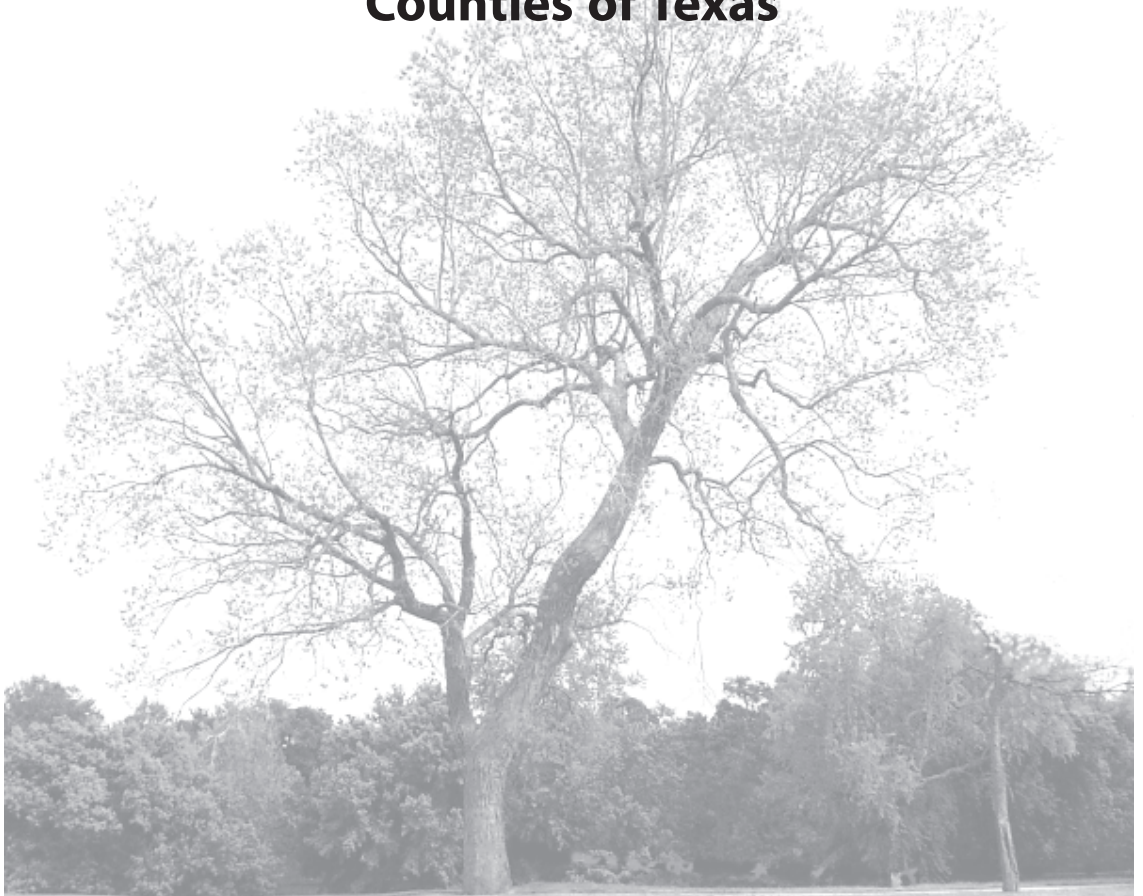


# **Tree Planting Guide**

for

**Bastrop, Caldwell, Lee and Fayette  
Counties of Texas**



Produced by the

**Pines & Prairies Land Trust**

**106 Conference Drive Bastrop Texas 78602**



**Pines and Prairies Land Trust Vision:  
Connecting with and Protecting  
the Special Lands and Resources of Our Region**

**About the Author**

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Written and Designed by Joan Russell  
Illustrated by Tom Dureka

**Produced by  
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106 Conference Drive  
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# About



## Pines and Prairies Land Trust

Pines and Prairies Land Trust (PPLT) is a non-profit, tax-exempt 501(c)(3) land conservation organization serving Bastrop, Caldwell, Fayette and Lee Counties since 2001. The mission of The Pines and Prairies Land Trust is to protect significant open space and natural, historic, and cultural resources; and to preserve the quality of life for current and future generations, through education and by owning and protecting easements and land.

PPLT helps property owners protect the legacy they own from unwanted fragmentation by providing economic alternatives to the sale of cherished family land to developers. PPLT can hold conservation easements that will protect land from being broken up and developed but will not prevent owners from selling or heirs from inheriting family land.

If you own a special place you are interested in preserving, please contact us to find out what options are available.

As part of its educational outreach, Pines and Prairies Land Trust produced this tree planting guide for the citizens of Bastrop, Caldwell, Fayette and Lee Counties. Education as well as conservation is a part of PPLT's mission. We hope this guide will be of use to everyone who wishes to beautify and improve a plot of land, whether large or small, by planting trees that will grow to give beauty, joy and value for many years.

**Pines and Prairies Land Trust**  
**106 Conference Drive, Bastrop, Texas 78602.**  
**512-308-1911**

**An electronic version of this Guide is available at <[www.pplt.org](http://www.pplt.org)>**

# Why Plant Trees?

Home and land owners plant trees for many reasons. Among the reasons are these:

1. The beautification of the landscape with
  - A tree's form and shape
  - The color and shape of leaves and flowers
  - Seasonal changes of deciduous trees
  - The fragrance of leaves, needles and flowers
  - The sounds of windblown needles and leaves
2. As a legacy for the enjoyment of future generations
3. To enhance the value of a property with mature trees
4. For energy conservation provided by shading home, lawn, air-conditioning equipment and pavement areas
5. To create more enjoyable outdoor sitting and activity areas with shade
6. For erosion reduction and water conservation
7. To improve wildlife habitat with food, nest sites and shelter
8. To create living, green screens for privacy, windbreaks and to block unsightly views
9. For reducing air and noise pollution from streets and neighboring businesses
10. For the majesty and mystery of living with mature trees

# About the Tree Planting Guide

This tree planting guide was produced especially for **Bastrop, Caldwell, Fayette and Lee Counties** so that residents may choose tree species that will thrive in the climate and various soils of these four counties. Most of the species are native to Texas, but some are well-adapted introduced species that have been proven over years and are not invasive. All the species are available in the nursery trade.

This guide is as much of a “what *not* to plant” as it is a “what *to* plant” guide. Choosing a tree species that fails to thrive in the conditions of a space can waste years of time when a different species could be flourishing in the same space and serving the purpose for which it was planted.

The trees have been arranged according to the amount of space they need when mature. **Small Trees** are appropriate for homes with yards of up to 1/4<sup>th</sup> acre, for planting under power lines or near structures and can well provide shade and privacy. **Mid-sized Trees** are generally suitable for homes with space of 1/3<sup>rd</sup> acre to one acre. **Large Trees** can be used singly on a large house lot but usually are more appropriate for larger acreages and natural settings.

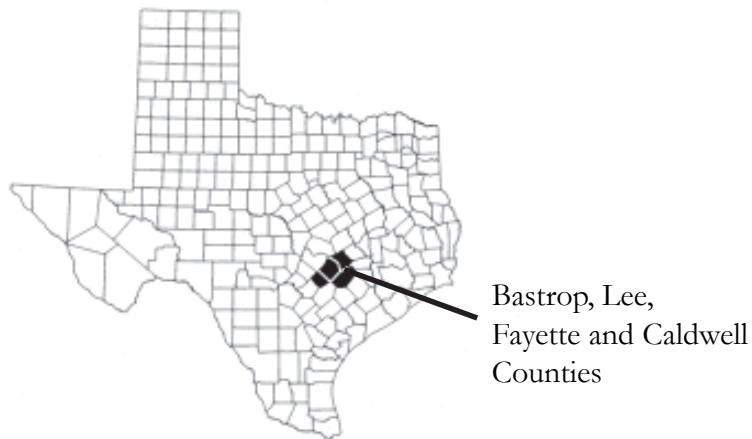
All of the characteristics for each tree are self-explanatory except for “life span”. “Life spans” are categorized as **Short**--up to 40 years, **Medium**--40 to 100 years, and **Long**--100 years and longer.

Every effort was made to include all the information needed to make this guide as complete and useful as possible. The contributors want everyone who plants a tree to be rewarded with a beautiful and valuable asset to our lovely Central Texas counties.



# About Our Four-County Region

Bastrop, Caldwell, Fayette and Lee Counties are located in an area of transition between the Gulf Coastal Plain of South Texas and Blackland Prairie farmland of North-Central Texas. This area is called the South-Central Texas Gulf Coast Climatic Division. The climate is generally humid with mild winters and hot summers. The Gulf of Mexico significantly affects weather in the area almost all year.



## Precipitation

The average yearly rainfall for the area is about 36 inches. However, rainfall varies greatly from year to year with wet years having 50 inches of rain or more to periods of drought lasting from one to several years with less than 25 inches of rain per year. The heaviest rainfall usually occurs between September and May but that varies also and disturbances in the Gulf of Mexico can produce torrential rainfalls during the hurricane season.

Snow is rare but there are occasional freezing rain and sleet events.

## **Soil**

Because the area is in the transition between the acidic sands, silts and clays of the Gulf Coastal Plain and the Blackland Prairies clay soils, many types of soil can be found in the four counties. Soil types can be critical to success in growing trees. Some trees will grow in almost any type or pH of soil, but many will not. It wastes precious time to try growing a tree where it simply sulks and looks peaked for years when a different species would thrive and become a valuable asset during the same length of time. Knowing the type and pH of the soil in the planting site is important. Call the Texas Cooperative Extension office in your county for information on how to get soil tested.

## **Temperature**

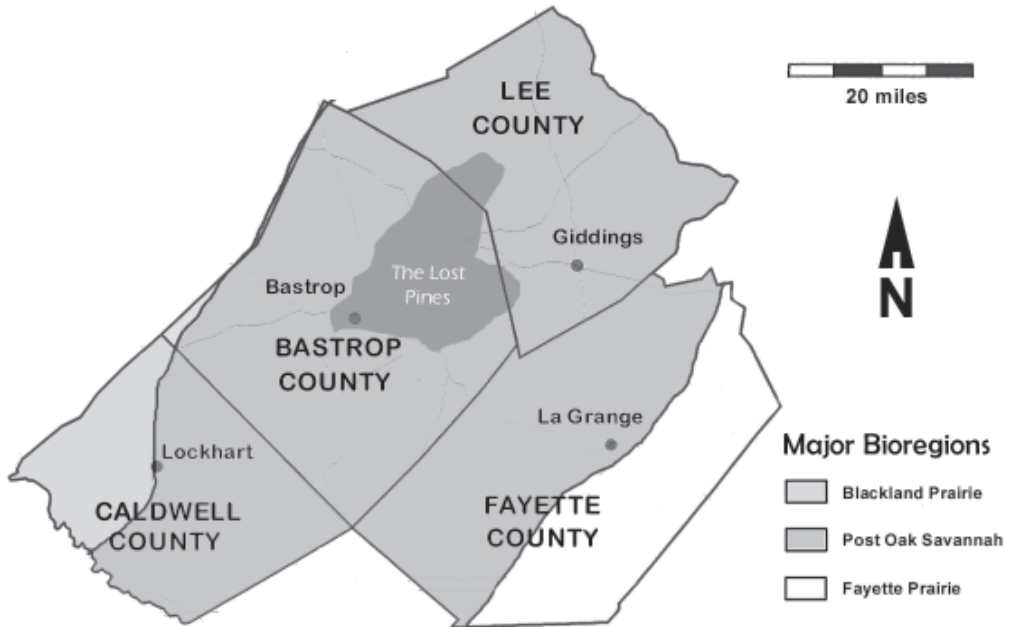
This area experiences mild winters with the lowest temperatures usually not less than 15 degrees. Summers are hot with temperatures of 95 degrees normal on many days and temperatures of 100 degrees or more not unusual. Humidity is generally high, between 55% and 85% most days.

**Bastrop County** covers about 900 square miles. Elevations range from 400 to 600 feet above sea level. Most of Bastrop County land is Post Oak Savannah. The soils are light tan, sandy or gravelly and the pH is acidic.

Post oak trees grow in acid soil. These trees are very sensitive and will not tolerate soil compaction or disturbance of the soil around the feeder roots that are near the surface. Post oak trees are not available in the nursery trade and are therefore not included in this guide. These very slow growing trees are beautiful and valuable shade trees and every effort should be taken to preserve and protect them.

The loblolly pine trees growing naturally in the area are known as the Lost Pines. These trees grow in deep sand or gravelly, acidic soil. Along the Colorado River, soils are generally loamy and neither acid or alkaline, but neutral in pH. In southwest Bastrop County loamy soils with underlying clay called claypan soils are neutral to alkaline. The northern part of Bastrop is situated in the Blackland Prairie with heavy, gummy black soils that tend toward alkalinity.

**Caldwell County** covers about 550 square miles and is located south of Travis County. Elevations range from 375 feet to 500 feet above sea level. The



northern 2/3rds of the county is located in Blackland Prairie with heavy clay soils of neutral pH. These soils constitute prime farmland. The natural vegetation is tall grasses and mesquite trees. The southeast part of the county has deep sand and sandstone. These soils tend to be acidic.

**Fayette County** is the largest of the four counties and covers 950 square miles. The land is level or gently sloped with elevations from 200 to 500 feet above sea level. Fayette County has the most varied soils of all four counties and in fact more different types of soil than almost any county in the state. It is not possible to pin down which soils may be found in which general areas. Landowners are advised to have soil analyzed before planting trees that need specific types of soil to flourish.

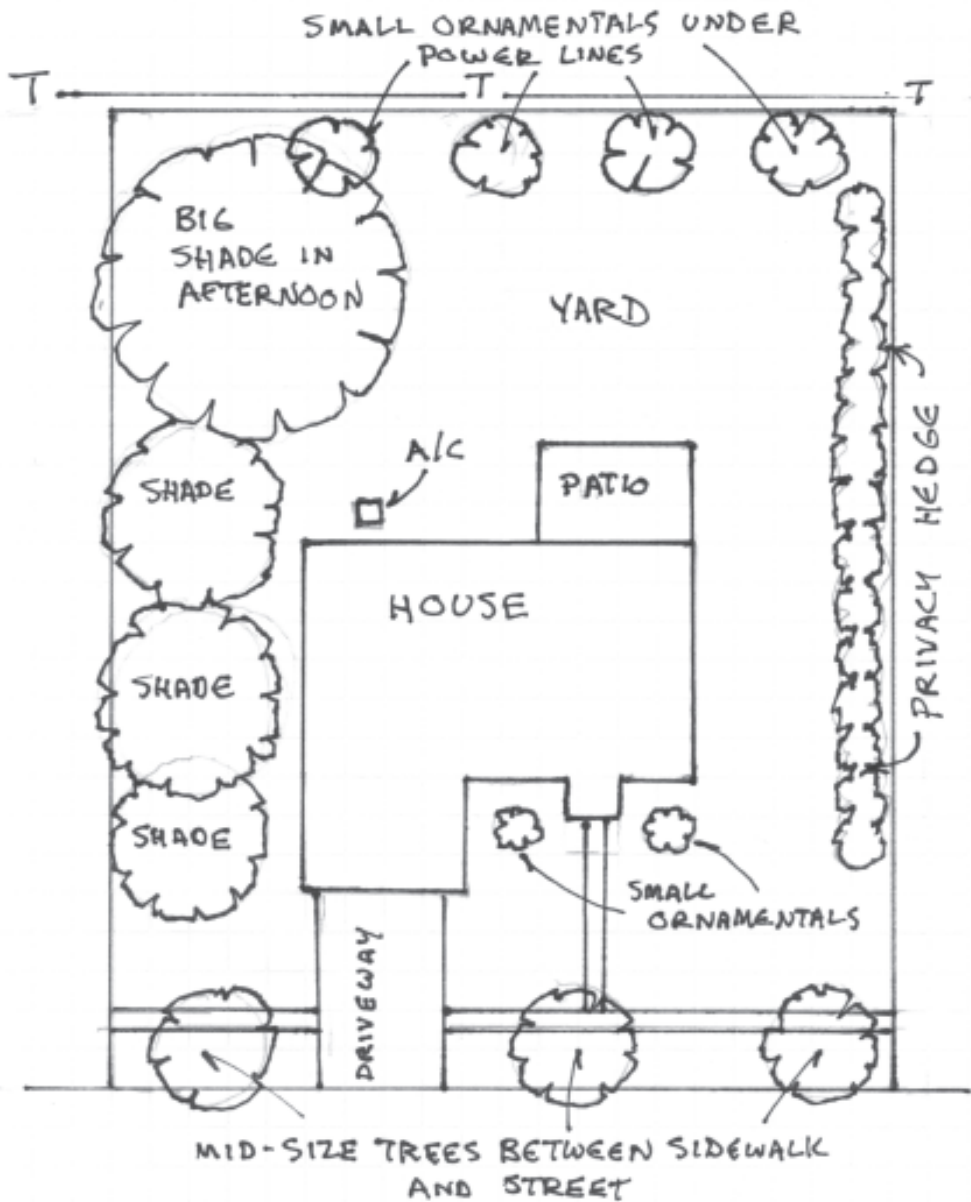
**Lee County** covers 631 square miles with elevations ranging from 270 to 970 feet. The northern part of the county is in a general area of deep sand and gravelly soils of neutral or acid pH with naturally growing Lost Pines loblolly pine trees. The central part of the county is Blackland Prairie having clay soils of neutral pH with mesquite trees and tall grasses as the natural vegetation. The rest of Lee County is considered Post Oak Savannah with sandy or loamy acidic soils and the characteristic native post oak trees.

# Where to Plant

1. Create a master plan on paper.
2. Plan for the height and spread of the mature tree.
3. Leave space surrounding the mature tree:
  - From other trees,
  - From power lines,
  - From structures and improvements,
  - From sidewalks, driveways and streets,
  - From underground utilities and other obstacles.

**Call Dig Tess at this number: 1-800-245-4545  
for the location of underground utilities.**
4. Plan for shading benefit for windows, lawns, outdoor activity areas and air-conditioning units.
5. Consider drainage and slope to allow for water and soil needs of tree.  
A tree needing well-drained soil will not do well in a low spot that stays wet.
6. Consider the aspect (the predominant exposure to sun and wind) when selecting the planting site. Some trees do well in late-afternoon sun and other, shade tolerant trees may scald.

# MASTER PLAN



# How to Plant a Tree

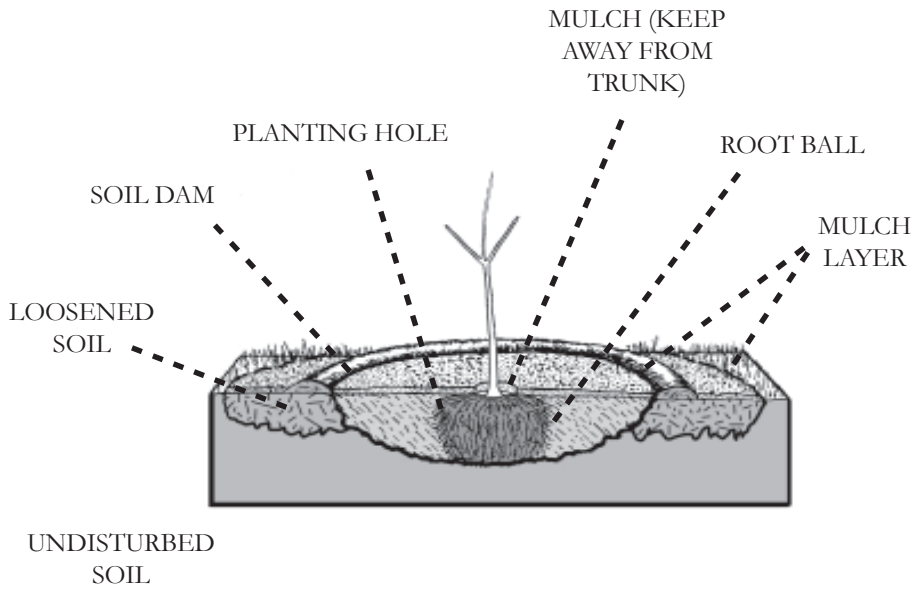
**Best time to plant** – October to March

## 1. **Types of nursery stock**

- Bare root – least expensive, plant in January and February. Fruit trees and pecan trees are sold this way.
- B&B – balled and burlapped roots.
- Container grown. Examine the roots to make sure they are not circling the root ball.

## 2. **Planting**

- Mark the site with a stake.
- Dig a hole 2-3 times wider than the root ball and slightly shallower. Make sure the sides of the hole are rough and uneven. (Reserve the soil on a tarp or wheelbarrow to backfill the hole.)



# How to Plant a Tree

- B&B trees - place in the planting hole and then cut the top 1/3 of the burlap away. Remove the metal banding and nylon string. The rest of the burlap can stay in the hole.
  - Container trees- remove container by squeezing sides gently.
  - Do not plant too deep. Make sure the flare of the roots is visible.
  - Bare root trees - place in the hole so that roots have enough room to spread.
  - Adjust the tree so the trunk is straight.
- 3. Finish planting**
- Backfill the planting hole halfway with the original soil.
  - As the soil is replaced, add water with a slow flowing water hose to fill in air pockets.
  - Tamp the soil gently.
  - Keep filling the hole with the original soil until it is again level with the ground.
- 4. Final steps**
- Loosen an area with a turning fork to a depth of 8 inches in an area about 5 times the diameter of the root ball.
  - Construct a little dam with leftover soil about 3 feet out all the way around the trunk. This will keep water seeping into the roots instead of running off. Water once more.
  - Mulch entire planting and loosened area with 3 – 4 inches of organic mulch. Keep mulch away from the tree's trunk.
- 5. Planting No No's**
- Do not add soil amendments such as peat moss or potting soil in the planting hole.
  - Do not add fertilizer to the planting hole.
  - Do not wrap the trunk or put any kind of guard around the trunk.
  - Do not weed-eat near tree trunks.
  - Stake only when necessary to keep the tree from blowing over and remove stakes after two years at the longest.

# Plan a “FireWise” Landscape

1. Plant only trees with low flammability ratings near structures and improvements.
2. Plant only trees with low flammability ratings next to driveways and streets and maintain adequate clearance to allow for width and height of emergency vehicles.
3. Do not plant trees, shrubs or tall grasses that will grow to be within 15 feet of propane or butane (LPG) tanks. Plan for mature size.
4. Plant only groundcover and low-growing, fire resistant plants underneath building eaves.
5. Trees with high flammability ratings are best planted singly and away from structures, power lines and LPG tanks.
6. Plan to allow for mature height and spread when planting trees near structures and power lines.
7. Maintain 30 feet clearance of highly flammable vegetation around structures – more if structures are on top of a slope. Select only lower flammability plants for use near improvements.
8. Plant trees with low-growing branches away from other trees and shrubs.
9. Keep foundation shrubs low and trimmed back from windows.
10. Keep tree limbs trimmed back 10 or more feet from chimneys.



# Care of Newly-planted Trees

- Do not prune healthy branches from a newly planted tree. Leaves create food the tree needs to develop a strong healthy root system.  
More leaves = more food.
- Prune only those branches that are crossed, rubbing, broken or dead.
- **EXCEPTION:** A well-formed young tree should have a single trunk from the base to the top. This is called a *leader*. Some young trees have *two* leaders. Cutting off one of these leaders, usually the smaller or weaker one will benefit the tree, and should be done at this time.
- Water newly-planted trees about once a week during dry weather. Newly planted trees need 6-8 gallons of water per week for every inch of trunk diameter.
- Add compost around the base of newly-planted trees twice a year. It is not necessary or desirable to use commercial fertilizer.
- Wait until after the tree has been in the ground for two years before pruning to shape the tree.

# Pruning

Healthy trees should be pruned only to correct a problem.

## Tree should be pruned to:

- Thin and balance the crown.
- Remove broken, diseased, crossed, rubbing and dead branches.
- Remove stubs and suckers.
- Remove low hanging branches.
- Remove weak, narrow crotches that can decay and split as the tree ages.
- Select the strongest and healthiest branches most parallel to the ground for future growth.

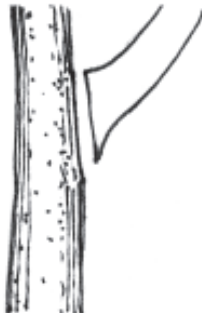
## Pruning No No's:

- Do not severely top trees.
- Do not prune newly planted trees.
- Do not remove the lower branches of **young trees** (this practice prevents the trunks from developing girth.)
- Do not remove more than 1/3 of the total growth in one year.

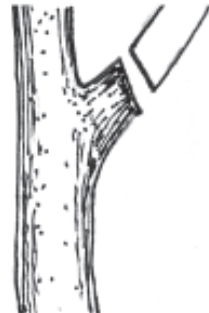
CORRECT AMOUNT OF  
BRANCH COLLAR

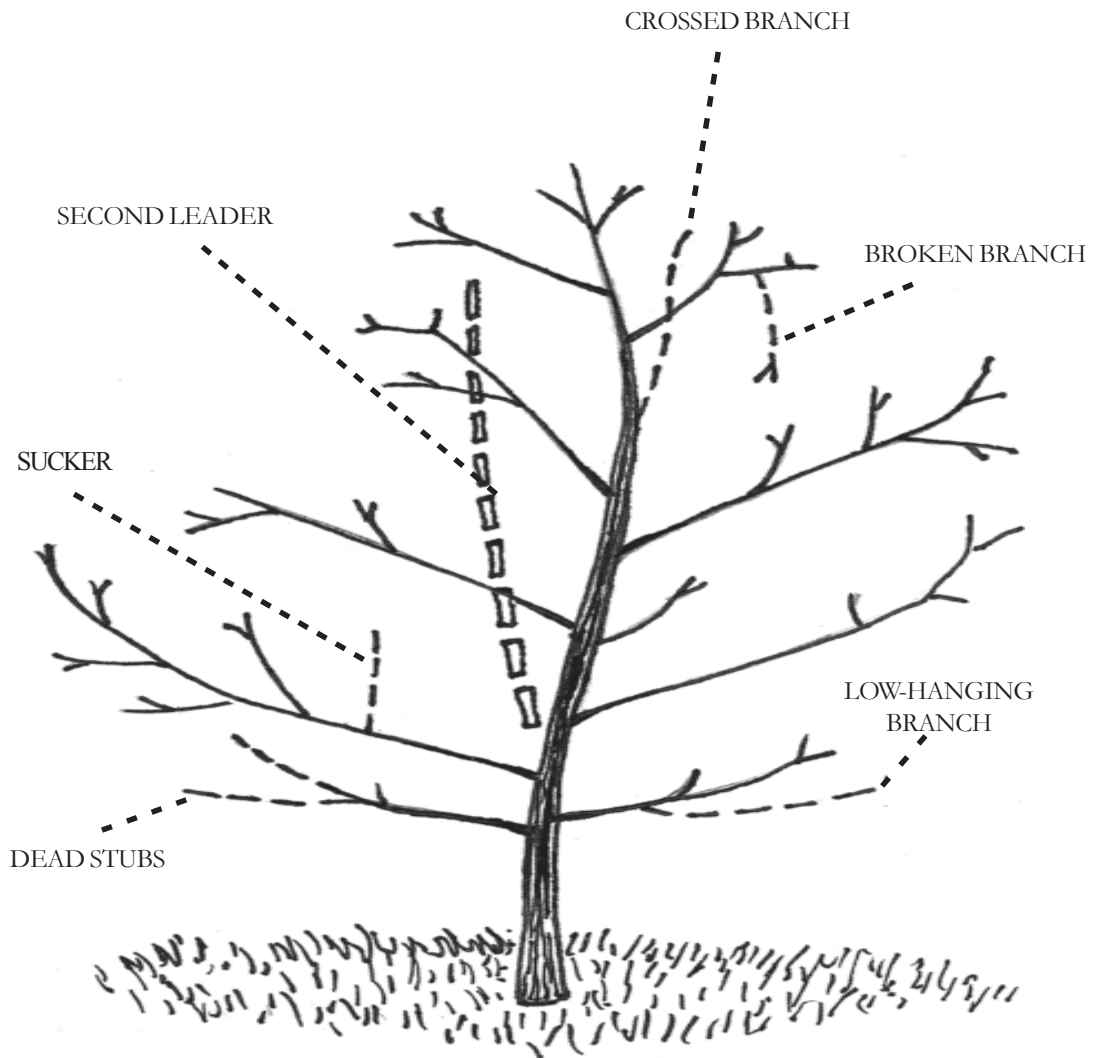


INCORRECT--  
TOO MUCH BRANCH  
COLLAR REMOVED



INCORRECT--  
TOO MUCH  
STUB LEFT





# Small Trees



# American holly *Ilex opaca*

**Origin** – Texas native

**Leaves** - Evergreen

**Height** – 15 - 25 ft

**Width** – 15 - 20 ft

**Spacing** – 10 - 20 ft

**Shape** – Naturally pyramidal

**Wildlife value** – Large berries for food, evergreen leaves for winter protection

**Problems** – Algae on leaves in high humidity

**Light** – Sun, shade, part shade

**Water** – Moderate needs

**Soil type** – Sand, loam, well-drained

**Growth rate** – Slow to moderate

**Life span** – Medium

**Flammability** – High

The American holly is native to the eastern part of the state. It also grows naturally in several Central Texas counties in the deep sands of post oak savannahs. Although this broad-leaved evergreen tree prefers adequate rainfall, it will thrive in droughty years as well. Well-drained soil is a must however.

In the forests of East Texas, American holly trees are understory trees where they can grow as tall as 60 feet with an abundance of rainfall and deep, rich soils. In dryer climates with poorer soils 25 feet is the usual height.

Only the female plants bear the large red berries which are prized by as many as 20 bird species. The large evergreen leaves provide winter shelter for birds and small mammals. Members of the human species, especially the females, value the bright red berries and dark green leaves for decorating habitats during the winter holiday season.

American holly trees can be trimmed up into tree forms which take up very little space in a landscape or they can be allowed to branch all the way to the ground to form evergreen screens. They should be planted 10 feet apart to form an effective screen.

# Carolina buckthorn

## *Rhamnus caroliniana*

**Origin** – Texas native, East and Central

**Leaves** – Deciduous

**Height** – 12 - 15 ft

**Width** – 15 ft

**Spacing** – 8 - 12 ft

**Shape** – Open in shade, shrub-like in sun

**Wildlife value** – Fruit eaten by birds and mammals

**Problems** – Few, if any

**Light** – Full sun to part shade

**Water** – Moderate

**Soil type** – Loam, clay, limestone

**Growth rate** – Moderate to fast

**Life span** – Short

**Flammability** – Low

The shiny dark green leaves of the Carolina buckthorn are the prettiest and most outstanding feature of this small understory tree. Growing under the canopy of tall trees in light shade the plant is graceful and airy. It does need shade to look its best.

The fruit is pink, then red and black when ripe and is a favorite of birds and other animals. Established plants form thickets. Naturally growing Carolina buckthorns are most often found along creeks, rivers and in low, moist areas.

# Cherry laurel

## *Prunus Caroliniana*

**Origin** – Texas native

**Leaves** – Evergreen

**Height** – 15 - 20 ft

**Width** – 15 ft

**Spacing** – 8-15 ft

**Shape** – Pyramidal in full sun

**Wildlife value** – Birds eat black fruit

**Problems** – Cotton root rot, borers, berries toxic to mammals

**Light** – Sun or shade

**Water** – Drought tolerant

**Soil type** – Any soil

**Growth rate** – Moderate to fast

**Life span** – Short

**Flammability** – High

Cherry laurel trees and shrubs can be found in back yards in many older neighborhoods throughout Bastrop, Caldwell, Lee and Fayette counties.

This small understory tree has shiny dark green leaves that make it attractive the year around in home landscapes. It can be trained to form a single trunked tree but does not tolerate clipping into a hedge. Established cherry laurels tend to form thickets and make an excellent, tall evergreen screen to block unsightly views and create privacy as well as back yard habitat for birds.

The crushed leaves of cherry laurels smell like cherries. The black berries are toxic to humans and livestock. They are not toxic to birds and are highly prized especially by cedar waxwings. Thickets of cherry laurels make ideal nesting sites.

Cherry laurels make excellent short, green screens under power lines. There are improved varieties in the nursery trade.



# Crape myrtle

## *Lagerstroemia indica*

**Origin** – Native to China

**Leaves** – Deciduous

**Height** – Some varieties to 25 ft

**Width** – 15 ft

**Spacing** – 15 - 20 ft

**Shape** – Naturally shrubby

**Wildlife value** – Nest sites, particularly for mockingbirds and cardinals

**Problems** – Aphids, mildew

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Any, well-drained

**Growth Rate** – Moderate

**Life span** – Medium to long

**Flammability** – Low

Crape myrtles thrive throughout the entire state of Texas. After they have been established they need very little care. Some can be seen in the countryside blooming away long after the homestead they were planted near has been abandoned.

The older varieties, the deep pinky- red or “watermelon” color, were quite susceptible to mildew. Newer varieties are more mildew resistant.

Crape myrtles do everything right. They are easy to grow, bloom all summer long, have striking orange and yellow fall leaf color and pleasing bare branch forms for winter interest. They can be trimmed into small multi-trunked trees or allowed to form naturally into a large shrub.

Crape myrtles must have full sun to grow and bloom well. If they are planted in too much shade they will grow lopsidedly with long branches but few flowers. They will also be much more likely to have mildewed leaves.

Plan carefully when planting these small, long-lived trees. Many varieties of different colors and sizes are available on the market. It is best to buy crape myrtles when in bloom to make sure of the color. Mislabeling is not uncommon.



# Desert willow

## *Chilopsis linearis*

**Origin** – Central and West Texas native

**Leaves** – Deciduous

**Height** – 15 - 25 ft

**Width** – 20 ft

**Spacing** – 15 ft

**Shape** – Open, single or multi-trunked

**Wildlife value** – Flowers for hummingbirds and butterflies

**Problems** – Root rot from over-watering, susceptible to wind damage

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Alkaline to neutral

**Growth rate** – Moderate to fast

**Life span** – Short, up to 30 years

**Flammability** – Low

The desert willow is not a willow at all but is related to the catalpa family. The long, narrow leaves are reminiscent of willow trees, hence the name.

This small, single or multi-trunked tree puts on a flush of three inch, orchid-like flowers in spring. Trees can have pinkish white to medium pink to burgundy flowers. The open branches continue to bloom lightly throughout the summer and into fall especially if the plant gets some rain or supplemental water. Flowers are produced on new wood so yearly pruning increases flowering.

Desert willow is a good choice for a specimen tree in a flower or herb garden because the feathery leaves will not shade out the sun. Desert willows need well-drained soil and will not tolerate wet roots. They are cold tolerant for the four county area of Central Texas.

## Eve's necklace

## *Sophora affinis*

**Origin** – Texas native  
**Leaves** – Deciduous  
**Height** – To 25 ft  
**Width** – To 20 ft  
**Spacing** – 10-15 ft  
**Shape** – Open, rounded  
**Wildlife value** – Deer browse leaves  
**Problems** – Few

**Light** – Full sun to part shade  
**Water** – Drought tolerant  
**Soil type** – Almost any well-drained  
**Growth rate** – Moderately fast  
**Life span** – Long  
**Flammability** – Low

This small, pretty tree is covered in early spring with pink and white blossoms that look very similar to wisteria blooms. The seed pods enclose each seed in its own compartment. The long seed pod resembles a beaded necklace, hence the name.

The fruit is poisonous and wildlife and birds do not eat it. Deer sometimes eat the leaves.

Eve's necklace makes an attractive and graceful specimen tree or a small accent tree in a native flower garden. It will provide light shade for plants during the heat of the day, but will not shade sun-loving, flowering plants.

# Flowering dogwood

## *Cornus Florida*

**Origin** – East Texas native

**Leaves** – Deciduous

**Height** – 30 ft

**Width** – 20 ft

**Spacing** – 8 - 15 ft

**Shape** – Open, narrow crown

**Wildlife value** – Red berries eaten by many birds

**Problems** – Few, but needs are specific

**Light** – Shade to part shade

**Water** – High water requirement

**Soil type** – Light, well-drained, moist, acid soils

**Growth rate** – Slow to moderate

**Life span** – Short, 15 - 20 yrs

**Flammability** - Low

Beautiful flowering dogwoods bloom early in spring before the leaves come out on the branches. The buds on the tips of the twigs are shaped like ¼ inch onion bulbs. The actual flower is tiny and inconspicuous, and it is the petal-like bract which surrounds the flower that creates the showy, creamy white “flower” structure. These bracts, measuring up to four inches across, last on the tree for several weeks, giving it a floating, ethereal look.

Leaves in summer are bright green, and turn to neon orange, pink, yellow and gold in late fall, making just as spectacular a show in autumn as in springtime. Even the seeds, which are bright red, are showy in winter and are eaten by many birds.

Dogwoods have very specific requirements for location, light, soil and water. They must be in shade or part shade under the canopy of taller trees. They need sandy or loamy, moist, perfectly drained, acid soil and they have high water requirements.

If these requirements can be met, flowering dogwoods reward with year round beauty. Plant a dogwood tree in the shade of taller trees where it will be protected from noontday and afternoon sun. Plant it where it can easily be seen and appreciated.

# Mexican plum

## *Prunus mexicana*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 15 - 20 ft

**Width** – 20 ft

**Spacing** – 20 ft

**Shape** – Shrubby

**Wildlife value** – Blossoms attractive to bees  
and butterflies, fruit for mammals

**Problems** – Relatively few

**Light** – Full sun to dappled shade

**Water** – Drought resistant

**Soil type** – Any well-drained soil

**Growth rate** – Moderate to fast

**Life span** – Short

**Flammability** – Low

This little tree blooms very early in spring and the tiny white to pink blossoms give off a sweet and memorable fragrance. The blossoms are irresistible to bees.

Grown as a specimen plant in full sun or under the canopy of tall trees, a Mexican plum tree is attractive in every season. In spring the early blooming flowers fill the air with scent. In summer the fruit attracts wildlife and delicious jam can be made from the plums. In fall the leaves turn a lovely rust color. In winter the mature tree's bare trunk and limbs form aesthetically pleasing shapes.

Mexican plum trees should be used more often in a home landscape.



# Retama

## *Parkinsonia aculeate*

**Origin** – SW Texas native

**Leaves** – Deciduous

**Height** – 12 - 15 ft

**Width** – To 15 ft

**Spacing** – 12 - 15 ft

**Shape** – Open, rounded

**Wildlife value** – Flowers for bees, beans for mammals

**Problems** – Large thorns, subject to wind damage

**Light** – Sun, part sun

**Water** – Drought tolerant

**Soil type** – All types

**Growth rate** – Fast

**Life span** – Short

**Flammability** – Low

The retama sometimes called Jerusalem thorn, makes a wonderful accent or specimen tree for native Texas xeriscape gardens and for wildflower gardens. It has lovely feathery leaves and yellow blooms almost all summer long with minimal supplemental water.

This small, pretty tree looks soft and feathery but the native variety is covered with vicious thorns. There is a thornless variety available called Desert Museum.

Wind storms can break the branches but recovery to a pleasing shape is fast with trimming. Though retama may freeze in unusually cold winters it grows back quickly from the roots.

Volunteer seedlings should be controlled.

# Redbud

# *Cercis (spp.)*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – To 30 ft usually 10-20 ft

**Width** – To 25 ft

**Spacing** – 15 - 25 ft

**Shape** – Single or multi-trunked, open

**Wildlife value** – Nectar for bees, seeds for birds

**Problems** – Less sun-resistant varieties scald, messy seed drop

**Light** – Morning sun, afternoon shade

**Water** – Low to moderate

**Soil type** – Any, well-drained

**Growth rate** – Moderate

**Life Span** – Short, 25 years

**Flammability** – Low

Nothing says springtime in Texas like a redbud tree with every branch and twig and even part of the trunk covered with tiny bright pink blossoms and buds. There are several native redbud varieties and some are more drought and heat tolerant than others.

Eastern redbud (var. *canadensis*) is a taller understory tree with large, heart-shaped dull leaves. It is found in the eastern part of the state, is less drought tolerant than other varieties, and the leaves scald in afternoon sun.

The Texas redbud (var. *texensis*) has shiny, leathery leaves, grows in the central part of the state, and is more drought and heat tolerant in full sun. This variety is a little shorter.

Mexican redbud (var. *mexicana*) occurs in the Trans-Pecos area. This variety has small leaves with wavy margins, or edges, and is the most tolerant variety to low moisture and hot summer sun. Any of these varieties will do well in the four county area but the eastern redbud should be planted under the canopy of tall trees and protected from direct sun in the afternoons.

# Rough-leaf dogwood

## *Cornus drummondii*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 15 - 20 ft

**Width** – 15 ft

**Spacing** – 6 - 12 ft

**Shape** – Shrubby

**Wildlife value** – Berries for many bird species

**Problems** – Thickets prolifically

**Light** – Full sun to part shade

**Water** – Drought tolerant

**Soil Type** – Not suitable for heavy clay

**Growth rate** – Moderate to fast

**Life Span** – Short

**Flammability** – Low

Rough-leaf dogwood blossoms are clusters of small white flowers about 3 inches across. If the rough-leaf dogwood were not so completely overshadowed by its flamboyant relative, the flowering dogwood, it would get more respect for its pretty flowers, showy white berries and valuable wildlife food. Rough-leaf dogwoods thrive in part shade to full sun at wood edges. The white berries are eaten by many species of birds.

These small trees are thicket forming with small sprouts coming up from the roots. This growth habit could easily become a nuisance in a formal shrub or flower bed. Rough-leaf dogwood is an ideal addition to a natural habitat island, shelter-belt or native screen planting where the volunteers would be welcome.

# Southern wax myrtle

## *Myrica cerifera*

**Origin** – Texas native

**Leaves** – Evergreen

**Height** – Up to 20 ft

**Width** – 10 ft

**Spacing** – 8 - 12 ft

**Shape** – Multi-trunked, loosely rounded

**Wildlife value** – Berries for birds

**Problems** – Brittle wood and suckers

**Light** – Full sun to part shade

**Water** – Drought tolerant

**Soil Type** – Most soils,  
poor drainage OK

**Growth rate** – Moderate

**Life Span** – Short to medium

**Flammability** – High

In natural settings this large shrub or small tree thrives in low, moist areas near stream beds and along the edges of ponds and marshes. In shade, the plant grows taller with looser, open branches. In full sun, southern wax myrtles grow into a more dense and rounded shape.

Southern wax myrtles can be trained into multi-trunked trees or allowed to form a small thicket naturally. They can be used to excellent advantage in an island wildlife habitat. Southern wax myrtles are useful as an evergreen screen for blocking unsightly views and as barriers for dust and noise from roads. The leaves are small and medium green. Multitudes of small blue berries line the branches. Both the leaves and the berries have a pleasant bayberry fragrance.



# Texas mountain laurel

## *Sophora secundiflora*

**Origin** – Texas native, So. Central and West

**Leaves** – Evergreen

**Height** – 10 - 12 ft

**Width** – 6 - 12 ft

**Spacing** – 10 ft

**Shape** – Shrubby

**Wildlife value** – Nectar for bees and butterflies

**Problems** – Late freezes damage flower buds, toxic seeds, brittle branches

**Light** – Full sun to part shade

**Water** – Drought tolerant

**Soil type** – Any well-drained soil

**Growth rate** – Slow

**Life span** – Medium, but varies with site

**Flammability** – Low

The Texas mountain laurel is slow growing but worth the wait. It grows naturally in the Texas Hill Country in limestone soils. In sun it will be full and shrubby. In part shade, the form will be more loose and airy. Mountain laurels can be limbed up to form a small tree with a single trunk or multiple trunks but are not happy formed into hedge shapes. Taller forms with loose branches can sustain wind damage more easily. Although Texas mountain laurels stay small, they can live a long time with specimens in the Texas Hill Country, where they are abundant, known to have lived 300 years.

The purple wisteria-like flowers in spring are stunning and smell like grape drink. The flower buds are prolific but can be disappointingly killed off by a late freeze. The shiny medium green leaves are beautiful all year long but are sometimes eaten by caterpillars in the spring and summer.

Mountain laurels are not laurels at all, they are legumes. The hard, pretty red seeds are sometimes used as beads in jewelry but they are poisonous and should not be worn against the skin unless they have a protective coating painted on them.

This lovely small tree can be used as a specimen tree in a lawn or an accent plant in a native butterfly and hummingbird garden with enough space to form its natural shape.

# Texas persimmon

## *Diospyros texana*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 15 to 20 ft

**Width** – 15 ft

**Spacing** – 6 - 10 ft

**Shape** – Multi-trunked small tree

**Wildlife value** – Fruit valuable food  
for birds and mammals

**Problems** – Few

**Light** – Sun to part shade

**Water** – Drought tolerant

**Soil type** – Prefers alkaline but  
grows in any, well-drained

**Growth Rate** – Moderate

**Life span** – Medium to long

**Flammability** – Low

The most noticeable trait of this small multi-trunked tree is the silvery gray color of the trunks the peeling bark reveals. As the tree ages, lower limbs can be trimmed up to show more of the interesting trunks and intricate branches.

In spring the tree is covered with small fragrant blossoms that develop into 1 to 2 inch persimmons with very little pulp and 3 to 8 seeds. This makes them undesirable for human consumption but they are still valuable food for birds and deer.

Texas persimmons can be used in small areas for specimen trees. They are very effective as featured accent trees in xeriscape and wildflower gardens.

It takes 5 or 6 years for the tree to start flowering and producing fruit and about 10 years for the dark bark to begin to peel exposing the silvery trunk. Purchase older trees to shorten this waiting time.

# Western soapberry

## *Sapindus saponaria*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – To 30 ft

**Width** – 30 ft

**Spacing** – 20 ft

**Shape** – Rounded

**Wildlife value** – Fruit for birds

**Problems** – Brittle branches

**Light** – Full sun to part shade

**Water** – Drought tolerant

**Soil type** – Any well-drained soil

**Growth rate** – Moderate to fast

**Life span** – Short

**Flammability** – Low

The western soapberry is an attractive small tree that puts on white flowers in spring and translucent gold berries in fall. The leaves reliably turn yellow in autumn. As the western soapberry matures it becomes a rounded shade tree for homes on smaller lots.

Western soapberry trees are easy to confuse with the chinaberry tree, an introduced species. Both have similar compound leaves and bunches of goldish berries in the fall. Farmers and ranchers even call western soapberries “Texas China” trees.

There are two quick ways to tell these two trees apart. The leaves of the western soapberry are smooth-edged and the leaves of the chinaberry tree are sharp-toothed. Western soapberry fruit is a translucent gold. Chinaberry fruit is more yellow and opaque.

Western soapberry is a good addition to a bird and butterfly native garden because it provides dappled shade and some protection from searing summer sun without depriving light to plants needing sunshine to bloom well.

# Mid-Sized Trees





# Bald cypress

## *Taxodium distichum*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 25 to 80 ft

**Width** – 30 - 50 ft

**Spacing** – 20 - 40 ft

**Shape** – Pyramidal young, rounded mature

**Wildlife value** – Birds eat the small seeds

**Problems** – Not suited for extremely alkaline soils

**Light** – Full sun

**Water** – 20 to 30 inches per year

**Soil type** – Sand, loam, clay,  
poor drainage OK

**Growth rate** – Fast young, slow mature

**Life span** – Very long

**Flammability** – Low

Two unusual characteristics distinguish the bald cypress. The first characteristic that most plants do not have is its ability to thrive in standing water and also survive on land with as little as 20 - 30 inches of rain a year. When it grows in water, it usually develops the “knees” commonly seen in photos of cypress swamps. The second unusual characteristic is that it is the only Texas native deciduous conifer. It has cones that are small and “ball-shaped.”

Bald cypress trees grow naturally in Texas next to stream and river beds and in swamps. The old growth cypress trees have been logged heavily for the highly desirable lumber because it is light and easily worked yet very resistant to rotting.

The lovely feathery foliage and ability to adapt to extreme conditions makes this a very desirable landscape and street tree. Fall color is rusty brown. The growth rate is fast for a young tree but slows as the tree ages.

Bald cypress trees have very few problems with disease and pests. The unusual texture of the leaves makes it a wonderful addition in a home landscape.

Bald cypress trees can be used for specimen trees because of the unusual shape and texture of the leaves. Bald cypress trees should be added more often to landscapes.

# Cedar elm

# *Ulmus crassifolia*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 30 - 60 ft

**Width** – 25 - 35 ft

**Spacing** – 20 - 30 ft

**Shape** – Irregular

**Wildlife value** – Food for wild turkeys

**Problems** – Subject to mistletoe,  
mildew and insect damage, seed drop nuisance

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Most soils but prefers  
alkaline soil

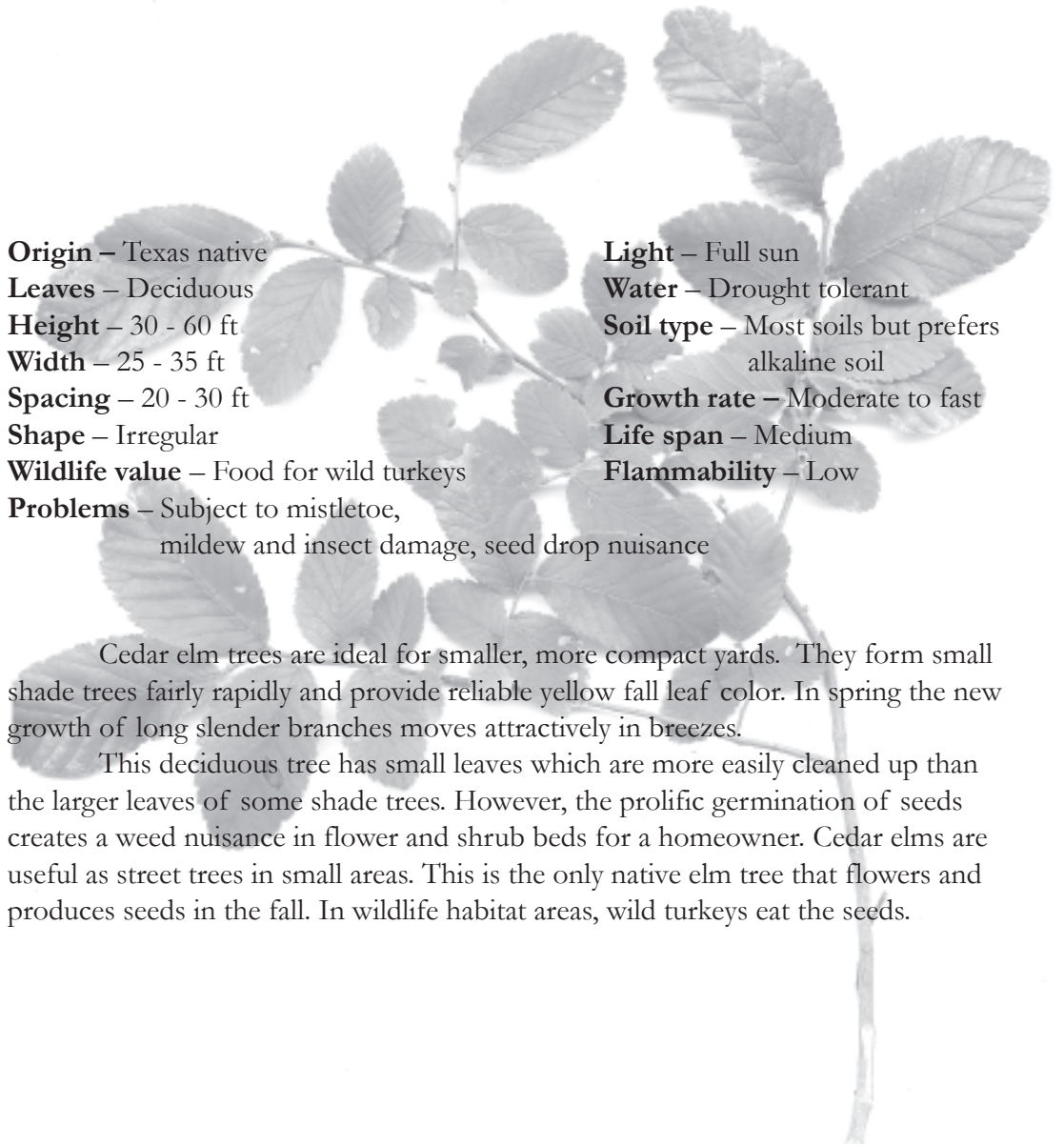
**Growth rate** – Moderate to fast

**Life span** – Medium

**Flammability** – Low

Cedar elm trees are ideal for smaller, more compact yards. They form small shade trees fairly rapidly and provide reliable yellow fall leaf color. In spring the new growth of long slender branches moves attractively in breezes.

This deciduous tree has small leaves which are more easily cleaned up than the larger leaves of some shade trees. However, the prolific germination of seeds creates a weed nuisance in flower and shrub beds for a homeowner. Cedar elms are useful as street trees in small areas. This is the only native elm tree that flowers and produces seeds in the fall. In wildlife habitat areas, wild turkeys eat the seeds.



# Eastern red cedar

## *Juniperus virginiana*

**Origin** – Texas native

**Leaves** – Evergreen

**Height** – 50 ft

**Width** – 20 ft

**Spacing** – 20-30 ft

**Shape** – Conical

**Wildlife value** – Berries for birds, winter protection

**Problems** – Can be subject to bag worms and spider mites

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Any soil

**Growth rate** – Slow

**Life span** – Long

**Flammability** – High

The much maligned eastern red cedars, more correctly named junipers, are good landscape trees for certain purposes. They are easily established, will grow in any soil and need very little water to thrive.

They make excellent shelterbelt trees and look elegant when they have space to form their natural cone shape. Many species of birds eat the “berries” which are really very small, tight cones. Birds also shelter from winter cold and winds among the branches especially those grown in open spaces that have branches sweeping the ground.

Although these trees are highly flammable and should not be planted next to homes or other flammable structures, the fire hazard can be lessened if the precaution is taken of alternating them with other less-flammable trees.

Ancient and distinguished eastern red cedar trees can be seen in cemeteries in the towns and countryside of the four county area. These trees have been limbed up to accommodate grave sites and roads. They are noble and steadfast in their guardianship of the dead.

# Lacebark elm

## *Ulmus parvifolia*

**Origin** – China

**Leaves** – Deciduous

**Height** – 50 ft

**Width** – 40 ft

**Spacing** – 20 - 30 ft

**Shape** – Rounded, spreading

**Wildlife value** – Nest sites, seeds for birds and wildlife

**Problems** – Can tolerate moist soil but not poor drainage

**Light** – Sun

**Water** – Drought tolerant

**Soil type** – Any soil

**Growth** – Moderate to fast

**Life span** – Medium

**Flammability** – Low

This non-native tree does as well or better than its native counterpart, the cedar elm, in Texas landscapes. The trunk of the tree is a sort of mottled color and texture with a lacy look, hence the name.

The tree is very easy to grow and makes a lovely shade tree with dark green leaves. In fall the leaves turn yellow.

Lacebark elm should not be confused with Siberian elm which is sometimes also called Chinese elm. The Siberian elm is a weed tree and should never be planted as it is subject to diseases and insect infestations.

Lacebark elm makes a fast growing, smaller shade tree with fall color and the added feature of interesting bark.



# Leyland cypress

## *Cupressocyparis leylandii*

**Origin** – England, (cultivated cross)

**Leaves** – Evergreen

**Height** – 30 - 40 ft

**Width** – 20 - 30 ft

**Spacing** – 10 - 15 ft

**Shape** – Pyramidal

**Wildlife value** – Shelter, nest sites

**Problems** – Subject to root rot in poorly drained soils

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Any, well-drained

**Growth rate** – Fast

**Life span** – Medium 50 - 60 years

**Flammability** – High

Leyland cypress grows well in poor soils with ordinary rainfall amounts. Although not a Texas native, it thrives in Central Texas as long as it does not have to stand in poorly drained soil.

This tree is evergreen with a graceful appearance and soft foliage on branches all the way to the ground. It looks the same the year around. It can be pruned or sheared to maintain size or to create a dense hedge.

Leyland cypress makes a very good, large screen for blocking unsightly views, wind, dust and noise. Homeowners living on golf courses use it to keep errant golf balls from breaking their windows. Leyland cypress makes a good, outdoor, living Christmas tree.

# Loblolly pine

# *Pinus taeda*

**Origin** – Texas native

**Leaves** – Evergreen

**Height** – To 100 ft

**Width** – 40 ft

**Spacing** – 12 - 15 ft apart

**Shape** – Pyramidal or irregular

**Wildlife value** – Seeds as food

for birds and mammals

**Problems** – Borers and sawyer beetles, needle drop

**Light** – Full sun to light shade

**Water** – Drought tolerant when mature

**Soil Type** – Sand, sandy loam,  
gravel, acid, well-drained

**Growth rate** – Fast

**Life span** - Long

**Flammability** - High

The western-most colony of loblolly pine trees in North America is in the Lost Pines area of Bastrop County. These trees, separated from the loblollies of the East Texas piney woods, are genetically shorter and more drought-tolerant than their East Texas cousins. However, trees weakened by the stress of long periods of drought are subject to die-off and infestation of insects.

Loblollies will not grow in heavy clay or alkaline soils. Pine tree needles have a two year life span, and individual needles are shed all year long. The natural mulching effect of the fallen needles makes it difficult to grow grass and many other types of landscape plants unless the needles are kept raked.

Although the needles of pine trees are very flammable, bark on the trunks of the trees can withstand some fire with no ill effects. Trees with branches that sweep the ground should be trimmed up to eliminate “ladder fuel” that enables fire to climb from the ground to the tree tops. Planting loblollies close together causes them to “self prune” and shed their lower branches.

Loblolly pines add variety of leaf texture, color and sound in a mix of deciduous trees. With their musical soughing, windblown needles have a calming and soothing effect. They can be used as screens to block noise, dust, wind and unsightly views.

# Red maple

# *Acer rubrum*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – To 100 feet

**Width** – 30 - 40 ft

**Spacing** – 20 - 40 ft

**Shape** – Upright, rounded crown

**Wildlife value** – Browse for deer, seeds for birds

**Problems** – Few

**Light** – Full sun to part shade

**Water** – Normal rainfall adequate

**Soil type** – Best in deep, acid,  
sandy soil

**Growth rate** – Fast

**Life span** – Medium, 50 years

**Flammability** – Low

Red maple trees are not commonly found growing in the four county area of Central Texas. However, they do occur naturally in the eastern half of the United States, including East Texas. Deep, sandy soils are more likely to grow red maples successfully. The tree is shade tolerant but needs space to form a pleasing, symmetrical shape.

This lovely tree has a straight trunk and smooth bark. It will put on a reliable show of color in autumn and show its red color in the new leaves, twigs and flowers at other times of the year.

In areas where deer are numerous, the sapling may have to be protected from being eaten. Deer love the sugary tasting leaves and will nibble them unless prevented while the leaves are close enough to the ground for them to reach.

Red maples have few problems but they make dense shade which can cause difficulty for growing grass or other plants beneath. Shade-loving groundcovers will grow under a red maple if they are given extra fertilizer. The tree does sucker, but gardeners say that the transplanted suckers live and thrive also.

# Southern magnolia

## *Magnolia grandiflora*

**Origin** – Southeast Texas native

**Leaves** – Evergreen

**Height** – 50 - 80 ft

**Width** – 30 ft

**Spacing** – 30 ft

**Shape** – Pyramidal

**Wildlife value** – Seeds for birds and squirrels

**Problems** – Messy leaf and seed pod drop

**Light** – Part shade to full sun

**Water** – More than 30 in

**Soil type** – Prefers deep acid soil

**Growth rate** – Slow

**Life span** – Medium

**Flammability** – Low

Nothing creates the ambiance of the South like a beautiful, mature southern magnolia. The beautiful, shiny leaves are a year round asset. However, they can also be a messy liability because they are shed all summer long. The large, leathery leaves do not shred easily when mowed, so a fastidious groundskeeper must collect them before mowing.

For this tree to grow to its natural full size it needs lots of space. The branches naturally grow all the way down to the ground and should not be limbed up if at all possible. The roots are near the surface of the soil making it difficult to grow grass or anything else underneath it. The wood of the tree is weak and cutting off the lower limbs creates more risk of damage from high winds. During extremely dry summers, these trees may require supplemental water.

The creamy white blossoms have a heavenly lemon fragrance and the seed pods have showy red seeds. The seed pods are large and also messy when shed. This is a beautiful and interesting tree, and the extra work involved with growing it in a formal lawn can certainly be worth it.



# Sweet gum

## *Liquidambar styraciflua*

**Origin** – East Texas native

**Leaves** – Deciduous

**Height** – 50 - 60 ft

**Width** – 30 - 40 ft

**Spacing** – 20 - 30 ft

**Shape** – Pyramidal

**Wildlife value** – Seeds for birds

**Problems** – Spiny seed drop

**Light** – Full sun to part shade

**Water** – Needs more than 30 in/yr

**Soil Type** – Deep acid to neutral  
loam or sand

**Growth rate** – Fast

**Life Span** – Long

**Flammability** – Low

The sweet gum tree inspires love/hate reactions in people. The leaf color is magnificent in fall. Each tree seems to have its own distinctive color and its own time for showing that color. The colors range from bright yellow through gold and orange, to red, burgundy and purple. Leaves usually persist on the tree until after Christmas.

The trees are monoecious which means that male and female flowers are on the same tree. It also means that the spiny seed balls are on every tree. These key lime-sized spiny balls are like South Texas snowballs for kids to play with but stepping on them barefoot motivates homeowners to wear shoes no matter how warm the day is.

The brilliant fall color and symmetrical pyramid shape offset the nuisance value of the seed balls for many. Sweet gum trees do not make exceptional shade trees as they are rather narrow. A grouping of sweet gum trees is a good way to show off their shape and color if there is space enough. In Central Texas sweet gums will require supplemental watering during most summers.

# Water oak

# *Quercus nigra*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 50 - 80 ft

**Width** – 30 - 50 ft

**Spacing** – 20 - 50 ft

**Shape** – Upright, rounded

**Wildlife value** – Acorns for wildlife, nest sites for birds

**Problems** – Susceptible to oak wilt and wind damage

**Light** – Full sun to part shade

**Water** – Needs more than 30 in per yr

**Soil Type** – Deep, acid to neutral soils

**Growth rate** – Fast

**Life Span** – Medium

**Flammability** – Low

Water oaks are fast growing, attractive shade trees that grow naturally in the eastern part of Central Texas. Abundant crops of acorns are prized by wildlife, especially squirrels which plant them anywhere they can. A good number of these acorns result in more water oak trees.

Water oak leaves turn yellow in fall creating color in the autumn landscape. In mild winters most leaves may persist on the tree. Water oaks have higher water requirements than some other native trees and grow along stream beds, low spots and drainages where water stands longer.

A water oak makes a fast growing shade tree in a large open space with deep soils. Supplemental watering by the homeowner may be necessary at least until the tree is established. be planted near structures because of brittle branches.

# Winged elm

# *Ulmus alata*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – Up to 40 ft

**Width** – 25 ft

**Spacing** – 20 - 30 ft

**Shape** – Open, rounded top

**Wildlife value** – Seeds provide food for wildlife

**Problems** – Relatively free of disease, messy seed drop

**Light** – Full sun

**Water** – Drought tolerant

**Soil Type** – Prefers alkaline soil

**Growth rate** – Fast in moist soils

**Life Span** – Medium

**Flammability** – Low

This tree is distinguished by corky, flat “wings” that form on the smaller twigs. The tree grows naturally in moist areas, but will thrive in dry locations although it grows more slowly. Winged elm is sometimes mistaken for cedar elm but the leaves are smoother than the very rough texture of cedar elm leaves. Winged elm seeds ripen in spring whereas cedar elm bears its seed in the fall. Both species shed seed prolifically and seeds landing in shrub and flowers beds can cause a weed problem.

Sometimes a location calls for a tree that does not outgrow the space in which it is planted. Winged elm is often used as a street tree in very small areas. Winged elm is a reliable tree for fall color. The leaves turn a clear yellow-gold.



# Large Trees



# American elm

## *Ulmus americana*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 40 - 80 ft

**Width** – 70 ft

**Spacing** – 30 - 60 ft

**Shape** – Vase-like

**Wildlife value** – Seeds for birds

**Problems** – Susceptible to Dutch elm disease, elm leaf beetle and cotton root rot

**Light** – Full sun

**Water** – Needs normal rainfall

**Soil type** – Most well-drained soils

**Growth rate** – Fast

**Life span** – Long

**Flammability** – Low

The lovely, graceful American elm tree is famous for having been wiped out by Dutch elm disease in the northern and eastern parts of the United States. Dutch elm disease does not seem to be too much of a problem in Texas with the native trees growing naturally, however.

American elm is a fast growing shade tree with tough wood. The vase-like shape makes it desirable for providing dappled shade, which still allows enough sunlight for grass and other understory trees and shrubs to grow. The leaves turn a clear yellow-gold in fall. The tree is very long lived if it doesn't succumb to fungal diseases or insects.

The long life and strong, invasive root system can play havoc with sidewalks, foundations and sewer systems. This tree should be provided with enough space to spread its roots. The prolific seeds also invade flowerbeds and become a nuisance for the gardener. It is not well-suited for smaller yards or for growing near structures.

American elm trees can be used as specimen shade trees in large areas, as legacy trees for future generations to enjoy and to provide fall color in a spacious landscape, but they may be difficult to locate in Central Texas and are more likely to be available in Houston area nurseries.

# American sycamore

## *Platanus occidentalis*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 100 ft

**Width** – More than 50 ft

**Spacing** – 30 - 40 ft

**Shape** – Rounded, open

**Wildlife value** – Seeds, insects and nest sites for birds

**Problems** – Needs space for roots; subject to insects, disease; messy, brittle branches

**Light** – Full sun

**Water** – Needs moist soil

**Soil type** – Rich, bottomland soils

**Growth rate** – Fast

**Life span** – Long, 150 - 200 yrs.

**Flammability** – Low

Sycamore trees grow naturally along streams and riverbanks and in low-lying areas of rich soil. The outer bark of the limbs and trunk peels off to reveal the smooth, white younger bark. The beautiful, white limbs of the older trees stand out in the winter landscape and look as though they have been sculpted in marble.

These trees have been used in some of the older towns in the four county area of central Texas for yard and street trees. If they have not been unmercifully trimmed for utilities, they arch beautifully over the street and create lovely dappled tunnels to drive through.

For the homeowner and for the wastewater and sewer providers, sycamore trees can be a terrible nuisance because the roots often become invasive as the tree matures. The leaves are huge and do not deteriorate easily so they are hard to clean up. These trees need a lot of room and are not suitable for smaller city yards and landscapes.

The best use of a sycamore tree is for shade, diversity of color and texture of leaves and branches, as well as for wildlife food and nest sites in a large space preferably near a natural drainage.

# Bur oak

# *Quercus macrocarpa*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 60- 80 ft

**Width** – To 80 ft

**Spacing** – 40 - 50 ft

**Shape** – Rounded

**Wildlife value** – Acorns are excellent wildlife food

**Problems** – Few, if any

**Light** – Full sun to part shade

**Water** – Needs 10 - 20 in. per year

**Soil type** – Any well-drained

**Growth rate** – Slow to moderate

**Life span** – Long

**Flammability** – Low

The most obvious characteristic of this large, oak shade tree is the acorn which can get up to 2 inches long and almost as big around. The name “macrocarpa” means large fruit. The cup of the acorn is also distinctive due to the moss-like fringe around the edge. Mossy cup oak is another name for this tree. The bur oak acorn is important to wildlife as it is lower in tannic acid and more palatable than that of some of the other oak trees. The large size of the acorn can cause a problem in lawns.

Bur oaks are widely adapted to any well-drained soil, are drought tolerant and will grow anywhere except in woodland where they are out-competed for light by faster growing trees.

Bur oaks also have exceptionally large, lobed leaves. The bur oak is one of the best shade trees, but must have enough open space to accommodate its stately size.



# Chinkapin oak

## *Quercus muhlenbergii*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – To 80 ft

**Width** – 40-60 ft

**Spacing** – 20 - 50 ft

**Shape** – Irregularly spreading, rounded crown

**Wildlife value** – Acorns provide forage for deer, mammals and some birds

**Problems** – Sensitive to poor drainage

**Light** – Full sun to part shade

**Water** – Drought tolerant

**Soil type** – Any, well-drained

**Growth rate** – Fast

**Life span** – Long

**Flammability** – Low

The relatively fast-growing chinkapin oak makes a desirable shade tree for a home landscape. It will grow in heavy, clay soil as long as it is well-drained. The leaves are oblong and 3 to 6 inches long with toothed edges along the entire length of the tree.

The native population is limited to scattered areas from Northeast Texas to Central Texas with a few populations in the Trans-Pecos area. The chinkapin oak has the added advantage of being resistant to oak wilt.

Wildlife and even some birds appreciate the comparatively large acorns. The fall leaf color is yellow and rusty brown.

The chinkapin oak tree is one of the best shade trees in Texas but must have adequate space to accommodate its spreading shape. This tree is not appropriate for a small urban homesite.

# Cottonwood

# *Populus (spp)*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 40 - 100 ft

**Width** – 50 ft

**Spacing** – 50 ft

**Shape** – Upright, oval

**Wildlife value** – Nest sites, insect food for birds

**Problems** – Weak wood, insect and root rot susceptibility, shallow roots interfere with water lines, sidewalks and foundations, messy “cotton” nuisance

**Light** – Full sun

**Water** – Drought tolerant

**Soil type** – Sand, loam, caliche, well-drained

**Growth rate** – Very fast

**Life span** – Long, 150 years

**Flammability** – Low

Several species of native cottonwoods grow along stream and riverbeds throughout the state of Texas. The triangular leaves rattle in breezes and create a lovely sound that evokes many a lazy summer day for those who spent vacations playing under the cottonwoods out in the country or beside a creek bank or lake.

Very old cottonwood trees near creeks and rivers often have huge, sturdy trunks but disproportionately small crowns because over the years wind and rain have broken the branches of the tree’s soft wood.

Cottonwood trees are messy twice a year. In spring, seed is borne on the wind by white, silky “cotton.” This cotton is so prolific it piles up in drifts. It is a powerful allergen for some people. In August, during a normally dry year, the large leaves are shed, removing the shade just when it is needed most. The “cotton” problem can be solved by planting only male trees that have no seed or “cottonless” cottonwoods.

Cottonwood trees should never be planted in an urban setting where they will cause a messy nuisance and pose a risk of branches breaking over buildings and of roots damaging sidewalks, waterlines and foundations. Native cottonwood trees growing near buildings should be removed.

# Live oak

## *Quercus virginiana*

**Origin** – Texas native

**Leaves** – Evergreen

**Height** – 40 - 50 ft

**Width** – Up to 100 ft

**Spacing** – 50 - 90 ft

**Shape** – Rounded, spreading

**Wildlife value** – Acorns for food, nest sites

**Problems** – Susceptible to oak wilt, galls and ice damage, messy, limits growth of grass

**Light** – Full sun

**Water** – 30 to 40 inches per year until established

**Soil type** – Sand, loam and clay

**Growth rate** – Slow

**Life Span** – Long

**Flammability** – Low

Live oak trees must have full sun and enough space to spread the heavy branches that parallel the ground. These trees can grow to be twice as wide as they are tall. Live oaks live in a variety of soils and can tolerate seasonal standing water.

Live oak trees are extremely popular and bespeak quintessential South Texas. They are the first species many think of when a shade tree is desired. However, live oaks have some characteristics and problems that homeowners may eventually find quite undesirable and they must then either put up with the problem or cut the tree down.

Live oaks are easy to establish and grow but make tending a manicured landscape much more difficult. Live oaks are evergreen in Central to South Texas but they shed leaves almost continuously as the old leaves are replaced by new ones. Spring brings on the heaviest flush of new leaves and old leaf drop. In natural areas the continuously falling leaves are not a problem.

Live oak trees provide such dense shade that often grass will not grow under the canopy of leaves. As the trees age they also develop surface roots that interfere even more with grass and lawnmowers. Live oaks are usually more welcome and honored in an informal landscape.



# Longleaf pine

# *Pinus palustris*

**Origin** – Southeast Texas

**Leaves** – Evergreen

**Height** – 80 - 100 ft

**Width** – 20 ft

**Spacing** – 30 ft or more

**Shape** – Open, irregular

**Wildlife value** – Shelter and food

**Problems** – Subject to breaking under icy conditions

**Light** – Full sun

**Water** – Moderate need

**Soil type** – Acid sand and sandy loam

**Growth rate** – Slow young,  
then moderate to fast

**Life span** – Long

**Flammability** – High young, lower as it ages

The large and stately longleaf pine tree takes up to 7 years to establish a substantial root system. During this period of root growth the bunch of needles showing above the ground looks like a clump of grass and this stage is indeed called the “grass” stage.

When the grass stage is completed, the tree grows tall fast but will still take about 100 years to reach its full height. The needles are from 8-15 inches long and the cones are up to 10 inches long. In cold climates the weight of ice forming on the long needles may cause the branches to break.

# Pecan

# *Carya illinoensis*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – Up to 100 ft, usually 50 - 60 ft

**Width** – Greater than 50 ft

**Spacing** – 50 ft

**Shape** – Rounded, spreading

**Wildlife value** – Nuts are food for many creatures

**Problems** – Subject to webworms, messy leaf, tassel and nut drop, squirrel damage

**Light** – Full sun

**Water** – 30 in per year to establish

**Soil type** – Any well-drained

**Growth rate** – Slow

**Life span** – Long

**Flammability** – Low

Pecan trees need ample space in a home landscape. Pecan trees provide shade and an edible crop of nuts and are very popular, but several drawbacks make them unsuitable for a smaller suburban lot.

The tannins in the leaves, shucks and nuts stain cars and sidewalks and the nuts falling on a car can damage the paint. Webworms are a common insect pest and although they usually do not threaten the life of the tree, they are an unsightly nuisance. There can also be difficulty growing other plants and grass under a pecan tree due to substances the tree produces that prevent competition by other plants.

While pecan trees may not be a good choice for smaller spaces or near sidewalks and driveways, they are very desirable for the delicious nuts they produce and as long-lived shade trees on larger sites.

Many newer varieties of pecan trees have been developed for larger nuts and softer shells. Hybrid varieties purchased for nut crops are all grafted onto native root stock.

# Shumard oak

## *Quercus shumardii*

**Origin** – Texas native

**Leaves** – Deciduous

**Height** – 50 - 100 ft

**Width** – 40 to 60 ft

**Spacing** – 40 ft

**Shape** – Wide, open, spreading

**Wildlife value** – Acorns for wildlife food

**Problems** – Subject to minor borer and insect damage, susceptible to oak wilt

**Light** – Full sun to part shade

**Water** – 10 - 20 in yearly

**Soil type** – Any well-drained

**Growth rate** – Fast

**Life span** – Long

**Flammability** – Low

This popular oak tree's leaves turn brilliant red in late November after a cold snap or two. It will grow almost anywhere in the state as long as the soil is well-drained. Shumard oaks are susceptible to oak wilt disease.

The Texas red oak (*Quercus texana*) which grows mainly west of Kerrville is often mistaken for the shumard oak. The shumard oak is larger and longer lived than the Texas red oak. The acorns of the shumard oak are large, up to one inch long, and are valuable food for wildlife.

Shumard oak is a fast-growing shade tree that will provide vivid fall color.

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