NATIVE LOW WATER USE PLANTS FOR MONTGOMERY COUNTY

Big Trees:

American Elm (Ulmus americana) - best in sandy soil but will grow in heavy soils if well drained, fast growing, seeds are good for birds and small mammals. The species usually grows 60-80 ft. Dark-green leaves have variable fall color. Large, handsome, graceful tree, often with enlarged buttresses at base, usually forked into many spreading branches, drooping at ends, forming a very broad, rounded, flat-topped or vaselike crown, often wider than high. It is a larval host for the Mourning Cloak, Columbia silkmoth, Question Mark butterfly, Painted Lady butterfly, Comma butterfly.

Black Hickory (Carya texana) - drought tolerant, medium to large tree, usually 60 to 75 feet tall, with a dark trunk 2 feet in diameter and short, gnarled branches that give the tree a narrow, oval crown of dark green foliage, grows from East Texas south and west to the Hill Country and San Antonio, growing on well-drained hillsides and sandy uplands with post and blackjack oaks. Edible nuts are food for many mammals. Serves as a primary host for some magnificent moths, including the Luna, funeral dagger, and giant regal. Also host for Banded hairstreak butterfly.

Bur Oak (Quercus macrocarpa) - huge leaves, large 2" acorns, drought tolerant, used by birds and mammals, grows in any soil. The species name macrocarpa, refers to the golf ball sized acorns of this tree. Will grow to 80 feet tall. The leaves of bur oak also are large, so they are easy to rake. Bur oak is drought resistant, long-lived and reasonably fast-growing for an oak. Tolerates limey soils better than other oaks. Resistant to oak wilt and a number of other problems. Sensitive to root zone disturbance caused by construction. Larval host plant for Edwards Hairstreak and Horaces Duskywing butterflies.

Catalpa or Fish Bait tree (Catalpa bignoniodes) - any soil, drought tolerant once established, moist bottomlands, edge of woods, host for Catalpa sphinx moth, large clusters of white flowers in the spring followed by long beans eaten by wildlife, deciduous, ugly duckling when small but grows into a beautiful shade tree.

Cedar Elm (Ulmus crassifolia) - food for turkeys & small mammals, yellow leafs in fall, grows in any soil and is drought tolerant and able to withstand seasonal flooding. Cedar elm is a large, oval-rounded tree growing 50-70 ft. high and 40-60 ft. wide. Bark is scaly and the drooping branches have corky ridges. Dark-green leaves are small and rough-textured. Leaves much smaller than those of the American Elm, Fall foliage is yellow except in the southern part of the range where it is evergreen. Tree with rounded crown of drooping branches and the smallest leaves of any native elm. This is a common native elm in east Texas where it is planted for shade. Called Cedar Elm because of the rough, cedar scale-like texture of the leaves and because it is often found in the western part of its range with Ashe Juniper (*Juniperus ashei*), which is locally called cedar. Cedar elm is a nicely-proportioned, hardy, drought tolerant shade tree for a broad range of soil types. It brings vivid yellow color to the landscape in autumn. No need to rake the small leaves—they compost nicely. Young trees have

corky wings on their branches. The Mourning Cloak and Question Mark butterflies use it for larval food. Withstands drought and heavy, infertile soils. Susceptible to Dutch elm disease. Reasonably fast-growing.

Chinkapin Oak (*Quercus muehlenbergii*) - A tree with light gray platy or scaly bark and smooth, gray twigs changing to brown on the current year's leaf-bearing growth. Leaves up to 8 inches long and 4 1/2 inches wide with their widest part nearer the apex than the base. Larger leaves broadly rounded from the widest part to the apex and tapered to the base, the smaller ones narrower, leaf margins shallowly lobed or coarsely toothed, each lobe or tooth with a minute tip; the upper surface smooth, with a sheen, the lower surface dull. Flowers inconspicuous in narrow clusters. Fruit an acorn up to 1 inch long and 3/4 inch wide. Medium to large tree 45 - 110 feet (19.8 - 33.5 m), leaves shiny dark green above, light green with minute pubescence below, often fall color, acorns annual; 1 - 2 acorns on peduncle 1/4 inch (6 mm) in length; thin cup with gray pubescence, covering 1/4 - 1/2 of the nut; light brown, oblong to ovoid nut, 5/8 - 1 inch (15 - 25 mm) long. Used by Birds , Butterflies , Hummingbirds. Larval host for Gray Hairstreak butterfly.

Drummond Red Maple also known as Swamp Maple (*Acer rubrum* L. var. *drummondii*) - medium water use but drought tolerant once established, best in part shade or afternoon shade, tolerates wet soils, prefers slightly acidic soils, sands, sandy loams, medium loams, clay loams, and clays, seeds consumed by a variety of birds and squirrels, leaves eaten by deer. Entire plant used by a number of moths and other insects, larval host for a number of sphinx moths.

Eastern Black Walnut (Juglan nigra) - deep taproot makes transplanting difficult, grows best with consistent moisture, drought tolerant once established. Black walnut is a large, rugged, deciduous tree, 50-75 ft. in height and width, sometimes reaching 150 ft. tall. Dark, furrowed bark on the trunk. Wide-spreading branches form an upright, umbrella-like crown in the woods or a round-topped crown in the open. The well-formed trunk is usually devoid of branches a considerable distance from the ground. Leaves up to 2 feet long with 5 to 11 pairs of leaflets along a central axis and a single leaflet at the tip; midrib of the lateral leaflets off-center with the wider part of the blade toward the leaf tip. Leaflets emerge very late in spring and are yellow-green. Fall color is clear yellow, unless the tree has been troubled with insects or leaf blight. Flowers inconspicuous, in elongate, green clusters. Fruit 1 1/2 to 2 1/4 inches in diameter, consisting of a hard-shelled, furrowed nut enclosed in a green husk, darker when ripe. Squirrels love the nuts. Black walnut is the preferred host of the Luna and Regal moths.

Eastern Red Cedar (Juniperus virginiana) - seeds used by birds and wildlife, very drought tolerant once established, evergreen, sometimes used as Christmas trees. Evergreen, aromatic tree with trunk often angled and buttressed at base and narrow, compact, columnar crown; sometimes becoming broad and irregular. Pyramidal when young, Eastern red-cedar mature form is quite variable. This evergreen usually grows 30-40 ft. but can reach 90 ft. Fragrant, scale-like foliage can be coarse or fine-cut, and varies in color from gray-green to blue-green to light- or dark-green. All colors tend to brown in winter. Pale blue fruits occur on female plants. Soft, silvery bark covers the single trunk. The most widely distributed eastern conifer, native in 37 states, Eastern Red Cedar is resistant to extremes of drought, heat and cold. The juicy berries are consumed by many kinds of wildlife, including the cedar waxwing, named for this tree. The fruits are a staple for many birds and small mammals. Also provides nesting material and cover. Larval host for the Olive butterfly.

Green (Swamp) Ash (*Fraxinus pennsylvanica*) - good fall color, grows in any soil including limey soils, 50', often found growing in creeks & bottomlands. Drought tolerant once established and tolerant of seasonal wet areas. Softly pyramidal in youth, this 50-75 ft., deciduous tree, develops an upright, spreading habit at maturity. Crown shape ranges from irregular and somewhat unsightly to a symmetrical, round-topped silhouette. Leaves up to 8 or more inches long, divided into 5 to 9 leaflets with smooth to slightly toothed margins and pointed tips. Deep-green summer foliage turns yellow in fall. Flowers small, in clusters, male and female on separate trees. Fruits in conspicuous clusters, dry, winged, resembling a paddle with a rounded or pointed blade, wing extending alongside the seed halfway or more to the base. Larval host plant for Eastern Tiger Swallowtail, Two-tailed tiger swallowtail, Tiger swallow-tail, Orange sulphur, Cloudless giant sulphur, and Mourning Cloak butterflies.

Live Oak (Quercus virginiana) - nut bearing eaten by turkeys, jays, titmice, woodpeckers, many species of birds as well as squirrels use the tree for cover and the acorns for food, dry to moist soils, whether gravelly, sandy, loamy or clay, but does best in neutral or slightly acidic clay loams; poor drainage okay. Saline tolerant and tolerant of compaction, larval host plant for Horaces Duskywing, White M hairstreak, Northern hairstreak butterflies.

Loblolly Pine (*Pinus taeda*) - squirrels love the pine cones along with many birds, Loblolly pine is a 60 ft. tree which can reach 110 ft. It loses its lower branches with age, leaving an open, rounded crown. Dark green needles are 6-10 in. long. Bark is gray and scaly. Fast growing, Attractive, wildlife use as nesting site and cover, attracts birds and butterflies, larval host plant for the Elfin butterfly.

Long Leaf Pine (*Pinus palustris*) - Longleaf pine is an 80-100 ft. tree with short, stout, spare branches forming an open, irregular crown. A new level of branches is added each year. Long, bright green needles, the longest of any eastern North American pine, occur in dense bundles of three. The cones are also the largest of any pine in eastern North America. Mature specimens provide high, airy, fragrant canopies. Seedlings pass through a grass stage for a few years, in which the stem grows in thickness rather than height and the taproot develops rapidly. Later, the elongating, unbranched stem produces very long needles, which give a bunchgrass-like appearance when they are still close to the ground. Medium water use but drought tolerant, full sun, prefers soils on the dry side, any soil deep, coarse, sandy soils. Sandy, Sandy Loam, Acid-based. This stately pine also tolerates seasonally poor drainage and is resistant to fusiform rust, a serious disease of other pines. Longleaf is a slow-growing pine.

Pecan (Carya illinoinensis) - drought tolerant, state tree of Texas, nuts used by many mammals, deciduous. The largest of the hickories, pecans typically grow 70-100 ft. and can reach 160 ft. It is massive-trunked, with stout branches supporting a symmetrical, oval crown. Slate gray bark remains smooth for years. Pinnately-compound, deciduous leaves are 12-20 in. long with 11-17 leaflets. Midrib of the leaflet off center with the wider part of the blade toward the leaf tip. Flowers inconspicuous, male in elongate clusters, both sexes on same tree. Fruit an oblong nut enclosed in a thin husk splitting open at maturity, husk often persistent on the tree for weeks after the nut has fallen. Pecan is one of the most valuable cultivated plants originating in North America. Larval host plant for the Gray hairstreak butterfly.

Short Leaf Pine (*Pinus echinata***)** - The most widely distributed of the southern yellow pines, a large tree with broad, open crown. This is a 50-100 ft. pine with short, spreading branches forming a pyramidal crown that

opens with age. Bright green, 5 in. needles grow in tufts. Trunks of larger trees have broad, flat, reddish-brown plates. Shortleaf Pine is native in 21 southeastern states. An important timber species, producing lumber for construction, millwork, and many other uses, as well as plywood and veneer for containers. This and other southern pines are the major native pulp-woods and leading woods in production of barrels. Seedlings and small trees will sprout after fire damage or injury. Medium water use but drought tolerant and prefers dry soils. Will grow in part shade, and almost any soil (dry, sandy soils, acid-based, medium Loam). This is the hardiest and most adaptable of the southern pines. It is very drought-tolerant and fairly slow-growing. It is troubled by Nantucket pine tip moth, fusiform rust, root-rot organisms, southern pine beetle and other deleterious insects. Attractive, fast growing and used by wildlife. Larval host for the Elfin butterfly.

Southern Magnolia (Magnolia grandiflora) - any soil from deep moist acid clay or limey soils, afternoon shade when young, grows in bottomlands, drought tolerant once established, fragrant showy flowers in late spring to summer. One of the most beautiful native trees, evergreen with straight trunk, conical crown, and very fragrant, very large, white flowers. The pyramidal southern magnolia does not get extremely large in most of its range. It is usually 50 ft. tall, rarely growing to 100 ft. They have a dense growth of smooth, leathery evergreen leaves that are alternate, 5-10 inches long, shiny on top and rusty below. Fragrant, creamy-white flowers, which discolor easily if bruised, appear on the ends of thick, tough stems all over the tree. They are cup-shaped, about 8 inches across, with 6 thick petals, wider at the tip, where they are cupped. The blossoms open about 9:00 A.M. and close at night for 2 or 3 days; then all the stamens are shed and the flower reopens, turns brown, and disintegrates. The flowers appear throughout the summer and into fall. The flowers produce conelike seedpods that contain large red seeds. When the pods open, the seeds often fall from their place and hang by silky threads. Southern magnolia is a relatively fast-growing tree. It casts a dark shade, making under planting difficult. Fallen leaves are messy and never seem to decompose. They can be chopped with a rotary mower and blown back under the branches to recycle nutrients. Relatively pest free.

Swamp Chestnut Oak (Quercus michauxii) - medium water usage, drought tolerant once established, part shade or protection from afternoon sun, will grow in moist soils, prefers slightly acidic deep rich soils, sandy or sandy Loam, medium loam to clay, tolerates compaction better than most oaks. Long-lived and slow-growing. Adaptable. One of the best oaks for fall color. Good for birds, the acorns are food for humans, cattle, deer, and small mammals. The nuts are sweet enough to eat raw without boiling, butterfly larval host for Horaces Duskywing, Northern hairstreak, White M hairstreak.

Sweetgum (*Liquidambar styraciflua*) - clay loam to acid sand or loam, will require supplemental water in drought, fall color, 25 species of birds eat the fruit. A large, open-crowned tree, sweet-gum grows 75 ft. tall in cultivation and up to 130 ft. in the wild. Large, aromatic tree with straight trunk and conical crown that becomes round and spreading. Young trees are distinctly conical in form. The long, straight trunk is occasionally buttressed and bears strong, ascending branches. Glossy green, deciduous leaves have five deep lobes making a star shape. Fall foliage is purple and red, and will become colorful even without cold temperatures. The fruit is a globular, horny, woody ball, 1 in. in diameter, which hangs on a long stem and persists through January.

White (Upland) Ash (Fraxinus americana) - will grow to 100' in deep rich soils, deer will eat when small, pastel fall foliage. Large tree with straight trunk and dense, conical or rounded crown of foliage with whitish lower

surfaces. White ash is a 75-120 ft., large-canopied, deciduous tree with dense branching, pinnate leaves, and early fall color. Leaves turn yellow, then may change to purple in autumn. Larval host for Eastern Tiger Swallowtail, Hickory Hairstreak (Satyrium caryaevorum), Mourning Cloak, Red-spotted Purple, Viceroy & Tiger Swallowtail butterflies.

Winged Elm (*Ulmus alata*) - Winged elm grows 30-40 ft. high with spreading branches that form a round-topped, oblong head. Opposite corky ridges occur on the branches in one plane. Dark-green leaves alternate, ovate, oblique, doubly serrate, acuminate, small. Leaves may turn dull yellow in fall. Fruit a samara, brown. In the 18th and 19th centuries, the fibrous inner bark was made into rope for fastening covers of cotton bales. The common and Latin species names refer to the distinctive broad, corky wings present on some twigs; Wahoo was the Creek Indian name. Fast growing shade tree in any soil, attractive, seeds eaten by birds and small mammals, good nesting site for birds, larval host plant for Question Mark butterfly.

Small Trees:

American Holly (*Ilex opaca*)- The height of American holly or Christmas holly ranges from 25 ft. to as tall as 60 ft. in the warmer parts of its range. The stout, stiff branches of this pyramidal evergreen bear dark green, non-glossy, spine-tipped leaves. New growth finally pushes off the old leaves in spring. Bright red berries occur on the female plants. A shorter, multi-trunked form may grow in lower-light situations. The bark is a light gray color.

The evergreen fruiting branches from wild and planted trees are popular Christmas decorations. Many improved varieties are grown for ornament, shade, and hedges. You must have both a male and female plant to have berries, or at least have the opposite sex growing wild somewhere nearby. The male must be the same holly species as the female and bloom at the same time. This is a very slow-growing tree. The whitish, fine-textured wood is especially suited for inlays in cabinetwork, handles, carvings, and rulers, and can be dyed various shades, even black. Many kinds of songbirds, gamebirds, and mammals eat the bitter berries of this and other hollies, but the fruits are poisonous to humans.

Moist, well-drained, acidic soils from sand to loamy soil. Does not perform as well in clay. For clay soils in areas of high humidity (like Houston), cultivar Savannah is recommended. Drought tolerant once established. Larval host for Henrys Elfin butterfly.

Anacacho Orchid Tree (*Bauhinia lunarioides*) formerly Bauhinia congesta - Native only to a few canyons in western central Texas and in adjacent northeastern Mexico. Anacacho orchid tree is a 6-12 ft., single- or multitrunked shrub or small tree with small, light green, deeply cleft leaves. It produces delicate white to pale pink, orchid-like flowers with extended stamens appear prolifically in clusters. Fruit is a flattened pod. Anacacho orchid tree makes a gorgeous display with its silvery gray bark and fragrant white flowers that resemble orchids. It is a relatively rapid-growing tree after its first year when placed in a favorable location, but should be planted on the south side of buildings in areas to protect from winter winds. Grows in any well drained soil including limestone soils in full sun to part sun but often grows as an understory tree. As it is a legume, it does not require fertilizer but only a good 2-3 inch aged native mulch layer. The nectar attracts many pollinators especially butterflies and bees. Once established it is very drought tolerant and does not need supplemental water in our area.

Carolina Buckthorn (Frangula caroliniana) - Will grow in full sun but does better in part shade or as a understory tree 12-15 foot tall but can reach 25 feet. This deciduous tree or shrub has leaves up to 5 inches long that stay green into late fall. Flowers are not showy, yellowish, in small clusters at the bases of the leaves, opening in May and June. Fruit fleshy, 1/4 inch or more in diameter, starts red, turning black when ripe. Songbirds and other wildlife consume the berries, which apparently have medicinal properties but can be toxic. Although called a buckthorn, this species has no spines. It was discovered in South Carolina, hence the common and Latin species names. Larval host for the Snout, gray hair streak, spring azure, and painted lady butterflies. Does best with a good aged native mulch layer three inches thick. Do not fertilize as it creates weak disease prone plants.

Eastern Persimmon (*Diospyros virginiana*) - Grows in full sun to part sun. In old fields, Eastern or common persimmon is a low, shrubby tree, 15 ft. tall. In rich, moist soil the species becomes a large tree, up to 100 ft. tall, with a spreading crown and pendulous branches. Bell-shaped, yellow flowers are hidden by half-grown leaves. Large, oval, mature leaves usually become yellow-green in fall. The large, orange, edible fruit attracts many types of wildlife. On old trunks the bark is thick and dark-gray to almost black and broken into scaly, squarish blocks. Common persimmon is deciduous. Best-known by its sweet, orange fruit in autumn. When ripe, the sweet fruit of Persimmon somewhat recalls the flavor of dates. Immature fruit contains tannin and is strongly astringent. Persimmons are consumed fresh and are used to make puddings, cakes, and beverages. American Indians made persimmon bread and stored the dried fruit like prunes. Opossums, raccoons, skunks, deer, and birds also feed upon the fruit. Principal uses of the wood are for golf-club heads, shuttles for textile weaving, and furniture veneer. The word persimmon is of Algonquian origin, while the genus name Diospyros, from the Greek, means fruit of the god Zeus. Flowers are good for honey bees and the tree is food for the large Luna Moth. For fruit production a male pollinator is required. Deer, small mammals, and at least 16 species of birds need and use this plant.

Eastern Redbud (*Cercis canadensis var. canadensis*) - This tree grows 12-36 ft. tall and prefers part shade. It grows in almost any well drained soil from sand to clay. It is a showy understory tree with pinkish flowers in spring and heart shaped leaves. Seeds ripen in fall and are used by wildlife from many insects to birds. Larval host plant for the Henrys Elfin butterfly.

Eve's Necklace (*Sophora affinis*) - This native has fragrant pink flowers in spring. It grows in any well drained soil and is found in nature in open woods and along fence lines. Will grow in sun to part shade and is very drought tolerant. It is a legume hence it does not need fertilization. It generally grows to around 15 feet but can reach 30 feet in rare cases. The 4-6 inch long flower clusters turn into strings of black beads in the fall. This plant is used by butterflies, birds and small mammals.

Farkleberry (*Vaccinium arboreum*) - Tree sparkle-berry is a coarse, spreading, deciduous shrub or small tree. It usually grows 12-15 ft., but can reach 25 ft. Does best in well drained sandy to loamy soils. Drought tolerant with a good aged native mulch. Fragrant flowers resemble tiny, white bells. Inedible, persistent, black berries follow. Shiny, dark-green leaves turn deep-red in the fall. Bark exfoliates and is composed of grays, rich browns, oranges, and reddish-browns. A shrub or tree with short trunk, irregular crown of crooked branches, small, glossy, elliptical leaves, and shiny black berries. This is the tallest of the genus of blueberries, often called huckleberries. The fruit has thin, slightly sweet pulp and large seeds. Although not palatable to humans, the berries are consumed by wildlife. Larval host for **Henrys Elfin and Striped hairstreak butterflies.**

Giant Flowered Orchid Tree (*Bauhinia sp.*) - Believed to be a cross between our native orchid tree and one from Central America. Huge white 6 inch orchid like flowers from May to fall. Typically 12-15 feet tall but can reach 20 feet in good soil. Full sun to part sun and any well drained soil sand or clay. Very drought tolerant once established.

Laurel Cherry (*Prunus caroliniana*) - This small tree grows from the East Coast to central Texas. Carolina laurel cherry is a dense shrub or small tree, 15-36 ft. tall, with a pyramidal to oval outline. Leaves are firm, smooth, evergreen, narrowly elliptic, tapered to a pointed tip and equally tapered to the base. Upper surface is dark green and shiny, the lower surface lighter and duller. The leaves have a taste suggestive of almond flavoring and are poisonous when eaten which discourages deer. Flowers are white to cream, about 3/16 inch wide, in showy elongate clusters among the leaves, opening from February to April. Fruit is fleshy, but with a thin pulp, black, 1/2 inch long by 3/8 inch wide, egg shaped with a small tip, and persistent through winter. A handsome, evergreen, ornamental and large hedge plant in southeastern North America. The greatest use of Cherry laurel is for providing a nearly carefree, dark green visual screen. Birds love the dry fruit. Grows well in any well drained soil with a thick mulch layer.

Mexican Buckeye (*Ungnadia speciosa*) - Mexican-buckeye, an 8-12 ft., deciduous tree, can reach 30 ft. in height. It is often multi-trunked with light gray to brown bark, smooth on young branches, becoming fissured with age. Leaves up to 12 inches long, with a central axis supporting 2 to 6 paired leaflets and a terminal one; leaflets up to 5 inches long, ovate to narrower with an elongate tip, rounded base, and serrate margins. Pinnate foliage turns golden yellow in fall. Clusters of bright-pink, fragrant flowers appear before or with the leaves from the axils of the previous season. Fruit distinctive, a light reddish brown when ripe, 3 lobed capsule containing 1 to 3 dark brown to black, shiny seeds 1/2 inch in diameter, the walls of the capsule often persisting through the winter, seeds mildly poisonous. From a distance the plants in full flower resemble redbuds or peaches.

Any well drained soil (Rocky soils. Rocky, Sandy, Sandy Loam, Medium Loam, Clay Loam, Clay, Caliche type Limestone-based). Mexican buckeye produces an opulent show when it blooms. The foliage turns a clear yellow in the fall. Foliage, flowers and dense branching makes this species an outstanding small specimen tree or tall background shrub. Rapid-growing, drought-resistant, resistant to cotton root rot. Prune to encourage a single trunk if desired. Growth characteristics of this tree vary greatly with site. It has mildly poisonous seedpods.

Showy, Aromatic, Accent shrub, Fall conspicuous, Understory tree, Attractive, Blooms ornamental. Used by wildlife: Nectar-bees, Nectar-butterflies, Nectar-moths, Seeds-granivorous birds, Seeds-Small mammals. Larval host for Henrys Elfin butterfly. Deer Resistant

Mexican Plum (*Prunus mexicana***)** - Mexican plum is a single-trunked, non-suckering tree, 15-35 ft. tall, with fragrant, showy, white flowers displayed before the leaves appear. Mature trunks become satiny, blue-gray with darker, horizontal striations. Leaves up to 5 inches long and 2 inches wide, ovate to narrower with serrate margins; minute glands on the petiole near the base of the blade. Plums turn from yellow to mauve to purple as they ripen from July through September. Any well drained soil from sand to clay, grows best in drier locations. It is a common wild plum of the forest-prairie border from Missouri and eastern Kansas to Texas. The fruit is eaten fresh and made into preserves and is also consumed by birds and mammals. Larval host for the Tiger Swallowtail butterfly and Cecropia moths.

Rusty Black-haw Viburnum (*Viburnum rufidulum*) - Native to open woodlands from East to Central Texas. Any well-drained sand, loam, or clay. This viburnum is a shrub or small tree, usually growing to 18 ft. but

sometimes taller with bark separating into dark, rectangular plates. Sometimes has good fall color with showy white flowers in spring, the fruits are edible and tastes like raisins. It has glossy, dark-green, deciduous leaves turn a variety of warm hues in autumn. Flowers white, from 1/4 to 3/8 inch wide, in rounded or flattened clusters up to 4 inches wide, appearing in March and April and noticeable from a distance in early spring. Fruit fleshy, bluish black lightened by a waxy coating, up to 1/2 inch long, slightly longer than wide. Very drought tolerant once established, requires well drained soils on the dry side.

Sassafras (Sassafras albidum) - The aromatic sassafras is a 35-50 ft., deciduous tree with horizontal branching in cloud-like tiers. The mahogany-brown bark is deeply ridged and furrowed. Little bunches of yellow-green flower balls are scattered profusely over the female tree; more sparsely on the male. Dark-blue fruits on scarlet stalks appear on female plants in late summer. Bright-green, mitten-shaped, oval, or three-lobed leaves have outstanding fall color. The roots and root bark supply oil of sassafras (used to perfume soap) and sassafras tea, and have been used to flavor root beer. Very drought tolerant and will grow in sun to shade. Prefers moist soils that are acidic but almost any soil (rich, moist, sandy loams. Sandy, Sandy Loam, Medium Loam, Acid-based). Sassafras can sucker into a small grove, but is easily controlled as a single tree. It is an appropriate tree to introduce into disturbed sites with infertile soil. It grows most quickly in fertile soil, and though it prefers well-drained situations, it will tolerate soggy feet. Except for occasional iron chlorosis caused by high pH soils, the tree is relatively free of problems. Sassafras is allelopathic and can discourage the growth of certain other plants within its root zone. Good fall color and birds like the fruit. A tea is made from young roots. Sweeten to taste. Only moderate amounts should be drunk. A spicy jelly can be made from strong tea with lemon juice, sugar and pectin. Green winter buds and young leaves can be added to salads. The bark produces an orange dye and the roots yield aromatic oil of sassafras, which has been used as a fragrance in soaps and perfumes. Foliage is fragrant and good for birds and other wildlife. Larval host for Spicebush butterfly, Tiger swallow-tail, Palamedes butterflies, and Pale Swallowtail.

Smooth Sumac (Rhus glabra) - The colony-forming smooth sumac is a 10-20 ft. shrub with short, crooked, leaning trunks and picturesque branches. The pinnately compound leaves are alternate, with 13-30 sharptoothed leaflets on each side of the midrib. Deciduous leaves become extremely colorful in early fall. On female plants, yellow-green flowers are followed by bright-red, hairy berries in erect, pyramidal clusters which persist throughout winter. The only shrub or tree species native to all 48 contiguous states. Sun, Part Shade or shade, low water requirements, prefers soils that are on the dry side. Most dry soils (sandy, loam, to clay Loam, or even caliche. This is the dominant sumac of backland prairies. A dwarf variety is becoming popular in cultivation. In a planned landscape, the species is most effective when drifts or colonies, typical of natural settings, are allowed to establish. Colonies can be rejuvenated every few years by cutting them to the ground in mid-winter. Sumacs will grow in dry waste areas, such as impossible slopes where even junipers struggle. They are fast growing, generally pest and disease-free, and drought-tolerant. Colonies are often single-sexed, formed from a single, suckering parent. Only female plants produce flowers and berries. The seeds remain firmly attached for a long time without noticeable deterioration and are often used in large decorative arrangements and are consumed by birds of many kinds and small mammals, mainly in winter. Deer browse the twigs and fruit throughout the year. Raw young sprouts were eaten by the Indians as salad. The sour fruit, mostly seed, can be chewed to quench thirst or prepared as a drink similar to lemonade. Larval host for the Hairstreak butterfly

Texas Mountain Laurel (*Sophora secudiflora*) - Texas mountain laurel is an evergreen, usually multi-trunked shrub or small tree ranging from just a few feet tall to more than 30 ft. in height, though its usual height at maturity is 10-15 ft. The dense, dark green, and glossy compound leaves are composed of 7-9 shiny, leathery

leaflets that are rounded on the ends. The leaflets are up to 2 inches or more long, tapering more gradually to the base than to the tip, and arranged along an axis terminated by a single leaflet. The bluish lavender flowers, in 3-7 in. drooping clusters, are very showy and fragrant (many people think the fragrance is like grape cool aid). The fruit is a semi-woody pod with extremely hard bright red poisonous seeds. It is very popular as a native evergreen ornamental tree within its range, valued for its handsome, dark green foliage and lush early spring blooms. It is drought-tolerant, prefers rocky limestone soil but grows well in any well drained soil and tolerates alkaline soils. It is native from central Texas west to New Mexico and south to San Luis Potosi in Mexico. Like many woody plants native to rocky soils, it is slow growing. It will grow in full sun to part shade. Flowers attract many pollinators.

Texas Persimmon (*Diospyros texana*) - Shrub or small tree with very hard wood, usually multi-trunked. Normally 10-15 ft tall but can reach 35 ft in the southern parts of its range. Common in brushy areas on level uplands, stony hillsides, and lower slopes from Houston and Bryan, Texas, in the east, west to Big Bend in west Texas and south to Nuevo Leon in northeastern Mexico. Almost any soil and it is extremely drought tolerant once established. Prefers soils on the dry side and grows well with an aged native mulch 2-3 inches thick. Very common in central and south Texas in full sun to part sun. Bark is light gray to white, smooth, thin, on some trunks peeling in rectangular flakes and exposing a pinkish layer beneath. Leaves up to 2 inches long, but most about half this length, firm textured, rounded or slightly notched at the tip and tapering to the base; margins smooth, rolled down. Flowers are urn shaped, whitish, about 3/8 inch wide, arranged singly or in small clusters among the new leaves; male and female on separate plants, appearing in March and April. Fruit fleshy, round, up to 1 inch in diameter, black and sweet when ripe, ripening from late July into September. This well-shaped, small tree is valued primarily for its striking trunk and branches, which are a smooth, pale greyish white or whitish grey, peeling off to reveal subtle greys, whites, and pinks beneath. The fruits, borne on female trees, are edible once soft, with a flavor some liken to prunes, and are favorites of many birds and mammals. It is extremely drought-tolerant and disease-resistant and is ideal for small spaces in full sun. The heartwood, found only in very large trunks, is black, like that of the related ebony (Diospyros ebenum), while the sapwood is clear yellow. The fruits are relished by mammals and birds including wild turkeys. Larval host plant for gray hairstreak & Henry's Elfin butterflies.

Texas Red Bud (*Cercis canadensis var. texensis*) - This plant grows to 25 feet, very drought tolerant once established, buds, pods, flowers are edible, host plant for Henry Elfin butterfly, legume, flower color a little more intense than eastern redbud.

Wild Olive or Mexican Olive (*Cordia boissieri*) - It grows in any soil including clay soils if well drained. Very drought tolerant and does best in full sun. Thrives in hot and dry locations and is typically 12-15 foot tall but can reach 20 feet on rare occasions. Native to South Texas to almost Austin at the northern end of its range. Blooms almost all year with very showy 3 inch white flowers that have a yellow throat. A good nectar plant for bees and butterflies, and the fruit is good for wildlife and livestock.

Yaupon Holly (*Ilex vomitoria*) - This evergreen perennial generally grows in nature 12-45 feet tall, but rarely higher than 25 feet. This plant grows as male and female (only functionally male or functionally female flowers borne on any individual plant); male flowers 2-several

clustered in fascicles in the axils of the leaves; female flowers 1-several in fascicles in the axils of the leaves. The fruit or drupes are red, spherical, shiny, up to 1/4 inch in diameter, containing 4 nutlets which are loved by birds.

Large Woody Shrubs (can grow to small tree size):

Deciduous Holly (*Ilex decidua*) - Also known as Possumhaw Holly will grow in any soil. It is a small, deciduous tree or shrub,15-30 ft. tall, with pale gray, twiggy, horizontal branches. Glossy, oval, toothed leaves remain dark green through autumn, finally turning yellow. Inconspicuous flowers precede clusters of persistent, red berries on female trees which provide winter color. Possum Haw is conspicuous in winter, with its many, small, red berries along leafless, slender, gray twigs. Opossums, raccoons, other mammals, songbirds, and gamebirds eat the fruit of this and related species. Not only does the plant provide fruit it is a used as a nesting site for many birds. Deciduous holly is a small, deciduous tree or shrub with pale gray, twiggy, horizontal branches that will grow in any soil. Glossy, oval, toothed leaves remain dark green through autumn, finally turning yellow. Inconspicuous flowers precede clusters of persistent red berries on female trees which provide winter color. Drought tolerant once established. It will grow in full sun to part shade and is often used as an understory plant.

Flame Leaf Sumac (Rhus lanceolata) - Prairie Flameleaf Sumac is a thicket-forming, small, deciduous tree to 30 ft. in height, but usually no taller than 20 ft that prefers full sun. Pyramidal panicles of red, fall fruit follow white, summer blossoms. Pinnately-compound foliage becomes vivid red or orange in fall. Native from southern Oklahoma through north, central, and west Texas to New Mexico and south to Puebla in central Mexico, the limestone-loving Prairie Flameleaf Sumac is relatively fast growing, generally pest- and disease-free, and heat, cold, and drought-tolerant. It grows in any soil from rocky, calcareous, limestone soils, including clays, loams, and sands as long as they are well drained. Flameleaf is a perfect description of this trees outstanding, orange and red, autumn foliage, but its pale trunk and branches, green summer leaves, and pyramidal clusters of red fall fruit are also noteworthy. Though it may sucker from the base to form a colony, it is not as likely to aggressively colonize as the more easterly Shining Sumac (Rhus copallinum). Like the very different-looking Evergreen Sumac (Rhus virens), Prairie Flameleaf Sumac produces berries that, when soaked in water, make a tart, tasty, high-Vitamin C tea. The fruits attracts birds and small mammals and butterflies. Larval host plant for the Red-banded Hairstreak, Banded Hairstreak butterflies. Note: Most of the Sumacs native to Texas are drought tolerant.

Fragrant Sumac (*Rhus aromatica***)** - Fragrant sumac is an irregular, spreading, deciduous shrub, 6-12 ft. tall, with velvety twigs and lower branches turned up at the tips. Glossy, somewhat blue-green, coarsely toothed, trifoliate leaves turn orange, red, purple and yellow in the fall. Yellowish catkin-like flowers precede dark-red berries which persist into March. A sprawling, small to medium-size shrub with aromatic foliage. The fruit is loved by songbirds including quail. Grows in any well drained soil. Prefers full sun, very drought tolerant once established.

Gregg's Acacia (*Senegalia greggii*) - formerly known as Acacia greggi is a rounded and much-branched shrub to 5 ft. tall, (occasionally tree-like to 15 ft.) with twice-pinnate, gray-green foliage; creamy-white flowers; contorted pods; and cat claw-shaped thorns. The flowers occur in bushy, 2 in. spikes and are fragrant.

Occasionally a small tree with a broad crown. Good barrier or protection plant as indicated by the common names (including the Spanish, una de gato), the sharp, stout, hooked spines, like a cat's claws, tear clothing and flesh. It has a moderate growth rate and sometimes it will repeat bloom again in August. Must have well-drained soils low in organic matter or roots will rot. Requires full sun and drier soils from caliche to sandy or rocky. Many insects, birds and mammals use this plant. Good for hot dry areas.

Parsley Hawthorn, Parsleyleaf Hawthorn (Crataegus marshallii) - Parsley hawthorn is a small, deciduous tree or shrub that can grow to to 25 ft. with slender, thorny - or sometimes thornless - branches. The dainty, white, five-pedaled blossoms are followed by bright-red, persistent fruits. This species has very ornamental foliage; it is deeply cut, resembling garden parsley. Small tree with wide-spreading, slender branches and broad, irregular, open crown of parsley like foliage; or often, a low much-branched shrub. Leaves sometimes become colorful in fall. It will grow in any well drained soil from sand to clay in full to part sun. Drought tolerant once established and will also tolerate seasonal flooding. Adapts well to many garden soils. The flowers provided nectar and pollen for butterflies and other pollinators. The fruit is eaten by small mammals and some birds.

Rough Leaf Dogwood (*Cornus drummondii*) - Rough-leaf dogwood is a clumping shrub or small tree, to 16 ft., with flat-topped clusters of creamy-yellow flowers and hard, white fruit on reddish brown or gray branchlets. This plant will grow in any soil from dry to moist, alkaline, limestone-based, sandy, sandy Loam, to clay or calcareous. Fall color is purplish-red. Flowers about 1/4 inch wide, cream colored, with 4 petals, numerous in broad clusters at the ends of branches, appearing from April to early June. Fruit fleshy, rounded, white, about 1/4 inch wide. This dogwood is easily recognized by the rough, upper leaf surfaces and white fruit. It spreads from root sprouts and provides cover for wildlife; various small birds, such as Bell's Vireo, nest in the thickets. This is a very adaptable plant and is found in nature in a variety of wet to dry situations. However it grows best in moist soils but is very drought tolerant once established. The large showy clusters of tiny flowers provide nectar for many butterfly species. Many birds eat the white fruit clusters. Leaves turn red in the fall. The trees sometimes colonize by suckers. Maintain this species as a tree by mowing or pulling surplus shoots. Does best in shade to part sun, often found as an understory plant in nature.

Southern Wax Myrtle (Morella cerifera) - A wispy, 6-12 ft., multi-trunked, evergreen shrub, southern bayberry or wax myrtle can reach 20 ft. in height. The light olive-green foliage has a spicy fragrance. Pale blue berries occur on female plants in the winter. Handsome gray bark is almost white on some plants. Native from New Jersey west to eastern Oklahoma and east Texas, south through Mexico to Central America as well as through much of the Caribbean, this popular evergreen ornamental is used for screens, hedges, landscaping, wetland gardens, habitat restoration, and as a source of honey. Essentially a shrub, it serves as an excellent screen plant, with both standard and dwarf varieties available. Because there are separate male and female plants, if you want berries you must have male plants close enough to the berry-producing female plants for pollination to occur. The leaves are aromatic, with an appealing, piquant fragrance when crushed. Colonists separated the fruits waxy covering in boiling water to make fragrant-burning candles, a custom still followed in some countries. Requires constant moisture to get established, but both drought- and flood-tolerant once established. If temperature goes below zero degrees F, will defoliate, not re-leafing until spring. Tolerant of saline conditions and urban confinement within pavement. Larval host plant for the Red-Banded Hairstreak butterfly. Many species of birds love the berries.

Wild or American Plums (*Prunus americana*) - A thicket-forming shrub or small tree with short trunk, many spreading branches, broad crown, showy large white flowers, and red plums. American plum is a small,

understory tree to 35 ft. with fragrant, white flowers in showy, flat-topped clusters occurring before the leaves in spring. The fruit that follows ripens to a shiny, bright red in August or September. The short, crooked trunk - with scaly, black bark - supports a graceful, open crown. Fall foliage ranges from electric red to pale yellow. The plums are eaten fresh and used in jellies and preserves, and are also consumed by many kinds of birds. Numerous cultivated varieties with improved fruit have been developed. A handsome ornamental with large flowers and relatively big fruit, American Plum is also grown for erosion control, spreading by root sprouts. Grows on any well drained soil and is drought tolerant once established. Good for many pollinators and wildlife.

Yellow Bells or Esperanza (*Tecoma stans*) - Esperanza or Yellow bells is an irregularly shaped, deciduous shrub, normally 3-6 ft. tall in the US but more southerly varieties can reach 9 ft. It has several stems and slender, erect branches. Clusters of large, trumpet-shaped, yellow flowers are very showy against the lance-shaped, olive-green leaves. Long, thin pods are conspicuous in autumn. It has an enormous natural range, extending from south Texas west to Arizona and south through Mexico and Central America to South America as far as northern Argentina, as well as in southern Florida south through much of the Caribbean. Anyone who has seen this plant in bloom can understand why one of its names is Yellow bells, as it produces great, attention-grabbing, yellow blossoms. In recent years, it has become a popular landscaping plant, valued as much for its drought-tolerance as for its spectacular appearance. Provides nectar for insects, bees, and hummingbirds. The seeds are eaten by small mammals. It is the larval host for the Dogface butterfly.

Small Shrubs:

American Beautyberry (*Callicarpa americana*) - American beauty-berry is a deciduous shrub that most often grows 3-5 ft. tall and usually just as wide, It can reach 9 ft. in height in favorable soil and moisture conditions. It has long, arching branches and yellow-green fall foliage, but its most striking feature is the clusters of glossy, iridescent-purple fruit (sometimes white) which hug the branches at leaf axils in the fall and winter. Bark light brown on the older wood, reddish brown on younger wood. Flowers small, pink, in dense clusters at the bases of the leaves, clusters usually not exceeding the leaf petioles. Fruit distinctly colored, rose pink or lavender pink, berrylike, about 1/4 inch long and 3/16 inch wide, in showy clusters, persisting after the leaves have fallen. Grows in any well drained soil in part sun to shade and is drought tolerant after it is established. Often grown as an understory plant. It can be cut to 12 inches above the base each winter to encourage more compact growth, flowers and fruit. It can also be left to mature naturally into a tall woody shrub. The shrub may temporarily defoliate and lose developing fruit during periods of prolonged summer drought. The seeds and berries are important foods for many species of birds, particularly the Northern Bobwhite.

Arkansas Yucca (*Yucca arkansana*) - In open fields and at the edges of thickets on upland soils. Leaves from the base, sharp pointed, with curly white fibers on the margins. Flower stalk erect, 6-7 ft., arising from the clump of basal leaves, usually unbranched. Flowers with 3 showy, greenish white, petals and 3 similar sepals, appearing from April to June. Fruit a capsule, opening from the tip when dry. Seeds many, flat, wafer-like, black when mature. Full sun to part shade, prefers any well drained soils on the dry side from sand to clay and caliche. Smaller and more flower-like than other yuccas. Useful as a small accent tree or shrub or in a short grass meadow.

Coralberry (Symphoricarpos orbiculatus) - This small, mound-shaped, deciduous shrub with shredding bark on older wood grows to 1-2 ft. but can reach 6 ft. Its smooth, dull green leaves are opposite and roughly oval, tapering about equally to tip and base, up to 2 inches long but often less than 1 inch, with smooth, turned down margins and a rounded or broadly pointed tip. The greenish-white flower clusters are not as showy as the clusters of coral-pink to purple berries up to 1/4 inch in diameter which remain on the plant through winter. Coralberry forms extensive colonies and spreads by rooting at the nodes where it touches the ground. A good choice for a woodland garden. Does best in any well drained soil that stays on the dry side. Songbirds, ground birds, small mammals, and browsers use this plant for food, cover, and nesting sites. Flowers are good for pollinators, especially our native bees.

Dwarf Palmetto (*Sabal minor*) - This common, fan-shaped palm is a small shrub, 3-5 ft. tall. Usually grows without a stem or trunk, the leaves arising from an underground stock. Leaf blades are longer than the leaf stalks, fan shaped, as much as 4 feet wide, dissected, the narrow segments notched at the tip. White blooms are followed by black fruit about 1/2 inch wide in long clusters. Plant forms a small trunk when grown in standing water. Very drought tolerant once established and will also tolerate poor drainage. It is the most cold-tolerant Sabal. This plant adds texture and interest to any garden. The flowers attract many pollinators and the fruits in fall-winter are loved by birds and small mammals. It is also used as a nesting site for some animals.

Narrow Leaf Yucca (*Yucca angustifolia*) - native from Dallas into Mexico, any well drained soil in full sun. Long sword like leaves with beautiful long lasting bloom spikes. Flowers attract many pollinators. Good for desert or dry gardens.

Texas Lantana (Lantana urticoides) - A perennial spreading shrub, much branched from the ground upward, branches sometimes with prickles. Frequent in brushy places and in woodlands. Bark is light gray to light brown, tending to flake off. Flowers are colorful, red, orange, and yellow, tubular with four flared lobes; in dense, rounded clusters appearing from April to October. The fruit is round, fleshy, dark blue to black occurring in clusters and is poisonous to humans. Grows in any well drained soil (even in poor soil) and in full sun. The leaves give off a strong scent when crushed. Deer do not like this plant however it is good for birds and butterflies. May be pruned in winter to keep the plant smaller and fuller.

Yellow Sophora (*Sophora tomentosa*) - A native from Florid to Texas that is hardy to about 20 degrees (a good mulch layer helps protect the roots). Common names are "Yellow necklace pod" or "yellow sophora". It is an evergreen shrub with a delicate, multi-stemmed shape and chartreuse branches. Silvery-green foliage provides a backdrop for the 4-16 in spikes of yellow flowers. Seedpods hang on the shrub for a year or more. This plant grows 3-6 feet in height. It prefers sandy to loamy soils that are well drained and on the dry side. Grows best in part shade. Loved by bees, butterflies, moths and many other pollinators and nectar loving insects.

Perennials For Sun:

Barbados Cherry (*Malpighia glabra*) - Barbados Cherry develops into a thick, rounded canopy of fairly delicate foliage. Small pink flowers appear periodically from April to October and are followed about one month later by bright red, tart-tasting, 1-inch fruits which are high in vitamin C. This is a shrub forming perennial that grows 3-6' tall. Wildlife love the fruit. Grows in sun to part shade. Any well drained soil from sand to clay.

Blackfoot Daisy (Melampodium leucanthum) - A low, round, bushy plant with flower heads of 8-13 broad white rays surrounding a small yellow central disk. Plains blackfoot or blackfoot daisy is a low, bushy, mounded perennial, 6-12 in. tall and twice as wide. It is covered with narrow leaves and 1 in. wide, white, daisy-like flowers. The white rays are toothed at the tips and surround yellow disk flowers. These honey-scented flower heads are solitary and terminal on slender stalks. At first glance, Blackfoot Daisy appears to be the twin of White Zinnia (Zinnia acerosa), but flower heads of the latter species have 4-7 broad white rays and a narrow base of several overlapping scales. Any well drained soil (dry, rocky, calcareous gravelly, sandy, limestone-based or caliche). Blackfoot daisy is a sturdy, mounding plant, that will flourish in rock gardens. It is heat and drought tolerant. Good drainage is essential to its success. In late winter, older plants can be cut back halfway to keep them compact. Rich soil and abundant water will likely produce many more flowers in the short-term, but may consequently shorten the lifespan. Pollinators from bees to butterflies love the flowers. Deer resistant.

Butterfly Weed (*Ascleplias tuberosa***)** - This bushy, 1.5-2 ft. native perennial wildflower is prized for its large, flat-topped clusters of bright-orange flowers. The leaves are mostly alternate, 1.5-2.25 inches long, pointed, and smooth on the edge. The yellow-orange to bright orange flower clusters, 2-5 inches across, are at the top of the flowering stem. It blooms from May through September, and requires any well drained soil from sand to clay. The abundance of stiff, lance-shaped foliage provides a dark-green backdrop for the showy flower heads. This showy plant is frequently grown from seed in home gardens. Its brilliant flowers attract butterflies. Host plant for the Monarch butterflies.

Calyophus Texas Primrose (*Calylophus berlandieri*) - This native perennial wildflower grows on low hills on sandy, gravelly, and limestone soils in relatively dry grassy prairies in full sun. Size can range from 1-3 foot tall. The showy yellow flowers are used by many pollinators.

Copper Canyon Daisy (*Tagetes lemmonii*) - This showy native perennial goes by many common names - Lemmon's Marigold, Mt. Lemmon Marigold, Copper Canyon Daisy, Mountain Marigold, Perennial Marigold, Bush Marigold, Tangerine-scented Marigold, Mexican Bush Marigold, and Shrub Marigold. It will grow to 4-6 feet in height and spreads to about 6 feet. Beautiful yellow flowers from August till frost. Any well drained soil on the dry side. Foliage has a pleasing fragrance to most when brushed.

Eastern Gamagrass (*tripsacum dactyloides*) - A native perennial prairie grass that grows in dense clumps hence it can be used as a buffer or screen. Larval food plant for many butterflies species and provides cover for many birds. Sun to part sun.

Fall Aster (Symphyotrichum oblongifolium) - This perennial's rigid stems, usually less than 20 in. tall, are much-branched from the base. The narrow leaves and stems are sparsely covered with short hairs. Pink or lavender-blue flowers are many-petaled and aromatic with a yellow center. Will grow in any well drained soil

from rocky to calcareous or sandy soils. Very drought tolerant but will grow in dry to moist soils in full sun to part shade. Fall aster creates dazzling purple mounds in the fall season. It slowly colonizes by stolons, so thin regularly to control it. The plant may open up if it gets to top heavy so it is a good idea to keep it thick by pruning it back by no more than half in June. After it goes dormant, wait to cut back to the basal rosette in late fall, early winter. Used by many pollinators.

Flame Acanthus (Anisacanthus quadrifidus var. wrightii) - Flame Acanthus, Hummingbird Bush, Wright's Desert Honeysuckle, Wright Acanthus, Mexican Flame, or Wright's Mexican Flame. This beautiful perennial is native from west and south-central Texas into adjacent northern Mexico, Anisacanthus quadrifidus var. wrightii is a spreading, 3 to 5 ft. deciduous shrub with exfoliating bark; red-orange, tubular flowers; and lightgreen, lanceolate leaves. Its brilliant summer-to-fall blooms, cheerful green foliage, pale bark, and ability to attract hummingbirds have made it increasingly popular in landscapes. Though found in the wild mostly in rocky, calcareous soils, it is adaptable both to the heavy soils of Houston and to the drying, confined conditions of pots. It is drought-tolerant and can survive low temperatures as far north as Dallas, though only the roots will survive the winters there and the whole plant will reemerge each year like a perennial from the ground. Though the attractive branches are somewhat brittle, it takes well to shearing and can make a dense, low hedge. As with other xeric plants within its range, rain will trigger a flush of blooms, covering the plant in fiery orange. In favorable conditions, it will seed out readily. Prefers well drained soil on the dry side but can tolerate some moisture. Plant in full sun to light part shade. As with many other xeric plants, rain triggers blooms. Flowers are a good nectar source for all pollinators hence it attracts hummingbirds and butterflies. Larval host for the Janais Patch and Texan Crescentspot butterflies. Generally deer resistant.

Giant Coneflower or Tall Coneflower (*Rudbeckia grandiflora*) - The erect, coarse tall coneflower grows 2.5-5 feet tall and usually forms colonies. The stem and leaves have rough hairs. Leaves at the bottom of the plant have long petioles, but the higher ones attach directly to the main stem. They are 2.5-6 inches long and half as wide, shallow toothed with prominent ribs. Flower heads have 8-12 ray flowers, 3/4-1 inch long, yellow and drooping. The cones are 3/4-1 1/4 inches high, gray-green, but turning brown as the flowers mature. Honey bees, bugs, butterflies, and beetles feed on the nectar and pollen. Does best in full sun, fairly drought tolerant once established.

Green Milkweed (*Asclepcias viridis*) - Green antelope horn is a native, perennial forb or herb with alternate, entire leaves. The leaf margins are often wavy. Flowers are white and in an umbel, mostly one per plant. Upon close inspection, some rose or purple color is evident in the center of each individual flower. The milky substance that is exuded when a plant part is broken is very sticky, much resembling "Elmer's glue." These milkweeds bloom from late spring to middle summer. This milkweed is common in pastures from Kansas to Texas. Generally avoided by cattle and horses. It can be found along roadsides, ditches, prairies, open areas, and other areas with little vegetative competition. The flowers are distinct in that they lack horns. Any well drained soil and is drought tolerant. Larval host plant for the Monarch butterfly and another member of the milkweed family that certain butterflies love. It can be found growing in rich or poor soils and blooms off and on over their growing season through the end of summer. Has a spreading, open growth form. Requires little water and full sun.

Guara (Gaura lindheimeri) - Native wildflower that is an upright to widely spreading, soft-hairy, 2-5 ft. perennial with delicate white flowers in elongated terminal and axillary clusters. The flowers are four-petaled, in one row on the upward side, and turn pink with age. Stamens are conspicuously long. A large and showy

gaura often forming extensive colonies. Flowers open in early morning. Any well drained soil and will tolerate moist or very dry conditions.

Indian Grass (*Sorghastrum nutans*) - A beautiful native grass that puts out a dramatic plume of golden plume-like seed heads on two foot stalks. Grows in any soil that is well drained and will endure extreme drought. Larval plant for butterflies, food and cover for birds.

Kansas Gayfeather (Liatris pycnostachya) - Also known as "Blazing Star" as to its show stopping beauty when planted in mass and in bloom hence often grown as an ornamental. The species name, from the Greek for crowded, describes both the leaves and the flower heads. A species found in native dry prairies, hence is very drought tolerant. The stems of this showy perennial are 2-5 ft. tall, and nearly half of this is the flower spike. A spike of rayless, rose-purple (rarely white), cylindrical, stalk less flower heads densely crowded on a coarse, hairy, very leafy stem. Stamens and styles protrude from the purple, tufted flower heads, creating a fuzzy appearance. Flowers bloom from the top of the spike downward. The lower portion of the stem is covered with short, fuzzy, grass-like leaves. Any well drained soil from rocky to sandy to loam and preferably of poor quality. Also one of the few Liatris species that grows well in seasonally very moist soils. Attracts butterflies and other pollinators. In addition it makes an excellent cut flower.

Maximilian Sunflower (*Helianthus maximiliani***)** - A native prairie perennial that is very drought tolerant, this sunflower is a desirable range plant, eaten by many animals and livestock. A heavy crop of seeds is produced, thus it is also a valuable plant for wildlife. This sunflower grows to a height of 3-10 ft in any soil with a preference for clay. Leaves are long and narrow, up to 10 inches near the bottom and as short as 2 inches near the top. It provides cover for wildlife and the seeds are eaten by numerous species of birds. Pollinators from bees to butterflies love the nectar and pollen.

Pink Evening Primrose (*Oenothera speciosa***)** - Often better known as buttercups. As the common name implies, most evening primrose species open their flowers in the evening, closing them again early each morning. Pink evening primrose is an upright to sprawling, 1 1/2 ft. perennial, which spreads to form extensive colonies. Its large, four-petaled flowers range in color from dark pink to white. A hardy and drought resistant species that can form colonies of considerable size. The flowers may be as small as 1 (2.5 cm) wide under drought conditions. The plant is frequently grown in gardens for their beauty. Readily colonizes in open areas in a variety of well-drained soils, rich or poor, dry or moist, disturbed or not, loams, clays, sand, caliche, rocky, or gravelly.

Purple Coneflower (*Echinacea purpurea***)** - A popular perennial with smooth, 2-5 ft. stems and long-lasting, lavender flowers. Rough, scattered leaves that become small toward the top of the stem. Flowers occur singly atop the stems and have domed, purplish-brown, spiny centers and drooping, lavender rays. An attractive perennial with purple (rarely white), drooping rays surrounding a spiny, brownish central disk. The flowers of Echinacea species are used to make an extremely popular herbal tea, purported to help strengthen the immune system; an extract is also available in tablet or liquid form in pharmacies and health food stores. Often cultivated, Purple Coneflower is a showy, easily grown garden plant.

Rock Rose (*Pavonia lasiopetala*) - A small perennial shrub, usually woody at the base only, with stems up to 4 feet tall. Found in shallow soil on limestone, in rocky places in woodlands, and at the edges of thickets. Leaves with petioles sometimes as long as the blade; blade up to 2 1/2 inches long, but mostly shorter, ovate to 3 lobed, with a pointed or blunt tip, flat or slightly lobed base, coarsely toothed or wavy margins, dark green on the upper surface and lighter on the lower. Flowers showy, rose colored, roughly 1 1/2 inches wide with a

yellow column formed by the pistil and stamens, appearing from spring to fall. Fruit a 5-lobed capsule with remnants of the flower at its base, separating into 5 units at maturity. In nature it is found in dry, rocky woods and slopes, pastures, savannahs, ditches, ravines, depressions to open woodlands. Needs full sun to light shade. Prefers well-drained soils from limestone soils to loam, sandy, sandy loam, clay loam, clay, or caliche type that stay on the dry side. Herbaceous stems rise from a woody base. Pink hibiscus-like flowers. Velvety, scalloped leaves. The flowers attract hummingbirds. Pavonia makes an excellent choice for landscaping. Able to survive the summer heat, its profusion of brilliant flowers adds a colorful touch to a dry landscape. Used by wildlife from butterflies and moths to hummingbirds. Moderate deer resistance.

Scarlett Bouvardia (*Bouvardia ternifolia*) - Firecracker-bush or scarlet bouvardia is a perennial 2-4 ft. shrub with shiny, oval, dark-green leaves and bugle-shaped red flowers, 2 in. long, the rim flaring into four segments. The flowers are arranged in clusters at the ends of the numerous erect branches. A shrub with brilliant scarlet, tubular flowers in loose clusters at ends of numerous erect branches. The spectacular red corolla attracts, and provides nectar for, hummingbirds. The Spanish name, Trompetilla, which means little trumpet, refers to the corollas shape. It does best in part shade and in any well drained soil on the dry side. Most often used as a flower, snipping old blooms will keep plant neat and dense. Butterflies and hummingbirds love the nectar

Scarlet Sage (*Salvia coccinea*) - grows in sun to dappled shade, any well drained soil, drought tolerant, attracts hummingbirds, butterflies and other pollinators. A perennial that often reseeds. Very showy when planted in mass. White and Pink forms are available.

St. Andrews Cross (*Hypericum hypericoides ssp. Hypericoides*) - This perennial shrub has pairs of small, oval leaves lines the sparse, ascending to spreading branches of this 1-3 ft. shrubby plant. Showy, yellow, flowers with numerous stamens top the branches either singly or in branched clusters from the upper axils. The four petals of each flower are arranged in a cross. Three well-defined subspecies of *Hypericum hypericoides* occur in the eastern U.S.: ssp. *hypericoides*, ssp. *multicaule*, and ssp. *oblongifolium*. Their native habitat is dry woods; pine barrens; sand hills & ridges; floodplains, growing in part shade. Best in any light, sandy or rocky soils that is well drained.

Switch Grass (*Panicum virgatum***)** - A fast growing native perennial prairie grass used by wildlife from birds to butterflies. Grows in full sun to partial sun. Loved by dove, quail and turkeys as a food source. Any well drained soil, drought tolerant once established.

Texas Sage (Leucophyllum frutescens) - This perennial plant goes by many common names - Cenizo, Purple Sage, Texas Ranger, Texas Barometer Bush, Texas Silverleaf, Texas Sage, and Silverleaf. A greenish gray shrub with leaves densely covered with stellate, silvery hairs and bright pink-lavender, bilaterally symmetrical flowers borne singly in crowded leaf axils. Typically a compact shrub, 2-5 ft. tall, Texas barometer-bush occasionally reaches 8 ft. in height, and 4-6 ft. in width. Leaves silvery gray to greenish, soft to the touch, up to 1 1/4 inches long but mostly 1 inch or less, tapering more gradually to the base than to the rounded tip, margins smooth. Flowers violet to purple, sometimes pink, nearly bell shaped, and up to 1 inch in length and width, appearing intermittently from spring to fall, that burst into bloom for only a few days at a time, in the summer and fall, depending on rainfall. The ashy appearance of the leaves, also described as silvery, white, or gray, is due to the millions of tiny hairs covering them. A grouping of several individuals makes a good screen or hedge. There are many nice color selections and cultivars. This and other *Leucophyllum* species are popular water-conserving ornamentals in the Southwest. It provides several months of periodic flowering. Often flowers after a few summer showers, which is why one of its common names is barometer bush. In nature it

grows over much of central and west Texas from the Rio Grande Plain, Trans-Pecos, & Edwards Plateau, south to Nuevo Leon in Mexico. It if found in ditches, ravines, depressions, hillsides, and on slopes. It will grow in any well drained soil on the dry side in full sun or part sun. Cenizo is easy to grow so long as it has good drainage as it is susceptible to cotton root rot if soil does not have good drainage and remains too moist. Humidity and high night temperatures are lethal. Cenizos should not be fertilized or over-watered. Drought-and heat-tolerant. During very cold winters, may lose a few leaves. Used by wildlife as a nesting site, shelter and the blooms attract many types of pollinators from bees to butterflies. It is the larval host to the Theona Checkerspot butterfly and Calleta silk moth. Very resistant to deer.

Woolly Butterflybush (*Buddleja marribiifolia*) - The orange flowers and fuzzy leaves of pale gray-green of this perennial are attractive. Because it is accustomed to a warmer part of Texas, woolly butterfly bush needs protection from freezes. It is very drought tolerant and will grow in any well drained soil on the dry side. It does best in part shade and the flowers attract many butterflies and pollinators. It is a showy long blooming plant with moderate deer resistance.

Wooly Stemodia (Stemodia lanata) - Native only to coastal and southern Texas and adjacent Mexico, Woolly Stemodia is a silver, whitish, or greyish plant that is great for the foliage alone....and then it blooms, with tiny lavender or white flowers that are best appreciated at close range. It colonizes densely by stolons and in sandy soil can blanket an area in its velvety white leaves. Quite suitable and attractive for trailing over the edge of a pot or wall, it dies back where winters are cold, but in warmer areas, it is reliably perennial evergreen. It only grows 4-10 inches tall with blooms that are white, purple, or violet from April through November. Small, scattered flowers. Usually purple with white throats and violet venation, but can also be entirely white. Native to Coastal and south Texas west to west Texas and south to adjacent Mexico. Found in many places from dunes and sandy soils on slopes in scrublands and plains. Grows in any soil from deep sand to acid or calcareous as long as it is well drained and on the dry side. It is also salt tolerant. Grows best in full sun. Very deer resistant.

Perennials For Shade:

Blue Mistflower (Conoclinium coelestinum) - Mistflower grows to 3 feet high, but often lower, with leaves opposite, somewhat triangular in shape, and bluntly toothed. At the top of the plant the branches, with their short-stemmed clusters of flowers, form an almost flat top. Disk flowers are bright blue or violet, about 1/4 inch long. There are no ray flowers. Blue Mistflower attracts bees and butterflies. However, this wildflower spreads quickly. Any soil in sun to part shade and often used as a groundcover. Drought tolerant once established.

Blue Mist Flower or Wild Ageratum (*Eupatorium coelestinum***) - A native** perennial that is a showy low maintenance flower that does well in low light to full sun, Good for Houston, blue or lavender blue fuzzy flowers from summer into fall, prefers sandy moist soil but fairly drought tolerant once established, aggressive spreader in favorable conditions, butterflies, native to most of Texas, butterflies

Inland Sea Oats - (Chasmanthium latifolium) - Native shade loving perennial grass that has a beautiful form often found in woodland settings. Will grow in moist conditions but is very drought tolerant once established. The seed heads in fall make a soft soothing rustling sound in the wind. The seeds are food for many species of wildlife from birds to mammals.

Strawberry Bush (*Euonymus americanus***)** - This native perennial is a airy, deciduous shrub which grows 6-12 ft. tall. Its ridged twigs become purplish when exposed to the sun. Pale green flowers with purple stamens have five, distinct clawed petals in May and June. The bright green, oval leaves become dark red in fall when bright red fruits open to reveal orange seeds. In nature its habitat is deciduous woods; low, sandy thickets; swamps, a very adaptable plant. Hence it will tolerate mist to very dry soils. Does best in par shade or filtered shade and will tolerate full shade.

Turk's Cap (*Malvaviscus arboreus var. drummondii*) - This beautiful plant is a native perennial and is uses both as a spreading shrub or a tall ground cover. It will grow often as broad as high, grows 2-3 ft., sometimes reaching 9 ft. Bright-red, pendant, hibiscus-like flowers never fully open, their petals overlapping to form a loose tube said to resemble a Turkish turban, hence its most common name, Turks cap. Especially useful in shady situations. Grows in any soil from sand to clays and limestone that is well drained and on the dry side. In nature it is found growing in shade to part shade in woodland settings. Turk's cap is a good ornamental for shady sites. Cultivars have been selected for white and pink blooms and variegated foliage. Many types of wildlife use this plant. The nectar is used by hummingbirds, butterflies, moths and other insects while the red fruits are eaten by birds and mammals. The fruit is edible either raw or cooked, tasting rather like apple, hence its Spanish name, Manzanilla (Little Apple).

White Boneset or Fragrant Mistflower, White Mistflower (*Eupatorium havenese*) - native perennial, full sun to part sun or dappled shade, well drained, drought tolerant, 2-5' tall, fringy fragrant white flowers clusters cover the bush in October and November, attracts hummingbirds and butterflies, tolerates poor soil and dry conditions, prune back after frost, blooms sporadically spring and summer, native to Edwards Plateau.

Vines For Sun:

Carolina Jessamine (Gelsemium sempervirens) - Native from Virginia and Florida west to Arkansas and east Texas and south to Guatemala, Carolina Jessamine is a twining, evergreen vine, 10-20 ft. long, that will climb trees, scramble over fences and structures, or develop a mound of tangled stems if left to its own devices. Lustrous, dark-green foliage develops a slight yellow or purple cast in winter. Auxiliary clusters of very fragrant, yellow, trumpet-shaped flowers. The fruit is a 1 1/2 in. long capsule. This high-climbing vine is very common in parts of the South, frequently found in abandoned fields and climbing high into the canopies of pine forests. It is quite adaptable and tenacious, with no serious disease or insect problems. These qualities, along with its glossy, evergreen leaves and waxy, trumpet-shaped flowers, have made it a mainstay of the suburban landscape in the Southeast. Grows is sun to part shade, any well drained humus rich soil from sand to clay. Drought tolerant once established.

Coral Honeysuckle (*Lonicera sempervirens*) - A beautiful perennial native vine that is high-climbing, twining vine, 3-20 ft. long, with smooth, glossy, paired, semi-evergreen leaves and 2-4 flowered clusters of red, tubular blooms followed by bright-red berries. Leaves ovate to oblong with smooth, rolled down margins and a blunt or short pointed tip those immediately below the flowers fused at the base. This vine has showy, trumpet-

shaped flowers, red outside, yellow inside, in several whorled clusters at the ends of the stems. Blooms havily in spring and sporadically the rest of the year. Papery, exfoliating bark is orange-brown in color. Fruit a red berry. This beautiful, slender, climbing vine is frequently visited by hummingbirds. Not too aggressive and uses as a good climber, ground cover or on arbors. Also found in a yellow cultivar. Almost any well drained soil, alkaline or acidic. Does best in full sun with good air circulation. The flowers attract hummingbirds, bees, and butterflies. The fruits are food for birds like Quail, Purple Finch, Goldfinch, Hermit Thrush, American Robin. This plant is also the larval host for the Spring Azure butterfly and Snowberry Clearwing Moth.

Coral Vine (*Antigonon leptopus*) - beautiful pink clusters of flowers spring to fall, sun to part sun, drought tolerant, loved by honey bees and other pollinators, any well drained soil, perennial, can grow up pine trees, dies to ground in cold winters but returns quickly in the spring.

Muscadine Grape (Vitas rotundifolia) - The "Muscadine Grape" comes in blonde (called Scuppernong) and dark varieties. Native to Southeastern USA, muscadine grapes contain more "resveratrol", a natural antioxidant that helps increase good cholesterol, than European wine grapes. This antioxidant is highest in skins and seeds hence purees made from whole grape contain this beneficial chemical. Grows in any well drained soil in full to part sun. Fruits are eaten by many species of birds and mammals. This grape has a high sugar content and can be eaten fresh from the vine or used to make jellies and jams. It is also know to make many wines including some very good Ports. A few cultivars are:

'Ison'- black, self fertile 20% sugar

'Cowart'- black, self fertile, 19% sugar

'Carlos'- bronze, self fertile, 16% sugar

'Magnolia'- bronze, self fertile, 16% sugar

`Triumph'- bronze, self fertile, 16% sugar

'Fry' - bronze, very sweet with up to almost 30% sugar

Mustang Grape (*Vitis mustangensis*) - **A** common and easily recognized native grape with a white, velvety surface on the lower side of the leaves. A vine climbing over shrubs and into trees and often shading their leaves. Leaves in two forms: one form unlobed or shallowly lobed, and the other form deeply lobed, with the latter less common and on rapidly growing shoots. The lower surface of the unlobed leaves often concave. Grapes up to 3/4 inch in diameter, few to the bunch, ripening in August and September to dark purple, and usually tart, but popular with makers of homemade wine/jellies/jam. Grows in any well drained soil from full sun to part sun. Birds and small mammals love the fruits. In nature it grows on the edge of woodlands to any opening along thickets or river banks. Often seen growing on fences.

Passiflora edula (formerly P. incarnata)- "Wild Passion Flower" or "Maypop", perennial, native to much of the USA, state flower of Tennessee, flowers are 2 inches across, white with purplish-pink crowns, herbaceous perennial, to 20 ft., full sun and any soil. Blooms June -September, the native habitat is from sandy thickets to edges of woods and streams. It attracts butterflies both as a nectar source and as a food source for caterpillars,

fruit is edible (rich in vitamin C) and produces a good jelly, self sterile hence need two or more for pollination and fruit production.

Passiflora incarnata - "Maypop", perennial, native to southern USA, edible yellow fruit, hardy to 18 degrees, full sun to part shade in afternoon, root hardy to Z-6, any soil, moist but well drained, drought tolerant once established. Self pollinating, nectar and host plant for Gulf coast fritillary butterflies

Purple Passionflower (*Passiflora foetida*) or P. foetida var. gossypiifolia - This native vine has many common names "Corona de Cristo or Christ's Crown, Love In A Mist ". It is a perennial that is native from Victoria into South Texas (often dies back to ground in the Houston area). A larval host plant for Fritillary butterflies, full sun to part shade, well drained soil (even saline), very vigorous, white to purplish or pink flowers backed by 3 feathery bracts April till October, bright red edible fruit. Drought tolerant once established and will grow in full sun to part shade in any soil. The fruits are mildly sweet and sometimes tart.

Texas Clematis, Scarlet Clematis or Scarlet Leather Flower (*Clematis texensis*) - This is a native perennial vine common in Central Texas and Edwards plateau. It likes hot summers, blooms late summer-fall, red pitcher shaped flowers, any well drained soil including alkaline calcareous soils, plumed seed balls, very showy, 6-8 ft. tall, often called a connoisseur's vine, hardy to Z-5, best with morning sun and afternoon shade but reported to tolerate full sun, loose fertile highly organic soils with even moisture, very drought tolerant once established. The 1" long pitcher shaped flowers, bloom June/July to late autumn, often takes 2-3 years to establish before good blooms commence, will grow to 9' tall, often dies to ground in winter.

A few well known cultivars are:

`Duchess of Albany', clear pink trumpets August-fall, vigorous climber 8-10', `Etoile Rose' - deep rose with paler center and margins `Gravetye Beauty' - star shaped flowers are deep satiny ruby red `Princess of Wales' - gleaming cherry red `Ladybird Johynson' - deeper huskier red

Texas Wisteria (*Wisteria frutescens*) - perennial, drought tolerant once established, sun to part sun, larval host for Marine Blue, Zarucco Duskywing, and skippers butterflies.

Trumpet Creeper or **Trumpet Vine** (*Campsis radicans*) - This perennial native to eastern North America as far north as Ohio and South Dakota into Central Texas. It is often cultivated for its attractive, reddish orange flowers and can escape cultivation, sometimes colonizing so densely it seems a nuisance, particularly in the southeast, where its invasive qualities have earned it the names Hellvine and Devils Shoestring. Its rapid colonization by suckers and layering makes it useful for erosion control, however, and its magnificent flowers never fail to attract Ruby-throated Hummingbirds within its range. Adapted to eastern forests, Trumpet creeper grows tall with support. It climbs by means of aerial rootlets, which, like English Ivy, can damage wood, stone, and brick. To keep it in check, plant it near concrete or an area that you can mow; mowing down the suckers will discourage them. Any well drained soil, drought tolerant within its range. Blooms most in full sun. The flowers attract hummingbirds and it is the larval host plant for the Trumpet Vine Moth.

Virgin's Bower (*Clematis virginiana*) - Perennial that is native to East Texas, sun to part sun, well drained but moist soil, evergreen, vigorous twinning vine, blooms in September with panicles of creamy white flowers which almost hide the foliage, starfish like hairy seeds follow. Drought tolerant once established.

Virgins Beard (*Clematis drummondii*) - Native to dry soils in South and West Texas. This is a climbing vine that covers fences and shrubs. Leaves are opposite and compound, with 5-7 leaflets 1/2-1 inch long, coarsely cut, sometimes toothed. The 4 petal-like sepals are light greenish-yellow, almost white, narrow and thin, with margins slightly crinkled, 1/2-1 inch long. There are no petals. The stamens are quite conspicuous. When the seeds mature, the female vine is covered with great masses of silky, feathery plumes, 2-4 inches long, which grow out from the seed cover. Male and female flowers on different plants. Any well drained soil. Flowers attract butterflies and it is the larval host plant for the Fatal metalmark butterfly.

Vines For Shade:

Carolina Snailseed (Cocculus carolinus) - A native perennial scrambling or climbing vine, 3-15 ft. long, with twining stems and ovate to somewhat heart-shaped leaves. Foliage is medium- to yellow-green, downy beneath, tardily deciduous to semi-evergreen in the South. Flowers small, greenish, male and female on different plants, both in loose lateral and terminal clusters, the male branched, the female unbranched, appearing from June to August. Fruit fleshy, bright red, 1/4 inch or more in diameter from Sept. to Nov. in drooping, grape-like clusters. Seeds are coiled, suggesting a snail. This vine is a strong grower and should be used where its vigorous spreading nature would be appreciated. Grows on any soil type from moist to dry. Fruits are loved by birds and other wildlife.

Cross Vine (Bignonia capreolata) - A native perennial climbing, woody vine reaching 50 ft. long with showy, orange-red, trumpet-shaped flowers 2 inches long and 1.5 inches across which hang in clusters of two to five. They are sometimes seen high in a tree, as the vine climbs by means of tendrils. Claws at the end of its tendrils allow cross vine to cling to stone, bricks and fences without support. Leaves are opposite and bifoliolate. Leaflets are 4-6 inches long by 1-1/2 inches wide, with a third leaflet modified into a tendril. Persistent, glossy, semi-evergreen leaves change from dark green in summer to reddish-purple in winter. Grows best when tops are in sun or part sun. Any soil from sand to clay as long as it is well drained. Prefers soils on the dry side but it will also tolerate seasonal flooding. An early nectar source for butterflies and hummingbirds as the spring bloom often coincides with the hummingbird migration.

B. c. 'Atrosanguinea' - red flowering form, bright scarlet flowers May-June

Cultivar `Tangerine Beauty' has beautiful red and yellow flowers to tangerine flowers, evergreen, vigorous, pest free, sun to partial shade

Pitcher, Purple Clematis or Leather Flower (*Clematis pitcheri*) - This perennial is native from East Texas to Canada. It is found growing in thickets and open woodlands, fast growing, heat and drought tolerant, best in dappled shade. Bluebill or leather-flower is an herbaceous, perennial vine climbing to 10 ft. by means of twining petioles. Flowers are nodding, on long, slender stems from the leaf axil. They are dull-purple to brick-red on the outside; dark purple, red, or greenish white on the inside. The interesting flowers of *Clematis pitcheri* are long lasting. The plant is fairly heat and drought-tolerant. It dies to the ground in fall. Birds eat the seeds.

Saw Greenbriar (*Smilax bona-nox*) - A prickly vine forming dense tangles in shrubby and wooded areas. Stems smooth, green, with stout, sharp prickles on the lower sections. Leaves with tendril-bearing petioles; blades up to 4 1/2 inches long and 4 inches wide, varying from triangular to heart shaped, often with a broad lobe on

each side, firm textured and occasionally mottled on the upper surface, persisting into winter. Flowers small, rather inconspicuous, in clusters arising from the axils of the leaves, male and female on different plants, appearing from March to June. Fruit is spherical about 1/4 inch in diameter, fleshy, black. Any well drained soil that is on the dry side. The fruits of saw greenbrier are eaten by wood ducks, ruffed grouse, wild turkeys, fish crows, black bears, opossums, raccoons, squirrels, and many species of songbirds. White-tailed deer browse the foliage. Provides cover for small animals and birds. Best in natural or woodland settings.

Texas Dutchman's Pipe (*Aristolochia reticulata*) - This small native vine that only grows to 3-4 feet, flowers May thru August in well drained soils kept on the dry side.

Virginia Creeper (*Parthenocissus quinquefolia*) - A woody, deciduous vine, Virginia Creeper can be high-climbing or trailing, 3-40 ft.; the structure on which it climbs is the limiting factor. Virginia Creeper climbs by means of tendrils with disks that fasten onto bark or rock. Its leaves, with 5 leaflets, occasionally 3 or 7, radiating from the tip of the petiole, coarsely toothed, with a pointed tip, and tapered to the base, up to 6 inches long. Leaves provide early fall color, turning brilliant mauve, red and purple. Inconspicuous flowers small, greenish, in clusters, appearing in spring. Fruit bluish, about 1/4 inch in diameter. Grows in any well drained soil including caliche from full sun to shade. Drought tolerant once established. The fruits are used by many birds through the winter (chickadees, nuthatches, mockingbirds, catbirds, finches, flycatchers, tanagers, swallows, vireos, warblers, woodpeckers, and thrushes). It is also a larval host for several species of sphinx moths. Note: In the right conditions this vine can become invasive.

Virginia Dutchman's Pipe (Aristolochia serpentaria) - This perennial native vine grows in shady conditions along stream banks, flood plains and bottomlands. It grows in any soil from sandy loam to clay that is on the dry side. A showy vine that often is used as a groundcover. Larval host plant for the Pipevine swallowtail butterfly.

Wooly Pipevine (*Aristolochia tomentosa*) - Wooly pipe vine has a **bractless** flower stalk, a yellowish calyx that is purple around the opening, and downy and whitish leaf undersurfaces. Grows in part shade in sandy to loamy soils that are well drained. Drought tolerant once established. Attracts butterflies and is the larval host plant for the Pipevine swallowtail butterfly.

Yellow Passionflower (Passiflora lutea) - Native to the southeastern states this perennial climbing or trailing vine grows to about 15 ft. in length. The greenish-yellow flowers, an inch across, give way to purple or black berries. Wide, shallowly lobed leaves with entire margins turn an attractive yellow in fall. This is a major food plant for several species of butterfly larvae. The pollen of this species is the only known larval foodstuff of the oligolectic (and possibly monolectic) Passionflower Bee, Anthemurgus passiflorae. This vine grows best in part shade in any soil that is well drained and is very drought tolerant once established. This is a major food plant for several species of butterfly larvae including Julia, Mexican & Gulf fritillaries, Zebra & Crimson-patch longwing butterflies.

Groundcovers For Sun:

Frog Fruit (Phyla incisa) - Naive perennial that grows in sun to part sun, root hardy, low growing, mat-forming. It is evergreen south of I-20 and dormant north of I-20, native to all of Texas. Any soil including saline and can

tolerate light mowing (2-4") to keep in tidy. Tiny white flowers from March-November loved by butterflies, host plant for Phaon Crescent butterfly

Frog Fruit (Phyla nudiflora) - Native member of verbena family, 3-4" tall, aggressive spreading groundcover, loved by butterflies, any soil, wet or dry, full shade to part shade, drought tolerant.

Gulf Coast Muhly (*Muhlenbergia capillaris*) - This is a native grass know as "Gulf Coast Muhly or Pink Muhly". It grows 3-4' tall by 2-3' wide in good conditions, and is native to the Gulf Coast and east Texas and much of N. America. It is almost evergreen, root hardy, long dark green needles, perennial grass, very elegant, use in large mass plantings. Grows in deep sand or in heavy black soil even if poorly drained, but drought tolerant once established. Prefers full sun, looks good in perennial flowers gardens in single clumps or in groups of three, blooms are rosy pink in early to mid-fall, when back lit it is a breathtaking sight. Only mow once a year (if at all) around Valentine's Day, can grow in sugar sand or clay that holds water a week or more, works best as a groundcover in Southeastern Texas, 1 gallon pots can be divided and plugs planted 12-18" apart for a solid cover, panicles turn pink in fall and look hazy as if plants are shrouded in smoke.

Indian Blanket (Gaillardia pulchella) - Firewheel or Indian blanket is a popular annual growing 1-2 ft. tall. The hairy stem is usually much-branched and becomes woody at the base late in the season. Branched stems, mostly leafy near the base, have showy flower heads with rays red at base, tipped with yellow, each with 3 teeth at broad end. The well-known flower heads are 1-2 in. across with a red center and a yellow outer band. Occasionally the three-cleft rays are solid orange or yellow. The disk flowers in the center are brownish red. It is found in dry plains & open areas and even in calcareous and sandy-calcareous prairies in the western two-thirds of the state. Any well-drained sand, loam, calcareous soils. Attracts butterflies and will reseed.

Little Bluestem (Schizachyrium scoparium) - Little false bluestem is a very ornamental bunchgrass with fine-textured foliage that forms very dense mounds18-24 in. in height. Slender, blue-green stems, appearing in August, reach 3 ft. by September and become radiant mahogany-red with white, shining seed tufts in the fall. Color remains nearly all winter. Perennial clumps grow up to a foot in diameter. This mid-prairie species, also known as Bunchgrass, gets its name from the bluish color of the stem bases in the spring, but most striking is the plants reddish-tan color in fall, persisting through winter snows. In winter the seeds, fuzzy white at maturity, are of particular value to small birds. Grows in sun or part shade and prefers soils on the dry side from sand to clay. Looks best when planted in mass as the visual dynamics it provides range from blue-green in late summer to golden with cotton-tufted seed heads in winter. It readily reseeds so little bluestem is not recommended for small gardens. Little bluestem is tolerant of a wide range of soils but will not tolerate wetlands or sub-irrigated sites. Wildlife use it for graze, cover, nesting material, and the seeds are eaten by small mammals and birds. It attracts birds and butterflies.

Powderpuff (mimosa strigulosa) - A native wildflower that is highly drought tolerant that grows in most well-drained soil, making it suitable for dry, sandy areas. Pretty powder puff like pink flowers.

Prairie Verbena (Glandularia bipinnatifida) - Gently rounded clusters of bilaterally symmetrical pink, lavender, or purple flowers bloom atop stems with highly divided leaves. The Spanish name, Moradilla, comes from morado ("purple") and means "little purple one." This plant often forms brilliant displays of pink or light purple, covering acres of ground. It is a variable complex, with some plants tall and pink-flowered, others more matted and with lavender or purple flowers; the two forms are usually found in separate areas. The

genus *Glandularia* is closely related to *Verbena*, differing conspicuously in its round-topped clusters of showy flowers; in some references, this species is listed as *Verbena ambrosifolia*. Commonly found in open grassy areas. Widespread throughout most of the state of Texas. Any well-drained sand, loam, clay, caliche, limestone. Tolerates part shade and drought tolerant once established.

Winecup (trailing) (*Callirhoe* involucrata) - "Trailing Wine Cup", 18-24 inches tall, blooms Feb.-July, abundant deep purple-red flowers 2 inches across, full sun to part shade, dry well drained loose gravelly or sandy soils, plant mid-winter, perennial, native, hardy and drought tolerant, make great hanging baskets, with occasional watering will bloom all summer, good for the Southeast and most of Texas.

Winecup (Standing) (Callirhoe digitata) - The wine cup is a perennial growing 8-20 inches tall, depending on moisture and soil, with gray-green stems. Leaves are alternate, basal leaves having stems about as long as the leaf; leaves are coarsely lobed or scalloped to deeply 5-lobed. There are few leaves on the upper part of the stem. Flowers have 5 petals, cup-shaped at first and opening out nearly flat as the flower matures. They are violet to red-violet, sometimes white, 1-2 inches across. The stamens and pistil form a cone like structure in the center of the flower. Best in full sun on dry rocky or sandy soils. Very drought tolerant.

Groundcovers For Shade:

Horseherb (Calyptocarpus vialis) - Depending on your point of view, Straggler Daisy or Horseherb is a pest or a welcome, shade-tolerant groundcover that tolerates moderate foot traffic. If you have a shady lawn anywhere within its range, you probably already have it. It gained in popularity during the growth in interest in native plants and is now occasionally available for sale at native plant nurseries. Thriving in sun or shade, its tiny, yellow daisy flowers add a minute touch of color to shady areas and attract small butterflies like sulfurs and skippers. Any well drained soil.

Missouri Violet (*Viola missouriensis*) - Violets are a sign that spring has arrived, and this is often one of the most common violets found within its range. It prefers well-drained woodland soil, where it can colonize via rhizomes to send up numerous glowing purple blossoms in early spring. Any well-drained sand, loam, clay, or limestone. Will go dormant during droughts.

Partridgeberry (*Mitchella repens*) - Partridge Berry is a native perennial, a small, woody, trailing vine with 6 to 12 inch, slender, trailing stems that does not climb but lays prostrate on the forest floor. The dark-green, evergreen leaves are simple, opposite, ovate, with a pale yellow midrib, are ½ inch across, with a short stalk. In late spring, a pair of white flowers (with a single calyx) appears. Each small, fragrant flower has four brilliant white petals that are pubescent and unite into a funnel-shaped tube that is also fringed with hairs. Partridge berry is a fairly common inhabitant of deciduous and coniferous forests in rich organic soils with dappled sunlight to complete shade. Depending on latitude and elevation Partridge Berry flowers from late spring to early summer. Partridge Berry is pollinated by insects. The ensuing scarlet berry contains eight seeds. The fruits are tasteless and generally survive through winter and into the following spring. Birds are the primary consumer of these fruits and the subsequent distribution of seeds. Most soils and drought tolerant once established.

Pigeonberry (*Rivina humilis*) - Native perennial that is low growing perennial herb about 1 foot tall that grows beneath trees and shrubs. The flowers are about 1/4 inch across, white to pink, growing on the last 2-3 inches of the stems. The fruits are numerous, red and almost translucent, often appearing on the lower part of the

stem while the upper part is still blooming. They are a choice food for many kinds of birds. Pigeonberry appeals to the eye when it blooms pale pink and bears scarlet fruit simultaneously. Birds and bees love this plant. Any well-drained sand, sandy loam, loam, clay, or calcareous soils. Prefers light shade and in drought during the summer it may go dormant.

Spiderwort (*Tradescantia occidentalis*) - native perennial with blue to lavender flowers that adds color to shady areas, tolerates moist or dry soils and is very drought tolerant once established, vigorous grower, no disease or pest problems. Very adaptable as it will also grow in full sun.

White Avens (Geum canadense) - White Avens complements any woodland garden as a groundcover or in a mass planting. The leaves resemble those of strawberries. Its evergreen winter foliage also makes it attractive. Grows on Woodland edges and openings, thickets, and open woodlands in shade or part shade. Any soil from sandy to clay that is well drained but tolerates seasonal flooding. Used by butterflies and other pollinators.

SOURCES OF INFORMATION FOR THIS LIST:

<u>How to Grow Native Plants of Texas and the Southwest: Revised and Updated Edition</u> (2001) Nokes, J.

Landscaping with Native Plants of Texas and the Southwest (1991) Miller, G. O.

Manual of the Vascular Plants of Texas (1979) Correll, D. S. & M. C. Johnston

Native Alternatives to Invasive Plants (2006) Burrell, C. C.

Native Texas Plants: Landscaping Region by Region (2002) Wasowski, S. & A. Wasowski

Trees of Central Texas (1984) Vines, Robert A.

Ladybird Johnson Wildflower Center database - https://www.wildflower.org

The Garden Club of Houston website https://www.gchouston.org:

Under the "Education" section you will find:

<u>Texas Tough Trees for Houston</u> <u>https://www.gchouston.org/wp-content/uploads/2017/11/Tough-Texas-Trees-by-Doris-Heard.pdf</u> Description of small and large native trees that survived the 2011 drought with little or no irrigation

<u>Great Small Trees for Houston</u> <u>http://www.gchouston.org/wp-content/uploads/2017/06/Great-Small Trees brochure-finalforweb.pdf</u> Native understory trees that do well in Houston, we did a demonstration planting along Buffalo Bayou.

Native Plant Society of Texas - https://npsot.org/

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