

# Palms in the landscape, XIV – Phoenix: The date palms, Part 5

Donald R. Hodel

## *Phoenix sylvestris* wild date palm

**Habit:** Solitary, moderate, medium-sized, tree palm, very slowly to 60 feet tall (Figs. 134-136). **Trunk:** to 12 inches DBH, brownish, distinctly marked with well defined, diamond-shaped leaf scars, distally with persistent leaf bases. **Leaves:** ascending to spreading to drooping, to 12 feet long, flat; leaf base to 20 inches long, deeply split opposite petiole, margins fibrous; acanthophylls to 5.5 inches long, arranged in several planes, yellow-green, very sharp; other pinnae to 14 × 1 inches, arranged in groups and in several planes, green to grayish green, very sharp pointed. **Inflorescences:** staminate to 20 × 8 inches, cream-colored; peduncle 1 foot long; rachillae to 6 inches long, spreading to drooping; pistillate to 4 feet long, peduncle to 3 feet long; rachillae to 12

inches long, spreading to drooping. **Fruit:** to 0.6-1 × 0.5 inch, obovoid, orange-yellow.

**Ecology and distribution:** Mostly in wastelands and disturbed monsoon forest on low, flat plains in areas subject to periodic, seasonal inundation. It is thought to be indigenous to adjacent areas of western India and Pakistan but a long history of human domestication has blurred its natural range and it is now frequently encountered across India to Nepal, Bangladesh, and Myanmar (Burma) (Fig. 137).

**Landscape adaptation:** Anywhere

in Hawai'i; immediate Bay Area and surrounding valleys of northern California; coastal plains and valleys and inland valleys of central and southern California; low deserts of California and western Arizona; full sun; tolerates heat, aridity, wind; requires little irrigation once established in coastal areas but regular irrigation in hot inland areas and deserts.

**Notes:** Mostly in only a few botanical gardens and private collections in California, the *Phoenix sylvestris* is much more common in Hawai'i and has naturalized in many places in the Islands, especially on the north shore and windward side of O'ahu (Hodel

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*Staminate plants are more scarce  
and more expensive.*

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Figure 134. (Left) *Phoenix sylvestris*, a solitary species related to *P. dactylifera*, beautify the grounds at Pōhākea Point, Kāne'ohe, Hawai'i.

Figure 135. (Center) *Phoenix sylvestris* can grow to 40 feet tall or more and have green or as here, grayish leaves (Los Angeles County Arboretum & Botanic Garden, Arcadia, CA).

Figure 136. (Right) This *Phoenix sylvestris* at the now closed Movieland Wax Museum in Buena Park, CA is a superb specimen with a full, spherical canopy.





Figure 137. (Left) *Phoenix sylvestris* is widely cultivated on the Indian subcontinent and adjacent areas, as here at Ton-gup, Rakhine, Myanmar (Burma).

Figure 138. (Center) *Phoenix acaulis* has a short, bulbous stem less than a foot tall and covered with persistent leaf bases (private collection, Whittier, CA).

Figure 139. (Right) *Phoenix paludosa* makes a fine, small ornamental, somewhat similar to a dwarf *P. reclinata* (in cleared swampland south of Bangkok, Thailand).

2012b). In Hawai'i it forms dense, sometimes impenetrable, unkempt-looking stands, easily competing with hale koa and kiawe. However, in maintained landscapes it makes a handsome plant, looking much like a slightly more diminutive version of an artificially solitary *P. dactylifera*, its close relative. Of easy culture, especially in Hawai'i, it makes a fine and appropriate substitute for *P. dactylifera* and *P. canariensis*.

### Other Species

#### *Phoenix acaulis*

As the specific epithet implies, *Phoenix acaulis* lacks a well developed, elongated trunk and instead has a short, bulbous stem less than a foot tall and covered with persistent leaf bases (Barrow 1998, Hodel 1995) (Fig. 138). The short leaves are about six feet long and acanthophylls and pinnae are irregularly arranged and held in several planes. The short inflorescences are less than a foot long, held at or near ground level, and do not elongate so they are always well hidden among the leaves. *Phoenix acaulis* is indigenous to scrublands, savannahs, and pine forests from 1,200 to 4,800 feet elevation in northern India

and Nepal (Barrow 1998).

Reports of *Phoenix acaulis* from Myanmar and Thailand are erroneous, and actually represent short or temporarily acaulescent forms of *P. loureiroi*, which differs in its inflorescence that always conspicuously elongate after fruit set. Also, fruiting rachillae of *P. acaulis* are decidedly shorter and thicker and have more congested, larger fruits than those of *P. loureiroi*, and each fruit of *P. acaulis* is subtended by a prominent, thickened bump on the rachilla (Barrow 1998).

#### *Phoenix andamanensis*

Restricted to the Andaman Islands (India) in the Bay of Bengal where it inhabits moist forest up to 2,500 feet elevation and named only recently (Barrow 1998), *Phoenix andamanensis* is a solitary tree palm that grows to about 20 feet tall and closely related and very similar to *P. rupicola*. It shares with *P. rupicola* the solitary habit, relatively wide pinnae regularly arranged and in one plane, and the white ramenta on the abaxial midrib region of the pinnae. However, the seeds of *P. adamanensis* with their ruminate endosperm easily distinguish it from *P. rupicola*.

#### *Phoenix atlantica*

This medium to large clustering species is endemic to the Cape Verde Islands off the west coast of Africa where it inhabits dry, barren, even desolate coastal sand dunes and rocky slopes and ravines to more favorable and protected valleys at higher elevation in the interior of the islands (Henderson et al. 2003). It is very similar to *Phoenix dactylifera* and was thought to be synonymous with and simply a range extension of this latter species (Barrow 1998). However, Henderson et al. (2006) showed that it is genetically isolated and distinct from *P. dactylifera*.

#### *Phoenix cespitosa*

This species, which occurs in rocky ravines in dry, semi-desert scrub to over 6,000 feet elevation in Saudi Arabia, Somalia, and Yemen, is a clustering, mostly trunkless, thicket-forming palm (Barrow 1998) long confused with *Phoenix reclinata*. It differs from *P. reclinata* in its mostly trunkless habit and its rounded rather than sharp-pointed staminate petals (Barrow 1998).

## *Phoenix paludosa*

This small, clustering palm with unusually slender stems occurs on the fringes of mangrove and other estuarine swamps from the Bay of Bengal through Myanmar and Thailand and down the Malay Peninsula to northern Sumatra (Fig. 139). Its trunks are as slender as those of *Phoenix roebelenii* and it could be mistaken for this species from a distance but *P. paludosa* has pinnae clustered in groups and in several planes and distinctly gray on the abaxial surface (Barrow 1998, Hodel 1998). A handsome species tolerant of wet conditions, its main drawback to wider use outside of Hawai'i might be its lack of cold hardiness. However, it is cultivated in a few private gardens in southern California where it grows slowly.

## *Phoenix pusilla* (*P. farinifera*, *P. zeylanica*)

This solitary or clustering palm occurs in a variety of habitats in Sri Lanka and southern India, including dry, barren and sometimes sandy areas near the seashore to wetter coastal and inland sites to 2,300 feet elevation (Barrow 1998). It grows to about 20 feet tall and has trunks to 12 inches DBH, and clustering forms would be similar in habit to *Phoenix reclinata* (Fig. 140). However, *P. pusilla* differs in the lack of scurfy, white ramenta on abaxial midrib area of pinnae and

Figure 140. (Left) *Phoenix pusilla* is much like *P. reclinata* in habit (29445, The Huntington Library, Art Collections, and Botanical Gardens, San Marino, CA).



the narrow, persistent, stick-like leaf bases arranged in a vertical manner on the trunk giving it a slat-like appearance (Fig. 141). There are a few specimens in botanical gardens in southern California.

## *Phoenix theophrasti*

Like *Phoenix atlantica*, *P. theophrasti* was long thought to be synonymous with *P. dactylifera* and they might not be distinct (Barrow 1998). Nonetheless, *P. theophrasti* occurs in protected sites with water seepage in coastal areas of Crete and southwestern Turkey. In some places it grows only a few feet from the ocean where salt-laden winds buffet the canopy and sea water occasionally reaches the roots. Cultivated in only a few private gardens and collections in southern California (Fig. 142), it might be considered for wider use, especially in coastal areas because of its high

Figure 142. (Center) *Phoenix theophrasti* is like a robust *P. dactylifera* in habit (43719, The Huntington Library, Art Collections, and Botanical Gardens, San Marino, CA).

Figure 143. (Below center) *Phoenix theophrasti* makes a fine landscape subject at the Jardí Botànic Marimurtra, Blanes, Spain.

Figure 144. (Right) The acanthophylls of *Phoenix theophrasti* are yellowish and among the fiercest in the genus (43719, The Huntington Library, Art Collections, and Botanical Gardens, San Marino, CA).



Figure 141. (Above) *Phoenix pusilla* can be distinguished from *P. reclinata* by the narrow, persistent, stick-like leaf bases arranged in a vertical manner on the trunk giving it a slat-like appearance (29445, The Huntington Library, Art Collections, and Botanical Gardens, San Marino, CA).



**Table 2. Some Interspecific Hybrids of Phoenix in Cultivation.**

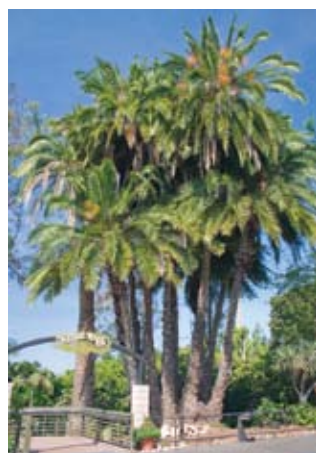
Documented or suspected parents <sup>z</sup>	Notes
<i>P. canariensis</i> × <i>P. dactylifera</i>	A large solitary or clustering plant with moderately heavy trunks and large canopies ( <b>Fig. 145</b> ).
<i>P. canariensis</i> × <i>P. reclinata</i>	A large, clustering plant with slender trunks and moderate (Reptile walk, San Diego Zoo, <b>Fig. 146</b> ) to large canopies ( <b>Fig. 147</b> ).
<i>P. canariensis</i> × <i>P. roebelenii</i>	A smallish, solitary and graceful plant of exceptional beauty ( <b>Fig. 148</b> ).
<i>P. canariensis</i> × <i>P. rupicola</i>	A medium- to large-size, solitary but still handsome plant.
<i>P. canariensis</i> × <i>P. sylvestris</i>	A medium-size, solitary, somewhat stout, stiffish but formal plant ( <b>Fig. 149</b> ).
<i>P. reclinata</i> × <i>P. paludosa</i>	A medium-size, clustering plant with gracefully leaning, slender trunks.
<i>P. reclinata</i> × <i>P. roebelenii</i>	Another medium-size plant with clustered or solitary, leaning trunks.
<i>P. reclinata</i> × <i>P. rupicola</i>	Still another medium-size, handsome plant with clustered or solitary trunks
<i>P. roebelenii</i> × <i>P. rupicola</i>	A medium-size, solitary and graceful plant of outstanding beauty ( <b>Fig. 150</b> ).
Unknown	Several, unusual and distinctive hybrids, found mostly in the Santa Barbara and Los Angeles areas, encompass a range of characters. They are generally small to medium, solitary plants with variable leaves. Possible parents include <i>P. canariensis</i> , <i>P. roebelenii</i> , and <i>P. rupicola</i> ( <b>Figs. 151-154</b> ).

<sup>z</sup>Hybrids are listed alphabetically without reference to which species was the pistillate or staminate parent. They frequently occur or are made both ways.

Figure 145. (Left) This *Phoenix canariensis* × *P. dactylifera* is a robust, solitary plant (Villa Winter, Bordighera, Italy).

Figure 146. (Center) This *Phoenix canariensis* × *P. reclinata* is a large, handsome plant (Reptile Walk, San Diego Zoo, San Diego, CA).

Figure 147. (Right) Another *Phoenix canariensis* × *P. reclinata* makes a large clump with graceful leaves (Villa Ormond, San Remo, Italy).



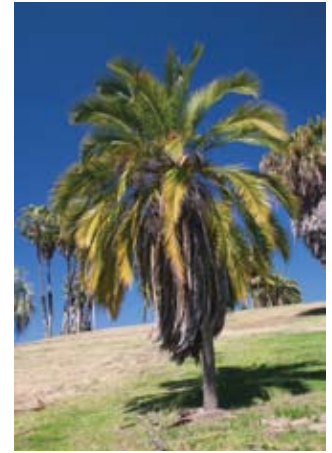


Figure 148. (Left) This *Phoenix canariensis* × *P. roebelenii* is an exceptionally attractive plant (Long Beach, CA).

Figure 149. (Center) Both parents are evident in this *Phoenix canariensis* × *P. sylvestris* (Villa Ormond, San Remo, Italy).

Figure 150. (Right) *Phoenix roebelenii* × *P. rupicola* makes an exceptionally graceful and handsome plant (Chavez Ravine Arboretum, Elysian Park, Los Angeles, CA).

salt tolerance. A heavier, more robust version of *P. dactylifera* (Fig. 143), its acanthophylls are typically brightly colored yellow and are among the fiercest in the genus (Fig 144).

**Hybrids**

The dioecious nature of *Phoenix* and its copious, light, dry, non-sticky, easily wind-borne pollen make hybrids

in cultivation a distinct possibility (Hodel 1995). Such hybrids blur the lines between species and make innumerable intermediate forms that can make correct identification especially challenging at times. Pollen source can even affect seed size and shape, casting doubt on the usefulness of these characters for identification of cultivated *Phoenix* spp. Seeds from

cultivated sources, especially botanical gardens or other collections with large numbers of *Phoenix* species, are of high risk of being hybrids. Indeed, hybrids of nearly every possible combination in both directions, and some unknown combinations, have been reported for just about all the commonly cultivated species (Hodel 1995) (Table 2, Figs. 145-154). In

Figure 151. (Left) This unidentified hybrid, perhaps *Phoenix canariensis* × *P. rupicola*, is an attractive, small to medium palm (Santa Barbara Visitor Bureau, Santa Barbara, CA).

Figure 152. (Center left) Another possible *Phoenix canariensis* × *P. rupicola* hybrid is at several places around Santa Barbara (Leadbetter Beach & Park).

Figure 153. (Center right) *Phoenix canariensis* × *P. rupicola* also occurs at the Santa Barbara Visitors Bureau, Santa Barbara, CA.

Figure 154. (Right) Another possible *Phoenix canariensis* × *P. rupicola* is at the Chavez Ravine Arboretum, Elysian Park, Los Angeles, CA.



most hybrids the offspring show characters of both parents but some defy logical interpretation and parentage can only be guessed at. For example, many specimens of *P. reclinata* and *P. rupicola* in the landscape do not appear to be “pure” or “true” species and are likely of hybrid origin (see individual accounts of these two species for additional information).

#### Acknowledgements

Robert Krueger of the U. S. D. A.-A. R. S. National Clonal Germplasm Repository for Citrus and Dates and David Smith and Duane Young of Young & Sons shared information about identification of *Phoenix dactylifera* varieties. Arborist Dave Cooper of West Coasts Arborists shared his thoughts about management of *P. canariensis* “pineapples.” David Spinoglio and the Irvine Company were especially accommodating of me at their *Phoenix*-rich properties in southern California.

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### Hodel's palm and tree series to move

Donald Hodel's two regular series, “Palms in the Landscape” and “Trees in the Landscape”, will move to his University of California website beginning this summer. Go to the following link to access new and archived articles in both series as well as other articles he has published: <http://ucanr.edu/sites/HodelPalmsTrees/>. Don will also be launching a new on-line, e-journal, ArborHort XP, at the same website this summer. It will cover topics of interest to arborists and others in the landscape management industries. Don will still contribute occasional articles to Western Arborist. Questions?: Contact Don at <[drhodel@ucanr.edu](mailto:drhodel@ucanr.edu)> or give him a call 626-586-1973.

## Hawaii Tree Climbing Championship

The Hawaii Tree Climbing Championship (HTCC) was held February 22-23, 2014, at beautiful Moanalua Gardens in Honolulu. Justin Donahue was the top finisher in the Men's Division while Mark Dobbertin took second place and Ashlen Aquila finished third. In the Women's Division, Jamilee Kempton took first place with Mealoha Hooten in second and Ilana Nimz in third. The event was well-attended with many families coming out to enjoy the day.

Mahalo to our sponsors, treestuff.com, Climb Aloha, Aloha Power Equipment, and Green Hawaii Tree Care.



Justin Donahue during the Master's Challenge.



Jamilee Kempton prepares to leap during the Master's Challenge.

Carol Kwan

Photos David Leonard