

Colpothrinax Cookii—A New Species from Central America

ROBERT W. READ

*National Research Council Visiting Research Associate,
Department of Botany, Smithsonian Institution, Washington, D.C.**

In an unpublished manuscript found among some palm specimens in the United States National Herbarium, Dr. O. F. Cook, formerly of the Bureau of Plant Industry, wrote: "An unknown fan palm was found in March, 1902, in a very mountainous district in the department of Alta Vera Paz in eastern Guatemala. The same place was visited again in May, 1904, when additional specimens and photographs were secured. . . . The new palm proved difficult to classify and seemed to have very little affinity with any other group of palms previously described from North America." Dr. Cook considered the new palm as representing a distinct genus and was preparing to publish this new monotypic genus in the year 1913. Although the paper reached the page-proof stage in one journal it was withdrawn from publication for some unknown reason and recommended for a different journal. Dr. Cook then revised his manuscript, added an analytical key, and elaborated on what he considered related genera. This second manuscript was scheduled for publication in 1914 but, again, did not appear and has thus remained among the specimens of this undescribed species for the past 55 years.

Critical studies of the Guatemalan collections and manuscript, and comparisons with other known taxa have left no doubt that an undescribed species is involved. However, it does not represent

a distinctly new genus as was thought by Dr. Cook; rather it is a second species of the formerly monotypic Cuban genus *Colpothrinax*, a genus which Cook himself maintained as quite distinct from the Polynesian genus *Pritchardia* as do I, in opposition to the conclusions of Beccari and Rock (Memoirs of the Bernice P. Bishop Museum 8(1):1-77. 1921). A comparison of some of the more obvious differences to be seen in herbarium material is given in Table 1.

Colpothrinax Cookii R. W. Read, *sp. nov.*

Palma 7-8 m. alta, trunco erecto columnari ca. 35 cm. in diam.; foliorum vaginae apex adversus petiolum longissimus linguiformis (ca. 75-100 cm. longus), in fibras tenues pendulas tandem solutus; rachillae dense hirsutae; florum calyces hirtelli, petala persistentia; fructus ca. 20-22 mm. in diam.

Trunk columnar, 7-8 m. high, ca. 35 cm. in diam. above the base, tapering just below the crown to about 10 cm. in diam., "increasing gradually in thickness with age" becoming "attenuate, longitudinally ridged and fissured" (O. F. Cook), clothed when young with an abundance of persistent, coarsely woven fibers derived from deterioration of the leaf sheath; youthful but mature plants with the upper trunk obscured by exceedingly long, fine, pendulous sheath fibers: crown of 20-30 leaves; leaf sheath of young plants tubular, 50-75 cm. long, with the apical margin very

* All photographs courtesy of the U. S. National Herbarium, Smithsonian Institution.



1. An immature plant of *Colpothrinax Cookii* R. W. Read, in the forest of Alta Vera Paz, Guatemala.

TABLE 1. *A comparison of some of the more obvious differences between Colpotherinax and Pritchardia exhibited by herbarium specimens.*

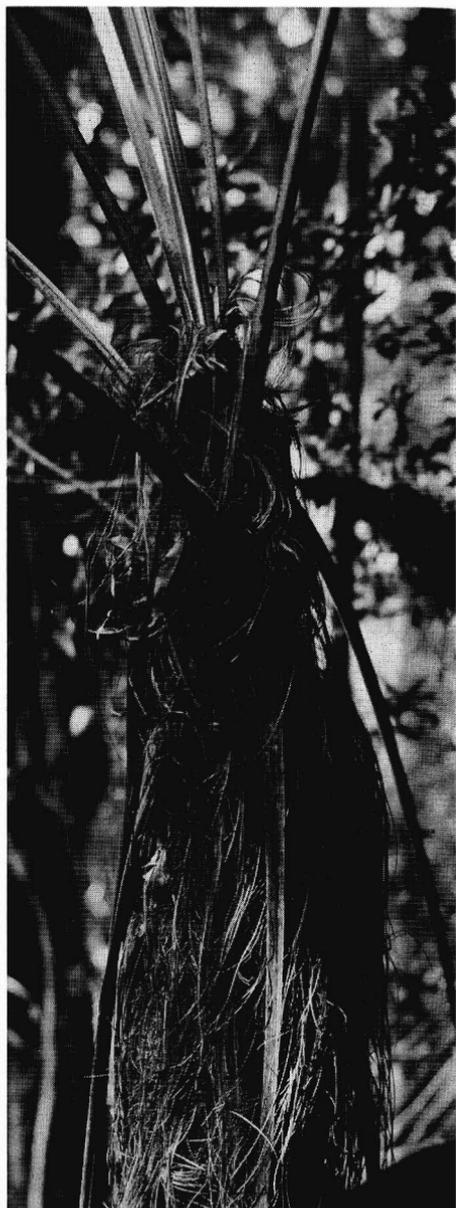
	<i>Colpotherinax</i>	<i>Pritchardia</i>
Petal lobes	Persistent or tardily deciduous, fleshy, lightly lacunate inside, attached across entire width of the stamen-tube.	Deciduous at anthesis, coriaceous, deeply lacunate inside, attached only partially across width of the stamen-tube, with free basal lobes.
Calyx	Fleshy, nerves lacking.	Coriaceous, nerves conspicuous.
Stamen-tube	Equalling or only slightly exceeding the corolla-tube in height.	Greatly exceeding the corolla-tube in height.
Anther connective	Very narrow, light-colored when dry.	Broad, dark-colored when dry.
Carpels	Completely free.	One-half connate externally.
Seed	With more or less thickened or intruded integument.	Without thickened or intruded integument.
Embryo	Lateral.	Basal.
Number of primary inflorescence branches	4-7.	1-2 (-4).

slightly (ca. 3-4 cm.) linguiform opposite the petiole, densely lepidote with large, coarse, spreading, ferruginous, basifixed scales intermixed with lighter-colored, closely appressed, peltate scales, the former restricted to the sheathing portion and the latter continuous around the thickened petiolar portion, the sheath glabrous inside except below the insertion of the petiole where large ferruginous scales occur, sheaths of mature plants with progressively longer linguiform apices, these fraying into loose fibrous strands 75-100 cm. long which are pendulous among the leaf bases, sheaths of very old plants much shorter, shaggy; petiole 3-4 m. long on young plants, ca. 1.3 m. long on mature plants, free portion usually ca. 60-70 cm. long, 2.7-3.0 cm. wide at the junction with the sheath, ca. 2-3 cm. wide at the base of the hastula, shallowly concave and densely lepidote adaxially with mixed

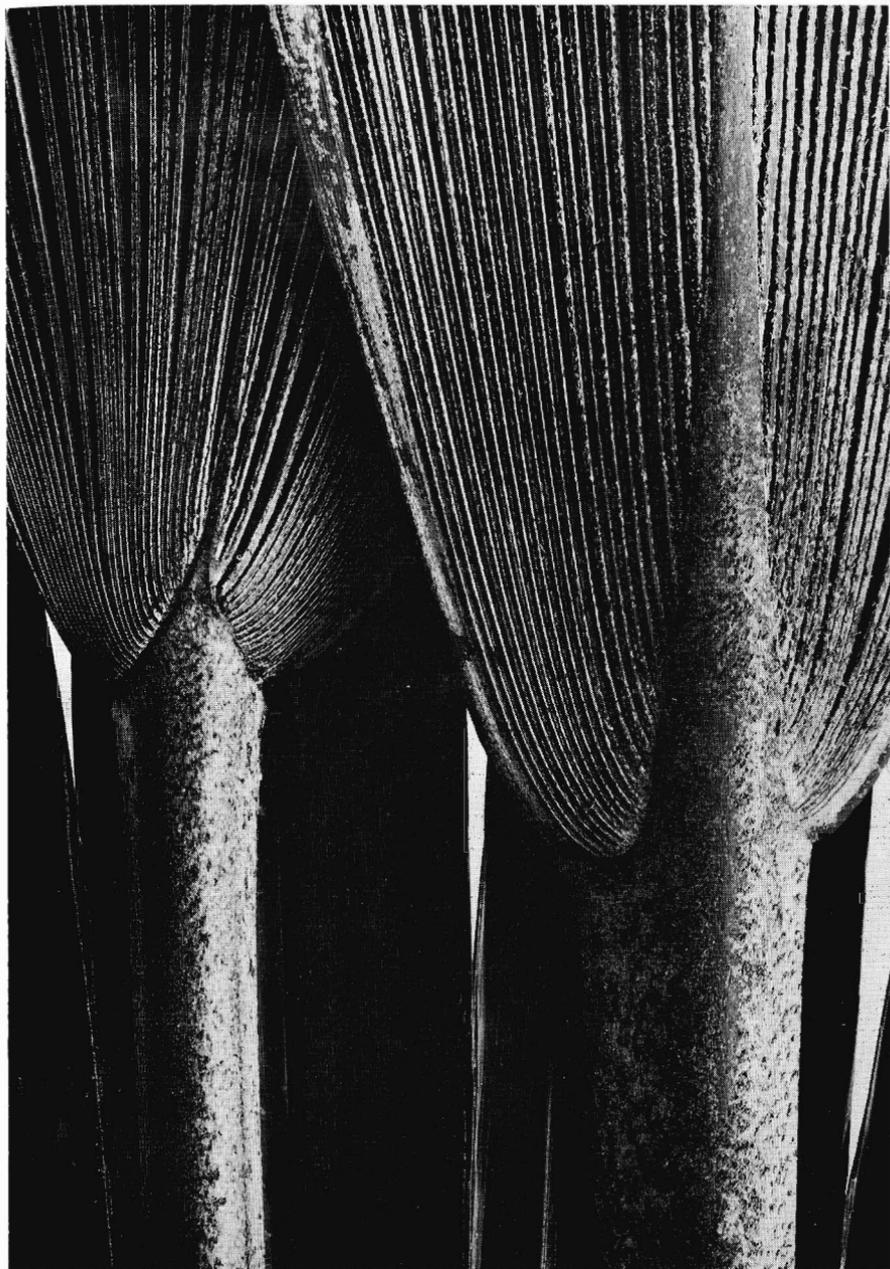
scales like those of the sheath, convex and densely lepidote abaxially, glabrescent in age but minutely puncticulate from the bases of the fallen scales, margins acute, apex continuing into the blade abaxially as a short, abruptly narrowed costa ca. 18-32 cm. long, and adaxially as a hastula; hastula triangular, acute to sharply apiculate, 2.3-3.0 cm. long and slightly broader than the petiole, margins thinly chartaceous to coriaceous, overlapping the blade slightly; blade shortly costapalmate, divided into 50-60 segments connate basally for ca. $\frac{1}{3}$ - $\frac{1}{2}$ their length, each trullate in outline, 4.0-5.5 cm. wide (measured at the broadest point) centrally, and ca. 125 cm. long, entire or bifid at the apex, lacking fiber strands in the sinus between the segments, densely appressed lepidote when unexpanded, the scales somewhat persistent on the major nerves as the blade expands

to an almost flat but strongly plicate orbicular form, surface, exclusive of major nerves, glabrous adaxially, densely hyaline-lepidote abaxially.

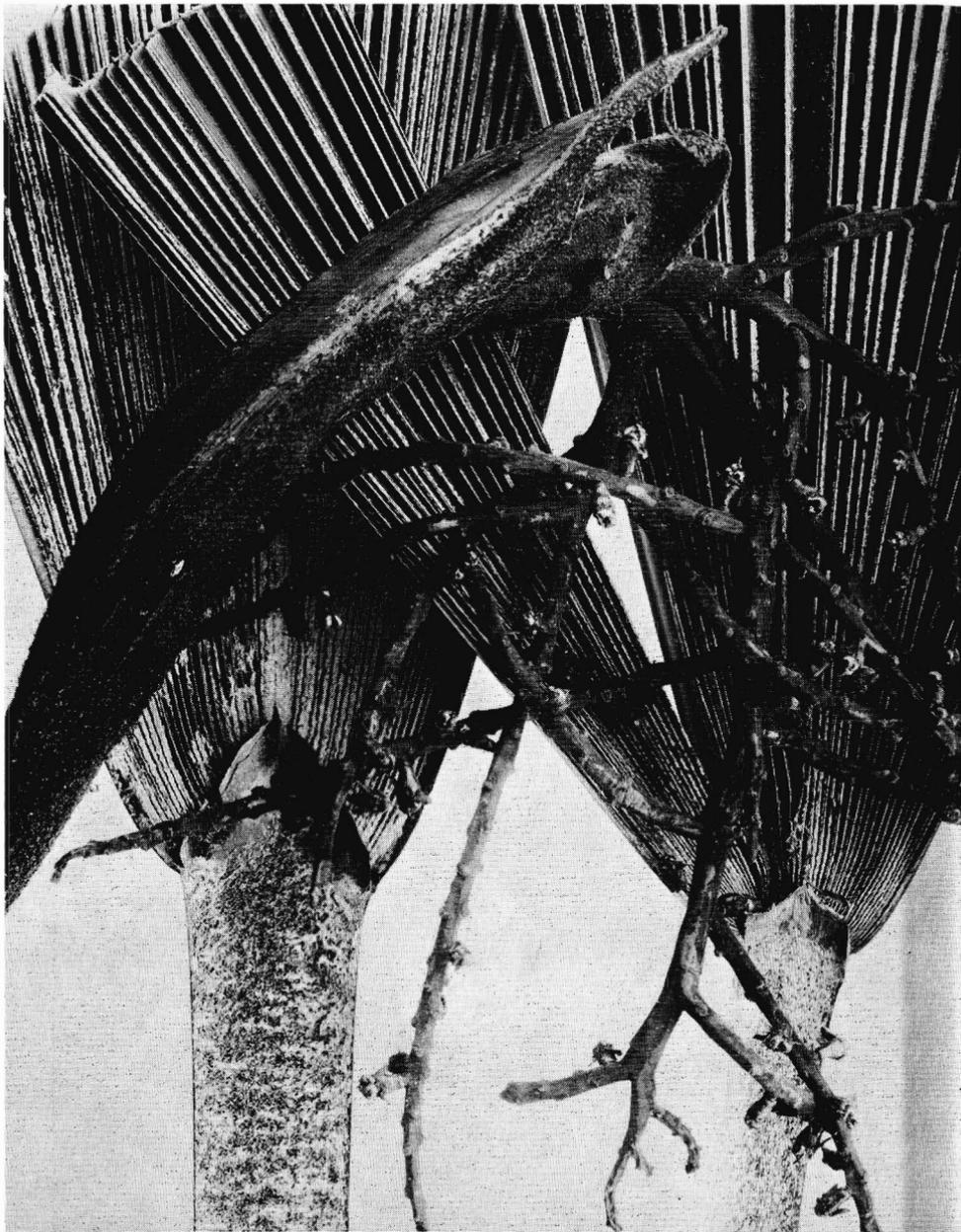
Inflorescences numerous per tree, interfoliar, arcuate from the axils of the lower living leaves, robust, shorter than the petioles, ca. 90–100 (–120) cm. long, the peduncle densely ferrugineous-velutinous, ca. 6 cm. broad at insertion, abruptly narrowed to ca. 2 cm. and then gradually smaller beyond each node of which there are 15–20, internodes short basally, becoming progressively longer toward the apex, ca. 2–8 cm. long, each node bearing a ferrugineous-squamate tubular bract which encloses the lower portions of the next higher bract and the base of the primary branch including its bracts; lowermost bract (prophyll) of the inflorescence bicarinate, ca. 21 cm. long, glabrous or glabrescent adaxially; the second bract inserted about 2 cm. above the insertion of the first, tubular with an oblique aperture, sharply pointed and carinate below the point, equally squamate on all sides, the next 5–6 bracts similar to the second but the carina becoming progressively reduced; the first 9 bracts empty and the remainder each enclosing a primary branch: primary branches 3–7, ca. 35–40 cm. long, twice-branched with about 15 rachillae, peduncles of the primary branches free from the main rachis nearest the base of the inflorescence but becoming progressively more adnate to the rachis toward the apex of the inflorescence, each peduncle bearing 1–3 tubular secondary bracts (the peduncles and their bracts almost entirely enclosed within the primary bracts), the first secondary bract bicarinate, glabrous adaxially, squamate abaxially, much inflated above, acutely pointed apically, almost completely enclosing the second (and third when present) tubular, terete, slightly carinate bract which is usually



2. A closeup of the bud region of a young plant of *Colpothrinax Cookii* R. W. Read, showing the long pendulous fibers from the leaf sheath.



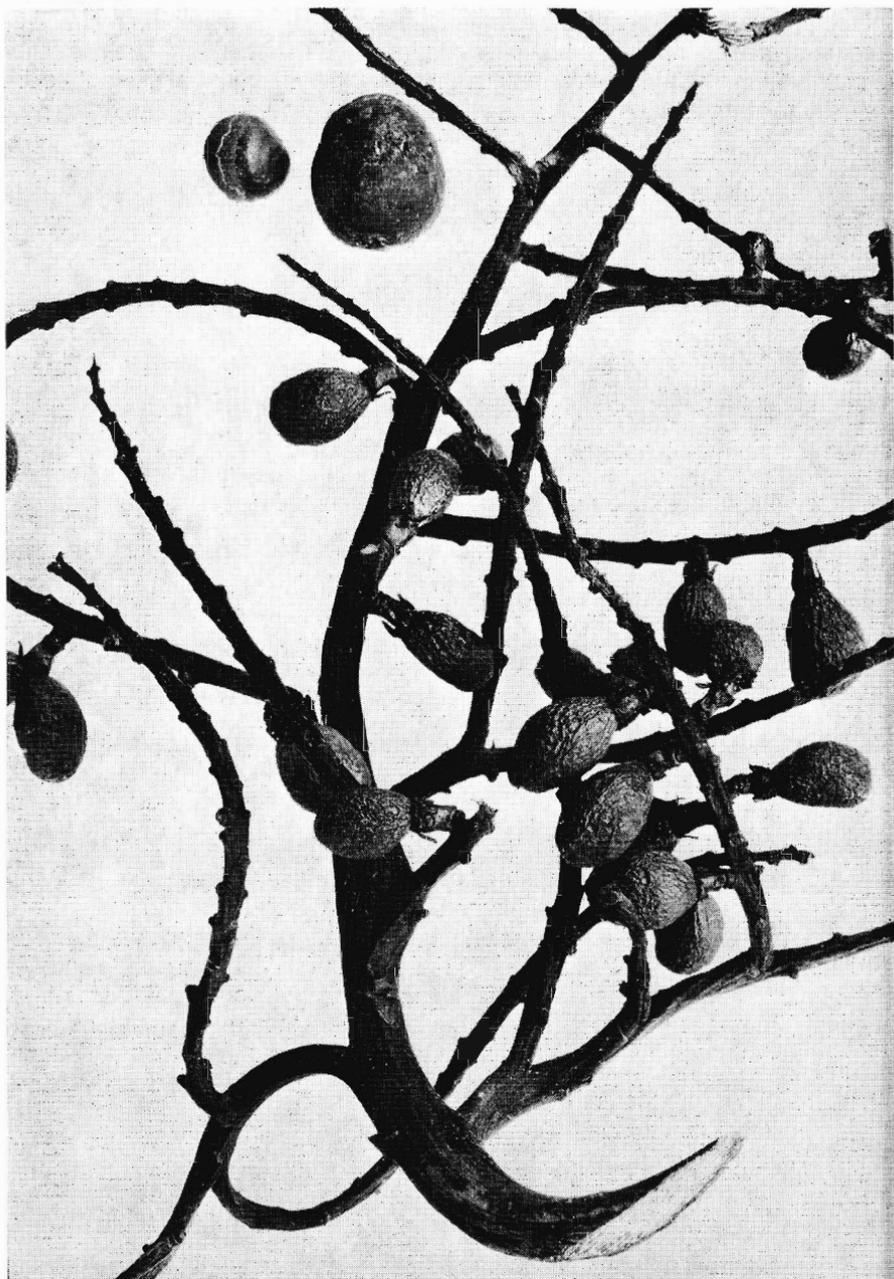
3. Unexpanded leaf blades of *Colpotherinax Cookii* showing the short costa extending into the abaxial surface; leaf from a young plant on the left.



4. A single primary branch, post anthesis, and the adaxial surface of an unexpanded leaf blade showing the hastula. The inflorescence and the leaf on the left are from the type collection, *Cook & Griggs 116*.



5. Inflorescences from the type collection of *Colpotherinax Cookii* R. W. Read, the one on the left with all the bracts and primary branches removed.



6. Immature fruit still attached to the primary branch of *Cook & Doyle 163*, collected two years later but in the same locality as the type of *Colpothrinax Cookii*.

more densely squamate abaxially, or if the ultimate then densely squamate on all sides, each division of the primary branch subtended by a smaller non-sheathing bract but the division sometimes adnate to the rachis of the branch for some distance above the bract, all axes densely ferruginous-hirsute, each rachilla 6–15 cm. long, 3–4 mm. thick, with 15–30 widely spaced flowers ca. 3–4 mm. apart, the floral scars conspicuous when dry as slightly raised areas subtended by a minute, narrowly triangular or lanceolate bracteole: flowers solitary, bisexual; pedicels inconspicuous, ca. 0.5 mm. long; calyx of 3 connate sepals, fleshy, densely hirtellous, solid and stipitate basally, tubular and cupulate above with three short acute or attenuate prominences or lobes extending to about $\frac{1}{4}$ the length of the petals; petals 3, fleshy, connate basally into a tube equalling the calyx, free and valvate above, then boat-shaped, acute and slightly apiculate at the apex, only slightly lacunate inside, reflexed at anthesis, persistent on developing fruit, lacking an abscission line, attached to stamen-tube across entire base; stamens 6, filaments connate basally into a tube where adnate to the petal tube, narrowly subulate above, not incurved at the apex, anthers tetrasporangiate and introrse, linear, retuse apically, bifid basally, dorsifixed, erect in bud, versatile at anthesis, connective inconspicuous, light-colored, narrow; pollen monocolpate with a strongly reticulate exine; carpels three, completely free except the slender filiform connate styles, stigmatic region simple, apparently smooth: fruit “2 or 3 from the same flower, . . . dark brown” (ripe?), subpyriform, slightly flattened apically, ca. 22 mm. long, 17–20 mm. in diam., stigmatic remains apical, “surface rimose, outer layer corky, becoming pulpy underneath,”; seed dark brown, subglobose, lighter greyish-brown along

the raphe, which extends from the base to apex (Cook wrote that the raphe was “strongly fibrous” but only weak fibers, when rarely present, have been seen); endosperm homogeneous; embryo lateral opposite the raphe, indicated by a distinct prominence on the testa.

Vernacular name. In the original manuscript Cook wrote: “The native name of the palm in the Kekchi language is ‘*xan*’, or ‘*shan*’, the letter ‘*x*’ being the usual equivalent of ‘*sh*’ in Spanish transliterations of the Mayan languages. At Cahabon, only a few miles to the north of the Senahu, the same name ‘*xan*’ is applied by a different branch of the Kekchi people to a true palmetto palm, a species of *Inodes*.” The generic name proposed by Cook in 1913, was translated by him as meaning literally, “head-of-hair fiber,” alluding to the unusual development of hairlike fibers arising from the sheath apex and hanging among the leaf bases.

Specimens examined. GUATEMALA. Dept. Alta Vera Paz: Sepacuite coffee estate, a few miles north of Panzos, on the northern slope of the principal range of mountains crossed in leaving the Polochic Valley, at an altitude of nearly 1,200 meters, March 22, 1902, *O. F. Cook & R. F. Griggs 116* (holotype, US: isotype, BH); March 22, 1902, *O. F. Cook & R. F. Griggs 115 & 117* (US); May 9, 1904, *O. F. Cook & C. B. Doyle 163 & 166* (US). PANAMA. Prov. Panamá: Cerro Jefe, March 14, 1964, *R. L. Dressler 2898* (US).

According to Cook’s manuscript, “This new fan palm was growing in company with a pinnate leaved palm, . . .” and “Unlike most of the species that inhabit the surrounding forests, these . . . are not undergrowth palms, but occupy exposed summits and the crests of narrow ridges. There the forest is somewhat open, and the shade is not so dense as to keep the young palms

from growing. Eventually they emerge above the other trees and secure full exposure to the sun."

The two species of *Colpothrinax* are contrasted below, using characters normally found in descriptions or herbar-

	<i>Colpothrinax Cookii</i>	<i>Colpothrinax Wrightii</i>
Petal lobes	Persistent without a line of abscission.	Tardily deciduous with a clear line of abscission.
Calyx	Hirtellous.	Glabrous.
Stamen-tube	Equalling connate portion of petals.	Exceeding connate portion of petals.
Rachillae	Densely hirsute.	Glabrous.
Fruit size	20–25 mm. in diam.	10–15 mm. in diam.
Apex of leaf sheath	Extremely long-linguiform, breaking up into long (75–100 cm.), fine, pendulous strands.	Short-linguiform, breaking up into coarse, interwoven, non-pendulous fibers.
Trunk form	Columnar.	Strongly fusiform.

WHAT'S IN A NAME?

Neophloga (knee o fló ga) is derived from the Greek prefix *neo* (new) and the generic name *Phloga*, thus meaning "new *Phloga*." Presumably this name was used because of a resemblance to *Phloga*, but the author of it provided no explanation.

Phloga (fló ga) was taken from the Greek *phlox* (with the genitive form *phlogos*) meaning a flame. The name was proposed by Noronha without an accompanying description and was later validly published by Martius. Neither writer gave any reason for applying the name to a palm of Madagascar.

Sindroa (sin dró a) is modified from the Malagasy vernacular name *sindro*

ium specimens. The information for *C. Wrightii* is taken from the following Cuban specimens, all at the U. S. National Herbarium: *A. H. Curtiss 364*, *N. L. Britton & Percy Wilson 14548*, and *J. G. Jack 8269*.

which means, according to information received by Toshihiko Satake at the National Museum in Paris, "a sprout which cannot be eaten" perhaps because the bud is not edible.

Syagrus (sigh ág russ) was the name of a kind of palm tree in Latin and was apparently used by Pliny though certainly not for the Brazilian genus of Martius.

Vonitra (vo née tra; voo née tra) was taken from the common name for *Vonitra Thouarsiana*, which is known as *vonitra* in the Malagasy language. *Vonitra* is defined as "a palm, from the stem of which a kind of potash is obtained" in James Richardson's *A New Malagasy-English Dictionary*, Antananarivo, Madagascar, 1885.