



## Redwood Barn Nursery

1607 Fifth Street Davis, California

### Choosing a shade tree.

There is no perfect tree. Some come pretty close: if ginkgo trees grew faster, we'd plant more of them. They get quite large with age, have excellent branch structure and deep roots, no pest or disease problems. The fall color is spectacular. So long as you get a grafted male clone there is no litter. But ginkgo trees grow just 18" a year. No faster, no slower. They've been on this planet for 270 million years, and are unconcerned about how much of a hurry you are in. So, it's about a decade before you begin to get significant shade.

There are a lot of factors that go into this important decision: litter, surface roots, pest issues, longevity, branch structure (safety), shade density, drought tolerance and more. Nurseries focus on the ancillary benefits: pretty flowers, fall color, quick shade, and so on. I have found that these considerations narrow down to four categories:

How big?

How fast?

Any drawbacks?

Any special features?

#### **Some definitions.**

Size: anything up to about 15' tall is a small tree. 15' to 30' is medium. 30' or bigger is a big tree.

Growth rate: a tree that grows more than 5' a year is fast-growing. A few trees grow very fast: poplars can grow more than 10' in a single season!

- | Very fast-growing trees usually have drawbacks (aggressive roots, poor branch structure) that make them unsuitable for residential use. They may be fine on rural properties; Lombardy poplars that were planted in the 1930's are still seen along some county roads here.
- | Fast-growing trees include plane trees and sycamores, elms, some maples.
- | Medium growth rate is 3 to 5 feet per year. Examples include Chinese pistache, zelkova, and many maples and oaks.
- | Slow growth is less than 3 feet per year. Ginkgo, young Valley oaks, smaller maples.

#### **Drawbacks**

Some issues are manageable or can be tolerated, others rule out a tree from consideration.

- | Susceptibility to diseases or pests that are not readily managed. Examples: most of the ash species (anthracnose, mistletoe, borers), Aristocrat pear (fireblight).
- | Nuisance pests. This refers to pests that are annoying in numbers, litter the area, or cause disagreeable drippy mess, but don't necessarily harm the tree. Examples: honey

locust gall midge, Asian woolly hackberry aphid on Chinese hackberry, elm leaf beetle, boxelder bug on goldenrain tree.

- | Poor branch structure leading to unsafe conditions; examples include calleryana pears (Bradford pear and the newer cultivars) and locust (Robinia).
- | Root issues. Willows and poplars have aggressive surface roots. Mulberries and silver maples can be a problem. Other species, such as sycamores, may develop surface roots, but that often has to do with how they are watered.
- | Invasive species should be avoided. Examples: Chinese tallow tree (*Triadica sebifera*, formerly *Sapium*), privet, silk tree (*Albizia*), empress tree (*Paulownia*), and tree-of-heaven.

### **Some of our favorite trees.**

#### Crapemyrtles (*Lagerstroemia*)

For shade, look for large hybrids such as Natchez, Muskogee, and Tuscarora. They have superior mildew resistance, grow fast, and spread outward more than the traditional varieties.

Smaller varieties with good mildew resistance include Catawba (purplish), Zuni (red-purple), and Centennial Spirit (hot, hot pink; shown at right).

The truest-red type to date is Dynamite. Note that Dynamite is especially prone to color change due to cool temperatures. When the delta breeze cools us off in the evening, some of the flowers will be more pink than red.

Crapemyrtles are naturally large shrubs or multi-trunk trees, though they can be trained to a single leader. They do not require pruning, despite what you see done to them in commercial landscapes.

If the color or shade really matters to you, you should buy and plant it in bloom. The nuances of color tone on crapemyrtle are a common source of frustration to designers and nursery folks. Flower color is affected by temperature and varies as the flower ages. Peak bloom is in July, so now's the time to look for them. Yes, it's a great time to plant them with proper watering.

In summer of 2017, crapemyrtle aphid was a common problem, creating sticky drip for much of the summer. Previously it had been a minor pest, controlled by natural predators. This year, we seem to have little problem with it. To avoid future nuisance, you may wish to avoid planting crapemyrtles over concrete or outdoor furniture.

#### Elms (*Ulmus*)

Our historic love affair with the American elm (*Ulmus americana*) derives from its tolerance of urban conditions and high canopy making it suitable for street tree planting. Unfortunately, it became the poster child for over-reliance on a single species when Dutch Elm disease spread through the country.

Hybridization and selection programs at the U.S. Arboretum created disease-resistant cultivars that have slowly entered the nursery trade. These grow at a moderate rate and ultimately become very large. Most have good resistance to the elm leaf beetle, a nuisance pest that old-timers will remember on the old elms that we used to have in downtown Davis.

The Drake variety of Chinese elm (*Ulmus parvifolia*; shown above, right, 8 years old) was widely planted in the 1940's and 50's, and seems to be coming back in vogue. It's graceful, with small leaves on a round-headed tree that kind of weeps, and ultimately is a large, spreading tree. Fast growth requires careful training for good structure, and there can be a lot of leaf litter during summer. My grandfather had one over his goldfish pond. A staid gentleman most of the time, he cursed it under his breath as he cleaned the pond.

Sawtooth zelkova (*Zelkova serrata*; 20 year old tree at left) is a tree in the elm family that is resistant to disease. It's a moderately fast-growing shade tree with a nice high canopy.

Ginkgo (Maidenhair tree), described above. Plant more ginkgoes! Just be sure they're grafted male trees. Tree at right is about 35 years old.

### Maples (Acer)

Maples suffered during the drought, as they are not suited to very low-water landscapes. They need deep irrigation about every two weeks once established, weekly during the first few years. Some are very large: October Glory gets more than 40 feet tall and wide. Medium-size hybrids between Shantung maple and Norway maple, such as Pacific Sunset and Crimson Sunset, are very attractive, clean trees for courtyards and small gardens.

Shantung maple (*Acer truncatum*, foliage shown at left) is a tough little tree with attractive, shiny leaves. Excellent substitute for the Japanese maple in sunnier, drier locations.

### Oaks (Quercus)

I gave short shrift to these in past articles. Partly that is because of the problem of marcescence, the unattractive tendency of some deciduous species to hang onto their leaves into the winter. Slow growth rate of our native Valley oak, coupled with its ultimate enormity, makes it hard to place in many landscapes.

If you have room, some species of oaks are worth considering. A valley oak (*Quercus lobata*; shown left at 20 years) is something you plant for the next generation, as it grows about a foot a year for about the first decade or so. Faster growing Shumardi oak (*Quercus shumardi*; foliage below, right) makes a big, spreading tree with large, attractive shiny leaves. Burr oak (*Quercus macrocarpa*; foliage below, left) is even bigger and faster. Tree shown below, right, is just three years old from a five-gallon container.

Drawbacks? A comment paraphrased from a gardener with a mature oak: "you can't really recommend oaks without talking about the acorns. There are some years where there are thousands!"

She is referring to the phenomenon of "mast years" with oaks, periodic events in which they produce prodigious amounts of acorns. She rakes up buckets of them, and she pointed out that oaks tend to seed themselves, with jays and squirrels doing much of the distribution. My 25-year-old Shumardi oak has sent up several seedlings, including one easily 300 feet from the original. I have several Coast live oaks establishing on my property, courtesy of my neighbor's tree...four acres away.

### Pistache, Chinese (*Pistacia chinensis*)

Still a favorite everywhere. The male cultivar Keith Davey has become the most common form planted, with reliable bright red fall color and no messy fruit. Chinese pistache has a moderate growth rate with about equal spread to height.

Some trees have succumbed to what appears to be verticillium wilt. I don't consider this prevalent enough to be a serious concern, but be aware of it if you are replacing another species that has been identified as having been infected. Other than that, they are tough, drought-tolerant, attractive trees with deep roots and very little litter, and spectacular fall color.

Sycamores and plane trees (*Platanus*)

The most common form in Davis is the London plane tree, a European hybrid widely used for its tolerance of urban conditions. Tree at right is estimated at 70 years old. Ultimately these are enormous trees, but with an open enough canopy that you can have a lawn or garden beneath. Columbia variety has good resistance to mildew and anthracnose diseases.

I'm happy to see the Roberts variety of California sycamore becoming more available. It has great anthracnose resistance, a disease that used to limit our use of the species. Compared to the London plane trees (the main trees in Davis Central Park), our native sycamore has bigger leaves, usually develops a broader crown, and has especially attractive white bark mottled with tan. More species diversity in our urban forest would be good.

#### **A few more to consider:**

Chaste tree (*Vitex agnus castis*, right): large shrub or multi-trunk tree, similar in growth habit and use to the crapemyrtle, but flowers are blue or purple. Bees love them.

Desert willow (*Chilopsis linearis*): southwestern native now available in burgundy, bicolor pink, and white along with the original magenta. Willow-like leaves on a tree with an open canopy, showy flowers throughout summer that attract hummingbirds and pollinators.

Formosan flame tree (*Koelreuteria elegans*, next page on left, 20 years old): only available at the Arboretum sales, this is a great tree for Davis gardeners. High canopy, tropical-looking leaves, good drought tolerance. Main feature is the very showy pods in late fall.

Palo Verde 'Desert Museum' (*Cercidium* hybrid): chance seedling of hybrid parents has become widely planted all over Southern California as well as the southwest where it originated. Availability here has been limited so far. This form is thornless and has profuse yellow flowers over a very long period. Tolerant of desert extremes, a great choice for xeriscapes.

This is not intended as a complete list. The City of Davis maintains a useful Master Street Tree list on the city website. TREE Davis has excellent resources. Visit [treedavis.org](http://treedavis.org), and make a donation while you're there!



Shantung maple (*Acer truncatum*) is getting better known as a substitute for Japanese maple. It has better drought tolerance and is fine in full sun. The tree grows at a moderate pace to about 15 feet tall and broad within 7 to 10 years. Hybrids of Shantung maple with Norway maple are larger, broad-crowned shade trees.



One of the showiest crapemyrtles, Centennial is a large shrub or small tree to about 10 – 12 feet tall and broad. It's a fairly slow grower with good mildew resistance.



Looking for an alternative to the ubiquitous crapemyrtle? Chaste tree (*Vitex*) is a large shrub or multi-trunk tree that has a similar long summer bloom season and attracts pollinators. Good drought tolerance.



Know the ultimate size of the shade tree you're planting! This London plane tree was planted in the mid-20<sup>th</sup> century and is about 70 feet tall, 40 feet across.



Foliage of the Shumardi oak, a large species for our area. Reasonably drought tolerant with a moderate growth rate, it forms a broad crown.



Burr oak (*Quercus macrocarpa*) is not widely planted in this area, but it is a very adaptable, very large rather open-crown tree. This specimen has grown to fifteen feet in just three years from a five gallon plant. It has enormous acorns.



[http://redwoodbarn.com/images/DE\\_choosing%20a%20shade%20tree/Quercus%20macrocarpa%20foliage.jpg](http://redwoodbarn.com/images/DE_choosing%20a%20shade%20tree/Quercus%20macrocarpa%20foliage.jpg)

Burr oak (*Quercus macrocarpa*) is not widely planted in this area, but it is a very adaptable, very large, rather open-crown tree. Huge leaves and enormous acorns.



Long popular in Southern California, the Drake variety of Chinese elm is a graceful, fast-growing tree that spreads quickly. Also suitable for our area, but give it room! Steady summer litter of leaves is annoying on a patio, not a problem over a lawn or ground cover area. Needs careful training when young to prevent splitting in the wind.



Our native Valley oak is a slow grower when young. Shown here at about 20 years of age (with a 5 foot stake for comparison). So it takes quite awhile to get significant shade, but then eventually they are very large trees.



20-year-old Zelkova serrata.



20-year-old Ginkgo biloba.



20-year-old *Koelreuteria elegans*