to 8 feet	full sun	mid-spring till mid-summer
Spiral Ginger / <i>Costus woodsohii</i>	24 to 36 feet	sun to partial shaded	mid-spring till mid-summer
Alimanda / <i>C. alimanda</i>	2 to 8 feet	light shade	summer till early fall
C. 'Purple Prince'	2 to 3 feet	part shade	summer
Giant Plume Ginger / <i>C. elata</i>	2 to 3 feet	sun to partial shade	mid-summer
Mauve Dancing Lady / <i>G. winitii</i>	1.5 to 2 feet	filtered sun, some full sun	summer till fall
Purple Globe Ginger / <i>G. Globulifera</i>	1.5 to 2 feet	partial to full shade	summer
Yellow Dancing Lady / <i>G. schomburgkii</i>	2 to 3 feet	bright indirect sunlight	summer
Orange Bottlebush Ginger / <i>H. coccinium</i>	6 to 10 feet	part shade to medium sun	late summer into fall
Variagated Butterfly Ginger / <i>H. 'Dr. Moy'</i>	2 to 3 feet	full sun to partial shade	late summer till fall
White Butterfly Ginger / <i>H. coronarium</i>	4 to 6 feet	full sun to partial shade	mid-summer till early fall
Yellow Butterfly Ginger / <i>H. flavescens</i>	4 to 6 feet	full sun to partial shade	mid-summer till fall
Grande / <i>K. 'Grande'</i>	a few inches to 2 feet	partial shade, some partial sun	May till fall
Silver Spot / <i>K. pulchra</i>	a few inches to 2 inches	light shade	summer into fall
Tropical Crocus / <i>K. rotunda</i>	1.5 to 2 feet	full sun to partial or filtered shade	late spring till early summer
Edible ginger / <i>Z. officinale</i>	up to 3 feet	full sun	12 months till harvest
Pinecone Ginger / <i>Z. zerumbet</i>	up to 6 feet	partial shade to full sun	root is used peeled, chopped or dried



The hibiscus, a favorite among gardeners in the Upper Gulf Coast of Texas, is on the best seller list at most local nurseries and garden supply houses. Some are hardy and bloom throughout the year. However, tropical varieties of hibiscus are not cold tolerant and require protection in the cold months.

The blooms of most varieties last only for a day. The plant itself may live for five to ten years with some of the older species surviving 50 years or more.

Hibiscus does not tolerate wet feet but neither does it like to dry out, so good drainage is important. Hibiscus prefers direct sun, but a little shade may encourage more blooms, especially in the hottest time of the day.

Ancient Tahitian lore tells that a hibiscus bloom worn over the right ear reveals that a person is looking for love; a bloom worn behind the left ear shows that a person has found love.

The hibiscus is of the Malvaceae family, which includes as cousins the mallow, rose-of-Sharon (althea), okra, cotton, and the hollyhock. The common pests of hibiscus are gall midge, aphids, thrips, whiteflies and spider mites. An insecticidal soap or neem oil works well for most of these insect problems.

Hardy Hibiscus

Hibiscus (HIGH-bis-cuss)

The following plants are the easiest of all hibiscus to grow. Some are natives, and most will return from the root if the tops should freeze in the winter.

Chinese Hibiscus, Rose of China

H. rosa-sinensis (RO-suh se-NEN-sis)

The most popular of the hibiscus, hailed as the “Queen of the Tropics” by the American Hibiscus Society, Chinese Hibiscus is available at most garden centers, including those with variegated leaves. This species’ capacity for hybridization captivated the imaginations of early horticulturists in China, Australia and Hawaii, who developed many hybrids. Today, the hundreds of hybrids available offer the gardener thousands of colors and color combinations.



Chinese Hibiscus



Confederate Rose, Cotton Rose

H. mutabilis (mew-TAB-ill-iss)

This hibiscus is an old-fashioned perennial that may become a shrub six to eight feet in height and width. With careful pruning, however, the Confederate rose can be formed into an impressive 12 to 15 foot multi-trunk tree. Available in single or double blooming varieties as featured with four- to six-inch blossoms, this hibiscus performs best in late summer and throughout the fall. This hibiscus is a hardy plant that thrives in full sun or partial shade. The flowers, as indicated by the plant’s species name, are mutable and darken with age, providing an extravagant display of multicolored blooms. Bright green leaves, large and deeply lobed, provide tropical-looking interest to the landscape. A confederate rose thrives with regular watering but is drought tolerant. Cuttings are easy to root.



Confederate Rose

Rose of Sharon, Althea

H. syriacus (seer-ee-AK-us)

Native to Asia, and grown from India to China, the rose of Sharon is a long-blooming shrub that will grow to 10. Dark green leaves with single or double flowers in hues of white, blue, purple or pink distinguish this vigorous growing favorite. The Rose of Sharon will grow in many soil types but prefers well-drained areas. Easy care with showy, long-lasting blooms makes this hibiscus a popular choice.



Rose of Sharon, Althea

Texas Star Hibiscus, Swamp Mallow

H. coccineus (kok-SIN-ee-us)

Bright red or white star-shaped blooms on tall thin stalks that can reach heights of six to 10 feet make this hibiscus a popular plant for the back of borders. Plant Texas Star Hibiscus in moist, sandy, acidic soil with morning sun and filtered afternoon shade. Apply a balanced formula fertilizer lightly and often.



Texas Star Hibiscus

Turk's Cap, Sleepy Hibiscus

Malvariscus arboreus (mal-vuh-VIS-kus ar-BOR-ee-us)

A native of Texas and Mexico, Turk's cap is an old-time favorite of southern gardeners, particularly with those who seek a reliable lure for hummingbirds. This shrubby evergreen perennial will grow to five feet and may spread as wide as it is tall. The blossoms are typically red, but varieties are also available in pink and white. When in bloom, the flower stands upright like an unopened bud. Drought resistant, mostly pest free, and requiring little maintenance, Turk's cap will bloom throughout the year but is brilliant in the fall. It prefers full sun for best results, and though petite, the two-inch flowers stand out against a backdrop of bright green leaves. Turk's cap will grow in sun or light shade. It appreciates regular watering, but is drought tolerant. The plant can be propagated through cuttings, root division, or layering.



Turk's Cap

Tropical Hibiscus Created & Grown in our Area

Tropical Hibiscus comes in basic bloom groups — single, crested, double, and cup and saucer double. Tropical hibiscus should be planted in sandy soil rich in organic matter to ensure lush growth. Fertilize lightly and often using a low phosphate fertilizer. They prefer even moisture.





Leaving a Legacy of Beauty

Native Houstonian Barry Schlueter didn't start out loving horticulture. Though his father grew vegetables and his mother grew flowers at home, Barry said he didn't participate in gardening as a kid more than I was forced to. But growing plants must have been in his blood. His father came from a German farming background near Fredericksburg and moved to Houston for a ship channel job. Apart from his parents, Barry's rise to becoming a prime hybridizer and creator of magnificent exotic hibiscus flowers was "the story of three men in search of a son," he claims. These son-less men handed down their knowledge and mentored him through the world of growing beautiful flowers.

After getting a degree in English and Biology from University of Houston and working at NASA as a technical writer, Barry and his wife were strolling through the Herman Park Rose Garden one day in 1970 and noticed a sign advertising a rose show. While Barry admired the magnificent flowers, he met Martin Stroud, a founder and then-head of the Houston Rose Society. Stroud had honored his wife's memory by creating and naming a beautiful rose after her. That sentimental gesture touched Barry's heart, and he developed a deep friendship with Stroud. Stroud taught him the fine art of hybridizing to creating new and better plants out of existing varieties.

During two years of a challenging Teacher Corps program in inner city Houston, Barry got his teaching certificate and masters degree, and switched professions

from technical writing to teaching. Later he and his wife (also a teacher) moved to Clear Lake Intermediate where he became the Head of the Science Department. There he developed a physical science course for interested kids that blended both physics and chemistry to an achievement of which he is still proud. His students received high school credit for this 8th grade program. He was excited to be teaching these kids who loved science, and did so for nearly 30 years. In the meantime, he won prizes for his new roses, and served as President of the Houston Rose Society.

Barry met his second mentor, Bill Forrest, when he moved to Friendswood. Forrest had a nursery there, and taught Barry all about tropicals. Though Forrest wasn't a refined or educated man, "he knew the botanical name of every tropical plant in creation," recalls Barry. He recommended that Barry stop "messing with roses" and breed exotic hibiscus instead: "Jackson & Perkins® chooses only four roses out of a hundred thousand new ones every year. Hibiscus is where the money is." Forrest taught all he knew about hybridizing hibiscus.

When Barry bought his house in Webster, he met his third and fourth mentors, Ralph Blaine and Joe Hester, who both owned small nurseries in Seabrook. They generously shared their broad-based horticultural knowledge. "Mr. Hester would leave pots of soil under his crape myrtle trees, and would get new seedlings that way, from whatever God and the birds dropped in the pots," re-

*“My goal is to breed great exotic flowers,
but on a plant that is hardy,
like the old garden varieties.”*



members Barry. “Like Stroud, he’d name some of these creations after family members. “It was when he was on vacation in Florida in 1987 that fate caught up with Barry. He and his wife wandered into a hibiscus show, and the beauty of the new flowers was a revelation. “I was used to the garden varieties,” he says, “but I had never seen hibiscus flowers so huge and fabulous to and in such unexpected colors like grays, browns, and greens.” He came back from Florida and devoted himself to creating new and fabulous exotic hibiscus.

Barry now has more than 15 patents on great hibiscus flowers. An article in the *Houston Chronicle* about his work drew the attention of the large Hines Nursery in Fulshear, Texas. Hines contracted with Barry to hybridize hibiscus for them exclusively. The new plants he creates are now grown in large tracts in both California and Texas, and are sold everywhere in the U.S. but Florida, under the label “Bahama Bay Hibiscus.” In 2000, Barry retired from teaching and now devotes himself full-time to creating new hibiscus flowers. “As a hybridizer, I look at 2000 new hibiscus seedlings per year,” he explains, “and keep about 500 to carry through and test. My goal is to breed great exotic flowers, but on a plant that is hardy, like the old garden varieties.” There is a good deal of science involved in knowing the genetic background of 2000 flowering plants. “It’s all based on dominant traits in seedlings. I might cross a seedling with great color but a weak plant with a strong plant. It may take five generations to get what you want. For instance, deep purple color is recessive — usually it results in small flowers on

small twiggy plants. You want a big deep purple flower on a robust healthy plant. It takes time to get there.” Of the 500 hybrids he might evaluate, only one plant in four has commercial potential.

Currently, he is seeking fragrance in his flowers, something that can be lost in the hybridizing process. His favorite hibiscus is the gorgeous “Susan Schlueter” which he named for his wife, following the sentimental example of his mentors. “It opens well and early,” he explains, “and produces different colors in different seasons.” He admits that he was lucky in his horticultural training, with the line of great mentors he had. But that was pure chance. If he had to do it over again, he would have gotten more formal horticultural training at Texas A&M, and would not have spent so many years ferreting out information. However, as an English and science major in college, he did gain the ability to write well about science, something that came in handy in writing his 500 articles about horticulture, and editing his authoritative book: *The Tropical Hibiscus Handbook*.

To date, Barry has honored about 30 people with their own special hibiscus flower, and takes justifiable pride in the gallery of magnificent flowers he’s created over the years. One has only to look at his American Hibiscus Society “Hibiscus of the Year” winners ‘Double Date’, ‘Atlantis’, and ‘Climax’ to see that Barry has already achieved a great legacy of beauty.

*Interview and articles by
MG Alcestis Cooky Oberg*



For magnificent hibiscus flowers, Barry recommends some simple guidelines.

1. Some exotic hibiscus make for troublesome landscape plants. Many do best around a swimming pool where other tropicals thrive. Grow exotic hibiscus in containers.
2. When growing in containers, water every day during the warm season. Re-pot once a year in a clean pot with fresh soil. If the pot is the same size, trim the roots and tops by $\frac{1}{3}$, and re-pot in a fresh rich soil mix that uses sharp sand rather than vermiculite.
3. Hibiscus plants are nutritionally weird. They evolved in volcanic soil, so they want high levels of a rich amount of potash. Hibiscus don't want a high level of phosphorus found in the "fast blooms" fertilizers. So spend the money and get specialized hibiscus food: 12-7-20 is ideal. A time-release fertilizer and epsom salt in the soil are great since hibiscus plants are heavy feeders.
4. Exotic hibiscus plants are not cold hardy north of Galveston County and won't tolerate freezing temperatures. It's best to grow them in containers or in a very sheltered south side of a house landscape. If planted in the ground, the best freeze protection is a tomato cage around the plant, filled with leaves. It's important to protect some wood above the ground, the plant will flower earlier the next year.
5. Don't prune hibiscus unless you're removing dead or diseased wood, or shaping it for convenience. Hibiscus does not thrive on pruning.
6. While old yard hibiscus plants like full sun, exotics usually don't. Exotics do best with a few hours of morning sun, or even filtered shade because their roots like to stay cool. When container-grown, they like the pot-within-a-pot method, where an outer empty pot protects and cools the inner pot of the rooted plant. As a general rule, pink, white, and yellow hibiscus plants like more sun, while red, purple, and color-blended ones prefer more shade.
7. When giving a gift of hibiscus flowers, there's no need to put them in water. They'll stay beautiful for 24 hours.

Hibiscus

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Chinese Hibiscus / <i>Hibiscus rosa-sinensis</i>	8 to 10 feet	part shade to medium sun	begins in second year
Confederate Rose / <i>Hibiscus mutabilis</i>	6 to 10 feet	3 to 5 hours of direct sun	spring
Rose of Sharon / <i>Hibiscus syriacus</i>	up to 10 feet	direct sun	summer till frost
Texas Star / <i>Hibiscus coccineus</i>	6 to 10 feet	direct sun	spring till frost
Turk's Cap / <i>Malvariscus arboreus</i>	up to 10 feet	direct sun	summer till fall



3 Bromeliads

Pineapple and Spanish moss may be the two best-known members of the family Bromeliaceae. The startling differences of these two plants are typical of the variety and diversity of this colorful family. Bromeliads range in size from miniatures to giants. Over 3,000 species in about 56 genera are native to the Western Hemisphere. Bromeliads grow from the southern United States through Central and South America and occur in nature from sea level environments to cool mountain elevations. Botanists are still discovering new species, and plant breeders are developing ever more stunning hybrids.

In general, bromeliads are inexpensive, easy to grow, require little care and reward the grower with brilliant, long lasting blooms and ornamental foliage. Long lived and slow growing, all bromeliads flower — most annually, but some may take as long as 10 years to bloom. With few exceptions, the flower stalk is produced from the center of the rosette. The stalk may be long and erect, may arch over with flowers or may be short with the flowers nestled in the rosette. The stalk may produce a single flower or many flower clusters. Many bromeliads produce colorful stalks and bracts that enhance the flowers.

Epiphytes And Terrestrials

Bromeliads are either terrestrials or epiphytes. Terrestrials grow primarily in the ground, and epiphytes grow on rocks, trees and other plants. While terrestrials take nutrients from the soil, epiphytic bromeliads draw nutrients from the air, absorbing water and nutrients through tiny scales on their thick leaves. The roots of epiphytic bromeliads function only to hold fast to the rock or plant to which they are clinging. In the case of Spanish moss, for example, the entire plant is covered in scales, giving it its beautiful iridescent gray color. Epiphytes adapt nicely to pots or tree bark, and terrestrials grow well in the ground. They must be protected, however, from our occasional frosty nights.

Air Pine or Living Vase

Guzmania (*guz-MAN-ee-uh*)

Members of this genus are spectacular in bloom. Their flower spikes grow out of the center of the plant on long-lasting, brilliantly colorful stalks. Air pine can grow in containers or on trees. A number of these plants are tough enough to handle temperate climates and long periods of cold damp conditions. However, most of the group are better suited to growing in pots, which can be taken indoors in winter.



Air Pine

Air Plants

Tillandsia (*til-LAND-see-uh*)

This is the largest of all the genera in the bromeliad family. Most are epiphytic and have twisted wiry silver gray leaves.

Carnations of the Sky

T. aeranthos

Carnations of the sky is an epiphyte with stiff, gray-green leaves that develop in spirals. Pink and blue flowers appear in late spring and give the plant its common name. This plant is hardy enough to take frosts and other adverse conditions.



Carnations of the Sky

Sky Plant

T. ionantha

A second group of air plants come from Mexico and Central America. These are tank-forming types with soft foliage that grows on trees or rocks. Planted at the bottom of a palm or other tree, *T. somnians* will climb the trunk.

Spanish Moss

T. usneoides

Spanish moss hangs in dense strands from large oaks. Over summer, Spanish moss produces tiny yellow-green flowers that have a musky fragrance. The plant prefers light shade and good air movement.

Care & Mounting of Air Plants

Air plants are some of the best bromeliads for mounting on almost any surface. Use an old log, dried grape vines, or a piece of weathered driftwood. Attach the air plant with wire (but not copper wire), fishing line, twine, clear craft epoxy. Use sphagnum moss to cover the attachment. Make sure water can drain quickly from the attached area. Air plants can also be attached to a long chain and hung from a tree or under a porch. Watering them is easy — just dip the entire chain into a bucket of water.

The silver scales that cover air plants absorb moisture and nutrients, so careful handling is important. A weekly misting provides all their nutritional needs with an occasional addition of diluted fish emulsion. A warm, humid environment will keep the plants healthy.



Sky Plant



Spanish Moss



Blushing Bromeliad



Earth Star

Blushing Bromeliad, Fingernail Plant

Neoregelia (*nee-oh-reg-EL-ee-uh*)

These spectacular foliage plants change the colors of their leaves when they begin to flower. They are both epiphytic and terrestrial in habit. Although only about 100 species exist in this genus, they are among the most hybridized plants in the bromeliad family. Thousands of hybrids exist, many with differences so slight, identification and naming are often impossible. Depending on the variety, the center turns brilliant red, pink or lavender at flowering. For this reason, they are often called blushing bromeliads.

Other hybrids show pink tips, giving rise to the name fingernail plant. Blushing bromeliads have diverse leaf colors and markings. Flowers are situated within the cup, so are insignificant. Plants of this genus are much used in the garden as ground covers. They do best grown on the dry side in strong light with the cup kept full of water. Adequate air movement is also important. Lack of light or frequent fertilization will cause blushing bromeliads to lose their attractive colors and turn green.

Earth Star

Cryptanthus spp. (*krip-TAN-thus*)

This genus is from Brazil. Its flat, star-shaped appearance and terrestrial habit gives it its common name. Growing almost flat to the ground, the foliage grows symmetrically, putting out leaves at the same time on opposite sides of the plant. Earth star plants like bright, diffused light and rich organic soil. Let the soil dry slightly between watering and fertilize them monthly from mid-spring through early fall. They are sensitive to cold, so cover to protect them from temperatures below freezing. Popular cultivars include 'Pink Starlite' and 'Ruby.'

Urn plant

Aechmea fasciata (EEK-mee-uh fas-ku-ATA)

These epiphytes grow on trees in the tropics, collecting moisture from the environment and fertilizer from plant debris. Here they do well mounted on a board, bark or driftwood. Boards should be untreated lumber, and driftwood should be thoroughly rinsed of salt water. Think about how these plants grow originally and try to duplicate those conditions in the garden. *A. fasciata purpurea*, for example, is green if grown in shade, but deep maroon if grown in sun. The plant prefers bright light and warm temperatures. The urn plant bloom lasts for several months.

Vriesea

Vriesea (VREE-zee-uh)

There are about 250 recognized species of Vriesea bromeliads. Members of this genus can reach two to three feet tall. Many have exotically patterned and colorful spineless foliage. They flower in late winter with bright colorful flower spikes that last for months. Vrieseas are epiphytes with shallow roots, so as house plants the roots need to be kept relatively dry with moisture obtained through misting. 'Rubra' is the most well known of the group with its heavy chocolate banding.



Urn plant



Vriesea



Bromeliad with pups



Pineapple with pups

Culture of Epiphytes and Terrestrials

Outdoors, bromeliads thrive on the humidity of the Upper Gulf Coast of Texas. If the plants spend the winter months indoors in pots, they will benefit from a weekly misting of the leaves to maintain humidity. Bromeliads prefer rain water. If this is not available, adding a teaspoon of Epsom salts to a gallon of tap water will serve the plants' needs. Fertilizing through the summer months will encourage bloom production. Used at half strength, fertilizer can be added to the misting water for better absorption. Diluted fish emulsion is also beneficial.

Most bromeliads bloom only once. Then, before dying, the mother plant sends up offshoots known as pups. Some bromeliads produce pups at the base of the mother plant. Stoloniferous bromeliads send out long stolons with a pup growing at the end, which, in turn, send out other pups. Others produce pups atop the inflorescence or flower spike of the mother plant. An example is the green leafy top of the pineapple, *Ananus comosus*, which is, in fact, a pup that may be removed and planted. When the pups are about six inches tall they can be cut from the mother plant and placed in a mix of peat, coarse sand, fern fiber and bark — a mix that ensures good drainage. Bromeliads can also be propagated from seeds placed in a shallow pan with good drainage. The seeds will germinate within a week. Once they are large enough to handle, they can be placed in an individual pot with well-drained soil.

Pests and Diseases

One of the leading causes of death in bromeliads is root rot. Gardeners can safeguard their plants against this disease by allowing the soil to dry out between waterings. Insects are rarely a problem. Occasionally black pea scale appears, and aphids sometimes attack the blooms. For scale, scrape off infected plants and wipe leaves with a cotton swab soaked in rubbing alcohol. For aphids, spray the flowers with insecticidal soap (such as Safer's). Repeat as necessary.

Bromeliads

COMMON / BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Air Pine / <i>Guzmania</i>	8 inches to 3 feet	part shade	repeat bloomer
Carnation of the Sky / <i>T. aeranthos</i>	4 to 6 inches	filtered sun	repeat bloomer
Sky Plant / <i>T. ionantha</i>	4 to 6 inches	filtered sun	repeat bloomer
Spanish Moss / <i>T. usneoides</i>	spreads throughout tree	light shade	inconspicuous blooms
Blushing Bromeliad / <i>Neoregelia</i>	1 to 1.5 feet	light shade to partial sun	repeat bloomer
Earth Star / <i>Cryptanthus</i> spp.	<1.5 feet	light shade to partial sun	mid-spring till early summer
Urn plant / <i>Aechmea fasciata</i>	1 to 1.5 feet	partial to full shade	fall till mid-winter
Vriesea / <i>Vriesea</i>	1 to 1.5 feet	partial to full shade	late winter till early spring



Jim and Joanne Woolsey

Jim Woolsey: Hooked on Neoregelias

“I just became mesmerized with the colors.”

Jim Woolsey, grower of many tropicals, never planned to collect *neoregelias*. But, a former employee at his nursery in Santa Fe kept pushing him towards this group of bromeliads, saying he'd really enjoy growing them.

“She got a bunch for me,” said Woolsey, “and I put them in a corner of the greenhouse and kinda forgot about them.” After awhile, when they started blooming and putting out pups, Woolsey began to take notice.

“I just became mesmerized with the colors,” Woolsey said. He set them up on one of the large wood-and-wire benches in the greenhouse where he could watch them more closely and soon found himself hooked. He laughs softly, blue eyes twinkling, and looks around the greenhouse at his nearly 100 types of *Neoregelias*, his favorite genus of the bromeliad family.

A native of Texas City, Woolsey didn't start out with a horticultural career. “I was doing chemical cleaning—hydroblasting— at Carbide, working nearly 100 hours a week. Long hours.” His wife didn't like the schedule much, but was less supportive than his stepfather, who told him, “You know, you could be working fewer hours at a nursery and making the same money.” So, in 1974, Woolsey, with \$20 in his pocket, wrote a resignation letter to both his boss and his wife and headed his pickup for the Rio Grande Valley.

“I started brokering plants in 1975, down in the Valley,” he says. He'd deliver plants to nurseries and backyard sellers. “It was kinda crazy, you know, getting up at four in the morning, and loading up the truck. One time, the bed was so loaded down with plants, I was driving with my tailpipe dragging on the ground. I had to stop and offload about 15 Norfolk pines.”

His horticultural knowledge was sketchy back then. “To be honest, I didn't know a pothos ivy from nutgrass,” he said, but he paid attention to detail and began learning common names, families, genera and species. He admits it did feel good to come up with plant varieties that even nursery owners didn't know.

He's only been interested in bromeliads for three years or so, and has just started a test garden next to his home to see which varieties will do best in sun, shade, and the colder temperatures of winter. He's found that the *neoregelias* with the reddest leaves can take more sun. He's also learned that too much fertilizer will turn plant leaves brown and that the softer a plant's leaves, the easier the plant will freeze.

Woolsey gets many of his plants from Grant Graves, a grower in Florida. He also gets plants from David Mead, a bromeliad breeder in Pasadena. Woolsey buys bromeliad pups and then cultivates them at his nursery. “These *neoregelias*,” he said, pointing, “are called ‘Kathleen,’ named after Graves' wife.”

‘Kathleen’ is one of the varieties on view at Jimbo's Nursery, but he doesn't have enough of the plant to sell it. “Plus, I'd have to pay royalties,” he admitted. Several other varieties are also in the cultivation stages and not yet available for sale. “I like to have about a hundred or so plants of a variety before I sell them,” he said. In fact, he'd like to offer more plants in fewer varieties.

Jimbo's Nursery, which is adjacent to Woolsey's home in Santa Fe, has been open since 1983. As well as the *neoregelias*, Woolsey has many other tropical plants.

*Interview and articles by
MG Eileen Storey*



"They are the easiest plants in the nursery."

1. Bromeliads are easy to grow and do well in hanging pots or in pots on benches or plant stands.
2. Bromeliads planted in the ground require good air circulation to prevent scale and enough room to grow and develop pups.
3. Bromeliads do not grow well as house plants. Because they are found in the jungle, they will not survive with the low humidity indoors.
4. Feed lightly with a 13-13-13, a slow-release fertilizer. Over fertilizing will brown the leaf edges.
5. Propagate with pups about $\frac{1}{3}$ the size of the mother plant. Propagate small plants by pulling or cutting some of the lower leaves with a sharp knife dipped in insecticide. The insecticide helps moving scale from one plant to another.
6. Newly potted neoregelias will enjoy a burst of fertilizer in their new pots. Half a teaspoon per pup, will produce lots of leaves and strong colors.
7. Petroleum-based products will kill bromeliads.



4 Orchids

The Orchidaceae (or-kid-ACE-e-ay) family is among the largest and most varied of all the flowering plants with over 800 genera and 25,000 species. Commonly associated with the tropics, orchids grow in almost every habitat — tundras, rainforests, mountains, grassy plains, deserts, and swamps. In North America there are 30 to 40 wild orchids from Delaware to California and Minnesota to Texas.

Orchids are surprisingly sturdy and resilient. All orchids fall into four categories according to their growth habits: Epiphytes are generally the most popular and have roots in the bark of trees. Terrestrials live with their roots in soil. Lithophytes grow on rocks or in other places with little soil. Myco-heterotrophs have a symbiotic relationship with fungi. For growing orchids on the Upper Gulf Coast of Texas, epiphytes and terrestrials do best and are the easiest to grow.

Epiphytes

Epiphytes are the most common orchids. The name comes from the Greek words, *ipe*, meaning “on” and *phyte*, meaning a “plant.”

Cattleya

Cattleya (KAT-lee-yuh)

Named after William Cattley, cattleyas are considered the queen of orchids because they are quite flamboyant. There are numerous species and many more hybrids. Cattleyas are long-lived perennials, flowering annually. Their large, showy flowers are some of the most magnificent and sweetly fragrant. The blooms often have very frilly lips and large petals, varying in colors from beautiful lavenders and blues to deep reds, whites, and yellows. There are also bifloiate cattleyas, which do not open as fully and have two large leaves.



Cattleya

Dancing Girls, Golden Shower

Oncidium (on-SID-ee-um)

Dancing girls are prized for their branching sprays of dainty white or yellow flowers with mahogany or brown spots. Dancing girls will bloom year round, last for months, and have a lovely scent. This hardy orchid grows well even under adverse conditions.



Dancing Girls

Dendrobium

Dendrobium (den-DROH-bee-um)

Dendrobiums are a diverse genus with many enchanting species. They have arching or drooping sprays of five to 100 blooms. Others have drooping spikes of anywhere from 12 to 100 blooms. The profusion of long-lasting flowers comes in many colors, though primarily in white or shades of purple, from light lavender to a deep violet.

Moth Orchid, Phals

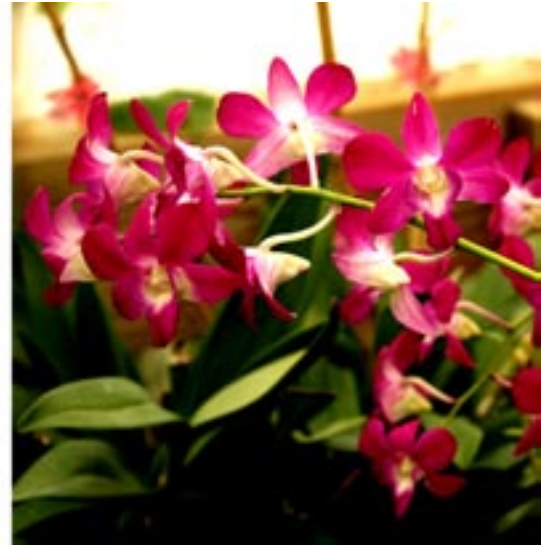
Phalaenopsis (fay-lay-NOP-sis)

Moth orchids can produce 15 or more flowers (as large as four inches in diameter) along a spike that may reach two feet in length. They come in a spectrum of colors: soft white, lavender, yellow, deep red, and vibrant orange. Some are even spotted or striped. Individual blooms may last for months, which is why moth orchids are the most popular orchids in the world.

Culture of Epiphytes

Culture for these epiphytes is similar. Most growers in the Upper Gulf Coast of Texas move their orchids outdoors in mid-March or when nighttime temperatures stay above 50°F. They leave their orchids outdoors all summer, watering weekly, until about mid-November. Then, once nighttime temperatures drop below 50°F, they bring their orchids indoors for the winter.

Dendrobiums and dancing girls will usually bloom in early spring. Moth orchids flower through mid-summer, just when the cattleyas begin to bud. All of these orchids favor moderate temperatures (50 to 90°F), high humidity, and good air movement. However, in order to bloom they favor a 15 to 20°F difference between night and day, and bright, diffused light. All epiphytes like to be pot-bound in small containers with a porous, free-draining medium (long fibered moss, tree fern fiber, chunky sphagnum peat, perlite and charcoal) containing at least 50 percent bark. Water well in the summer, once or twice a week, allowing the water to drain through the pot. One way to check a plant's moisture is by sticking a wooden pencil into the mix about three or four inches. If the wood end is dark, the medium is still wet. Orchids' crown areas are sensitive, so always water early in the day. Water sparingly in the winter when they are dormant. Fertilize once every two weeks in the summer with a diluted fish emulsion or manure teas.



Dendrobium



Moth Orchid

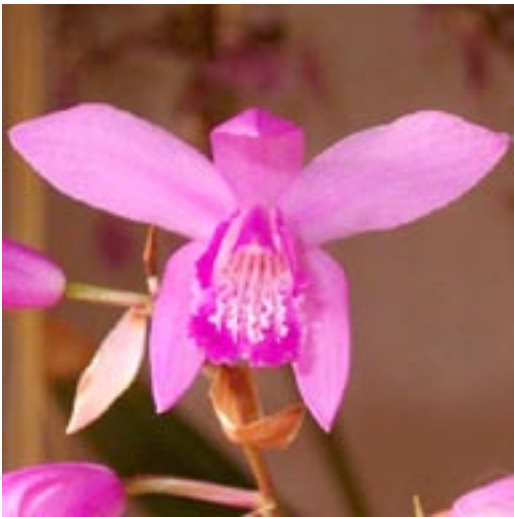
Terrestrials

Terrestrial orchids are shallow-rooted plants that secure themselves in loose soil comprised of decaying leaves and other organic matter. Their growing season usually begins in spring and may last through autumn. These are outstanding plants in a tropical-looking garden and grow quite well outdoors in the Upper Gulf Coast of Texas, some in pots and others directly in the ground. Never plant an orchid in soil unless it is a terrestrial. Buy the plant in a four-inch to one-gallon container or as a tuber. Potted plants are usually purchased in the spring and tubers in the fall. Look for healthy plants with new growth and flower buds.

Bletia

Bletia (BLEE-sha)

Several species of *Bletia* will grow in the Upper Gulf Coast of Texas. *Bletia striata* is native to Central and South America. The flowers look very similar to cattleyas with colors of lavender, white, and yellow. Although flowers are short-lived, they bloom sequentially to extend bloom time. Grow bletias in partially shaded flower beds or in pots with a terrestrial mix.



Bletia striata

Chinese Ground Orchid

Spathoglottis plicata (spath-ob-GLOT-tiss ply-KAY-tuh)

The Chinese ground orchid is a tropical, terrestrial perennial. Softly textured leaves emerge from its small pseudobulbs, along with an erect flower spike. Healthy, well-grown Chinese ground orchids will bloom year-round with small, purple flowers that have a red spot on the lip. Some varieties range from lilac, magenta, white and various shades of pink, violet, peach, orange-yellow, and even bi-colored.



Chinese Ground Orchid

Cymbidium

Cymbidium (sim-BID-ee-um)

Cymbidiums do well on the Upper Gulf Coast of Texas and are one of the least demanding orchids. Miniature cymbidiums range from 18 to 24 inches tall, and standard cymbidiums can reach a height of four feet with wider leaves and larger flowers. However, our summers are too hot for standards to set their blooms, while miniature cymbidiums adjust better to our climate. Choose miniatures by their smaller appearance if the plants are not marked. Long, strap-like leaves grow from thick and round pseudobulbs. Flower spikes can bear up to 20 blooms on each of several flower stems. Some types will bloom in winter when other plants are dormant. Flowers may last over two months, and cut flowers a little under three weeks. Cymbidiums will need partial shade when the temperature exceeds 80°F or else the leaves will be damaged.



Cymbidium

Nun's Orchid, Swamp Orchid

Phaius tankervilleae (FAY-ee-us tan-kar-VIL-ee-ay)

The hooded flower of nun's orchid resembles a nun's veil, and the throat appears to be her head bowed in prayer. A nun's orchid can grow as tall as four feet and looks lovely out of bloom. The nun's orchid has small, egg-shaped pseudobulbs and long, lush leaves that are sometimes ruffled. A flower spike may bear 10 to 20 fragrant flowers that open sequentially and last four to six weeks.



Nun's Orchid



Cymbidium

Culture of Terrestrials

Whether planting terrestrials in the garden or in pots, chose a warm, airy place with bright morning light and bright shade in the afternoon. If a terrestrial has not bloomed, give it more light, from 14 to 16 hours daily. For in-ground terrestrials, select a well-drained location and create a raised bed, as these orchids are sensitive to fungal diseases including crown rot. Use a medium mixture of coarse sand, soil, bark compost, leaf mold, and perlite with a small (one teaspoon to a gallon of mix) amount of blood and bone meal. Dig a hole that is the same size as the container in which the plant was purchased. Add a very light amount of an organic fertilizer in the hole before placing the plant, and space the terrestrial orchid nine to 12 inches apart from other plants. Use about three inches of organic compost and mulch around the plant, then water thoroughly. Potted terrestrials look quite tropical on the porch or patio. To pot, use a large container with broken bits of brick in the bottom for drainage. Add charcoal to an organically enriched compost consisting of four cups sphagnum or coarse peat moss, one cup of sandy loam, one cup composted perlite, one cup bark chips of varying size, and one cup of composted cow manure. Make sure the mixture drains quickly. Remember that their roots need to breathe and drink, which requires a good, open medium that is slightly acidic. Repot every two to three years.

For both in-ground and potted plants, water early in the day to make sure the plant tissue on the leaf crown is dry by night. Damp crowns are susceptible to crown rot, and damp leaves are susceptible to leaf-spotting fungal infections. Maintain a consistently moist environment for terrestrials during their growing season, watering twice a week during the summer if necessary. Douse the medium once, then wait a few seconds and water again. Wait a minute, then water a third time. This should keep the medium evenly moist but not wet. During cooler weather, check your medium and only water when it begins to feel really dry. A good misting helps when drier air prevails.

Until plants are mature, lightly fertilize once a month with a balanced orchid water-soluble fertilizer, such as 18-18-18 or 20-20-20 diluted to half the recommended strength. Organic fertilizers, such as fish emulsion and manure teas, are especially good because these help reduce salt buildup. Once mature, fertilize terrestrial orchids every two weeks from spring to fall. From fall through winter use a soluble fertilizer solution once every month or so to encourage spike formation. Terrestrials love hot temperatures, high humidity, and good air movement. They do well in a range of 40°F nights to 90°F days. Give them some protection when the temperature drops below 39°F, and mist them in the afternoon during those days over 90°F.

Pests and Diseases

Orchids are no different than any other plant — a variety of pests and diseases can attack them. However, when checked frequently and properly cared for, orchids are relatively pest and disease free.

Orchids will only become susceptible to bacteria, fungi, and viruses if they are neglected, over-crowded, or mistreated.

Black rot is caused by a fungus that will kill an orchid quickly. The infected area turns black and watery and must be cut out, with the remaining plant being drenched with an appropriate fungicide.

Leaf spots and rots are caused by lack of good ventilation. Keep spraying with a fungicide until the problem is gone.

Root rot is caused by incorrect mediums and inadequate drainage for terrestrial orchids. Dig up or un-pot the plant, cut off all diseased roots, re-plant or re-pot in an appropriate, new mixture soaked with the correct fungicide, and repeat treatment according to directions. Make sure that the plant is well drained, gets good air movement, and is not over-watered.



Chinese Ground Orchid

Orchids

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Cattleya.....	1 to 2 feet	bright light	late summer till spring
Dancing Girls, Golden Shower / <i>Oncidium</i>	1 foot	bright indirect light	late winter till mid-spring
Dendrobium.....	2 to 4 feet	sun to partial shade	mid-spring
Moth Orchid, Phals / <i>Phalaenopsis</i>	1 to 3 feet	shade or indirect light	repeat bloomer
Bletia5 to 1.5 feet	sun to partial shade	early spring till winter
Chinese Ground Orchid / <i>Spathoglottis plicata</i>	1.5 to 2 feet	light shade	mid-spring till mid-summer
Cymbidium	1 to 1.5 feet	filtered light or light shade	late winter till late spring
Nun's Orchid, Swamp Orchid / <i>Phaius tankervilleae</i>	2 to 4 feet	sun to partial shade	late spring till early summer

Meet the Orchid Growers...



Clyde Holt - League City, TX

Clyde Holt, a Galveston County Master Gardener, has been growing orchids for 20 years. Clyde first saw an orchid when he bought a corsage for his prom date. He remembers it was a purple cattleya. He always thought orchids were beautiful. Then a friend of his who grew orchids gave Clyde a cattleya and suggested he join an orchid club. He quickly became involved with the one in Galveston County. Clyde found that winning raffles his club sponsored was a great way to obtain diverse varieties for very little money. Now he has over 100 different orchids. His favorite is a bowringiana for its outstanding flower and shape. A famous grower told Clyde, “You aren’t considered an expert until you’ve killed a thousand orchids!”

Clyde: Whatever you don’t kill, buy more of those. Start with easy growers and learn from them.



Adrian Jimenez - Houston, TX

Adrian Jimenez saw his first orchid at the age of seven. He was in the library reading a book on indoor plants and noticed a photograph of a “strange green flower.” Adrian was struck by the flower’s structure and that this plant grew entirely in moss. As he read on, he learned it was a phalaenopsis from the orchid family. Adrian bought his first orchid at Target. After taking the plant home, the stem broke. Adrian researched how to take care of it. He watered this broken “Phal” twice a week, in the morning, making sure the medium was continually moist. After seven months, it shot out two spikes, which turned into 11 blooms. In the interim, Adrian got orchid fever. He began to buy different genera and more books. When his paphiopedilum bloomed, he was awestruck by its flower-shaped slipper. His third orchid was an oncidium because it was “cheap” and he had never seen such tiny blooms nor the pure yellow color. He went on-line and saw a photograph of an oncidium in a palace in France that had 286 blooms on seven spikes and could not believe one plant could produce that many flowers. He was hooked. As Adrian began shopping commercial orchid outlets, he spoke with growers and learned from them. Though he does not own one, his favorite is the bulbophyllum. Adrian now has 15 orchids in his bedroom. He says, “I plan to build a greenhouse, become a botanist and obtain his ‘PhD’ in orchids.”

Adrian: Wipe the leaves with a dry cotton swab to control sucking pests.

Laurie and Sheila Skov - Clear Lake, TX

Laurie and Sheila Skov own a local orchid business. The couple lives in Houston, converting their backyard into a “naturalized jungle.” Surrounding their pool, there are literally tiers upon tiers of orchids rising up two and a half stories. The Skovs have every imaginable genus, from Dendrobiums to Encyclias to Vandas. Hailing from Chicago, Laurie joined the Peace Corp and was sent to Samoa. There he saw his first orchid. Shelia was born in El Salvador, literally surrounded by orchids where they were considered weeds. Laurie’s favorite genus is the *Stanhopea*, which he says, stands far and above all others. Though the blooms only last a day to two, stanhopeas produce flowers throughout their growing season.

Renee Haase - Spring, TX

Renee Haase was born and raised in Houston. Her maternal uncle had a glass greenhouse filled with orchids he brought back from Mexico. When Hurricane Carla hit, the greenhouse was blown away. Renee’s uncle started all over again. One Thanksgiving Renee’s husband Denny saw a cattleya at her uncle’s home. Denny fell in love. For their next wedding anniversary, he bought one for Renee. As it didn’t die, Renee received another cattleya for her birthday. Then they bought a third. Denny began collecting in earnest and Renee, an at-home mom, became their caregiver. They decided to grow old cattleya hybrids from the 1940s and 1950s. Renee read every book she could find on orchids. She learned one valuable lesson: That everything you read is not necessarily accurate. Renee discovered through experimentation that successful orchid growing depends upon the environment and your personality.

*Interviews and articles by
MG Candice Hawkinson and MG Clyde Holt*



Laurie: Pick orchids that do well in your environment. We are lucky to live in Galveston County where there are numerous varieties from which you can choose.



Renee: If your orchid hasn’t bloomed in two years, and you have done everything else correctly, move it to a better light. Learn where the genus originated and create the same environment. Grow on the dry side. Though the orchid will grow slower, it will be hardier with fewer pests and diseases.



5 Bulbs, Corms, Rhizomes & Tubers

The bulbs, corms, rhizomes and tubers that grow well in the Upper Gulf Coast of Texas come from all over the world but mainly from South Africa, the Mediterranean and South America. Many plants in this group can stay in the ground in our mild Texas climate and will naturalize as perennials given the proper planting and care.

Bulbs

A true bulb contains the embryo of a new plant surrounded by modified leaves called scales, which are held together by a basal plate. Hair-like roots extend from the bottom of this plate and indicate which end of the bulb to plant downward. Bulbs come in two groups according to their growing season. Summer bulbs are planted in the spring (March to May), and grow and bloom through the fall. Spring bulbs are planted in the fall and bloom from January through the spring. When selecting bulbs for either planting season, look for the largest, fullest, and firmest. Avoid any bulb that appears to have cuts or soft spots that may indicate damage or disease. Planting bulbs in raised beds in well-drained soil prevents them from standing in water.

Amaryllis

Hippeastrum amaryllis (*hip-ee-ASS-trum am-uh-RIL-us*)

Amaryllis was discovered in Peru and Brazil during the 18th Century. The showy, trumpet-shaped clusters of blossoms rise atop sturdy stalks often reaching two feet in height and surrounded by strap-shaped foliage. This plant will grow well in either the garden or in containers. Often called the “tulip of the South,” this hardy plant brings vibrant color with minimal care to garden landscapes and has a high tolerance for clay soil. The amaryllis makes excellent cut-flower arrangements and is deer resistant.

There are many varieties and colors of amaryllis. Plant in the spring, six to nine inches apart, in raised beds, in soil improved with organic matter. While partial shade is acceptable, amaryllis does better in good light. After the plant flowers in April, maintain moist soil levels and use premium rose food fertilizer for best blooms. If provided good drainage and good mulch, these bulbs can be left in the ground over the winter. Amaryllis produces small new bulbs at its base about every three years. To propagate, pull the baby bulbs apart from the mother plant.



Amaryllis

Crinum

Crinum americanum (*KRY-num a-mer-ih-KAY-num*)

With clusters of three- to six-inch flowers on two to four foot stems and strap-like evergreen foliage, this striking plant is one of the easiest bulbs to grow. Sometimes known as milk lily or swamp lily, crinums have appeared on Texas gardeners' lists of plants grown since the early 1800s. Crinums perform well in poor, heavy-clay soil but can survive in swamp-like areas. Versatile, hardy, and healthy, they are a popular bulb to plant in the spring, summer, or early fall. Crinums have few pests other than snails, which can be easily controlled.



Crinum

Plant crinum eight to ten inches deep, 24 to 36 inches apart in full sun to allow growth heights of 18 to 36 inches. They will then naturalize and provide years of blooming pleasure. Larger and more frequent blooms can be induced with applications of manure tea. Divide older specimens every three to four years. Dig a trench around the entire clump to lift the deep-rooted bulbs before separating larger bulbs from smaller ones. Share the smaller bulbs with family or friends, and replant the larger ones in your beds.

Lily

Lilium (LEE-lee-um)

The lily family is large and varied, but most share common features. The 6-petaled flowers are usually three to eight inches across and perch on top of stiff, three to six foot tall stems with multi-layered, thin-leaved foliage. The flowers may be trumpet, bowl, or bell shaped, and come in a wide range of colors and fragrances. Most lilies flower in early summer.

Asiatic Hybrids

Easiest to grow in all soil conditions, they provide summer and autumn blooms. They are self-seeding, best known for rapid growth, and flower in the second year. 'Enchantment', 'Amber Gold', and 'Tiger Lilies' are the most reliable of all lilies for the South. They flower through the summer but need to be shaded from hot afternoon sun.

Easter Lily

L. longiflorum v eximium

Raised on Bermuda and forced by florists for the Easter season, Easter lilies are the most famous of all lilies. With a pure white fragrant bloom, they will perform well in the Upper Gulf Coast of Texas even in our gumbo soil. They usually bloom in April in time for Easter.



Lilium "American Eagle"



Asiatic Hybrid



Easter Lily



Rain Lily

Rain Lily

Zephyranthes (ze-fi-RANTH-eez)

These attractive, clump-forming perennials time their blooming with our summer rains. Then they magically burst into blooms of pink, white, yellow or rose star-shaped flowers from six to 12 inches high. Rain lilies increase the number of their blooms after each rain throughout the summer. *Z. grandiflora* is larger and more hardy than other species and is fragrant. Originally from Mexico, Guatemala, and South America, rain lilies are easy to grow along the Upper Gulf Coast of Texas and can remain in the ground throughout the winter. Plant 2 inches deep and three to four inches apart in well-drained soil. Divide by separating the small bulbs in the fall or early spring. All parts of the plant are poisonous if eaten.

Resurrection Lily, Magic Lily

Lycoris (ly-KO-ris)

A spidery lily with long feathery stamens magically emerges atop two foot tall stalks totally devoid of foliage in late summer and early fall. The long, narrow, strap-shaped foliage appears in early spring but dies back well before the bloom emerges in late summer. The delicate, red flower of *L. radiata* is the most common resurrection lily grown in Upper Gulf Coast of Texas gardens. *L. squamigera* has a pink, trumpet-shaped bloom and grows in much the same pattern as *L. radiata*. *L. africana* is bright yellow in color, and *L. x albiflora* is white.



Resurrection Lily

Bulbs should be planted six to 12 inches apart during spring through summer in sun to partial shade. Bulbs planted in shade will flower first. Resurrection lily is hardy in coastal areas and will naturalize. The bulbs perform best in sandy loam but will work in amended soil. Incorporate at least three inches of organic matter into the topsoil, and cover with two inches (minimum) of bark mulch. In winter, be careful not to cut back the foliage, and water resurrection lily because the bulbs are setting buds for next year's bloom. Thin this lily every four to five years only after the foliage turns yellow and dies back. Seldom found in local garden centers, these plants are known as "pass-a-long" plants, shared with friends and relatives. Resurrection lily is an excellent container plant and blooms best when slightly pot-bound. Plant the bulbs with tips just slightly below the surface of highly amended, sandy loam, and grow similar to bulbs planted in the garden. Blooms will actually be bigger and fuller than garden-grown bulbs. Propagate by division.

Spider Lily

Hymenocallis (*high-men-oh-KAH-lis*)

The spider lily has showy clusters of fragrant, white flowers with spider-like tendrils on stems ranging from eight inches to two feet with large, dark-green foliage. The many varieties of the spider lily range from those that grow best in the garden, those that prefer the swamp, and those that grow well in containers. One of the most well-known, hardier varieties for garden growing is *H. galvestonensis*. The *H x narcissiflora* is well known for container growing. One of the most common and abundant species known to gardeners in the Upper Gulf Coast of Texas is *H. liriosme*, often found standing in shallow water or in the heaviest of thick clay gumbo. Its blooms open in March and April and have the fragrance of Easter lilies. These bulbs make fine planting companions to Louisiana irises.

Plant spider lilies in the fall (September through November) or in the spring (February through April), in full or partial sun. For large showy clumps, set the bulbs three to four inches below the surface and 16 to 24 inches apart. Feed with a balanced, water-soluble fertilizer in early spring and during the bloom cycle. Propagate by division.

Culture of Bulbs

Lily bulbs should be planted in early fall, five to six inches deep, 18 to 24 inches apart, with three to five bulbs in cluster. Cluster planting makes for a showy, dramatic burst of color when blooms erupt from June to August, depending on the variety. Soil should be porous and slightly acidic, so add equal parts of humus, sand, and loam. Lilies do not like to get their feet wet and will rot easily. They prefer five or six hours sun to partial shade. Most varieties mature after several seasons and can be left in the ground over winter undisturbed for several years. Deadhead flowers after blooming to prevent energy loss from seed production. Do not remove stems or foliage. To divide, lift bulbs in clumps, leaving generous amounts of soil around the roots. Small bulbs will have developed around the larger ones and can be easily separated. These bulbs are loose-scaled and will damage easily if allowed to dry out, so share with neighbors or replant as quickly as possible. While most current hybrids are disease resistant, one serious problem for some lilies is a mosaic virus disease for which there is no remedy. Symptoms are yellowish-streaked foliage and less hardy growth. To arrest the disease, remove and destroy the bulbs. Container planting of bulbs is best from September to March. Use a 12-inch pot for a three to five bulb clump planted at least five inches below the soil surface. Care is similar to lilies growing in the garden. Cut lilies are known to last for up to a week or longer in arrangements.



Spider Lily

Corms

Corms are similar in appearance to bulbs but do not have the layers of scales protecting the embryo. As the energy from the original corm is used up during the flowering season, new corms (called cormels) are created along side or on top of the old corm. These will act like new corms for the following year's growth. Corms usually perform best when lifted from the soil and stored over the winter. After drying for a week or two, remove any loose dirt from the corms and dust them lightly with sulfur. Then place them in a container filled with sawdust or peat moss and hang in a cool, dry place. Some of the new corms may take two to three years to bloom.

Elephant Ear

Colocasia esculenta (Kol-ob-KAY-see-uh es-kew-LEN-tuh)

Elephant ear is the common name for many *Colocasias* and *Alocasias*, tropical plants originally from Southeast Asia, Polynesia, and South America. *Colocasia esculenta* has many varieties, ranging in color from green to purple. Some have variegated leaves. The plants grow from three to six feet. Their soft, velvety leaves can span three feet or more across on four-foot petioles. When planting in the spring, select the largest, fullest corms available. Plant two to three inches deep and at least three to four feet apart. Plant in well-drained soil in sun or partial shade. Elephant ear prefers a slightly acidic soil. Remove damaged leaves to keep the plant healthy. Elephant ear is a good companion plant to cannas and gingers and adds a tropical feel to any water or pool side setting. This plant overwinters well in the ground with good drainage, or the corms can be dug, dried, and separated for spring planting. Elephant ear can clog bayous and rivers, so when disposing of the plant, put it in garbage bags or dispose through garbage pick-up.



Elephant Ear

Freesia

Freesia (FREE-see-ya)

The extremely fragrant, springtime blooms of this plant open in early March, only four to five months after planting in October and November. The two-inch tubular flowers range along foot-long, spindly stems surrounded by sparse, narrow, grass-like foliage. Plant the corms at least two inches deep and two inches apart in areas that provide morning sun. White varieties may naturalize, but others should be treated as annuals. Freesias are best planted in clumps or masses or as borders in well-drained, sandy loam. The spindly stems may require staking at the peak of their bloom season. Freesias are especially well suited to container planting. The small corms can be planted 10 to 12 at a time, pointed ends up, in a soil mix of 1/3 parts potting soil, peat moss, and sand. They should be watered sparingly and moved to a bright location once sprouts appear.



Freesia

Giant Taro

Alocasia “Gold Coast” (*Al-o-KAY-see-uh*)

This plant is also known as the Asian ape and sometimes called an upright elephant ear, too. In tropical settings it is tree-like with large, long, shiny green blades extending from thick stems reaching skyward. There are over 70 species of this tropical beauty. Popular varieties for planting are ‘Metallica,’ ‘Nigra,’ ‘Rubra,’ and ‘Variegata.’ Giant taro will grow to heights of four to six feet with leaves that easily span three feet in width. It is grown for its variety of lush, beautiful foliage in shades of green, purple, and variegated hues. Giant taro should be planted in sun to partial shade three to four feet apart to allow for its spreading growth. Put the plant in the ground in the spring in well-drained, highly organic soil. Giant taro requires a lot of water so is best suited for water gardens and bogs. Variegated types should be sheltered from direct sun and protected from hard frosts. These hardy plants usually grow for more than 200 days out of the year and are problem free. Plants may be propagated by divisions of the root ball or by divisions of below-ground runners. Be aware that handling the plant may cause skin irritations or allergic reactions.



Giant Taro

Gladiola, Glads

Gladiolus x hortulanus (*glad-ee-OH-lus hort-ew-LAH-nus*)

Of African descent, the gladiola has been popular since the mid-19th Century. Glads offer a variety of colors with spikes ranging from one to over five feet tall. These thin, one-sided flower spikes support funnel-shaped blooms that generally last from seven to 10 days from April through September. To assure the longest bloom time, stagger the planting schedule at seven to 10 day intervals. Spikes should be cut early in the morning or late in the evening when two or three flowers on the stem have opened. The stiff, spear-shaped foliage will remain green until cold weather. Leave at least four to five leaf blades on the plant to send energy to the corm. Glads can be planted from February through May. Choose healthy corms at least one to two inches in length and an inch or more in thickness. Dig each hole four inches deep, four to six inches apart in well-prepared, highly organic and sandy soil. While some varieties will naturalize here, it is better to treat glads as annuals.



Gladiola

Rhizomes

Rhizomes are different from bulbs and corms in that they grow horizontally, creeping along, slightly under or on top of the ground. Buds appear on top, and roots grow from the bottom as the rhizome lengthens. To propagate, cut rhizome into sections, making sure each section has eye buds and roots. Each section will make new plants that usually flower in the first year. Rhizomes are good candidates for leaving in the ground over the winter, or they can be taken up and stored like corms and bulbs.

Canna

Cannas x generalis (KAN to na jen-er-ALL-us)

Cannas are believed to have originated in the moist forests of Asia. However, many are native to the Central and South American tropics, too. Cannas were originally grown for their colorful foliage — broad leaves six to 12 inches long, ranging in colors from green to bronze to deep lavender. Now they are grown for their flowers, which bloom from early May through September in colors ranging from red to pink, to yellow, to orange, to cream. Cannas are effective when planted in groups of single colors and banked in drifts against walls or evergreens. Some popular varieties are Pfitzer's dwarf hybrids (18 inches), grand opera series (4 feet), and standards (7 feet).

Plant cannas February through May, four to six inches deep, 12 to 18 inches apart, in full sun to partial shade. Plant in loose, well-drained soil that has been enriched with compost and cow manure. Prune each flower stalk as it finishes blooming, and cut and remove the entire plant top after the winter freeze. No other pruning is required, but divide cannas every third to fourth year to assure maximum blooms. Fertilize the plants in spring and mid-summer with slow-release fertilizer. Cannas can be propagated by dividing the rhizomes in spring.

The lime-green leafroller caterpillar is a common pest that will fasten the edges of new leaves with silk-like threads before they unroll and will shelter inside to feed on leaf tissue. This pest causes severe damage to the plant. Leaves may never open; the plants become brown and unsightly, and they may never bloom. Collect and destroy the above-ground portions of cannas during the winter, and treat new spring growth with recommended chemical controls or with an insecticide containing *Bacillus thuringiensis* (Bt).



Canna

Lily of the Nile

Agapanthus (a-ga-PAN-thus)

This stunning plant originates from South Africa in the Cape peninsula areas, and not from Egypt, as its common name would imply. For the southern gardener, there are two major species with only subtle differences. The larger, *A. orientalis*, is an evergreen, and has large umbels with 40 to 200 blooms in clusters of white, lavender, or blue. The other is *A. africanus*, differentiated primarily by the smaller umbels with up to 40 blooms in the clusters. Both have long, strap-like evergreen blades for foliage. Lily of the Nile usually blooms in May and June, with two to four foot sturdy stems supporting clusters of bell-shaped flowers.

Plant lily of the Nile from October through February in the ground, or through early spring in containers. Plant in full sun, 24 to 36 inches apart and two inches deep, to allow for rapid spreading. Amend the soil with humus, sand, and manure. Water well in the spring to assure strong blooms. After bloom peak, water heavily and feed monthly with bone meal and superphosphates. Protect the roots in freezing weather with mulch. Although winter temperatures below 25°F may damage the leaves, lily of the Nile is root hardy and naturalizes easily. Dig up the clumps; shake off loose dirt, separate root sections, cut leaves way back, and replant immediately.

Louisiana Iris

I. nelsonii (EYE-ris)

This native to the bayous and swamplands of the lower Mississippi Delta has been found growing wild in old southern gardens and along waterways. Cultivars range from deep crimson red to bright white. Their sizes range from large blooms of seven to eight inches across to smaller, more elegant, flowers of only three to four inches.

The iris requires four to six hours of sun per day, but prefers afternoon shade. After a good growing season, many will travel as far as three feet from their original location. Blooms begin in March or April and commonly resemble medium-sized orchids. This iris flowers first at the top, then at the bottom, followed by two or three buds in the middle on stems two to three feet in height. The foliage is straight, strappy and upright and helps make Louisiana iris an excellent cut flower.

Plant the rhizomes of Louisiana iris August through October, at least one inch deep, spacing them eight to 10 inches apart. Amend the beds with peat moss, manure, and a good potting soil. Add three pounds of sulphur and one pound of iron sulfate per 100 square feet of soil, about 12 inches deep. For best results, cut the stalks back after the bloom cycle to one inch in a fan shape. Remove all dead and diseased foliage. Then mulch heavily to prevent sunburn during hot summers. Louisiana irises are also popular in submerged pots in ponds for color and vertical foliage.



Lily of the Nile



Louisiana Iris

Tubers

Tubers are round like bulbs but have no bottom basal plate with a root system. The most common tuber is the potato. New plant shoots emerge from several growth buds, or “eyes” on the tuber. Tubers are easily propagated by cutting them into sections with at least one eye per section. Tubers will grow larger if they are frequently divided.

Caladium

Caladium bicolor (kay-LAY-dee-um)

Caladiums originated in Brazil and are grown for their colorful foliage. Most caladiums prefer shade to partial shade. However, some new varieties will tolerate sunlight.

Caladiums make a strong visual statement when planted in one mass color under a tree or as two complimentary colors in an open bed or along pathways. Their light colors range from pure white to burgundy, and many variegated types in between can brighten a shady garden. The flowers should be removed as soon as they bloom. They usually bloom April through September.

Buy firm tubers, or the most healthy-looking plants, as soon as they become available during the planting season, March through May. There are two basic types: The heart-shaped fancy leaf and the arrow-shaped lance leaf. The heart-shaped type grows 18 to 20 inches, while the arrow-shaped type grows to about 12 inches and remains low and bushy. Plant the tubers about one ½ times as deep as the size of the tuber and 12 to 18 inches apart in rich, moist, well-drained, slightly acidic soil. Enrich the soil with compost or humus, and incorporate a slow-release fertilizer. For best results, plant partially sprouted tubers with the crown slightly above the soil’s surface. Caladiums should be dug up in the fall and stored in a dry, cool place for spring planting. Propagate by division. Please note that the plant sap may be irritating.



Caladium Candidum



Caladium "Miss Moffett"

Lily Turf, Liriope

(li-RYE-oh-pee)

This dark green, slender, grass-like foliage plant produces tiny spikes of small, white or lilac flowers on eight to 10-inch stems. This evergreen ground cover is never dormant, and will grow most anywhere, sun or shade. It requires no special soil conditions other than good drainage. Lily turf spreads easily and multiplies rapidly. It can be used as a ground cover or a border shrub. Plant lily turf in fall or spring, and thin at any time. To thin and divide, use a sharp spade and cut straight down into the clump. Lift and separate the tangled tubers, and replant as desired.



Lily Turf, Liriope

Monkey Grass, Mondo Grass

Ophiopogon japonicus (Oh-fee-oh-POE-gon ja-PON-eh-cus)

Monkey grass is similar to lily turf, but is narrower and shorter, reaching lengths of only six inches. This evergreen plant is easy to grow, and can be planted any time weather is favorable. Monkey grass requires no special culture for successful growth. Plant the tuberous root system just below ground level, and expect this plant to spread easily and quickly. Monkey grass makes an excellent evergreen ground cover in heavy shade. Thin clumps when they get too large in the same method as described for lily turf.



Monkey Grass

BULBS, CORMS, RHIZOMES AND TUBERS

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Amaryllis / <i>Hippeastrum amaryllis</i>	2 to 3 feet	full sun	late spring till early summer
Crinum / <i>Crinum americanum</i>	1 to 3 feet	sun to partial shade	late spring till early summer
Lily / <i>Lilium</i>	3 to 4 feet	partial shade	mid-spring till fall depending on variety
Rain Lily / <i>Zephyranthes</i>	1 to 1.5 feet	sun to partial shade	early spring thru fall
Resurrection Lily, Magic Lily / <i>Lycoris</i>	1.5 feet	sun to partial shade	late spring
Spider Lily / <i>Hymenocallis</i>	1.5 to 2 feet	sun to partial shade	mid-summer
Elephant Ear / <i>Colocasia esculenta</i>	3 to 8 feet	sun to partial shade	mid-summer
Freesia5 to 1 foot	sun to partial shade	late fall till mid-spring
Giant Taro / <i>Alocasia macrorrhizos</i>	4 to 6 feet	partial shade	repeat bloomer
Gladiola / <i>Gladiolus x hortulanus</i>	3 to 4 feet	full sun	mid-summer
Canna / <i>Cannas x generalis</i>	4 to 6 feet	full sun	late spring till mid-summer
Lily of the Nile / <i>Agapanthus</i>	2 to 3 feet	full sun	late spring till mid-summer
Louisiana Iris / <i>Iris</i>	1.5 to 3 feet	sun to partial shade	early summer
Caladium / <i>Caladium bicolor</i>	1 to 1.5 feet	partial to full shade (<i>some varieties tolerate sun</i>)	not grown for blooms
Lily Turf / <i>Liriope</i>5 to 1 foot	partial to full sun	late summer till early fall
Monkey Grass / <i>Ophiopogon japonicus</i>	< .5 foot	full sun to full shade	not grown for blooms



6 Flowering Vines

Tropical-looking vines alone can create an exotic look in the garden. Their brilliantly colored flowers will cascade over fences, trellises and walls. Gathered from rain forests in South America and warm areas of Africa and the Orient, these vines flourish in the Upper Gulf Coast of Texas. Many have flowers that attract butterflies and hummingbirds, and some have scented flowers.



Allamanda

Allamanda

Allamanda cathartica (al-uh-MAN-da ka-THART-i-ka)

This beautiful yellow flowering vine has elliptical leaves five to six inches long arranged in whorls or opposite pairs along the stem. The stems, which become woody with age, must be trained to climb or they will sprawl. Also, the allamanda may be trimmed as a small shrub or hedge. The variety ‘Hendersonii’ has large flowers, sometimes six inches across. ‘Williamsii’ is smaller but produces more blooms, is slightly fragrant and more root-hardy. All varieties thrive in humus-enriched soil and full sun. Allamanda will not survive freezing temperatures.

Bleeding Heart Vine

Clerodendrum thomsoniae (kler-o-DEN-drum tomp-SO-nee-eye)

This native of West Africa is a twining vine-like shrub that prefers partial shade, especially for its roots. It can be partly deciduous in winter and may grow to 20 feet with support, adequate moisture and mulch. Its spectacular flowers are cream-colored and heart-shaped with protruding rays of crimson petals and long white stamens. Like all clerodendrums, the bleeding heart vine prefers enriched well-drained slightly acidic soil. Prune after its bloom cycle.



Bleeding Heart Vine

Bougainvillea

(boo-gan-VIL-lee-uh)

Bougainvillea, a Brazilian beauty, is one of Texas’ most beloved and popular tropical plants. The plant is named for Admiral Louis de Bougainvillea who discovered it in 1768 on a voyage to Brazil. A member of the four o’clock family, bougainvillea is a vigorous evergreen woody vine with spines. The blooms as we know them are not the true flower but are three large papery bracts that encircle the small inconspicuous white flowers within.

When planted in the ground, bougainvillea sends out long branches up to 10 feet with showy clusters of blooms on the ends, creating a beautiful cascading show of color. Encourage luxuriant growth by cutting the branches back to 18 to 20 inches. Bougainvillea prefers full sun and can bloom almost all year. Tolerant of cold, these vines will lose some leaves during the winter.

Bougainvillea can be trained in pots or hanging baskets by pruning the branches. Prune at any time of year but preferably in the fall after the plant finishes blooming. Potted plants are heavy feeders and flower best under stress, so keep the plant on the dry side, and allow it to become root bound. Use a good mix of well-rotted pine bark, peat moss and coarse perlite. Fertilize with a 9-5-9 slow-release lawn fertilizer. Cover or move to a protected location if a freeze is forecast.

Bougainvillea cuttings four to six inches long will root in a perlite peat moss mix with good drainage. Care should be taken when trans-



Bougainvillea

planting because the roots are very fine and do not form a good root ball. Varieties that perform well in the Upper Gulf Coast of Texas include: 'California Gold,' 'Barbara Karst,' 'Jamaica White,' 'Texas Dawn' and 'Surprise.' Bougainvillea is almost totally insect free.

Chalice Vine

Solandra maxima (so-LAN-druh MAX-i-ma)

Chalice vine is a heavy, thick-stemmed tropical vine with large shiny leaves and large bell-shaped golden flowers. The flowers are shaped like a chalice, six to 10 inches long with a four- to seven-inch opening.

The flowers exude a baby powder fragrance at night. Chalice vine blooms intermittently, but mostly in the winter. The thick and woody stems branch frequently and can run for more than 200 feet. The vine must be supported. All parts of this vine are poisonous.

Chalice vine thrives in well-drained soil. It tolerates severe pruning and blooms on new growth, so it can be cut back at any time of the year. It grows best in full sun to partial shade. Fertilize in the fall. It is tolerant of salt spray and salty soils. Chalice vine can be propagated from stem cuttings taken in summer. Pests may include spider mites and scale, which can be controlled with neem oil.

Coral Vine

Antigonon leptopus (an-TIG-o-nun LEP-to-pus)

Coral vine is a common and trouble-free vine, with large hanging clusters of pink, red, or white flowers that appear over a long growing season. It is a rampant grower, and often leaps from fence to tree. The heart-shaped leaves are light green and rough to the touch. The long clusters of flowers appear most readily in the late spring or early fall. These vines are drought tolerant and prefer full sun. They will thrive in almost any kind of soil but are sensitive to temperatures below 30°F. They must be root-protected at 20°F. Pruning back is necessary because this vine blooms on new growth.

Giant Dutchman's Pipe, Calico Flower

Aristolochia gigantea (a-ris-toh-LOH-kee-uh guy-GAN-tah)

Originally from the rainforests of Brazil, Dutchman's pipe produces an interesting flower that resembles a 19th-century Dutch pipe. It is an evergreen perennial used for screening or for ornamental cover. It grows rapidly and can reach six to 20 feet in height. The smooth stem is erect and somewhat twining. Dutchman's pipe's heart or kidney-shaped leaves are six to 14 inches wide. It blooms in the summer and fall. The flowers are aromatic, and their strong scent attracts insects. The inner part of the flower tube is covered with hairs, acting as a flytrap. Once the trapped fly is covered with pollen, the hairs wither and release it. Butterflies are attracted to the flowers as well. In fact, polydomus and



Chalice Vine



Coral Vine



Giant Dutchman's Pipe



Angelwing jasmine



Carolina yellow jasmine



Confederate jasmine

pipevine swallowtail butterflies use these vines as host plants. Dutchman's pipe grows best in full sun in rich well-drained soil. White-veined Dutchman's pipe (*A. fimbriata*) with its distinctive silver veins is a small vining variety used as a ground cover.

Jasmine

Jasmine is probably the South's favorite flowering vine. It is easy to grow, quick to establish and has an extraordinary floral display. Jasmine can be trained to grow on a fence or trellis, used as an informal ground cover under trees and can grown in containers and planters. Spreading from 15 to 40 feet, it may need some pruning to control it over time. The two-inch long leaves are oval shaped, glossy and dark green. In spring, the plant will turn a two-tone green with new growth.

Three species of jasmine are favored by gardeners in the Upper Gulf Coast of Texas: Angelwing jasmine, *Jasminum nitidum*, may also be grown as a shrub. It blooms almost constantly and has a pleasant fragrance. Carolina yellow jasmine, *Gelsemium sempervirens*, blooms in spring and early summer. The final jasmine is the Confederate jasmine, *Trachelospermum jasminoides*. It is very fragrant and blooms in the spring with delicate one-inch white pinwheel flowers.

Culture of Jasmine

Jasmine grows best in well-draining organic soil and can be drought-tolerant once established. It is pest free and easy to maintain. Propagation may be readily accomplished through the use of cuttings.

Mandevilla

Mandevilla (man-de-VIL-a)

Mandevillas are a large genus of vines and shrubs. They are natives of Central and South America. Mandevillas are evergreen with large leathery deep-green leaves and a sprawling growth habit. They prefer temperatures above 70°F. The popular variety 'Alice du Pont' has tubular deep pink flowers with a light yellow throat. The blooms, about four inches across and two inches long, grow in clusters at the end of each branch. This vine favors sun to partial shade and enriched moist soil. It will bloom spectacularly if fertilized regularly with fish emulsion or a balanced fertilizer like 20-20-20. It can be trained in almost any form, but needs support to climb.

M. boliviniensis can become a sprawling shrub or a trellis vine. Its stems are more slender than 'Alice du Pont.' The leaves are smaller, and flowers are pure white with a yellow throat. This species of mandevilla makes a good foundation plant or a container plant near a patio. The red varieties are also beautiful. Mandevilla pests include mealybug, scale, aphid, and whitefly.



Mandevilla

Passionflower

Passiflora (pass-iff-FLOR-uh)

Many hundreds of species of passionflower exist in the tropics as vines. They are generally prolific growers in any soil and are often seen stretching from fence to tree. Passionflowers are alluring to butterflies with their very large lobed leaves and remarkable blooms. Most often seen in our area is *P. caerulea* (see-ROOL-ee-a), whose flowers are white and purple.

A relatively new species in our area is *P. vitifolia* (vy-tee-FOL-lee-uh) with striking red petals and sepals, and a corona of purplish red to pink. Some people favor a lovely pink variety. Most species are the host plant for the Gulf Coast fritillary butterfly. These plants like full sun to partial shade and are not particular about soil but do need regular watering during dry spells. Passionflower vines thrive in high humidity.



Passionflower



Rangoon Creeper

Rangoon Creeper

Quisqualis indica (kwis-KWAH-lis IN-di-ka)

Rangoon creeper, a native of tropical Asia, is a very fast-growing vine that will rapidly overtake whatever supports it. It has a lush appearance with close-growing, light green deciduous leaves that hang like oval pendants from the plant. The bloom clusters are made up of as many as 12 long tubular red flowers with an unusual fragrance. As the flowers mature, they evolve from the green buds to white, to pink, and then red, producing a colorful display from spring through fall. In the moist mild climate of the Upper Gulf Coast of Texas, these vines can spread quickly. The rangoon creeper will return after a freeze. It blooms in the spring and will rebloom after a mid-summer pruning. This vine prefers regular moisture and sun to partial shade.

Flowering Vines

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Allamanda / <i>Allamanda cathartica</i>	4 to 6 feet	sun to partial shade	mid-summer till early fall
Bleeding Heart Vine / <i>Clerodendrum thomsoniae</i>	10 to 12 feet	sun to partial shade	late spring till early summer
Bougainvillea	8 to 10 feet	full sun	repeat bloomer from spring
Chalice Vine / <i>Solandra maxima</i>	30 to 40 feet	full sun	mid-fall till early spring
Coral Vine / <i>Antigonon leptopus</i>	30 to 40 feet	full sun	late spring thru summer
Dutchman's Pipe / <i>Aristolochia</i>	3 to 4 feet	light shade	spring till fall
Jasmine	6 to 8 feet	sun to partial shade	mid-spring till early summer
Mandevilla	15 to 20 feet	sun to partial shade	mid-spring till early summer
Passionflower / <i>Passiflora</i>	> 40 feet	full sun	mid-spring till early fall
Rangoon Creeper / <i>Quisqualis indica</i>	> 40 feet	sun to partial shade	late spring till early fall



7 Tropical Foliage

Tropical foliage, with rich colors, dramatic leaf shapes and lush textures can create a wonderfully exotic look. Many of these foliage plants are suitable for the Upper Gulf Coast of Texas. When planted according to instructions, all of the following plants are resistant to pests and diseases.

Bamboo

Culms are the technical name used for canes or stems of bamboo, an attractive grass that can, alone, add a tropical look to a garden scheme. Culms come in a variety of colors and range in heights from dwarf proportions of one foot to over 100 feet. The aggressive running bamboo that spreads rapidly is usually from temperate climates; the clumping bamboo, which slowly expands in all directions in a more controlled manner, is usually from tropical or subtropical regions.

'Alphonse Karr' Bamboo

Bambusa multiplex (bam-BOO-sub MUL-tih-pleks)

'Alphonse Karr' is a bamboo from China and is one of the most attractive evergreen clumping bamboos grown. Ornamental yellow gold culms are accented with irregular upright thin green stripes. The beautiful new shoots often emerge as pinkish red. This bamboo is known as a hedge bamboo with tight clusters of culms producing a thick privacy fence. Growing to 40 feet with two-inch diameter culms, this dense graceful bamboo also makes a striking focal point. 'Alphonse Karr' grows exceptionally well in a large container. It is very cold tolerant, withstanding temperatures of 15°F or lower. Low temperatures may cause it to lose leaves. The 'Alphonse Karr' can be grown in sun to partial shade in moist well-drained soil. Once established, this bamboo can tolerate drought.



'Alphonse Karr' Bamboo

Arrow Bamboo

Pseudosasa japonica (juh-PON-ih-kuh)

Arrow bamboo is the most popular running bamboo for creating a privacy fence. Although it can be aggressive, it is less invasive than other running types. Arrow bamboo can reach heights of 15 feet with culms up to one inch in diameter. The glossy foot-long evergreen leaves grow along the entire length of the culms, providing a thick screen. This bamboo does well in wet or dry conditions and is tolerant of wind and salt. Arrow bamboo does prefer well-drained soil in sun or shade. Classified as a temperate bamboo, it can tolerate temperatures as low as 0°F Arrow bamboo was used to make arrows in its native habitat of Japan.



Arrow Bamboo

Java Black Bamboo

Gigantochloa atrovioleacea (jy-gan-toh-KLOH-uh at-roh-vy-oh-LAH-see-uh)

Java black bamboo is a very popular species of bamboo in the Upper Gulf Coast of Texas. It is often used in the construction of fine furniture and musical instruments. Forming tight clumps at the base, this bamboo gradually arches out toward the top. When young, the culms are green but within a season will turn black. Java black bamboo can grow to 40 feet tall with three-inch diameter culms and will tolerate temperatures as low as 25°F. Large pointed leaves give the black bamboo a stunning tropical look. Originally from Java, this bamboo prefers afternoon sun and regular watering.



Java Black Bamboo

Mexican Weeping Bamboo

Otatea acuminata aztecorum (oh-ta-TAT-a a-cu-mi-NA-ta)

The thick mass of long narrow leaves on the Mexican weeping bamboo bends the narrow culms creating a waterfall effect. The culms, spaced one to two feet apart allow the bamboo to float softly in the breeze. Rising to 20 feet in height, this evergreen clumping bamboo is drought tolerant. Drying out between watering is beneficial. Raise it above the surrounding ground to avoid wet roots. This bamboo can take low temperatures to 20°F and prefers sun to part sun. Plant this bamboo in a raised bed. Mexican weeping bamboo is invasive, spreading each year as much as five feet in all directions, but it may be restricted by a two-foot deep barrier.



Mexican Weeping Bamboo

Painted Bamboo

Bambusa vulgaris vittata (bam-BOO-suh vul-GAIR-iss)

This giant bamboo has the most striking culms of all bamboos, although the culms are not as straight. Dark green streaks run vertically along the creamy golden yellow culms. The four-inch diameter culms are topped with masses of leaves creating a dense shade. Growing to 40 feet, painted bamboo is considered an open clumping bamboo with culms spaced a foot or two apart. Although not invasive, its footprint can get large, spreading about a foot a year in all directions. Be cautious when planting this bamboo as the strong roots can lift pavements, bricks, and flagstones. Full sun and consistently moist soil are very important. Being drought sensitive, this bamboo may dry out and its leaves shrivel up. Painted bamboo can tolerate temperatures to 27°F. A hard freeze may cause it to die to the ground but with warming weather, it will re-emerge. Young plants may be protected with the mulch. This ornamental bamboo is not recommended for pots. With shallow roots rarely more than two feet deep, this bamboo will not invade pipes.



Painted Bamboo



Punting Pole Bamboo

Punting Pole Bamboo

Bambusa tuldooides (bam-BOO-suh tool-DOY-deez)

Punting pole bamboo has thick strong olive green culms and is sought after by craftsmen for the weaving of baskets and in the construction of fences. Traditionally the culms were used to push boats down rivers, hence the name punting pole. Rapidly growing to 55 feet with two-inch diameter culms, the small leaves are typically five inches long. This evergreen clumping bamboo will make a nice hedge or may be used as a beautiful specimen plant. Pole bamboo performs best if planted in full sun to partial shade in moist well-drained soil. An average amount of watering will be sufficient; do not overwater. Originally from China, punting pole bamboo can survive temperatures to 19°F.

Culture of Bamboos

Propagation of bamboos may be accomplished through the spreading rhizomes or by division of plants. Ants, mealybugs, and scale can pose a problem in bamboos. By managing ants, gardeners may experience fewer problems with mealybugs and scale.

Bananas

MUSA (MEW-sub)

Gardeners have found that integrating the large lush leaves of ornamental bananas into a landscape is an effortless way to create a tropical setting and adds a unique texture.

Bananas also supply filtered shade for other tender plants. Grown in partial shade to full sun, the ornamental banana requires generous amounts of moisture and rich soil. A regular fertilizing schedule will keep the plants healthy, and protection from winds will help prevent shredding of the leaves. After the stalk produces fruit, it will die back and the plant will produce new stalks for next season.

Dwarf Pink Banana

M. velutina (vel-oo-TEE-nuh)

Originating from Asam in northeast India, the dwarf pink banana will grow to six feet. The midribs under the leaves are pink-red in color, and the small inedible velvety pink bananas on this plant are a show-stopper. When the bananas are ripe, they actually peel themselves.

Japanese Hardy Banana

M. basjoo (BAS-joo)

Japanese hardy banana is winter hardy banana and the trunk will survive 15°F temperatures. To flower and bloom, it does require 10 to 12 months frost free. The plant may rise to heights of 18 feet as it produces bright green six-foot long leaves. Rapidly developing at a rate of as much as two feet per week, this banana tree has a creamy yellow inflorescence, but the bananas are inedible. An attractive variegated form of this plant is also available.

Rojo Blood Banana

M. acuminata sumatrana (ah-kew-min-AY-thu soo-MAH-truh-nuh)

The trunk of the rojo blood banana is solid burgundy, while the leaves are embellished with beautiful burgundy streaks. From a distance the plant may appear to be bleeding, as the banana's inflorescence is also burgundy in color. Soaring to eight feet with enormous four-foot leaves, the rojo with its variegated foliage will add an attractive contrast to any landscape. Unfortunately, the fruit produced by this spectacular plant is inedible.



Dwarf Pink Banana



Japanese Hardy Banana



Rojo Blood Banana

Cordylines

Cordyline (kor-di-LY-nee)

Grown for its vibrant color and handsome foliage, *Cordyline* is native to Australia and New Zealand as well as to Asia and Polynesia.

Red Sensation

C. australis (aw-STRAL-iss)

In a frost-free climate the red sensation can soar to 25 feet in height. But along the Upper Gulf Coast of Texas it commonly grows four to six feet. The deep burgundy sword-like foliage spreads outward from the trunk forming a palm-like appearance. Cutting it back will force branching that results in a more lush plant. While fairly drought tolerant, red sensation will flourish with regular watering in well-drained soil. Let it dry out between watering. This plant is tolerant of salt air but not of salt in the soil. Requiring full sun or filtered shade, red sensation will die back in full shade.



Red Sensation

Ti Plant

C. fruticosa (fru-ti-CO-sa)

In Polynesia, the leaves of this plant are used for clothing, roof thatching, and woven leis. Boasting a combination of bold intense colors of fuchsia, burgundy, green, or cream, the ti plant can add an exciting tropical effect to any garden.

The wide leaves can extend to 30 inches and the plants to six feet in height. Planting in full sun or filtered shade will guarantee the best color results. Mature bottom leaves will yellow and die back leaving a stalk. Do not overwater, but take care not to let the soil become too dry. In winter watch for root rot if soil becomes excessively wet. Ti plants are more vulnerable to frost damage, not surviving below 25°F. Mulch heavily during the winter and cover if a freeze is expected.



Ti Plant

Culture of Cordylines

Propagation of Cordylines may be accomplished by rooting suckers, taking cuttings or by dividing the plants. Pests and diseases are not a problem as long as the gardener follows cultural recommendations given here.

Ferns

Ferns are ancient plants that typically grow under the canopy of a forest. Thousands of ferns grow worldwide in differing climatic conditions. Many ferns will flourish in the home garden, and their lush foliage will guarantee a tropical look.

Giant Sword Fern, Macho Fern

Nephrolepis biserrata (nef-roh-LEP-iss bi-SER-rah-tah)

Rising to six feet and called the macho fern because of its size, this plant will tolerate some drought but prefers moist well-drained soil. Overwatering can be harmful, so let the fern dry out between watering. Although it will thrive in filtered shade, the fern will grow in sun, partial sun and shade. A hard freeze may cause this fern to die to the ground, but with warming weather it will re-emerge.

Holly Fern

Cyrtomium falcatum (sir-TOH-mee-um fal-KAY-tum)

Holly fern is an evergreen whose shiny arching fronds resemble holly leaves. Gardeners have found the holly fern very easy to grow in partial to full shade. Favoring moisture but tolerating some dryness, this fern can be grown in alkaline or acidic well-drained soil enhanced with generous amounts of organic matter. Although a slow grower, the fern may attain a height of three feet and a width of four feet.



Giant Sword Fern



Holly Fern



Royal Fern



Southern Maidenhair Fern

Royal Fern

Osmunda regalis (os-MUN-duh re-GAY-liss)

The royal fern produces two kinds of fronds, making it one of the most dramatic of the fern family. Unlike other ferns that produce spores on the underside of fronds, the royal fern spawns a tall stalk with spore clusters that resemble flowers as it emerges from the middle of the broad bright green sterile fronds. This unusual fern will grow in standing water beside a pond or stream and can take full sun under these conditions. Growing up to six feet tall in partial shade to sun, it prefers slightly acidic soil.

Southern Maidenhair Fern

Adiantum capillus-veneris (ad-ee-AN-tum KAP-il-iss VEN-er-iss)

These small delicate lacy ferns can be found throughout the world growing in partial shade or full shade. They are evergreen along the Upper Gulf Coast of Texas. The slender black shiny stems and fan-like soft green leaflets make interesting contrasts in the garden. Grow them in moist well-drained soil as these ferns may become dormant or die if they dry out between watering. Maidenhair ferns require less acidity in the soil than other ferns.

Culture of Ferns

Ferns may be propagated by division or from spores; propagation by division is recommended for home gardeners. Gardeners can propagate them by dividing the rhizomes or the plants themselves for ferns with fibrous roots. Ferns may be divided in late fall after the first frost. There are few pests and diseases that will bother ferns.

Philodendron

Philodendron (fil-ob-DEN-dron)

Philodendrons can add a dramatic tropical statement to any garden. The leaves are glossy green and heavily lobed, some almost to midrib. All parts of these plants are poisonous if ingested, and anyone with sensitive skin may develop a rash upon contact.

Cut-leaf Philodendron, Selloum

P. bipinnatifidum (by-pin-uh-TIFF-ih-dum)

The large imposing leaves of the cut-leaf philodendron can grow to four feet in length. Leaves grow alternately on a thick trunk. Extensive aerial roots protruding from the trunk help stabilize the plant. Originally from Brazil, cut-leaf is the hardiest of all philodendrons. It will stay evergreen to 25°F. It needs shade or partial sun and rich, moist well-drained soil. This plant may grow 10 to 12 feet tall and nearly as wide with regular watering. Cut-leaf philodendron propagate by cuttings or by dividing the rootball.

Philodendron 'Xanadu'

This popular cultivar of the philodendron was discovered at a nursery in Australia. It is a dense compact shrub, growing slowly from two to four feet tall and up to six feet wide. The glossy, deeply lobed leaves may be a foot long. Grow 'Xanadu' in rich, moist well-drained soil in filtered shade. Protect it from the hot afternoon sun. Mulch heavily for the winter, and cover if a freeze is expected. This philodendron can be propagated by cuttings or by division.



Cut-leaf Philodendron



Philodendron 'Xanadu'



Cast Iron Plant

Other Tropical Foliage Plants

Strikingly different in their foliage, all of these tropical plants prefer shade.

Cast Iron Plant

Aspidistra elatior (ass-pi-DIS-truh ee-LAY-tee-or)

This is an easy-care evergreen that will add beautiful texture to the shady areas of any tropical-looking garden. The name “cast iron” is derived from its almost indestructible nature. It can be grown in poor soil, but well-drained high organic soil will enable the cast iron plant to flourish. Salt and sun may scorch its leaves, but any damaged leaves may be cut back to the ground. The flowers of the cast iron plant are inconspicuous, but the foliage can be stunning with its three-foot wide clumps of long dark green leaf stalks with dramatic pointed leaf blades. Cast iron plants originated in China and are available in several sizes and types. The cast iron plant was a stand out performer as they survived the salty flood water of Hurricane Ike in 2008.



Chocolate Plant

Chocolate Plant

Pseuderanthemum alatum (soo-der-RANTH-ee-mum a-LAY-tum)

Named for the chocolate or pinkish brown color of its leaves, the chocolate plant produces leaves six to 10 inches in length with silver blotches along the midrib and silver markings along the veins. Usually growing to 10 inches in height, this plant may be used as a groundcover. Small purple flowers on tall spikes will emerge in summer. Native to Mexico and Central America, the chocolate plant prefers partial shade and well-drained soil with average amounts of moisture.

Persian Shield

Strobilanthes dyerianus (stroh-bil-AN-theez dyer-ee-AN-us)

Native to Burma, this herbaceous shrub may grow to four feet in height with four to eight-inch leaves that range in color from a variegated green to an iridescent purple accented with silver gray. The Persian shield will perform best in moist well-drained soil with filtered shade in the morning and shade in the hot afternoon. In the Upper Gulf Coast area it can die to the ground after a freeze; however, if mulched, Persian shield will sprout again when the weather warms. Most often grown for the foliage, Persian shield will produce a purple flower. Pinching back new growth will ensure full and luxuriant development.



Persian Shield

Root Beer Plant

Piper auritum (PIP-er aw-RY-tum)

A beautiful herbaceous perennial and a member of the pepper family, this shrub has bamboo-like stems that can develop rapidly up to 10 feet. Huge heart-shaped velvety leaves can grow over a foot in length and if crushed or bruised exude the aroma of root beer. Native to Southern Mexico and Central America, the root beer plant requires significant moisture and grows best in partial shade to full shade in moist well-drained soil. Careful thought must be given before using this plant, as it is prone to be invasive through its proliferation of underground rhizomes.



Root Beer Plant



Tapioca Plant 'Variegata'

Tapioca Plant 'Variegata'

Manihot esculenta (Man-ee-hot es-kew-LEN-tuh)

A Texas Superstar plant with a buttery yellow center on eight-inch deeply lobed green leaves, this plant will make a bold statement in a tropical-looking garden. Each leaf is attached to the trunk with a red stem. Growing up to six feet, the tapioca plant can be grown as a shrub or trimmed into tree form. Preferring morning sun and filtered afternoon shade, it requires moist well-drained soil. Care must be taken not to overwater. A deciduous plant, the tapioca plant will lose its leaves in the fall. Though it may die back to the ground in a hard freeze, it will re-emerge as the weather warms. Gardeners may want to use mulch for winter protection.

Sago Palm

Cycas revoluta (SY-kas ree-vo-LU-ta)

The sago is an extremely popular garden plant, but most people do not realize it is not a true palm but another genus called *Cycad*. This spiky feather-leaved variety can be grown in full sun. However, when grown in shade, it will grow taller. The flower of the male plant resembles a cream colored corn cob, while the female plant produces a flower that looks like a cabbage head. Propagation of the sago palm is from the pups of the female plant. The sago flowers can be poisonous to dogs and children, and the sap is irritating to the skin.

Culture of Tropical Plants

When planted according to instructions, all of the above plants are naturally resistant to pests and diseases.

With the exception of the sago palm, propagation of the plants listed may be accomplished quite readily through the use of cuttings or the division of the root ball and division of the plant itself.



Sago Palm



Sago Palm, female



Sago Palm, male

How Jerry Created His Dream Jungle



Jerry Seymore arrived in Houston from Abilene, as a teenager straight out of high school. When he got off the bus, it was love at first sight: “Man, I’m never leaving here!” he vowed. The lush greenery of the Houston area captured him, heart and soul.

After some years, he found his special soul’s home. He fell in love with the big ancient oak trees on 4.5 acres around an old frame house. He bought the beautiful acreage and moved in with his wife Fern.

In 1986, Jerry and Fern went to Hawaii on vacation and were smitten with the tropical beauty of the plant life there. Though his property is technically zone 8, Jerry and Fern brought some tropicals back with them...and that was the beginning of Jerry’s Jungle.

The huge live oak trees served as the upper canopy and frost protectors for his tropical jungle below. Though some plants get nipped during very cold winters, and some have to hang out in the greenhouse until spring, his jungle thrives under the oaks. Though he planted many tropicals, his favorites turned out to be crinum. He began to hybridize them, and named one splendid 7-foot giant with a gorgeous flower, Katy Sue, after a granddaughter.

In 1992, Jerry went to Costa Rica and brought back the Brazilian Red Cloak, a fabulous bush, which he shared with Mercer Arboretum. Over the years, Jerry learned a great deal about adapting tropicals to an un-tropical place: Palms and cycads can tolerate a lot of cold while some tropical plants went belly-up at the first sign of cold weather. Some clerodendrons turned out to be invasive, and he grows root beer plant for the pretty foliage only. He never has disease or insect problems, as others in the area do. He is committed to using horse manure, because it is a great soil builder and doesn’t have salts in it, like other mulches. He often plants potted plants in the rich ground soil during the warm season and digs them up as winter approaches.

Though Jerry is not a commercial grower, he allows the public to come through his jungle three times a year and buy some of his treasures. After Fern died in March 2007, he still had his traditional open house in April — not wanting to disappoint his devoted gardening public.

*Interview and articles by
Deborah Repazs and Margie Jenke*



Jerry has had long experience in growing tropicals, and has several good tips to those who want to have their tropicals thrive.

1. He saves his newspapers, and puts about one inch of paper sheets around a plant. Then he wets it thoroughly, so the paper doesn't blow away.
2. He gets most of his plants through swaps, not from costly catalogues.
3. He mixes his own potting mix with a lot of topsoil, a little sand, and manure mulch. The mixture is heavy and holds moisture, perfect for tropical plants.
4. Black pots should be kept out of the sun. It both dries and cooks the roots of the plant.
5. You can acclimate some plants to different conditions. For instance, ginger can be easily acclimated if watered a lot.
6. Jerry is an organic gardener. He picks off bugs every day by hand, and waters. However, if he's gone and some bug moves in, he successfully uses insecticidal soap to treat aphids, mealybugs and other soft-bodied insect pests.
7. Jerry fertilizes daylilies and amaryllis only. The rest thrive in his rich manured soil.

Tropical Foliage

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
'Alphonse Karr' Bamboo / <i>Bambusa multiplex</i>	30 to 40 feet	sun to partial shade	no blooms
Arrow Bamboo / <i>Pseudosasa japonica</i>	6 to 10 feet	sun to partial shade	no blooms
Java Black Bamboo / <i>Gigantochloa atroviolacea</i>	> 40 feet	sun to partial shade	no blooms
Mexican Weeping Bamboo / <i>Otatea acuminata aztecorum</i>	15 to 30 feet	sun to partial shade	no blooms
Painted Bamboo / <i>Bambusa vulgaris vittata</i>	> 40 feet	full sun	no blooms
Punting Pole Bamboo / <i>Bambusa tuldooides</i>	> 40 feet	full sun	no blooms
Dwarf Pink Banana / <i>M. velutina</i>	3 to 4 feet	full sun to partial shade	late spring till early fall
Japanese Hardy Banana / <i>M. basjoo</i>	8 to 15 feet	full sun	mid-summer till early fall
Rojo Blood Banana / <i>M. acuminata sumatrana</i>	4 to 6 feet	full sun	late spring till early fall
Red Sensation / <i>C. australis</i>	2 to 4 feet	full sun to partial shade	mid-summer till early fall
Ti Plant / <i>C. fruticosa</i>	4 to 6 feet	full sun to partial shade	mid-spring
Giant Sword Fern / <i>Nephrolepis biserrata</i>	2 to 4 feet	sun to partial shade	no blooms
Holly Fern / <i>Cyrtomium falcatum</i>	1.5 to 2 feet	partial to full shade	no blooms
Royal Fern / <i>Osmunda regalis</i>	2 to 6 feet	sun to partial shade	no blooms
Southern Maidenhair Fern / <i>Adiantum capillus-veneris</i>	1.5 to 2 feet	partial to full shade	no blooms
Cut-leaf Philodendron, Selloum / <i>P. bipinnatifidum</i>	12 to 15 feet	sun to partial shade	late spring till early summer
Philodendron 'Xanadu'	2 to 6 feet	sun to partial shade	late spring till early summer
Cast Iron Plant / <i>Aspidistra elatior</i>	2 to 3 feet	partial to full shade	repeat bloomer
Chocolate Plant / <i>Pseuderanthemum alatum</i>	1 to 1.5 feet	sun to partial shade	blooms from spring
Persian Shield / <i>Strobilanthes dyerianus</i>	3 to 4 feet	partial to full shade	late spring till early summer
Root Beer Plant / <i>Piper auritum</i>	4 to 6 feet	partial to full shade	mid-summer till early fall
Tapioca Plant 'Variegata' / <i>Manihot esculenta</i>	4 to 6 feet	full sun	late spring till early summer
Sago Palm / <i>Cycas revoluta</i>	10 feet	partial shade to full shade	no blooms



The shrubs in this chapter produce spectacular flower shapes, including pinwheels, tubes, butterflies, hearts, and even musical notes. Leaves often exhibit contrasting veins or undersides. Many of these plants have originated from as far away as China, India and the Philippines and as close as Mexico. All have adapted well to the Upper Gulf Coast of Texas. In fact, several of the plants we consider shrubs in our warm climate are called perennials in areas where they grow much shorter or die back completely in winter. Others can become trees in our climate if allowed to grow naturally or if pruned to a tree shape.



Angel Trumpet



Carnation of India

Angel Trumpet

Brugmansia (broog-MAN-zee-ah)

Angel trumpets grow into woody perennial shrubs or trees in tropical climates and are vulnerable to cold temperatures. They should be heavily mulched in winter. Their blooms hang down and come in several shades of orange, pink, yellow and white. Angel trumpets are a cousin of tomatoes, tobacco and petunias, and a close relative of the jimsonweed. They are fast growing, reaching a height of 15 feet. They can be pruned or grown in containers. Angel trumpet blooms are beautiful bell-shaped flowers seven to 14 inches long dangling like trumpets. It blooms profusely in spring and fall and lightly in the summer. All parts of this plant are poisonous. Angel trumpets grow well in a sunny, sheltered spot. The soil should be light, organically rich and well drained. During the growing season, angel trumpets need frequent watering and a balanced 20-20-20 fertilizer monthly to stimulate new growth and flowers. If leaves turn yellow, use a high-nitrogen fertilizer. Use a high-phosphorus fertilizer on reluctant bloomers. Propagate angel trumpet by taking six to eight-inch long cuttings from half-ripened wood in the fall. Remove the lower leaves and stick the cutting in the ground. Angel trumpets do not have serious insect or disease problems.

Carnation of India

Tabernaemontana divaricata (tab-ur-nee-mahn-TAN-a di-vair-i-KATT-a)

Carnation of India is a large multi-branched shrub that can be trained to be a small tree. Its leaves are 6- to 8-inch leathery elongated ellipses in a deep green hue. These plants are prized for their fragrant nocturnal blooms that appear year-round. The flowers are clustered, tubular white waxy blossoms in the shape of a 1½-inch pinwheel. There are single and double-flowered cultivars. The shrub will be damaged below 30°F but will recover from the roots. Carnation of India prefers sun to partial shade, average water and well-drained soil. These plants are a fine addition to a shrub border and make excellent container plants. Prune only after flowering.

Cuphea

Cuphea (KYOO-fee-uh)

Cuphea species range from perennials to shrubs on the Upper Gulf Coast of Texas where many bloom year round. Most are carefree, and all have tubular flowers attractive to hummingbirds, butterflies and bees. Cupheas bloom best in full sun but will tolerate partial shade. Most are drought tolerant. Plant in raised beds. Propagate from woody or softwood cuttings.

Cigar Plant, Firecracker Plant

C. Ignea (IG-nee-uh)

The cigar plant is a nonstop bloomer growing three feet tall and wide. It has red or orange flowers. A popular variety is 'David Varsity.' It grows to six feet with orange-red flowers or pink flowers with white and purple fringes. The small green leaves are evergreen with pointed tips that may develop a purplish hue in winter.

Bat-Face Cuphea

C. lavea (LAH-vay-uh)

Named because the red and dark purple-to-black flower resembles a bat's face, this shrub grows to three feet.



Cigar Plant



Bat-Face Cuphea

Clerodendrum

Clerodendrum (kler-ob-DEN-drum)

A small handful of the hundreds of species of clerodendrums can do well along the Upper Gulf Coast of Texas. This group of shrubs produces exotic and fragrant blooms that hummingbirds and butterflies find irresistible. Clerodendrums are easily propagated through the use of cuttings, transplanting of offshoots and volunteer seedlings. Some may become invasive through the proliferation of offshoots.

Bridal's Veil

C. wallichii (wahl-IK-ee-eye)

From Thanksgiving to Christmas, a long cascade of lavish white blooms will appear on the bridal's veil bush. The oblong leaves are glossy green, deep veined and wrinkly. This shrub can grow to eight feet in Galveston County. Plant in partial shade in moist well-drained enriched soil. The roots need to be protected with mulch in a hard freeze.



Bridal's Veil

Butterfly

C. ugandense (yoo-gand-EN-see)

The butterfly clerodendrum flower looks like a butterfly in flight. Its long arching branches hold leaves that are soft to the touch, and it blooms year round. Butterfly clerodendrum can freeze to the ground but will re-emerge from the roots. The butterfly clerodendrum will flourish when planted in sun to partial shade in moist well-drained soil. They range in size from eight to 10 feet tall.



Butterfly

Cashmere Bouquet

C. bungei (BUN-jee-eye)

Eight-inch clusters of fragrant blooms appear from summer to fall. Its foliage will produce an unpleasant odor when bruised. Cashmere bouquet prefers sun to partial shade and moist well-drained soil. This fast growing shrub will attain heights of four to six feet. Cashmere bouquet is extremely aggressive and will become invasive if not carefully tended.

Musical Note

C. incisum (in-KYE-sum)

Named for its large tubular white buds in the form of musical notes, the musical note will quickly grow to four feet in height. Grown in full morning sun, filtered shade, or partial shade, this clerodendrum needs protection from hot afternoon sun. This plant prefers moist well-drained soil but will tolerate some dry periods. Overwatering can become a problem, so let the soil dry out between watering. Musical note clerodendrum needs winter protection, so mulch and cover if a freeze is expected.

Shooting Star

C. quadriloculare (kawh-drih-lok-yoo-LAIE-ee)

This clerodendrum from the Philippines is a stunning plant grown for both its foliage and its flowers with large spheres of blooms that resemble fireworks bursting with color. The contrast in the large oblong leaves with their deep green tops and purple undersides is striking, and it is one of the reasons that this plant has become popular with area gardeners. Because it traditionally blooms in the winter months, a drop in temperature to 35 or 40° F may cause the shooting star to become dormant, losing all of its foliage. It will slowly sprout from its limbs when warm weather returns. Shooting star can grow to a height of eight feet when planted in a sunny or partially sunny spot. It needs moist well-draining soil. A variegated variety of this plant has white and burgundy leaves on top and a dark rich burgundy underside.



Cashmere Bouquet



Musical Note



Shooting Star, Variegated



Esperanza, Yellow Bells

Esperanza, Yellow Bells

Tacoma stans (tek-OH-muh stanz)

This deciduous shrub produces many two-inch bright yellow bell-shaped flowers from late spring to winter. Esperanza likes full sun and average watering. It will grow three to five feet in height. To propagate, let the seed pods dry on the plant; then break them open and collect the seeds. Plant them in raised beds in fertile garden soil with high organic matter. A popular cultivar for our area is 'Gold Star.'

Firespike

Odontonema Callistachyum (oh-don-toh-NEM-um kal-lis-Stay-kee-um),

Firespike is a relatively care free shade loving, tender tropical perennial with deep green glossy leaves. Its name comes from the blooms that grow above the foliage on a long shoot. Firespike is one of the best blooming plants for shady areas. Its brilliant spikes of deep red, fuchsia violet and purple are cherished by hummingbirds, bees and butterflies. Firespike can be grown outdoors along the Upper Gulf Coast of Texas as an annual that grows about two feet the first season. If it survives the winter as a protected perennial, firespike can grow from four to 10 feet tall and blooms continuously in cool weather. It can be grown in heavy clay soils and wet conditions. If it freezes, it will re-sprout in the spring. Fertilize through the growing season with an all-purpose fertilizer. Water regularly, but don't overwater. Potted in late fall, it can be used as a blooming houseplant throughout the winter.



Firespike

Firecracker Plant, Fountain Plant

Russelia equisetiformis (russ-EL-ee-uh-eck-kwis-ee-tih-FOR-mis)

Fountain plant, an evergreen shrub, produces half-inch tubular flowers all along its cascading stems spring, summer, and fall. If planted in a raised planter or on a hillside, the arching stems fall gracefully like water from a fountain. This native of Central Mexico performs best with direct sun exposure but will bloom in part shade. The tubular flowers come in several colors, but the common ones are red and yellow. Both colors attract hummingbirds and butterflies. Fountain plant grows about four feet by four feet. Stems that touch the ground will root, making it easy to propagate. It may also be grown in hanging baskets. In the ground, fountain plant requires average watering and is generally care free.



Firecracker Plant

Gardenia

Gardenia jasminoides (gar-DEEN-ee-a jaz-mi-NOY-deez)

Gardenias are prized for their heavily scented blooms. Some of these evergreen shrubs can grow to 12 feet tall but most grow four to eight feet tall. The flowers bloom in spring. They require humus-enriched acidic soil, similar to azaleas. Regular applications of azalea, gardenia food or fish emulsion will greatly enhance blooming and healthy growth. Gardenias prefer well-watered soil yet must have good drainage. Pests include mealybug, scale, and whitefly.



Gardenia

Hummingbird Bush

Hamelia patens (ham-EE-lee-uh PAT-ens)

Here is another shrub that hummingbirds love. Red-orange tubular flowers cover this six to 10 foot tall shrub from early summer to late fall. Hummingbird bush then produces shiny black seeds that attract birds in the winter. The plant performs best in full sun and well-drained soil. Frosty nights in the winter will cause it to lose its leaves and even die back, but it will return from the roots in spring. In mild winters hummingbird bush remains semi-evergreen. To propagate, plant the black seeds.



Hummingbird Bush

Ixora

Ixora coccinea (IX-or-a kabk-SIN-ee-a)

Ixoras can vary from small, medium, or large shrubs with a spread of four to 10 feet. Ixoras are slow growers, dense, and compact. They are evergreen. Shades of red or orange, bright pink or yellow are available. Hybrids have even larger flower clusters. Ixoras love sun and water and prefer moist, well-drained acidic soil. Propagate from cuttings. Ixoras are attractive to butterflies.



Ixora



Shrimp Plant

Shrimp Plant

Justicia brandegeana (jus-TIS-ee-a bran-dej-ee-AHN-a)

This native of Mexico is a favorite of Gulf Coast gardeners. It is a broad shrub with leggy stems that can grow to three or four sprawling feet. The pinkish bronze-colored bracts that appear on the end of the stems look like shrimp and may be several inches in length. For best results and continuous summer blooms, plant in full sun to partial shade. The shrimp plant can tolerate poor soil and short dry periods but does need water in prolonged drought situations. Propagate from cuttings.

Flowering Shrubs

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Angel Trumpet / <i>Brugmansia</i>	6 to 12 feet	sun to partial shade	late spring till early fall
Carnation of India / <i>Tabernaemontana divaricata</i>	4 to 6 feet	sun to partial shade	mid-spring till early summer
Cigar Plant / <i>C. Ignea</i>	1 to 1.5 feet	sun to partial shade	all year after spring
Bat-Face Cuphea / <i>C. lavea</i>	1.5 to 2 feet	sun to partial shade	late spring till early fall
Butterfly Clerodendrum / <i>C. ugandense</i>	8 to 10 feet	sun to partial shade	late spring till fall
Cashmere Bouquet Clerodendrum / <i>C. bungei</i>	4 to 6 feet	sun to partial shade	mid-summer
Musical Note Clerodendrum / <i>C. incisum</i>	2 to 3 feet	full sun	all year from spring
Shooting Star Clerodendrum / <i>C. quadriloculare</i>	8 to 10 feet	sun to partial shade	spring till early summer
Esperanza, Yellow Bells / <i>Tacoma stans</i>	10 to 12 feet	full sun	late summer thru fall
Firespike / <i>Odontonema Callistachyum</i>	3 to 4 feet	sun to partial shade	spring till winter
Firecracker Plant / <i>Russelia equisataformis</i>	2 to 6 feet	sun to partial shade	late spring till early fall
Gardenia / <i>Gardenia jasminoides</i>	4 to 8 feet	sun to partial shade	late spring till mid summer
Hummingbird Bush / <i>Hamelia patens</i>	8 to 10 feet	full sun	late spring till winter
Ixora / <i>Ixora coccinea</i>	3 to 4 feet	sun to partial shade	late spring thru early fall
Shrimp Plant / <i>Justicia brandegeana</i>	3 to 4 feet	sun to partial shade	late spring thru early fall



While the flowers of many northern trees are small and insignificant, those of tropical and subtropical climates can be spectacular and may flower for many months. For instance, there are many magnificent flowering varieties of bauhinias and plumerias that thrive on the Upper Gulf Coast of Texas.

Bauhinia

(Bah-HIN-ee-uh)

Known as the orchid tree, bauhinia is a spectacular focal point in any landscape when used as a shade tree or integrated into shrubbery borders. Bauhinia is attractive to bees, butterflies, and birds and can get as large as 20 to 40 feet in height and 10 to 20 feet in width. It will benefit from pruning in early stages to form a suitable shape for the landscape. If Bauhinia is left unpruned, it grows multiple trunks and branches. They can be quite spectacular for open-spaced areas, but those branches may break in strong winds. Bauhinia can be quite messy with oversized leaves that decompose slowly on the ground. Their foot-long flat brown woody pods tend to drop before the leaves. Bauhinias usually bloom within three to four years starting in late winter through early summer. The flowers are very ornate, orchid-like petals of magenta, lavender, purplish blue, purple, red, pink, yellow, white or variegated. Bauhinia grows best in full sun or high, shifting shade. It requires regular and thorough watering and should be almost dry before watering again. During the winter months, only water when the soil is nearly “dust dry.” Bauhinias are mildly tolerant of salty conditions and favor well-drained, loam-based compost. In spring, fertilize bauhinias with a high-phosphorus plant food to encourage new growth.



Anacacho Orchid Tree

Anacacho Orchid Tree

B. lunarioides (loo-nair-ree-OY-dees)

Anacacho orchid tree is fast growing with a small single trunk reaching a maximum height of 12 feet and a width of 10 feet. Clusters of white flowers appear in mid-spring continuing through fall. This tree does best in full sun, warm temperatures, and a moist well-drained soil with moderate watering.



Dwarf White Bauhinia

Dwarf White Bauhinia

B. acuminata (ah-kew-min-AY-tuh)

This tree is commonly called a dwarf because it only grows to 10 feet. Originally from Malaysia, the dwarf white bauhinia does well in semi-tropical, humid climates and is perfect for places with limited space. Over time, the tree will develop several trunks, but it can be trained to grow from a single trunk. The tree's branches droop a bit as it matures, but pruning will keep the crown strong. Dwarf white bauhinia produces small, white flowers often described as doves, snowflakes, or butterflies hanging from the branches. Under the right conditions, it will flower almost continually from spring through fall. Dwarf white bauhinia thrives best in full sun or partial shade with well-drained, moist soil. It also does well as a container plant.

Mexican Orchid Tree

B. mexicana (meks-sih-KAY-nuh)

No small flowering tree attracts more butterflies or hummingbirds than the Mexican orchid tree. With its non-invasive root system, the Mexican orchid tree may grow 10 to 18 feet tall and 15 to 25 feet wide. It is multi-trunked with impressive white or pale pink flowers that bloom nonstop from early summer through fall. Mexican orchid tree prefers a southern exposure in a semi-protected area. Tolerant of dry conditions and most soils, it is also less affected by salt air than any other bauhinia.

Purple Bauhinia

B. purpurea (pur-PUR-ee-uh)

Purple bauphinia is an exotic tropical that blooms for long periods. It is fast growing, reaching maturity in less than two years and blooming within three to four years. It should be provided a warm environment with rich, moist well-drained soil. It blooms in summer through early winter. Long pods, resembling French beans, develop among the leaves. This is a beautiful orchid tree with numerous, five-petaled blooms in almost white to pink to royal purple hues. Purple bauphinia will flourish fertile soil and prefers partial shade or full sun with regular watering. This is another bauphinia that looks best if cut back in fall, for it can reach 15 to 30 feet in height with a width of 12 to 20 feet.



Mexican Orchid Tree



Purple Bauhinia



Camphor Tree

Camphor Tree

Cinnamomum camphora (*sin-na-MO-Mum kam-FOR-uh*)

Native to eastern China, Taiwan, and southern Japan, the camphor tree is readily adaptable to the Upper Gulf Coast of Texas. It may reach heights of 50 feet with a wide spread. The bark of the camphor tree is cinnamon in color, maturing to a gray-brown. The leaves are oval, elliptical and glossy. The leaves and wood are strongly aromatic of camphor. New leaf growth is often pink and bronze, giving the tree the look of being in bloom. The actual blooms are insignificant green to white flowers. Mature berries are black, plentiful, and attractive to birds, but they may be a nuisance on walkways. Camphor trees flourish in sunny locations in well-drained soil.



Golden Rain Tree

Golden Rain Tree

Koelreuteria bipinnata (*kel-roo-TER-ee-a by-pin-NAIT-a*)

The golden rain tree is a medium-sized, fast-growing, deciduous tree, named for its large golden flower clusters that appear in September and October. It is a southwestern China native that can grow to a height of 40 feet. The two foot long pinnate leaves have a fern-like appearance, and the pink fruit and long lasting seedpod are remarkable. These trees prefer sun to partial shade. Plant the golden rain tree away from building foundations, sewer lines and other planting beds, as the roots can be invasive. However, the tree will do well when confined to a small space surrounded by sidewalk or curbing.

Palms

Palms are the universal symbol of the tropics in our imagination and immediately give an exotic ambience to a landscape. Generally palms can have either feather-shaped or fan-shaped leaves. Though some species of palms do survive in colder climates like Scotland or Japan, the palms that grow best in the Upper Gulf Coast of Texas are tropical in nature and are not hardy below 25°F.

Canary Island Date Palm

Phoenix canariensis (Fee-niks kuh-nair-ee-EN-sis)

The Canary Island date palm is an attractive, single-trunked tree growing slowly to maturity at a height of 50 to 60 feet. The foliage of this palm forms a distinctive crown. Individual fronds may reach eight to 10 feet in length with sharp spines at the base. Although the large size of this palm may limit its use in small yards, it is a favorite for the Upper Gulf Coast of Texas because it does not drop messy fruit as does the date palm. The attractive diamond pattern on the trunk, which can reach four feet in diameter, is formed from leaf scars. Flowers, which are hardly noticeable, form clusters of orange, date-like fruit. Canary Island date palm is cold hardy and does well in a variety of soil conditions.

Date Palm

Phoenix dactylifera (FEE-niks dak-ty-LIF-er-uh)

This tall, stately feather-leaved variety has been cultivated for its fruit for thousands of years and was introduced to California by the Spaniards in the 1700s. In our region, the tree can grow rapidly from 80 to 100 feet. However, because of the humidity in this area, the date palm produces a marginal fruit crop at best and is rarely planted in the landscape for that purpose.



Canary Island Date Palm



Date Palm



Mexican Fan

Mexican Fan

Washingtonia robusta (wa-shing-TO-ni-a ro-BUS-ta)

This fast growing palm can reach heights from 40 to 100 feet. As fan-shaped leaves die and fall down against the trunk, they give off the appearance of a “hula skirt.” Most people trim off the dead leaves in the spring to keep the tree’s appearance tidy and to prevent infestation by rodents and snakes.

Pindo Palm

Butia capitata (BEW-tee-uh ca-pee-TA-ta)

The hardiest of the feather-leaved palms, this tree can grow to 20 feet or more. The tree’s growth is slow, and it is rarely damaged by cold weather. Plant in full sun or light shade. This variety produces cream-colored blossoms and can produce edible orange fruits that can be made into preserves or jelly.



Pindo Palm

Windmill Palm

Trachycarpus fortunei (trak-ee-KAR-pus for-TOO-nee-eye)

This fan-shaped leafed tree can grow up to 40 feet. The trunk is covered with hairy fibers that eventually fall off or can be trimmed to give a smoother-looking trunk appearance. This palm grows well in sun or shade.

Queen Palm

Cocos plumosa (Koh-kohs plum-OH-sub)

This palm is fast growing and can rise to a height of 50 feet or more. It is self-cleaning — that is, the dead feather-shaped leaves fall away from the trunk. The queen palm is not very cold hardy; we were surprized at the extent of cold weather damage that this palm suffered in the January 2110 freeze. It's best to plant this tree in a protected and sunny area, such as the south or southeast side of a building. The tree produces tiny yellow blossoms that become clusters of nut-like yellow seeds, creating a bit of a mess in the landscape.



Windmill Palm



Queen Palm



Palm with layer of mulch



Correct staking of palms

Culture of Palms

Palms are usually sold either potted or balled in burlap. The best time of year to plant is during the warmer months when the soil temperature is at least 65°F. The most important factor in a palm tree's health is a sandy, enriched soil. Compacted, nutrient-deficient soils or heavy clay soils need to be amended. When planting palms, make sure the tree is placed in the hole so that half the roots are above ground level. More enriched soil should then be mounded around the exposed roots. Top with a two- or three-inch layer of organic mulch, wood chips (not cypress), pine straw, compost or other suitable material.

Newly planted palms should be staked until well established. Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes that will give as the tree moves. About one year after planting, when the roots can support the tree upright, the stakes should be removed so as not to girdle and damage the tree. Water every few days when first planted. When the roots start becoming established after a couple months, water once a week if necessary. Do not allow the soil to dry out completely during this time period, as it will severely weaken your new palm. Avoid sprinklers hitting the tree trunk as this could damage the bark.

Fertilize every month from March to November with a palm-formulated fertilizer containing manganese and iron. Avoid high nitrogen fertilizers that can burn palm tree roots. When a hard freeze is in the weather forecast, cover the top growing leaves whenever possible or put Christmas lights high in the trees to keep ambient temperatures warmer.

Palms are remarkably resistant to pests and diseases unless in poor health. The most effective form of control is to keep palms healthy by proper maintenance.

Plumeria, Frangipani

Plumeria rubra (ploo-MER-ee-a ROOB-ra)

Plumerias have become very popular along the Upper Gulf Coast of Texas. They can grow as small trees to a height of 20 feet, but some dwarf cultivars are more suitable for growing in pots so they can be moved to a protected area in cold weather. Plumerias have an open crown of 10 to 12 inches long large elliptical leaves that grow at the end of the branches. The stems are thick and easily broken, and the blooms are waxy, five-petaled, with somewhat overlapping lobes. Different cultivars and hybrids have various-colored fragrant flowers of white, yellow, pink and even red or bi-colored. Plumerias prefer sun, but can take some partial shade. Plant in a sandy well-drained soil that has been enriched with humus. Plumerias are very tolerant of salt spray and can be grown near the seashore. They may be planted in beds in a frost-free climate, are excellent container plants, and are easily propagated from cuttings. Be sure to let the cutting dry for a few days to a week before planting it in slightly moist sand. Plumerias may be easily transplanted, as they do not have extensive root systems.

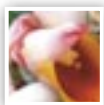


Plumeria

Flowering Trees

COMMON/BOTANICAL NAME	HEIGHT	LIGHT	BLOOMING CYCLE
Anacacho Orchid Tree / <i>B. lunarioides</i>	8 to 12 feet	full sun	mid-spring till early summer
Dwarf White Bauhinia / <i>B. acuminata</i>	6 to 8 feet	sun to partial shade	late spring thru early fall
Mexican Orchid Tree / <i>B. mexicana</i>	8 to 12 feet	full sun	mid-spring till early summer
Camphor Tree / <i>Cinnamomum camphora</i>	> 40 feet	sun to partial shade	late winter till mid-fall
Golden Rain Tree / <i>Soapberry Koelreuteria bipinnata</i>	> 40 feet	full sun	mid-summer till early fall
Canary Island Date Palm / <i>Phoenix canariensis</i>	> 40 feet	full sun	late spring till early summer
Date Palm / <i>Phoenix dactylifera</i>	> 40 feet	sun to partial shade	late summer till early fall
Mexican Fan / <i>Washingtonia robusta</i>	> 40 feet	full sun	late summer till early fall
Windmill Palm / <i>Trachycarpus fortunei</i>	8 to 10 feet	sun to partial shade	late spring till early summer
Plumeria / <i>Plumeria rubra</i>	6 to 30 feet	full sun to partial shade	late spring till early fall depending on variety

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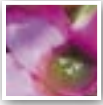
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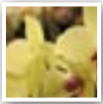
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Renee Haase of Spring Orchids, 22332 Gosling Road, Spring, Texas. 77389



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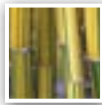
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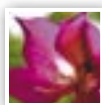
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- CayDee Caldwell of Caldwell Nursery, 2436 Band Road, Rosenberg, Texas. 77471



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- #### REGIONAL EXPERTS
- Carol Maas of Maas Nursery, 5511 Todville Road,
 Seabrook, Texas 77586



Just like our gardens, this book took lots of people.

It has been an exciting experience to watch Galveston County Master Gardeners come together to produce six books since 1990. The list includes *“The Butterflies of Galveston County,”* *“A Thumbnail Guide for New Gardeners in Galveston County,”* *“Ambrosia from Your Backyard - Growing Citrus Fruit on the Upper Gulf Coast of Texas,”* *“Herbs from the Upper Gulf Coast of Texas,”* *“Bilingual Guide to Yard Care - Basic Words and Phrases,”* *“The Edible Landscape,”* and now *“Creating the Tropical Look: Low-care Tropicals for the Upper Gulf Coast of Texas.”* These are now available in hard copy and on our website as downloadable PDFs.

This book has raised the bar. The number of people involved in the production set a new record; as you can see from the inside title page, the list is large. Its length created new situations not experienced before. Each chapter required a different writer and the search for photos was endless. Because of such a large number of photos required, a more efficient photo cataloging method had to be found. A group called “Digital Library Editors” spent 100s of hours just identifying and cataloging our photographs to make them more accessible for this project.

What is here is another gem, but unique to it is the information. It includes our three unique growing environments of the county and also knowledge gained from Hurricane Ike in the early part of the work on this book, then, through an unusually long drought. This book shows the survivors, just like these Master Gardeners have become.

Dr. William M. Johnson

Galveston County Extension Horticulture Agent