

×*Wodyetchia bifurcina* (Arecaceae), A New Hybrid Genus and Species from Cultivation of *Wodyetia bifurcata* and *Veitchia arecina*

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Abstract

×*Wodyetchia bifurcina*, a hybrid palm between the pistillate parent *Wodyetia bifurcata* and the likely staminate parent *Veitchia arecina*, is described, named, typified, and illustrated. Its history, description, and cultivation are provided and discussed.

Introduction

In the 1980s and 1990s in Australia, this hybrid occurred spontaneously between *Wodyetia bifurcata*, the foxtail palm, and a *Veitchia* sp. (likely *V. arecina*). In the United States, the hybrid was made between *W. bifurcata*, the foxtail palm, and initially the suspected *V. arecina*, Montgomery's palm. However, recently in South Florida, in addition to *V. arecina*, *V. joannis* has been used as the other parent but offspring from this cross have yet to attain maturity. Both parents of this hybrid are arecoid palms and classified in the subtribe Ptychospermatinae, which includes 15 genera having pinnae with praemorse tips, wide and stiffly spreading inflorescences, multi-staminate flowers bullet-shaped in bud, and ranging from the southern Philippines and Micronesia through the Moluccas to New Guinea, Australia, Solomon Islands, Vanuatu, Fiji, and Samoa (Dransfield et al. 2008, Heatbun et al. 2014).

This hybrid palm, commonly called the foxy lady palm and Wodveitchia by collectors and growers, has been cultivated in the United States for about 35 years and is highly esteemed by palm collectors and growers in tropical and warm and cool subtropical regions who admire and value its clean, neat, solitary, handsome habit, and canopy of ascending, arching pinnate leaves supported by a prominent, whitish green crownshaft (**Figs. 1–6**). The leaves are composed of relatively broad but mostly deeply divided, dark green, leathery pinnae with jaggedly toothed apices. Not to be overlooked is its relative vigorous growth and cool tolerance, perhaps the result of hybrid vigor, enabling it to be successfully cultivated in cooler subtropical climates like those in coastal California. A vigorous grower, some reports in Hawai'i in the early 2000s claimed one palm had achieved a growth rate of about two meters of trunk in one year.



1. ×*Wodyetchia bifurcina* is an attractive palm with a graceful canopy of slightly plumose leaves. In 2011 at The Huntington (HNT 96594), San Marino, California.



2. ×*Wodyetchia bifurcina*, with spreading inflorescences, is an attractive palm with a graceful canopy of slightly plumose leaves. In 2013 at the Gary Levine garden, Escondido, California.



3. A group planting of young \times *Wodyetchia bifurcina* makes an imposing sight. In 2012 at the Los Angeles County Museum of Art, Los Angeles.



4. ×*Wodyetchia bifurcina* is an attractive palm with a graceful canopy of arching, slightly plumose leaves. In 2013 on the beach, Santa Monica, California.



5. A young \times *Wodyetchia bifurcina* is an attractive palm with a graceful canopy of arching, slightly plumose leaves. Co-author Dobbs's garden, Fort Myers, Florida. ©2025 by Justen B. Dobbs.

Because it has become common in tropical and subtropical landscapes, we provide here a formal botanical name and description of the hybrid genus and species and discuss their history, taxonomy and nomenclature, and cultivation. The description is based on fresh, non-dried, living material.

History

As is typical with most inadvertent hybrids, relatively little is documented about the history of \times *Wodyetchia bifurcina*. It has been in cultivation since at least the late 1980s or early 1990s, which is not too long after one of its parents, *Wodyetia bifurcata*, burst on the palm scene. Its other, suspected parent, *Veitchia arecina*, had already been commonly cultivated in warm subtropical and tropical areas like Hawai'i, and especially South Florida since as far back as the 1940s.

The initially inadvertent hybrid \times *Wodyetchia bifurcina* might have first shown up Australia. About 10 years ago on Palmpedia Forum (PF 2014), a contributor suggested that hybrid was an inadvertent hybrid that occurred in South Florida but, in a subsequent string, a well known and typically quite knowledgeable southern California palm collector corrected this statement and said that it was the late Rich Trapnell in Australia who first identified this hybrid. It very easily could have occurred in both places and/or perhaps even in Hawai'i simultaneously or nearly so. It seems that as soon as *Wodyetia bifurcata* attained maturity, it began to hybridize with pre-existing *Veitchia* spp., likely *V. arecina*.

In South Florida, George of Florida Foliage of Southwest Ranches has one of the largest flowering specimens that we know. Also, David Praul of Cape Coral has a large flowering specimen. Both of these were inadvertent hybrids.

Co-author Dobbs intentionally made the hybrid in late 2008, just after establishing Seabreeze Nurseries with Derek Batke in Fort Myers on the west coast of Florida and where he specializes in hybrid palms, especially of the genus *Chrysalidocarpus*. For this hybrid, Dobbs used *Veitchia arecina* as the staminate or pollen parent and *Wodyetia bifurcata* as the pistillate or seed parent. He made the hybrid again in 2009 and 2011 and distributed them to customers in the United States and worldwide. Indeed, many if not most of the specimens of this hybrid palm now maturing in California are likely Dobbs's hybrids.

It should be noted as well that many of these hybrids brought into California from Florida and labeled as such turned out to be pure foxtail palms. Most, if not all of these, were grown from seed collected from naturally open-pollinated foxtail palms. Thus, the grower and/or seller did not manually pollinate the flowers and instead simply assumed that seedlings were spontaneous hybrids, basing their assumption on juvenile leaf morphology, which is an unreliable character of this hybrid.



6. A mature \times *Wodyetchia bifurcina* stands among the palms in co-author Robert H. Burtcher's garden, Fullerton, California. *D. R. Hodel 4084*, the type plant. Note the spreading, expansive, diffuse inflorescence.

Taxonomy and Nomenclature

×*Wodyetchia* Hodel, J. B. Dobbs, and R. H. Burtcher gen. hyb. nov.

(*Wodyetia* A. K. Irvine × *Veitchia* H. Wendl.). Type species: ×*Wodyetchia bifurcina*.

Moderate to tall, solitary, unarmed, monoecious, pleonanthic tree palm (**Figs. 1–6**). **Trunk** columnar, erect, smooth but ringed with leaf scars, especially distally. **Leaves** pinnate, only slightly plumose or not plumose, oblong-elliptic in outline, erect spreading to arching or slightly to strongly drooping distally; **leaf bases** tubular and forming a prominent, whitish green crownshaft, sometimes with vertical, yellow stripes, and with dense, appressed, grayish white, deciduous scales throughout and distally with reddish brown to nearly black, coarse, basifixed, chaff-like scales; **petiole** much shorter than rachis, abaxially rounded with indument like that of leaf base especially laterally, adaxially flat and with scattered black scales, margins sharp; **rachis** elongate, abaxially rounded and with same indument as petiole but becoming less so distally, adaxially flat to becoming angled, **pinnae** regularly arranged, inserted in same plane but slightly drooping distally in proximal ca. 40 cm of rachis and in distal ca. 35 cm of rachis with pinnae simple and not deeply divided into segments, in middle 135 cm of rachis pinnae deeply split to base or nearly so into 2–4 segments, these only minimally fanned in several planes to give a slightly plumose appearance, pinnae apices praemorse, midrib prominent, raised, and yellow adaxially and lesser veins conspicuous, abaxially all veins green and less conspicuous, abaxially midrib on simple, unsplit pinnae with several, large, black, chaff-like ramenta on midrib near base, deeply split pinnae abaxially with long, slender, hair-like ramenta on midrib near base of one segment of each group, all pinnae dark glossy green adaxially, paler abaxially with minute white and brown scales especially proximally and minutely white-granular throughout, transverse veinlets very faint, indistinct, mostly near pinna margins. **Inflorescences** infrafoliar, stiffly spreading, expansive, diffuse, branched to 3 orders, white-cream, mostly glabrous but with scattered, minute, grayish aging to black indument especially proximally; **peduncle** short, stout, dorsiventrally compressed; **prophyll** and **peduncular bract** similar except the former 2-keeled laterally, the latter lacking keels and nested within the former and both typically thrust off together as one unit, tubular initially, thin-leathery, greenish with whitish tomentum, scar of incomplete, rudimentary bract typically present; **rachis** longer than peduncle, with very short bracts subtending branches and rachillae; **rachillae** mostly straight, stiff, spreading, longitudinally rounded-angled, cream-colored, glabrous except for a few patches of minute, dark scales near floral triads especially proximally; triads of center, later-opening pistillate flower flanked on each of two sides by earlier-opening staminate flowers in proximal portion of rachilla, paired or solitary staminate flowers only distally; floral bracteoles distinct, 2 subtending pistillate flower larger, imbricate, thick, each deeply 1–2 lobed, 1 subtending a staminate flower smaller, low, thin, nearly transparent. **Flowers** +/- symmetrical; **staminate** in bud bullet-shaped; **calyx** cuplike, **sepals** 3, distinct, bowl-shaped,

imbricate to apex and there truncate or straight; **corolla** ca. twice as high as calyx, **petals** 3, ovate, boat-shaped, valvate, at anthesis undoubtedly spreading horizontally flat or sometimes recurved; **stamens** numerous, erect to spreading; **pistillode** exceeding stamens and petals; **pistillate** ovoid; **calyx** crown-like; **sepals** 3, distinct, bowl-shaped, strongly rounded-angled abaxially, strongly concave adaxially, thick, sturdy, imbricate in basal 3/4; **petals** 3, broadly ovate to bowl-like, thinner and not so thick and sturdy as sepals, imbricate nearly to apex and there rounded-acute; **staminodes** 3(?); **gynoecium** ovoid; **style** short or lacking; **stigma** undifferentiated. **Fruit** nearly always parthenocarpic (without seeds), ovoid, apex pointed, pinkish red, outer endocarp fibers longitudinal, numerous, moderately thick, coarse, and densely placed, forked, black except for 2–3, unforked, white ones overlying the black ones; seed ovoid, endosperm homogeneous, embryo basal. **Type Species:** *Wodyetchia bifurcina* Hodel, J. B. Dobbs, and R. H. Burtscher.

×**Wodyetchia bifurcina** Hodel, J. B. Dobbs, and R. H. Burtscher sp. **hyb. nov.**

(*Wodyetia bifurcata* A. K. Irvine × *Veitchia arecina* Becc.[?]). Type: CULTIVATED. U. S. A. California. Orange County: Fullerton, garden of Robert and Judy Burtscher, 14 February 2026, D. R. Hodel 4084 with R. H. Burtscher (Holotype LASCA, Isotype BH). **Figs. 6, 13–28, 30–50.**

Diagnosis: The distinctive ×*Wodyetchia bifurcina* is variable and displays a range of characters with its parents (*Wodyetia bifurcata* and *Veitchia arecina*), some intermediate and others shared with one parent but not the other (**Table 1**). It is intermediate between both parents in the slightly plumose leaf (strongly plumose in *W. bifurcata* and not plumose in *V. arecina*; quantity of segments from pinnae splitting, up to four (up to 17 in *W. bifurcata* and none in *V. arecina*); and fruit size, 5 × 2.5–3.2 cm (4.9–5.7 × 2.7–3.7 cm in *W. bifurcata* and 2.6–4.6 × 1.3–2.7 in *V. arecina*). With *V. arecina* it shares the columnar trunk (slightly ventricose in *W. bifurcata*); three orders of inflorescence branching (four orders in *W. bifurcata*); ovoid fruits (globose-ovoid in *W. bifurcata*); and few, white, slender outer endocarp fibers (none in *W. bifurcata*). With *W. bifurcata* it shares the similar prophyll and peduncular bract, the latter nested inside the former and both often shed or dropped as one unit (dissimilar in *V. arecina*, the latter typically exceeding and protruding from the former and both marcescent); and the numerous, black, coarse, thick, forked outer endocarp fibers (none in *V. arecina*). Comparing the quantity of pinnae on each side of the rachis is difficult because, while *W. bifurcata* has nearly double the quantity on each side of the rachis as ×*Wodyetchia bifurcina*, the highly variable range of *V. arecina* encompasses the quantity of the latter.

Etymology: Because the pistillate or seed parent is typically listed first and the staminate or pollen parent second in a hybrid name, we have combined the first two syllables of the seed parent genus name *Wodyetia* and the last two of the staminate parent genus name *Veitchia* to form the

Table 1. Comparison of critical characters of *Veitchia arecina*, *Wodyetia bifurcata*, and their hybrid \times *Wodyetchia bifurcina*.

Character	<i>Wodyetia bifurcata</i> ^z	\times <i>Wodyetchia bifurcina</i>	<i>Veitchia arecina</i> ^y
trunk	slightly ventricose	columnar	columnar
leaf	strongly plumose	only slightly plumose to not plumose	not plumose
pinnae			
quantity per side	90–107	ca. 50	38–65
degree of splitting	all pinnae (except most proximal and most distal four pinnae) deeply split in up to 17 segments	pinnae in ca. 1/4 proximal and ca. 1/4 distal portions of blade simple, unsplit while those in the middle ca. 1/2 of blade deeply split in up to 4 segments	simple, unsplit
inflorescence			
orders of branching	4	3	3
prophyll and peduncular bract	similar, the latter nested inside the former, caducous and often dropping as one unit	similar, the latter nested inside the former, caducous and often dropping as one unit	peduncular bract as long or longer than prophyll and typically exceeding and protruding from it, both marescent
Fruit (Figs. 7–12)			
size (cm)	4.9–5.7 × 2.7–3.7	5 × 2.5–3.2 cm	2.6–4.6 × 1.3–2.7
shape	globose-ovoid	ovoid	ovoid
endocarp outer fibers	numerous, coarse, thick, flattened, forked, black	numerous, moderately coarse, thick, flattened, black overlain with a few, moderately coarse, flattened-round, unforked, white	few fine, thin, round, unforked, white

^zBased on Dransfield et al. (2008), Irvine (1983), and cultivated plants in California.

^yBased on Dransfield et al. (2008), Zona and Fuller (1999); Dowe and Cabalion (1996); Moore (1957); Beccari (1921) and cultivated plants in California.



7–8. Fruit (left) and seed (right) of *Wodyetia bifurcata*, pistillate parent of \times *Wodyetchia bifurcina*. Note the coarse, black fibers of the seed endocarp.



9–10. Fruit (left) and seeds (right) of \times *Wodyetchia bifurcina*, the hybrid of *Wodyetia bifurcata* and *Veitchia arcina*. Note the moderately coarse, branched, black fibers of the seed endocarp and the few, white, longitudinal fibers. ©2025 by Justen B. Dobbs. (measuring tape in inches.)



11–12. Fruit (left) and seed (right) of *Veitchia arcina*, staminate parent of \times *Wodyetchia bifurcina*. Note the fine, whitish to brown fibers of the seed endocarp. ©2025 by Justen B. Dobbs.

hybrid genus name \times *Wodyetchia*, which is the traditional convention for naming hybrids. Similarly, we have combined the first two syllables of the seed parent epithet *bifurcata* and the last two of the staminate parent epithet *arecina* to form the hybrid species epithet *bifurcina*.

Common Names: foxy lady palm, Wodveitchia.

Habit: moderate to tall, solitary, unarmed, monoecious, pleonanthic tree palm to at least 20 m tall (**Figs. 1–6**).

Trunk: erect, to at least 18 m tall, ca. 16.5 cm DSH (**Fig. 13**), swollen at base and there ca. 30 cm diam. (**Fig. 14**), internodes 12.5–15 cm, proximally light gray to grayish tan, longitudinally fissured, distally green with whitish indument, leaf scars ca. 1 cm wide (**Fig. 13**).

Leaves: pinnate, 10–15, erect-spreading or slightly drooping (**Figs. 1–6**); **base** ca. 1.2 m long, tubular, forming a prominent crownshaft, light green to brownish green and overlain with densely placed to contiguous, appressed, grayish white, +/- deciduous scales throughout and distally with reddish brown to nearly black, coarse, basifixed, chaff-like scales (**Figs. 15–16**); **petiole** ca. 20 cm long, ca. 3.6 \times 2.3 cm, abaxially rounded with center lime-green, nearly glabrous band and laterally with indument similar to that of leaf base (**Fig. 17**), adaxially flat and with scattered black scales and margins sharp (**Fig. 18**); **rachis** ca. 2.2 m long, tapering to ca. 1.5 \times 1.5 mm at ultimate pinna, abaxially rounded and with similar indument as petiole but becoming progressively less dense distally (**Fig. 19**), adaxially flat to becoming angled distally; **blade** ca. 2.5 m long, widest ca. 90 cm from base of blade and there ca. 1.2 m wide, gradually narrowing toward base and apex; **pinnae** ca. 50 per each side of rachis (**Figs. 20–22**) in three distinct groups along rachis, in group one of the most proximal ca. 40 cm of rachis, ca. 12 simple pinnae per side, largest of these 57–58 \times 6–7 cm, smallest at base 36–38 \times 1.2–1.5 cm, spaced ca. 0.7–3 cm apart, adaxially prominent and raised yellowish midrib, 0–1 primary vein near proximal margin, 1–2 secondary veins between midrib and primary vein or margin, marginal veins slightly raised, adaxially sometimes 1–2 yellow, raised primary veins on either side of midrib, numerous secondary veins between midrib and primary veins, marginal veins thickened, abaxially 1–3 brown to black, coarse, medifixed ramenta to 3 mm long in proximal 3 cm of midrib (**Fig. 28**); in group two of the middle ca. 1.35 m of rachis, ca. 29 multi-split pinnae per side, these split nearly to the base into 2–4 segments (**Figs. 23–24**), these 45–62 \times 1.2–7 cm, narrowly lanceolate to linear, spaced ca. 3–4 cm apart, typically slightly fanned into multiple planes to give slight plumose effect (**Fig. 25**) but sometimes flat, tips drooping, most proximal segment of pinnae on one side typically crossing back over rachis on to opposing side, most segments adaxially with slightly off-centered, prominent and raised, yellowish midrib, 1–3 barely raised greenish yellow primary veins on either side (**Fig. 26**), marginal veins yellow-green and raised, lesser veins faint, ramenta like those of the



13. The trunk of *Wodyetchia bifurcina* is proximally light gray to grayish tan, longitudinally fissured, and with ring-like leaf scars. *D. R. Hodel 4084*, the type plant.



14. The base of the trunk of \times *Wodyetchia bifurcica* is typically swollen. D. R. Hodel 4084, the type plant.



15. Leaf bases of *Wodyetchia bifurcina* form a prominent crownshaft and are light green to brownish green and overlain with densely placed to contiguous, appressed, grayish white, +/- deciduous scales. *D. R. Hodel 4084*, the type plant.



16. Leaf bases of \times *Wodyetchia bifurcina* have reddish brown to nearly black, coarse, basifixed, chaff-like scales distally that extend on to the petiole. *D. R. Hodel 4084*, the type plant.



17. Abaxially the petiole and rachis of *Wodyetchia bifurcina* have reddish brown to nearly black, coarse, chaff-like scales laterally. *D. R. Hodel 4084*, the type plant.



18. The petiole and proximal rachis of *Wodyetchia bifurcina* are flat and with scattered black scales and sharp margins adaxially. *D. R. Hodel 4084*, the type plant.



19. The rachis of *×Wodyetchia bifurcina* has densely placed to contiguous, appressed, grayish white, scales laterally with sparsely scattered, black, chaff-like scales distally. *D. R. Hodel 4084*, the type plant.



20. *×Wodyetchia bifurcina* has about 50, typically deeply split pinnae per side that lend a slightly plumose appearance to the leaf. *D. R. Hodel 4084*, the type plant.



21. Abaxial view of the leaf of \times *Wodyetchia bifurcina* showing the regularly arranged but deeply split pinnae. *D. R. Hodel 4084*, the type plant.



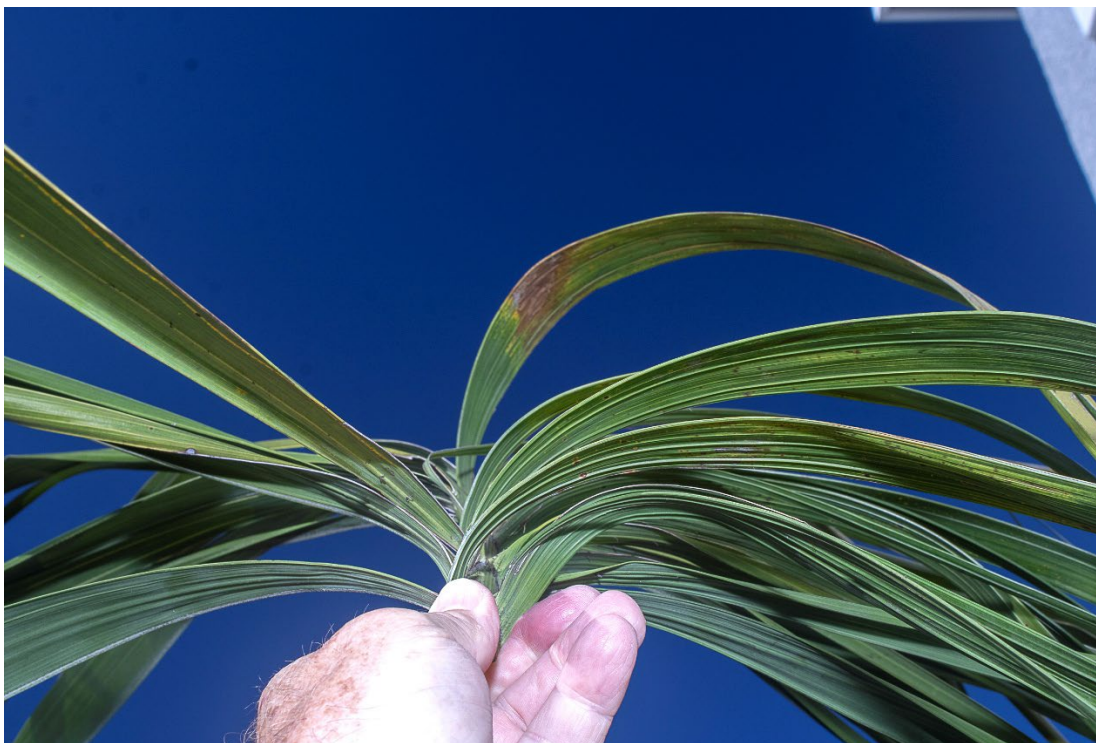
22. Co-author Robert H. Burtscher holds leaf blade of \times *Wodyetchia bifurcina*. D. R. Hodel 4084, the type plant.



23. Pinnae of \times *Wodyetchia bifurcina* are deeply split nearly to the base, giving the appearance of clustered pinnae. *D. R. Hodel 4084*, the type plant.



24. Two, oppositely arranged pinnae of *×Wodyetchia bifurcina* are each deeply split nearly to the base. *D. R. Hodel 4084*, the type plant.



25. Looking distally along the rachis of *×Wodyetchia bifurcina*, the split pinnae segments are slightly fanned to give a plumose appearance. *D. R. Hodel 4084*, the type plant.



26. Adaxially most pinnae segments of *×Wodyetchia bifurcina* have a prominently raised yellowish midrib and 1–3 barely raised greenish yellow primary veins. *D. R. Hodel 4084*, the type plant.



27. Distal, simple pinnae of *×Wodyetchia bifurcina* have slender, hair-like, basifixed, ascending, black ramenta abaxially and proximally. *D. R. Hodel 4084*, the type plant.

proximal, simple pinnae and typically on only 1 of the segments and typically the center one; in group three of the most distal ca. 35 cm of rachis, ca. 9 simple pinnae per side, these 25–49 × 1.6–5 cm, spaced ca. 3–4 cm apart, adaxially prominently raised, yellow midrib and 1–2 green to yellowish primary veins on either side, abaxially with numerous slender, hair-like, basifixed, ascending, black ramenta to 1 cm long in proximal 3–14 cm of midrib (**Fig. 27**), sometimes ramenta are coarse and brown; all pinnae mostly lanceolate, slightly falcate, narrowed at base and apex, mostly praemorse at apex especially on distal pinnae and then with numerous fine to coarse teeth, distal margin conspicuously longer than proximal margin, or sometimes acuminate at apex, thin-leathery, regularly arranged, opposite to subopposite, dark glossy green adaxially, paler abaxially with minute white and brown scales especially proximally and minutely white-granular throughout (**Fig. 28**), transverse veinlets very faint, indistinct, mostly near pinna margins, abaxially all veins green and less conspicuous, simple pinnae in proximal and distal groups forward-pointing, in one plane, sometimes deeply lobed, tips slightly drooping.

Inflorescences: 3–4, infrafoliar, branched to 3 orders, whitish cream-colored at anthesis (**Figs. 29–30**), slightly tinged with pink and purple when first expanding (**Fig. 31**), 0.9–1.65 × 1.3–2.25 m, stiffly spreading, expansive, diffuse (**Figs. 29, 32–33**); **peduncle** 13–20 cm long, stout (**Fig. 34**), 8–13 × 3–5 cm at point of attachment, 6–10 × 2.5–4 cm at prophyll attachment, 4.5–7.5 × 1.8–3 cm at peduncular attachment, 3.5–6 × 2–3.5 cm at first branch, ellipsoid in transverse section, greenish proximally transitioning whitish cream-colored distally, to initially densely covered with short, whitish gray, felt-like indument (**Fig. 35**) but this +/- deciduous and becoming sparser and with minute dark brown to black scales (**Fig. 36**); **prophyll** attached 3–5 cm from base, 38–65 cm long, 10–16.5 cm wide if unfolded and flattened, bicarinate, 6.5–0.5 cm wide from costa to costa, cordate at base, acuminate at apex into a hard point, leathery, lime green abaxially but covered moderately proximally to densely distally with whitish, appressed, moderate to coarse, cottony indument (**Figs. 37–38**), adaxially greenish yellow-cream-colored and glabrous (**Fig. 39**), adaxially and abaxially densely longitudinally veined; **peduncular bract** attached 4.5–7.5 cm from base, nested inside prophyll and often detaching with it (**Figs. 40–41**), 33–51 cm long, 7.5–13 cm wide if unfolded and flattened, weakly bicarinate, 4.8–8 cm wide from costa to costa, thin-leathery, truncate at base, pointed at apex, abaxially greenish tan with indument like that of prophyll (**Fig. 42**), adaxially tan-cream-colored and glabrous (**Fig. 43**); vestigial rudimentary bracts attached 6.5–10.5 and 8.5–14.5 cm from base, these 0.3–0.5 × 3–5 cm; prophyll and all bracts leaving circular scars; **rachis** elongate, 70–120 m long, 3–5 × 2.8–3 cm at base, tapering to 4–7 × 4–7 mm at apex, rounded-angled, whitish cream-colored (**Fig. 44**), proximally moderate to sparse indument as peduncle transitioning to glabrous distally, with 8–12 branches and 8–12 simple rachillae, most proximal branch largest and with most complex branching, attached at nearly right angle to rachis, 65–115 cm long, sub-peduncle 11–18 cm long, 2.5–4 × 1.2–2 cm at base, tapering to 1.5–2.5 × 1.3–2 cm at apex, sub-rachis 55–90 cm long, with 2–4 sub-branches and 6–10 simple



28. Pinnae segments of \times *Wodyetchia bifurcina* are paler abaxially with minute white and brown scales, especially proximally, and white-granular throughout. Note the large, coarse, chaff-like, dark brown ramenta. *D. R. Hodel 4084*, the type plant.



29. Inflorescences of \times *Wodyetchia bifurcina* are infrafoliar and typically stiffly spreading. In 2024 in the garden of Bob DeJong, Vista, California.



30. Inflorescences of \times *Wodyetchia bifurcina* are infrafoliar and typically stiffly spreading, expansive, and diffuse. *D. R. Hodel 4084*, the type plant.



31. Newly expanding inflorescences of \times *Wodyetchia bifurcina* can be slightly tinged with pink and purple. *D. R. Hodel 4084*, the type plant.



32. Co-author Robert H. Burtcher holds an exceptionally large, expansive, and diffuse inflorescence of \times *Wodyetchia bifurcina*. D. R. Hodel 4084, the type plant.



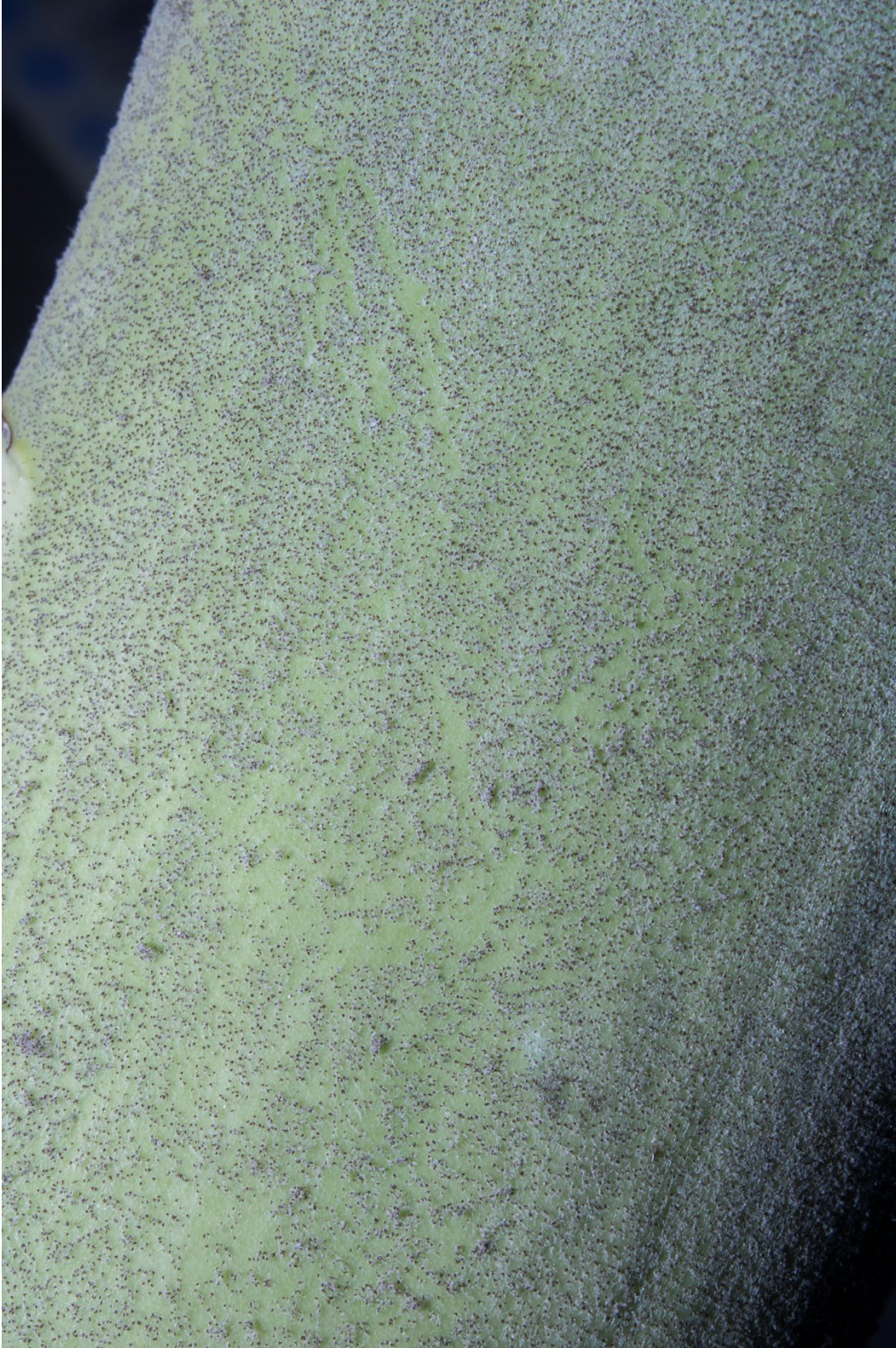
33. Marianne A. Hodel holds an exceptionally large, expansive, and diffuse inflorescence of \times *Wodyetchia bifurcina*. D. R. Hodel 4084, the type plant.



34. Peduncles of \times *Wodyetchia bifurcina* are short and stout. *D. R. Hodel 4084*, the type plant.



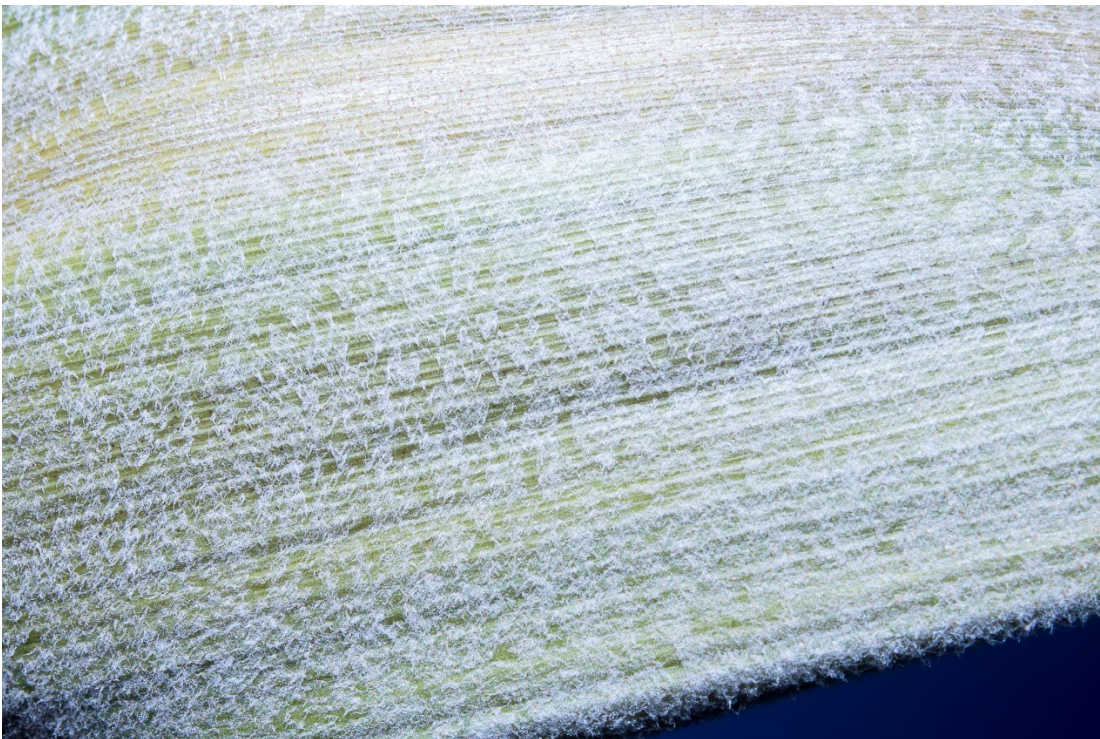
35. Peduncles of \times *Wodyetchia bifurcina* are short and stout with dense, whitish gray, felt-like, +/- deciduous indument. *D. R. Hodel 4084*, the type plant.



36. Peduncles of *Wodyetchia bifurcina* are initially covered densely with felt-like indument but this +/- deciduous and becoming sparser and with minute dark brown to black scales. *D. R. Hodel 4084*, the type plant.



37. The prophyll of \times *Wodyetchia bifurcina* abaxially is lime green abaxially but covered moderately to densely with whitish indument. *D. R. Hodel 4084*, the type plant.



38. The prophyll of \times *Wodyetchia bifurcina* is lime green abaxially but covered moderately proximally to densely distally with whitish, appressed, moderate to coarse, cottony indument. *D. R. Hodel 4084*, the type plant.



39. The prophyll of \times *Wodyetchia bifurcina* is adaxially greenish yellow-cream-colored and glabrous. *D. R. Hodel 4084*, the type plant.



40. The prophyll, with the peduncular bract nested inside it, is being thrust off the expending inflorescence of \times *Wodyetchia bifurcina*. D. R. Hodel 4084, the type plant.



41. The prophyll of \times *Wodyetchia bifurcina* with the peduncular bract nested inside it. D. R. Hodel 4084, the type plant.



42. The peduncular bract of \times *Wodyetchia bifurcina* is greenish tan with whitish, appressed, moderate to coarse, cottony indument abaxially. *D. R. Hodel 4084*, the type plant.



43. The peduncular bract of \times *Wodyetchia bifurcina* is tan-cream-colored and glabrous adaxially. *D. R. Hodel 4084*, the type plant.



44. The rachis of \times *Wodyetchia bifurcina* is elongate, rounded-angled, and whitish cream-colored. *D. R. Hodel 4084*, the type plant.

rachillae, sub-sub-peduncle 3.5–6.5 cm long, 1.2–2 × 0.6–1 cm at base, tapering to 0.8–1.5 × 0.8–1.5 cm, with 2–4 simple rachillae, branches and sub-branches subtended by bracts, proximally these 0.3–1 × 1.6–4 cm with a center, mucronate tip, greenish (**Fig. 45**), distally diminishing in size until virtually disappearing, whitish cream-colored, branches and sub-branches whitish cream-colored; **rachillae** 12–54 cm long, 5–10 × 4–7 mm at base, flattened, longitudinally rounded-angled, tapering to 1.5–2 × 1.5–2 mm at apex, straight, slightly zig-zag at apex, stiff, spreading, whitish cream-colored with a very slight greenish tinge when young, glabrous except for a few patches sparse, dark indument near floral triads especially proximally.

Flowers: in triads in ca. proximal 2/3–4/5 of rachillae of a later-opening pistillate flanked on each of two sides by earlier-opening staminate (**Fig. 46**), triads 2.5–4 cm distant proximally, 0.8–2 cm distant distally, paired or solitary staminate flowers only in distal 1/5–1/3, these 0.6–1.5 cm distant, triads in pits 8 mm long, 5 mm wide, 3 mm deep; staminate flowers subtended by bracteole 1 mm high, 10 mm long, crescent-shaped, thin, nearly transparent, clear-colored; pistillate flower subtended 2 bracteoles, 2–3.5 mm high, 8–10 mm long, broadly crescent-shaped (**Fig. 47**), imbricate in basal 3/4, rounded to truncate apically, prominently and deeply 1–2-lobed nearly to base, light greenish white abaxially, greenish adaxially, margins of lobes black; **staminate flowers** in bud just prior to anthesis 13–17 × 6–8 mm, bullet-shaped, greenish (**Fig. 48**); **calyx** 3.5–7 × 4–8 mm, cuplike, green aging to greenish yellow, **sepals** 4–7 × 4–11 mm, bowl-like, strongly concave adaxially, imbricate to apex and there truncate to broadly rounded; **petals** 11–15 × 4.5–7 mm, typically spreading flat but sometimes strongly recurved, long-ovate, boat-like, valvate, free nearly to base, lime green; **stamens** ca. 80, set on an obovoid pedestal ca. 3 mm high like needles in a pin cushion, 6–12 mm tall, likely erect to spreading at anthesis, briefly connate basally, creamy white, filaments and anthers not differentiated; **pistillode** 11–17 mm tall, exceeding stamens and petals, rounded to spindle-shaped base, 3.5–5 × 3–4 mm topped with an elongate, slender style 8–12 mm long, portion exceeding stamens and petals, flexuous, white (**Fig. 49**); **pistillate flowers** prior to anthesis 9–14 × 7–10 mm, at anthesis 1.1–1.9 × 0.7–1.3 cm, ovoid, greenish (**Fig. 50**); **calyx** 4–6 × 7–10 mm, crown-like, light green; **sepals** 5–7 × 6–9 mm, 1 larger than the other 2, bowl-shaped, strongly rounded-angled abaxially, strongly concave adaxially, thick, sturdy, imbricate in basal 3/4, very broadly rounded apically; **petals** 6–8 × 6–8 mm, broadly ovate to bowl-like, thinner and not so thick and sturdy as sepals, imbricate nearly to apex and there rounded-acute; **staminodes** 3(?), together, 0.4–0.5 × 0.3–0.4 mm, tooth-like, truncate, whitish to clear-colored; **gynoecium** 7–10 × 3.5–5 mm, ovoid, white, **style** short or lacking, **stigma** 0.8–2 mm long, barely exerted beyond petals, briefly 3-parted, lobes strongly flared outwardly, white (**Fig. 50**).

Fruits: 5 × 2.5–3.2 cm, ovoid, apex pointed, pinkish red (**Fig. 9**), outer endocarp fibers longitudinal, numerous, moderately thick, coarse, densely placed, black, forked, except for 2–3, unforked,



45. Rachis bracts subtending branches and rachillae of \times *Wodyetchia bifurcina* are typically low, wide, greenish and sometimes with a center mucronate tip. *D. R. Hodel 4084*, the type plant.



46. Floral triads of *xWodyetchia bifurcina* have a center pistillate flower and two staminate flowers. *D. R. Hodel 4084*, the type plant.



47. Bracteoles subtending the pistillate flowers of *xWodyetchia bifurcina* are broadly crescent-shaped, lobed, and greenish adaxially. *D. R. Hodel 4084*, the type plant.



48. Staminate flowers of \times *Wodyetchia bifurcina* in bud just prior to anthesis are bullet-shaped. Note the exserted pistillode. *D. R. Hodel 4084*, the type plant.



49. Longitudinal section of the staminate flower of \times *Wodyetchia bifurcina* shows the pistillode exserted well above the stamens. *D. R. Hodel 4084*, the type plant.



50. Pistillate flowers of *×Wodyetchia bifurcina* are ovoid, greenish, and with a 3-parted, exserted, white stigma. *D. R. Hodel 4084*, the type plant.



51. Seeds of *×Wodyetchia bifurcina* have homogeneous endosperm and a basal embryo. ©2024 by Jason B. Dobbs.

white ones overlying the black ones (**Fig. 10**); **seeds** 3 × 1.5–1.9 cm, ovoid, endosperm homogeneous, embryo basal (**Fig. 51**).

Fruits: 5 × 2.5–3.2 cm, ovoid, apex pointed, pinkish red (**Fig. 9**), outer endocarp fibers longitudinal, numerous, moderately thick, coarse, and densely placed, forked, black except for 2–3, unforked, white ones overlying the black ones (**Fig. 10**); **seeds** 3 × 1.5–1.9 cm, ovoid, endosperm homogeneous, embryo basal (**Fig. 51**).

Discussion

The pistillate parent of ×*Wodyetchia bifurcina* is clear and unambiguous in the United States; fruits from which the hybrid was grown were, until recently, always collected from *Wodyetia bifurcata*. *Veitchia arecina* is typically listed as the staminate parent in popular literature; however, it is unclear and we are somewhat uncertain that the staminate parent is *V. arecina*, a hybrid of it, or another species altogether.

What Is *Veitchia arecina*?

Beccari's original treatment of *Veitchia arecina* (Beccari 1921) and the three most recent taxonomic treatments that include *V. arecina* (Dowe and Cabalion 1996, Moore 1957, Zona and Fuller 1999) are not in full agreement as to what constitutes this species. For example, Beccari (1921), Dowe and Cabalion (1996), and Moore (1957) noted that in *V. arecina* the rachillae are sinuous or zig-zag while Zona and Fuller contend that they are straight. Also, Beccari (1921), Moore (1957), and Zona and Fuller (1999) noted that triads of a pistillate flower and two staminate flowers in *V. arecina* are in proximal portions of the rachillae while Dowe and Cabalion (1996) contend that they are found nearly throughout the rachillae. Beccari (1921), Dowe and Cabalion (1996), and Moore (1957) noted that *V. arecina* was not densely lepidote on the pinnae abaxial veins although strangely Zona and Fuller (1999) neglected this typically conspicuous character altogether.

Five Vanuatuan *Veitchia* names (*V. arecina*, *V. macdanielsii*, *V. montgomeryana*, *V. spiralis*, and *V. winin*) and one Fijian name (*V. joannis*) come into play in trying to establish the *Veitchia* staminate parent of ×*Wodyetchia bifurcina*. All six are similar in gross habit, foliage,

inflorescence, and flower and fruit characteristics and they have been historically variously interpreted based on contentious features, including pinnae disposition (spreading or pendulous); rammenta on the pinnae abaxial midrib; minute scales or lepidia on the pinnae abaxial primary and secondary veins; the scaly indument of the distal leaf base, petiole, and proximal rachis; inflorescence indument; rachillae flexibility; staminate flower bud size; stamen quantity; floral triad arrangement; and fruit (and seed) size and shape.

For example, Zona and Fuller (1996) discounted the taxonomic significance of ramenta on the pinnae abaxial midrib, the scaly indument on leaf bases, petioles, and rachises, and the inflorescence indument for all species in *Veitchia*, and specifically rachillae flexibility, staminate flower bud size, stamen quantity, and fruit and seed size for *V. arecina* because they felt that these characters were simply too variable, formed a continuum, and, therefore, carried no taxonomic weight. They included *V. macdanielsii* and *V. montgomeryana* as synonyms of *V. arecina* but, on the basis of rachillae flexibility, staminate flower bud size, and leaf base color, they maintained *V. winin* as a separate species. In contrast, Dowe and Cabalion (1996), who relied on pinnae abaxial vein lepidia, rachillae flexibility, and fruit and seed size, maintained all three taxa as separate but included *V. winin* as a synonym of *V. macdanielsii*. Moore (1957), who relied on pinnae abaxial lepidia and fruit size, maintained all four species as separate. Dowe and Cabalion (1996) and Zona and Fuller (1999) maintained *V. spiralis* as a separate species, basing it on pinnae abaxial vein lepidia, rachillae flexibility, and rachillae flexibility, staminate flower bud size, pinnae disposition, and fruit size, respectively, while Moore (1957) included it but as imperfectly known.

Despite this ambiguity of what is *Veitchia arecina* in cultivation, we feel that *V. arecina* (including *V. macdanielsii* and *V. montgomeryana*) is likely the best place to start as the candidate for the pollen parent of \times *Wodyetchia bifurcina* in the United States. *Veitchia arecina* is the most widely distributed and common *Veitchia* in Vanuatu. It occurs near the main city, Port Villa, and the international airport on the main island, Efate, where collectors had easy access to it. It was grown and had reached maturity in South Florida and perhaps elsewhere in the 1940s or 1950s, about 30 to 40 years prior to the introduction of *Wodyetia bifurcata*. Also, co-author Hodel collected fruits of *V. arecina* (as *V. montgomeryana*) on Efate in 1976 and again with the late Ken Foster in 1979, which were grown on and came to maturity in Hawai'i and South Florida by about the time *W. bifurcata* attained maturity in both places.

The Specter of *Veitchia* Hybridization in Cultivation

One of the most outstanding and significant findings to come out of Zona and Fuller (1999) is their rather novel proposition that cultivated *Veitchia* could be considered potential inadvertent hybrids of two or more species. They noted that circumstantial evidence exists that *V. arecina* (including *V. macdanielsii* and *V. montgomeryana*), *V. winin*, and *V. joannis* can hybridize in cultivation and even intergeneric hybrids between *Veitchia* and other genera in the Ptychospermatinae are likely. They concluded that if a cultivated *Veitchia* did not match their descriptions, it might be a hybrid. Thus, the *Veitchia* or staminate parent of \times *Wodyetchia bifurcina* might be a hybrid.

Indeed, in Fort Myers, Florida co-author Dobbs collected mature fruits from several *Veitchia* sp. around town and found that fruit size would differ greatly from palm to palm with some fruits as

small as 1.5 cm in diameter, round, and parthenocarpic while others were as long as 7.5 cm and contained seeds with endosperm and embryos. Parthenocarpic fruit is a strong indicator that a palm is a hybrid.

In the 1979 the trip that co-author Hodel and the late Ken Foster made to Vanuatu, they also collected and introduced seeds of *Veitchia macdanielsii* (now *V. arecina*), *V. spiralis*, and *V. winin*, all from their type localities in Vanuatu, to Hawai'i and South Florida, which attained maturity in about 10 years. Earlier, in 1977, Hodel and Foster had collected *V. joannis* in Fiji, which also attained maturity in about 10 years. These introductions raise the possibility that other species could be the pollen parent or could hybridize in cultivation with *V. arecina*.

We concur with Zona and Fuller (1996) that inadvertent hybridization is a distinct possibility in cultivated *Veitchia*, and what we accept as *V. arecina* could, in fact, be a hybrid with *V. winin* or even *V. joannis* or *V. spiralis*. Indeed, South Florida, in particular, now appears to be an “incubator” of hybrid *Veitchia* spp. Co-author Dobbs and other growers and collectors in South Florida now suspect that nearly all *Veitchia* spp. there are hybrids, the only exceptions being plants grown from documented wild-collected seeds, mostly in botanical gardens and similar institutions. The wild-collected seeds that co-author Hodel and the late Ken Foster introduced in the late 1970s and those of other collectors, germinated and were grown on in botanical gardens and by a few collectors, attained maturity in about 10 years, unknowingly hybridized, and produced seeds. Nurseries and palm fanciers collected these seeds, germinated and grew them, and then distributed them, using the name or label name from the palm from which they collected the seeds, typically *V. arecina*, unaware that they were hybrids.

Additional evidence that hybridization of *Veitchia* species in South Florida could be rampant is co-author Dobbs's observation that about two-thirds of the \times *Wodyetchia bifurcina* seedlings that he produces using pollen from random *Veitchia* sp. in the landscape, typically called *V. arecina*, have green leaves while one-third of the seedlings have variegated leaves (**Fig. 52**). In contrast, all \times *Wodyetchia bifurcina* seedlings that he produces using pollen from a documented, wild-collected *Veitchia*, in his case a *V. joannis*, are green. This startling phenomenon might be a case of genetic epistasis, in which the effect of a gene mutation is dependent on the presence or absence of mutations in one or more other genes, respectively termed modifier genes (Gros et al. 2009). In the case of variegation, the multi-parentage of the pollen donor might have produced a gene mutation that suppresses or modifies the expression of another gene that governs the formation of chlorophyll, resulting in variegation.

In summary, we feel that the pollen parent of \times *Wodyetchia bifurcina* in the United States is probably a hybrid of *Veitchia arecina* although the situation might be different in Australia. Some collectors and growers in Australia feel that *Veitchia joannis* is the staminate parent of \times *Wodyetchia*



52. About one-third of the *×Wodyetchia bifurcina* seedlings produced from random landscape *Veitchia* sp. pollen have variegated foliage. ©2025 by Justen B. Dobbs.

bifurcina (J. J. Dowe, pers. comm., 15 December 2025). Also, co-author Dobbs is now making \times *Wodyetchia bifurcina* using pollen from documented, wild-collected *V. joannis* and he is making reverse \times *Wodyetchia bifurcina* where the pollen plant is *Wodyetia bifurcata* and the seed plant is *V. arecina* but neither of these two hybrids has yet attained maturity. It seems that DNA sequence data will be necessary to sort out and confirm *V. arecina* or a hybrid of it or the identify another *Veitchia* sp. as the staminate parent of \times *Wodyetchia bifurcina*.

As an aside, co-author Hodel has been alluding to the specter of inadvertent hybridization in cultivated palms for several years (Hodel 2023, 2025, Hodel et al. 2025). While long touted as a way to conserve species and their genetic material, cultivated collections of palms, especially those of closely related species and genera, can do just the opposite. Hybridization contaminates species and their genetic material to render them useless and a dangerous threat for conservation purposes.

Conversely, hybridization provides some advantages for the nursery market in that hybrids often display hybrid vigor, tending to be faster-growing, more cold-tolerant, and generally more drought-tolerant, which means faster production and a superior, hardier, and tougher landscape product than their parent species. Also, parthenocarpic fruit production renders less seedling regeneration underneath the parent palm, which saves time, money, and herbicide treatments in landscape management in areas where favorable climates encourage volunteer seedlings, like South Florida and Hawai'i.

That staminate flowers do not open fully and abort and the lack of differentiation in some staminate and pistillate floral parts of the type plants of \times *Wodyetchia bifurcina* could be due to several factors, including cool temperatures, not fully mature inflorescence and flowers, genetic aberrations of hybridization, and/or palm age. Indeed, \times *Wodyetchia bifurcina* is likely self-sterile but can produce fruits with viable seeds if pollen from one of its parent species, for example *Veitchia arecina*, is used. F2 offspring using pollen from *Veitchia arecina* are available and in the landscape. They are unusually handsome individuals with a slender trunk, elongate crownshaft, and regularly spaced, unusually broad, dark green, drooping, praemorse pinnae.

Cultivation

For comprehensive reviews of palm horticulture and landscape management, see Broschat et al. (2014) and Hodel (2012).

\times *Wodyetchia bifurcina* palms seem well adapted to a variety of subtropical and tropical climates and regions around the world. They seem adapted to tropical and warm subtropical,

moist to wet conditions, like those of southern Florida, northern Australia, Thailand, and elsewhere. They are tolerant and grow adequately in warm or slightly cooler, drier, and more arid subtropical conditions, like the Mediterranean-climate regions of southern California, southern Europe, southern Africa, parts of Australia, and elsewhere. *Wodyetia bifurcata*, the pistillate parent of \times *Wodyetchia bifurcina*, likely imparts heat, cool, drought, wind, and arid tolerance to this hybrid. Despite this drought tolerance, \times *Wodyetchia bifurcina* palms perform best with occasional irrigation during dry, rainless periods (see later).

\times *Wodyetchia bifurcina* palms will tolerate hot temperatures, likely as warm as 40 C, especially if given some afternoon shade and occasional irrigation. They will also tolerate short, overnight periods of near-freezing and slightly sub-freezing temperatures to -2 C with little or no damage.

Propagation of \times *Wodyetchia bifurcina* palms is by seed, which can be produced on *Wodyetia bifurcata* whose pistillate flowers are pollinated with pollen from *Veitchia arecina*. Measures should be taken to emasculate the inflorescence of *W. bifurcata*, removing staminate flowers pre-anthesis to exclude unwanted pollen (**Fig. 53**), which is critical to maximize hybrid fruit production and prevent self-pollination. To remove staminate flowers mechanically, simply rub them off with your fingers beginning at the distal end of each rachilla and moving toward the proximal end. Removal should be done well before staminate anthesis to eliminate the chance of stray pollen escaping the flower during removal and lodging on the pistillate flower. It is helpful to start by cutting off or removing the distal portion of each rachilla, which contains only solitary or paired staminate flowers anyway and no pistillate flowers. Then remove the staminate flowers in triads with a pistillate flower in the more proximal portion of the rachilla. Be careful not to damage pistillate flowers when removing adjacent staminate flowers.

After removal of staminate flowers, spray the entire inflorescence with a mixture of water, a denaturing agent, and a surfactant to wash off any escaped pollen. Also, the now emasculated inflorescence must be protected to exclude unwanted, foreign pollen spread by wind and/or insects from adjacent or nearby individuals of *Veitchia*, which can be done by emasculating or removing inflorescences on other palms or securely enclosing the just emasculated inflorescence in a protective bag of cheesecloth, poly screen mesh, or specialized pollination bags used in the date and oil palm industries. The poly mesh bags also provide protection of the developing fruits against marauding herbivores (**Fig. 54**).

\times *Wodyetchia bifurcina* is fairly easy to make because of the large size of the flowers on both parents, which makes it easy to emasculate the inflorescence on the *Wodyetia* effectively. Then, staminate flowers from a *Veitchia* are collected during anthesis and the anthers can be physically rubbed, one at a time, onto the pistil of the female flowers on the *Wodyetia*. The fruits take about nine months or so to ripen and then can be collected and cleaned of mesocarp. The



53. Co-author Dobbs is emasculating the inflorescence of *Wodyetchia bifurcata* pre-anthesis to exclude unwanted pollen. ©2025 by Justen B. Dobbs.

seeds look typical of a pure *Wodyetchia* seed, expect that they are slightly longer and slightly more slender, but this trait would be difficult for an inexperienced person to discern. Also, the seeds sometimes feature a couple of beige “stripes” on the endocarp, much like the fibers on a *Veitchia* seed.

Keep in mind that \times *Wodyetchia bifurcina* can only be produced using *Wodyetchia bifurcata* and *Veitchia arecina* as parents. Even if \times *Wodyetchia bifurcina* inadvertently produced mature ripe fruits with viable seeds, these are likely the product of backcrossing with one of the parents because this hybrid is likely self-sterile. Even in the slight chance that \times *Wodyetchia bifurcina* produced fruits with viable seeds that were not backcrossed with one of the parents, resulting offspring would still not be true \times *Wodyetchia bifurcina* because this hybrid is based only on *Wodyetchia bifurcata* and *Veitchia arecina*.



54. Poly screen mesh bags are placed around the inflorescences of *Wodyetia bifurcata* after pollination to protect against intrusion of unwanted pollen and marauding herbivores. ©2025 by Justen B. Dobbs.

×*Wodyetchia bifurcina* seeds germinate readily in about three to four weeks and subsequent growth is fairly fast. Eophylls tend to be longer and daintier than that of pure *Wodyetia*. The leaflet itself is slightly thinner and more delicate. But again, to the inexperienced, these differences are not easily discernable. ×*Wodyetchia bifurcina* seedlings are extremely difficult to differentiate from pure *Wodyetia* seedlings until they have about four to five healthy first leaves, at which point it becomes clear that the leaflet bifurcations are not present and instead each leaflet apex has a well-defined droop towards the ground. Leaflets are also equally spaced and at least 50 to 100 percent longer than the leaflets of pure *Wodyetia* of the same size.

Best results indicate that when the first eophyll is fully formed, pot up seedlings into appropriately sized, clean containers using the same or similar mix used for germination, only now incorporate dolomite lime and a palm-special fertilizer into the mix following recommended rates. Keep plants off the ground and in light shade, especially in the afternoon. As roots fill out their

containers, move up young plants into larger containers and gradually decrease any shade until they are in full sun. Keep the potting medium evenly moist (Broschat et al. 2014, Hodel 1998).

When the plants are of sufficient size, they can be planted out into the ground. ×*Wodyetchia bifurcina* palms perform well in just about any type of soil, from the clays, sandy loams, and decomposed granites of southern California to the limestone soils of Florida, as long as the soil environment is managed properly, especially as it pertains to irrigation, fertilizer, and maintenance of an appropriate mulch.

Situate ×*Wodyetchia bifurcina* palms in full sun or with some light, afternoon shade in the hottest, driest regions. Dig a hole as deep as the root ball is high and twice as wide. Place an appropriate amount of palm-special fertilizer in the bottom of the hole. Remove the container and place the palm in the hole. Backfill with the same soil that was dug out of the hole without amending it, tamp firmly, apply about five cm of good quality mulch from the palm's stem out to 60 cm, and irrigate thoroughly. If rain is insufficient, irrigate when the palm needs it by checking the original root ball, backfill, and surrounding site soil. Whichever one of these zones first dries out at a depth of about three to five cm under the soil surface (not counting the mulch), then immediately apply sufficient water to moisten the upper 30 cm of the root zone. Irrigate again only when the root zone dries out again to a depth of three to five cm and continue this irrigation regimen (Broschat et al. 2014, Hodel 2012).

Fertilize with a palm-special fertilizer following label recommendations (Broschat et al. 2014, Hodel 1998). Yellow and dark splotching sometimes occurs on older or lower leaves in the canopy of ×*Wodyetchia bifurcina* palms, which could indicate potassium deficiency. However, because ×*Wodyetchia bifurcina* is a hybrid, this condition might also be the genetic disorder lesion mimic mutant (see later discussion of this phenomenon).

×*Wodyetchia bifurcina* palms are sufficiently handsome and imposing to make a statement in any landscape. Their smooth, clean trunk; light green leaf bases with whitish tomentum and dark scales distally and forming a prominent crownshaft; relatively large, expansive, diffuse, white inflorescences; and splendid canopy of dark green leaves is sure to draw attention. Its appearance is sufficiently powerful to stand alone as a single specimen or for added emphasis, plant three or five well spaced individuals in a group. Companion plants should be kept at least 60 cm away from the trunk and low, so as not to hide or obscure the neat, clean trunk.

A possible byproduct of hybridization in ×*Wodyetchia bifurcina* in California is the yellow and brown splotching that can appear on lower or older leaves in the canopy. This splotching is more evident with a backlit leaf. One's first inclination might be to diagnosis this splotching as a nutrient disorder, such as potassium deficiency (Broschat et al.2014, Hodel 2012), and, indeed, these symptoms can fit this disorder. Another explanation could be lesion mimic mutants, which are a

result of the hybridization process and can become sufficiently severe to kill some palms, such as the mule palm (*×Butiagrus nabonnandii*) (Dhillon et al. 2024). Lesion mimic mutants do not respond to fertilizer or pesticide and fungicide applications because they are the result of genetic anomalies in the hybridization process.

Like many palms, we feel that *×Wodyetchia bifurcina* palms have maximum appeal and ornamental value when they have just initiated flowering and have about three to four m of trunk. They will continue to reward for many more years, but then unusually tall specimens tend to lose some of their allure and replacement becomes a consideration.

Acknowledgements

We sincerely thank John L. Dowe, who provided many useful comments and suggestions about *Veitchia arecina* and its relatives in Vanuatu and in cultivation in Australia; and Max F. Rothschild, who provided information about genetic mutations, inheritance, and gene expression.

Literature Cited

- Beccari, O. 1921. Le Palme della Nuova Caledonia. *Webbia* 5: 71–74. (Preprint: Firenze, 1920).
- Broschat, T. K., D. R. Hodel, and M. L. Elliott. 2014. Ornamental Palms: Biology and Horticulture. *Horticultural Reviews* 42: 1–121.
- Dhillon, B., L. Altarugio, S. Chakrabarti, and K. Bansal. 2024. Suspected lesion mimic mutants in mule palms (*×Butiagrus nabonnandii*). *Palms* 68: 125–132.
- Dowe, J. L. and P. Cabalion. 1996. A taxonomic account of Arecaceae of Vanuatu, with descriptions of three new species. *Australian Systematic Botany* 9: 1–60.
- Dransfield, J., N. W. Uhl, C. B. Asmussen, W. J. Baker, M. H. Harley, and C. E. Lewis. 2008. *Genera Palmarum*(:) The Evolution and Classification of Palms. Kew Publishing, Royal Botanic Gardens, Kew, United Kingdom.
- Gros, P. A., H. Le Nagard, and O. Tenailon. 2009. The evolution of epistasis and its links with genetic robustness, complexity and drift in a phenotypic model of adaptation. *Genetics* 182 (1): 277–293. DOI: [10.1534/genetics.108.099127](https://doi.org/10.1534/genetics.108.099127) [PMC 2674823](https://pubmed.ncbi.nlm.nih.gov/19279327/) [PMID 19279327](https://pubmed.ncbi.nlm.nih.gov/19279327/).
- Heatbun, C. D., S. Zona, and W. J. Baker. 2014. Three new genera of arecoid palms (Arecaceae) from eastern Malesia. *Kew Bulletin* 69(3): 9525 (1–18). DOI: [10.1007/S12225-014-9525-X](https://doi.org/10.1007/S12225-014-9525-X)

Hodel, D. R. 1998. Propagating palms from seeds. Combined Proceedings of the International Plant Propagators Society 48: 56–61.

Hodel, D. R. 2012. The Biology and Management of Landscape Palms. The Britton Fund, Inc. Western Chapter of the International Society of Arboriculture, Porterville, California.

Hodel, D. R. 2023. *Chrysalidocarpus blackii* (Arecaceae) (:) a new species from cultivation. PalmArbor 2023-05: 1–30. <https://ucanr.edu/sites/default/files/2025-03/Chrysalidocarpus%20blackii%20PalmArbor%20FINAL.pdf> DOI: <https://doi.org/10.21414/B18G67>

Hodel, D. R. 2025. *Chrysalidocarpus hamannii* (Arecaceae): a splendid new species from cultivation. PalmArbor 2025-12: 1–40. <https://ucanr.edu/sites/default/files/2025-09/Chrysalidocarpus%20hamannii%20PalmArbor%20FINAL%2029%20Sept%202025.pdf> DOI: <https://doi.org/10.21414/B1DS3F>

Hodel, D. R., J. B. Dobbs, and R. H. Burtscher. 2025. New artificial hybrids in *Chrysalidocarpus* (Arecaceae). Part 1. The Tri-Bear Palm: *Chrysalidocarpus* x *leptocaryi*. PalmArbor 2025-13: 1–39. <https://ucanr.edu/sites/default/files/2025-10/Chrysalidocarpus%20x%20leptocaryi%20%20tri-bear%20palm%20PalmArbor%20FINAL%2013%20October%202025.pdf> DOI: <https://doi.org/10.21414/B1901T>

Irvine, A. 1983. *Wodyetia*, a new arecoid genus from Australia. Principes (Palms) 27: 158–167.

Moore, H. E., Jr. 1957. Synopses of various genera of Arecoideae. Article 21. *Veitchia*. Gentes Herbarum 8: 483–536.

PF. 2014. Palmpedia Forum. <https://forum.palmpedia.com/threads/wodyetia-x-veitchia-foxy-lady.2249/> 31 October 2014. Accessed: 23 December 2025.

Zona, S. and D. Fuller. 1999. Revision of *Veitchia* (Arecaceae-Arecoideae). Harvard Papers Botany 4: 543–560.

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Publication Date: 25 March 2026.

PalmArbor: <https://ucanr.edu/site/hodel-palms-and-trees/palmarbor>

ISSN 269083245

Editor-In-Chief: Donald R. Hodel

Hodel Palms and Trees: <https://ucanr.edu/site/hodel-palms-and-trees>