

Palms in the landscape, XIV – Phoenix: The date palms, Part 4

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Staminate varieties of *Phoenix dactylifera*

Staminate plants of *Phoenix dactylifera* generally have a significantly larger and more robust habit and have larger canopies and more leaves than their pistillate counterparts (Figs. 86, 110-111). Retaining longer but still neatly pruned leaf bases on staminate plants increases the diameter of the trunk even more, making these staminate palms appear even more like *P. canariensis* than *P. dactylifera* (Fig. 112). The larger, more robust habit, trunks, and canopies coupled with their resistance to *Fusarium* wilt make staminate plants an appropriate choice for replanting where *P. canariensis* have died from this disease if one wishes to retain the *P. canariensis* motif. Unfortunately, staminate plants comprise only about two percent of *P. dactylifera* (typically planted in the date orchard one staminate per 50 pistillate plants per acre) so they are more scarce and

more expensive. Named staminate varieties include ‘Crane’ and ‘Jarvis’ (Fig. 113) although in the landscape trade they typically are referred to only by the generic term “macho” (meaning male). Their larger, more robust habit and canopy and short inflorescences that do not set fruit are sufficient to identify staminate *P. dactylifera* (Fig. 114). In the spring when they flower the panicle at the end of the staminate inflorescence is more compact with shorter, whitish flowering strands or rachillae (Fig. 115) while pistillate inflorescences

have larger, more expansive panicles with longer, yellowish rachillae.

Phoenix loureiroi (“loureiri”) (*P. hanceana*, *P. humilis*) Loureiro’s date palm

Habit: variable, mostly solitary or infrequently clustered, rarely acaulescent (without visible trunk), slender to moderate, small- to medium-sized, shrub or tree palm, slow to 20 feet tall

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Figure 110. (Left) Staminate plants of *Phoenix dactylifera* generally have a significantly larger and more robust habit and have larger canopies and more leaves than their pistillate counterparts, making them look more like *P. canariensis* (12062 Valley View St., Garden Grove, CA).

Figure 111. (Center) A grove of robust staminate plants of *Phoenix dactylifera* is at The Plantation, Indio, CA.

Figure 112. (Right) Retaining long er but still neatly pruned leaf bases on staminate plants of *Phoenix dactylifera* increases the diameter of the trunk even more, making them appear more like *P. canariensis* (11300 Birch St., Bloomington, CA).





Figure 113. (Left) *Phoenix dactylifera* 'Jarvis' is one of the few named, staminate varieties (U. S. D. A. Germplasm Collection, Thermal, CA).



Figure 114. (Lower right) Besides their more robust habit and larger canopies, the short, whitish inflorescences distinguish staminate varieties of *Phoenix dactylifera* (U. S. D. A. Germplasm Collection, Thermal, CA).



Figure 115. (Lower right) Staminate inflorescences of *Phoenix dactylifera* have short, compact, white to cream-colored flower-bearing rachillae (U. S. D. A. Germplasm Collection, Thermal, CA).

(Fig. 116). **Trunk:** to 12 inches DBH, brownish, typically densely covered with crowded, diamond-shaped leaf bases to give checkered appearance (Fig. 117), much later marked with diamond-shaped leaf scars, distally with persistent leaves and leaf bases below the canopy. **Leaves:** ascending to spreading to drooping, to 8 feet long, stiff to gracefully arching, flat or tilted; leaf base to 12 inches long, deeply split opposite petiole, margins reddish brown fibrous; acanthophylls to 8 inches long, arranged in several planes, yellow-green to orange; other pinnae to 130 on each side, to 18 × 0.9 inches, arranged in groups and in several planes, especially proximally, sometimes regularly arranged distally, stiff and very sharp-pointed to drooping, green. **Inflorescences:** staminate to 12 inches long, cream-colored; peduncle 6 inches long; rachillae to 6 inches long, spreading to drooping; pistillate to 5 feet long, peduncle to 4 feet long; rachillae to 15

Figure 116. (Left) A variable species, *Phoenix loureiroi* grow slowly to about 20 feet tall (52 s 1590, Los Angeles County Arboretum & Botanic Garden, Arcadia, CA).

Figure 117. (Right) Leaf bases typically persist for many years on *Phoenix loureiroi* and when neatly trimmed give a checkered appearance to the trunk (52 s 1590, Los Angeles County Arboretum & Botanic Garden, Arcadia, CA).



inches long, spreading to drooping. Fruit: 0.35-1 × 0.2-0.6 inch, ovoid to obovoid, blue-black.

Ecology and distribution: In a variety of habitats, from dryish scrublands to deciduous monsoon or moist evergreen forests (see Fig. 23 earlier), 0 to 5,500 feet elevation, India to Southeast Asia, southern China (including Hong Kong and Macao), Taiwan, and the Philippines.

Landscape adaptation: anywhere in Hawai'i; depending on provenance and subsequent cold hardiness, the immediate Bay Area and surrounding valleys of California; coastal plains and valleys and inland valleys of central and southern California; low deserts of California and western Arizona; full sun in coastal plains and valleys to light afternoon shade in hot interior areas and deserts; tolerates heat, aridity, wind; requires little irrigation once established in coastal areas but regular irrigation in hot inland areas and deserts.





Figure 118. *Phoenix loureiroi* makes a small to medium, handsome landscape subject (Nong Nooch Tropical Garden, Thailand).

Notes: Unfortunately, *Phoenix loureiroi* is uncommon in the landscape and is mostly found only in botanical gardens and private collections in Hawai'i and California. However, it is deserving of much wider cultivation and is especially suitable for typical residential yards and limited-space landscapes. Consider it a more diminutive version of *P. sylvestris* or a dwarf version of *P. dactylifera* and *P. canariensis*. It is an unusually variable species and depending on its provenance, it can vary in habit (solitary or clustered (**Fig. 118**), trunked or acaulescent), leaves (stiff to gracefully arching), and pinnae (stiff or drooping). Acaulescent specimens, which might be the prod-

Figure 119. (Left) Marianne Hodel provides scale for a *Phoenix loureiroi* that for many years formed a nearly perfect, hemispherical, acaulescent, mound-like bush, making it appear much like a giant cycad (Jardin Botanique Harrison Smith, Papeari, Tahiti, French Polynesia).

Figure 120. (Right) This tall *Phoenix loureiroi* with stiff leaves looks much like a giant cycad (Penang botanical Garden, Penang, Malaysia).



uct of the environment because they are nearly always found in dry, harsh, exposed grasslands and disturbed, frequently burned areas (Barrow 1998, Hodel 1998), are often confused with *P. acaulis*. However the fruiting peduncle of *P. loureiroi*, which rapidly elongates after fruit set and push the fruiting panicle out to or beyond the end of the leaves, distinguishes it from *P. acaulis*, which has a peduncle that does not elongate much after fruit set and maintains the fruiting panicle down among the leaves. Many of these acaulescent forms of *P. loureiroi* in Thailand and adjacent Myanmar have been erroneously identified as *P. acaulis*.

Two varieties are recognized and distinguished by the presence or absence of strips of sclerotic, tannin-filled cells along pinnae margins and abaxial midrib regions (Barrow 1998). *Phoenix loureiroi* var. *loureiroi*, which ranges from Southeast Asia through southern China to the Philippines, has the strips of tannin-filled cells while *P. loureiroi* var. *humilis*, which is restricted to India, Bangladesh, and Nepal, lacks the strip of cells.

In California, *Phoenix loureiroi* is a slow grower, with specimens attaining only about 20 feet tall overall and



15 feet of leaf-base-covered trunk after more than 50 years. When they finally do form a visible trunk it is typically densely and attractively covered with crowded, diamond-shaped leaf bases, especially if the latter are neatly and closely trimmed, giving the trunk a checkered appearance (**Fig. 117**). For many years the small palms form a nearly perfect, hemispherical, acaulescent, mound-like bush (**Fig. 119**), which is not unattractive. At this stage and with larger, trunked forms with exceptionally stiff leaves the plants appear not unlike some cycads (primitive conifers) (**Fig. 120**).

Phoenix reclinata Senegal date palm

Habit: clustered, slender, medium- to large-sized, thicket-forming, shrubby, or tree palm, slowly to 40 feet tall and wide (**Figs. 121-123**). **Trunk:** to 8 inches DBH, brown, marked with indented leaf scars, often covered by persistent leaf bases distally, trunks on the periphery tend to lean outwardly in a picturesque manner. **Leaves:** ascending to spreading to drooping, to 12 feet long, tilted; leaf base to 2 foot long, deeply split opposite petiole, margins fibrous; acanthophylls to 3.5 inches long, arranged in several planes, green to yellow-red; other pinnae to 130 on each side, to 18 × 1.5 inches, distally regularly arranged in 1 plane but medially and proximally irregularly arranged in several planes, glossy green, abaxially with white ramenta on midrib. **Inflorescences:** interfoliar, staminate to 2 feet long, cream-colored; peduncle to 1 foot long; rachillae spreading to drooping; pistillate to 5 feet long, orange-yellow; peduncle to 4 feet long; rachillae spreading to drooping. **Fruit:** to 0.8 × 0.5 inch, ovoid-ellipsoid, yellow to orange to black.

Ecology and distribution: variable, from seasonally water-logged areas and along streams and rivers to rain forest margins and drier sites on rocky hillsides, cliffs, and grasslands in



Figure 121. (Left) *Phoenix reclinata* is one of the most picturesque date palms (11100 Santa Monica Blvd., Los Angeles, CA).



Figure 122. (Right) *Phoenix reclinata* forms handsome clumps to 40 feet tall and wide (250 W. Broadway, San Diego, CA).

tropical and subtropical Africa, Madagascar, and the Comoro Islands.

Landscape adaptation: Hawai'i; coastal plains and valleys and inland valleys of California; low deserts of California, southern Nevada, and western Arizona; full sun; tolerates extreme heat, aridity; protect from severe cold; requires regular irrigation everywhere except wet areas of Hawai'i

Notes: With its leaning trunks and attractive leaves, *Phoenix reclinata* is perhaps the most picturesque palm in

Figure 123. (Left) These *Phoenix reclinata* make a picturesque and formal planting (11100 Santa Monica Blvd., Los Angeles, CA).



our landscape palette. Protect it from extreme cold and give it adequate space in the landscape. A versatile

Figure 124. (Center) Some *Phoenix reclinata* in the landscape are likely hybrids, especially those with heavier, more robust trunks (890 S. Rosemead Blvd., Pasadena, CA).

Figure 125. (Right) This *Phoenix reclinata* with heavy, robust trunks is likely a hybrid (Crown Point, Mission Bay Park, San Diego, CA).



species, judiciously remove trunks to control clump height, width, and density. It is susceptible to magnesium deficiency and it was susceptible to Fusarium wilt in field trials at the UC South Coast Research and Extension Center in Irvine, California although I have never seen this disease on it in the landscape. Plants with heavier, more robust trunks are likely hybrids (Figs. 124-125).

Phoenix roebelenii pygmy date palm

Habit: naturally clustered but usually solitary in the landscape, slender, small-sized, shrub to tree palm, slowly to 10 feet tall (Fig. 126). **Trunk:** to 4 inches DBH, brown, marked with diamond-shaped leaf scars each with a central, woody bump or knob projecting out for 1 inch (Fig. 127), distally with persistent leaf bases below the canopy. **Leaves:** pinnate, ascending to spreading to drooping, to 4 feet long, flat or tilted; leaf base to 6 inches feet long, deeply split



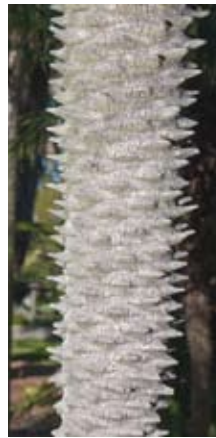


Figure 126. (Left) One of the most common and widely planted *Phoenix* is *P. roebelenii*, which makes a neat and tidy, small, solitary tree (Hyatt Newporter, Newport Beach, CA).

Figure 127. (Right) Persistent leaf bases make for a knobby, curious, and not unattractive trunk on *Phoenix roebelenii* (The Huntington Library, Art Collections, and Botanical Gardens, San Marino, CA).

opposite petiole, margins fibrous; acanthophylls to 3.5 inches long, arranged in 1 plane, orange-green, other pinnae to 50 on each side, to 16 × 0.5 inches, regularly arranged in 1 plane, glossy green, abaxially with white ramenta on midrib. **Inflorescences:** interfoliar, staminate to 2 feet long,

cream-colored; peduncle 1 foot long; rachillae spreading to drooping; pistillate to 2.5 feet long, peduncle to 1.5 feet long; rachillae spreading to drooping. **Fruit:** to 0.7 × 0.3 inch, obovoid, purplish brown.

Ecology and distribution: a rheo-

Figure 128. (Left) In more humid Hawai'i leaves of *Phoenix roebelenii* are longer and more graceful than in more arid California (Pōhākea Point, Kāne'ōhe, HI).

Figure 129. (Right) Aerially branched forms of *Phoenix roebelenii* sometimes occur in the landscape and perhaps are a reminder of the naturally clustering habit of this species (Catamaran Hotel, San Diego, CA).



phyte, in and along streams and rivers, Laos, Vietnam, southwestern China.

Landscape adaptation: Hawai'i; coastal plains and valleys and inland valleys of California; low deserts of California, southern Nevada, and western Arizona; full sun to part shade in most places but does best in shade in hot inland areas and deserts; tolerates extreme heat, aridity, wind; protect from cold; requires regular irrigation.

Notes: *Phoenix roebelenii* is one of the most common and popular small palms in California. Leaves are shorter and stiffer in California and the desert Southwest but are longer and much more graceful in more humid Hawai'i (Fig. 128). What we commonly grow as *P. roebelenii* might actually be a hybrid because the species is definitely clustering in its natural habitat. Aerially branched specimens sometimes occur in the landscape and are popularly referred to as crested forms (Fig. 129). It is unclear how these develop but it could be genetic and/or boron deficiency although some people contend that one can induce the aerial branching by carefully cutting or damaging the apical meristem. Once devoid of leaf bases, the knobby trunk is distinctive and curious (Fig. 127). *Phoenix reclinata* is susceptible to the date palm plant hopper, which causes yellow spotting on emerging leaves (Hodel 2012a), and needs protection from severe cold and hot sun in interior areas and deserts.

Phoenix rupicola cliff date palm

Habit: solitary, moderate, medium-sized, tree palm, slowly to 40 feet tall (Figs. 130-131). **Trunk:** to 10 inches DBH, brownish, mostly smooth and indistinctly marked with ill-defined leaf scars, distally with persistent leaf bases below the canopy. **Leaves:** ascending to spreading to drooping,



Figure 130. (Left) *Phoenix rupicola*, here flanked on each of two sides by *Washingtonia filifera*, is a solitary, refined, and elegant species. This specimen is about as pure or true as one can find for this species in the landscape (3118 N. Garey Ave., Pomona, CA).

Figure 131. (Center left) Another pure *Phoenix rupicola* is on the beach at Leadbetter Beach & Park, Santa Barbara, CA.

Figure 132. (Center right) While mostly pure or true, this specimen of *Phoenix roebelenii* is probably a hybrid because the leaves are stiff and not sufficiently curved (200 Arlo Way, Anaheim, CA).

Figure 133. (Right) Because of the stiff leaves with little curvature this specimen, while mostly *Phoenix rupicola* is actually probably a hybrid (VA Greater Los Angeles Medical Center, Los Angeles, CA).

curved, to 8 feet long, tilted; leaf base to 15 inches long, deeply split opposite petiole, margins fibrous; acanthophylls to 3.5 inches long, arranged in 1 plane, orange-green; other pinnae to 24 × 1.5 inches, closely and regularly arranged in 1 plane, glossy dark green, abaxially with white ramenta on midrib. **Inflorescences:** staminate to 2.5 feet long, cream-colored; peduncle 1.5 feet long; rachillae to 10 inches long, spreading to drooping; pistillate to 5 feet long, peduncle to 3 feet long; rachillae to 20 inches long, spreading to drooping. **Fruit:** to 0.6 × 0.35 inch, obovoid, reddish to purplish brown.

Ecology and distribution: On mostly inaccessible, steep, rocky hillsides and cliffs in wet forests, 1,000 to 4,000 feet elevation sub-Himalaya; the Darjeeling District of West Bengal in India and also in the Kingdom of Bhutan.

Landscape adaptation: middle elevations in Hawai'i; immediate Bay Area and coastal plains and valleys and inland valleys of Central and southern California; full sun to part

shade in most places but would do best with some afternoon shade hot inland areas; tolerates heat, aridity, wind; protect from cold; requires regular irrigation.

Notes: *Phoenix rupicola*, perhaps the most elegant and refined of the *Phoenix*, is, unfortunately, one of our most uncommon landscape species. Deserving of much wider use, its smaller stature, solitary habit, and unusually graceful and handsome, glossy dark green leaves make it an ideal choice for limited-space landscapes and an appropriate substitute for the larger, even menacing *P. canariensis* and the potentially widely spreading *P. reclinata*. Picture a solitary *P. reclinata* and you have a good idea of the habit and appearance of *P. rupicola*. Indeed, *P. reclinata* with all the basal suckers or offshoots removed are difficult to distinguish from *P. rupicola* and are frequently misidentified as such. Distinguish artificially solitary *P. reclinata* by the acanthophylls and proximal pinnae arranged in multiple planes. Pure or true *Phoenix rupicola* is extremely rare in the landscape. An

insufficient number of plants was established to facilitate or ensure breeding populations that produced pure or non-hybrid seeds; thus, most landscape specimens are likely hybrids (Figs. 132-133). True or pure *P. rupicola* have soft, conspicuously curved leaves while hybrids nearly always have straighter, somewhat stiff leaves. Also, like most date palms, *P. rupicola* often suffers from magnesium and/or potassium deficiencies. Its intolerance of cold likely limits or precludes its use in winter-cold inland regions.

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of Landscape Palms

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The BRITTON Fund Inc.