

Domesticating the Wild Palm: A Survey of Palms and Their Culture Suitable for California and the Pacific Coast®

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I intend to give a general overview of the care, selection, and cultural requirements of some of the palms used in Southern California.

REVIEW

- The palm family has 2800 different species, with over 200 genera, 20 to 30 of which are found in Southern California.
- Palms are monocots so they have some very unique characteristics.
- Stems are comprised of vascular bundles rather than a continuous vascular system.
- It is nearly impossible to girdle a palm and they can also be planted deeper than the original crown.
- A majority of our palms are solitary or single trunk and have one apical bud. You cannot cut the top out of the tree to produce secondary growth.
- Palms have a temporary root system that is in continual process of losing old and initiating new roots. This occurs at a higher rate when soil and air temperatures are warm.
- The bulk of root systems are usually in the top surface of the soil mass (4 to 6 ft).
- An ideal time to transplant palms is during the warmer months, especially field-grown palms. Container-grown palms usually present little or no problems unless they are heavily rooted into the soil under the containers.
- On field-grown palms, leaves need to be left tied around the heart for 60 days.

Palm Nutrition.

- Slow-release nitrogen, iron and magnesium, and potassium. Blood meal is a good nitrogen source.
- Ironite: Apply iron during the warm months.

Palm Propagation.

- Most by seed, few by asexual or vegetative propagation.
- Bottom heat and sweat tents.

Plant Diseases.

- Fusarium complex — *Phoenix canariensis*.
- Lethal yellows.
- Pink rot — *Gliocladium* blight.
- Mites.
- Mealy bug.

Water

- Many are very drought tolerant.

DETAILS ON SPECIFIC PALMS

Name: *Caryota* sp.

Origin: India, Eastern Asia, Malay, Thailand, Philippines

Common Name: fishtail palm

Jack Ingwersen has re-introduced *Caryota urens*, "Himalayan" or *C. plumosa*. This is an outstanding interior palm that will take low light, has few pests, and looks spectacular in groves. Probably first introduced by Dave Berry.

- Relatively fast growing, acclimates easily, and is easy to transplant.
- Some of us have had a bad experience with *C. mitis*, a fine looking clumping *Caryota* that does well in the tropics, but suffers here when temperatures drop below 60 °F. This species seems to be very susceptible to salt damage.
- Mites and drafts from air conditioning seem to be the major problem.
- Jack Ingwersen has several selections that he is experimenting with, and these should be available in the next few years.
- Species found at the higher elevations have performed better in California.
- Flowers will first appear among the upper leaf bases, and then flower successively down the stem until the trunk dies.
- *Caryota gigas*: black trunk.

Name: *Howea forsteriana*

Origin: Lord Howe Island

Common Name: kentia, paradise palm

Synonym: *Kentia forsteriana*, sentry palm

- Used since Victorian days; still the No.1 indoor palm. Excellent for low light areas.
- Extremely slow growing, expensive.
- Palms grown under shade and cool seem to hold up somewhat better than ones grown in the greenhouse or produced in Hawaii or Florida.
- Transplants relatively easily, almost any time of the year.
- Collects dust; mites are a problem and on occasion will get *Gliocladium* (pink rot).
- During the winter, kentias seems to get a yellowing or bronzing color if grown outside. I believe this relates to a nutritional problem. Use calcium-nitrate in light amounts during winter months. Apply chelated iron in the fall.
- Leaning head or leaning crown.

Name: *Chamaedorea* sp.

Origin: Mexico to Central America

Common Name: bamboo palm

- A very diverse group of palms, the most common being what we call "Florida Hybrid", probably a cross between *C. erumpens* and *C. seifrizii*.
- The true *C. seifrizii* is probably a better palm. Bernicker's Nursery in Florida has a nice selection and Kohala Nursery in Hawaii has developed a nice line.

- Very susceptible to pink rot and mites, especially where air circulation is poor.
- *Chamaedorea elegans* or neantha bella palm has been a standard as a ground cover, mass planting, or table top plant. Will tolerate quite a bit of abuse.
- Jack Ingwersen is currently hand pollinating several promising selections. “Irving Cantor,” “Horace Anderson,” and “Harold Moore.”
- New selection *C. hooperiana*.
- There are several other promising species: *C. metallica*, *C. glaucifolia*, *C. tepejilote*, *C. radicalis*.
- Don Hodel, L.A. County Farm Advisor has completed a publication concerning the chamaedoreas.

Name: *Neodypsis* sp.

Origin: Madasgar

Common Name: triangle palm

- Relatively new introduction.
- Noted for its southwest look.
- Very susceptible to pink rot.
- Jury still out.

Name: *Rhapis* sp.

Origin: China, Thailand

Common Name: lady palm

- A group of about 12 species; *R. excelsa* and *R. humilis* are considered the best.
- Excellent for container culture; will last in pots indefinitely.
- Takes adverse interior conditions well.
- Several years ago a species from Thailand was introduced which gave *Rhapis* a bad name.
- Susceptible to high salts and high temperatures. Prefers organic nitrogen and is a heavy user of iron.

Name: *Trachycarpus fortunei*

Origin: China

Common Name: windmill palm

Synonym: *Chamaerops excelsa*

- Critical factor is the re-establishment period required for field-dug trees.
- Acclimates to interior conditions relatively easily, and has few pests. Relatively slow growing, so it will stay in scale indefinitely.
- Sometimes confused with *C. humilis*, which naturally clumps. I think there might be potential for *C. humilis* inside because it is so easy to transplant and reestablish itself quickly.
- Excellent in narrow parkways.
- Prefers some protection in hot desert areas.

Name: *Chamaerops humilis*

Origin: Mediterranean

Common Name: Mediterranean fan palm

- One of the most adapted of all palms. Will take very cold nights (maybe down to 0 °F) and takes the extreme desert heat.
- Highly prized for its multiple trunks and beautiful forms.
- One of the easiest palms to transplant.
- Very few problems.

Name: *Syagrus romanzoffiana* (syn. *Arecastrum romanzoffianum*)

Origin: Brazil

Common Name: queen palm

Synonym: *Cocos plumosa*

- Outstanding palm for outdoor use, but has a few problems inside. It is very susceptible to pink rot (*Gliocladium*). Heart and fronds stretch in low light and the hot temperatures found in the peaks of buildings. Mites and mealy bugs are major problems.
- Re-establishes itself relatively quickly, but needs to be properly acclimated.
- Tends to use more water than some of the other palms.
- Has been known to quickly outgrow surroundings and become too tall.
- Prefers soil moisture and will perform better under those conditions, but will survive in severe drought.

Name: *Ptychosperma elegans*

Origin: Australia

Common Name: king palm

Synonym: *Seaforthia elegans*, *Archontophoenix cunninghamiana*

- Has been promoted as a *Kentia* substitute.
- Does not like dry (arid); prefers a cool humid environment. Leaf tips will tend to burn severely.
- Very susceptible to pink rot!!!
- Very difficult to transplant and re-establish. Even uprooting boxes sometimes causes problems.
- Poor choice as interior selection.
- *Archontophoenix alexandrae* is a slender-trunk form that is found extensively in Hawaii.

Name: *Brahea edulis*

Origin: Guadalupe Islands

Common Name: Guadalupe palm

Synonym: *Erythea edulis*

- Far better than *Washingtonia*, stays in scale.
- No dangerous spines on petiole.

- Excellent street tree.
- Very few pests.
- Will grow on sea coast.
- Slow growing.

Name: *Brahea armata*

Origin: Mexico

Common Name: Mexican blue palm

Synonym: *Erythea armata*

- Excellent in desert conditions.
- One of the most difficult to transplant of all the palms. Probably needs to be side-boxed.
- Very slow growing.

Name: *Phoenix reclinata*

Origin: Africa

Common Name: Senegal date palm

- Immature specimens are not very impressive; does not become nice until several trunks develop.
- Clumping palm that needs space; can be a hazard near walkways and staircases because of thorns.
- Heart tends to get soft and break out in low light.
- Mites are a serious problem.
- Moderately susceptible to pink rot especially in humid locations.
- Probably should be side-boxed when moving large specimens.
- Not outstanding in the desert.

Name: *Phoenix canariensis*

Origin: Canary Islands

Common Name: Canary Island palm

- Highly prized for “bold” look.
- Has become the Las Vegas palm.
- Very susceptible to a fusarium complex especially in coastal area.
- Preventative measures.
- Only prune old fronds that are dropping below a straight plain.
- Don't prune new fronds.
- Sterilize or disinfect tools with Clorox 9 : 1.
- Avoid use of chainsaws — consider throw away saws.
- Select other species for coastal use because of *Fusarium* problems.

Name: *Phoenix roebelenii*

Origin: Southeast Asia

Common Name: pigmy date palm, dwarf date palm

- Beautiful palm, but it tends to really stretch in low light.
- Probably better used in shade gardens.
- Solitary, but looks nice planted in groups.

- Will take container culture well, but is susceptible to mites.
- Needs regular applications of iron and magnesium.
- Fungal problems in crown have been taken care of with the use of Cleary 3336.

Name: *Butia capitata*

Origin: Brazil

Common Name: pindo palm

- Very cold adaptable.
- Slow growing.
- Great in the desert.
- One of the palms of the future.

Name: *Washingtonia robusta*

Origin: Mexico

Common Name: Mexican fan palm

- Famous in Southern California.
- Beautiful skyline.
- Transplants much easier.
- Takes coastal, as well as desert conditions.
- Can grow more than 5 ft in 1 year in warm areas.
- Has shown the ability to acclimate and be used indoors.
- Giant palm borer - inspect transplanted palms.
- Malathion drenches have been used in the past with mixed results.
- Sevin, Diazion, Dursban — but not on label.

Name: *Washingtonia filifera*

Origin: California deserts

Common Name: California fan palm

- Much slower than *W. robusta*.
- Much stouter trunk than *W. robusta*.
- Far more difficult to transplant.
- Does not do well near sea coast.
- Gets diamond scale (a fungus not insect) usually prune off old fronds.
- *Fusarium* complex.
- A few comments about acclimating and adopting palms to interior use (author's humble opinions):
- It is extremely difficult to take a palm growing in field conditions and move it immediately into adverse conditions for interior use.
- Palms dug in the field should be first established in containers. The box size does not have to be large. Usually, on most mature palms, 30 to 42 inches is more than adequate. This process usually takes about 60 to 120 days. The longer the period, the better the chance that it will result in a better acclimated plant.
- Remember once again to inspect the plants carefully for diseases and pests, and then treat accordingly.

- It should be obvious by now that the time-line that is required makes it difficult to dig a palm in the desert and ship it to Salt Lake, and plant it without suffering severe problems.
- Proper planning, specifications, time frames, and inspections are critical for this process to be successful.
- The planting site should also be thoroughly inspected for any of many problems. For example: adequate light, proper irrigation and drainage, drafts, soil, air temperature, etc.

PLANT GLOSSARY

Archontophoenix (ahr-kon-toe-FEE-niks): From the Greek archon or Archontos (a chieftain) and phoenix (the date palm); an allusion to the majestic appearance of these palms.

Arecastrum (a-ree-KAS-truhm): From *Areca* plus -astrum indicating resemblance.

Armata (ahr-MAH-tuh): Armed with thorns, spines and/or other such features.

Butia (BEW tee-uh): Vernacular name in Brazil for *B. capitata*.

Canariensis (kan-air-ee-EN-sis): Of the Canary Islands.

Capitata (ca-pee-TAH-tuh): Growing in a dense head; can refer to the flowers, the fruit, the whole plant, or in this case the leaves.

Caryota (kair-ee-OE-tuh): From the Greek Karyon (nut); referring to a date shaped nut.

Chamaerops (ka-MEE-rops): From the Greek chamai (dwarf) and rhaps (bush).

Cunninghamiana (kuhn-ing-ham-ee-AN-uh): Named for James Cunningham, East India Col surgeon at Amoy, China who sent home large collections of plants and plant drawings from China.

Edulis (ED-ew-lis): Edible.

Erythea (air-ee-thee-uh): Named for one of the three Hesperides who lived far away in the West on the border of the ocean where the sun set, guarding the golden apples which Earth had give to HERA.

Erytrea (air-ee-TREE-uh): See above.

Filifera (fi-LIF-er-uh): Thread-bearing; referring to the fibers that separate from the leaf margins.

Fortunei (for-TEWN-ee-ee or for-TEWN-eye): Named for Robert Fortune, Scottish horticulturist and collector in China. He established the tea industry in India and Ceylon.

Humilis (HEW mi-lis): Low growing or **excelsea** (eks-SEL-suh) tall.

Humilis (HEW-mi-lis): Low growing; more dwarfish than most of its kindred.

Phoenix (FEE-niks): The Greek name for date palm.

Reclinata (re-clin-AH-tuh) Bent backward from the vertical.

Rhapis (RAY-pis): From the Greek rhaps (a needle); with reference to the needle-like segments of these sucker producing palms.

Robusta (roe-BUSH-tuh) Stout, strong in growth.

Roebelenii (roe-bel-EE-nee): After M. Robelin who collected plants in S.E. Asia.

Romanzoffiana (roe-man-zoff ee-AN-uh.) Names for Prince Nicolas Romanzoff, who financed a round-the-world expedition.

Trachycarpus (tra-kee-KAR puhs): From the Greek trachys (rough) and karpos (fruit); an allusion to the fruit of some species.

Urens (EWR-enz): Stinging burning, with reference to the voluminous sap that quickly ferments into a highly intoxicating product.

Washingtonia (wah-shing-TOEN-ee-uh): Named for George Washington.

Robusta (roe-BUSH-tuh) Stout, strong in growth.

From the Wild to the Garden Center: *Pulmonaria* and *Heuchera*®

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Terra Nova has been exciting plant nerds and the American public for 11 years. Our goal has been “to boldly grow what no man has grown before”. While this sounds humorous, we have been quite serious about breeding the best new perennials in the marketplace with 406 new introductions to North American horticulture. This process has involved the growing, trialing, and evaluation of hundreds of thousands of seedlings on our property and trial sites around the world. Our deliberate breeding work has paid off well with our new introductions becoming some of the most sought after new perennials.

Pulmonaria

Natives of shady woods and scrublands from Siberia to Italy, these plants are often the harbinger of spring. I've seen glorious photographs of orchards in France where the plants have naturalized. Wall-to-wall carpets of cobalt-blue *P. angustifolia* reflecting the sky through the naked apple branches makes quite a show. The flowers range from salmon (*P.* 'Redstart') through raspberry (*P.* 'Berries and Cream') to sky blue (*P.* 'Roy Davidson'). An outstanding characteristic of most *Pulmonaria* is the fact that the flowers turn totally different shades as they age; pinks may fade to blues, wines to reds, or the reverse! Some, like *P.* 'Sissinghurst White' and the coral 'Bowles' Red' hold their color for the whole blooming period.

The other exciting aspect of *Pulmonaria* is foliage. Background colors may vary from apple-green through olive to an almost black-emerald. Brilliant silver spotting may run from lightly dusted to solid silver (*P.* 'Excalibur' PP# 8958). Foliage shape is another variable. Leaves can be lanceolate (spear-shaped) like *P.* 'Cotton Cool' to oval as in *P. angustifolia* subsp. *azurea*. The latter plant is one of the dwarves of the genus, rarely reaching 8 inches high. Plants like *P. mollis* 'Samobor' can top out