City of West Hollywood

Urban Forest Management Plan

City of West Hollywood
California 1984

September 2019

Acknowledgments

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West Hollywood Tree Preservation Society

Thank you to the West Hollywood Community.

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Executive Summary

The Urban Forest Management Plan strives to help sustain, protect, and enhance the urban forest in the City of West Hollywood. The trees along streets, in parks, and in open space areas provide many benefits to West Hollywood, its residents, and visitors. Trees provide shade, save energy, improve air quality and public health, mitigate climate change, reduce stormwater runoff, increase property values, create wildlife habitat, and enhance quality of life.

This plan is meant to be a working document that will be continually implemented and monitored during the 20 years it is designed to cover. Recommendations for this plan were based on input from City of West Hollywood staff, the City of West Hollywood's Public Facilities Commission, and community stakeholders. Community leaders and City staff members identified benefits of trees, desires for more trees in neighborhoods, issues relating to tree care, and a willingness to invest in trees. Staff and Commission members worked to develop a more comprehensive and diverse list of recommended trees for the City. The complete list is part of the appendices of this document.

The City of West Hollywood's policies, regulations, and planning documents establish a strong framework for maintaining and enhancing the urban forest. This plan discusses issues and trends that affect West Hollywood's public trees. The most recent tree inventory was completed in 2016, and there is a need for a tree canopy assessment. Some investments will be needed to implement the outlined goals and objectives listed herein including street tree planting and replacement, watering, and pruning.

The goals of the plan are listed below. Objectives and actions for achieving these goals are also provided in the plan document.

1. Establish and maintain optimal levels of tree cover to maximize ecosystem benefits provided by the urban forest; such as improving air quality, reducing energy use, moderating stormwater runoff, and providing a favorable environment for city residents.
2. Maintain trees in a healthy condition through good cultural practices.
3. Establish and maintain an optimal level of age and species diversity.
4. Promote conservation of existing tree resources.
5. Select, situate, and maintain urban trees appropriately to maximize benefits and minimize hazard, nuisance, hardscape damage, and maintenance costs.
6. Promote efficient and cost-effective management of the urban forest.
7. Foster community support for the local urban forestry program and pursue public-private and nonprofit partnerships to assist with program development.
8. Encourage good tree management on privately-owned properties.

An implementation plan and a monitoring plan follow the strategic plan. The implementation plan lists actions needed to accomplish the goals and objectives and how they will be carried out. Situations might arise during the term of the plan that cannot be accounted for. The monitoring plan will help staff understand what is happening, why it is happening, and how specific management adjustments will change the outcome.

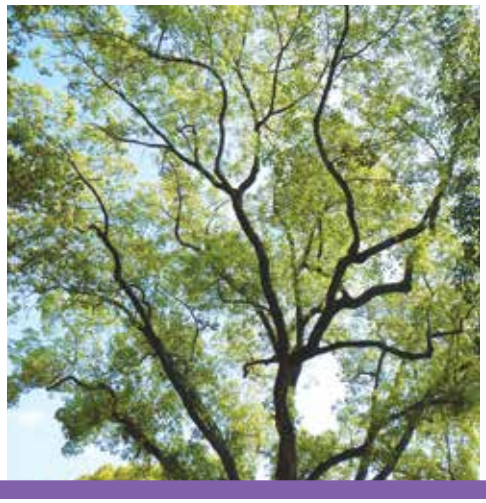
Introduction

The West Hollywood Urban Forest Management Plan (UFMP) was developed to guide the urban forest into the future and assists in compliance with the City's General Plan action LU-A.6 that requires an overall street tree master plan. This management plan considers the best solutions for sustainability and for educating the public about the benefits of trees.

Climate change and the introduction of a variety of exotic pests are having a major impact on our urban forest. It is recommended that this plan be reviewed and reevaluated every five years to ensure that it continues to meet the needs of the community. A regular review of policies and procedures that affect the urban forest is also advised.

Vision

The vision for West Hollywood's urban forest is to have a city rich with park environments and streetscapes that foster awareness of the values that trees provide. In that vision, the public is conscious of and appreciative of the urban forest, its merit, and the broad range of benefits it provides to the community.



Mission

Part of the City of West Hollywood's mission is to promote a healthy and sustainable urban forest so as to enhance the beauty and prosperity of the community.

History of West Hollywood's Urban Forest

Before European colonization in the late 1700s, the Tongva Indian tribe inhabited the area that was to become West Hollywood. By 1780, the Sunset Strip was the major connecting road between El Pueblo de Los Angeles and all ranches westward to the Pacific Ocean.

In the late 1800s, Moses Sherman and his partners in the Los Angeles Pacific Railroad established the town of Sherman. Sherman became the location of the railroad's main shops, railroad yards, and car barns. Many working-class employees of the railroad settled there, and it was during this time that the city began to earn its reputation as a loosely regulated, liquor-friendly (during Prohibition) place for eccentric people wary of government interference. Despite several annexation attempts, the town elected not to become part of the City of Los Angeles. In 1925, Sherman adopted West Hollywood as its name but the area remained under the jurisdiction of the Los Angeles County.

Santa Monica Blvd. going northeast to Sherman in 1922

Because gambling was illegal in the City of Los Angeles, but still legal in Los Angeles County, the 1920s saw the proliferation of many casinos and nightclubs along Sunset Boulevard. Craftsmen and artists employed by the movie industry were also attracted to this less-restricted area of the county, and a number of designers and decorators opened showrooms there. This growth produced many architecturally distinctive apartment buildings and hotels.

In the late 1980s, thousands of Russian Jews migrated to West Hollywood after the dissolution of the Soviet Union. The Russian-speaking population of West Hollywood is now the most concentrated single Russian-speaking region in United States outside of New York City.

In 1984, residents in West Hollywood organized to maintain local control due to skyrocketing rents. When Los Angeles County began planning to discontinue rent controls, West Hollywood was a densely populated area of renters, many of whom would not be able to afford the rapidly rising rents of Los Angeles County. The city swiftly voted to incorporate as the City of West Hollywood.

Before 1984, West Hollywood was an often forgotten portion of Los Angeles County. With the incorporation of Los Angeles in 1850, and Beverly Hills in 1914, a 1.9 square mile of county land was left like an island in the middle. The irregular boundary of the town is featured in the City of West Hollywood's official logo, and was largely formed from the unincorporated Los Angeles County area that had not become part of the surrounding cities.

There is no complete published history of West Hollywood. It was an isolated and distant portion of county land that other jurisdictions did not find desirable. This affected all aspects of community development including the planting of trees.

No county records were kept for any aspect of the management of the area, and only urban legends

Apartments with parking under the first level along the street frontage

account for much of what is known as the history of its urban forest. After the City's incorporation, the first street tree inventory was taken in December 1990, and it showed a tree count of 4,900 public trees. With approximately 87 curb miles of streets, a tree was planted on average every 94 feet. Since incorporation, the city has pursued an aggressive tree-planting program, and now boasts more than 9,000 public trees. The average distance between trees has been lowered to one tree for every 48 feet.

The approximately 9,000 public trees are located along public thoroughfares and within seven city parks, and 47 civic landscaped areas. The public urban forest is fortunate to have a diverse distribution of trees that now includes more than 190 species.

Early development in the area favored small cottages and homes in the Craftsman style of architecture. In the early 1960s, these were rapidly replaced with apartment buildings. Front-loading apartments were often the normal form of construction. These apartments were designed with parking under the first level along the street frontage of the building and effectively eliminated all of the available public right-of-way planting space. Particularly hard hit by this development practice were the southern and eastern limits of the city. Some residential blocks south of Santa Monica Boulevard can only support a fraction of the trees they could have had with more environmentally-friendly planning. Current West Hollywood building codes no longer permit front-loading residential units.

The City of West Hollywood, which has a total population of approximately 35,000 residents, is said to be the most densely populated city west of the Mississippi. Only two small areas in the city are zoned for single-family homes or duplexes. The remainder of the city is zoned for multifamily dwellings that take up much of the available land space. This makes every available portion of street parkway an important element of the city's urban forest. Currently, there are less than five percent vacant planting sites within the city, though many of these sites can be attributed to normal attrition through old age and occasional illegal removal of trees.

Prior to 1984, only haphazard planting contributed to what eventually developed into West Hollywood's urban forest. Residents planted whatever looked

good from the nursery, and commercial streets were often planted with *Ficus nitida* trees.

Approximately 50 years ago, the county planted much of the residential areas in the southwest portion of the city with *Ficus nitida.* Though beautiful, these trees represent maintenance issues for the city and size and litter problems for residents.

Poinsettia Drive, on the east side of the city has an unusual tree planting history. According to locals, a gentleman living on the street in the 1950s and 60s would regularly walk to Green Acre Nursery, which was located one block west of Poinsettia Drive. He would purchase two trees at a time, and then plant them in front of residences on Poinsettia Drive. He continued to do so until the entire street was planted.

In February 1990, the West Hollywood City Council approved the Urban Design Streetscape Master Plan. Prepared by the ROMA Design Group. It is commonly known as the ROMA Plan. It is the first document implementing a formal street tree palette for the city. In that plan, the city was divided into 13 planting zones with individual tree species assigned to each of these zones. For each zone, a dominant tree is indicated for plantings. This was done to differentiate each of the communities within the city. The ROMA Plan provided a first step in the standardization of planting within the city.

The City adopted a Historic Preservation Ordinance in 1989 and has designated more than 80 historic and cultural resources, including six historic districts. These districts include clusters of buildings from the first part of the twentieth century, with modern, craftsman, and Spanish influences. Landscaping in these districts contributes to their unique character.

In early 2006, the City started to develop its Heritage Tree Program, and in 2008, six trees were approved for that certification. With further promotion of this program, it is hoped that additional trees will be nominated and approved.

Ficus nitida, Indian Laurel

Environmental Context

Located in western Los Angeles County, the City of West Hollywood is bounded on the north by the Hollywood Hills neighborhood of the City of Los Angeles, on the east by the Los Angeles' Hollywood district, on the southeast by the Fairfax neighborhood of Los Angeles, on the southwest by the Los Angeles' Beverly Grove district, and on the west by the City of Beverly Hills.

West Hollywood benefits from a dense compact urban form with small lots, mixed land use, and a walkable street grid. According to walkscore.com, a website that ranks cities based on walkability, West Hollywood is the most walkable city in California with a Walkscore of 89. Commercial corridors of nightlife and dining are focused on the Sunset Strip, along Santa Monica Boulevard, and the Avenues of Art and Design along the streets of Robertson, Melrose, and Beverly Boulevard.

Residential neighborhoods in West Hollywood include the Norma Triangle, West Hollywood North, West Hollywood West, West Hollywood Eastside, and West Hollywood Heights, all of which are only a few blocks long or wide. Major intersecting streets typically provide amenities within walking distance of adjacent neighborhoods.

The rapid early development of the area was due in large part to its mild climate. West Hollywood has a subtropical-semiarid climate with year-round warm weather. The record high temperature of 111°F was recorded September 26, 1963, while the record low of 24°F was recorded on January 4, 1949. Snow is rare in West Hollywood, with the last accumulation occurring in 1949. Rainfall is sparse (only 13 inches annually), and falls mainly during winter months.

West Hollywood falls in *The Sunset Western Garden Book's*[1] climate zone 23, one of the most favored areas in North America for growing subtropical plants. Temperatures are mild because Pacific Ocean weather dominates. On the few occasions when interior air is dominant, those are the days when the hot, dry Santa Ana winds blow. The city lies mainly in the coastal plain, which contains several distinct soil types varying mostly from medium to fine texture.

[1]Brenzel, Kathleen Norris. *The New Sunset Western Garden Book*. Time Home Entertainment, Inc. 2012.

Portions of West Hollywood are located under former marshes, and historically, the groundwater has been close to the surface. Continued development, however, has depleted the water table (Figure 1).

The urban environment is not the same as trees' natural habitats, nor does it mirror any other natural environment. The conditions under which trees now grow in West Hollywood are generally less than ideal and fairly uniform throughout the City. The soil is often a mixture of disturbed soils and construction debris. Frequently, trees have restricted rooting space, and what space they do have is often limited to concrete or asphalt. Staff has recently been experimenting with more permeable substances.

West Hollywood's urban environment presents unique issues that its urban forest faces. Traffic pollution, abundance of overhead wires, and water restrictions due to the drought conditions in California are some of the problems City staff would like to address in this plan. Additionally, billboards and the urban forest often compete for the same real estate.

Because many of the street parkways are narrow, a restricted amount of planting space is one of the main factors that are hindering the expansion of West Hollywood's urban forest.

With California facing fluctuating drought conditions, City staff is anxious to update its tree species selection list to include more water efficient trees and those species that are most tolerant of urban conditions, including traffic pollution.

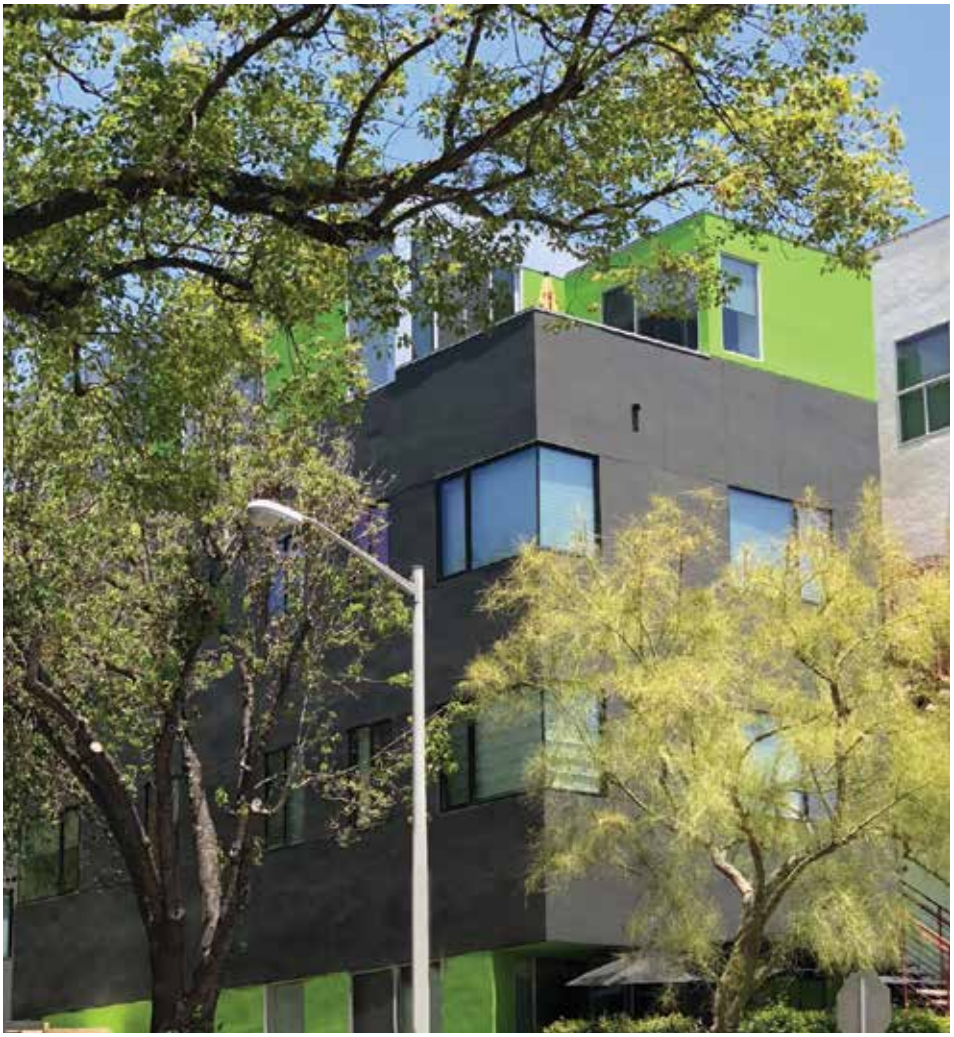
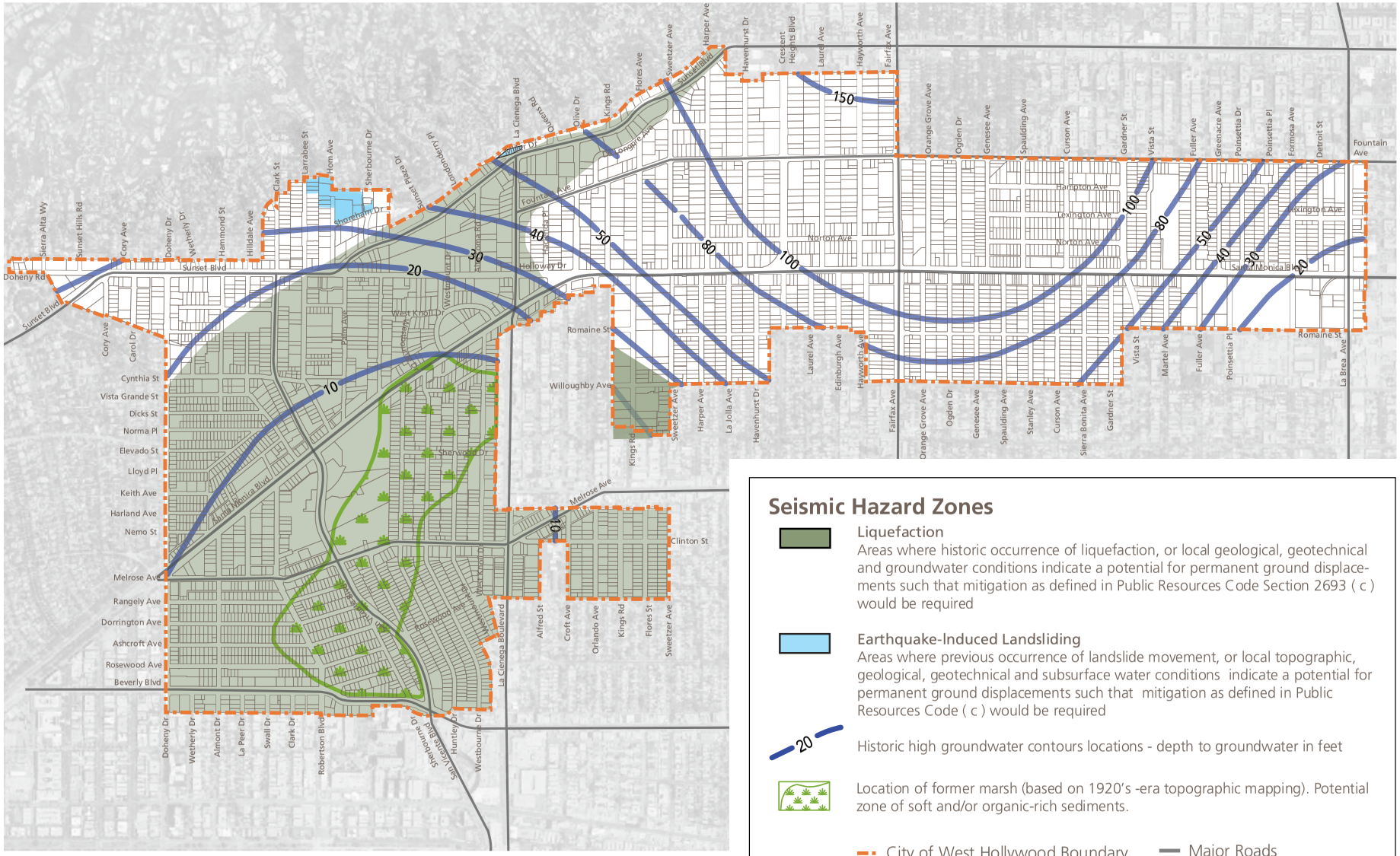


Figure 1: Seismic Hazard Zones



Source mapping from CDMG Seismic Hazard Zone Map of the Hollywood Quadrangle (CDMG 1999a) and Beverly Hills Quadrangle (1999b).

NOTE: ALL LOCATIONS, DIRECTIONS AND DIMENSIONS ARE APPROXIMATE

Why We Need a Plan

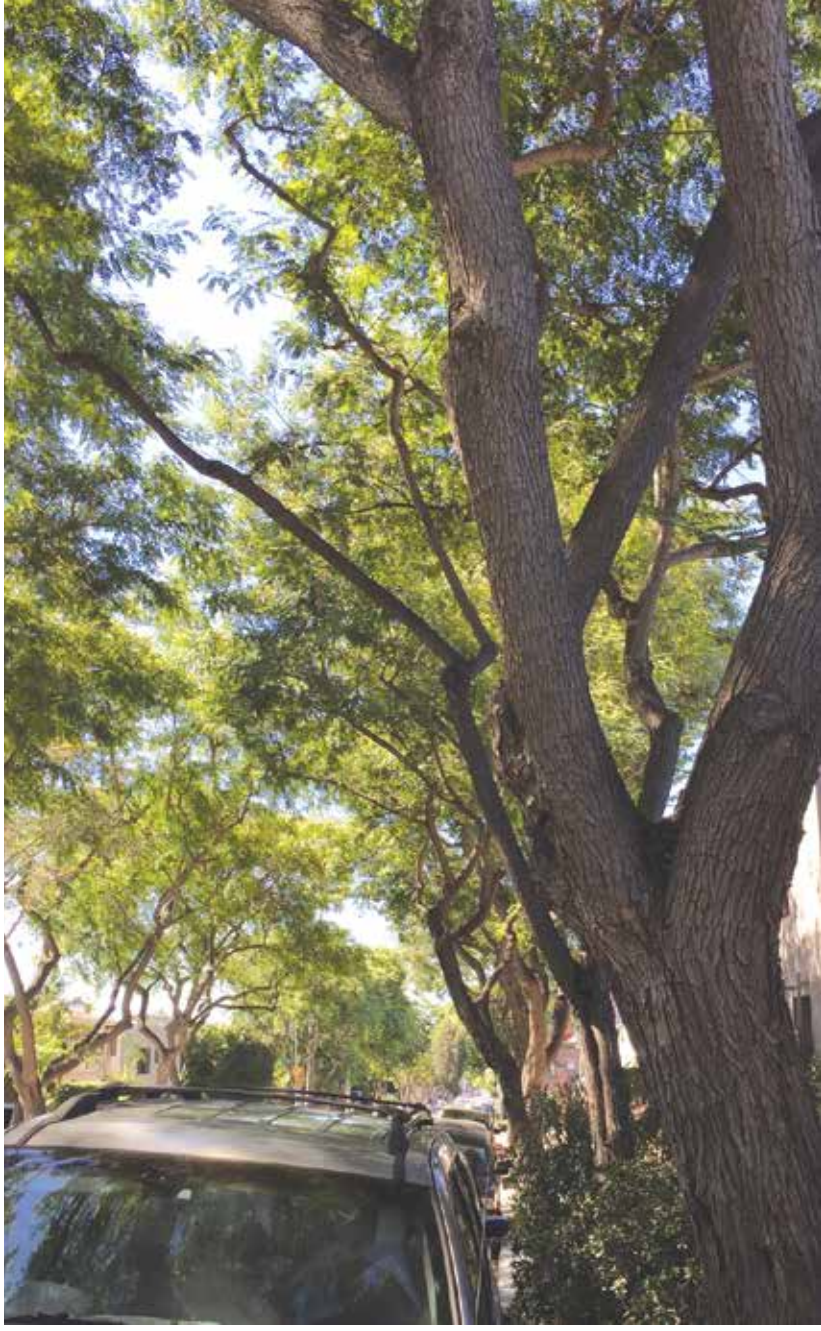
Any inhabited area that has trees and vegetation is considered an urban forest. The concept of urban forest management developed in the 1960s out of the death and devastation of the elm tree population throughout the United States due to Dutch Elm disease.

The discipline of urban forestry strongly advocates for species and age diversity in the urban forest so that the elm tree devastation of the 1960s does not happen again. Unfortunately, the Midwest is experiencing another such disaster. This time, the Emerald Ash Borer is destroying ash trees at an alarming rate as it marches westward. Researchers continue to look to expand current planting palettes to include trees that are more resistant to these new and exotic pests, disease, and soil salinity, and are more resilient to climate stressors such as heat, drought, and high winds.

During the last three decades, urban forestry has evolved as researchers and practitioners learn more about the structure and function of trees and their unique role in providing environmental, economic, and social benefits to urban areas. Urban forestry provides each of these benefits in differing circumstances: as infrastructure, as part of design and development, as ecosystem services, and as efficient and productive providers of economic development.

Residents of West Hollywood traditionally have indicated that they consider the urban forest a priority. Within the intensely urban environment of West Hollywood, the urban forest is sometimes the only day-to-day interaction with nature that many residents enjoy.

As West Hollywood continues to grow, and high land values favor intense development, the urban forest needs a strong advocate. This will happen with the education and support of the city's constituency, staff, and elected officials via of an approved urban forest management plan. The urban forest is unique in the array of benefits it provides to the West Hollywood community, and a management plan will effectively preserve and showcase these values.



While a management plan is useful in helping educate and ensure future viability, it also will set up useful parameters for the daily operations and care of the urban forest. A fresh look at all of the policies currently in place will bring into focus what is necessary for day-to-day activities to ensure long-term viability and safety of the urban forest.

Benefits Provided by Trees

The quality of life of the citizens of West Hollywood depends on the urban forest, as trees make a vital and affordable contribution to the sense of community, pedestrian- friendly neighborhoods, energy savings, and air quality. The urban forestry program is critical to meeting the city's commitment to climate change, carbon sequestration, stormwater reduction, wildlife habitat enhancement, and water conservation. Trees are one of the few infrastructure investments that grow in value over time. The following data was derived from Alliance for Community Trees.[2]

Positively Influence Climate to Ensure West Hollywood's Sustainability

Trees absorb carbon dioxide and store carbon in wood, which helps to reduce greenhouse gases. Carbon emissions from vehicles, industries, and power plants are a primary contributor to increased air temperatures in metropolitan areas, because they slow the passage of heat through the Earth's atmosphere. Urban trees in the United States store 700 million tons of carbon valued at $14 billion with an annual carbon sequestration rate of 22.8 million tons per year valued at $460 million annually.

Clean the Air and Breathe Easier

Shade trees reduce pollution and return oxygen to the atmosphere. In addition to carbon dioxide, trees' leaves or needles absorb pollutants, such as ozone, nitrogen dioxide, sulfur dioxide, and some particulate matter.

Save Energy and Lower Energy Costs for Buildings

As natural screens, trees can insulate homes and businesses from extreme temperatures, keep properties cool, and reduce air conditioning utility bills. A 20 percent canopy of deciduous trees over a house results in annual cooling savings of 8 to 18 percent and annual heating savings of 2 to 8 percent. By planting shade trees on sunny exposures, residents and businesses can save up to 50 percent on hot-day energy bills

Reduce the Need for Street Maintenance

Shaded streets last longer and require far less pavement maintenance, reducing long- term costs. Canopy diminishes pavement fatigue, cracking, rutting, and other damage, reducing repair costs up to 60 percent. A study from University of California at Davis found that 20 percent shade cover on a street improves pavement condition by 11 percent, which is a 60 percent savings for resurfacing over 30 years.

[2]Alliance for Community Trees. 2011. Benefits of trees and urban forests: A research list. http://actrees.org/files/Research/benefits_of_trees.pdf

Raise Property Values

Trees are sound investments, for businesses and residents alike, and their value increases as they grow. Sustainable landscapes can increase property values up to 37 percent. The value of trees appreciates over time, because the benefits increase as trees grow. For businesses, trees have added value, including higher revenues. Shoppers seek out leafy promenades that frame storefronts. Research shows that shoppers spend more—between 9 and 12 percent more—on products in tree-lined business districts.

Conserve Water and Soil

A tree's fibrous roots, extending into the soil, are premier pollution filtration and soil erosion prevention systems. Because West Hollywood is an intensely urbanized area, it is covered with a large amount of impermeable surfaces. In contrast to an impervious hardscape, a healthy urban forest can reduce annual storm water runoff up to 7 percent. Highly efficient trees also utilize or absorb toxic substances such as lead, zinc, copper, and biological contaminants. One study estimated that eliminating the need for additional local stormwater filtration systems would result in savings exceeding $2 billion.

Cooler Pavement Diminishes Urban Heat Islands

Broad canopy trees lower temperatures by shading buildings, asphalt, and concrete. They deflect radiation from the sun and release moisture into the air. The urban heat island effect is the resulting higher temperature of areas dominated by buildings, roads, and sidewalks. Cities are often 5° to 10°F hotter than undeveloped areas, because hot pavement and buildings have replaced cool vegetated land. In addition, high temperatures increase the volatility of automobile oil and oil within the asphalt itself, releasing the fumes into the atmosphere. Shade trees can reduce asphalt temperatures by as much as 36°F, which diminishes the fumes and improves air quality.

Protect Wildlife and Restore Ecosystems

Planting and protecting trees can provide habitat for hundreds of birds and small animals. Urbanization and the destruction of valuable ecosystems have led to the decline of many of species. Adding trees, particularly native trees, provides valuable habitat for wildlife. West Hollywood is located along the Pacific Flyway, which is a major north-south route for migratory birds traveling from Patagonia to Alaska.

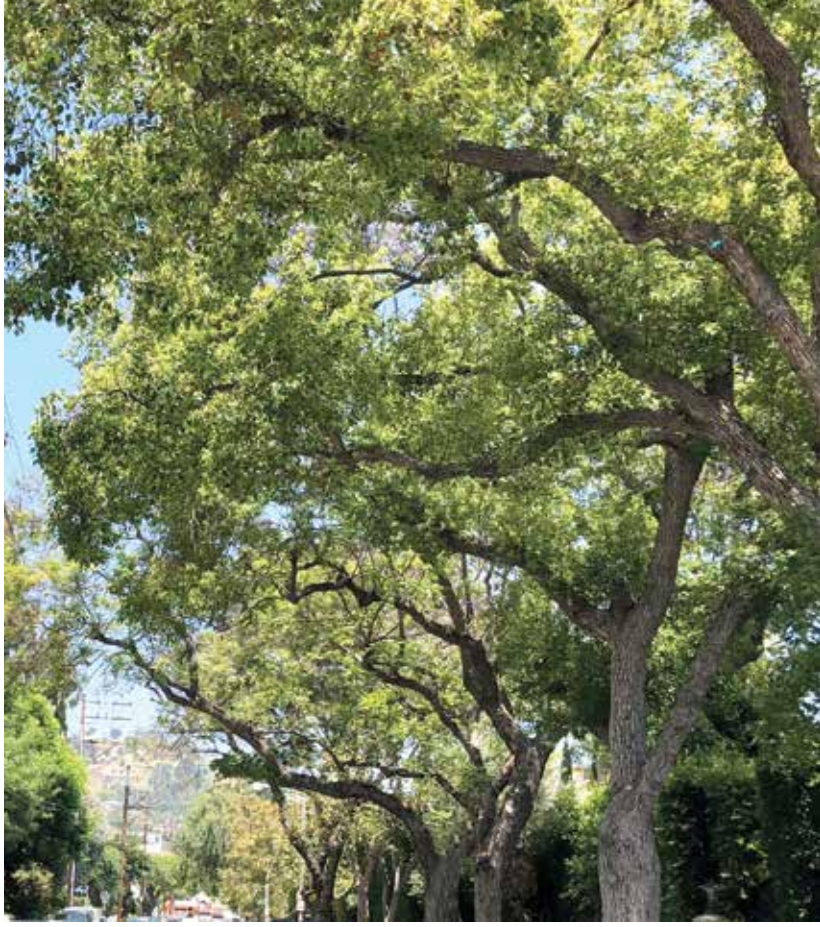
Build Safe Communities and Decrease Crime

Police and crime prevention experts agree that trees and landscaping cut the incidence of theft, vandalism, and violence by enhancing neighborhoods. Thriving trees on well-maintained streets indicate pride of ownership. Public housing residents with nearby trees and natural landscapes reported 25 percent fewer acts of domestic aggression and violence. Apartment buildings with high levels of greenery had 52 percent fewer crimes than those without any trees. Buildings with medium amounts of greenery had 42 percent fewer crimes

Calm Traffic and Make Neighborhoods Safer and Quieter

Because trees create the illusion of narrower streets, people drive more slowly and carefully through tree-lined streets. One study found a 46 percent decrease in crash rates across urban arterial and highway sites after landscape improvements were installed. The presence of trees in a suburban landscape reduced the cruising speed of drivers by an average of 3 miles per hour. Faster drivers and slower drivers both drove at decreased speeds in the presence of trees.

Trees reduce noise pollution, buffering against as much as half of urban noise. By absorbing sounds, a belt of trees 100 feet wide and 50 feet tall can reduce highway noise by 6 to 10 decibels. Buffers composed of trees and shrubs can reduce 50 percent of noise.



Reduce Stress and Improve the Quality of Life

Neighborhoods with generous canopies of trees are uplifting and good for public health. Greater contact with natural environments correlates with lower levels of stress, improving performance. Studies show that children with attention deficit disorder function better after activities in green settings.

A green environment impacts worker productivity; workers without views of nature from their desks claimed 23 percent more sick days than workers with views of nature. Residents of areas with the highest levels of greenery were 3 times as likely to be physically active and 40 percent less likely to be overweight than residents living in the least green settings

More information about the benefits of trees, links to the latest research papers, and other research can be found at the Invest From the Ground Up resource web page (http://investfromthegroundup.org/resources/research/).

Scope of the Plan

Planning Horizon

The scope of this plan is a 20-year planning horizon with the expectation of review every five years. This plan assesses the public street trees, facility trees, park trees, and trees in open space areas.

Relationship to Other City Efforts

The City of West Hollywood's policies, City Council resolutions, ordinances, planning documents, and programs establish a framework for developing and managing the urban forest. The City's documents and publications range from the guiding General Plan to specific recommendations in its Climate Action Plan.

The West Hollywood Urban Forest Management Plan supersedes all previous tree species designations. As a living document, the intention is to update this Plan through time as other efforts by the City evolve and change.

The following illustrates the relationships that are applicable to and affect urban forestry activities within West Hollywood.

2020

Climate Action and Adaptation Plan (CAAP)

In 2020, the City will begin to create its CAAP plan, which is an update to the 2011 CAP. The new effort will include resiliency measures and likely expand upon the City's tree canopy needs as an adaptation measure for extreme heat conditions.

2019

Green Building Program Update

In 2019, the City updated its green building policies and program. Items related to the urban forest include: new code will mandate sustainable roof measures, one of which are vegetative roofs. Smaller courtyard buildings (2- and 3-story buildings), in exchange for meeting their parking requirements, may opt to increase their vegetative space and a minimum box size for tree plantings will be specified.

2019

Sunset Specific Plan

Adopted in 1996 and amended in 2019, this plan provides direction for the responsible development and preservation of the eclectic character on Sunset Boulevard. Items related to the urban forest include the protection of public trees from removal or alteration for creative billboards and creative tall wall signs; adds tree installation requirements when sidewalks are widened; hotel design requirements must include a landscaping plan and any street trees approved by the City; and projects on Sunset Boulevard shall not substantially damage scenic resources such as trees.

2014

Design District Streetscape Master Plan

This plan includes the public rights-of-way on the following streets within West Hollywood: Melrose Avenue, Robertson Boulevard, Beverly Boulevard, Almont Drive, and La Peer Drive between Melrose Avenue and Santa Monica Boulevard. One of the goals of the plan is to improve the pedestrian environment through landscaping and other improvements. The plan calls for expanding existing landscaped parkways or adding them. The main objective of adding street trees is to increase canopy cover. One of the criteria for trees in these areas is that they are compatible with storefronts so that business signs are visible.

2011

General Plan 2035

This plan provides a roadmap for the City to continue building on its success. It is intended to provide guidance for the next 25 years, with long-term strategies that address the unique characteristics and needs of West Hollywood. The plan calls for addressing air quality climate change issues. Action LU-A.6 specifically calls for updating the Street Tree Master Plan to identify new locations for street trees and other landscaping throughout the city. Some of the implementation actions for the Parks and Recreation chapter call for identifying opportunities for expanding parks and open spaces in the city.

2011

Climate Action Plan (CAP)

The CAP is an implementation measure of the General Plan 2035. It includes actions the entire community can take to reduce our contributions to global climate change by reducing greenhouse gas emissions. The plan recognizes trees as a valuable asset and makes recommendations to add to the urban forest, such as planting more shade trees throughout to encourage walking. In the short term, the plan calls for implementing the urban forest management plan as well as developing a community outreach program that provides information about the benefits of trees and encourages tree planting on private property. Additionally, the plan recommends interspersing shade trees among palm tree plantings. By 2020, the document calls for 100 new trees to be planted and 500 by 2035. The document also calls for the city to increase its green space using innovative programs such as developing a green roof program and expanding parks.

2010

Parkway Design Guide

The Guide stresses trees that are planted in the parkway are the most important plants in the parkway and that care should be taken to protect them.

2007

Guidelines for Removal of Public Trees

This document establishes criteria for the removal of public trees. It also lists unacceptable reasons for removing trees.

2006

Heritage Tree Program

The program acknowledges that heritage trees whether located on public or private property are distinct and unique living resources of the West Hollywood community. Urban trees play a key role in our quality of life and the quality of our environment, and heritage trees are exemplary at thriving in their local context. The program lists criteria for nominating either a designated heritage tree or a protected heritage tree. Staff would like to see this program expanded.

1996

Public Facilities Commission

Established by Ordinance No. 96-473, the Public Facilities Commission consists of seven members and duties include performing an annual review of public facilities other than parking and transportation-related facilities – such as parks, City-owned buildings, library, cable facilities, landscaping, streetscape and the Santa Monica Boulevard median, and make recommendations to the City Council regarding funding for repairs or improvements for inclusion in the annual budget or five-year capital improvement program. The urban forest and parkways are included under the purview of this Commission.

1990

Urban Design Streetscape Master Plan (ROMA Plan)

Prepared by the ROMA Design Group, the ROMA plan outlines steps toward comprehensive improvements to the city's streets. It strives to create a more livable environment for the city's residents and promote the economic viability of the city's commercial districts. The use of elements such as, tree planting, lighting, graphics, paving, and furnishings, are suggested to distinguish each commercial district, but yet provide cohesiveness to the community. The ROMA plan divides the city's residential neighborhood into five main areas, and notes that there are already many mature trees in each of the neighborhoods. The plan suggests five to six alternate tree species to plant each neighborhood either to fill existing vacancies or to replace mature trees at the end of their useful lives. The plan also suggests one species to be used as the dominant tree for the area. Color was a major consideration in selecting trees for the list, and flowering trees have been used extensively throughout the city.

Status of the Urban Forest

Tree Resource Assessment

Canopy Cover

Canopy cover refers to the proportion of land area covered by tree crowns over the ground when viewed from above. Tree canopy is an important measure of the urban forest resource. Currently, the city has no estimates of its tree cover. The Urban and Community Forestry program of CAL FIRE has acquired aerial imagery of all major metropolitan areas in California. The imagery is downloadable from CAL FIRE servers, and the availability of that data has made developing associated canopy cover assessments more affordable for California municipalities. Staff is interested acquiring the data for use in development of its canopy cover assessment.

A current canopy cover assessment will help the city establish a baseline for the range of the urban forest and define canopy cover targets for the future. Defining canopy cover will help the city find opportunities to expand the urban forest and to determine where management is needed to sustain current canopy levels. Knowing canopy cover also helps quantify the actual benefits that the urban forest is providing to the city.

Tree Inventory

Trees along streets have a greater effect on most residents and visitors than do trees in all other public areas. People spend more time traveling along tree-lined streets than they spend on other public property. An estimated 9,000 trees line West Hollywood's streets, parks, and facilities, and they are valued at more than $27 million. Each of the trees in the inventory requires periodic maintenance throughout its life. These trees range in size from large eucalyptus and jacaranda trees to smaller trees such as yucca and crape myrtle trees. The largest trees provide the most ecosystem benefits for the city, and wherever possible, staff would like to broaden the number of large trees.

West Hollywood's most recent tree inventory was completed in 2016. The tree inventory is comprised of 194 species. The three most dominant species are: Jacaranda at 1,427; Chinese Elm at 1,018; and Indian Laurel Fig at 484. Palm trees make up 15 percent of the tree inventory. The ROMA plan called for the use of palms extensively in the commercial areas as demarcations and to give the areas a sense of place.

More than 55 percent of the city's public trees are considered small- to medium-sized (13 ft. to 18 ft. high). Planting spaces are limited in many of the city's parkways, and as such, it is only feasible to plant small to medium trees in those areas. With new expanded planting areas proposed for commercial areas, staff should plan to plant larger trees.

Many planting opportunities exist in the City, such as along under planted arterials; in older, established neighborhood streets where trees may have been lost; in newly constructed areas; around schools; and in parks. Increasing tree canopy on the east side of the city is a goal that staff would like to prioritize. There is an ongoing east side community plan effort, and the City's Planning Department is seeking more input from the urban forestry group.

There are also opportunities to plant trees in some of the City's six parks, including two recently added pocket parks. The City is also seeking to expand its park system.

Tree Species by Frequency

Botanical Name	Common Name	Count
Jacaranda mimosifolia	JACARANDA	1,427
Ulmus parvifolia	CHINESE ELM	1,018
Ficus microcarpa 'Nitida'	INDIAN LAUREL FIG	484
Washingtonia robusta	MEXICAN FAN PALM	450
Magnolia grandiflora	SOUTHERN MAGNOLIA	416
Syagrus romanzoffianum	QUEEN PALM	402
Tipuana tipu	TIPU	340
Brachychiton acerifolius	AUSTRALIAN FLAME TREE	271
Cassia leptophylla	GOLD MEDALLION TREE	221
Koelreuteria bipinnata	CHINESE FLAME TREE	181
Ficus benjamina	WEEPING FIG	173
Handroanthus impetiginosus	PINK TRUMPET TREE	170
Platanus X *hispanica*	LONDON PLANE	137
Calodendrum capense	CAPE CHESTNUT	131
Cupaniopsis anacardioides	CARROTWOOD	129
Tristaniopsis laurina	WATER GUM	120
Bauhinia variegata	PURPLE ORCHID TREE	115
Corymbia ficifolia	RED FLOWERING GUM	113
Phoenix canariensis	CANARY ISLAND DATE PALM	108
Liquidambar styraciflua	AMERICAN SWEETGUM	102
Pyrus kawakamii	EVERGREEN PEAR	95
Hymenosporum flavum	SWEETSHADE	89
Cupressus sempervirens	ITALIAN CYPRESS	86
Pyrus calleryana	ORNAMENTAL PEAR	85
Cinnamomum camphora	CAMPHOR TREE	84
Yucca gloriosa	SPANISH DAGGER	77
Casuarina cunninghamiana	RIVER SHE-OAK	66
Corymbia citriodora	LEMON-SCENTED GUM	63
Ceiba speciosa	SILK-FLOSS TREE	62

Tree Species by Frequency (cont.)

Botanical Name	Common Name	Count
Afrocarpus macrophyllus	YEW PINE	57
Lagerstroemia indica	CRAPE MYRTLE	55
Platanus mexicana	MEXICAN SYCAMORE	54
Koelreuteria paniculata	GOLDENRAIN TREE	52
Brachychiton populneus	BOTTLE TREE	50
Brahea edulis	GUADALUPE PALM	44
Olea europaea	OLIVE	35
Schinus terebinthifolius	BRAZILIAN PEPPER	35
Afrocarpus gracilior	FERN PINE	33
Pittosporum undulatum	VICTORIAN BOX	32
Afrocarpus henkelii	LONG-LEAFED YELLOW-WOOD	30
Pinus canariensis	CANARY ISLAND PINE	30
Syzygium paniculatum	BRUSH CHERRY	29
Ginkgo biloba	MAIDENHAIR TREE	28
Melaleuca quinquenervia	CAJEPUT TREE	27
Archontophoenix cunninghamiana	KING PALM	25
Phoenix dactylifera	DATE PALM	24
Quercus agrifolia	COAST LIVE OAK	24
Melaleuca citrina	LEMON BOTTLEBRUSH	23
Persea americana	AVOCADO	23
Handroanthus chrysotrichus	GOLDEN TRUMPET TREE	21
Strelitzia nicolai	GIANT BIRD OF PARADISE	21
Syzygium spp.	EUGENIA	18
Acacia melanoxylon	BLACK ACACIA	17
Washingtonia filifera	CALIFORNIA FAN PALM	16
Eucalyptus polyanthemos	SILVER DOLLAR GUM	15
Fraxinus uhdei	SHAMEL ASH	15
Pittosporum tobira	MOCK ORANGE	15
Platanus racemosa	CALIFORNIA SYCAMORE	15

Tree Species by Frequency (cont.)

Botanical Name	Common Name	Count
Eucalyptus sideroxylon	RED IRONBARK	14
Nerium oleander	OLEANDER	14
Pistacia chinensis	CHINESE PISTACHE	14
Sequoia sempervirens	COAST REDWOOD	14
Brachychiton discolor	PINK FLAME TREE	13
Eriobotrya japonica	EDIBLE LOQUAT	13
Viburnum tinus	LAURUSTINUS	13
Ceratonia siliqua	CAROB	12
Chamaerops humilis	MEDITERRANEAN FAN PALM	12
Euphorbia tirucalli	PENCIL TREE	12
Lophostemon confertus	BRISBANE BOX	12
Melia azedarach	CHINABERRY	12
Pinus pinea	ITALIAN STONE PINE	12
Pinus thunbergiana	JAPANESE BLACK PINE	12
Laurus nobilis	SWEET BAY	11
Pinus halepensis	ALEPPO PINE	10
Albizia julibrissin	SILK TREE	9
Fraxinus velutina 'Modesto'	MODESTO ASH	9
Populus fremontii	FREMONT COTTONWOOD	9
Prunus cerasifera	PURPLE-LEAF PLUM	9
Rhus lancea	AFRICAN SUMAC	8
Thuja occidentalis	AMERICAN ARBORVITAE	8
Calliandra haematocephala	PINK POWDER PUFF	7
Cedrus deodara	DEODAR CEDAR	7
Citrus sinensis	ORANGE	7
Juniperus chinensis 'Torulosa'	HOLLYWOOD JUNIPER	7
Liriodendron tulipifera	TULIP TREE	7
Morus alba	WHITE MULBERRY	7
Pyrus calleryana 'Aristocrat'	ARISTOCRAT PEAR	7

Tree Species by Frequency (cont.)

Botanical Name	Common Name	Count
Araucaria columnaris	STAR PINE	6
Auranticarpa rhombifolium	QUEENSLAND PITTOSPORUM	6
Betula pendula	EUROPEAN WHITE BIRCH	6
Eucalyptus globulus	BLUE GUM	6
Fraxinus velutina	ARIZONA ASH	6
Harpephyllum caffrum	KAFFIR PLUM	6
Schinus molle	CALIFORNIA PEPPER	6
Agonis flexuosa	PEPPERMINT TREE	5
Casuarina stricta	DROOPING SHE-OAK	5
Cercis occidentalis	WESTERN REDBUD	5
Ficus elastica	RUBBER TREE	5
Ficus rubiginosa	RUSTY LEAF FIG	5
Platanus spp.	SYCAMORE	5
Prunus cerasifera 'Krater Vesuvius'	PLUM KRAUTERS VESUVIUS	5
Rhaphiolepis 'Majestic Beauty'	INDIAN HAWTHORNE	5
Tupidanthus calyptratus	TUPIDANTHUS	5
Citrus limon	LEMON	4
Erythrina crista-galli	COCKSPUR CORAL TREE	4
Handroanthus heterophylla	PINK TRUMPET TREE	4
Howea forsteriana	PARADISE PALM	4
Prosopis chilensis	CHILEAN MESQUITE	4
Ravenea rivularis	MAJESTY PALM	4
Schefflera actinophylla	QUEENSLAND UMBRELLA TREE	4
Spathodea campanulata	AFRICAN TULIP TREE	4
Trachycarpus fortunei	WINDMILL PALM	4
Acer palmatum 'Green'	JAPANESE MAPLE GREEN	3
Citrus X paradisi	GRAPEFRUIT	3
Eriobotrya deflexa	BRONZE LOQUAT	3
Eucalyptus rudis	DESERT GUM	3

Tree Species by Frequency (cont.)

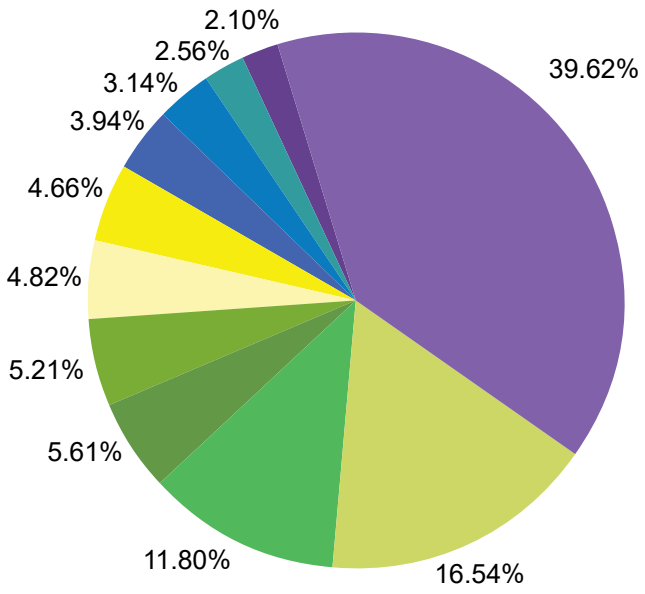
Botanical Name	Common Name	Count
Ficus carica	EDIBLE FIG	3
Ficus mysorensis	MYSORE FIG	3
Gleditsia triacanthos	HONEY LOCUST	3
Magnolia soulangiana	SAUCER MAGNOLIA	3
Parkinsonia aculeata	JERUSALEM THORN	3
Platycladus orientalis	ORIENTAL ARBORVITAE	3
Punica granatum	POMEGRANATE	3
Quercus ilex	HOLLY OAK	3
Acacia baileyana	BAILEY ACACIA	2
Acca sellowiana	PINEAPPLE GUAVA	2
Aloe arborescens	TREE ALOE	2
Celtis sinensis	CHINESE HACKBERRY	2
Dypsis decaryi	TRIANGLE PALM	2
Erythrina caffra	KAFFIRBOOM CORAL TREE	2
Eucalyptus robusta	SWAMP MAHOGONY	2
Ficus lyrata	FIDDLELEAF FIG	2
Hibiscus rosa-sinensis	CHINESE HIBISCUS	2
Lagerstroemia indica 'Pink'	PINK CRAPE MYRTLE	2
Leptospermum laevigatum	AUSTRALIAN TEA TREE	2
Ligustrum japonicum	JAPANESE PRIVET	2
Ligustrum lucidum	GLOSSY PRIVET	2
Melaleuca decora	WHITE FEATHER HONEYMYRTLE	2
Melaleuca viminalis	WEEPING BOTTLEBRUSH	2
Metrosideros excelsus	NEW ZEALAND CHRISTMAS TREE	2
Phoenix roebelenii	PYGMY DATE PALM	2
Pinus torreyana	TORREY PINE	2
Prunus caroliniana	CAROLINA LAUREL CHERRY	2
Quercus rubra	RED OAK	2
Robinia pseudoacacia 'Purple Robe'	PURPLE ROBE LOCUST	2

Tree Species by Frequency (cont.)

Botanical Name	Common Name	Count
Vitex agnus-castus	CHASTE TREE	2
Xylosma congestum	XYLOSMA	2
Acacia stenophylla	SHOESTRING ACACIA	1
Acer buergeranum	TRIDENT MAPLE	1
Acer palmatum 'Red'	JAPANESE MAPLE RED	1
Acer saccharinum	SILVER MAPLE	1
Ailanthus altissima	TREE OF HEAVEN	1
Alnus rhombifolia	WHITE ALDER	1
Araucaria heterophylla	NORFOLK ISLAND PINE	1
Bauhinia blakeana	HONG KONG ORCHID TREE	1
Bauhinia forficata	BRAZILIAN BUTTERFLY TREE	1
Calocedrus decurrens	INCENSE CEDAR	1
Casimiroa edulis	WHITE SAPOTE	1
Cassia splendida	GOLDEN WONDER SENNA	1
Celtis spp.	HACKBERRY SPECIES	1
Chionanthus retusus	CHINESE FRINGE TREE	1
Cordyline australis	DRACAENA	1
Cupressocyparis x *leylandii*	LEYLAND CYPRESS	1
Diospyros kaki 'Fuyu'	PERSIMMON FUYU	1
Dypsis lutescens	ARECA PALM	1
Erythrina coralloides	NAKED CORAL TREE	1
Eucalyptus microtheca	COOLIBAH	1
Fortunella margarita	KUMQUAT	1
Grevillea robusta	SILK OAK	1
Hibiscus syriacus	ROSE-OF-SHARON	1
Juniperus monosperma	ONE SEED JUNIPER	1
Lagerstroemia indica 'Muskogee'	MUSKOGEE CRAPE MYRTLE	1
Leptospermum spp.	TEA TREE	1
Liquidambar orientalis	ORIENTAL SWEETGUM	1

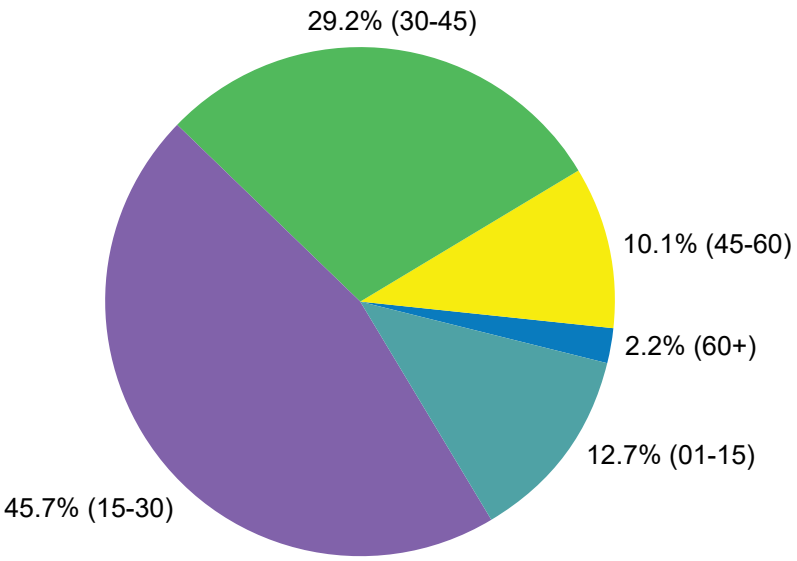
Tree Species by Frequency (cont.)

Botanical Name	Common Name	Count
Magnolia grandiflora 'Little Gem'	LITTLE GEM MAGNOLIA	1
Malus sylvestris	EDIBLE APPLE	1
Melaleuca nesophila	PINK MELALEUCA	1
Melaleuca styphelioides	PRICKLY MELALEUCA	1
Morus spp.	MULBERRY SPECIES	1
Musa spp.	BANANA SPECIES	1
Photinia X fraseri	FRASERS PHOTINIA	1
Pinus radiata	MONTEREY PINE	1
Prunus amygdalus	ALMOND	1
Prunus domestica	PLUM	1
Prunus serrulata	JAPANESE FLOWERING CHERRY	1
Prunus serrulata 'Kwanzan'	KWANZAN CHERRY	1
Syzygium australe	SCRUB CHERRY	1
Thevetia peruviana	YELLOW OLEANDER	1
Ulmus pumila	SIBERIAN ELM	1
Umbellularia californica	CALIFORNIA BAY	1
Yucca spp.	YUCCA SPECIES	1
Totals		**8,629**



	16.54%	Jacaranda
	11.80%	Chinese Elm
	5.61%	Indian Laurel Fig
	5.21%	Mexican Fan Palm
	4.82%	Southern Magnolia
	4.66%	Queen Palm
	3.94%	Tipu
	3.14%	Australian Flame Tree
	2.56%	Gold Medallion Tree
	2.10%	Chinese Flame Tree
	39.62%	Other

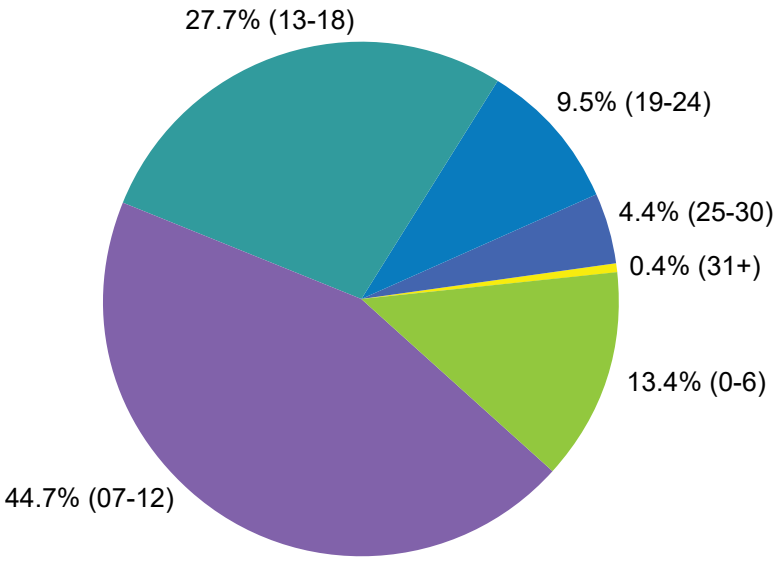
Frequency by Height



Height	Total
01-15	1,099
15-30	3,942
30-45	2,521
45-60	874
60+	193
	8,629

	12.7% (01-15)
	45.7% (15-30)
	29.2% (30-45)
	10.1% (45-60)
	2.2% (60+)

Frequency by DBH (Diameter at Breast Height)



Height	Total
01-06	1,160
07-12	3,854
13-18	2,386
19-24	817
25-30	379
31+	33
	8,629

	13.4% (0-6)
	44.7% (07-12)
	27.7% (13-18)
	9.5% (19-24)
	4.4% (25-30)
	0.4% (31+)

Management

Summary of Current Tree Management Practices and Urban Forest Programs

The success of an urban forestry program not only hinges on the talents and work ethic of a small group of professionals trained in this field, but also relies on the commitment of allied professionals, appointed and elected public officials, and the residents and local businesses that represent the community. In a successful program, all of these people are involved at different levels, and all bring something vital and necessary to the outcome.

The City only allows tree maintenance contractors employed by the City and employees authorized by the Facilities and Field Services Division to prune public trees. The City also requires all tree pruning to be done according to standards set forth by the International Society of Arboriculture (ISA).

The maintenance of the urban forest is the responsibility of the City's Facilities and Field Services Division, which is comprised of two full-time employees, including one ISA certified arborist. The primary maintenance activity for trees is pruning. All of this work is contracted out except for issues that are priorities and can quickly be handled. The Division does not have any heavy equipment.

West Hollywood considers its goals for trimming to be:

• remove a threat to the safety of the public or property. This would include removal of limbs that interfere with pedestrian or vehicular movement throughout the city;

• remove limbs that are dead or diseased;

• improve the structural integrity of the tree; and

• improve the appearance of the tree.

The City requires its tree contractors to implement a young tree care program for all newly planted public trees. Young trees are irrigated through the first five years after planting, and they receive structural pruning.

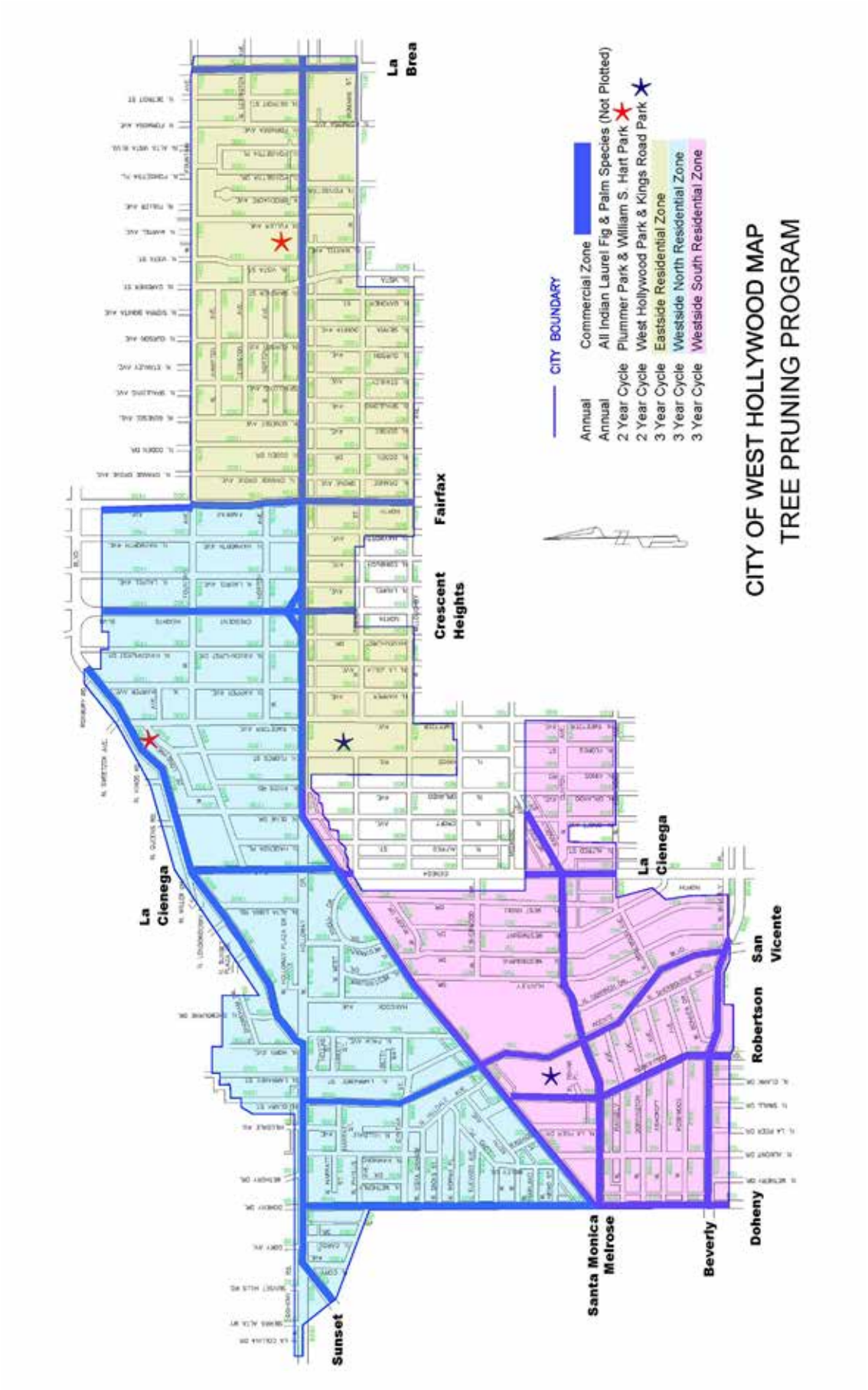
Tree watering bag on a young tree

The recent drought affected all of California, and West Hollywood was no exception. During this period, the City halted new public tree plantings except to replace tree removals. Staff hopes to start planting more trees in the future. The City minimized its turf areas and replaced spray irrigation in street medians with drip irrigation systems. The City also uses tree watering bags to supplement water to some of its street trees, and new development is now required to have irrigation systems provided.

Southern California Edison also trims trees within West Hollywood for line clearance. Line clearance is done on any tree in the city, private or public, that may interfere with the electrical distribution equipment and lines.

Tree Pruning and Other Management Activities

West Hollywood trims public trees on a regular predefined schedule. All major commercial streets are trimmed every year. Residential street trees are on a three-year trim cycle. The residential areas are divided up into three grid areas with each area to be trimmed in its entirety each year. All Indian Laurel Fig trees and palm trees within the city are trimmed every year. Park trees are managed on a three- to four-year trim cycle.


CITY OF WEST HOLLYWOOD MAP
TREE PRUNING PROGRAM
CITY BOUNDARY
Commercial Zone
Annual
All Indian Laurel Fig & Palm Species (Not Plotted)
Annual
Plummer Park & William S. Hart Park
2 Year Cycle
West Hollywood Park & Kings Road Park
2 Year Cycle
Eastside Residential Zone
3 Year Cycle
Westside North Residential Zone
3 Year Cycle
Westside South Residential Zone
3 Year Cycle
La Brea
Fairfax
Crescent Heights
La Cienega
La Cienega
San Vicente
Robertson
Santa Monica
Melrose
Beverly
Doheny
Sunset

The City also has trees trimmed in response to a service request from a constituent, property, or business owner. On average, more than 5,000 trees are trimmed annually. City staff is concerned that the public trees are over-pruned, and is currently reviewing the pruning schedules and guidelines for its contract documents.

Granite infill at the base of a street tree

The City follows the Los Angeles Audubon guidelines for bird-friendly tree trimming and removal. This generally allows the City to trim between the months of October through February.

The City is responsible for the care of tree grates and decomposed granite infill around trees as well as providing emergency services when needed. Staff would like to develop procedures that would enable them to more easily deal with emergency tree issues that often arise. Staff has been experimenting with replacing the decomposed granite infill around trees in commercial areas with surfaces that require less maintenance but are water permeable. Young trees are often vandalized, especially in areas where there is high foot traffic, and it is hard to get them established. Staff is seeking alternate methods for protecting trees during their establishment period.

One of the recurring issues involving trees concerns their placement and root structure in municipal public rights-of-way, particularly on residential streets, where the same space must accommodate water and sewer lines and other underground utilities. In West Hollywood, property owners are responsible for maintaining entire sewer line out to street including the saddle. Staff would like to have root pruning standards as well as tree preservation guidelines during construction in place to protect the public trees.

Urban foresters are often engaged in modifications, repairs, and damage control related to the urban forest. For that reason, it is critical to have urban foresters involved directly in planning decisions. Division staff often interacts with the City's planners to provide input in the review of pending development applications. Staff is working with the Planning Department to address the details of parkway planting. Currently, new development has to provide adequate parkway sizes to support larger tree establishment, and the Planning Department currently requests five-foot parkways.

The new recommended tree species list will provide diversity. While it has been a common practice to designate thoroughfares with a particular tree species to achieve a sense of place for each street, species diversity is preferable. The larger the monoculture, the greater the chance for catastrophic failure in the event of disease or insect vectors that target a particular species. West Hollywood's new tree list contains 43 species of large trees and 53 species of small to medium trees. *(See appendices.)*

Integrated Pest Management

Invasive species are pests that are not native to areas in which they cause problems. They are considered invasive because they invade and establish populations in new areas and the resulting uncontrolled population growth and spread causes economic or environmental problems. Invasive species are often native to a country or area different from where they have invaded and are now causing

problems. On average, California acquires around six invasive species per year; this is a rate of one new species every 60 days.

Pest and disease control for the public trees is performed on a case-by-case basis, and is contracted to a qualified Certified Pest Control Operator. Staff has recently been dealing with invasive pests, particularly a psyllid on its *Tipuana tipu* trees. These trees were widely planted in the city for their attractive flowers. Tipu psyllids are tiny insects that feed on a tree's phloem. Extensive feeding causes the leaves on host plants to curl and drop prematurely. Adults and nymphs produce copious amounts of honeydew, which fosters the growth of black sooty mold on leaves and branches.

In addition to the *Tipu* psyllid, there are other invasive pests that pose a threat to the urban forest. They include the polyphagous shot hole borer (PSHB) that carries a symbiotic fungus. The fungus destroys the food and water conducting systems of the tree, eventually causing stress and dieback. This pest is not discriminating in its hosts and feeds on a broad list of plants. PSHB has become a major threat to urban forests from San Diego north to Los Angeles and the Inland Empire. The search continues for beneficial insects to control the pest, but simply killing the insect is not enough as the fungus remains in the tree. Strategies to reduce the overall population pressure of the insects are currently the best defense. Researchers recommend frequent monitoring and removal.

The South American palm weevil has been detected in Southern California. Feeding by weevil larvae in the crown of palm trees causes significant damage and results in the crown of the palm dying. This inability to produce new fronds gradually leads to palm death.

The Asian citrus psyllid is an efficient vector of the bacterial citrus disease huanglongbing, previously called citrus greening disease, which is one of the most destructive diseases of citrus worldwide. Efforts are underway to eradicate the psyllid in Southern California. If the psyllid and the disease were to become established in California, the disease would devastate the citrus industry.[3]

Asian citrus psyllids which carry huanglongbing

A xylem-infecting bacterium, *Xylella fastidiosa*, is spread by certain leafhoppers. The infected xylem, or water-conducting tissues of the plant, becomes clogged, and water transport throughout the plant is disrupted. Other strains of this bacterium are the cause of Pierce's disease in grapevines. This disease, also known as leaf scorch, has had a devastating effect on sweetgum trees in Riverside and San Bernardino counties. The typical symptom is dieback in the upper canopy. Besides sweetgum trees, *Xylella* can also infect olive, elm, and ornamental plum trees.

The goldspotted oak borer (GSOB) is another pest that could be a threat to West Hollywood's urban forest. It has the potential to kill several oak species including the coast live oak and the California black oak. It has been detected in San Diego and Riverside counties and most recently in San Bernardino County.

Staff is interested in developing a removal and replacement policy for the affected *Tipu* trees as well as for its *Ficus* trees, which have a history of causing sidewalk issues with its roots.

[3]The Center for Invasive Species Research, April 2017, Web page, www.cisr.ucr.edu

Community Values

The residents of West Hollywood are an engaged, progressive community that is actively seeking to enhance the well-being of its city. This includes expanding the urban forest. The West Hollywood Tree Preservation Society is an organization committed to promoting public awareness and understanding of the value of the urban forest through education. The group focuses on the City's Heritage Tree Program, tree maintenance activities throughout the city, education outreach, and an urban forest help desk.

City staff would like to have the city designated as a Tree City USA. One of the requirements is for the City to have a tree ordinance, which it currently lacks. The City does conduct an annual Arbor Day celebration. Staff also notes the need for an outreach program (as noted in the Climate Action Plan) especially in some of the City's commercial areas, that encourages property owners to plant and care for trees.

Strategic Plan

Issues and Needs

The following issues and needs were derived from examination of the assessments in West Hollywood's tree resource, tree management, and community attitudes about trees:

Tree Planting. Staff would like to expand its public tree list to ensure that climate appropriate species are planted in locations that are compatible with the trees' growth habits. There is also a need to develop replacement policies for those species of trees that are negatively impacted by climate change, pests, diseases, and/or are not suited to their locations. A master-planting plan is needed.

A program to ensure the establishment of young trees is desirable. Vandalism has been an issue with young trees as well as soil compaction. Poor soil structure and volume often limit tree growth and create conflicts with sidewalks and other infrastructure. A good strategy would be to pursue a soil structure that promotes tree growth and assists with stormwater retention, if possible. Staff would like to focus tree planting on the east side of town and in parks and open spaces.

Conflicts with Infrastructure. Currently, there are many species of trees that are too large for the available planting space, and their roots can lift sidewalks, curbs, and drive approaches. Some trees can also negatively impact underground utilities, overhead wires, and sewer lines. Policies and guidelines are needed to address these issues. West Hollywood's trees also often compete with billboards. Currently, there is no city policy that addresses billboard conflicts or the unauthorized removal of trees by billboard companies.

Education. Staff is interested in implementing a community outreach program that brings awareness and educates both the public and City staff about the benefits of trees, how they create a more livable community, and planting the right tree in the right place as well as enumerating the responsibilities of property owners and the City for maintaining the urban forest.

Management. Sustainable management of West Hollywood's urban forest requires considerable staff time to address public concerns, tree service requests and evaluations, limb and tree failures, record keeping, and ensuring that there are no sight interferences with safety signs. Additional staff is needed to better manage the urban forest. Mechanisms need to be in place for identifying issues in the field, and risk should be managed proactively. Staff would like to review pruning cycles and the removal and replacement of problem trees.

Other City Programs. The urban forest would benefit from a holistic approach. Urban forestry has already been incorporated into its climate action policies. The urban forest is a resource and should be employed to meet the City's goals for air quality, storm water management, energy conservation, wildlife habitat, and carbon sequestration. There is a desire for West Hollywood to become a Tree City USA.

Goal 1

Establish and maintain optimal levels of tree cover to maximize ecosystem benefits provided by the urban forest; such as improving air quality, reducing energy use, moderating stormwater runoff, and providing a favorable environment for city residents.

Objective 1.1

Develop a strategy to monitor West Hollywood's urban tree canopy cover over time.

Actions

1.1.1 Implement a LiDAR study of the city's canopy cover.

1.1.2 Evaluate the LiDAR findings and make recommendations through community outreach for setting canopy cover goals for the city.

1.1.3 Develop a monitoring program to evaluate the city's progress towards these goals.

1.1.4 Present findings to Public Facilities Commission and City Council.

Objective 1.2

Update the city's tree inventory every three years.

Actions

1.2.1 Re-inventory all public trees including available planting sites.

1.2.2 Update inventory as work is accomplished.

1.2.3 Re-inventory every three years. Trees can be lost due to accidents, storms, or illegal removals. Trees might also be planted by the public without staff knowledge.

Objective 1.3

Identify all vacant planting sites and develop planting plans to comply with canopy cover goals as well as the city's climate action plan and streetscape plans.

Actions

1.3.1 Identify all available planting sites via the inventory process.

1.3.2 Identify all areas in need of canopy coverage per the LiDAR study.

1.3.3 Evaluate these potential areas to determine if new planting spaces can be created.

1.3.4 Identify and evaluate potential planting sites for canopy trees among the existing palm trees.

1.3.5 Develop a planting plan that addresses vacant sites, potential sites, and their ability to achieve canopy cover goals, climate action goals, and enhancement of the city's streetscapes.

Objective 1.4

Phase the planting program so that all available sites are planted by 2025.

Actions

1.4.1 Establish yearly planting goals for species and age diversity.

1.4.2 Set area planting priorities to address the east side needs.

1.4.3 Develop a citizen-based volunteer re-forestation program.

Objective 1.5

Optimize dedicated funding from general fund and development fees to complete planting goals.

Actions

1.5.1 Identify yearly re-forestation funding needs.

1.5.2 Continue to implement existing program that uses funds from violation fines to re-plant trees.

Goal 2

Maintain trees in a healthy condition through good cultural practices.

Objective 2.1

Follow approved best management practices (BMPs) for all tree care activities.

Actions

2.1.1 Identify best management practices for planting, removal, and maintenance including root pruning standards and tree preservation guidelines during construction.

2.1.2 Incorporate BMPs into the City's tree policy manual.

2.1.3 Develop inter-departmental procedure for coordinating and finalizing the City's tree ordinance.

2.1.4 Establish guidelines in the policy manual that addresses billboard and tree conflicts.

2.1.5 Re-evaluate BMPs and update the policy manual every 10 years to address changes.

Objective 2.2

Require that all private tree work follow best management practices..

Actions

2.2.1 Require private contractors to have a city business license and workers to be certified by International Society of Arboriculture (ISA) as tree workers and arborists.

2.2.2 Provide all contractors with the city's BMP policy manual, and provide BMPs to the public.

2.2.3 Monitor compliance by both contractors and developers.

Goal 3

Establish and maintain an optimal level of age and species diversity.

Objective 3.1

Establish age diversity goals.

Actions

3.1.1 Utilize the tree inventory to determine approximate age of each tree.

3.1.2 Determine the service life of tree species based on location, environmental, and aesthetic contribution.

3.1.3 Develop planting plan that implements an age diversity program.

3.1.4 Require new development to plant trees of varying container sizes to help promote diversity.

Objective 3.2

Establish age diversity goals.

Actions

3.2.1 Utilize the tree inventory to determine current species diversity.

3.2.2 Develop an approved list of tree species for City use.

3.2.3 Determine the approximate service life of tree species based on location, environmental and aesthetic contribution and replace with diverse species.

3.2.4 Develop planting plan that implements a species diversity program.

3.2.5 Require new development to plant trees of varying species to help promote diversity.

Goal 4

Promote conservation of existing tree resources.

Objective 4.1

Identify existing tree resources to be conserved.

Actions

4.1.1 Inventory all public trees to determine health, proper location, and contribution.

4.1.2 Establish a list of trees to be removed and replaced based on health, location, and contribution.

4.1.3 Establish a list of trees that have heritage value and incorporate into the City's heritage tree program.

Objective 4.2

Develop a maintenance management program for the existing tree resources.

Actions

4.2.1 Identify maintenance needs of existing trees as part of the inventory program.

4.2.2 Identify special maintenance needs of heritage or unique trees for preservation as identified in updated heritage tree program.

4.2.3 Develop a management program for watering, trimming, pest and disease prevention, and root pruning.

4.2.4 Develop contract specifications that reflect management program outlined in 4.2.2 and 4.2.3.

Goal 5

Select, situate, and maintain urban trees appropriately to maximize benefits and minimize hazard, nuisance, hardscape damage, and maintenance costs.

Objective 5.1

Select public tree species that will maximize environmental benefits.

Actions

5.1.1 Develop an approved tree species list and identify their potential environmental benefits.

5.1.2 Develop a master planting plan that locates the right species in the right location to maximize benefits

Objective 5.2

Identify existing or new species that are potentially hazardous and can cause hardscape damage

Actions

5.2.1 Match species with their cultural needs and available planting spaces to minimize potential damage.

5.2.2 Plan for early replacement of some species that are planted in tight growing spaces to maximize canopy cover.

5.2.3 Develop a planting and monitoring program to control root growth for these tree species to minimize damage and management costs.

Goal 6

Promote efficient and cost-effective management of the urban forest.

Objective 6.1

Develop management program and associated costs.

Actions

6.1.1 Detail management program for maintaining the tree resource.

6.1.2 Assign associated costs for maintaining the tree resource.

6.1.3 Detail staff support for maintaining the urban forest.

6.1.4 Assign associated costs for support staff.

6.1.5 Detail contractual work program.

6.1.6 Assign associated costs for contractual work.

Objective 6.2

Develop job descriptions and duties for staff support of the urban forest.

Actions

6.2.1 Define role of individual responsible for the management of the urban forest.

6.2.2 Define role of person responsible for citations.

6.2.3 Define roles of staff support needed.

Objective 6.3

Outline City Council and Public Facilities Commission responsibilities

Actions

6.3.1 City Council approves budget, staffing, and contracts.

6.3.2 Public Facilities Commission is responsible for public hearings, and is the appeal body for property owner requests and provides input to the program.

Goal 7

Foster community support for the local urban forestry program and pursue public private and nonprofit partnerships to assist with program development.

Objective 7.1

Develop community education program on tree selection and care.

Actions

7.1.1 Define scope of the community education program.

7.1.2 Incorporate various social media programs.

7.1.3 Establish and schedule programs.

7.1.4 Target programs and press releases to seasonal events/needs such as pruning, planting, tree selection, and summer watering.

7.1.5 Provide timely informational materials on current pests and diseases.

7.1.6 Set benchmarks to determine success.

Objective 7.2

Develop a Tree Stewardship program to support city efforts.

Actions

7.2.1 Create a program that engages residents with community efforts via a stewardship program.

7.2.2 Certify attendees as Tree Stewards who can act as leaders for volunteer beautification projects.

7.2.3 Grant funding for tree planting often requires volunteer support where the Tree Stewards can assist groups in volunteer tree planting projects.

7.2.4 City to promote tree giveaway program online, through social media, and at City events.

Objective 7.3

Develop public-private partnerships and nonprofit partnerships, including local businesses and tree-oriented nonprofits.

Actions

7.3.1 Identify how partnerships could help and develop a list of organizations and businesses. What are the needs? What are the responsibilities and roles of each partner? Consider employee give-back and volunteer work goals.

7.3.2 Contact those organizations to inquire about opportunities to partner with the City on such things as tree planting, young tree care, tree watering, tree stewardships, adopt-a-tree/park, and other beautification projects.

7.3.3 Solicit input and assistance from Councilmembers or commission/committee members with connections to these organizations

7.3.4 Develop guidelines, policies, and procedures.

7.3.5 Create the basic program with the ability to adapt to the private organization's goals or needs.

Objective 7.4

Comply with Arbor Day Foundation requirements to become a Tree City USA

Actions

7.4.1 Annually comply with Arbor Day Foundation guidelines for Tree City USA designation and reapply at the appropriate time each year.

7.4.2 Staff to publicize West Hollywood's Tree City USA status.

7.4.3 Enforce the City's new tree ordinance and review annually to determine need for revisions.

7.4.4 Cultivate relationships with community groups to assist with tree plantings.

Goal 8

Encourage good tree management on privately-owned properties.

Objective 8.1

Implement best practice guidelines for property owners.

Actions

8.1.1 Provide educational brochures for property owners on proper tree care.

8.1.2 Provide educational brochures for gardeners and professional maintenance companies.

8.1.3 Mandate proper tree pruning through business licenses and code enforcement.

West Hollywood UFMP Implementation Plan

The management plan sets goals and objectives, which provide the overall destinations of the plan. It also lists actions needed to accomplish the goals and objectives. The implementation plan describes how these actions will be carried out. For each action, the implementation plan spells out: an overall priority ranking; funding source(s); specific budget on an annual or multi-year basis; personnel responsible for administering and carrying out the action, and a time schedule. It is likely that the implementation plan will span shorter time blocks and will be revised based on the pace of the implementation.

Refer to above Goals and Objectives for more detail on each Action item.

Action	Description	By Whom	Target Start Date	Actual Completion/ Comments
1.1.1	Implement a LiDAR study of the city's canopy cover.	Management Staff	July 2020	
1.1.2	Evaluate the LiDAR findings and make recommendations through community outreach for setting canopy cover goals for the city	Management Staff	July 2021	
1.1.3	Develop a monitoring program to evaluate the city's progress towards these goals	Management Staff	July 2021	
1.1.4	Present Findings to Public Facilities Commission & City Council	Management Staff	July 2022	
1.2.1	Re-inventory all public trees including available planting sites	Management Staff	Ongoing	
1.2.2	Update Inventory as work is completed	Management Staff	Ongoing	
1.2.3	Re-inventory every three years. Trees can be lost due to accidents, storms, or illegal removals. The public without staff knowledge might also plant trees.	Management Staff	Spring 2025	
1.3.1	Identify potential planting sites	Management Staff	July 2020	
1.3.2	Identify all areas in need of canopy coverage per the LiDAR study.	Management Staff	July 2020	
1.3.3	Evaluate these potential areas to determine if new planting spaces can be created.	Management Staff	July 2020	
1.3.4	Identify and evaluate potential planting sites for canopy trees among the existing palm trees.	Management Staff	July 2020	
1.3.5	Develop a planting plan that addresses vacant sites, potential sites, and their ability to achieve canopy cover goals, climate action goals, and enhancement of the city's streetscapes.	Management Staff	July 2021	

Action	Description	By Whom	Target Start Date	Actual Completion/ Comments
1.4	Phase the planting program so that all available sites are planted by 2025	Management Staff	Dec 2025	
1.5	Evaluate the LiDAR findings and make recommendations through community outreach for setting canopy cover goals for the city	Management Staff	Dec 2025	
2.1.1	Identify best management practices for planting, removal, and maintenance including root pruning standards and tree preservation guidelines during construction.	Management Staff	July 2021	
2.1.2	Incorporate BMP's into the City's tree policy manual.	Management Staff	July 2021	
2.1.3	Develop inter-departmental procedure for coordinating and finalizing the City's tree ordinance.	Management Staff	Dec 2019	
2.1.4	Establish guidelines in the policy manual that addresses billboard and tree conflicts.	Management Staff	July 2021	
2.1.5	Re-evaluate BMPs and update the policy manual every 10 years to address changes	Management Staff	July 2031	
2.2.1	Require private contractors to have a city business license and workers to be certified by the International Society of Arboriculture (ISA) as tree workers and arborists.	Management Staff	July 2020	
2.2.2	Provide all contractors with the City's BMP policy manual.	Management Staff	July 2022	
2.2.3	Monitor compliance by both contractors and developers.	Management Staff	Ongoing	
3.1.1	Utilize the tree inventory to determine approximate age of each tree.	Management Staff	July 2021	
3.1.2	Determine the service life of tree species based on location, environmental, and aesthetic contribution.	Management Staff	July 2021	
3.1.3	Develop planting plan that implements an age diversity program.	Management Staff	July 2021	
3.1.4	Require new development to plant trees of varying container sizes to help promote age diversity.	Management Staff	Ongoing	
3.2.1	Utilize the tree inventory to determine current species diversity.	Management Staff	July 2021	

Action	Description	By Whom	Target Start Date	Actual Completion/ Comments
3.2.2	Develop an approved list of tree species for City use.	Management Staff	Jan 2019	Available in Appendix
3.2.3	Determine the approximate service life of tree species based on location, environmental and aesthetic contribution and replace with diverse species.	Management Staff	July 2021	
3.2.4	Develop planting plan that implements a species diversity program	Management Staff	July 2021	
3.2.5	Require new development to plant trees of varying species to help promote diversity	Management Staff	Ongoing	
4.1.1	Inventory all public trees to determine health, proper location, and contribution	Management Staff	July 2020	
4.1.2	Establish a list of trees to be removed and replaced based on health, location, and contribution.	Management Staff	July 2020	
4.1.3	Establish a list of trees that have heritage value and incorporate into the City's heritage tree program.	Management Staff	Dec 2020	
4.2.1	Identify maintenance needs of existing trees as part of the inventory program.	Management Staff	July 2021	
4.2.2	Identify special maintenance needs of heritage or unique trees for preservation as identified in updated heritage tree program.	Management Staff	July 2021	
4.2.3	Develop a management program for watering, trimming, pest and disease prevention, and root pruning.	Management Staff	July 2021	
4.2.4	Develop contract specifications that reflect management program outlined in 4.2.2 and 4.2.3	Management Staff	July 2021	
5.1.1	Develop an approved tree species list and identify their potential environmental benefits.	Management Staff	Jan 2019	Available in Appendix
5.1.2	Develop a master planting plan that locates the right species in the right location to maximize benefits.	Management Staff	July 2021	
5.2.1	Match species with their cultural needs and available planting spaces to minimize potential damage.	Management Staff	July 2021	
5.2.2	Plan for early replacement of some species that are planted in tight growing spaces to maximize canopy cover	Management Staff	July 2021	

Action	Description	By Whom	Target Start Date	Actual Completion/ Comments
5.2.3	Develop a planting and monitoring program to control root growth for these tree species to minimize damage and management costs.	Management Staff	July 2021	
6.1.1	Detail management program for maintaining the tree resource.	Management Staff	July 2022	
6.1.2	Assign associated costs for maintaining the tree resource.	Management Staff	July 2022	
6.1.3	Detail staff support for maintaining the urban forest.	Management Staff	July 2022	
6.1.4	Assign associated costs for support staff.	Management Staff	July 2022	
6.1.5	Detail contractual work program.	Management Staff	July 2022	
6.1.6	Assign associated costs for contractual work.	Management Staff	Dec 2022	
6.2.1	Define role of individual responsible for the management of the urban forest.	Management Staff	July 2021	
6.2.2	Define role of person responsible for citations.	Management Staff	July 2021	
6.2.3	Define roles of staff support needed	Management Staff	July 2021	
6.3	Outline Council and Commission responsibilities.	Management Staff	July 2021	
7.1.1	Define scope of the community education program.	Management Staff	July 2022	
7.1.2	Incorporate various social media programs.	Management Staff	July 2022	
7.1.3	Establish and schedule programs.	Management Staff	July 2022	
7.1.4	Target programs and press releases to seasonal events/needs such as pruning, planting, tree selection, and summer watering.	Management Staff	July 2022	
7.1.5	Provide timely informational materials on current pests and diseases.	Management Staff	Ongoing	
7.1.6	Set benchmarks to determine success.	Management Staff	July 2022	
7.2.1	Create a program that engages residents with community efforts via a stewardship program.	Management Staff	July 2022	
7.2.2	Certify attendees as Tree Stewards who can act as leaders for volunteer beautification projects.	Management Staff	July 2022	
7.2.3	Grant funding for tree planting often requires volunteer support where the Tree Stewards can assist groups in volunteer tree planting projects.	Management Staff	Ongoing	

Action	Description	By Whom	Target Start Date	Actual Completion/ Comments
7.2.4	City to promote tree giveaway program online, through social media and at City events	Management Staff	Ongoing	
7.3	Develop public-private and nonprofit partnerships, including local businesses and tree-oriented non-profits	Management Staff	July 2022	
7.4	Comply with Arbor Day Foundation requirements to become a Tree City USA	Management Staff	Jan. 2020	
8.1.1	Develop educational brochures for property owners on proper tree care.	Management Staff	July 2022	
8.1.2	Develop similar brochures for gardeners and professional maintenance companies.	Management Staff	July 2022	
8.1.3	Mandate proper tree pruning through business license and code enforcement.	Management Staff	July 2020	

Monitoring Plan

The goal of the monitoring plan is to provide the data needed to understand what is happening, why it is happening, and how specific management adjustments will change the outcome. The possible situations that may arise over the course of a 20-year plan period cannot all be accounted for. Actions and plans will need to be adjusted over time. By monitoring the urban forest system, information can be gathered to make these adjustments. The 'Actual Completion/Comments' column in the Implementation Plan will be used to monitor the progress of the plan and adjust timelines, if necessary.

Appendix A

Recommended Small to Medium Trees for West Hollywood

APPENDIX A

Small to Medium Trees[4]

Botanical Name	Common Name
Acacia aneura	Mulga
Acacia craspedocarpa	Leather-leaf acacia
Acacia salicina	Willow acacia
Acacia saligna	Blue-leaf wattle
Agonis flexuosa	Peppermint tree
Arbutus 'Marina'	Arbutus
Bauhinia variegata	Purple orchid tree
Cassia leptophylla	Gold medallion tree
Cercis canadensis 'Forest Pansy'	Forest Pansy redbud
Cercis canadensis mexicana	Mexican redbud
Cercis canadensis var. *texensis'* Oklahoma'	Oklahoma redbud
Cercis occidentalis	Western redbud
Cercis reniformis 'Texas White'	Texas White redbud
Chionanthus retusus	Chinese fringe tree
Chilopsis linearis 'AZT Desert Amethyst'	AZT desert willow
Chilopsis linearis 'Bubba'	Bubba desert willow
Cupaniopsis anacardioides	Carrot wood tree
Eucalyptus erythrocorys	Red-cap gum
Eucalyptus torquata	Coral gum
Geijera parviflora	Australian willow
Hymenosporum flavum	Sweetshade
Koelreuteria bipinnata	Chinese flame tree
Koelreuteria paniculata	Goldenrain tree
Lagerstroemia indica 'Cherokee'	Cherokee crape myrtle
Lagerstroemia 'Comanche'	Comanche crape myrtle

[4]Not all species listed are appropriate for individual site conditions. A qualified staff member will assist in selecting a species from each street list that is appropriate for the specific site conditions.

Small to Medium Trees[4] (cont.)

Botanical Name	Common Name
Lagerstroemia indica 'Seminole'	Seminole crape myrtle
Lagerstroemia 'Muskogee'	Muskogee crape myrtle
Lagerstroemia 'Natchez'	Natchez crape myrtle
Lagerstroemia 'Tuskegee'	Tuskegee crape myrtle
Lagerstroemia 'Tuscarora'	Tuscarora crape myrtle
Laurus nobilis	Sweet bay
Leptospermum laevigatum	Australian tea tree
Leptospermum petersonii	Lemon-scented tea tree
Lophostemon confertus	Brisbane box
Magnolia grandiflora 'Little Gem'	Southern magnolia
Magnolia grandiflora 'St. Mary'	Southern magnolia
Magnolia grandiflora 'Samuel Sommer'	Southern magnolia
Maytenus boaria 'Green Showers'	Green Showers mayten
Melaleuca linariifolia	Flaxleaf paperbark
Melaleuca quinquenervia	Cajeput tree
Olea europaea 'Swan Hill'	Swan Hill fruitless olive
Parkinsonia 'Desert Museum'	Desert Museum palo verde
Pistacia x 'Red Push'	Red Push pistache
Prosopis alba 'Colorado'	Argentine mesquite
Pyrus calleryana 'Aristocrat'	Aristocrat pear
Pyrus calleryana 'Autumn Blaze'	Autumn Blaze pear
Pyrus calleryana 'Chanticleer'	Chanticleer pear
Pyrus calleryana 'Redspire'	Redspire pear
Pyrus calleryana 'Trinity'	Trinity pear
Pyrus kawakamii	Evergreen pear
Quercus buckleyi	Texas red oak
Tristaniopsis laurina	Water gum
Tabebuia chrysotricha	Golden trumpet tree

MULGA

Acacia aneura

Utility friendly tree. Fine patio tree for hot, dry areas.
Hardy to about 15 degrees F.
Native to Western Australia Mulga shrublands.
Family: *Fabaceae*

Tree Characteristics

Oval or Umbrella Shape.
Has Evergreen foliage.
Height: 15 - 20 feet. Width: 15 - 20 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Linear, Silver Gray, No Change, Evergreen.
Flowers Showy. Yellow. Flowers in Spring. Has perfect flowers (male and female parts in each flower).
Brown Pod, Large (1.50 - 3.00 inches), fruiting in Fall, Winter or Summer.
Bark Dark Brown or Light Green, Fissured.
Shading Capacity Rated as Moderate in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 8, 9 and 12 - 24.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
Allergy Health Hazard.
Attracts Birds.
Not Deer Palatable.

Special Uses & Values

Screen.

Overall

Leaves

Bark

Flowers

Fruit

Branches

Overall Juvenile

SelecTree. "*Acacia aneura* Tree Record." 1995-2019. Jul 15, 2019.< https://selectree.calpoly.edu/tree-detail/acacia-aneura >

LEATHER-LEAF ACACIA

Acacia craspedocarpa

Utility friendly tree.
Native to Western Australia.
Family: *Fabaceae*

Additional Common Names

LEATHER-LEAF, BROAD LEAVED MULGA, DESERT ACACIA

Tree Characteristics

Oval Shape.
Has Evergreen foliage.
Height: 12 - 15 feet. Width: 12 - 15 feet.
Growth Rate: 12 Inches per Year.
Longevity Less than 50 years.
Leaves Round, Gray Green, No Change, Evergreen.
Flowers Showy. Yellow. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).
Brown Pod, Medium (0.50 - 1.50 inches), fruiting in Winter, Spring or Summer Wildlife use it.
Bark Light Gray, Smooth.
Shading Capacity Rated as Dense in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 8, 9 and 12 - 24.
Exposure Full Sun.
Well Drained Soil.
Drought tolerant.
Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Weak.
Root Damage Potential Rated as Low.
Allergy Health Hazard.
Attracts Birds.
Not Deer Palatable.
Wildlife use Fruit.

Special Uses & Values

Screen.

Overall

Leaves

Bark

Fruit

Branches

SelecTree. "*Acacia craspedocarpa* Tree Record." 1995-2019. Jul 16, 2019. < https://selectree.calpoly.edu/tree-detail/acacia-craspedocarpa >

WILLOW ACACIA

Acacia salicina

Drought and frost resistant in adapted zones.
Best in dry soils. Saline tolerant.
Native to Australia.
Family: *Fabaceae*

Additional Common Names

WILLOW ACACIA, AUSTRALIAN WILLOW

Tree Characteristics

Spreading or Weeping with a Low Canopy.
Rounded Shape.
Has Evergreen foliage.
Height: 20 - 40 feet. Width: 15 feet.
Growth Rate: 36 Inches per Year.
Longevity Less than 50 years.
Leaves Linear, Blue Green or Dark Green, No Change, Evergreen.
Flowers Showy. Cream, Orange or Yellow. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).
Brown Pod, Very Large (Over 3.00 inches), fruiting in Winter or Spring Wildlife use it.
Bark Dark Gray or Light Gray, Furrowed or Rough.
Shading Capacity Rated as Moderately Dense in Leaf.
Litter Issue is Dry Fruit.

Overall

Bark

Tree Site Conditions & Constraints

Sunset Zones 8, 9 and 12 - 24.
USDA Hardiness Zones 7 - 10.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil.
Drought tolerant.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Weak.
Root Damage Potential Rated as Low.
Allergy and Poisonous Health Hazard.
Desirable Wildlife Plant.
Attracts Birds.
Not Deer Palatable.
Wildlife use Fruit.

Special Uses & Values

Screen.

SelecTree. "*Acacia salicina* Tree Record." 1995-2019. Jul 16, 2019. < https://selectree.calpoly.edu/tree-detail/acacia-salicina >

BLUE-LEAF WATTLE

Acacia saligna

Evergreen tree to 30 feet. Good wind screen.
Native to Western Australia.
Family: *Fabaceae*

Synonyms

Acacia cyanophylla, Acacia bracteata

Additional Common Names

BLUE-LEAF WATTLE, WEEPING WATTLE, ORANGE WATTLE, GOLDEN WREATH

Tree Characteristics

Spreading or Weeping with a Low Canopy.
Rounded Shape.
Has Evergreen foliage.
Height: 20 - 30 feet. Width: 15 - 20 feet.
Growth Rate: 36 or More Inches per Year.
Longevity Less than 50 years.
Leaves Linear, Blue Green, No Change, Evergreen.
Flowers Showy. Orange. Flowers in Spring. Has perfect flowers (male and female parts in each flower).
Brown Pod, Very Large (Over 3.00 inches), fruiting in Winter or Summer.
Bark Dark Brown, Furrowed or Rough.
Shading Capacity Rated as Moderately Dense in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 8, 9 and 12 - 24.
USDA Hardiness Zones 9 - 11.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Salinity Tolerance is Good Inland.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
Allergy Health Hazard.
Attracts Birds.
Not Deer Palatable.

Special Uses & Values

Screen.
Hedged.

Overall

Leaves

Bark

Flowers

Fruit

Branches

Overall Juvenile

SelecTree. "*Acacia saligna* Tree Record." 1995-2019. Jul 23, 2019. < https://selectree.calpoly.edu/tree-detail/acacia-saligna >

AGONIS flexuosa — KamCards® WIP 08/30/10

TREE

a-GO-niss fleks-u-O-suh	**Synonym**: Metrosideros flexuosa	**Family**: Myrtaceae
Gk, grouping, gathering or cluster, *L* tortuous, winding, zigzagging		**Origin**: Western Australia
Common Name: Peppermint Tree, Australian Willow Myrtle		**Species in Genus**: 13

WHAT IT WILL BECOME

Height: 25-35'	**Habit**: Weeping	**Texture**: Medium-fine	**Density**: Medium
Width: 15-30'	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate, simple, broader stiff bronze juvenile growth on winged branchlets, matures 4-6 x ¼" narrow lanceolate, curved, willow-like, entire margin, 3-main veins, gray to dark green, peppermint scented when crushed.
Flower: Fragrant, white blooms, ½" globular heads, mass, axillary, chain cluster, along branches, in late spring-summer.
Fruit: Green ¼-½" nut-like spherical capsules, matures brown, woody 3-celled, axillary, many seeds, persist for years.
Bark: Exfoliating, dark red brown, fibrous, furrowed, stout, straight or twisted, single-trunked, massive in age, stump sprouts, spreading, weeping strong branches, red new twigs zigzagging branchlets.
Special Maintenance: Prune to remove suckers. Very little water required once established.

WHERE WILL IT GROW

Sunset Zones: 13, 15-17, 20-24	**Seacoast Zones**: 2-3	**MPA**: 3-5'	**Sun/Shade**: ☼, ☼
WUCOLS: L-/-L-M-/-/, ɵ, •, o	**PDR**: Phytophthora, root rot. No significant pest problems are known at this time.		
Firescape Zones: unknown	**USDA**: 9-11	**Hardy**: Down to 27°F, 16°F in maturity	**Altitude**: From 0,000-0,000'

Culture: Any moist, well-drained soil, slightly acidic-very alkaline (5.6-7.5 pH). Tolerant of poor soil, lime, some wind, dry climate and drought. Shelter from high winds.

WHY USE IT

Usage: Lawn, espalier, container, garden, specimen, street, screen, park, attracts birds, butterflies, and bees.
Notes: Authored by Kurt Spreng. Moderately lived for 50 years. Moderate root damage potential. Varieties are '**After Dark**' reddish purple to burgundy foliage, '**Burgundy**' dark purplish-red foliage, '**Denmark Delight**' weeping dwarf, slightly smaller than '**Nana**', medium-heavy density, '**Dwarf Weeping**' narrow foliage, pendent branches, '**Fairy Foliage**' fine textured, narrow blade foliage, thread-like in upper third of tree, medium-heavy density, '**Forest Magic**' bushy dwarf, pink-green foliage, '**Juniperia**' open, fine texture, narrow green foliage, '**Nana**' dwarf, no flowers, pink tipped foliage, '**Pied Piper**' erect dwarf, wavy margin, '**Royal Flush**' white-green variegated foliage, '**Southern Wonder**' weeping prostrate dwarf, canopy foliage erect, pink-green foliage, undulating margin, green-gold foliage, '**Variegata**' white-green variegated foliage yellow margin, '**Willow Gold**' straight erect dwarf, green-gold foliage.

Overall, Valley Crest Tree Company, Fillmore, CA

Fruit

Flower

Fruit and flowers

Flower

Leaves

Fruit clusters

Branches

Bark

Weeping branches

Overall juvenile

AGONIS flexuosa (Researched by Liz Jennings)

ARBUTUS 'Marina'

KamCards® WIP 08/31/10

TREE

ar-BYOO-tus ma-REE-nuh	**Synonym**: None	**Family**: Ericaceae
L the Strawberry tree		**Origin**: Created variety
Common Name: Strawberry Tree, Marina Arbutus, Marina Madrone		**Species in Genus**: 14

WHAT IT WILL BECOME

Height: 20-40' +	**Habit:** Round-headed, Vase	**Texture**: Medium	**Density**: Thin to Medium
Width: 20-30'	**Spacing**: _-_'	**Planting Depth**: _-_'	**Growth**: Moderate

Leaf: Evergreen, alternate, simple, 2-5 x 1½" oblong, entire margin, leathery, bronzy juvenile growth matures dark green, red stem.
Flower: Rosy pink ¼" urn blooms, pendent panicles, in fall, winter or early spring.
Fruit: Yellow 1" spherical berry, matures red, edible, gritty outer coating, pendent, appear in first year, ripens next year.
Bark: Exfoliating in smooth mahogany curls, ruddy new bark, single or multi-trunked, spreading, low branches.
Special Maintenance: Clean pruning tools between cuts with bleach solution when treating trees with Botryosphaeria. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 14-24	**Hardy**: Down to 15-20°F	**Seacoast Zones**: 2-3	**MPA**: _-_'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-M-M-/-/, •, o	**USDA**: 9-11	**PDR**: Aphid, sooty mold, thrip, Anthracnose, Botryosphaeria, Phytophthora root rot, rust. Resistant to oak root fungus.		
Firescape Zones: B-D	**Altitude**: From sea-0,000'			

Culture: Any soil, very acidic-slightly alkaline (4.5-9.1 pH). Tolerant of drought.

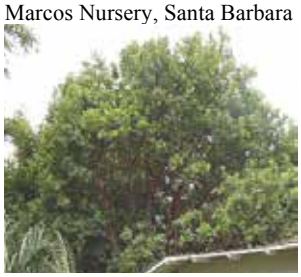
WHY USE IT

Usage: Garden, specimen, screen, lawn, shade, street, bark effect, fruit production, attracts animals.
Notes: Moderately lived for 50-70 years. Somewhat new to the industry and stock may be inconsistent in specific sizes at the nursery. Substitute for Arbutus menziesii, Madrone, which does not work along Southern California coastal zones.

Overall, Goleta, CA

New leaves

Canopy and branches at San Marcos Nursery, Santa Barbara



Rosy urn blooms

Immature fruit

Leaf above/below

Butterfly on floral cluster

Bark

ARBUTUS 'Marina'

BAUHINIA variegata — KamCards® WIP 08/31/10

TREE

baw-HIN-ee-uh var-ee-GA-tuh | **Synonym**: Bauhinia purpurea | **Family**: Fabaceae - Leguminosae

Bauhin brothers, 16-17th century Swiss botanists, *L* marked variously | **Origin**: India, China, Southeast Asia

Common Name: Purple Orchid Tree, Mountain Ebony, Pink Camels Foot, Pink Orchid Tree | **Species in Genus**: 14

WHAT IT WILL BECOME

Height: 20-40'	**Habit**: Irregular, Round-headed	**Texture**: Medium-coarse	**Density**: Medium
Width: 25-35'	**Spacing**: 4-6'	**Planting Depth**: _-_ '	**Growth**: Fast

Leaf: Evergreen to semi-deciduous, alternate, simple, 2-8" broad ⅓ depth lobe tip, heart-shaped base, entire margin, cleft tip, thin, leathery, 9-11 palmate veins, light gray green, generally drops in midwinter.
Flower: Fragrant, light white, pink to purple orchid blooms, in succession, showy, 5 broad 2-6 x 1" overlap petals, upper petal darker, veins darker or pale, central dark purple spot, 3-5" terminal lateral racemes, in January-April as foliage falls.
Fruit: Green 6-12 x ½" pod matures dry brown, sharp pointed tip, splits open and curls, flat light brown seeds, persistent.
Bark: Light to dark gray, smooth, scaly, rough, single or multi-trunked, spreading, low and stiff branches, root sprouts.
Special Maintenance: Prune to create a standard tree or to bring new growth on earlier, and for traffic clearance.

WHERE IT WILL GROW

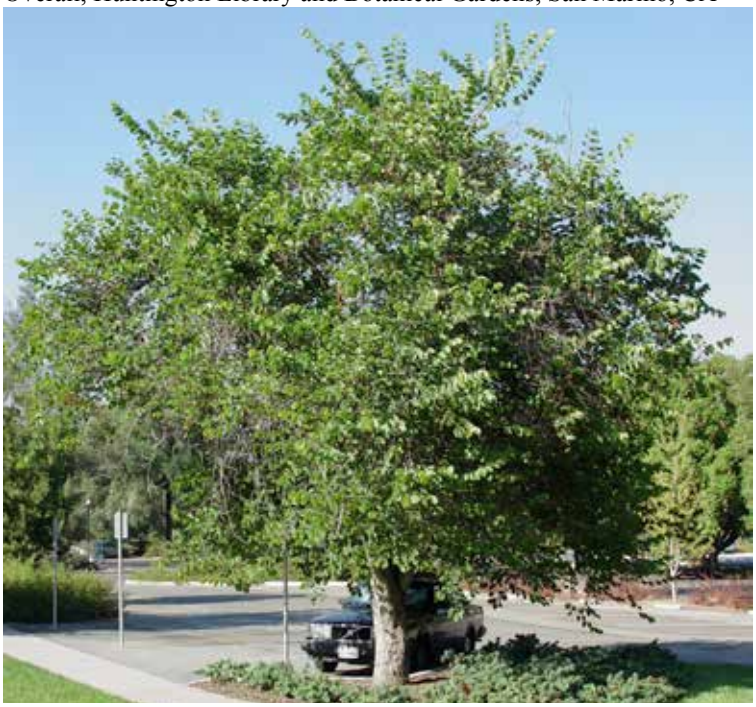
Sunset Zones: 13, 18-27, H1-H2	**Seacoast Zones**: 2-3	**MPA**: 5-6'	**Sun/Shade**: ☼, ☼, ☼, ☼
WUCOLS: M-/-M-M-/-M, •, o	**PDR**: Aphid, borer.		
Firescape Zones: B-D	**USDA**: 9-11	**Hardy**: Down to 22-25°F	**Altitude**: From low-med 0,000'

Culture: Any moist, well-drained soil, very acidic-slightly alkaline. Tolerant of drought, salinity, heat and short cold.

WHY USE IT

Usage: Street, highway, shade, specimen, parking lot, garden, patio, lawn, reclamation, interiorscape, park, attracts birds.
Notes: Authored by Carolus Linnaeus. Short lived around 50 years. Difficult to transplant unless very small. May take 3 years to bloom. Inclined to grow as shrub. Plant where spring stays warm and shelter from strong drying winds. Most frequently planted Bauhinia. Variety '**Candida**' has large pure white blooms with green veins.

Overall, Huntington Library and Botanical Gardens, San Marino, CA



Overall '**Candida**', SCBG

Overall deciduous, Huntington Library, CA

Leaf

Flower '**Candida**'

Prominent veins

Seed

Bark

Flower

Flower

Fruit pods and seed

Canopy in bloom

Pink & white variety

BAUHINIA variegata

CASSIA leptophylla — KamCards® WIP 08/31/10

TREE

KASS-ee-uh lep-toh-FILL-uh	**Synonym**: None	**Family**: Fabaceae - Leguminosae
L Senna, *Gk* Kasia used by Dioscorides, *Gk* fine slender, a leaf		**Origin**: Southeast Brazil
Common Name: Gold Medallion Tree		**Species in Genus**: 500 +

WHAT IT WILL BECOME

Height: 20-40'	**Habit**: Round-headed, Umbrella	**Texture**: Medium	**Density**: Medium to Heavy
Width: 30-40'	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Briefly deciduous to evergreen, alternate, _-_" even pinnately compound, 8-14 paired 1½-4" leaflets, ovate-lanceolate, entire margin, nearly acute, delicate, lacy, pendulous, bronze juvenile growth matures medium green.
Flower: Fragrant, bright yellow 2-3" blooms, 30-50 blooms on 6-8 x 12-18" terminal spike-like racemes, in summer.
Fruit: Green 10-18" linear pod, square sided, matures brown, taper tip, pendent, persistent, pithy cell divisions, in fall.
Bark: Dark brown, furrowed, single or multi-trunked, spreading, low branching, low branches droop in age.
Special Maintenance: Prune in early spring or after bloom period in early fall to develop a strong central leader, and yearly to shape, open branching structure, for traffic clearance and remove included bark. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 15-16, 20-25, 27, H1-H2	**Seacoast Zones**: 3	**MPA**: 4-6'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-M-M-/-/, •, o	**PDR**: Caterpillar, leaf spot, mildew, root rot. Resistant to deer.		
Firescape Zones: unknown	**USDA**: 9-11	**Hardy**: Down to 25-30°F	**Altitude**: From 0,000-0,000'

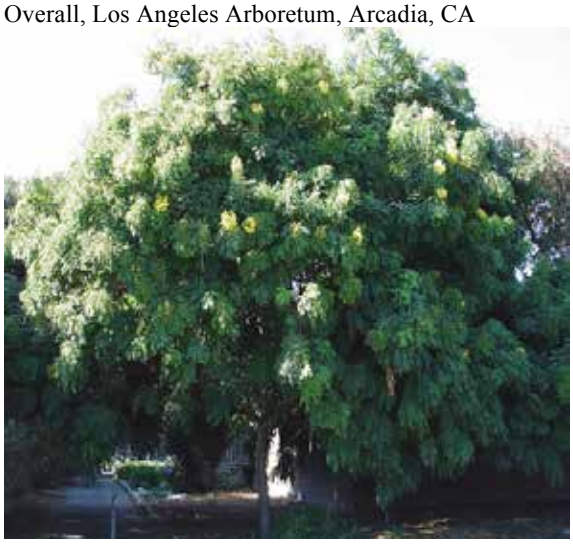
Culture: Any moist to dry, well-drained soil, slightly acidic-slightly alkaline. Tolerant of drought, cold and heat. Shelter from winds.

WHY USE IT

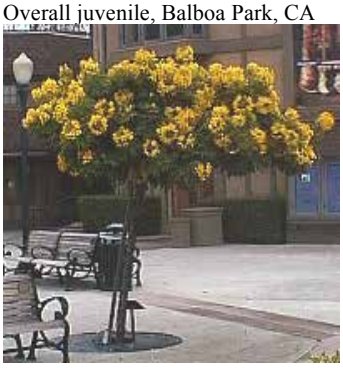
Usage: Shade, street, highway, parking lot, specimen, patio, large container, lawn, screen, floral display.
Notes: Authored by Julius Rudolph Theodor Vogel. Moderately to short lived for less than 50 years. Introduced to industry by Los Angeles Arboretum.

Overall, Los Angeles Arboretum, Arcadia, CA

Overall, Los Angeles Arboretum, Arcadia, CA



Overall juvenile, Balboa Park, CA



Fruit forming

Bark

Floral cluster*

Fruit

Leaves

CASSIA leptophylla

CERCIS canadensis 'Forest Pansy' KamCards® WIP 08/31/10

TREE

SER-sis ka-na-DEN-sis FOR-est PAN-sea | **Synonym**: None | **Family**: Caesalpinaceae

Gk a kind of poplar, a rod, *NL* of Canada | **Origin**: Forest Nursery, McMinnville, Tennessee

Common Name: Forest Pansy Redbud, Purple-leaved Eastern Redbud | **Species in Genus** : 7

WHAT IT WILL BECOME

Height: 15-35'	**Habit**: Round-headed, Umbrella	**Texture**: Medium-coarse	**Density**: Thin
Width: 20-25'	**Spacing**: 15-30'	**Planting Depth**: _ - _ '	**Growth**: Fast

Leaf: Deciduous, alternate, simple, 3-6" broad, rounded, entire margin, pointed tips, heart-shaped base, 3-9 main palmate veins, slender petiole, purple juvenile growth, matures bronzy green, yellow fall color at first frost.
Flower: Rosy pink ½", pea-shaped blooms, 2-8 clustered on last years bare branches and main trunk, prior to foliage, in early spring.
Fruit: Reddish, 2-3" linear pods, thin, flat, mature brown, pendent, dry, thick upper margin, persist, in summer.
Bark: Black, dark or red-brown, scaly, single or multi-trunked, tiered low horizontal branching, spreading, droops in age.
Special Maintenance: Prune in late winter or early spring to develop a strong central leader, to remove included bark and for traffic clearance. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 1-24, 26, 28-41	**Seacoast Zones**: 4	**MPA**: _ - _ '	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: M-M-M-M-/-/, o	**USDA**: 4-11	**Hardy**: Down to 15°F	**Altitude**: From sea level-0,000'
Firescape Zones: Retardant	**PDR**: Caterpillar, Anthracnose, crown rot, dieback, oak root rot, Phytophthora, root rot, Verticillium wilt. Sensitive in maturity.		

Culture: Any deep, rich, moist, well-drained soil, very acidic-very alkaline (5.6-7.8 pH). Tolerant of drought. Shelter from salt and wet soil, extreme heat and high winds in the high desert.

WHY USE IT

Usage: Specimen, container, parking lot, highway, deck, patio, screen, shade, street, reclamation, under utility lines, attract birds.
Notes: Short lived to 35 years or more. Transplant in youth as ball and burlap or in a box, after pruning. Needs a frost for best floral display. Fills the gap between the early-flowering fruit trees and late-flowering cherries. Pollen can cause allergy reactions.

Overall, University of British Columbia, Vancouver, Canada

Floral clusters on branches

Leaves

Deciduous, Corona Ranch

Branch

Leaves

Fruit

Leaf below

New foliage

Bark

CERCIS canadensis 'Forest Pansy'

CERCIS canadensis mexicana — KamCards® WIP 09/05/10

TREE

SER-sis kan-a-DEN-sis miks-sih-KAY-nuh | **Synonym**: | **Family**: Fabaceae - Leguminosae

Gk a kind of poplar, a rod, *L* of or from Canada and North America, of or from Mexico | **Origin**:

Common Name: Mexican Redbud, Southwest Redbud | **Species in Genus**: 7-10

WHAT IT WILL BECOME

Height: 12-25'	**Habit:** Vase, Irregular	**Texture**: Medium-coarse	**Density**: Moderate
Width: 15-25'	**Spacing**: _-_ '	**Planting**: _-_ '	**Growth**: Slow to Moderate

Leaf: Deciduous, alternate, simple, 2-4" heart-shaped, wavy entire margin, rounded or notched tip, pink juvenile growth, matures glossy medium blue-green to dark green, yellow to reddish-purple fall color.
Flower: Pinkish purple ¼-⅓" tiny pea-shaped blooms, axillary clustered along twigs and branches, prior to foliage, in late winter-early spring.
Fruit: Green, 1-4" linear pods, mature purplish brown, dry, hard, flat, pendent, persists.
Bark: Grey and light brown, thin, single or multi-trunked, low branching, droop with age.
Special Maintenance: Prune to develop a strong structure, for traffic clearance, remove poor collar wood. Pick up litter.

WHERE IT WILL GROW

Sunset Zone: 4-24, 26, 28-41	**Seacoast Zone**: 4	**MPA**: 3-4'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: L-L-?-?-?-?, •	**PDR**: Borer, budworm, caterpillar, deer, hopper, scale, webworm, Anthracnose, canker, dieback, leaf spot, Verticillium wilt.		
Firescape Zone:	**USDA**: 6-9	**Hardy**: Down to 0°F	**Altitude**: From med-high 0,000'

Culture: Any well-drained soil, acidic-slightly alkaline (6.1-7.5 pH). Tolerant of heat, poor soil and drought with age.

WHY USE IT

Usage: Patio, floral display, dry wash, riparian, parking lot, lawn, highway, shade, understory, specimen, street, group, woodland effect, under utility lines, reclamation, container, attracts birds, bees and butterflies.
Notes: Authored by Joseph Nelson Rose. Can be short lived to moderately lived for 70-90 years. Transplants best in youth in spring or fall. Host for Elf butterfly. Other species varieties include '**Alba**', '**Flame**', '**Forest Pansy**', '**Oklahoma**', '**Rubye Atkinson**', '**Silver Cloud**' and '**Texas White**'.

Overall, Boyce Thompson Arboretum, Superior, AZ

Fruit

Floral cluster

Branch

Bark

Leaves and juvenile color

Axillary floral cluster

CERCIS canadensis mexicana

OKLAHOMA REDBUD

Cercis canadensis
var. *texensis* 'Oklahoma'

Utility friendly tree.
Branches droop and are susceptible to breakage
Family: *Fabaceae*

Synonyms

Cercis reniformis

Tree Characteristics

Rounded or Vase Shape.
Has Deciduous foliage.
Height: 15 feet. Width: 15 feet.
Growth Rate: 24 or More Inches per Year.
Leaves Cordate, Green, Gold, Deciduous.
Flowers Showy. Pink. Flowers in Spring. Has perfect flowers (male and female parts in each flower).
Persistent, Purple Pod, Large (1.50 - 3.00 inches), fruiting in Summer.
Bark Gray or Brown, Rough.
Shading Capacity Rated as Moderate to Moderately Dense in Leaf.
Shading Capacity Rated as out of Leaf.

Tree Site Conditions & Constraints

Sunset Zones 1 - 24.
USDA Hardiness Zones 6 - 9.
Exposure Full Sun to Partial Shade.
Well Drained Soil.
Loam or Sand Texture.
Acidic to Alkaline Soil pH.

Pests & Disease Information

Susceptible to Scales, Canker, Leaf Spot and Verticillium.

Health, Safety & Environmental Concerns

Root Damage Potential Rated as Low.

Special Uses & Values

Specimen, Container, Shade Tree, Buffer Strip or Street Tree.

Overall

Leaves

Fruit

SelecTree. "*Cercis canadensis* var. *texensis* 'Oklahoma' Tree Record." 1995-2019. Jul 16, 2019.
< https://selectree.calpoly.edu/tree-detail/cercis-canadensis-texensis-oklahoma >

CERCIS occidentalis — KamCards® WIP 08/31/10

SHRUB/TREE

SER-sis ock-sih-den-TAY-liss	**Synonym**: Cercis canadensis texensis	**Family**: Caesalpinaceae
Gk a kind of poplar, a rod, *L* western	**Origin**: Southern Oregon, California, Nevada, Arizona, Utah, western Texas	
Common Name: Western Redbud, California Redbud, Arizona Redbud, Judas Tree, Árbol de Judas, Bóton Encarnado, Texas Redbud		**Species in Genus**: 7

WHAT IT WILL BECOME

Height: 10-25'	**Habit**: Vase, Round-headed	**Texture**: Medium-coarse	**Density**: Medium
Width: 8-25'	**Spacing**: 6-20'	**Planting Depth**: _-_'	**Growth**: Moderate

Leaf: Deciduous, alternate, simple, 2-3½ x 4" heart-shaped, entire margin, reddish in youth, round or slightly notched tip, heart-shaped base, 7-9 palmate veins, leathery, smooth, glossy, medium blue green, bright yellow to red fall color.
Flower: Monoecious, magenta ½" pea-shaped blooms, edible, 2-6 clustered, on older wood, prior to foliage, in spring.
Fruit: Magenta, 1½-4 x ½-1" linear pods, thin, flat matures red-brown, persist, 7 seeds, edible roasted, in summer-fall.
Bark: Pale gray to brown, smooth, thin, slightly scaly or ridged, light lenticels, single or multi-trunked, smooth branches, droop in age, shrubby twigs reddish in juvenile growth.
Special Maintenance: Stake and prune in winter to thin, shape, develop a strong central leader and for traffic clearance.

WHERE IT WILL GROW

Sunset Zones: 4-24	**USDA**: 6-9	**Seacoast Zones**: 3	**MPA**: 2-3'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: VL-VL-L-L-/-/, o	**Hardy**: Down to 15-28°F		**PDR**: Caterpillar, scale, crown rot, leaf blight, root rot, Phytophthora. Highly resistant to oak root fungus.	
Firescape Zones: B-D	**Altitude**: From 300-6,000'			

Culture: Any well-drained soil, very acidic-slightly alkaline (6.1-7.8 pH). Tolerant of drought, clay, aridity and heat once established. Shelter from extreme heat, salinity and high winds in arid regions.

WHY USE IT

Usage: Street, park, lawn, garden, specimen, patio, shade, parking lot, soil stabilization, under utility lines, container, floral display, cut flower, branch arrangement, attracts birds.
Notes: California native, authored by John Torrey. Transplant in youth as ball and burlap or in a box, after pruning. Needs near zero temperatures to produce heavy floral display. Variety '**Alba**' is smaller overall and has white blooms.

Overall, Descanso Gardens, La Canada, CA

Overall, Downtown Disney, CA

Overall, Rancho Santa Ana, CA

Leaf

Leaf, juvenile color

Bark mature

Bark juvenile

Buds, new foliage

Flowers

Immature fruit

Fruit

Seeds

CERCIS occidentalis

CHIONANTHUS retusus — KamCards® WIP 08/31/10

TREE

kye-oh-NAN-thus re-TOO-sus | **Synonym**: None | **Family**: Oleaceae

Gk snow, flower, *L* blunt, rounded leaves, notched tips | **Origin**: China, Taiwan, Korea, Japan

Common Name: Chinese Fringe Tree, Fringe Tree | **Species in Genus**: 3 or 4

WHAT IT WILL BECOME

Height: 15-30' | **Habit**: Round-headed, Umbrella | **Texture**: Medium | **Density**: Medium

Width: 10-40' | **Spacing**: 15-20' | **Planting Depth**: _ - _' | **Growth**: Slow

Leaf: Deciduous, sub-opposite or opposite, simple, 1-8 x ¾-2" varies in size and shape: obovate or elliptic, finely toothed or entire margin, smooth, leathery, glossy, medium green above, soft white hair on veins below, bright yellow fall color.
Flower: Fragrant, dioecious, white 4 narrow linear ¾-1 x 1" petal blooms, 2-4" erect terminal panicles, prior to or above foliage, larger male blooms more profuse, on separate trees, in late spring or early summer, on current year's wood.
Fruit: Dull dark blue purple ½-1" oval drupes, fleshy, 1-seed, on female plants only, in early-late summer.
Bark: Grayish brown, smooth, matures furrowed, ridged, single or multi-trunked, spreading branches droop with age.
Special Maintenance: Prune to develop a strong central leader and for traffic clearance, remove up to ⅓ of wood yearly.

WHERE IT WILL GROW

Sunset Zones: 3-9, 14-24, 28-34, 39 | **Seacoast Zones**: 3 | **MPA**: 3-6' | **Sun/Shade**: ☼, ☼, ☼

WUCOLS: M-M-M-M-/-/, •, o | **PDR**: Scale, canker, leaf spot, powdery mildew, salt tip burn.

Firescape Zones: B-D | **USDA**: 5-9 | **Hardy**: Down to -10-15°F | **Altitude**: From 0,000-0,000'

Culture: Any rich, moist, well-drained soil, very acidic-alkaline (4.5-6.0 pH). Tolerant of drought, heat and wet.

WHY USE IT

Usage: Street, park, lawn, parking lot, specimen, garden, group, container, patio, understory, floral display, natural area, screen, highway, under utility lines, attracts birds.
Notes: Authored by John Lindley and Joseph Paxton. Short-lived for less than 50 years. Difficult to transplant, but best from containers. Needs a winter chill for best flowering. Plant male and female trees for fruit production. May take 5-8 years to bear fruit. Best viewed with a dark background. Smaller than Chionanthus virginicus in blooms, and foliage. Pollen can cause allergy reactions. Pick up litter. Shelter from wind.

Overall mature tree, Los Angeles Arboretum, Arcadia, CA

Leaf

Juvenile foliage

Floral panicle

Floral cluster

Fruit

Mature bark

Deciduous

Branches in early bloom

Overall, SCBG, CA

Overall juvenile

Mature tree

CHIONANTHUS retusus

CHILOPSIS linearis — KamCards® WIP 08/31/10

khil-OP-sis lin-AIR-iss	**Synonym**: Bignonia linearis	**Family**: Bignoniaceae
Gk a lip, similar to, *L* a line	**Origin**: West Texas to California, Mexico	**Species in Genus**: 1

Common Name: Western, Eastern, Texas or Chihuanhuan Desert Willow, Desert Catalpa, Flowering Willow, Mimbres

WHAT IT WILL BECOME

Height: 6-30'	**Habit**: Round-headed, Umbrella	**Texture**: Fine	**Density**: Medium to Thin
Width: 6-30'	**Spacing**: 6-8'	**Planting Depth**: _-_'	**Growth**: Fast then Slow

Leaf: Deciduous, whorled, alternate or opposite, simple, ½-3 x ¼-½" linear to linear-lanceolate, entire margin, sharply pointed, tip, erect, somewhat sticky, smooth, 3 veins, smooth, dull green, drops early at 40°F with little fall color change.
Flower: Fragrant, pink, white, rose, or lavender, ¾-2", funnel-shaped, 2-lipped, 5 crimped lobes, tube or petals marked purple, 2 yellow keels, 2-4" terminal racemes, in spring and often through fall for several weeks, in late spring-summer.
Fruit: Green 3-12 x ¼-½" narrow capsule, twisted, elongated cylindrical 2-celled, matures tan, dry, heavy crop, persist into winter, numerous light brown oval seeds, fluffy, white fringed hairs on each end, wind dispersed, in summer and fall.
Bark: Exfoliating, light green to light gray, prominent white lenticels on juvenile growth, fissured, broad scaly ridges, furrowed, rough, stringy in maturity, twisting single or multi-trunked, spreading, low branching.
Special Maintenance: Pruning after bloom period to improve shape, for traffic clearance. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 3b, 7-14, 18-23, 29-30, 33	**Seacoast Zones**: 4	**MPA**: 4-6'	**Sun/Shade**: ☼, ☼, ☼, ☼
WUCOLS: VL-VL-VL-L-M-M, •, o	**PDR**: Alternaria leaf spot, powdery mildew, root rot. Resistant to Texas root rot.		
Firescape Zones: B-D	**USDA**: 7-11	**Hardy**: Down to 10-¯10°F	**Altitude**: From 1,300-5,000'

Culture: Any deep, rich, well-drained loam or sand soil, acidic- alkaline (6.1-7.8 pH). Tolerant of drought and salinity.

WHY USE IT

Usage: Container, highway, patio, specimen, hedge, screen, shade, street, park, floral display, group, reclamation, erosion control, watercourse, riparian, under utility lines, honey production, attracts birds, hummingbirds and bees.
Notes: Authored by Antonio José Cavanilles. Short lived for less than 50 years. Intergeneric hybrid of parent plants *Catalpa bignonioides* X *Chitalpa tashkentensis*. Gallon-size transplants bloom first year and have a long bloom period. Pollen can cause allergy reactions. Varieties '**Burgundy**' and '**Dark Star**' have deep purplish red flowers, '**White Storm**' has yellow throat white flowers and '**Alba**' has white flowers. California big tree in Porterville.

Overall, Huntington Library and Botanical Gardens, San Marino, CA

Joshua Tree

Living Desert

Deciduous

Flowers and buds

Fruit and foliage

Dry fruit and seeds

Seed

Buds

Flower

Leaves

Bark

Bark

SHRUB/TREE

CHILOPSIS linearis

CUPANIOPSIS anacardioides KamCards® WIP 08/31/10

ku-pan-ee-OP-sis an-uh-KAR-dee-oy-deez	**Synonym**: Cupania anacardiopsis, Cupaniopsis sapida	**Family**: Sapindaceae
Gk resemblance or similar to, *Gk* like genus Anacardium, leaf-like cashew nut		**Origin**: Southeastern Australia
Common Name: Carrot Wood, Akee, Cashew-leaf Cupania, Tuckeroo, Brush Deal		**Species in Genus**: 55-60

WHAT IT WILL BECOME

Height: 20-40'	**Habit**: Round-headed, Oval	**Texture**: Medium	**Density**: Heavy
Width: 20-35'	**Spacing**: 12-20'	**Planting Depth**: _ - _ '	**Growth**: Moderate

Leaf: Evergreen alternate, 3-10" odd-pinnately compound, 3-13 obovate to obovate-oblong 2-6 x 1-2" leaflets, notched blunt tip, wavy or revolute, entire margin, prominent midrib on leaflets, leathery, smooth, smooth, glossy medium green.
Flower: Fragrant greenish white, ⅛-¼" inconspicuous blooms, axillary or terminal panicles, in winter.
Fruit: Green, ½-1" round capsule, matures orange-red, fleshy husk, leathery, dry, 3-lobed capsule opens, sticky, 6-cells, 3 edible red to black seeds, can be inconsistent in fruiting and some trees never set fruit, in spring.
Bark: Light gray, smooth, rough, thin, showy, single-trunked, low branching, spreading, pendent branchlets, deep roots.
Special Maintenance: Prune for a strong structure of 1 or 2 leaders, traffic clearance and included bark. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 16-26	**Seacoast Zones**: 2-3	**MPA**: 6-10'	**Sun/Shade**: ☼, ☼
WUCOLS: M-/-M-M-/-/, •, o ●	**PDR**: Root rot, Verticillium wilt. Resistant to Oak root fungus.		
Firescape Zones: B-D	**USDA**: 9-11	**Hardy**: Down to 22°F	**Altitude**: From 0,000-0,000'

Culture: Any moist to dry, well-drained soil, slightly acidic-very alkaline (_-_ pH). Tolerant of some drought, salinity, salt winds at the coast, wet or poor soil, and hot, dry arid inland winds. Generally neat, never chlorotic in appearance.

WHY USE IT

Usage: Shade, street, lawn, parking lot, specimen, pool, patio, urban tolerant, screen, attracts birds.
Notes: Authored by Achille Richard. Moderately lived for over 50 years. An attractive, well-behaved tree for many years. Variable habit from seed. Ground cover under canopy hides litter. Great foolproof urban tree to replace Ceratonia siliqua carob tree. Can be tender in youth. Plant away from pedestrian zones. California big tree in Orange. Orange mature wood used in fine woodworking.

Overall, Claremont Colleges, Claremont, CA

Overall, UCLA, CA

Flower

Leaf

Bark

Inflorescence

Fruit

Seeds

Juvenile foliage

Indented tip

CUPANIOPSIS anacardioides

RED-CAP GUM

Eucalyptus erythrocorys

Takes water with good drainage. Saline tolerant. Hardiness estimate: 23-26 degrees F. Branches often sag and spread from the weight of the large bell-like fruit. Has fragrant Leaf.
Family: *Myrtaceae*

Additional Common Names

RED-CAP GUM, ILLYARRIE

Tree Characteristics

Erect or Spreading with a Low Canopy.
Oval Shape.
Has Evergreen foliage.
Height: 12 - 30 feet. Width: 9 - 25 feet.
Growth Rate: 36 Inches per Year.
Longevity 50 to 150 years.
Leaves Lanceolate, Glossy Medium to Dark Green, No Change, Evergreen.
Flowers Showy. Yellow. Flowers in Fall, Winter, Spring or Summer. Has perfect flowers (male and female parts in each flower).
Brown, Red or Mostly Green Capsule, fruiting in Spring, Summer or Fall Wildlife use it.
Bark Striking Cream, Smooth.
Shading Capacity Rated as Moderately Dense in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 5 - 6 and 8 - 24.
Exposure Full Sun.
Moist to Dry Soil. Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Salinity Tolerance is Good Inland.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Resistant to Texas Root Rot and Verticillium. Susceptible to Beetle Borers, Armillaria, Phytophthora and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Biogenic Emissions considered High.
Desirable Wildlife Plant.
Attracts Birds. Not Deer Palatable.
Wildlife use Fruit..

Special Uses & Values

Screen.

Overall

Leaves

Bark

Flowers

Fruit

Branches

Overall Juvenile

SelecTree. *"Eucalyptus erythrocorys* Tree Record." 1995-2019. Jul 17, 2019.
< https://selectree.calpoly.edu/tree-detail/eucalyptus-erythrocorys >

EUCALYPTUS torquata KamCards® WIP 09/01/10

TREE

yew-kah-LIP-tuss tor-KWAH-tuh	**Synonym**: Symphyomyrtus torquata	**Family**: Myrtaceae
L well covered, *L* twist	**Origin**: Western and New South Wales, Australia	
Common Name: Coral Gum, Coolgardie Gum		**Species in Genus**: 605

WHAT IT WILL BECOME

Height: 15-36'	**Habit**: Columnar	**Texture**: Medium	**Density**: Thin
Width: 15-30'	**Spacing**: 20-40'	**Planting Depth**: _ - _'	**Growth**: Fast

Leaf: Evergreen, opposite 2½ x 1¼" juvenile growth matures alternate, simple, 1½-6 x ½-¾" sickle-shaped, elliptic to lanceolate, long and narrow or blunt and round, entire margin, tapered tip, rounded asymmetrical base, nearly waxy blue to white coating, dull light gray-green to yellow-green, scented when crushed.
Flower: Pink or white, cream or red, 1¼ x 1¼" staminate blooms, 3-8 on axillary umbels, rib beaked cap, of fused petals and sepals, ¾-1" glossy green to reddish-orange ribbed lantern buds, on slim 1" stems, in spring-summer or most of year.
Fruit: Green, red, and orange ½" cylindrical capsule, ribbed narrowing base, constricted above base, smooth to cap edge, ribbed beaked cap, valves scarcely protruding or included, matures brown to red-brown, gray black seeds retained.
Bark: Gray to black base and main branches, smooth gray brown above, scaly, flaky, rough, vertically fissured, single or multi-trunked, spreading, reddish pendent branchlets, droop with weight, often seen with a leaning habit.
Special Maintenance: Stake street trees for straight growth. Prune to remove dead branches. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-6, 8-24, H1-H2	**USDA**: 9-11	**Seacoast Zones**: 3	**MPA**: 2-3'	**Sun/Shade**: ☼, ☼, ☼, ☼
WUCOLS: L-L-L-M-/-M, •	**Firescape Zones**: B-D	**PDR**: Beetle borer, chlorosis, oak root rot, Phytophthora, root rot. Resistant to Texas root rot and Verticillium wilt		
Hardy: Down to 17-22°F	**Altitude**: From low-med 0'			

Culture: Any moist to dry, well-drained soil, slightly acidic-very alkaline. Tolerant of drought and poor soil.

WHY USE IT

Usage: Park, highway, garden, patio, parking lot, container, long lasting cut flower, windbreak, street, group, screen, under utility lines, narrow area, asymmetrical group, honey production, cut flower, attracts birds, bees and insects.
Notes: Authored by George Luehmann. Moderately lived for 50-150 years. Blooms after 2 years old. Pollen can cause allergy reactions. Good at moderate altitudes in California interior.

Overall, Corona, CA

Leaf

Branch of flowers

Fruit, mature pods

Bark

Floral clusters and buds

Floral cluster

Immature green buds

EUCALYPTUS torquata

GEIJERA parviflora — KamCards® WIP 09/02/10

TREE

gye-JER-uh par-vih-FLOO-ruh	**Synonym**: None	**Species in Genus**: 5-7	**Family**: Rutaceae
J D Geijer, 17th century Swedish botanist, *L* small, a flowers		**Origin**: Queensland, New South Wales, Victoria, Australia, New Caledonia	
Common Name: Australian Willow, Wilga, Sheep Bush			

WHAT IT WILL BECOME

Height: 25-40'	**Habit**: Round-headed	**Texture**: Fine	**Density**: Heavy
Width: 20-25'	**Spacing**: 12-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate, simple, 3-6 x ¼-½" linear to narrow lanceolate, drooping curve, entire margin, tapered tip and base, smooth, glandular dotted, glossy, olive to medium gray-green, strong scented when crushed.
Flower: Creamy white ⅛-⅓" bells, 2½-3" loose broad conical terminal panicles, in late fall-early spring, in age.
Fruit: Green ½" round carpels, matures bright orange-brown, dry, hard, opens, fleshy, 5 hard glossy black seeds, in summer.
Bark: Light gray smooth juvenile growth, matures reddish-brown, rough, short single-trunked, erect, spreading, branches sweep up, pendent branchlets.
Special Maintenance: Prune to create a strong central leader, for traffic clearance and to correct form. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 12-24	**Seacoast Zones**: 2-3	**MPA**: 5-6'	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-L-M-M-M, o	**USDA**: 9-11	**PDR**: Root rot. Resistant to oak root fungus.	
Firescape Zones: B-D	**Hardy**: Down to 15-20°F	**Altitude**: From 0,000-0,000'	

Culture: Any well-drained soil, very acidic-slightly alkaline. Tolerant of some shade, dry soil, drought, heat and frost.

WHY USE IT

Usage: Shade, patio, street, park, lawn, parking lot, specimen, screen, garden, golf course, weeping effect, attracts bees.
Notes: Authored by John Lindley. Moderately lived for over 40 years. A willow's grace, Eucalyptus's toughness and deep, noninvasive roots. Needs a large space for good development.

Overall juvenile, El Camino College, Torrance, CA

Flowers

Flowers and fruit

Overall, mature, Arcadia, CA

Leaf

Floral cluster

Fruit cluster

Bark

Black seed

GEIJERA parviflora

HYMENOSPORUM flavum — KamCards® WIP 09/02/10

TREE

hye-MEN-oh-SPOR-um FLA-vum	**Synonym**: None	**Family**: Pittosporaceae
Gk a membrane, a seed, *L* yellow	**Origin**: New Guinea, Queensland, New South Wales, Australia	
Common Name: Sweetshade, Native Frangipani, Australian Frangipani		**Species in Genus**: 1

WHAT IT WILL BECOME

Height: 20-40'	**Habit**: Pyramidal, Irregular, Oval	**Texture**: Medium	**Density**: Medium
Width: 15-20'	**Spacing**: 12-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate, simple, 2-8 x 1-2" obovate to lanceolate, entire wavy margin, tapered tip, prominent veins, thin, matures smooth, clustered mainly at branch ends, glossy dark green above, pale and hairy below.
Flower: Fragrant honey scented, creamy yellow 1-2" tubular blooms, fades darker golden yellow, 5 spreading lobes, red to green throat, loose 4-8 x 1½" terminal umbel-like corymbs, best display in open sunny locations, in early summer.
Fruit: Green 1 x ¾" pear-shaped capsules, matures brown, many brown flat papery winged seeds, in summer or fall.
Bark: Light gray to brown-gray and green, rough, smooth, single-trunked, low branching, narrow, erect to pendent, spreading, few widely spaced tiered branches, bushy, brittle branches.
Special Maintenance: Stake in youth and prune in spring to remove week crotched limbs to the base, head back, pinch new growth to strengthen branches and promote bushier habit. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 14-24	**Seacoast Zones**: 2-3	**MPA**: 3-4'	**Sun/Shade**: ☼, ☼
WUCOLS: M-/-M-M-/-/, •	**USDA**: 9-10	**PDR**: Free of pests.	
Firescape Zones: B-D	**Hardy**: Down to 30-41°F	**Altitude**: From sea level-3,500'	

Culture: Any rich, moist, well-drained soil, slightly acidic-very alkaline. Tolerant of coastal salinity, extreme heat and cold. Shelter from coastal wind.

WHY USE IT

Usage: Specimen, street, garden, patio, park, lawn, golf course, screen, container, attracts birds and bees.
Notes: Authored by Ferdinand Heinrich Jacob von Mueller. Moderately lived for 20-40 years. Average roots.

Overall, Corona, CA*

*Photograph by Ken Kammeyer

Leaves

Floral cluster

Bark

Bud

Overall, LA Arboretum

Overall, Westchester

Fruit

Seed

Fruit

Overall

HYMENOSPORUM flavum

KOELREUTERIA bipinnata — KamCards® WIP 09/02/10

TREE

kole-roo-TEER-ee-uh by-pin-NAY-tuh | **Synonym**: Koelreuteria integrifolia | **Family**: Sapindaceae

Joseph Gottlieb Koelreuter, 18th century German professor, *L* two, feather | **Origin**: China, Fiji, Korea, Taiwan

Common Name: Chinese Flame Tree, Golden Rain Tree, Chinese Lantern Tree, Evergreen Bougainvillea Tree, Southern Bougainvillea Tree, Red Raintree | **Species in Genus**: 3-4

WHAT IT WILL BECOME

Height: 20-50'+	**Habit**: Round-headed, Umbrella, Vase	**Texture**: Medium	**Density**: Medium
Width: 20-40'	**Spacing**: 25-35'	**Planting Depth**: _-_ '	**Growth**: Moderate

Leaf: Deciduous, alternate, 1-2½ x 2' bipinnately compound, divided into 7-16 broadly ovate to oblong-ovate 2-5 x 1¾" slightly oblique leaflets, 4 paired pinnae, serrated to entire margin, pointed tip, scattered light hair on mid rib and axils, reddish juvenile growth matures yellow-green to bright green, yellow fall color, persist until December.
Flower: Fragrant, yellow ½" blooms, blotched scarlet bases, erect 1-1½' loose terminal panicles, in early-late summer.
Fruit: Green 1-2¼ x 1 ⅜" bladder-like capsules, mass, matures orange, red, or salmon, dry, 3-sided, resemble Japanese lanterns, fat, papery, in mass, showy, fades to brown, single round black seed per section, in late summer-fall.
Bark: Light green to light brown, smooth, thin, matures furrowed, gnarled, single-trunked, low branching, spreading, twisting angled branches, weak wood can break a poor collar formations, many lenticels on juvenile branches and twigs.
Special Maintenance: Stake and prune to develop a strong central leader and for traffic clearance. Pick up litter.

WHERE IT WILL GROW

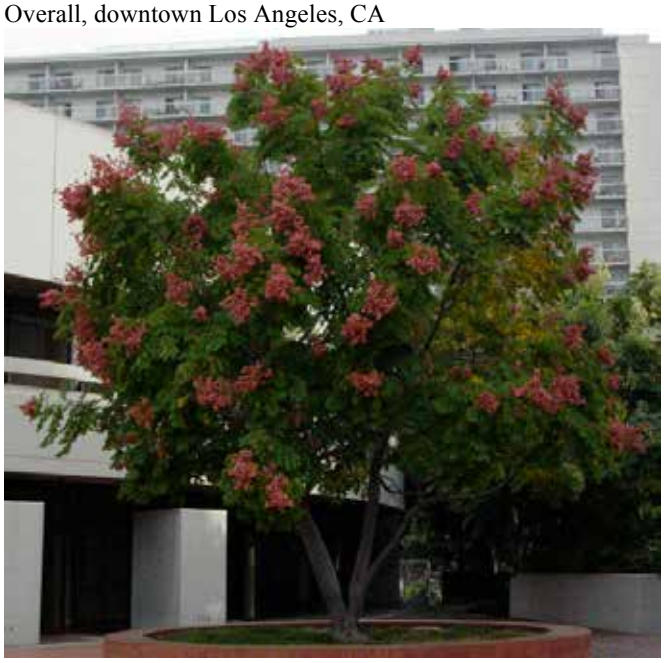
Sunset Zones: 8-24, 26, 28-33	**USDA**: 5-11	**Seacoast Zones**: 3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-M-M-/-M, •, o	**Hardy**: Down to 15-18°F		**PDR**: Beetle borer, goldenraintree bug, scale, canker, mushroom root rot, Verticillium wilt.	
Firescape Zones: B-D	**Altitude**: From sea level-0,000'			

Culture: Any deep, moist, well-drained soil, very acidic-very alkaline (_-_ pH). Tolerant of drought, poor drainage, compacted soil, extended flooding, salt, heat, wind, urban conditions, air pollution and smog. Shelter from salty wind.

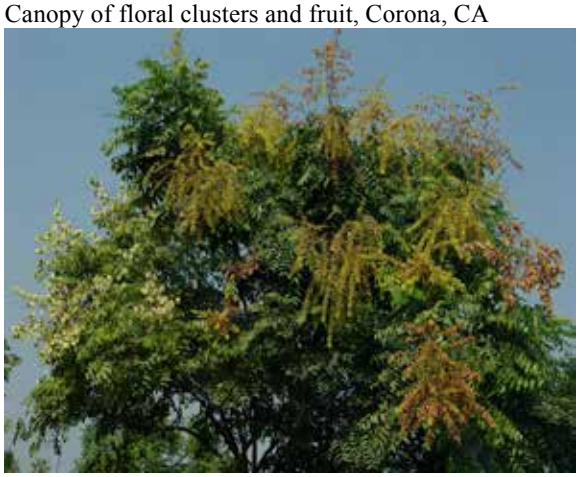
WHY USE IT

Usage: Highway, parking lot, planter, patio, shade, lawn, specimen, street, garden, park, golf course, screen, container, reclamation, urban condition, dried arrangement, attracts bees.
Notes: Authored by Adrien René Franchet. Moderately lived for 20-40 years. Roots are deep, not invasive and good to cultivate under. Fruit yield not always dependable. Reseeds easily. Confused with Koelreuteria elegans, which has glossier leaves and is tenderer. Joseph Gottlieb Koelreuter, Professor of Natural History at Karlsruhe, 1733-1806.

Overall, downtown Los Angeles, CA



Canopy of floral clusters and fruit, Corona, CA



Flowers

Deciduous

Dry fruit and seeds

Inflorescence

Leaf

Fruit

Bark

KOELREUTERIA bipinnata

KOELREUTERIA paniculata

KamCards® **WIP 09/02/10**

kole-roo-TEER-ee-uh pan-ik-yoo-LA-tuh | **Synonym**: Koelreuteria japonica | **Family**: Sapindaceae

Joseph Gottlieb Koelreuter, professor of botany, *L* with flowers in panicles | **Origin**: China, Korea, Japan

Common Name: Goldenrain Tree, Varnish Tree, Panicled Goldenraintree, Shower Tree, Pride of India, Gate Tree, China Tree, Golden Rain-tree, Pride of China | **Species in Genus**: 3-4

TREE

WHAT IT WILL BECOME

Height: 20-50' + | **Habit**: Round-headed, Umbrella, Vase | **Texture**: Medium | **Density**: Medium

Width: 25-40' | **Spacing**: 20-30' | **Planting Depth**: _-_ ' | **Growth**: Slow

Leaf: Semi-deciduous, alternate, 6-18" odd bipinnately, compound, 7-17 ovate to oblong, 1-6 x ¾-2¾" sessile leaflets, 3 shallow lobes, pointed tip, wedge base, coarse variable tooth or scalloped margin, smooth, pink to bronze juvenile growth, blue green above, hairy veins below, golden yellow to orange early fall color, persists, bare for up to 5 months.
Flower: Bright yellow ½" blooms, showy 8-20" loose pyramidal terminal panicles, above foliage, in early summer.
Fruit: Green 1-2" oblong capsules, matures red, dries buff or brown, lustrous, fat, papery, resemble Japanese lanterns, terminal erect 1' panicles, black hard round single seed in each of 3-4 valves, in fall, persist into winter.
Bark: Light brown, dark gray, thin, fissured, ridged, furrowed, orange-brown prominent raised lenticels, irregular or leaning stout, single-trunked, twisted erect, spreading branches, low branching, drooping branch tips, terminal branchlets, craggy growth in shade, shield-shape leaf scar, deep rooted, can have weak wood, invasive in warmer climates.
Special Maintenance: Prune in winter in youth to develop a strong leader, in maturity to shape, to thin, for traffic clearance, pinch to increase density, space major branches along trunk and remove included bark. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 2-24, 28-41, A2 | **USDA**: 4-9 | **Seacoast Zones**: 2-3 | **MPA**: 8-12' | **Sun/Shade**: ☼, ☼

WUCOLS: M-M-L-L-M-M, •, o | **Hardy**: Down to 0-10°F | **PDR**: Beetle borer, goldenraintree bug, leaf spot, scale, canker, coral-spot fungus, root rot, Verticillium wilt.

Firescape Zones: B-D | **Altitude**: Below 4,000'

Culture: Any deep, moist to dry, well-drained soil, very acidic-very alkaline (_-_ pH). Tolerant of light wind, cold, heat, frost, smog, air pollution, drought, occasional extended flooding, compact, dry, inland salinity, urban conditions, poor or saline soil and no irrigation. Shelter from freezing and wind.

WHY USE IT

Usage: Shade, street, lawn, garden, park, specimen, patio, container, parking lot, highway, golf course, grove, screen, reclamation, dried arrangement.
Notes: Authored by Erich Laxmann. Moderately lived for 20-40 years or longer. Transplants well when young or in dormancy, from box or ball and burlap, due to fibrous to coarse root system. Hardiest of genus. May blooms in 2 years. Pollen can cause allergy reactions. Varieties '**Kew**' and '**Fastigiata**' have 3' x 25' columnar growth. California big tree in Santa Ana.

Overall, downtown Los Angeles, CA

Leaf

Bark

Fruit

Seeds

Floral cluster*©, Photograph by Jeff Beck

KOELREUTERIA paniculata

CRAPE MYRTLE

Lagerstroemia indica

Crape Myrtle is a commonly used single or multi-trunk tree, effective as a flowering or foliage accent. It blooms best in full sun, when it receives moderate moisture. It has handsome peeled bark and a colorful summer bloom. Native to China.
Family: *Lythraceae*

Tree Characteristics

Erect or Spreading with a Low Canopy.
Oval, Rounded, Umbrella or Vase Shape.
Has Deciduous foliage.
Height: 25 feet. Width: 25 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Oval, Bronze or Dark Green, Red, Gold, Orange or Multicolored, Deciduous.
Flowers Showy. Lavender, Pink, Red, Rose or White. Flowers in Summer. Has perfect flowers (male and female parts in each flower).
Brown Capsule, Small (0.25 - 0.50 inches), fruiting in Fall.
Bark Striking, Light Green, Pink or Red Brown, Exfoliating or Smooth.
Shading Capacity Rated as Moderately Dense in Leaf.
Shading Capacity Rated as Moderate out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 7 - 10, 12 - 14 and 18 - 21; H1, H2.
USDA Hardiness Zones 7 - 9.
Exposure Full Sun.
Moist to Dry Soil. Drought tolerant.
Clay, Loam or Sand Texture.
Highly Acidic to Slightly Alkaline Soil pH.
Salinity Tolerance is Moderate Inland.
Seaside Tolerance is Not Suited.

Pests & Disease Information

Resistant to Texas Root Rot. Susceptible to Aphids, Powdery Mildew and Sooty Mold.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Biogenic Emissions considered Low.
Attracts Birds

Special Uses & Values

Screen. Hedged.

Overall (*Lagerstroemia* 'Seminole')

Overall (*Lagerstroemia* 'Natchez')

Leaves

Bark

Flowers

Fruit

SelecTree. "*Lagerstroemia indica* Tree Record." 1995-2019. Jul 17, 2019. < https://selectree.calpoly.edu/tree-detail/lagerstroemia-indica >

LAURUS nobilis

KamCards® **WIP 09/02/10**

SHTUB/TREE

LAW-rus NO-bil-iss	**Synonym**: None	**Family**: Lauraceae
L the bay tree, praise, commendation, excellent, famous, noble, notable		**Origin**: Mediterranean, Azores, southern Europe, Canary Islands
Common Name: Sweet Bay, Bay Tree, Bay Laurel, Laurel, Grecian Laurel, Bay, Apollo's Laurel, Roman Laurel, Poet's Laurel, Sweet Laurel, Royal Bay		**Species in Genus**: 2

WHAT IT WILL BECOME

Height: 12-45' +	**Habit**: Conical, Pyramidal, Oval	**Texture**: Medium	**Density**: Heavy
Width: 12-40'+	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Slow to Moderate

Leaf: Evergreen, alternate, simple 2-4 x ¾-1¾" lanceolate to elliptic, wavy or entire translucent margin, slightly revolute, tapered tip, prominent midrib, leathery, stiff, smooth, glossy, dark green above, dull below, scented when crushed.
Flower: Dioecious, cream to yellow-green ¼" star-shaped blooms, inconspicuous, small axillary umbels, males and females usually on separate trees, in late spring-early summer.
Fruit: Green ¼-1" ovoid berries, matures dark purple or black, on female plants, perfumed, in fall.
Bark: Light-dark gray smooth, furrowed, deep winkles, multi-trunked, spreading, erect, low branching, suckers.
Special Maintenance: Prune in winter or summer to shape, remove suckers. Can handle severe pruning or shearing to maintain a hedge. Withhold water in late summer-early fall to induce semi-dormancy in cold regions. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-9, 12-24, H1-H2	**Seacoast Zones**: 2-3	**MPA**: 4-6'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-L-M-M, o	**PDR**: Mealybug, scale, Laurel psyllid, root rot, Phytophthora, sooty mold.		
Firescape Zones: Retardant	**USDA**: 8-11	**Hardy**: Down to 15-20°F	**Altitude**: Below 2,000'

Culture: Any rich, moist to dry, well-drained soil, very acidic-very alkaline (6.6-7.5 pH). Tolerant of heat, short cold, drought, wind and coastal salinity. Shelter in youth until established and hardy.

WHY USE IT

Usage: Street, park, lawn, screen, container, specimen, formal effect, topiary, hedge, shade, culinary, essential oil, attracts birds and bees.
Notes: Authored by Carolus Linnaeus. Moderately lived for 50-150 years. Average to deep rooted. Natural habit is compact, gradually tapering cone. Symbol of ancient Greeks, Romans and Olympic games. Only culinary tree of this genus, but can have narcotic and emetic results in large doses. Variety '**Saratoga**' has broader foliage, more upright tree-like habit, and is resistant to Laurel psyllids.

Overall, Huntington Library and Botanical Gardens, San Marino, CA

Multi-trunked

Bark

Floral cluster

Buds

Leaf

Overall shrub topiary, Los Angeles Arboretum

LAURUS nobilis

LEPTOSPERMUM laevigatum KamCards® WIP 09/02/10

lep-toh-SPUR-mum lev-ih-GA-tum | **Synonym**: Leptospermum flavescens citratum | **Family**: Myrtaceae

Gk fine, slender, seed, *L* smooth, nimble, light, to left | **Origin**: Victoria, Queensland, New South Wales, Tasmania

Common Name: Australian Tea Tree, Coast Tea Tree | **Species in Genus**: 79

SHRUB/TREE

WHAT IT WILL BECOME

Height: 10-25'	**Habit**: Irregular, Oval, Round-headed, Umbrella	**Texture**: Fine	**Density**: Medium
Width: 10-30'	**Spacing**: _-_ '	**Planting Depth**: _-_ '	**Growth**: Moderate

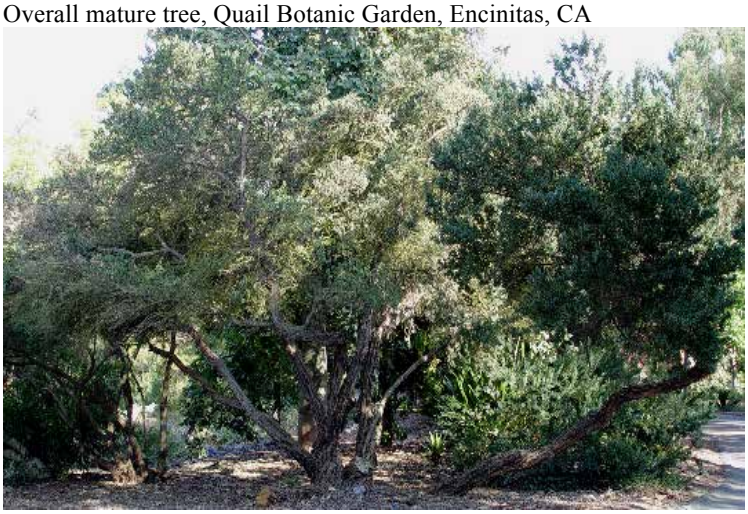
Leaf: Evergreen, alternate, simple, ½-1¼ x ⅛-½" broad lanceolate, entire margin, blunt tip with small sharp point, tapered base, leathery, thin, 3 inconspicuous veins, short petiole, hairy juvenile growth, matures dull gray green.
Flower: White, pink or red ½-¾" rose-like blooms, sessile, terminal paired or solitary axillary, in late winter-spring.
Fruit: Green ¼" oval capsule, matures brown, dry, woody, hard, flat top, inflates 8-10 valves, persists, wrinkles, in fall.
Bark: Exfoliating, flakes off in shaggy strips, gray brown, smooth, thick, furrowed in maturity, gnarled, multi-trunked, low branching, spreading to erect, twisting, drooping branches, heavy limbs in age.
Special Maintenance: Stake in youth. Prune in winter-spring to develop a strong central leader if preferred, to shape, for traffic clearance, prune up to ⅔ of foliage and branches with foliage as bare twigs do not develop further. Pick up litter.

Sunset Zones: 1-24, H1-H2	**Seacoast Zones**: 1-3	**MPA**: _-_ ' small	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-L-/-/, o	**PDR**: Chlorosis, oak root rot, root rot. Resistant to deer.		
Firescape Zones: Retardant	**USDA**: 9-10	**Hardy**: Down to 25-30°F	**Altitude**: From sea level-0,000'

Culture: Any moist to dry, well-drained soil, slightly acidic-slightly alkaline. Tolerant of inland or coastal salinity, frost and drought. Shelter from hot and dry winds.

Usage: Specimen, hedge, container, screen, patio, highway, windbreak, screen, street, garden, golf course, park, erosion control, reclamation, sand dune stabilization, bonsai, floral arrangement, attracts birds and bees.
Notes: Authored by Ferdinand Jacob Heinrich von Mueller. Moderately lived got 50-150 years. Can be invasive.

Overall mature tree, Quail Botanic Garden, Encinitas, CA



Twisted trunk, Alice Keck Park Memorial Garden, Santa Barbara, CA

Trellis, Lotusland, Montecito, CA

Flower

Fruit and seeds

Leaves and bud

Immature fruit

Bark

Leaf and pointed tip

LEPTOSPERMUM laevigatum

LEMON-SCENTED TEA TREE

Leptospermum petersonii

Utility friendly tree. Evergreen shrub to small tree with lemon scented leaves. Leaves can be used as a tea substitute. Leaves and stems contain essential oils used in candle and soap making. Has fragrant Leaf. Native to Eastern Australia.
Family: *Myrtaceae*

Additional Common Names

TEA TREE, LEMON-SCENTED TEA TREE

Tree Characteristics

Oval or Rounded Shape.
Has Evergreen foliage.
Height: 10 - 20 feet. Width: 6 - 15 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Ovate, Light Green, No Change, Evergreen.
Flowers Showy. White. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).
Brown Capsule, Small (0.25 - 0.50 inches), fruiting in Summer or Fall Wildlife use it.
Bark Light Green or Light Gray, Fibrous or Rough.
Shading Capacity Rated as Dense in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 14 - 24.
USDA Hardiness Zones 9 - 11.
Exposure Full Sun to Partial Shade.
Moist to Dry and Well Drained Soil.
Drought tolerant.
Loam or Sand Texture.
Slightly Acidic to Slightly Alkaline Soil pH.
Seaside Tolerance is Good to Medium in Moderate Zone.

Pests & Disease Information

Susceptible to Armillaria and Chlorosis.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Desirable Wildlife Plant.
Attracts Birds.
Not Deer Palatable.
Wildlife use Fruit..

Special Uses & Values

Screen. Hedged.

Overall

Leaves

Bark

Flowers

Fruit

Branches

SelecTree. "*Leptospermum petersonii* Tree Record." 1995-2019. Jul 17, 2019.< https://selectree.calpoly.edu/tree-detail/leptospermum-petersonii >

LOPHOSTEMON confertus KamCards® WIP 09/02/10

TREE

loh-fo-STEM-on kon-FUR-tus	**Synonym**: Tristania conferta		**Family**: Myrtaceae
Gk a crest, tuft, a thread, a stamen, *L* with, together, bear, carry		**Origin**: New South Wales and Queensland, Australia	
Common Name: Brisbane Box, Queensland Box, Brush Box			**Species in Genus**: 4

WHAT IT WILL BECOME

Height: 30-75' +	**Habit**: Round-headed, Oval	**Texture**: Medium-coarse	**Density**: Medium
Width: 20-35' +	**Spacing**: 15-30'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate or 3-5 in false whorls, simple, 3-7 x 1-3" ovate-lanceolate, wavy, entire margin, tapered tip and base, prominent midrib, soft hairy juvenile growth matures leathery, glossy dark green and cream above, pale below, nearly terminal.
Flower: White to creamy, ¾-1½" star-shaped blooms, feathery, 70+ stamen united into 5 pinwheel lobe bundles of fringe stamen, 3-7 blooms in terminal axillary cymes, hidden under foliage, on young wood, in summer, blooms early in life.
Fruit: Red brown ½-1" bell-shaped capsule, 3-celled, woody, 3 enclosed valves at rim, persist, ⅛" seeds, in summer.
Bark: Exfoliating, reddish brown peels, revealing smooth, light-tan, orange-brown, pink on trunk and limbs, rough, scaly at base, straight single or multi-trunked, 'V' ascending branches, spreading habit in age, horizontal branching in youth.
Special Maintenance: Prune branches in youth, in spring for traffic clearance, to shape and remove twiggy growth.

WHERE IT WILL GROW

Sunset Zones: 15-17, 19-25, H1-H2	**Seacoast Zones**: 2-3	**MPA**: 5'	**Sun/Shade**: ☼, ☼
WUCOLS: M-/-M-M-/-/,•, o	**PDR**: Scale, spider mite, chlorosis, Phytophthora, root rot.		
Firescape Zones: Retardant	**USDA**: 9-11	**Hardy**: Down to 25-30°F	**Altitude**: From sea level-2,500'

Culture: Any rich, moist, well-drained soil, acidic-alkaline. Tolerant of heat, smog and drought once established.

WHY USE IT

Usage: Street, lawn, garden, specimen, patio, golf course, park, parking lot, highway, shade, bark color theme.
Notes: Authored by Robert Brown. Related to Eucalyptus. Moderately lived for 50-150 years. Average roots. Shelter from heavy frost in youth. Pick up litter. California big tree in Orange.

Overall, El Camino College, Torrance, CA

Floral cluster

New foliage color

Fruit

Foliage

Bark

LOPHOSTEMON confertus

MAGNOLIA grandiflora 'Little Gem' KamCards® WIP 09/02/10

TREE

mag-NO-lee-uh gran-dih-FLOR-uh li-tule jem	**Synonym**: None	**Family**: Magnoliaceae
Pierre Magnol, 17th century French botanist, *L* large, great, a flower		**Origin**: Southern United States
Common Name: Little Gem Southern Magnolia, Little Gem Bull Bay		**Species in Genus**: 100 +

WHAT WILL IT BECOME

Height: 15-40'	**Habit**: Oval, Pyramidal	**Texture**: Medium-coarse	**Density**: Medium
Width: 15-30' 8-12'	**Spacing**: 8-12'	**Planting Depth**: _-_ '	**Growth**: Slow

Leaf: Evergreen, alternate, simple 2-6 x 1-2" obovate to elliptic, entire margin, tapered tip, wedge base, stiff, leathery, glossy deep green, hairy rust colored below.
Flower: Fragrant, white or cream, 8-10cup-shaped blooms, solitary", usually 6 (9-12) fleshy petals, 3 sepals, woolly buds sensitive to frost, will start blooming once 3' tall, in spring, summer or fall.
Fruit: Reddish brown 3-4" cylindrical cones, elongated, woolly, heavy, threaded red seeds, in summer, ripens in fall.
Bark: Light green, thin, smooth juvenile growth, matures dark brown, black platelets, furrowed, multi-trunked, erect, low branching, spreading, drooping horizontal branches in age.
Special Maintenance: Mulch to keep young shallow roots cool. Prune to develop a strong structure and twigs back to their base. Prune for a strong central leader and traffic clearance. Pick up litter as foliage and large cones are slow to decompose. Slow growing if soil restricts roots, amend for best results. Water deep and thoroughly.

WHERE IT WILL GROW

Sunset Zones: 4-12, 14-24, 26-33, H1-H2	**Seacoast Zones**: 3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: M-M-M-M-/-H, o	**USDA**: 7-10	**Hardy**: Down to _ °F	**Altitude**: 0,000-0,000'
Firescape Zones: B-D	**PDR**: Aphid, borer, mite, scale, weevil, black mildew, blight, canker, leaf spot, root rot, scab, Verticillium wilt. Resistant to oak root fungus and deer.		

Culture: Any rich, moist, well-drained soil, very acidic-slightly alkaline. Tolerant of heat, salinity, drought and wet.

WHY USE IT

Usage: Shade, street, garden, specimen, park, floral display, patio, espalier, lawn, screen, highway, hedge, container, under utility lines, floral arrangement, attracts animals.
Notes: Average lived. Invasive surface roots can heave hardscapes. Do not plant grass under canopy due to dense shade. Transplant in spring as ball and burlap, due to fragile slow healing fleshy roots. Roots need a large space.

Overall, downtown Los Angeles, CA

Leaf above/below

Branches, rusty leaves below

Bark

Flower

Fruit forming

Seeds

MAGNOLIA grandiflora 'Little Gem'

ST. MARY MAGNOLIA

Magnolia grandiflora 'St. Mary'

Utility friendly tree.Blooms at a young age.Has fragrant Flower.
Native to Southeastern United States.
Family: *Magnoliaceae*

Additional Common Names

SOUTHERN MAGNOLIA, BULL BAY

Tree Characteristics

Erect or Spreading with a Low Canopy.
Oval or Rounded Shape.
Has Evergreen foliage.
Height: 20 - 25 feet. Width: 15 - 20 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Oval, Glossy Dark Green, No Change, Evergreen.
Flowers Showy. Fragrant White. Flowers in Spring, Summer or Fall. Has perfect flowers (male and female parts in each flower).
Prolific, Brown or Purple Follicle, Very Large (Over 3.00 inches), fruiting in Summer or Fall.
Bark Light Green, Fissured.
Shading Capacity Rated as Dense in Leaf.
Litter Issue is Flowers, Dry Fruit and Leaves.

Tree Site Conditions & Constraints

Sunset Zones 4 - 12 and 14 - 24.
Exposure Full Sun to Partial Shade.
Moist Soil.
Clay, Loam or Sand Texture.
Highly Acidic to Slightly Alkaline Soil pH.
Salinity Tolerance is Moderate on Coast.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Aphids, Scales and Spider Mites, Armillaria, Root Rot and Verticillium.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Attracts Birds.

Special Uses & Values

Screen. Espalier.

Overall

Bark

Flowers

Leaves

SelecTree. "*Magnolia grandiflora* 'St. Mary' Tree Record." 1995-2019. Jul 25, 2019.
< https://selectree.calpoly.edu/tree-detail/magnolia-grandiflora-st-mary >

SAMUEL SOMMER SOUTHERN MAGNOLIA

Magnolia grandiflora 'Samuel Sommer'

Blooms at a young age. Has fragrant Flower.
Native to Southeastern United States.
Family: *Magnoliaceae*

Additional Common Names

SAMUEL SOMMER SOUTHERN MAGNOLIA, BULL BAY

Tree Characteristics

Erect or Spreading and requires ample growing space.
Oval or Rounded Shape.
Has Evergreen foliage.
Height: 30 - 40 feet. Width: 20 - 30 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Elliptic to Ovate, Glossy Dark Green, Bronze or Red, No Change, Evergreen.
Flowers Showy. Fragrant White. Flowers in Spring, Summer or Fall. Has perfect flowers (male and female parts in each flower).
Prolific, Brown or Purple Follicle, Very Large (Over 3.00 inches), fruiting in Summer or Fall.
Bark Light Green, Fissured.
Shading Capacity Rated as Dense to Very Dense in Leaf.
Litter Issue is Flowers, Dry Fruit and Leaves.

Tree Site Conditions & Constraints

Sunset Zones 4 - 12 and 14 - 24.
USDA Hardiness Zones 7 - 10.
Exposure Full Sun to Partial Shade.
Moist Soil. Clay, Loam or Sand Texture.
Highly Acidic to Slightly Alkaline Soil pH.
Salinity Tolerance is Moderate on Coast.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Aphids, Scales and Spider Mites, Armillaria, Root Rot and Verticillium.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
None Known Health Hazard.
Attracts Birds.

Special Uses & Values

Espalier.

Overall

Fruit

Bark

Flowers

Leaves

SelecTree. "*Magnolia grandiflora* 'Samuel Sommer' Tree Record." 1995-2019. Jul 25, 2019.
< https://selectree.calpoly.edu/tree-detail/magnolia-grandiflora-samuel-sommer >

MAYTENUS boaria — KamCards® WIP 09/21/11

may-TEE-nus bow-AR-ee-uh	**Synonym**: Maytenus chilensis	**Family**: Celastraceae
L of Chilean vernacular, of cattle		**Origin**: Chile
Common Name: Chile Mayten Tree		**Species in Genus**: 55

WHAT WILL IT BECOME

Height: 10-50'	**Habit**: Weeping, Oval, Umbrella	**Texture**: Medium-fine	**Density**: Medium
Width: 10-20'	**Spacing**: 30-40'	**Planting Depth**: _-_'	**Growth**: Slow to Moderate

Leaf: Evergreen to cold deciduous, alternate, simple, 1-2 x ¼-¾" ovate-lanceolate, fine tooth margin, tapering pointed tip and base, midrib prominent, sessile, thin, leathery, smooth, glossy, light green above, pale below.
Flower: Monoecious, greenish-white minute blooms, inconspicuous, axillary 2-5 clustered, in late spring-summer.
Fruit: Orange-red to scarlet 1/8-¼" oval capsule, 2-valved, 2 yellow seeds, red aril, in late summer-early fall.
Bark: Dark brown, furrowed, single or multi-trunked, wiry juvenile trunks, erect main branches, long pendulous branchlets.
Special Maintenance: Prune in spring or fall to shape, to thin and remove small sucker if desired. Can handle shearing.

WHERE IT WILL GROW

Sunset Zones: 8-9, 14-25	**Seacoast Zones**: 2-3	**MPA**: _-_'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: M-M-M-M-/-/, •, o	**PDR**: Resistant to oak root fungus		
Firescape Zones: B-D	**USDA**: 8-11	**Hardy**: Down to 14°F	**Altitude**: From sea level-0,000'

Culture: Any rich, moist, well-drained soil, slightly acidic or very alkaline. Tolerant of coastal salinity some drought. Shelter from long freezes.

WHY USE IT

Usage: Lawn, screen, shade, specimen, street, group, weeping effect.
Notes: Authored by Giovanni Ignazio Molina. Moderately lived for 50-150years. Average to deep rooted, cultivation under canopy can cause suckers to appear. Recovers after a cold snap. Water deeply to encourage deep rooting.

Overall, Strybing Arboretum, San Francisco, CA

Overall, Strybing Arboretum, San Francisco, CA

Overall multi-trunked, Montecito, CA

Flowers

Bark

Fruit cluster

Leaf above

Leaf below

Fruit green and aged

SHRUB/TREE

MAYTENUS boaria

MELALEUCA linariifolia

KamCards® **WIP 09/02/10**

mel-uh-LOO-kuh li-na-re-ee-FOH-lee-uh | **Synonym**: None | **Family**: Myrtaceae

Gk black trunk and white branches, similar to Linaria, foliage | **Origin**: Eastern Australian territories

Common Name: Flaxleaf Paperbark, Narrow-leaved Paperbark, Snow-in-Summer | **Species in Genus**: 220

SHRUB/TREE

WHAT IT WILL BECOME

Height: 15-30'	**Habit**: Round-headed, Oval	**Texture**: Fine	**Density**: Heavy
Width: 10-25'	**Spacing**: 20-40'	**Planting Depth**: _-_'	**Growth**: Fast

Leaf: Evergreen, opposite, simple, ⅜-1½ x ⅛" narrow elliptic to linear-lanceolate, soft maturing rigid, entire margin, tip pointed, sessile or short stalked, 3 prominent veins, smooth, leathery, bright green or bluish-green, clustered like pillows.
Flower: Fragrant, white small star-shaped staminate blooms, solitary, clustered in a bract, on dense 1½-2" terminal opposite spiked bottlebrushes, surrounding terminal branches, in late spring-summer, looks like snow on branches.
Fruit: Green ⅛ x ⅛" round capsules, mature brown-gray, woody, dry, surround branchlets, valves enclosed, persist, drops seeds annually, in fall.
Bark: Exfoliating, sheds in papery strips, willowy, narrow and upright juvenile growth, matures waxy white bloom, white to honey brown, thick, spongy, rigid, single-trunked, spreading, low branching, slender branchlets.
Special Maintenance: Stake and prune young plants develop a strong structure and remove lower branches to shape.

WHERE IT WILL GROW

Sunset Zones: 9, 13-24, H1	**USDA**: 9-11	**Seacoast Zones**: 1-3	**MPA**: 5'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-L-/-/, •	**Hardy**: Down to _°F	**PDR**: Scale, spider mite, mushroom root rot, dieback, canker, chlorosis, Phytophthora, root rot.		
Firescape Zones: unknown	**Altitude**: From 0,000-0,000'			

Culture: Any rich, moist to dry, well-drained soil, slightly acidic-slightly alkaline. Tolerant of drought, inland salinity, heat, smog and poor soil. Shelter from cold, drying winds.

WHY USE IT

Usage: Street, windbreak, screen, specimen, park, patio, lawn, golf course, hedge, group, watercourse, riparian, small soil location, attracts birds and bees, tea tree oil source.
Notes: Authored by James Edward Smith. Average lived. Pick up litter.

Overall, Cal Poly, Pomona campus, Pomona, CA

Overall, South Coast Botanic Garden, CA

Multi-colored bark

New foliage color

Leaves

Leaves

Fruit capsules

Floral cluster and bud

Floral cluster

Branch of flowers

MELALEUCA linariifolia

MELALEUCA quinquenervia KamCards® WIP 09/02/10

TREE

mel-uh-LOO-kuh kwin-kway-NER-vee-uh	**Synonym**: Melaleuca leucadendron	**Family**: Myrtaceae
Gk Black and white, *L* 5 veins	**Species in Genus**: 220	**Origin**: New Guinea, New Caledonia, New South Wales, and Queensland, Australia
Common Name: Paperbark Tree, Broad Leaf Paperbark, Cajeput Tree, Punk Tree, Swamp Tea Tree, Broad-leaved Paperbark, Tea Tree, Swamp Paperbark		

WHAT IT WILL BECOME

Height: 20-45' +	**Habit**: Weeping, Columnar, Oval	**Texture**: Medium	**Density**: Medium
Width: 15-25' +	**Spacing**: 8-20'	**Planting Depth**: _-_'	**Growth**: Fast

Leaf: Evergreen, alternate, simple, 1-5 x ⅜-2" lanceolate to oblanceolate, wider below middle, entire margin, tapering pointed tip, 5 prominent parallel veins, leathery, flat, thin, smooth, glandular dots, short petiole, rusty hair juvenile growth, matures dull green, above, silvery gray-green silky hairs below, bronze tinted fall color, scented when crushed.
Flower: Fragrant, whitish-yellow, pink, purple or yellowish staminate blooms, clustered in 1-4" dense bottlebrush spikes, solitary or 2-3 in upper axillary or terminal blooms, in summer-fall.
Fruit: Brown ¼" cupped capsules, woody, surround pendent branchlets, exserted valves, persist, many tiny seeds, in fall.
Bark: Exfoliating, peels in thick papery layers, mottled cream tan, gray, spongy cork, leaning, single or multi-trunked, spreading, low branching.
Special Maintenance: Prune in spring to shape, strengthen structure and remove included bark. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 9, 12-13, 15-17, 20-24, H1-H2	**Seacoast Zones**: 1-3	**MPA**: 5-6'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-M-M-/-M, ɵ, •, o	**Firescape Zones**: Retardant	**Altitude**: From sea level-4,500'	
PDR: Beetle, mite, psyllid, scale, dieback, canker, chlorosis, fungus, mushroom root rot, Phytophthora, root rot, rust.			
Culture: Any moist to dry soil, very acidic-slightly alkaline (4.4-7.9 pH). Tolerant of wind, drought, inland salinity or poor soil, flooding, smog, desert, some cold and heat.		**USDA**: 9-11	**Hardy**: Down to 20-40°F

WHY USE IT

Usage: Street, park, lawn, specimen, parking lot, shade, screen, windbreak, garden, patio, watercourse, reclamation, riparian, erosion control, essential oil, line planters, bark art mosaics, attracts birds, bees and butterflies.
Notes: Authored by Stanley Thatcher Blake. Moderately lived to 50-75 years. Shelter from cold, drying winds. Self sows in moist soil. Sap and pollen can cause allergy reactions or irritations. Invasive in Florida and Texas.

Floral cluster

Leaves

Spent flowers

Buds

Overall, downtown Los Angeles, CA

Floral cluster

Fruit, capsule cluster

Capsules

Bark

MELALEUCA quinquenervia

OLEA europaea — KamCards® WIP 09/21/11

TREE

OH-lee-uh yoo-ROH-pay-uh	**Synonym**: None	**Family**: Oleaceae
L oil, olive oil, emit a smell, *L* from Europe		**Origin**: Eastern Mediterranean
Common Name: Olive, Common Olive, Edible Olive		**Species in Genus**: 20

WHAT WILL IT BECOME

Height: 20-40'	**Habit**: Round-headed, Irregular, Vase	**Texture**: Medium-fine	**Density**: Medium
Width: 15-30' +	**Spacing**: 10-15'	**Planting Depth**: _ - _'	**Growth**: Slow

Leaf: Evergreen, opposite, simple, 1-3 x ⅜-⅝" elliptic to oblong-lanceolate, fine pointed tip, entire margin or irregular tooth, revolute, tapered base, leathery, gray green above, silvery scurfy scales below.
Flower: Fragrant, cream white to yellow small blooms, mass, on 2" axillary panicles, on prior year's wood, in spring.
Fruit: Green 1-2" oblong drupe, smooth, ripens wrinkled glossy black, processed edible, oily flesh, 1-seeded, in summer.
Bark: Gray, smooth in youth matures dark, ridged, fissured, furrowed, scaly, rough, gnarled, short, leaning, single or multi-trunked, low branching, spreading, deep roots.
Special Maintenance: Train early for single or multi-trunked forms, stake branches at desired angles. Prune in winter for traffic clearance, remove suckers, promote air circulation and prevent included bark. Withstands heavy pruning, thin each year for best branch form. Prune or spray hormones to reduce crop production. Pick up fallen fruit/litter, in winter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 11-24	**Seacoast Zones**: 2-3	**MPA**: 2-6'	**Sun/Shade**: ☼, ☼
USDA: 8-11	**Hardy**: Down to 10-15°F	**Altitude**: From sea level-0,000'	
WUCOLS: VL-VL-L-L-M-M, •	**PDR**: Aphid, scale, thrip, Anthracnose, black soot, crown gall, fruit rot, leaf, spot, lesion nematodes, mushroom root rot, oak root rot, olive knot, Phytophthora, root rot, sooty mold, Southern blight, Verticillium wilt. Resistant to Texas root rot.		
Firescape Zones: B-D, Retardant			

Culture: Any deep, rich, moist, well-drained soil, slightly acidic-very alkaline. Tolerant of calcareous or rocky soil, dry, shallow, poor , heat, wind, salt, desert conditions, coastal salinity and drought once established. Shelter from humidity.

WHY USE IT

Usage: Garden, lawn, street, shade, patio, park, group, specimen, highway, windbreak, hedge, espalier, screen, slope, container, bonsai, parking lot, golf course, erosion control, urban condition, gray color theme, picturesque shape and trunk, Biblical theme, fruit production for 50 years or more, attracts birds and bees.
Notes: Authored by Carolus Linnaeus. Very long lived for 5-6 centuries. Large old trees can be transplanted with care, boxed, with near certainty of survival, but do not move when in bloom. Can be aggressive in riparian locations, and have surface roots or suckers. California trademark introduced to missions for oil. Pollen can cause allergy reactions. Can be used in coastal areas, tolerant of short-term frosts, but not humidity. Needs 50ºF for 2 months to flower, but fruit can be damaged below 28ºF. First crop in 3-10 years, heavy crop every 2 years. Olives require processing, to be edible, oil stains paving, and harms lawns if not removed. Fruitless varieties are not reliably barren and '**Swan Hill**' has less pollen.

Overall, UCLA campus, Westwood, CA

Overall, Montecito, CA

Leaf and glandular dots

Fruit green and ripe

Leaves

Floral panicle

Flower

Trunk gnarled

Overall **'Little Ollie'**

OLEA europaea

DESERT MUSEUM PALO VERDE

Parkinsonia × 'Desert Museum'

Utility friendly tree. This hybrid is a three-way cross with P. aculeata, P. microphyllum, and P. floridum, with rigorous growth and a sturdy, upright branching habit. Brilliant and conspicuous bloom in spring with fragrant Flowers. Native to A hybrid. Parents are native of the Sonoran and Chihuahan Deserts of the southwestern United States.
Family: *Fabaceae* Previously listed in the *Caesalpiniaceae* family.

Tree Characteristics

Spreading or Weeping with a Low Canopy.
Rounded, Umbrella or Vase Shape.
Has Deciduous foliage.
Height: 15 - 20 feet. Width: 20 - 25 feet.
Growth Rate: 24 to 36 Inches per Year.
Longevity 40 to 150 years.
Leaves Bipinnately Compound, Light Green, Deciduous.
Flowers Showy. Fragrant Yellow. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).
Brown Pod, Very Large (Over 3.00 inches), fruiting in Fall.
Bark Green, Smooth.
Shading Capacity Rated as Moderately Low to Moderate in Leaf.
Shading Capacity Rated as Moderately Low out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 8 - 14 and 18 - 20.
USDA Hardiness Zones 6 - 9.
Exposure Full Sun.
Moist to Dry Soil.
Drought tolerant.
Clay, Loam or Sand Texture.
Neutral to Highly Alkaline Soil pH.
Salinity Tolerance is Good to Moderate Inland.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Resistant to Texas Root Rot. Susceptible to Invasive Shot Hole Borer, Eriophyid Mite.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Biogenic Emissions considered Moderate.
Desirable Wildlife Plant.
Attracts Bees.

Special Uses & Values

Screen, Streetscape, Parking Lot, Specimen.

Overall

Leaves

Bark

Flowers

Fruit

Branches

SelecTree. "*Parkinsonia* × 'Desert Museum' Tree Record." 1995-2019. Jul 23, 2019.
< https://selectree.calpoly.edu/tree-detail/parkinsonia-×-desert-museum >

RED PUSH PISTACHE

Pistacia × 'Red Push'

A hybrid between Pistacia atlantica × Pistacia integerrima. Hybrid developed in Arizona. Drought and cold tolerant. New leaves have distinctive red color when emerging. Trees may be referred to as male or female.
Family: *Anacardiaceae*

Tree Characteristics

Erect or Spreading with a High Canopy.
Oval, Rounded or Umbrella Shape.
Has Deciduous foliage.
Height: 25 - 40 feet. Width: 20 - 40 feet.
Growth Rate: 12 to 24 Inches per Year.
Longevity Greater than 150 years.
Leaves Pinnately Compound Odd with Lanceolate Leaflets, Medium to Dark Green, Red, Gold, Orange or Multicolored, Deciduous.
Flowers Inconspicuous. Flowers in Spring. Has either male or female flowers (dioecious). Trees may be sold as male or female.
Fruitless.
Bark Dark Brown, Light Gray or Light Green, Furrowed or Scaly.
Shading Capacity Rated as Dense in Leaf.
Shading Capacity Rated as Moderate out of Leaf.

Tree Site Conditions & Constraints

Sunset Zones 8 - 24.
USDA Hardiness Zones 7 - 9.
Exposure Full Sun.
Moist to Dry Soil.
Drought tolerant.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Not Suited.

Pests & Disease Information

Resistant to Verticillium.

Health, Safety & Environmental Concerns

Branch Strength Rated as Strong.
Root Damage Potential Rated as Low.

Special Uses & Values

Street Tree, Park Tree, Screen.

Overall

Leaves

Bark

Branches

SelecTree. "*Pistacia* × 'Red Push' Tree Record." 1995-2019. Jul 23, 2019. < https://selectree.calpoly.edu/tree-detail/pistacia-×-red-push >

ARGENTINE MESQUITE

Prosopis alba 'Colorado'

A fast-growing mesquite. Shed old leaves as new ones appear.
Has thorns.
Native to Argentina.
Family: *Fabaceae*

Tree Characteristics

Spreading with a Low Canopy.
Oval, Rounded or Umbrella Shape.
Has Deciduous to Partly Deciduous foliage.
Height: 20 - 40 feet. Width: 15 - 30 feet.
Growth Rate: 36 Inches per Year.
Longevity 50 to 150 years.
Leaves Bipinnately Compound, Blue Green, Bronze or Gold, Deciduous to Partly Deciduous.
Green or Yellow. Flowers in Spring. Has perfect flowers (male and female parts in each flower).
Brown Pod, Very Large (Over 3.00 inches), fruiting in Summer Edible.
Bark Dark Gray, Fissured.
Shading Capacity Rated as Moderate in Leaf.
Shading Capacity Rated as Moderately Low out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

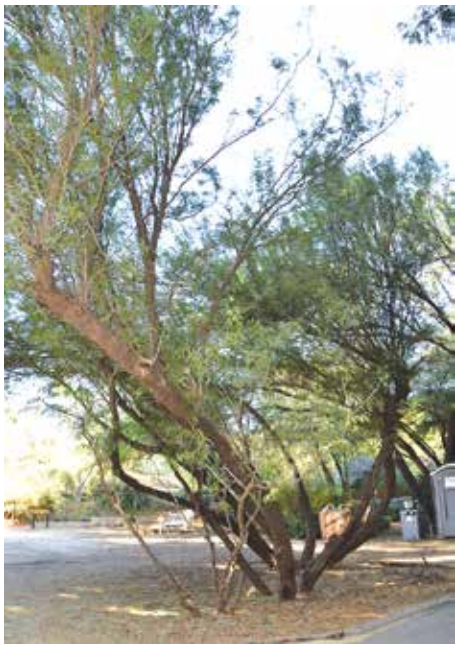
Sunset Zones 10 - 13 and 18 - 24.
Exposure Full Sun.
Dry Soil.
Drought tolerant.
Loam or Sand Texture.
Neutral to Highly Alkaline Soil pH.
Seaside Tolerance is Not Suited.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Attracts Birds.

Special Uses & Values

Screen.



Overall

Leaves

Bark

SelecTree. "*Prosopis alba* Tree Record." 1995-2019. Jul 23, 2019. < https://selectree.calpoly.edu/tree-detail/prosopis-alba >

FLOWERING ORNAMENTAL PEAR

Pyrus calleryana

Fairly resistant to fireblight. Open, wide branching.
Brilliant fall colors. Has fragrant Flower.
Native to China.
Family: *Rosaceae*

Additional Common Names

FLOWERING ORNAMENTAL PEAR, CALLERY PEAR

Tree Characteristics

Erect or Spreading Low or High Canopy.
Oval or Rounded Shape.
Has Deciduous foliage.
Height: 30 - 40 feet. Width: 20 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Ovate, Glossy Dark Green, Red, Gold, Purple or Multicolored, Deciduous.
Flowers Showy. Fragrant White. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).
Brown or Mostly Green Pome, Small (0.25 - 0.50 inches), fruiting in Summer.
Bark Dark Brown or Light Green, Blocky or Furrowed.
Shading Capacity Rated as Moderately Dense in Leaf.
Shading Capacity Rated as Moderately Dense out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 2 - 9 and 14 - 21.
USDA Hardiness Zones 5 - 8.
Exposure Full Sun.
Moist to Dry Soil.
Clay, Loam or Sand Texture.
Highly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Resistant to Fair Resistance to Fire Blight, Armillaria and Verticillium. Susceptible to White Fly, Sooty Mold.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
Allergy Health Hazard.
Attracts Birds.

Special Uses & Values

Screen.

Overall

Leaves

Bark

Flowers

Fruit

SelecTree. "*Pyrus calleryana* Tree Record." 1995-2019. Jul 17, 2019. < https://selectree.calpoly.edu/tree-detail/pyrus-calleryana >

PYRUS kawakamii — KamCards® WIP 09/21/11

TREE

PI-russ kow-uh-KAM-ee-eye	**Synonym**: None	**Family**: Rosaceae
L a pear, Takiyu Kawakami, 20th century Japanese plant collector		**Origin**: China, Taiwan, Japan
Common Name: Evergreen Pear		**Species in Genus**: 25

WHAT IT WILL BECOME

Height: 15-40'	**Habit**: Round-headed	**Texture**: Medium	**Density**: Medium
Width: 15-30'	**Spacing**: 20-30'	**Planting Depth**: _-_'	**Growth**: Slow

Leaf: Semi-deciduous, alternate, simple, 2-4½" ovate to obovate, wavy fine rounded toothed margin, pointed tip, wedge, base, leathery, smooth, 3-4 clustered on lateral spur near branch tips, 1" petiole, glossy, green, red to scarlet fall color.
Flower: Fragrant, white ½-1" blooms, showy, few small terminal corymbs, sporadically or in mid-winter-early spring.
Fruit: Green ¼-½" globose pome, smooth, inedible, are rarely seen, in spring-summer.
Bark: Black-brown, rough, blocky, deeply furrowed, single or multi-trunked, spreading, low branching, angled branches, drooping branchlets/spurs, thorny.
Special Maintenance: Stake one or several branches, prune side growth until established. Prune in fall or spring to thin, to shape or form an espalier. Can take pleaching. Fire blight needs to be cut below the area of damage and dip tools in a disinfectant between each cut, spores can spread 1-2 blocks, can use a fungicide by spraying the blooms. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 12-24	**Firescape Zones**: unknown	**Seacoast Zones**: 3	**MPA**: 3-5'	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-M-M-M-M, o	**USDA**: 8-10	**Hardy**: Down to _°F	**Altitude**: From 0,000-0,000'	

PDR: Aphid, caterpillar, leaf roller, mite, scale, whitefly, Anthracnose, blister, canker, dieback, fireblight, powdery mildew, purple leaf spot, scab, sooty mold. Resistant to Verticillium wilt.

Culture: Any rich, moist, well-drained soil, very acidic-very alkaline. Tolerant of heat, smog and dust.

WHY USE IT

Usage: Espalier, street, park, lawn, garden, patio, shade, specimen, parking lot, screen, golf course, attracts birds.
Notes: Authored by Bunzo Hayata. Moderately lived for 20-40 years. Easy to grow wherever it doesn't freeze. Deeper fall color with a chill. Pyracantha is frequent source of infection to this genus. Can bloom prior to or with foliage.

Overall, Rose Hills Memorial Garden

Overall, thinned and shaped, downtown Los Angeles, CA

Overall fall color, UCLA

Floral cluster, leaf fall color

Deciduous in bloom*

*Photograph by Ken Kammeyer

Floral cluster

Leaf

Fall color

Bark

PYRUS kawakamii

TEXAS RED OAK

Quercus buckleyi

Branches droop but resist breakage. A spectacular cold hardy landscape tree.
Native to Kansas, Oklahoma and Texas
Family: *Fagaceae*

Additional Common Names

Quercus texana 'Buckley', *Quercus nuttallii*

Additional Common Names

TEXAS RED OAK, TEXAS OAK, SPANISH OAK, Nutall OAK

Tree Characteristics

Oval or Rounded Shape.
Has Deciduous foliage.
Height: 30 - 50 feet. Width: 30 - 50 feet.
Growth Rate: 24 or More Inches per Year.
Leaves Ovate, Green, Red or Orange, Deciduous.
Flowers Inconspicuous. Brown. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).
Brown Acorn, Small to Medium (0.25 - 1.50 inches), fruiting in Fall Wildlife use it.
Bark Brown to Gray, Fissured.
Shading Capacity Rated as Moderate to Moderately Dense in Leaf.
Shading Capacity Rated as out of Leaf.

Tree Site Conditions & Constraints

Sunset Zones 3, 6 - 12 and 18 - 21.
USDA Hardiness Zones 6 - 11.
Exposure Full Sun.
Well Drained Soil.
Drought tolerant.
Clay, Loam or Sand Texture.
Acidic to Alkaline Soil pH.

Pests & Disease Information

Resistant to Verticillium. Susceptible to Caterpillars, Borer, Aphids, Scales, Leaf Miner and Insect Galls, Armillaria, Anthracnose, Canker, Leaf Spot, Powdery Mildew and Root Rot.

Health, Safety & Environmental Concerns

Root Damage Potential Rated as Low.
Desirable Wildlife Plant.
Attracts Mammals.
Wildlife use Fruit.

Special Uses & Values

Specimen, Shade Tree, Buffer Strip or Street Tree.

Overall

Overall Juvenile

Leaves

Bark

Branches

Fruit

SelecTree. "*Quercus buckleyi* Tree Record." 1995-2019. Jul 23, 2019. < https://selectree.calpoly.edu/tree-detail/quercus-buckleyi >

TABEBUIA chrysotricha — KamCards® WIP 09/04/10

TREE

tab-eh-BOO-ee-uh krye-so-TRY-kuh	**Synonym**: Ipe chrysotricha, Tabebuia pulcherrima	**Family**: Bignoniaceae
L wasting away, *Brazilian Indian* name, *Gk* gold, hair	**Origin**: Tropical America, Venezuela, Brazil, Columbia	
Common Name: Golden Trumpet Tree		**Species in Genus**: 100

WHAT WILL IT BECOME

Height: 20-50'	**Habit**: Round-headed	**Texture**: Medium	**Density**: Thin
Width: 12-25'	**Spacing**: 8-12'	**Planting Depth**: _-_'	**Growth**: Fast to Moderate

Leaf: Briefly deciduous, opposite, 4-7 x 1¾" palmately compound 3-5-7 ovate, oblong to obovate-oblong 2-5 x 2" rough leaflets, entire or undulating margin, pointed tip, tapered base, prominent veins, silvery green above, tawny fuzz below.
Flower: Fragrant, golden yellow 2½-4 x 3" trumpet-shaped bloom, maroon striped throat, hairy ruffled lobes, wrinkled petals, dense 8" terminal umbel, heaviest in spring, prior to foliage and at other times, best floral display in warm regions.
Fruit: Brown 8-14 x ⅜-⅝" linear capsule, slender curved, tan fuzzy, pendent, persist, flat, papery winged seeds, in winter.
Bark: Brown-gray fissured juvenile growth, matures whitish-gray and black, cracked, single-trunked, weak wood, wide spreading, low branching, asymmetrical juvenile growth, tawny fuzzy shoots.
Special Maintenance: Prune to develop a strong central leader, to shape, slow growth and for traffic clearance. Tends to be gangly or irregular when young and benefits from training in early years. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 13, 15-16, 20-26, H1-H2	**Seacoast Zones**: 2-3	**MPA**: 3'	**Sun/Shade**: ☼, ☼
WUCOLS: ?-/-M-M-/-M, o	**PDR**: Spider mite, die back, leaf spot.		
Firescape Zones: B-D	**USDA**: 9-11	**Hardy**: Down to 24-30°F	**Altitude**: From 0,000-0,000'

Culture: Any rich, moist, well-drained soil, slightly acidic-slightly alkaline (6.1-7.5 pH). Tolerant of wind, heat, urban condition and drought. Shelter from frost and wind.

WHY USE IT

Usage: Highway, street, parking lot, container, patio, light shade, specimen, garden, lawn, golf course, park, screen, tropical effect, floral display, attracts bees.
Notes: Authored by Paul Carpenter Standley. Short lived for 20-40 years. Check for circling roots in containers that will girdle and kill the tree. Official flower of Brazil. Handling hairy plant parts may cause skin irritation or allergy reactions. Introduced by Los Angeles Arboretum.

Overall, Puerto Vallarta, Mexico

*Photograph by Jackie Godo Kiss

Overall, Los Angeles Arboretum

Flower

Leaves

Bark

Overall, Alice Keck Park

Flower

Floral cluster

Fruit and winged seeds

TABEBUIA chrysotricha

TRISTANIOPSIS laurina KamCards® WIP 09/04/10

tris-tan-ee-OP-sis lor-EYE-nujh	**Synonym**: Tristania laurina	**Family**: Myrtaceae
Jules M.C.Tristan, 19th century French botanist, *L* like laurel		**Origin**: Queensland, Victoria Australia
Common Name: Water Gum, Kanooka		**Species in Genus**:

SHRUB/TREE

WHAT IT WILL BECOME

Height: 10-45'	**Habit:** Upright, Oval, Round-headed	**Texture**: Medium	**Density**: Medium
Width: 5-30'	**Spacing**: _-_'	**Planting**: _-_'	**Growth**: Slow to Moderate

Leaf: Evergreen, alternate, simple 2-5½ x ⅜-1¼ " lanceolate, elliptic, obovate to oblanceolate, narrow, pointed tip, entire margin, tapered base, leathery, glossy, coppery-red juvenile growth, matures medium green above, whitish below.
Flower: Fragrant, yellow ¼-⅜" staminate blooms, mass, 3" terminal to axillary cymes, in late spring-early summer.
Fruit: Eucalyptus-like ¼-½" capsule, matures red-brown, in summer-fall, drop in winter.
Bark: Exfoliating in peels, mahogany, mottled, light gray to pale brown, reveals white below, single or multi-trunked, spreading, low branching.
Special Maintenance: Prune by pinching to keep shrubby, to standard if desired. Pick up litter..

WHERE IT WILL GROW

Sunset Zone: 15-17, 19-25	**Seacoast Zone**: 2-3	**MPA**: 3'	**Sun/Shade**: ☼, ☼
WUCOLS: M-/-M-M-/-/, •, o	**PDR**: Scale.		
Firescape Zone: unknown	**USDA**: 9-11	**Hardy**: Down to 20-26°F	**Altitude**: From 0,000-0,000'

Culture: Any moist, well-drained soil, neutral-slightly alkaline (7.0-_ pH). Tolerant of wind, salt, drought, poor-drainage and wet conditions. Shelter from frost until established.

WHY USE IT

Usage: Tall screen, container, under story, street, specimen, garden, shade, hedge, bark effect.
Notes: Authored by (James Edward Smith.) Robert Brown. Moderately lived for 50-150 years. Variety '**Elegans**' has broader leaves, bright red juvenile growth, maturing dark green when shaded by later growth.

Overall, San Francisco Arboretum, San Francisco, CA

Floral and bud cluster

Leaves

Bark

TRISTANIOPSIS laurina

Appendix B

Recommended Large Trees for West Hollywood

APPENDIX B
Recommended Trees for West Hollywood[5]

Large Trees[6]

Botanical Name	Common Name
Acacia melanoxylon	Black acacia
Afrocarpus falcatus (See *Afrocarpus gracilior* on information sheet.)	Fern pine
Celtis australis	European hackberry
Cinnamomum camphora	Camphor tree
Corymbia citriodora	Lemon-scented gum
Corymbia ficifolia	Red-flowering gum
Corymbia maculata	Spotted gum
Cupressus sempervirens	Italian cypress
Eucalyptus camaldulensis[7]	Red gum
Eucalyptus leucoxylon	White ironbark
Eucalyptus rudis	Flooded gum
Eucalyptus sideroxylon	Red ironbark
Gingko biloba 'Autumn Gold'	Autumn maidenhair tree
Gingko biloba 'Fairmont'	Fairmont maidenhair tree
Gingko biloba 'Saratoga'	Saratoga maidenhair tree
Gingko biloba 'Princeton Sentry'	Princeton Sentry maidenhair tree
Gleditsia triacanthos 'Moraine'	Moraine honey locust
Gleditsia triacanthos 'Sunburst'	Sunburst honey locust
Gleditsia triacanthos 'Shademaster'	Shademaster honey locust
Jacaranda mimosifolia	Jacaranda
Magnolia grandiflora 'Russet'	Russet southern magnolia
Pinus canariensis[8]	Canary Island pine
Pinus eldarica[9]	Afghan pine

[5]Not all species listed are appropriate for individual site conditions. A qualified staff member will assist in selecting a species from each street list that is appropriate for the specific site conditions.
[6]Greater than 35 feet tall at maturity
[7]For use in parks and open spaces
[8]For use in parks and open spaces
[9]For use in parks and open spaces

Large Trees[6]

Botanical Name	Common Name
Pinus torreyana[10]	Torrey pine
Platanus x *hispanica* 'Columbia'	Columbia London plane tree
Platanus x *hispanica* 'Yarwood'	Yarwood London plane tree
Platanus racemosa	California sycamore
Quercus agrifolia	Coast live oak
Quercus coccinea	Scarlett oak
Quercus douglasii	Blue oak
Quercus frainetto 'Forest Green'	Forest Green Hungarian oak
Quercus fusiformis	Escarpment live oak
Quercus ilex	Holly oak
Quercus kelloggii	California black oak
Quercus muehlenbergii	Chinquapin oak
Quercus rubra	Red oak
Quercus suber	Cork oak
Quercus virginiana 'Cathedral'	Cathedral southern live oak
Tabebuia impetiginosa	Pink trumpet tree
Ulmus parvifolia 'Drake'	Drake elm
Ulmus parvifolia 'Dynasty'	Dynasty elm
Ulmus parvifolia 'True Green'	True Green elm
Zelkova serrata 'Village Green'	Village Green zelkova

[10]For use in parks and open spaces

ACACIA melanoxylon KamCards® WIP 08/30/10

a-KA-sha mel-an-OX-i-lon | **Synonym**: None | **Family**: Fabaceae - Leguminosae

Gk thorny, a point, spiny, I sharpen, *L* black, wood | **Origin**: South and Eastern Australia, Tasmania

Common Name: Blackwood Acacia, Australian Blackwood, Tasmanian Blackwood | **Species in Genus**: 800

SHRUB/TREE

WHAT IT WILL BECOME

Height: 15-70' +	**Habit**: Pyramidal, Round-headed	**Texture**: Fine	**Density**: Medium
Width: 12-30' +	**Spacing**: 6-8'	**Planting Depth**: _ - _'	**Growth**: Fast

Leaf: Evergreen, alternate, bipinnately compound, ferny 12-15 paired lanceolate juvenile leaflets, 2-5 pinnae, replaced by 2-6 x 1-1¼" simple curved, oblanceolate phyllodia, entire margin, tapered base, narrow blunt tip, 3-6 prominent parallel veins, dull gray-green above, pale below, silvery-purple winter color. Foliage and fruit vary in shape by location.
Flower: Fragrant, cream to pale yellow ¼-½" spheres, short 1½-4" axillary branched racemes of 30-50 blooms, in spring.
Fruit: Brown 2-6" linear pod, flat narrow, twists, constricted, red aril around oval ⅛" hard black seeds, in summer-fall.
Bark: Dark gray to brown-black, rough, furrowed, fissured, short thick straight trunk, brittle spreading angular branches.
Special Maintenance: Prune in youth and summer to shape, reduce mass, remove brittle and crossing branches, root suckers and pick up litter. Can take heading back or pollarding. Low branching in open locations may need to be raised.

WHERE IT WILL GROW

Sunset Zones: 8-9, 13-24	**Seacoast Zones**: 1-3	**MPA**: 6-8'	**Sun/Shade**: ☼, ☼	**USDA**: 8-11
WUCOLS: VL-L-L-L-/-/, •	**Firescape Zones**: Retardant	**PDR**: Borer, thrip, Phytophthora, root rot.		

Culture: Any deep, moist, well-drained soil, acidic-very alkaline (5.6-7.8 pH). Tolerant of poor or saline soil, frost, drought, heat, smog, dust and coastal winds.

Hardy: Down to -20-30°F
Altitude: From sea level-4,500'

WHY USE IT

Usage: Shade, garden, quick screen, street, windbreak, hedge, erosion control, attracts bees and birds.
Notes: Authored by Robert Brown. Long lived to 40-75 years. Water deeply to promote deep rooting as aggressive shallow spreading roots can heave hardscapes. Suckers if roots are damaged. Shelter from wind. Pollen can cause allergic reactions. California big tree in Hayward.

Overall, University of California at Riverside, CA

Adult leaf

Juvenile leaves

Juvenile and adult leaves

Flowers

Buds up close

Bark

Fruit

Seed

ACACIA melanoxylon

AFROCARPUS gracilior — KamCards® WIP 08/30/10

TREE

af-row-KAR-pus gra-SILL-ee-or	**Synonym**: Podocarpus gracilior, Nageia falcatus		**Family**: Podocarpaceae
Gk a footed stalk, a fruit or seed, *L* slender		**Origin**: Eastern Africa, Uganda, Kenya, Ethiopia	
Common Name: Fern Pine, African Fern Pine			**Species in Genus**:

WHAT IT WILL BECOME

Height: 40-60'	**Habit**: Round-headed, Oval	**Texture**: Medium-fine	**Density**: Heavy
Width: 20-60'	**Spacing**: 15-40'	**Planting Depth**: _-_'	**Growth**: Slow

Leaf: Evergreen, alternate, simple, or 2-4 x ¼-½" linear-lanceolate, entire margin, flat, glossy bright light green juvenile growth, matures 1-2 x ¼-½" gray or bluish-green, black tipped, makes 2 toned billowy clouds.
Flower: Dioecious, yellow male catkin-like cones, persist, yellow, female blooms, inconspicuous, in spring.
Fruit: Bluish ½-1" drupes, waxy bloom, matures peachy, fleshy, 2-4 scaled cone, near branch ends, 1-seeded, in fall.
Bark: Light gray thin, flaking to reveal light orange platelets, furrowed, smooth, single or multi-trunked, spreading pendulous branches, green twigs.
Special Maintenance: Stake well in youth to support heavy foliage mass until strong trunk develops. Prune in spring-fall for traffic clearance and a strong central leader.

WHERE IT WILL GROW

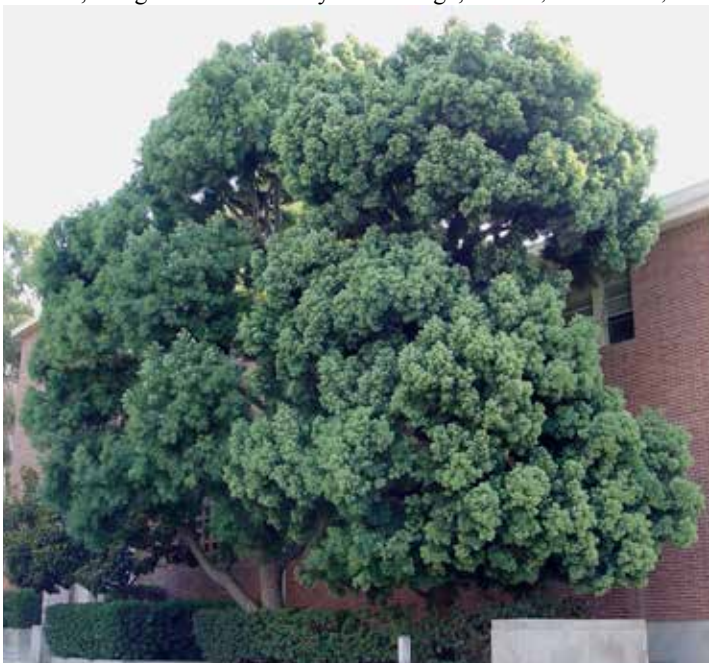
Sunset Zones: 8-9, 13-27, H1-H2	**Seacoast Zones**: 3	**MPA**: 8'	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-M-M-?-M, •, o	**PDR**: Resistant to deer.		
Firescape Zones: B-D	**USDA**: 9-11	**Hardy**: Down to 20-25°F	**Altitude**: From 0,000-0,000'

Culture: Any rich, moist, well-drained soil, very acidic-slightly alkaline. Tolerant of a poor soil, moderate drought, ocean winds, urban conditions, smog and air pollution. Shelter from cold dry winds.

WHY USE IT

Usage: Street, shade, standard, specimen, lawn, park, patio, garden, espalier, hedge, shrub, container, screen, golf course, parking lot, background, hanging basket, indoor, topiary.
Notes: Authored by Robert Knud Friedrich Pilger. Long lived for over 150 years. Versatile plants grown for good-looking foliage, interesting form; adaptable to many climates, many garden uses. Habit and foliage vary with age of plant and method of propagation. Plants grown from cuttings or grafts taken from such wood have limber branches, are slow to make vertical growth, seed grown specimens are sturdier. Not a clean tree for pools. California big tree in Orange.

Overall, foreground tree mainly new foliage, UCLA, Westwood, CA



Overall thinned, Rose Hills Memorial Garden, CA

Floral catkin

Fruit

Fruit clusters

Bark

New foliage

Small soil area

AFROCARPUS gracilior

EUROPEAN HACKBERRY
Celtis australis

Moderate to fast growing deciduous tree.
Native to Southern Europe.
Family: *Cannabaceae*

Tree Characteristics
Erect or Spreading and requires ample growing space.
Oval, Rounded or Umbrella Shape.
Has Deciduous foliage.
Height: 40 - 70 feet. Width: 40 - 50 feet.
Growth Rate: 24 to 36 Inches per Year.
Longevity 50 to 150 years or more.
Leaves Ovate, Gray Green or Dark Green, Gold, Deciduous.
Flowers Inconspicuous. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).
Black or Purple Drupe, Small (0.25 - 0.50 inches), fruiting in Summer or Fall Edible and Wildlife use it.
Bark Mottled, Dark Gray or Light Green, Smooth.
Shading Capacity Rated as Moderate in Leaf.
Shading Capacity Rated as Moderate out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints
Sunset Zones 8 - 16 and 18 - 20.
USDA Hardiness Zones 6 - 8.
Exposure Full Sun to Full Shade.
Moist to Dry Soil.
Drought tolerant.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Not Suited.

Pests & Disease Information
Resistant to Armillaria.

Health, Safety & Environmental Concerns
Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
Allergy Health Hazard.
Desirable Wildlife Plant.
Attracts Birds.
Wildlife use Fruit.

Overall

Leaves

Bark

Fruit

SelecTree. "*Celtis australis* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/celtis-australis >

CINNAMOMUM camphora — KamCards® WIP 08/31/10

TREE

sin-uh-MOH-mum kam-FOR-uh	**Synonym**: Camphora officinalis, Laurus camphora	**Family**: Lauraceae
Gk cinnamon, *Gk* carry, bear	**Origin**: China, Taiwan, Korea, Japan, Vietnam	
Common Name: Camphor Tree, Camphor Laurel		**Species in Genus**: 250

WHAT IT WILL BECOME

Height: 20-50' +	**Habit**: Round-headed, Umbrella	**Texture**: Medium	**Density**: Medium
Width: 30-80'	**Spacing**: 8-10'	**Planting Depth**: _ - _ '	**Growth**: Moderate

Leaf: Evergreen to briefly deciduous, alternate, simple, 2-5 x ½-2½" obovate, elliptical, entire margin, 3 veins prominent yellowish, leathery, thin, firm, 2 base glands, smooth, pink, red, or bronze in youth, matures shiny yellow green above, pale white below, yellow bronze in fall of colder regions, replaced as some shed in spring, camphor scented when crushed.
Flower: Fragrant, greenish-yellow blooms, fade to brown, on 2-3" axillary panicles, in late spring-early summer.
Fruit: Green, ¼-½", round drupes, fleshy, matures glossy black, pendent, cupped receptacle, 1-seeded, in winter-summer.
Bark: Dark brown to gray-black, narrowly fissured, rough, blocky, looks black when wet, strong heavy single trunked, 1-6' diameter, flared at base, erect, droop in age, spreading heavy limbs, bright green tinged red juvenile twig growth.
Special Maintenance: Prune in youth to shape and fall through winter to thin, develop a strong structure, for traffic clearance and remove damaged branches. Use mulch or plant a ground cover under the canopy. Pick up foliage that decomposes slowly but do not use in compost. Pick up heavy periodic litter. Water deeply to encourage deep rooting.

WHERE IT WILL GROW

Sunset Zones: 8-9, 12-28, H1-H2	**Seacoast Zones**: 3	**MPA**: 8' +	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: M-/-M-M-/-M, o	**PDR**: Mite, scale, Anthracnose, Oak root rot, Phytophthora, root rot, Verticillium wilt.		
Firescape Zones: B-D	**USDA**: 9-11	**Hardy**: Down to 15-20°F	**Altitude**: Best at lower altitudes

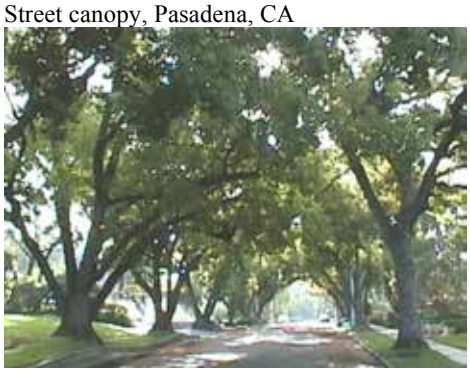
Culture: Any moist, deep, well-drained soil, slightly acidic-very alkaline (5.6-7.8 pH). Tolerant of soil, drought, wind, heat, air pollution, smog, poor drainage, coastal salinity, compacted soil and humidity in maturity. Shelter from wet soil, wind and frost in youth.

WHY USE IT

Usage: Large lawn, shade, park, garden, wide street, tall screen, hedge, windbreak, erosion control, attracts animals.
Notes: Authored by Carolus Linnaeus. Moderate lived to 75 years. Hard to transplant except when very small in youth. Surface roots can heave hardscapes and make mowing difficult. Competitive roots and dense canopy restrict growth under canopy. Creates a great street canopy. Flowers are **poisonous** if ingested, pollen can cause allergy reactions. Wood has medicinal properties and leaves and wood are distilled to produce camphor. Aromatic firewood. Variety '**Monum**'.

Overall, Arcadia, CA

Street canopy, Pasadena, CA



Bark, black when wet

Leaves

Fall color

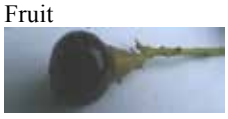
Restricted base

Floral cluster

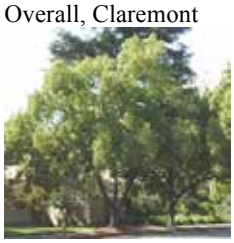
Flowers and fruit

Fruit

Fruit



Overall, Claremont



CINNOMOUM camphora

CORYMBIA citriodora

KamCards® **WIP 08/31/10**

TREE

kor-RIM-bee-uh sih-tree-oh-DOR-uh	**Synonym**: Eucalyptus citriodora, Corymbia citriodora citriodora	**Family**: Myrtaceae
Gk clustered, lemon, hide, skin, scent		**Origin**: Queensland, Australia
Common Name: Lemon-scented Gum, Citron-scented Gum		**Species in Genus**: 605

WHAT IT WILL BECOME

Height: 35-100' +	**Habit**: Oval	**Texture**: Medium	**Density**: Thin
Width: 10-50' +	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Very Fast

Leaf: Evergreen, alternate, simple, 2½-5 x ½-1½" narrow to broadly lanceolate ,wavy juvenile powdery gray or pinkish matures medium green 2½-10 x ½-1" narrow lanceolate, smooth, prominent midrib, parallel veins, lemon scented when crushed due to citronella, lower ½-⅔ of tree is bare, large pendent clusters at branch ends giving an airy cloud like look.
Flower: Creamy white ½-¾" staminate blooms, nectar rich terminal or axillary corymbose panicles of 3-5 blooms, high in canopy, not distinctive, from late summer-mid winter. Petals and sepals fused into a conical cap.
Fruit: Green ¼-½" urn-shaped capsule, smooth or warty, matures brown, dry, narrows at tip, 3-4 deep valves, in terminal clusters, sheds red-black seeds yearly, in late spring-summer.
Bark: Exfoliating in flakes revealing spotted cream patches yearly, tan, blue-gray powder white to pinkish, smooth, aromatic, tapering single-trunked, narrow, straight or curved, erect heavy branches, pendent branchlets, spreading crown.
Special Maintenance: Stake weak trunks in youth. Prune in spring to remove suckers, reduce side branches and thin often to strengthen and protect from winds. Do not top cut or prune from May to October due to pests. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-6, 8-24, H1-H2	**USDA**: 8-11	**Seacoast Zones**: 3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: L-/-L-M-/-M, •, o	**PDR**: Aphid, borer, lerp psyllid, mealybug, mite, scale, thrip, chlorosis, oak root rot, Phytophthora, root rot. Resistant to deer, Texas root rot, Verticillium wilt.			
Altitude: From 210-3,000'				

Culture: Any moist, rich, well-drained soil, slightly acidic-very alkaline, not calcareous or shale. Tolerant of heat, wet, smog and drought. Shelter from calcium and wind in youth.	**Firescape Zones**: B-D
	Hardy: Down to 20-28°F

WHY USE IT

Usage: Street, garden, park, silhouette, specimen, golf course, grove, small soil space, screen, copse, windbreak, patio, honey production, essential oil production, attracts birds and bees.
Notes: Authored by William Jackson Hooker. Moderately lived for over 50 years. Do not plant pot-bound stock. Roots can be voracious, growing shallow and laterally. Gradual hardening off in fall is more critical than temperature. Can have brittle branches that could drop in heat. Similar to Eucalyptus maculata. Very graceful tree enhances architecture.

Overall, California Scenario Garden, Santa Ana, CA

Juvenile foliage and colors

Juvenile leaf color

Buds cluster, dried

Adult foliage

Bark

Fruit

Valves exposed

Seed

Flower

CORYMBIA citriodora

CORYMBIA ficifolia

KamCards® **WIP 08/31/10**

TREE

kor-RIM-bee-uh fiss-ih-FOE-lee-uh	**Synonym**: Eucalyptus ficifolia	**Family**: Myrtaceae
Gk clustered, *L* fig leaved		**Origin**: Western Australia
Common Name: Red-Flowering Gum, Bloodwood		**Species in Genus**: ≈ #

WHAT IT WILL BECOME

Height: 20-45'	**Habit:** Round-headed, Weeping	**Texture**: Medium	**Density**: Heavy
Width: 15-60'	**Spacing**: _ - '	**Planting Depth**: _ - '	**Growth**: Fast

Leaf: Evergreen, alternate, simple 3-7 x 2" ovate, broad, prominent yellow midrib, entire margin, tapered tip, leathery, scented, glossy dark green above, pale below.
Flower: Bright red, cream, pink, rose, salmon, orange or white 1-2" staminate blooms, 7 blooms per dense 1' terminal umbels, any time of the year, heaviest in late spring-summer.
Fruit: Green _-1" oval cup capsule, heavy, matures brown, dry, hard, 3-valves enclosed, brown tapered winged seeds.
Bark: Exfoliating, light gray to dark brown, fibrous, rough, furrowed, thick single-trunked, lignotuber, spreading, low branching, weeping branchlets.
Special Maintenance: Prune to develop a strong structure and remove fruit prior to weight causing branch failure.

WHERE IT WILL GROW

Sunset Zone: 5-6, 8-27, H1-H2	**Seacoast Zone**: 2-3	**Firescape Zone**: unknown	**Sun/Shade**: ☼, ☼
WUCOLS: L-/-M-M-/-/, ɵ, •	**Altitude**: From 0,000-0,000'	**Hardy**: Down to 25-30°F	
PDR: Aphid, borer, caterpillar, mealybug, mite, scale, thrip, gall, leaf spot, Oak root rot, Phytophthora, powdery mildew, root rot. Resistant to Armillaria root rot, deer and Verticillium wilt. (Texas root rot)		**MPA**: _-_ ' **USDA**: 7-11	

Culture: Any moist to dry, well-drained soil, slightly acidic-very alkaline (_._-_._ pH). Tolerant of drought, smog, air pollution, poor drainage, coastal salinity and compacted soil.

WHY USE IT

Usage: Street, highway, lawn, parking lot, floral display, screen, container, interiorscape, attracts bees.
Notes: Authored by (Ferdinand von Mueller) K.D.Hill & Lawrence Alexander Sidney Johnson. Moderately lived for over 50 years. Difficult to produce grafted plants. Select plants in bloom as seed grown plants are variable.

Overall, Los Angeles Arboretum, Arcadia, CA

Leaf

Bark

Canopy

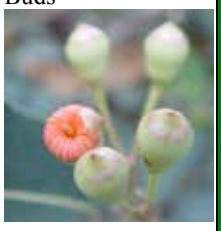
Fruit

Floral cluster

Floral cluster

Floral cluster

Buds



Bud cluster

CORYMBIA ficifolia

CORYMBIA maculata — KamCards® WIP 08/31/10

TREE

kor-RIM-bee-uh mak-you-LA-tuh | **Species of Genus**: 605 | **Family**: Myrtaceae

Gk clustered, lemon, hide, skin, scent | **Synonym**: Eucalyptus maculata, Corymbia maculata | **Origin**: Coastal Queensland, New South Wales, Victoria, Australia

Common Name: Spotted Gum

WHAT IT WILL BECOME

Height: 50-75' +	**Habit**: Standard, Round-headed	**Texture**: Medium	**Density**: Thin
Width: 30-40'	**Spacing**: 30-40' +	**Planting Depth**: _-_'	**Growth**: Fast

Leaf: Evergreen opposite juvenile growth, simple, 2½-7" ovate, pointed tip, prominent yellowish-green veins, angular petiole, glossy light green above, pale hairy veins below, matures alternate, narrow-broad lanceolate to sickle-shaped, smooth, darker green.
Flower: Fragrant, white ½" staminate blooms, ovoid buds, hemispherical beaked cap, flexible tip, 3-7 on 1-3" axillary or terminal umbels or corymbose panicles, flat peduncle, mid winter-mid spring.
Fruit: Green ¼-½" urn-shaped capsules, matures brown, rough, 3-4 hidden valves, red black seeds, in summer-fall.
Bark: Exfoliating, large elliptical patches of gray, blue-gray, cream, pink to violet, exposes smooth lower layer in dimpled, spotted pattern, single-trunk, spreading branches create a wide canopy.
Special Maintenance: Pruning requires a special service due to tree and foliage height.

WHERE IT WILL GROW

Sunset Zones: 1-24	**Firescape Zones**: B-D	**Seacoast Zones**: 3	**MPA**: 8'	**Sun/Shade**: ☼, ☼

WUCOLS: L-/-M-M-/-/, • | **USDA**: 9-11

Altitude: From sea level-3,000'

Hardy: Down to 19-23°F

PDR: Eucalyptus longhorn borer, psyllid, Oak root rot, Phytophthora, root rot. Resistant to deer, Texas root rot, Verticillium wilt.

Culture: Any moist to dry, well-drained soil, slightly acidic-very alkaline. Tolerant of smog and drought.

WHY USE IT

Usage: Garden, specimen, grove, architectural element, koala fodder, honey production, attracts birds and bees.
Notes: Authored by William Jackson Hooker. Moderately lived for over 50 years. Closely related to Corymbia citridora in bark color and smaller habit, but the leaves do not have the lemon scent.

Overall, UCLA campus, Los Angeles, CA

Leaves

Pendent branchlet

Juvenile leaf color

Bark

Flowers

Floral clusters

Bud

Fruit

Bark

CORYMBIA maculata

CUPRESSUS sempervirens — KamCards® WIP 08/31/10

TREE

koo-PRESS-us sem-per-VYE-renz	**Synonym**: None	**Family**: Cupressaceae
L to produce, equal, always, green		**Species in Genus**: 20
Common Name: Italian Cypress, European, Cypress, Roman Cypress, Mediterranean Cypress, Funeral Cypress, Pillar Cypress, Classical Cypress		**Origin**: Southern Europe, western Asia, Iran, Tunisia, Crete, Mediterranean

WHAT IT WILL BECOME

Height: 20-60' +	**Habit**: Columnar	**Texture**: Fine	**Density**: Heavy
Width: 3-20'	**Spacing**: 4-6'	**Planting Depth**: _-_'	**Growth**: Moderate

Leaf: Evergreen, opposite, simple, 1/16" paired irregular scale-like, obtuse, rounded blunt pointed tip, flat, sheathed, 4 rows, dense, closely set, overlapping, on cordlike branches, whorled sprays, smooth, resinous glands, dark gray-green.
Flower: Monoecious, yellow brown 1/10-1/12", male, inconspicuous blooms, clustered at tips, in spring.
Fruit: Green, ½-1¾" oval female cones, matures glossy brown, 8-14 overlapping woody shield-like hooked scales, in fall.
Bark: Medium to dark gray-brown, shallow spiral ridges, fibrous, furrowed, rough, thin, straight single-trunked, resists rot, dense horizontal low-branching, cherry red erect branches, form varies due to microclimate and space available.
Special Maintenance: Prune to shape, prevent top heavy growth for size of root system and remove dead branches. Water moderately for erect branching, wind resistance and uniform columnar shape. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 4-24, 28-32, H1-H2	**Seacoast Zones**: 2-3	**MPA**: _-_'	**Sun/Shade**: ☼, ☼
WUCOLS: L-M-L-L-M-M, •	**PDR**: Bagworm, mite, twig-boring beetle, canker, Gummosis, Phytophthora, root rot, Seiridium cardinale. Resistant to Texas root rot.		
Firescape Zones: None			
USDA: 7-11	**Hardy**: Down to 15°F		**Altitude**: From sea level-2,600'

Culture: Any deep, well-drained soil, very acidic-very alkaline. Tolerant of heat, smog, drought, light frost, clay, poor or calcareous soil, salinity once established

WHY USE IT

Usage: Hedge, screen, formal effect, terrace, specimen, windbreak, religious effect.
Notes: Authored by Carolus Linnaeus. Most widely planted of genus. Long lived to 3,000 years. Deep rooting. Best in coastal, inland or valley regions and tolerates all desert zones. Religious symbol. Variety '**Glauca**' has blue-green foliage, '**Swane's Golden**' has golden green foliage and '**Stricta**' has very narrow habit.

Overall group, Claremont Colleges

Overall '**Stricta**', UCLA

Foliage spray

Seeds

Overall, Claremont Colleges

Male floral cone

Female fruit cone

Leaves

Bark

CUPRESSUS sempervirens

EUCALYPTUS camaldulensis — KamCards® WIP 09/01/10

TREE

yew-kah-LIP-tuss cam-ed-due-LEN-sis	**Synonym**: Eucalyptus rostrata, Eucalyptus robusta	**Family**: Myrtaceae
L well covered, Italian district in Tuscany		**Origin**: Australia, Tasmania
Common Name: River Red Gum, Red Gum, Murray Red Gum, Australian Kino		**Species in Genus**: 605

WHAT IT WILL BECOME

Height: 45-150'	**Habit**: Round-headed, Oval	**Texture**: Medium	**Density**: Medium
Width: 45-65'	**Spacing**: 30-40' +	**Planting Depth**: _ - _ '	**Growth**: Fast

Leaf: Evergreen, opposite matures alternate, simple, 8-12 x 1" oblanceolate, narrow lanceolate, to sickle-shaped, pointed tip, wedge base, entire margin, thin, glandular, yellow prominent vein, pendent, dull blue-gray juvenile growth, matures reddish medium green, scented when crushed.
Flower: Greenish white to pale yellow ¼-½" staminate blooms, nectar-rich, petals and sepals are fused into a ⅜" conical beaked cap, 5-11 blooms on pendent axillary umbels, on ½" stems, in late winter-spring.
Fruit: Brown 5/16" capsules, 3-5 prominent protruding valves, small yellow brown smooth seeds, in summer-fall.
Bark: Exfoliating, thin large strips, smooth, mottled patches, ashy blue, gray, cream and brown upper bark, variable habit: typically curved rough stout, single or multi-trunked, lignotuber, twisted, low branching, spreading, angled branches, graceful pendent red branchlets, red wood, could drop limbs on hot days.
Special Maintenance: Prune to open silhouette, and remove storm or frost damage, do not top cut. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-6, 8-24, H1-H2	**USDA**: 8-11	**Seacoast Zones**: 3	**MPA**: _ - _ '	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: L-L-L-L-M-M, •	**Hardy**: Down to 12-23°F	**PDR**: Eucalyptus longhorn beetle borer, Red Gum lerp psyllid, chlorosis, oak root rot, root rot.		
Firescape Zones: None	**Altitude**: From 75-2,200'			

Culture: Any soil, slightly acidic-very alkaline. Tolerant of drought, frost, heat and wet. Shelter from calcium carbonate.

WHY USE IT

Usage: Highway, street, garden, park, silhouette, reclamation, windbreak, shade, riparian, attracts birds and bees.
Notes: Authored by Friedrich Dehnhardt. Moderately lived for over 50 years. Aggressive roots compete for water and nutrients and can inhibit other plants and lift hardscapes. One of the most planted eucalypts worldwide. **Use caution** planting in California due to psyllid infestation. Tolerant of interior valley heat or cold and will regenerate after 11°F freeze. Red resin sap. Pollen can cause allergy reactions. California big tree in Fresno.

Overall, Rialto, CA*

Leaves

Flower and bud

Bud, beaked cap

Fruit capsules

Bark at base*

Windbreak row*

*Photographs by Ken Kammeyer

EUCALYPTUS camaldulensis

WHITE IRONBARK

Eucalyptus leucoxylon

Bark can be a litter problem. Has fragrant Leaf.
Hardiness estimate: 14-18 degrees F.
Native to Southern Australia.
Family: *Myrtaceae*

Tree Characteristics

Erect or Weeping and requires ample growing space.
Oval Shape.
Has Evergreen foliage.
Height: 30 - 90 feet. Width: 18 - 60 feet.
Growth Rate: 36 or More Inches per Year.
Longevity 50 to 150 years.
Leaves Falcate, Gray Green, No Change, Evergreen.
White. Flowers in Spring or Winter. Has perfect flowers (male and female parts in each flower).
Brown or Mostly Green Capsule, Small (0.25 - 0.50 inches), fruiting in Spring or Summer.
Bark Cream or Light Green, Exfoliating or Mottled.
Shading Capacity Rated as Moderately Low in Leaf.
Litter Issue is Dry Fruit, Twigs and Bark.

Overall

Tree Site Conditions & Constraints

Sunset Zones 8, 9 and 12 - 24.
Exposure Full Sun.
Well Drained Soil.
Drought tolerant.
Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Leaves

Bark

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Weak.
Root Damage Potential Rated as Low.
Allergy Health Hazard.
Attracts Birds.
Not Deer Palatable.
Wildlife use Fruit.

Flowers

Fruit

Special Uses & Values

Screen.

SelecTree. "*Eucalyptus leucoxylon* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/eucalyptus-leucoxylon >

FLOODED GUM

Eucalyptus rudis

Hardiness estimate: 12-18 degrees F.
Has fragrant Leaf.
Native to Southwestern Australia.
Family: *Myrtaceae*

Additional Common Names

FLOODED GUM, DESERT EUCALYPTUS, DESERT GUM

Tree Characteristics

Spreading or Weeping and requires ample growing space.
Rounded Shape.
Has Evergreen foliage.
Height: 30 - 60 feet. Width: 25 - 40 feet.
Growth Rate: 36 or More Inches per Year.
Longevity 50 to 150 years.
Leaves Ovate, Gray Green or Dark Green, No Change, Evergreen.
White. Flowers in Spring or Summer. Has perfect flowers (male and female parts in each flower).
Brown Capsule, Small (0.25 - 0.50 inches), fruiting in Summer or Fall.
Bark Red Brown, Exfoliating.
Shading Capacity Rated as Dense in Leaf.
Litter Issue is Dry Fruit.

Overall

Tree Site Conditions & Constraints

Sunset Zones 5 - 6 and 8 - 24.
USDA Hardiness Zones 9 - 10.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil. Drought tolerant.
Clay, Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Salinity Tolerance is Good Inland.
Seaside Tolerance is Medium in Moderate Zone.

Fruit

Pests & Disease Information

Resistant to Texas Root Rot and Verticillium. Susceptible to Beetle Borers, Psyllid and Thrip, Armillaria, Phytophthora and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
Allergy Health Hazard.
Biogenic Emissions considered High.
Fire Resistance is Unfavorable.
Attracts Bees.
Not Deer Palatable.

Bark

Branches

Special Uses & Values

Riparian.

SelecTree. "*Eucalyptus rudis* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/eucalyptus-rudis >

EUCALPYTUS sideroxylon 'Rosea'

KamCards® **WIP 09/01/10**

TREE

yew-kah-LIP-tuss sye-der-OKS-ih-lon RO-zee-uh
L well covered, iron, wood, pink

Synonym: Eucalyptus leucoxylon sideroxylon 'Rosea'

Family: Myrtaceae
Species in Genus: 605

Common Name: Red Ironbark, Pink Ironbark, Mulga Island Eucalyptus, Mulga Island Ironbark, Mugga

Origin: New South Wales, Victoria, Queensland, Australia

WHAT IT WILL BECOME

Height: 20-80' | **Habit**: Oval, Columnar, Weeping | **Texture**: Medium | **Density**: Medium
Width: 10-60' | **Spacing**: 40' | **Planting Depth**: _-_' | **Growth**: Fast

Leaf: Evergreen, opposite, simple, 2½-6 x ½-1" linear to lanceolate dull blue-green juvenile growth, pointed tip, wavy entire margin, rounded wedge base, curved, waxy bloom, matures alternate lanceolate gray-green, bronze winter color, scented when crushed.
Flower: Light pink, red to rose ¾-1⅛" stamen blooms, 3-7-9 on pendent umbels, in fall-spring or anytime.
Fruit: Greenish ½-¾ x ⅜" goblet-shaped capsules, conical beaked cap of fused petals and sepals, staminal ring, faint ribs, 5-6 enclosed valves, matures purplish-green, 3-7 in axillary clusters, gray to dark brown seeds in summer, retained.
Bark: Exfoliating in peels or flakes, revealing copper brown, reddish-gray nearly black, rough, ridged, fissured, red in deep furrows, dark red hard wood, often crooked, single-trunked, spreading, smooth white branches, brittle branches, erect or weeping, pendulous branchlets, stump sprouts.
Special Maintenance: Stake in youth, prune in spring to shape, correct structure and remove suckers. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-6, 8-24, H1-H2 | **Seacoast Zones**: 2-3 | **MPA**: 5-6' | **Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-L-M-M, • | **USDA**: 9-11 | **Hardy**: Down to 15-25°F | **Altitude**: From sea level-3,500'
Firescape Zones: B-D | **PDR**: Beetle borer, thrip, chlorosis, oak root rot, Phytophthora, root rot. Resistant to deer, Texas root rot and Verticillium wilt.

Culture: Any moist to dry well-drained soil, neutral-very alkaline. Tolerant of drought, heat, desert, some cold, frost, dust, wind, smoke, pollution, smog, urban conditions and poor, shallow or sterile soil.

WHY USE IT

Usage: Screen, street, highway, group, specimen, park, patio, golf course, parking lot, shade, garden, windbreak, watershed protection, bark effect, timber, honey production, attracts birds and bees.
Notes: Authored by Norman D Ingham. Moderate lived to over 40 years. Voracious shallow roots spread laterally. Seedlings vary in form and density and are not true to floral color. Good at coastal or inland avoid lawns and clay.

Overall, Little Tokyo, Los Angeles, CA

Leaf pendent habit

Bark in maturity

Bark in youth

Floral cluster

Floral clusters

Buds

Fruit cluster

EUCALYPTUS sideroxylon 'Rosea'

GINKGO biloba

KamCards® **WIP 09/02/10**

TREE

GING-koh bi-LOW-buh | **Synonym**: Salisburia adiantifolia | **Family**: Ginkgoaceae

L Silver apricot, two, *Gk* lobes | **Origin**: Southeast China

Common Name: Ginkgo, Maidenhair Tree, Golden Fossil Tree, Stink Bomb Tree, Duck's Foot Tree, Silver Apricot, Yin-Hsing, Silverfruit, Sacred Tree of China

Species in Genus: 1

WHAT IT WILL BECOME

Height: 20-80' +	**Habit**: Pyramid, Irregular	**Texture**: Medium-fine	**Density**: Medium
Width: 20-40' +	**Spacing**: 30-40'	**Planting Depth**: _-_ '	**Growth**: Slow to Moderate

Leaf: Deciduous, alternate, simple 1-4 x ½" broad, fan-shaped, obovate to deltoid, usually 2 lobes, but can vary in quantity and depth to an entire margin, thick side margins, veins diverging from central base, smooth, 3-5 clustered on woody spurs light matte green, yellow fall color, glows when backlit, all drop within 1 or 2 days making a golden carpet.
Flower: Dioecious, fragrant, yellow-green slender 1-3" erect loose male catkins axillary, 3-5 green 2" paired female blooms, 1 usually fails, clustered on spurs, inconspicuous, prior to foliage, may take 20 years to first bloom, in spring.
Fruit: Green 1-1¼" drupes, waxy white bloom, matures peachy, fleshy, chewy texture, single edible triangular nut, ripens in fall, plant only grafted male trees, unless fruit is desired, females bear messy smelly fruit.
Bark: Pale gray to gray-brown, ridges, thick fissures, deep furrowed in age, straight, tapered, single-trunked, spreading, erect, droops in maturity, female plants are wider spreading.
Special Maintenance: Stake in youth. Prune in early spring to shape and for a strong central leader. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 1-10, 12, 14-24, 28, 30-44	**Seacoast Zones**: 3	**MPA**: 5-6'	**Sun/Shade**: ☼, ☼

WUCOLS: M-M-M-M-M-?, •, o

PDR: Mealybug, nematode, Anthracnose, fungal leaf spot, root rot. Resistant to deer, gypsy moth, oak root fungus and Verticillium wilt.

Firescape Zones: B-D	**USDA**: 3-9	**Hardy**: Down to 10-15°F	**Altitude**: From 0,000-0,000'

Culture: Any deep, rich, moist, well-drained soil, very acidic-slightly alkaline (6.1-7.5 pH). Tolerant of wind, drought, urban conditions, poor or compacted soil, occasional wet soil, smog, pollution, salt air, dust and extreme heat or cold.

WHY USE IT

Usage: Highway, street, specimen, lawn, shade, park, parking lot, bonsai, fall color, nut production, attracts squirrels.
Notes: Authored by Carolus Linnaeus. Long lived to over 1,000 years. Transplants easily at any age, due to fibrous and deep roots. Triassic period tree, a true gymnosperm related to conifers. Check for root-bound stock. Handling flesh can cause dermatitis and pollen can cause allergy reactions. Can set fruit without pollination. Prepared seeds are safe to consume in small quantities. Seeds are used in herbal memory supplement. Varieties '**Autumn Gold**' and '**Fairmont**' are reliably erect males. Other varieties include '**Fastigata**', '**Lakeview**', '**Princeton Sentry**' and soon variegated foliage.

Overall, Los Angles Arboretum, Arcadia, CA

Leaf

Bark

Overall, deciduous

Fall color*, Redding, CA

*Photograph by Ken Kammeyer

Fruit ripened

Floral clusters

Bi-lobed margin

GINKGO biloba

MAIDENHAIR TREE

Ginkgo biloba

Resistant to oak root fungus. Smog tolerant. Female tree has fruit with obnoxious odor. Plant male trees to avoid fruit. Can grow to 100 feet in the right conditions but commonly shorter. Has Unpleasant Fruit fragrance. Native to China.
Family: *Ginkgoaceae*

Tree Characteristics

Erect or Spreading and requires ample growing space.
Conical Shape.
Has Deciduous foliage.
Height: 35 - 65 feet. Width: 25 feet.
Growth Rate: 12 to 24 Inches per Year.
Longevity Greater than 150 years.
Leaves Rhomboidal, Medium to Light Green, Gold, Deciduous.
Flowers Inconspicuous. Flowers in Spring. Has either male or female flowers (dioecious). Trees may be sold as male or female.
Orange or Yellow Drupe, Medium (0.50 - 1.50 inches), fruiting in Fall.
Bark Light Green, Fissured.
Shading Capacity Rated as Moderate in Leaf.
Shading Capacity Rated as Moderately Low out of Leaf.
Litter Issue is Wet Fruit.

Overall

Tree Site Conditions & Constraints

Sunset Zones 1 - 10, 12 and 14 - 24.
USDA Hardiness Zones 5 - 9.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil.
Clay, Loam or Sand Texture.
Highly Acidic to Slightly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Overall
Ginkgo biloba
'Fairmont'

Overall
Ginkgo biloba
'Autumn Gold'

Pests & Disease Information

Resistant to Armillaria. Susceptible to Anthracnose.

Health, Safety & Environmental Concerns

Branch Strength Rated as Strong.
Root Damage Potential Rated as Moderate.
Allergy and Irritant Health Hazard.
Biogenic Emissions considered Moderate.
Attracts Squirrels.

Leaves

Bark

Special Uses & Values

Hedged or Pleached.

SelecTree. "*Ginkgo biloba* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/ginkgo-biloba >

MORAINE LOCUST

Gleditsia triacanthos var. *inermis* 'Moraine'

Tolerates some drought. Grows poorly where ocean salt spray occurs. Has few or no pods. Trees may be referred to as male or female.
Family: *Fabaceae*

Tree Characteristics

Spreading with a High Canopy.
Oval or Umbrella Shape.
Has Deciduous foliage.
Height: 30 - 65 feet. Width: 30 - 50 feet.
Growth Rate: 36 or More Inches per Year.
Longevity 50 to 150 years or more.
Leaves Bipinnately Compound, Light Green, Gold, Deciduous.
Flowers Inconspicuous. Flowers in Spring or Summer. Has either male or female flowers (dioecious). Trees may be sold as male or female.
Few, Brown or Purple Pod, Very Large (Over 3.00 inches), fruiting in Summer or Fall.
Bark Black or Dark Brown, Furrowed or Smooth.
Shading Capacity Rated as Low in Leaf.
Shading Capacity Rated as Low out of Leaf.

Tree Site Conditions & Constraints

Sunset Zones 1 - 16 and 18 - 20.
USDA Hardiness Zones 3 - 8.
Exposure Full Sun to Partial Shade.
Wet to Dry Soil.
Drought tolerant.
Loam or Sand Texture.
Highly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Not Suited.

Pests & Disease Information

Resistant to Verticillium. Susceptible to Invasive Shot Hole Borer, Caterpillars, Insect Galls, Pod Gall Midge and Spider Mites, Mistletoe, Phytophthora and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
Allergy Health Hazard.
Attracts Bees.

Overall

Leaves

Bark

SelecTree. "*Gleditsia triacanthos* var. *inermis* 'Moraine' Tree Record." 1995-2019. Jul 19, 2019.
< https://selectree.calpoly.edu/tree-detail/gleditsia-triacanthos-inermis-moraine >

GLEDITSIA triacanthos 'Sunburst' KamCards® WIP 09/02/10

TREE

gleh-DIT-see-uh tri-ah-KAN-thos | **Synonym**: Gleditsia triacanthos inermis | **Family**: Fabaceae - Leguminosae

Johann Gottlieb Gleditsch, botanist, *L* three, *Gk* a spine thorn | **Origin**: Central and Eastern North America

Common Name: 'Sunburst' Honey Locust | **Species in Genus**: 12

WHAT IT WILL BECOME

Height: 35-70'	**Habit**: Round-headed, Oval	**Texture**: Fine	**Density**: Medium
Width: 25-35'	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Deciduous, alternate, 8-10" bi-pinnately compound, ¾-1½" oval leaflets, bright yellow juvenile growth turns pale green in summer, late to leaf out, goes dormant early, early yellow fall color, giving grass added sun in spring and fall, will drop foliage due to temperature changes.
Flower: Inconspicuous, small, greenish blooms on racemes, in spring-summer.
Fruit: No fruit or a few large brown to purple pods, in summer-fall.
Bark: Black to dark brown, orange furrowed, smooth, thorn less, straight, single-trunked, winding branches, spreading to ascending branches.
Special Maintenance: Prune to promote a strong central leader and to remove lower thorns.

WHERE IT WILL GROW

Sunset Zones: 1-16, 18-20, 32-43	**Seacoast Zones**: 1-3	**MPA**: 6' +	**Sun/Shade**: ☼, ☼
USDA: 3-7	**Hardy**: Down to _°F	**Altitude**: From 0,000-0,000'	

WUCOLS: not listed, •, o
Firescape Zones: B-D, Retardant

PDR: Caterpillar, honey locust borer, pod gall midge, spider mite, webworm, canker, insect gall, mistletoe, Phytophthora, root rot. Resistant to Verticillium wilt.

Culture: Any rich, moist, well-drained soil, very acidic-very alkaline (6.1-7.8 pH). Tolerant of poor drainage, salt, heat, dry, air pollution and drought. Shelter from frost, cold, heat and wind in youth, otherwise hardy.

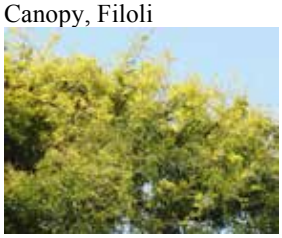
WHY USE IT

Usage: Shade, specimen, screen, color effect, attracts bees.
Notes: Moderately lived for 50-150 years. Easy to transplant due to fibrous roots. Invasive shallow roots can sucker and heave hardscapes, but can grow grass under canopy. Pollen can cause allergy reactions. Plant in front of a green point of reference to highlight the foliage. Do not plant if you need dense shade over a long season. Good lawn tree as small leaflets dry up and disappear into grass, decreasing raking chores.

Overall, Los Angles Arboretum, Arcadia, CA

Overall, S CA Mountains

Canopy, Filoli



Bark

Fruit

Overall, deciduous

Leaves

GLEDITSIA triacanthos 'Sunburst'

SHADEMASTER LOCUST

Gleditsia triacanthos var. *inermis* ‘Shademaster’

Tolerates some drought. Grows poorly where ocean salt spray occurs. Has few or no pods.
Trees may be referred to as male or female.
Family: *Fabaceae*

Tree Characteristics

Erect or Spreading with a High Canopy.
Oval or Umbrella Shape.
Has Deciduous foliage.
Height: 45 feet. Width: 35 feet.
Growth Rate: 36 or More Inches per Year.
Longevity 50 to 150 years or more.
Leaves Bipinnately Compound, Medium to Light Green, Gold, Deciduous.
Flowers Inconspicuous. Flowers in Spring or Summer. Has either male or female flowers (dioecious). Trees may be sold as male or female.
Few, Brown or Purple Pod, Very Large (Over 3.00 inches), fruiting in Summer or Fall.
Bark Black or Dark Brown, Furrowed or Smooth.
Shading Capacity Rated as Moderate in Leaf.
Shading Capacity Rated as Low out of Leaf.

Overall

Tree Site Conditions & Constraints

Sunset Zones 1 - 16 and 18 - 20.
USDA Hardiness Zones 4 - 9.
Exposure Full Sun to Partial Shade.
Wet to Dry Soil.
Drought tolerant.
Loam or Sand Texture.
Highly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Not Suited.

Leaves

Bark

Pests & Disease Information

Resistant to Armillaria and Verticillium. Susceptible to Invasive Shot Hole Borer, Caterpillars, Insect Galls, Pod Gall Midge and Spider Mites, Mistletoe, Phytophthora and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Moderate.
Allergy Health Hazard.
Attracts Bees.

Branches

Fruit

SelecTree. “*Gleditsia triacanthos* var. *inermis* ‘Shademaster’ Tree Record.” 1995-2019. Jul 19, 2019.
< https://selectree.calpoly.edu/tree-detail/gleditsia-triacanthos-inermis-shademaster >

JACARANDA mimosifolia — KamCards® WIP 09/02/10

jak-uh-RAN-duh mih-moh-sih-FOH-lee-uh
Brazilian name, *Gk*, mimic, *L* leaf like Mimosa

Synonym: Jacaranda acutifolia, Jacaranda ovatifolia, Jacaranda ovalifolia

Family: Bignoniaceae
Species in Genus: 34-50

Common Name: Jacaranda, Brazilian Rosewood, Sharpleaf Jacaranda

Origin: Northern Argentina, Brazil, Paraguay

TREE

WHAT IT WILL BECOME

Height: 25-50' +
Habit: Round-headed, Umbrella, Oval, Vase
Texture: Fine
Density: Medium
Width: 15-70' +
Spacing: 40' +
Planting Depth: _ - _ '
Growth: Fast

Leaf: Evergreen to semi-deciduous, opposite, 10-24" odd bipinnate compound fern-like 9-30 paired oblong-rhomboid narrow ⅜-¾ x ¼-⅓" leaflets, terminal ½" leaflet is longest, long tapered tip, 10-20 paired pinnae, entire margin, pointed tips, winged rachis, smooth, hairy except near tips, bright medium green, turns rusty then drops in late winter-spring.
Flower: Fragrant, lavender blue 1½-2 x 1½" tubular blooms, white throat, pendent on 8-12" erect loose terminal panicles of 50 blooms, in late spring-early summer, prior to foliage, possible any time from spring-fall if adequate light is available, often fails to bloom in path of ocean winds or where heat is inadequate.
Fruit: Green 1-3" round pods, flat, wavy, matures brown, dry, hard, woody, persist, papery, narrow winged seeds, wind dispersed, in summer-fall.
Bark: Gray-brown, thin, smooth, furrowed, deep fissured, rough, leaning, single or multi-trunked, spreading, low branching, brittle wood, deep roots.
Special Maintenance: Prune in early spring for a strong central leader, to shape, to reduce wind damage, and for clearance.

WHERE IT WILL GROW

Sunset Zones: 12-13, 15-25, 27, H1-H2
USDA: 9-11
Seacoast Zones: 3
MPA: 5-6'
Sun/Shade: ☼

WUCOLS: M-M-M-M-/-M, •
Hardy: Down to 41-45°F
Firescape Zones: B-D
Altitude: From sea level-3,000'
PDR: Aphid, black sooty mold, mushroom root rot, Phytophthora, root rot. Resistant to oak root fungus.

Culture: Any rich, moist, well-drained soil, slight acidic-slight alkaline (5.6-7.5 pH). Tolerant of salinity, heat, drought.

WHY USE IT

Usage: Specimen, shade, street, parking lot, garden, park, lawn, golf course, pool, tropical effect, screen, floral display, dry arrangement, attracts animals.
Notes: Authored by David Don. Moderately lived for over 40 years. Transplant in winter dormancy. Foliage appears quickly or may remain bare until tree blooms. City Tree of Pretoria, South Africa. Pruning can distort the shape of the tree. Shelter from wind. Fairly hardy in maturity, young plants are tender below 25°F but often come back from a freeze to make a multi-stemmed, shrubby plant. The odd number and leaflets' bristle tip, distinguish it from Albizia julibrissin. White-flowered variety '**Alba**' can have more lush foliage, longer bloom period, but fewer blooms and be more tender.

Overall, Los Angeles Arboretum, Arcadia, CA

Deciduous in bloom, Westchester, CA

Dry and green fruit

Leaf

Buds

Floral cluster

Bark

Seeds

Leaflets and terminal taper

JACARANDA mimosifolia

RUSSET SOUTHERN MAGNOLIA

Magnolia grandiflora 'Russet'

Blooms at a young age. Some references suggest this tree can grow 80 feet tall. Has fragrant Flower.
Family: *Magnoliaceae*

Additional Common Names

RUSSET SOUTHERN MAGNOLIA, BULL BAY

Tree Characteristics

Erect or Spreading and requires ample growing space.
Oval or Rounded Shape.
Has Evergreen foliage.
Height: 25 - 50 feet.
Width: 15 - 25 feet.
Growth Rate: 24 Inches per Year.
Longevity 50 to 150 years.
Leaves Elliptic to Ovate, Glossy Dark Green, No Change, Evergreen.
Flowers Showy. Fragrant White. Flowers in Spring, Summer or Fall. Has perfect flowers (male and female parts in each flower).
Prolific, Purple or Red Follicle, Very Large (Over 3.00 inches), fruiting in Summer or Fall.
Bark Light Green, Fissured.
Shading Capacity Rated as Dense in Leaf.
Litter Issue is Flowers, Dry Fruit and Leaves.

Overall

Tree Site Conditions & Constraints

Sunset Zones 4 - 12 and 14 - 24.
USDA Hardiness Zones 7 - 10.
Exposure Full Sun to Partial Shade.
Moist Soil.
Clay, Loam or Sand Texture.
Highly Acidic to Slightly Alkaline Soil pH.
Salinity Tolerance is Moderate on Coast.
Seaside Tolerance is Good in Mild Zone.

Leaves

Bark

Pests & Disease Information

Susceptible to Invasive Shot Hole Borer, Aphids, Scales and Spider Mites, Armillaria, Root Rot and Verticillium.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium.
Root Damage Potential Rated as Low.
None Known Health Hazard.
Attracts Birds.

Fruit

Special Uses & Values

Espalier.

SelecTree. "*Magnolia grandiflora* 'Russet' Tree Record." 1995-2019. Jul 19, 2019.
< https://selectree.calpoly.edu/tree-detail/magnolia-grandiflora-russet >

PINUS canariensis KamCards® WIP 09/02/10

TREE

PYE-nus kan-air-ee-EN-sis	**Synonym**: None	**Family**: Pinaceae
L pine, of or from Canary Islands		**Origin**: Canary Islands
Common Name: Canary Island Pine, Canary Pine		**Species in Genus**: 93

WHAT IT WILL BECOME

Height: 50-80'	**Habit**: Columnar, Pyramid	**Texture**: Fine	**Density**: Medium
Width: 20-35'	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Fast

Leaf: Evergreen, whorl, simple, 6-12" slender needles, bundles of 3s, dense terminal tufts, stomata lined, fringed margin revolute, vertical buds, blue-green juvenile growth, matures spreading, pendent, glossy bright green, persists 2-3 years.
Flower: Monoecious, tan male catkin-like candle clusters, on branch tips, inconspicuous, yellow females, in spring.
Fruit: Green, 3-9 x 3-5¼" oval to obtuse cones, matures brown, dry, single or 2-4 clustered, 4-sided, glossy, projections, twin naked ovules, at base of woody scales, ⅓-½" brown seeds 1¾" tan wings, persist, in winter, matures in 2 years.
Bark: Reddish-brown plates, thick scaly, furrowed, deeply fissured, straight single-trunked, tiered horizontal to upswept branches, lower branches and branchlets droop.
Special Maintenance: Prune in November and December for a strong central leader, pinch candles to thicken growth. Avoid pruning in January through October due to bark beetle, gall rust and pitch canker. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 12-24	**Seacoast Zones**: 2-3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼
USDA: 8-11	**Hardy**: Down to _°F	**Altitude**: From sea level-0,000'	
WUCOLS: L-L-L-M-M-M, •, o	**PDR**: Aphid, beetle borer, Pine tip moth, procession caterpillar, spider mite, Fusarium subglutinas, gall rust, pine pitch canker, Phytophthora, root rot, sooty mold. Resistant to oak root rot, Texas root rot, Verticillium wilt.		
Firescape Zones: None			

Culture: Any moist to dry, well-drained soil, very acidic-very alkaline. Tolerant of heat, smog, sand, dust, poor soil, salinity, and drought.

WHY USE IT

Usage: Highway, street, park, silhouette, windbreak, screen, garden, patio, golf course, parking lot, group, hillside lawn, erosion control, attracts animals.
Notes: Authored by Robert Sweet, Christen Smith. Moderately lived for 75 years. Deep rooting system. Stump will sprout. Can grow a lawn below canopy. Pollen can cause allergy reactions. Considered a pyrophyte that almost attracts fire. California big tree in Orange.

Overall, UCLA campus, Westwood, CA

Shoot

Needle bundle

Pendent needles

Male flower and pollen

Fruit

Bark

PINUS canariensis

PINUS eldarica — KamCards® WIP 09/02/10

TREE

PY-nus el-DAR-ee-kuh	**Synonym**: Pinus brutia eldarica	**Family**: Pinaceae
L Pine, *L* sandy lowland native region	**Origin**: Southern Russia, Afghanistan, Pakistan, Azerbaijan, northern Iraq	
Common Name: Afghan Pine, Eldar Pine		**Species in Genus**: 0

WHAT IT WILL BECOME

Height: 30-80'	**Habit**: Pyramidal	**Texture**: Fine	**Density**: Medium
Width: 15-25'	**Spacing**: 15-20'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, single, 3¼-6½" needles in 2s, dark green.
Flower: Monoecious, male catkin-like cone, nearly terminal clusters, inconspicuous.
Fruit: Green 2-3¼" oval to oblong cone, matures reddish brown, woody, 2-seeded per scale, in winter.
Bark: Gray and brown, rough, fissured, long vertical cracks, furrowed, single trunked, erect and horizontal branching, spreading.
Special Maintenance: Prune to shape. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 7-9, 11-24, 29-30, 33	**Seacoast Zones**: 3	**MPA**: 6-8'	**Sun/Shade**: ☼
WUCOLS: L-L-L-L-L-L, •, o	**PDR**: Aphid, mite, Nantucket pine tip moth.		
Firescape Zones:	**USDA**: 6-9	**Hardy**: Down to _°F	**Altitude**: From 200-0,000'

Culture: Any soil, alkaline (7.9-8.5 pH). Tolerant of heavy drought, heat and wind.

WHY USE IT

Usage: Desert effect, attracts birds.
Notes: Authored by Ibrahim Nahal. Moderately lived for 50-150 years. Deep rooting. One of the best pines for the desert or near the coast. Pollen can cause allergy reactions. Variety '**Christmas Blue**' has blue-green foliage. Rarely seen in the wild.

Overall, Chico Basin Water Conservation Garden, Montclair, CA

Green fruit

Overall

Overall, Palm Desert

Leaves

Overall, Disneyland

Male catkin clusters

Fruit

Fruit clusters

Bark

PINUS eldarica

PINUS torreyana — KamCards® WIP 09/03/10

TREE

PYE-nus tor-ree-AY-nuh	**Synonym**: None	**Family**: Pinaceae
L pine, Dr John Torrey Professor of Botany	**Origin**: Coastal San Diego, Santa Rosa Island, Del Mar, La Jolla	
Common Name: Torrey Pine, Soledad Pine		**Species in Genus**: 93

WHAT IT WILL BECOME-

Height: 40-60' +	**Habit**: Irregular, Pyramidal, Round-headed	**Texture**: Fine	**Density**: Medium
Width: 30-50'	**Spacing**: 40'	**Planting Depth**: _ - _ '	**Growth**: Fast

Leaf: Evergreen, whorled, single 7-13" linear needles, bundles of 5s, stomata lines on all sides, stiff, thick, light gray yellow-green to dark blue-green, persists for 2-4 years.
Flower: Monoecious, inconspicuous yellow 1-1⅓" male blooms, catkin-like cone.
Fruit: Green 4-6 x 1¼-2" ovoid symmetrical cone, matures glossy chocolate brown, broad oval thick, 3 angled tip, short pyramidal projections, spreading to recurved scales, naked ovules between bases of woody scales up to 100 edible large ½-1" oval buff seeds, speckled brown, 2 per scale, encircling ¼-½" wing, opens once ripe in 1-3 years, ½-1 pound.
Bark: Red-brown to dark brown, purple furrows, thin large scales, irregular deep fissures, broad flat ridges, stout single-trunked, 16-28" diameter, spreading or ascending branches, windblown at ocean, erect symmetrical inland.
Special Maintenance: Do not prune branches, as they will die back to the trunk. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 8-9, 14-24	**Altitude**: Near coast-450'	**Seacoast Zones**: 2-3	**MPA**: 6-10'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-M-/-/,•, o	**USDA**: 7-11	**PDR**: Aphid, beetle borer, mite, Fusarium wilt, pitch canker. Resistant to oak root fungus, Texas root rot, Verticillium wilt.		
Firescape Zones: unknown	**Hardy**: Down to _ °F			

Culture: Any moist to dry soil, very acidic-slightly alkaline. Tolerant of drought, poor soil and coastal salinity.

WHY USE IT

Usage: Bonsai, Japanese effect, attracts birds and squirrels.
Notes: Native to California coast, authored by William Edward Parry. Long lived for over 150 years. Rare in nursery trade. Open irregular habit at ocean and tall, upright to spreading habit inland. Threatened species due to confined range. Largest native stand in Torrey Pine National Preserve on the coast by Del Mar, CA. Pollen can cause allergy reactions. California big tree in Carpinteria.

Overall, Mission San Luis Rey, Oceanside, CA

Surface roots

Male floral cluster

Closed cone

Needle clusters

Bark

Fruit

Scale prickles

Fruit, needles and flower

Male floral catkins

PINUS torreyana

LONDON PLANE TREE

Platanus × hispanica

A hybrid between Platanus occidentalis × Platanus orientalis.
A tough, durable tree; can tolerate severe pruning and smog.
Native to Spain.
Family: *Platanaceae*

Additional Common Names

Platanus × acerifolia
Platanus occidentalis × Platanus orientalis.

Tree Characteristics

Erect or Spreading and requires ample growing space.
Oval, Rounded or Umbrella Shape.
Has Deciduous foliage.
Height: 70 - 85 feet. Width: 50 - 70 feet.
Growth Rate: 36 Inches per Year.
Longevity Greater than 150 years.
Leaves Palmate, Medium Green, Bronze or Gold, Deciduous. Flowers Inconspicuous. Flowers in Spring or Winter. Has separate male and female flowers on the same tree (monoecious). Prolific, Brown or Mostly Green Achene, Medium (0.50 - 1.50 inches), fruiting in Summer.
Bark Cream, Light Green, Light Gray or Multicolored, Exfoliating or Smooth.
Shading Capacity Rated as Dense in Leaf.
Shading Capacity Rated as Moderately Low out of Leaf.
Litter Issue is Dry Fruit, Twigs and Bark.

Tree Site Conditions & Constraints

Sunset Zones 2 - 24.
USDA Hardiness Zones 5 - 8.
Exposure Full Sun to Partial Shade.
Wet to Dry Soil. Clay, Loam or Sand Texture.
Highly Acidic to Highly Alkaline Soil pH.
Seaside Tolerance is Good in Mild Zone.

Pests & Disease Information

Resistant to Verticillium. Susceptible to Invasive Shot Hole Borer, Scales and Spider Mites, Anthracnose and Powdery Mildew.

Health, Safety & Environmental Concerns

Branch Strength Rated as Strong.
Root Damage Potential Rated as High.
Allergy Health Hazard.
Biogenic Emissions considered High.
Fire Resistance is Favorable.
Desirable Wildlife Plant.
Attracts Bees.

Special Uses & Values

Pleached or Pollarding.

Overall

Overall Juvenile

Leaves

Bark

Fruit

SelecTree. "*Platanus* × *hispanica* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/platanus-×-hispanica >

PLATANUS racemosa — KamCards® WIP 09/03/10

TREE

PLAT-a-nus ray-see-MO-suh | **Synonym**: Platanus californica | **Family**: Platanaceae

Gk ample, broad, flat, Plant tree name, *L* cluster, having racemes | **Origin**: Southern and Baja California coastal ranges

Common Name: California Sycamore, Western Sycamore, California Plane-tree, Buttonwood, Buttonball-tree, Planetree, Aliso, Portola Sycamore | **Species in Genus**: 8

WHAT IT WILL BECOME

Height: 30-80' + | **Habit**: Irregular, Upright, Oval | **Texture**: Medium-coarse | **Density**: Medium

Width: 20-50' + | **Spacing**: 40' | **Planting Depth**: _-_' | **Growth**: Fast

Leaf: Deciduous, alternate, simple 4-12 x 6-18" ovate, 3-5 broad deep lobes, entire or remotely dentate, tapered tip(s), wedge base, thick, ¾-1⅛" stipules drop, 1-3" petiole, yellow-green above, rusty hairs below, dusty brown fall color, hangs on until new growth in mild weather regions.
Flower: Monoecious, 8-10 small male red blooms, near tip, 3-7 green females, sessile on strand, on older wood, in spring.
Fruit: Green ¾-1", bristly achene spheres, , 3-7 sessile female on a 6-9" smooth or hairy zig zag strand, mass, persists into winter, drop to release, 1-seeded, small hairy nutlets, first crop in 20-25 years. ⅓ achenes, ¾ beads, in summer or fall
Bark: Exfoliating, in patches to reveal smooth, tan, cream, light green and rust, thick, furrowed, broad rounded ridges, gnarled, single or multi-trunked, spreading or leaning secondary trunk, smooth branches often gracefully twisted, gnarled and contort into scattered directions; this growth attributed to a fungus.
Special Maintenance: Rake up and dispose of dead leaves, since fungus spores can over winter on them. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 4-24 | **Hardy**: Down to _°F | **Seacoast Zones**: 2-3 | **MPA**: 6-8' | **Sun/Shade**: ☼, ☼, ☼

WUCOLS: M-M-M-M-L-L, o | **Firescape Zones**: B-D, Retardant | **USDA**: 8-11 | **Altitude**: From 0,000-6,500'

PDR: Lace bug, leaf miner, mite, scale, Anthracnose, Apignomonia venata, blight, chlorosis, leaf blight, mistletoe, Oak root rot, Phytophthora, powdery mildew, root rot. Resistant to Verticillium wilt.

Culture: Any deep, rich, moist to dry soil, very acidic-very alkaline. Tolerant of salt, heat, cold, wind, desert, inland salinity, drought and raised soil level conditions. Shelter from high winds.

WHY USE IT

Usage: Garden, park, shade, specimen, watercourse, reclamation, riparian, erosion control, attracts birds, arrangement.
Notes: California native, authored by Thomas Nuttall. Long lived to over 150 years. Transplants easily even as a mature tree, plant horizontally for several trees. Buy bare root for planting in fall or early spring. Pollen can cause allergy reactions. Native to canyons and is used to floods, high mud and uprooting, a buried tree will bud.

Overall, Chino Basin Water Conservation Garden, CA

Leaf

Bark

Deciduous, Claremont

Floral cluster

Green and ripe fruit

Seed

Fruit and fall foliage color

PLATANUS racemosa

QUERCUS agrifolia — KamCards® WIP 09/10/10

TREE

KWER-kus ag-rih-FOH-lee-uh	**Synonym**: Quercus oxyadenia	**Family**: Fagaceae
L Beautiful tree, *L* field (rough), leaved	**Origin**: Mendocino to Baja California, Mexico	**Species in Genus**: 300+

Common Name: Coast Live Oak, Encina Oak, California Live Oak, California Field Oak, Encina

WHAT IT WILL BECOME

Height: 20-70' +	**Habit**: Round-headed	**Texture**: Medium-fine	**Density**: Heavy
Width: 20-100' +	**Spacing**: 40-50' +	**Taproot Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate, simple, 1-4 x ½-3" oblong, obtuse, oval to elliptical, convex, rounded entire or coarsely spiny margin, holly-like, pointed tip, rounded base, stiff, leathery, stipules drop early, pale green or pinkish downy juvenile growth, matures smooth, slightly glossy green convex above, pale to dull light yellow-green, hairy axillary veins below.
Flower: Monoecious, slender yellow green male pendent axillary catkins/aments, among upper foliage, matures brown, inconspicuous, female hairy reddish 3-4" spikes, 1 to many axillary blooms, in spring.
Fruit: Light brown ¾-1⅝ x ½" acorn, slender elongated oval, pointy, longitudinally striped nut, dry, sessile solitary or cluster of 2-3, matures in 1 year, broad top cap, thin hairy overlapping scales, covers ¼-⅓ of acorn, persist or drop in fall.
Bark: Light and dark gray, red-brown, smooth, variable plates separated by dark gray rough ridges, slightly furrowed, thick, stout, single-trunked, 5-20' diameter, spreading, low branching, massive crooked branches, brittle branchlets, droop to ground.
Special Maintenance: Prune in fall-winter for a strong central leader, to thin, for traffic clearance. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 7-9, 14-24	**Hardy**: Down to 10-15°F	**Seacoast Zones**: 2-3	**MPA**: 8' +	**Sun/Shade**: ☼, ☼
WUCOLS: VL-VL-L-L-/-M, •, o	**Firescape** Zones: B-D	**USDA**: 9-10	**Altitude**: From sea level-5,580'	

PDR: Aphid, beetle grub, borer, caterpillar, coddling moth, deer, gall, leaf miner, leaf roller, mite, Oak moth larvae, scale, thrip, weevil, whitefly, Anthracnose, Armillaria, canker, crown rot, Cryptocline fungus, Diplodia infection, Discula, heart rot, Hypoxylon thousarsianum, leaf blister, leaf spot, mistletoe, mushroom root rot, powdery mildew fungus, oak root fungus, Phytophthora, root rot, rust, skeletonizer, sudden oak death, sooty mold, twig blight, wilt, witch's broom.

Culture: Any rich, moist or dry, well-drained soil, very acidic-slightly alkaline. Tolerant of heat, some cold, salt and drought, but not summer watering once established. Water only to a depth of 18" from ⅔ in to ⅓ beyond the drip line.

WHY USE IT

Usage: Shade, specimen, park, garden, golf course, highway, street, lawn, reclamation, erosion control, attracts animals.
Notes: California native, authored by Luis Née. Long lived for 150-800+ years. Difficult to transplant due to large size and taproot. Do not adjust the soil around the tree or it will die. Has greedy roots and drops almost all its old leaves in early spring. City of Thousand Oaks recommends to not plant under the tree, which will change water requirements, but a porous hardscape or deck may be ok. Microrhizal fungus dies during dry season or will take over with irrigation and root rot can kill the tree unless it was acclimated to irrigation from youth. Acorns are **poisonous** until processed. Pollen can cause allergy reactions. California big tree in Julian.

Overall in bloom, Los Angeles Arboretum, Arcadia, CA

Flowers, New leaf

Fruit

Leaves

Bark

QUERCUS agrifolia

QUERCUS coccinea — KamCards® WIP 09/10/10

TREE

KWER-kus kok-SIN-ee-uh	**Synonym**: Quercus richteri		**Family**: Fagaceae
L Beautiful tree, *L* scarlet	**Origin**: Maine to Minnesota, Florida to Missouri, Oklahoma, Arkansas		
Common Name: Scarlet Oak, Spanish Oak, Black Oak			**Species in Genus**: 300+

WHAT IT WILL BECOME

Height: 60-80'	**Habit**: Pyramidal, Round-headed, Oval	**Texture**: Medium	**Density**: Medium
Width: 40-60'	**Spacing**: 40' +	**Planting Depth**: _ - _ '	**Growth**: Moderate

Leaf: Deciduous, alternate, simple, 3-8 x 2-6" oblong to elliptical, 5-9, very deeply cut lobes pointed bristle-tipped, close sinuses, coarsely toothed margin, straight base, prominent light green midrib, 4-5 nerve pairs, smooth, glossy red in youth matures bright green above, pale below with tufts of hair at vein axils, turning scarlet where fall nights are cold, persist.
Flower: Monoecious, brown rugby ball-shaped buds, smooth slender 3-4" axillary pendent male catkins, 2 tiny 5" female blooms, 1 or 2 per cluster, open in spring to brown blooms, while foliage emerges, inconspicuous.
Fruit: Green ½-1" rounded acorn, single or paired, matures green-tan or red-brown, broad based, tapering rounded tip, ⅓-½ nut covered by bowl-like reddish-brown or yellow-brown scaled cap, ripens in fall, matures in 2 years, in winter.
Bark: Gray-brown juvenile growth, lenticels, smooth, variable ridges, shallow fissures, cracked irregular scaly plates, thin, matures rough red-brown to black, flared base, single-trunked, spreading, angled horizontal branches, deep rooted.
Special Maintenance: Prune in youth and fall to develop a strong central leader. Take care of cuts to exclude disease.

WHERE IT WILL GROW

Sunset Zones: 2-10, 14-24, 31-41	**Hardy**: Down to _ °F	**Seacoast Zones**: 2-3	**MPA**: 8' +	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-/-M-/-/, •, o	**USDA**: 4-9	**Firescape Zones**: Retardant	**Altitude**: From 2,500-5,700'	

PDR: Borer, caterpillar, cankerworm, gypsy moth, orange-striped oak worm, scale, walkingstick, wasp, Anthracnose, chlorosis, gall, leaf blister, oak wilt, rot. Resistant to deer and Verticillium wilt..

Culture: Any deep, rich, moist soil, very acidic-very alkaline (4.5-6.0 pH). Tolerant of heat, cold, urban conditions, drought, dry and rocky soil.

WHY USE IT

Usage: Shade, street, lawn, specimen, parking lot, park, specimen, attracts birds and squirrels.
Notes: Authored by Otto von Muenchhausen. Long lived for over 150 years. Difficult to transplant, due to deep and lateral spreading roots. May take 20 years to first crop. Can cultivate under canopy. Acorn is **poisonous** until processed and pollen can cause allergy reactions. California big tree in Bakersfield.

Overall juvenile, fall color, Cascades Golf Course, Sylmar, CA

*Photographed and planted by Ken Kammeyer

Overall, Claremont Colleges, Claremont, CA

Fruit

Floral strand

Flowers in canopy

Leaf

Bark

QUERCUS coccinea

QUERCUS douglasii — KamCards® WIP 09/05/10

TREE

KWER-kus dug-LAS-ee-eye | **Synonym**: None | **Species in Genus**: 300+ | **Family**: Fagaceae

L Beautiful tree, David Douglas, 19th century Scottish collector

Origin: Central and southern California coastal, western Sierra Nevada, Tehachapi Mountains

Common Name: Blue Oak, Mountain White Oak, White Oak, California Blue Oak, California Rock Oak, Iron Oak, Jack Oak, Douglas Oak, Mountain Oak

WHAT IT WILL BECOME

Height: 20-50' | **Habit**: Round-headed, Pyramidal | **Texture**: Medium | **Density**: Medium

Width: 40-70' | **Spacing**: _-_' | **Planting Depth**: _-_' | **Growth**: Moderate to Slow

Leaf: Deciduous, alternate, simple, 1½-5 x ¾-2¼" variable shape elliptic, obovate to oblong, 7 shallow varable rounded lobes, wavy, toothed or entire margin, blunt or round tip, rounded base, thin, stiff, sessile, 3-5 nerve pairs, minute hair, small stipules drop early, bluish-green above, pale yellow-green and hairy below, pastel pink, orange to yellow fall color.
Flower: Monoecious, yellow green, small blooms, inconspicuous, hairy male catkins, in upper axils, pendent, in spring.
Fruit: Green ¾-1½ x ½-⅓" ovoid female acorns, matures chestnut brown, narrow base, sharply pointed tip, soft hairy, thin warty flat shallow saucer cap covers ¼-⅓ of nut, solitary or paired axillary cluster, 1 year to mature, in fall.
Bark: Light gray, lenticels, thick, shallowly checked thin small white, gray, brown or red square scales, rough, single-trunked, 1-2' diameter, low branching, matures wide spreading, brittle branches.
Special Maintenance: Prune to shape. No water required after planting. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 3-11, 14-24 | **Altitude**: From 150-5,900' | **Seacoast Zones**: 3 | **MPA**: _-_' | **Sun/Shade**: ☼, ☼

PDR: California Oak moth, caterpillar, insect gall, scale, wasp, weevil, Armillaria, crown rot, dry rot, fungi, mistletoe, Oak root rot, powdery mildew, root rot. Resistant to Verticillium wilt

WUCOLS: VL-VL-VL-L-/-/, •, o | **Firescape Zones**: B-D, Retardant | **USDA**: 8-10 | **Hardy**: Down to 30°F

Culture: Any loamy to rocky, moist to dry, well-drained soil, very acidic-slightly alkaline. Tolerant of drought and heat.

WHY USE IT

Usage: Slope, shade, reclamation, park, garden, erosion control, attracts animals.
Notes: California native, authored by William Jackson Hooker and George Arnott Walker-Arnott. Long lived to 100-400 years or more. Deep roots allow cultivation under the canopy. Acorns **poisonous** until processed and pollen can cause allergy reactions. California native good in dry hot areas of the foothills and interior. Hybridizes with Quercus garryana, Quercus lobata and Quercus john-tuckeri. California big tree in Three Rivers.

Overall, Rancho Santa Ana Botanic Garden, Claremont, CA

Leaves

Fruit

Branch

Fruit and leaves

Overall, RSABG

Overall, Viejas Outlet Center, Alpine

Sargent illustration

Courtesy of LA Arboretum

Flower

Bark

Deciduous, juvenile

QUERCUS douglasii

HUNGARIAN OAK

Quercus frainetto

A large tree with deeply lobed leaves. Cultivar 'Forest Green' is smaller in stature than the species, growing to only 50 feet tall and 30 feet wide. Native to South Central and Eastern Europe.
Family: *Fagaceae*

Synonyms

Quercus conferta , Quercus hungarica

Additional Common Names

HUNGARIAN OAK, ITALIAN OAK

Tree Characteristics

Erect with a High Canopy.
Oval Shape.
Has Deciduous foliage.
Height: 100 feet. Width: 70 feet.
Growth Rate: 36 Inches per Year.
Longevity Greater than 150 years.
Leaves Obovate and Lobed, Glossy Dark Green, Bronze or Yellow, Deciduous. Flowers Inconspicuous. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).
Prolific, Brown Acorn, Medium (0.50 - 1.50 inches), fruiting in Fall or Winter Wildlife use it.
Bark Dark Gray, Fissured.
Shading Capacity Rated as Dense in Leaf.
Shading Capacity Rated as Moderate out of Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 2 - 12 and 14 - 21.
USDA Hardiness Zones 6 - 8.
Exposure Full Sun to Partial Shade.
Moist to Dry Soil. Loam or Sand Texture.
Slightly Acidic to Highly Alkaline Soil pH.
Salinity Tolerance is Moderate Inland.
Seaside Tolerance is Not Suited.

Pests & Disease Information

Resistant to Verticillium. Susceptible to Beetle Borers, Caterpillars, Insect Galls and Scales, Armillaria, Crown Rot, Mistletoe and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Medium to Medium Strong.
Root Damage Potential Rated as Moderate.
Allergy and Poisonous Health Hazard.
Biogenic Emissions considered Moderate.
Fire Resistance is Favorable.
Desirable Wildlife Plant. Attracts Birds and Squirrels.
Deer Palatable.Wildlife use Fruit.

Special Uses & Values

Riparian.

Overall

Overall Juvenile

Leaves

Bark

Branches

SelecTree. "*Quercus frainetto* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/quercus-frainetto >

ESCARPMENT LIVE OAK

Quercus fusiformis

Quercus fusiformis is in the White Oak section of the genus *Quercus*. This semi-evergreen tree is visually similar to *Quercus virginiana* (and used to be considered a variety of *Q. virginiana*) but is more drought, cold, and heat tolerant. Native to South-Central United States, Mexico.
Family: *Fagaceae*

Synonyms

Quercus virginiana var. *fusiformis*

Additional Common Names

PLATEAU LIVE OAK, TEXAS LIVE OAK

Tree Characteristics

Erect or Spreading with a High Canopy.
Oval, Rounded or Umbrella Shape.
Has Evergreen to Partly Deciduous foliage.
Height: 20 - 50 feet. Width: 20 - 40 feet.
Growth Rate: 12 Inches per Year.
Longevity Greater than 150 years.
Leaves Elliptic to Ovate, Glossy Dark Green, No Change, Evergreen to Partly Deciduous. Flowers Inconspicuous.
Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).
Brown Acorn, Medium (0.50 - 1.50 inches), fruiting in Fall or Winter.
Bark Black or Dark Brown, Blocky, Furrowed or Scaly.
Shading Capacity Rated as Moderate in Leaf.
Litter Issue is Dry Fruit.

Tree Site Conditions & Constraints

Sunset Zones 3 and 10 - 13.
USDA Hardiness Zones 6 - 10.
Exposure Full Sun to Partial Shade.
Dry Soil.
Drought tolerant. Clay, Loam or Sand Texture.
Acidic to Alkaline Soil pH.
Salinity Tolerance is Good Inland and Good to Moderate on Coast.
Seaside Tolerance is Good to Medium in Mild Zone..

Pests & Disease Information

Resistant to Verticillium. Susceptible to Insect Galls, Armillaria, Phytophthora, Live Oak Wilt, and Root Rot.

Health, Safety & Environmental Concerns

Branch Strength Rated as Strong.
Root Damage Potential Rated as Moderate.
Allergy and Poisonous Health Hazard.
Biogenic Emissions considered High.
Desirable Wildlife Plant. Attracts Birds and Squirrels.
Not Deer Palatable.

Special Uses & Values

Specimen, Shade Tree, Wildlife Tree, Street Tree, Screen.

Overall

Overall Juvenile

Leaves

Bark

Fruit

SelecTree. "*Quercus fusiformis* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/quercus-fusiformis >

QUERCUS ilex

KamCards® **WIP 09/10/10**

TREE

KWER-kus EYE-lecks

L Beautiful tree, *L* the name for Holly

Synonym: Quercus smilax, Quercus sempervirens, Quercus marcetti, Quercus montserratensis

Family: Fagaceae

Origin: Southern Europe, western Pakistan, North Africa, Mediterranean

Common Name: Holly Oak, Holm Oak, Evergreen Oak, Holly-leaf Oak

Species in Genus: 600+

WHAT IT WILL BECOME

Height: 20-60'	**Habit**: Round-headed	**Texture**: Medium	**Density**: Heavy
Width: 20-60'	**Spacing**: 40' +	**Planting Depth**: _-_'	**Growth**: Moderate

Leaf: Evergreen, alternate, simple, 1-3 x ½-1¼" holly-like, narrow oblong-obovate to lanceolate, tapered pointed tip, finely toothed to entire margin, revolute, uneven rounded base, stiff, leathery, waxy, 7-12 vein pairs, downy juvenile growth, matures entire margin, smooth, glossy dark green above, pale yellowish hairs below, persists for 2-3 years.
Flower: Monoecious, creamy yellow-green 1¼-2" narrow spike male catkins, pendent, 3-4" solitary female axillary blooms, in late winter-spring.
Fruit: Green ¾-1¼" ovoid to round acorns, matures gray-brown, pointed, darker lines, 1-3 grouped, ½ nut covered by top-shaped rounded cap, thin, deep cup of close downy scales, ripens in 1 year.
Bark: Light to dark gray, smooth, erect juvenile growth, matures black, small rough square scales, fissured, stout, single-trunked, 1-3' diameter, spreading, low branching, horizontal or ascending branches, descending tips, deep rooting.
Special Maintenance: Prune in fall to develop a strong central leader, to thin for an airy look, for traffic clearance, remove suckers and included bark. Can take sheering to create formal shapes. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 4-24, 32	**Hardy**: Down to 0-15° F	**Seacoast Zones**: 2-3	**MPA**: 6'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: L-L-L-L-M-M, •, o	**Firescape Zones**: B-D, Retardant	**USDA**: 7-11	**Altitude**: From 0,000-0,000'	

PDR: California oak worm, caterpillar, mite, scale, thrip, Anthracnose, Armillaria root rot, canker, powdery mildew, twig blight. Resistant to Oak root rot, salt burn and Verticillium wilt.

Culture: Any deep, moist to dry, well-drained soil, very acidic-very alkaline (5.6-8.5pH). Tolerant of drought, heat, air pollution, dust, smog, urban conditions, wind, heavy or poor soil, salt air and coastal salinity. Shelter from cold.

WHY USE IT

Usage: Street, lawn, parking lot, highway, reclamation, shade, park, specimen, garden, hedge, windbreak, screen, patio, erosion control, golf course, topiary, urban tolerant.
Notes: Authored by Carolus Linnaeus. Moderately lived for 75-150 years. Acorns are **poisonous** until processed and pollen can cause allergy reactions. Hardy in damp soils, but will dieback in youth if exposed to cold and frosts. Does well in high humidity locations. Needs a large space for best growth and form. will grow in constant sea wind but grows shrubby. Best in sandy to clay loam. California big tree in Sacramento Capital Park.

Overall, El Camino College, Torrance, CA

Foliage and floral cluster

Leaf variations

Bark

Fruit

QUERCUS ilex

QUERCUS kelloggii KamCards® WIP 09/10/10

TREE

KWER-kus kell-LOG-ee-eye | **Synonym**: Quercus californica | **Species in Genus**: 600+ | **Family**: Fagaceae

L Beautiful tree, Dr Albert Kellogg, 19th century American botanist | **Origin**: Owens Valley foothills, upland southern Oregon to southern California

Common Name: California Black Oak, Kellogg Oak, Mountain Black Oak

WHAT IT WILL BECOME

Height: 30-80' +	**Habit**: Irregular, Oval	**Texture**: Medium	**Density**: Medium
Width: 25-80'	**Spacing**: 20-40'	**Taproot Depth**: _-_'	**Growth**: Moderate

Leaf: Deciduous, alternate, simple, 3-10 x 2-6" elliptical to obovate, 5-7 sharp, ½ depth narrow sharply dentate lobes, 1-4 bristle tip teeth, rounded tip, leathery, pale yellow midrib, yellow-green petiole, dusty rose in youth, maturing smooth bright glossy green above, pale smooth or fuzzy vein junctions below, rosy brown, yellow or yellow orange fall color.
Flower: Monoecious, wine red, 3-4¾" slender male catkins, hairy, pendent, near branchlet tips on prior years wood, 1 to several axillary males among upper leaves (generally 1), 1-3" female catkins, axillary on this year's growth, in spring.
Fruit: Chestnut brown 1-1½ x ¾" cylindrical, ovoid to oblong acorn, rounded tip, solitary or paired, thin loosely appressed scaled bowl cap covers ⅓ -½ of nut, takes 2 years to mature, best tasting fruit of the local oaks, in fall-winter.
Bark: Dark gray, thin, smooth juvenile growth, matures reddish-brown or nearly black, deeply furrowed, thick broad irregular ridges, checked small irregular plates at base, slow to show roughness, stout single or multi-trunked, 1-4½' diameter, spreading, ascending, brittle branches.
Special Maintenance: None required. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 5-7, 9, 14-21	**USDA**: 7-8	**Seacoast Zones**: 4	**MPA**: _-_'	**Sun/Shade**: ☼, ☼
WUCOLS: L-M-/-M-/-/, •, o	**Firescape Zones**: B-D	**Hardy**: Down to _°F		**Altitude**: From 200-9,000'

PDR: Carpenter worm moth, deer, gall wasp, insect gall, Oak pit scale, Pacific Oak tree girdler, scale, Annosus root disease, Anthracnose, Armillaria, brown rot, butt rot, canker, dry rot, heart rot, mistletoe, Oak root rot, Phytophthora, powdery mildew, root rot, sudden oak death. Resistant to Verticillium wilt.

Culture: Any moist to dry, well-drained soil, very acidic-slightly alkaline. Tolerant of drought, dry, heat and some cold.

WHY USE IT

Usage: Park, shade, space articulation, erosion control, attracts animals.
Notes: California native authored by John Strong Newberry. Very long lived to 50-500 years. Difficult to transplant in maturity due to its strong taproot(s). Acorns are **poisonous** until processed and pollen can cause allergy reactions.

Overall, Descanso Gardens, La Canada, CA

Overall fall color, Idyllwild, CA

Floral strands

Fruit

Leaf

Fall color

Mature bark

Juvenile bark

QUERCUS kelloggii

CHINQUAPIN OAK

Quercus muehlenbergii

Branches don't droop, and resist breakage.
Native to Southern and Eastern United States.
Family: *Fagaceae*

Synonyms

Quercus prinus

Additional Common Names

CHINQUAPIN OAK, YELLOW CHESTNUT OAK

Tree Characteristics

Rounded Shape.
Has Deciduous foliage.
Height: 40 - 50 feet. Width: 50 - 60 feet.
Growth Rate: 24 or More Inches per Year.
Leaves Ovate, Green, Gold, Deciduous.
Flowers Inconspicuous. Brown. Flowers in Spring. Has separate male and female flowers on the same tree (monoecious).
Brown Acorn, Medium (0.50 - 1.50 inches), fruiting in Summer or Fall Edible and Wildlife use it.
Bark White to Gray, Blocky or Scaly.
Shading Capacity Rated as Moderate to Moderately Dense in Leaf.
Shading Capacity Rated as Moderate out of Leaf.
Litter Issue is Leaves.

Tree Site Conditions & Constraints

Sunset Zones 2 - 12 and 14 - 17.
USDA Hardiness Zones 3 - 9.
Exposure Full Sun.
Well Drained Soil.
Clay, Loam or Sand Texture.
Acidic to Alkaline Soil pH.

Pests & Disease Information

Resistant to Verticillium. Susceptible to Armillaria.

Health, Safety & Environmental Concerns

Branch Strength Rated as Strong.
Root Damage Potential Rated as Low.
Attracts Mammals.
Wildlife use Fruit.

Special Uses & Values

Buffer Strip, Shade Tree or Street Tree.

Overall

Overall Juvenile

Leaves

Bark

Branches

SelecTree. "*Quercus muehlenbergii* Tree Record." 1995-2019. Jul 19, 2019. < https://selectree.calpoly.edu/tree-detail/quercus-muehlenbergii >

QUERCUS rubra — KamCards® WIP 09/05/10

TREE

KWER-kus ROO-bruh
L Beautiful tree, *L* red

Synonym: Quercus rubra maxima, Quercus borealis

Family: Fagaceae

Origin: Iowa, Nova Scotia to Pennsylvania, Minnesota, Georgia

Common Name: Red Oak, Common Red Oak, Northern Red Oak, Gray Oak, Eastern Red Oak, Mountain Red Oak, Spanish Oak

Species in Genus: 600+

WHAT IT WILL BECOME

Height: 60-80' +	**Habit**: Round-headed	**Texture**: Medium-coarse	**Density**: Medium
Width: 50-60' +	**Spacing**: 40'	**Taproot Depth**: _ - _ '	**Growth**: Fast

Leaf: Deciduous, alternate, simple, 4-10 x 3-6" oblong to obovate or elliptical, 3-9 paired ½ depth cut triangular or ovate, 1-3 bristle-pointed lobes, variable coarse toothed margin, wedge base, smooth, matt red or bright yellow juvenile growth, matures glossy dark green above, occasional axillary tufts of brown hair on midrib and dull to pale below, dark red, ruddy brown, or orange fall color, depends on soil acidity.

Flower: Monoecious, yellow-green to brown 4-5" slender hairy male catkins, inconspicuous, tiny females, single or clustered, axillary, in spring.

Fruit: Brown ½-1¼" toy top-shaped acorns, single or paired, mass, ¼-⅓ enclosed by fringed cap of overlapping red-brown, dark tipped scales, shallow or deep cap, 2 years to mature, 20-40 years to first fruit, in fall, drops in winter.

Bark: Slate gray to gray brown in youth matures dark brown almost black, shallow fissures, hard scaly rounded deep oblong ridges, deep furrows in age, checkered, gray lines, straight massive single-trunked, to 3' diameter, stout branches, spreading upward and horizontal branches form a rounded canopy.

Special Maintenance: Stake in youth and prune in fall, winter or early spring to develop a strong central leader to thin. To avoid oak wilt disease, prune in the dry season. Pick up litter.

WHERE IT WILL GROW

Sunset Zones: 1-10, 14-24, 31-45	**Seacoast Zones**: 3	**MPA**: _ - _ '	**Sun/Shade**: ☼, ☼

WUCOLS: M-M-/-M-/-/, •, o

Firescape Zones: B-D

PDR: Aphid, caterpillar, gall, gypsy moth, orange-striped oak worm, scale, 2-lined chestnut borer, Anthracnose chlorosis, leaf scorch, Oak wilt, Phytophthora, root rot, rust.

Culture: Any deep, rich, moist, well-drained soil, very acidic-slightly alkaline (below 4.5-6.0 pH). Tolerant of smog, heat, urban condition, salinity and drought.

USDA: 3-8 **Hardy**: Down to _ °F

Altitude: From 600-5,500'

WHY USE IT

Usage: Light shade, lawn, park, broad street, parking lot, highway, golf course, attracts animals.

Notes: Authored by Carolus Linnaeus. Moderately lived for 75-100 years or more. Transplants easily with little damage to taproot. Good to cultivate under, but plant 6' away from hardscapes. New Jersey State Tree. Acorns are **poisonous** until processed and pollen can cause allergy reactions. Variety '**Aurea**' has golden yellow foliage.

Overall, Huntington Library and Botanical Gardens, CA

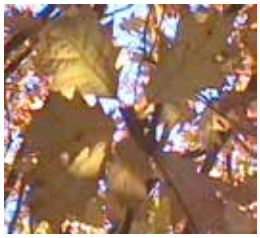
Fall Color, Huntington Library

hairy axils, fruit

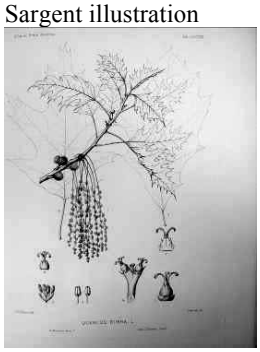
Bark

Leaves

Fall color



Sargent illustration



Courtesy of LA Arboretum

QUERCUS rubra

QUERCUS suber KamCards® WIP 09/10/10

TREE

KWER-kus SOO-ber	**Synonym**: None	**Family**: Fagaceae
L Beautiful tree, *L* the cork oak	**Origin**: Southwestern Europe to North Africa, central Mediterranean	
Common Name: Cork Oak, Cork Tree		**Species in Genus**: 600+

WHAT IT WILL BECOME

Height: 30-80' +	**Habit**: Round-headed, Oval, Weeping	**Texture**: Medium	**Density**: Medium
Width: 30-60' +	**Spacing**: 40'	**Root Depth**: _ - _' deep	**Growth**: Moderate to Fast

Leaf: Evergreen, alternate, simple, 1-3 x ¾-1⅝" rigid, oblong, 4-5 paired prickle toothed or entire margin, rounded tip and base, smooth, leathery, glossy blue-green above, pale gray hairs, prominent veins below, last for 2 years, in spring.
Flower: Monoecious, brown 4" male catkins, small female erect spikes, 2-5 blooms, inconspicuous, in spring.
Fruit: Green, ½-1⅝ x ½-⅝" ovoid-oblong acorn, matures chocolate brown, single or paired, ripe in 1 year, pointed tip, hard base, held loosely in cap, ⅓-½ nut covered, gray fringed coarse curved thick scaled cap, in fall-winter.
Bark: Pale gray, tan, 3-8" deeply furrowed, fissured, cracked, twisted, extruded prominent ribs, corky orange interior, thick, massive stout single-trunked, erect, leaning in age, spreading, cork on large limbs, branchlets weeping to ground.
Special Maintenance: Prune in early spring, to thin, for strong central leader or traffic clearance, remove included bark.

WHERE IT WILL GROW

Sunset Zones: 5-16, 18-23	**USDA**: 7-11	**Seacoast Zones**: 3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼
WUCOLS: L-L-L-L-L-L, •, o	**PDR**: Aphid, caterpillar, thrip, Anthracnose, chlorosis, Phytophthora, root rot, powdery mildew. Resistant to insects, fire, rot and Verticillium wilt.			
Altitude: From 0,000-0,000'				
Hardy: Down to 25°F	**Culture**: Any deep, moist to dry, well-drained soil, very acidic-slightly alkaline. Tolerant of heat, cold, aridity, smog, dust and drought once established. Shelter from cold.			
Firescape Zones: B-D				

WHY USE IT

Usage: Garden, parking lot, highway, shade, street, park, lawn, specimen, cork production, windbreak, golf course, grove, erosion control, attracts animals.
Notes: Authored by Carolus Linnaeus. Long lived for over 300 years. Zones 5-7 have occasional winter damaging temperatures. Durable and one of the best oaks for the desert. Not tolerant of calcareous or compact soil.. Best growth with humidity and 80" of rain, but 25-35" is adequate. Lower trunk bark can be harvested every 8-10-15 years for over a hundred years, and inner wood is not harmed. Value diminishes with graffiti. Acorns are **poisonous** until processed and pollen can cause allergy reactions. WWII packing 'peanuts'. Pick up litter. California big tree in Napa. Deep rooting.

Overall, University California Berkeley Botanic Garden, Berkeley, CA

Leaf

Leaves

Corky trunk and branch

Fruit

Bark exposed

Flower

QUERCUS suber

QUERCUS virginiana — KamCards® WIP 09/21/11

KWER-kus ver-jin-ee-A-nuh | **Synonym**: None | **Family**: Fagaceae

L Beautiful tree, *L* of or from Virginia | **Origin**: Virginia to Florida coastal plain, Texas to Mexico, Cuba

Common Name: Southern Live Oak, Live Oak, Louisiana Live Oak, Virginia Live Oak, Spanish Oak, Spanish Encina | **Species in Genus**: 600+

TREE

WHAT IT WILL BECOME

Height: 40-80'	**Habit**: Round-headed	**Texture**: Medium-fine	**Density**: Medium
Width: 80-150'	**Spacing**: 40-_'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Evergreen to semi-deciduous in cold-winter regions, alternate, simple, 1¼-5 x ⅜-¾" elliptic to oblong-obovate, revolute, wavy entire margin, very rarely toothed, blunt or rounded tip, tapered base, yellow midrib, leathery, thin or thick, smooth, glossy dark green above, white wooly hairs below, foliage replaced with in several weeks, in spring.
Flower: Monoecious, pendent, brown, 2-3" hairy male catkins, inconspicuous, in spring.
Fruit: Green 1-1¼ x ¼-½" ovoid acorn, matures glossy chestnut brown, pointed tip, narrow, broad base, ¼-⅓ covered, red-brown bowl-shaped fealty cup, thin scales, dense hairs, single or 2-5clustered, ripe in 1 year, in fall-winter.
Bark: Red-brown, matures very dark brown or black, shallow grooves, deep furrows, checked blockish plates, scaly, single-trunked, base can buttress, spreading, heavy-limbed, low horizontal branches dip and curve upward.
Special Maintenance: Prune to develop a strong central leader and included bark. Use pruning seal to prevent Oak wilt.

WHERE IT WILL GROW

Sunset Zones: 4-31	**Firescape Zones**: B-D	**Seacoast Zones**: 1-3	**MPA**: 7' +	**Sun/Shade**: ☼, ☼
WUCOLS: M-M-M-M-M-M, •, o	**USDA**: 8-11	**Hardy**: Down to _°F	**Altitude**: From low -0,000'	

PDR: Insect gall, Oak root rot, Oak wilt, Phytophthora. Resistant to deer, root rot and Verticillium wilt.

Culture: Any deep, rich, wet to dry soil, very acidic-neutral (5.1-7.5 pH). Tolerant of wind, inland and coastal salinity, short flood, drought and, urban conditions.

WHY USE IT

Usage: Street, parking lot, highway, reclamation, shade, lawn, specimen, park, golf course, urban tolerant, attracts birds and squirrels.
Notes: Authored by Phillip Miller. Long lived over 100 years. Transplants well in youth if heavily pruned. Plant with plenty of room around the root system, as death from construction damage takes several years to kill. Pick up litter. Best oak for lawn planting and most attractive of all evergreen oaks in hot interior low desert climates. State tree of Georgia. Good annual crop early. Acorns are **poisonous** until processed and pollen can cause allergy reactions. Ship, 'Old Ironsides' ribs were made of Live Oak. Variety '**Heritage**' grows fast and is recommended for interior desert regions.

Overall, University of Arizona, Tucson, AZ

Leaf gray below

Leaf tip

Bark

Bark

Overall, Palm Desert, CA

Leaves and fruit

Floral cluster*

*©Photograph by Jeff Beck

Fruit

Branch

QUERCUS virginiana

TABEBUIA impetiginosa — KamCards® WIP 09/04/10

TREE

tab-eh-BOO-ee-uh im-pet-eye-gin-OH-suh
L wasting away, *L* an attack

Synonym: Tabebuia ipe, Tecoma impetiginosa, Tabebuia avellanedae

Family: Bignoniaceae

Origin: Northern Mexico to Brazil, northern Sonoran Desert

Species in Genus: 100

Common Name: Purple Trumpet Tree, Pink Trumpet Tree, Lavender Trumpet Tree, Pau d′arco, Taheebo, Ipe Roxo, Ipe, Argentina Trumpet Tree

WHAT WILL IT BECOME

Height: 25-60'	**Habit**: Round-headed	**Texture**: Medium	**Density**: Thin
Width: 25-50'	**Spacing**: 20-30'	**Planting Depth**: - '	**Growth**: Slow to Moderate

Leaf: Semi-deciduous, whorled, 4½-7 x 6-8" palmately compound, 3-5-7, oblong to oblong-obovate 1½-8 x 1-3" leaflets, entire or fine toothed margin, tapered tip, rounded base, papery, scaly, medium green above, hairy surface and t axillary veins below.
Flower: Fragrant, white to light pink or purple, 2-3 x 2" tubular bell-shaped blooms, yellow striped keel, 5 lobed, white throat fades yellow, in panicles, prior to foliage, in late winter or spring, may re-bloom in late summer-fall.
Fruit: Brown 12-22½ x ½-1" linear pods, slender, curving, smooth, pendent, flat papery winged seeds, in fall.
Bark: Gray, smooth, matures fissured, rough, single or multi-trunked, low branching, drooping, weak branches.
Special Maintenance: Stake in youth, prune to shape and remove weak wood.

WHERE IT WILL GROW

Sunset Zones: 12-13, 15-16, 20-26	**Seacoast Zones**: 2-3	**MPA**: 5'	**Sun/Shade**: ☼, ☼
WUCOLS: /-/-M-M-/-/, o	**PDR**: Spider mite, die back, leaf spot.		
Firescape Zones: B-D	**USDA**: 10-11	**Hardy**: Down to 24-30°F	**Altitude**: From sea level-1,200' +

Culture: Any rich, deep, well-drained soil, acidic-alkaline. Tolerant of drought in age. Shelter from high winds.

WHY USE IT

Usage: Shade, street, specimen, lawn, park, garden, container, floral display, parking lot.
Notes: Authored by Joaquim Franco de Toledo. Looks like a Jacaranda. Best blooms in hot inland regions. Blooms later than Tabebuia chrysotricha.

Overall, Los Angeles Arboretum, Arcadia, CA

Leaves

Overall, LA Arboretum

Deciduous

Bark

Flowers

Flower, yellow keels

Canopy

Fruit split open

Seed

TABEBUIA impetiginosa

ULMUS parvifolia — KamCards® WIP 09/05/10

TREE

UL-mus par-vih-FOH-lee-uh	**Synonym**: Ulmus parvifolia 'Sempervirens'	**Family**: Ulmaceae
L the elm, *L* small, a leaf		**Origin**: China, Korea, Japan, Taiwan
Common Name: Chinese Evergreen Elm, Chinese Elm, Lacebark Elm		**Species in Genus**: 18

WHAT WILL IT BECOME

Height: 20-60'	**Habit**: Weeping, Round-headed	**Texture**: Medium-fine	**Density**: Medium
Width: 30-70'	**Spacing**: 40'	**Planting Depth**: _-_'	**Growth**: Fast

Leaf: Evergreen or semi-deciduous due to winter temperatures and tree's heredity, alternate, simple, ¾-3 x ⅓-1¼", ovate to elliptic or lanceolate, toothed margin, asymmetrical base, notched or pointed tip, smooth, leathery, firm, thick, 10-12 paired veins, glossy dark green above, pale matted axillary hair below, may turn yellowish or reddish purple fall color.
Flower: Yellow-green to red blooms, mass, inconspicuous small auxiliary clusters, in late summer-fall.
Fruit: Green ¼-½" oval samara, flat, dry, matures tan, 1-cell, 1-seed, papery winged nutlet, notched tip, clustered, in fall.
Bark: Exfoliating in dark gray, reddish brown, and cream patches, orange lenticels, smooth, slender single-trunked, low branching, arching, spreading, turning branches, hairy weeping branchlets, brittle wood, narrow crotches can easily split, variable form, pendent shoots.
Special Maintenance: Stake in youth, prune in youth to shape and in spring to develop a strong structure and central leader, for traffic clearance, thin to reduce possible storm damage remove included bark. Keep soil moist until established.

WHERE IT WILL GROW

Sunset Zones: 3-24, 26-35, 37-39	**USDA**: 5-11	**Seacoast Zones**: 2-3	**MPA**: 5-6'	**Sun/Shade**: ☼, ☼

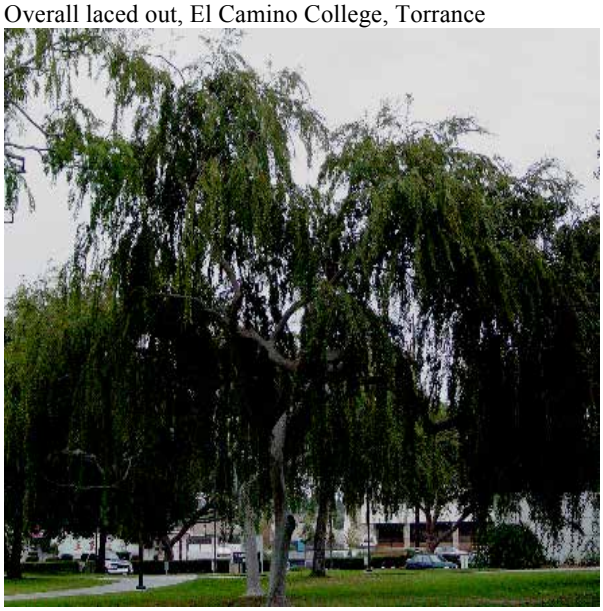
Hardy: Down to 0°F	**PDR**: Aphid, bark beetle, borer, Elm leaf beetle, leaf hopper, mealybug, scale, spiny elm caterpillar, Anthracnose, Elm yellow, mistletoe, mushroom root rot, Oak root rot, phloem necrosis, Phytophthora, root rot, sooty mold, Texas root rot in desert, trunk canker, twig blight, Verticillium wilt, wood rot. Semi-resistant to Dutch Elm disease.
Altitude: From 0,000-0,000'	
WUCOLS: M-M-M-M-M-M, o	
Firescape Zones: Retardant	

Culture: Any rich, moist, well-drained soil, very acidic-very alkaline (5.6-8.5 pH). Tolerant of pollution, smog, dust, heat, cold, desert, coastal salinity, drought, urban conditions, and compacted or short wet soil. Shelter from wind and ice.

WHY USE IT

Usage: Park, lawn, patio, shade, street, parking lot, highway, reclamation, specimen, bonsai, shelterbelt, screen, garden, golf course, hedge.
Notes: Authored by Nicolaus Joseph von Jacquin. Moderately lived for 50-75 years. Transplant in spring from ball and burlap. Aggressive surface root restricts growing under canopy. Pollen can cause allergy reactions. Varieties include '**Brea**', has larger foliage, more erect habit, '**Drake**', has small foliage and weeping habit, '**True Green**' has small deep green evergreen foliage and is round headed and '**Dynasty**' has various shades of red fall color. Pick up litter.

Overall laced out, El Camino College, Torrance



Overall, pruned to show from, Manhattan Beach

Flowers

Flowers and fruit

Seeds

Pendent branches

Leaf above/below

Deciduous bark

Bonsai

ULMUS parvifolia

DYNASTY CHINESE ELM

Ulmus parvifolia 'Dynasty'

Branches droop but resist breakage.
Family: *Ulmaceae*

Additional Common Names

DYNASTY CHINESE ELM, DYNASTY LACEBARK ELM

Tree Characteristics

Vase Shape.
Has Deciduous foliage.
Height: 40 - 50 feet.
Width: 35 - 50 feet.
Growth Rate: 12 to 36 Inches per Year.
Leaves Elliptic, Green, Red, Deciduous.
Flowers Inconspicuous. Green. Flowers in Fall. Has separate male and female flowers on the same tree (monoecious).
Brown Winged Seed, Small (0.25 - 0.50 inches), fruiting in Fall.
Bark Reddish brown, Scaly.
Shading Capacity Rated as Low to Moderately Low in Leaf.
Shading Capacity Rated as out of Leaf.

Tree Site Conditions & Constraints

Sunset Zones 3 - 24.
USDA Hardiness Zones 5 - 10.
Exposure Full Sun to Partial Shade.
Wet but Well Drained Soil.
Clay, Loam or Sand Texture.
Acidic to Alkaline Soil pH.

Pests & Disease Information

Susceptible to Beetle Leaves and Borer, Armillaria, Dutch Elm Disease, Canker and Twig Blight.

Health, Safety & Environmental Concerns

Root Damage Potential Rated as Low.
Fire Resistance is Favorable.

Special Uses & Values

Specimen, Shade Tree, Buffer Strip or Street Tree.

Overall

Leaves

Bark

Branches

SelecTree. "*Ulmus parvifolia* 'Dynasty' Tree Record." 1995-2019. Jul 19, 2019.
< https://selectree.calpoly.edu/tree-detail/ulmus-parvifolia-dynasty >

ZELKOVA serrata — KamCards® WIP 09/05/10

TREE

zul-KOH-vuh ser-RA-tuh
Russian name, *L* saw-toothed

Synonym: Zelkova cuspidate klaki
Zelkova acuminata, Planera japonica

Family: Ulmaceae
Origin: Eastern Asia, Japan, Korea, Taiwan

Common Name: Sawleaf Zelkova, Japanese Zelkova, Common Zelkova, Japanese Elm

Species in Genus: 5

WHAT IT WILL BECOME

Height: 50-80' +	**Habit**: Round-headed	**Texture**: Medium	**Density**: Medium
Width: 40-60'	**Spacing**: 40'	**Planting Depth**: _-_'	**Growth**: Moderate to Fast

Leaf: Deciduous, alternate, simple, 1½-5 x ¾-1½" oblong-ovate to oblong, sharply serrated margin, tapered tip, unequal base and blade, 8-14 paired pinnate veins, rough, dull green, slightly hairy above, smooth, hairy veins, glossy below, medium green, yellow, orange, dark red to dull reddish brown fall color, purple shoots.
Flower: Dioecious, polygamous, green small, bell-shaped petal-less blooms, solitary male blooms, females in upper axils, clusters, inconspicuous, in early spring with emerging foliage. Sterile branches 4-6 x 2-3½", fruit branches 2-3 x ¾-1¼".
Fruit: Green-brown ¼-⅛" oblique drupes, 2-edged asymmetrical, slightly hairy, sessile, winged on the upper half, in fall.
Bark: Exfoliating in scaly golden brown patches, smooth reddish-brown, juvenile growth, matures dappled gray-white to brown, flakes, ridged, large lenticels, short single-trunked, spreading erect, slender branches.
Special Maintenance: Prune in fall for a strong central leader, to shape, remove included bark, and to force side growth.

WHERE IT WILL GROW

Sunset Zones: 3-21, 28-35, 37, 39	**USDA**: 5-9	**Seacoast Zones**: 2-3	**MPA**: 8-12'	**Sun/Shade**: ☼, ☼, ☼
WUCOLS: M-M-L-M-M-M, •, o	**Hardy**: Down to 4°F	**PDR**: Beetle leaf, canker disease, Japanese beetle, scale, red spider mite. Somewhat resistant to Dutch Elm disease		
Firescape Zones:	**Altitude**: Below 4,000'			

Culture: Any deep, moist, well-drained soil, very acidic-very alkaline. Tolerant of drought, heat, cold, wind, aridity, dust, urban conditions and smog. Shelter from frost in youth.

WHY USE IT

Usage: Shade, Elm substitute, specimen, street, park, lawn, garden, garden, golf course, parking lot, highway, sidewalk, windbreak, hedge, bonsai.
Notes: Authored by Tomitaro Makino. Moderately lived for 40-75 years. Transplants easily in youth by ball and burlap or boxed, due to shallow roots. Variety **'Halka'**, fastest growing, and resemble American elm, **'Green Vase'** and **'Village Green'** grow to 40' graceful vase and superior bronze fall color. Pick up litter. California big tree in Fremont.

Overall mature, Lacy Park, San Marino, CA

Overall middle aged

Overall fall color

Juvenile bark

Flower fall color

Leaf, unequal blade

Flowers/fruit

Mature bark

ZELKOVA serrata

Appendix C

Guidelines for Removal of Public Trees

APPENDIX C

City of West Hollywood
California 1984

City of West Hollywood
Facilities & Field Services Division
8300 Santa Monica Boulevard
West Hollywood, CA 90069-6216
(323) 848-6375

GUIDELINES FOR REMOVAL OF PUBLIC TREES

The City of West Hollywood desires to realize the optimum benefit of Public Trees, including abating air and noise pollution, purifying and replenishing oxygen, conserving energy by shading buildings and landscape areas, reducing glare, reducing wind speed and directing air flow, increasing real property values, providing a habitat for birds and other wildlife, reducing water runoff and the potential for soil erosion; and enhancing the visual and aesthetic qualities of our residential neighborhoods and business areas. Public Trees and trees in general, serve as a source of community pride. Public Trees include those trees located on the City's streets, in City parks and in City medians and landscaped areas.

The City of West Hollywood's Facilities and Field Services Division of the Human Services Department is responsible for the maintenance, care and planting of the City's Public Trees. Although the Division's mission is to preserve and protect the City's Public Trees there are occasions when the removal of Public Trees are required.

The following establishes criteria for the removal of Public Trees. The removal of Public Trees (Tree) will fall into one of the following three categories:

Category 1 – HEALTH & STRUCTURE
Category 2 – SAFETY
Category 3 – PHYSICAL DAMAGE / NUISANCE

CATEGORY 1 – HEALTH & STRUCTURE

Necessity to remove a Tree which has a serious health condition or pest infestation or has a poor structure which cannot reasonably be mitigated by treatment or trimming.

- The Tree is dead, dying, critically diseased, or damaged beyond reasonable repair.

- The Tree has a fatal disease or pest and no mitigating measures can save the Tree.

- The Tree is infected with a fatal pest or disease that if spread to other trees could cause an epidemic and removal will prevent transmission.

- The Tree is dead or suffering from major decay which cannot be treated successfully.

- The Tree is structurally poor; and / or has a history of falling limbs and past mitigation measures have not been successful.

- The structure of the Tree has been drastically comprised and trimming or other corrective measures will not correct the condition.

CATEGORY 2 – SAFETY

Necessity to remove a Tree which poses a safety hazard; it must be demonstrated that the condition or location of the Tree presents a clear public safety hazard or a foreseeable danger of property damage to an existing structure and such hazard or danger cannot reasonably be mitigated by trimming or other treatment of the Tree or surrounding area. The Tree poses a threat to persons or property which cannot be corrected by pruning, transplanting or other treatments. Root pruning, sidewalk shaving, sidewalk rerouting or alternative sidewalk materials shall be considered as alternative options when evaluating the removal of Trees that are causing safety hazards.

- The Tree presents a foreseeable risk of injury and liability to the public and corrective measures have proven not to mitigate the hazard.

- The Tree is blocking a traffic control device and frequent trimming will not correct the obstruction.

- Tree is blocking a significant portion of an immediately adjacent street light and frequent trimming will not correct the obstruction.

- The location of the Tree is hazardous to pedestrian or vehicular travel or safety and frequent trimming, and sidewalk rerouting will not correct the hazard.

- Removal of the Tree is required to mitigate life safety conflicts such as the obstruction of motorist or pedestrian sight-lines.

- The Tree has severe lean with uneven weight distribution which causes a hazard or potential hazard to pedestrians, vehicles or adjacent properties.

- The Tree is causing a physical safety hazard (such as significant sidewalk and curb uplifting), and root pruning is determined not to be a viable option.

CATEGORY 3 – PHYSICAL DAMAGE / NUISANCE

INFRASTRUCTURE DAMAGE:

- The Tree has a history of repeated damage to public infrastructure such as:

  Street Improvements - Curb, gutter, sidewalk, street pavement;
  Utilities - Sewer, water, gas electrical, phone, Cable TV (underground or overhead); including their related structures and

  there are no reasonable mitigating measures that can be taken to address the condition including on-going repairs or replacement to the subject public infrastructure. The requesting party is required to provide written documentation from the affected utility provider for utilities or the City Engineer for street improvements that continued existence of the Tree will continue to cause repeated (more than one instance) of significant damage, line breakage or disturbance as the direct result of the Tree.

PROPERTY DAMAGE:

- Damage to buildings (roofs, foundations, landscaped and hardscaped areas and there is no cost-effective alternative or reasonable mitigating measures that can be taken to save or transplant the Tree.

OTHER:

- The Tree interferes with the growth and development of a more desirable City Tree; resulting in the necessity to remove a Tree for the health and vigor of the surrounding trees.

- Tree is located in a parkway of a width of 24 inches or less: the Tree has become too large for the width of the parkway, causing major damage to immediately adjacent sidewalks or curbs and gutters, or where root pruning will damage the Tree such that it is susceptible to falling over in heavy winds.

- It is determined by the City that it is a benefit to the public and in the best interest of the community to remove a Tree for infrastructure necessity or as part of a development or planning effort in which public meeting(s) have occurred.

UNACCEPTABLE REASONS FOR PUBLIC TREE REMOVAL:

The following factors shall not be considered as justification for the removal of a Public Tree:

A. Obstruction of a scenic view.

B. Visibility of signage or storefront.

C. Potential future costs to public infrastructure or private property which can be avoided by root pruning, root barriers trimming or other corrective measures.

D. The cost of routine Tree maintenance (pruning, watering, fertilizing, and spraying, if necessary)

E. Normal maintenance activities such as the raking/sweeping of leaves, flowers, seed pods and annual cleaning of gutters

F. Hazards that can be controlled or eliminated through appropriate pruning or maintenance.

Tree(s) scheduled for removal shall be posted with a Notice (see attachment) which will include the following information:

- Address of Tree
- Reason for removal of the Tree
- Approximate removal date
- Replacement tree species and size (if applicable)
- Contact phone number for additional information

The Notice shall be posted a minimum of 4 weeks prior to the date of removal.

Appendix D

Specifications for Tree Planting

APPENDIX D

City of West Hollywood
California 1984

City of West Hollywood
Facilities & Field Services Division
8300 Santa Monica Boulevard
West Hollywood, CA 90069-6216
(323) 848-6375

SPECIFICATIONS FOR TREE PLANTING

Trees planting should meet the following minimum standards. Trees that do not meet these requirements will be rejected. The City of West Hollywood, or its representative, retains the right to inspect each tree species.

SPECIFICATIONS FOR TREE PLANTING SHALL BE AS FOLLOWS:

- All planting locations shall be checked for underground conflicts. It is mandatory that Dig Alert is notified to detect all underground utilities prior to any digging.

- Dig planting holes two to three (2-3) times as wide as the container. The depth of the planting pit shall be equal to the size of the rootball. Place the tree in the planting pit so the trunk flare or the top of the rootball is at least one-half inch to 1 inch (1/2” to 1”) above finish grade. In grass covered parkways the top of the rootball shall be higher than the surrounding soil by one-half inch to one inch (1/2” to 1”). In a concrete tree well, the rootball shall be one inch (1”) above the level of the finished surface of the surrounding concrete.

- When obtaining a tree from a nursery, always carry the tree by its container or rootball, never by the trunk.

- After removing the tree from the container, cut circling roots and matted roots off the bottom. Check for any circling roots missed during initial inspection. Any roots less than one-third (1/3) the size of the trunk shall be removed with a sharp pruning tool.

- Before placing the tree in the planting pit, examine the root ball for injured roots and the canopy for broken branches. Damaged roots shall be cleanly cut off at a point just in front of the break. Broken branches shall be cut out of the canopy making sure that the branch collar is not damaged.

- Backfill with soil removed from the planting hole. Only add fertilizer or compost if soil analysis indicates it is required. Build a temporary four to six inches (4” to 6”) water retention berm around the root ball to allow for establishment watering. Immediately after planting the tree, water it thoroughly by filling the water retention basin twice.

- Eliminate all air pockets while backfilling the planting pit by watering the soil as it is put into the hole. Do not compact the backfill by tamping it down.

- All trees shall be staked with two wooden lodge poles and two ties per pole. The minimum diameter of a lodge pole is two inches (2”), but may be larger for 36” and 48” box trees. Place the tree ties at one-third (1/3) and two-third (2/3) of the trunk height. Drive the stake into the ground approximately twenty-four to thirty inches (24” to 30”) below grade making sure not to penetrate the root ball.

- Provide a two to four inch (2” to 4”) layer of mulch where appropriate to conserve soil moisture, provide protection from extreme temperatures and prevent damage from weed eaters. Mulch shall be kept three to four inches (3” to 4”) away from the tree trunk and shall extend at minimum to the boundary of the water retention basin. It may extend further if desired.

- The soil around the new tree shall be kept moist, but not saturated, by watering at least once a week during the cooler winter months and twice a week during the hot summer months.

Appendix E

Specifications for Selection of Quality Tree Stock

APPENDIX E

City of West Hollywood
California 1984

City of West Hollywood
Facilities & Field Services Division
8300 Santa Monica Boulevard
West Hollywood, CA 90069-6216
(323) 848-6375

SPECIFICATIONS
FOR
SELECTION OF QUALITY NURSERY TREE STOCK

Container material is the most common type of nursery stock in California; however, bare root tree stock in the winter is a good alternative when appropriate.

Trees should meet the following minimum standards. Trees that do not meet these requirements will be rejected. The City of West Hollywood, or its representative, retains the right to inspect the root mass of each tree species.

SPECIFICATIONS FOR SELECTION OF QUALITY NURSERY TREE STOCK SHALL BE AS FOLLOWS:

- All trees shall be true to type or botanical name as ordered or shown on planting plans or contract orders.
- All trees shall have a single, relatively straight trunk with a good taper and branch distribution vertically, laterally and radially with a live crown ratio (distance from bottom of canopy to tree top/tree height) of at least sixty percent (60%).
- All branches in the canopy should be less than two-third (2/3) the trunk diameter and free of included bark. The trunk and main branches shall be free of wounds, except for properly made pruning cuts, and free of damaged areas, conks, bleeding and signs of insects or disease.
- All trees shall be healthy, have a form typical for the species or cultivar, be well-rooted, and pruned as appropriate for the species.
- All trees shall have sufficient trunk diameter and taper so that it can remain vertical without the support of a nursery stake within six (6) months of planting.
- The rootball of all trees shall be moist throughout and the crown shall show no sign of moisture stress.

- The tree shall be well-rooted in the soil mix. The point where the topmost root in the root ball emerges from the trunk should be visible at the soil surface of the root ball. When the container is removed, the root ball shall remain intact. When the tree is lifted, the trunk and root system shall move as one.

- All trees shall comply with federal and state laws requiring inspection for plant diseases and pest infestations.

- No tree shall be accepted that has been severely topped, headed back, or lion-tailed.

- No tree shall be accepted with co-dominant stems or excessive weak branch attachments that cannot be correctively pruned without jeopardizing the natural form of the species.

- No tree shall be accepted that is root bound, shows evidence of girdling or kinking roots, or has roots protruding above the soil (a.k.a. “knees”).

- No tree shall be accepted that has roots greater than one-fifth (1/5) the size of the trunk diameter growing out of the bottom of the container.

City of West Hollywood
California 1984

City of West Hollywood

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