

The Collectors of Cuban Palms (Arecaceae) 3.

Charles Wright

Recolectores de Palmas Cubanas (Arecaceae) 3.

Charles Wright

CELIO E. MOYA LÓPEZ

Abstract

The taxonomy of Charles Wright's palm (Arecaceae) collections in Cuba in the mid-19th century is discussed and updated. Wright collected 14 genera of palms in Cuba, only *Pseudophoenix* eluded him. From his palm collections, six new genera were described, five of them as correct names: *Acoelorrhaphe* (1879), *Colpothrinax* (1879), *Calyptronoma* (1864), *Gaussia* (1865), and *Hemithrinax* (1883). He also collected the first specimens of the genus *Leucothrinax* in Cuba. Of the 621 specimens of Cuban palms that C. Wright collected, I identified 11 holotypes, 4 isotypes, 14 lectotypes, 21 isolectotypes, 1 neotypes 2 isoneotypes, 37 syntypes, and 531 without type status. A total of 84 syntypes from 14 other collectors were also identified.

Resumen

Se relaciona y actualiza la taxonomía de las recolectas de palmas en Cuba por Charles Wright a mediados del siglo XIX. Wright recolectó en Cuba 14 géneros de Arecaceae, de los cuales sólo *Pseudophoenix* no fue recolectado. De sus colecciones de palmas, seis nuevos géneros fueron descritos para la ciencia, cinco de ellos como nombres correctos: *Acoelorrhaphe* (1879), *Colpothrinax* (1879), *Calyptronoma* (1864), *Gaussia* (1865) y *Hemithrinax* (1883). También recolectó para Cuba los primeros especímenes del género *Leucothrinax*. Del total de 621 especímenes de C. Wright de palmas cubanas yo considero 11 holotipos, 4 isotipos, 14 lectotipos, 21 isolectotipos, 1 neotipo, 2 isoneotipos, 37 sintipos y 531 sin categoría de tipo. También se relaciona un total de 84 sintipos de otros 14 colectores.

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Introduction

The Arecaceae family, commonly known as palms, is composed of flowering, woody, perennial plants with varying life habits. About 180 genera and 2,600 species comprise the family worldwide (Dransfield et al. 2008).

In Cuba, 15 genera and 99 infrageneric taxa are reported for the Arecaceae: 79 species; 10 infraspecific taxa; and 10 hybrids. Of the total, 86 infrageneric taxa are endemic (86.9 %), one of the highest rates among plant families in the country (Moya 2024a).

Charles Wright (Wethersfield, Connecticut, 29 October 1811—Wethersfield, Connecticut, 11 August 1885) was an American naturalist and botanist who explored and collected plants in Cuba in the mid-19th century. Considered one of the most important naturalists of his era, he made a remarkable contribution to the Cuban flora (León 1918). Over a span of eight years, he conducted three expeditions to Cuba, the first from November 30, 1856 to August 1857, the second from November 29, 1858 to August 1864, and the third from May 10, 1865 to July 1867 (Howard 1988).

Prior to C. Wright, only six species of five genera of palms were described for Cuba: *Cocos crispera* ($\equiv$ *Acrocomia crispa*), *Corypha miraguama* ($\equiv$ *Coccothrinax miraguama*), *Oreodoxa regia* ($\equiv$ *Roystonea regia*), and *Corypha maritima* ($\equiv$ *Sabal maritima*), all described by Kunth (1816) and based on Humboldt and Bonpland collections; *Copernicia hospita*, described by Martius (1838) and based on a Poepping collection; and *Thrinax yuraguana* (nom. illeg., see Moya [2018] $\equiv$ *Coccothrinax yuraguana*).

The goals of this study are to present, discuss, and update the information on the taxonomy and nomenclature of all palms collected by Charles Wright in Cuba in the mid-19th century. Based on the current International Code of Botanical Nomenclature (Turland et al. 2018), I identify and clarify new types and define collections without type status of C. Wright's Cuban palm collections, which will facilitate the updating of web pages and herbaria.

Materials and Methods

Howard (1988: 16) explained that “The numbering system used on the C. Wright Cuban collections as published by Grisebach and later by Sauvalle refers to species, not specimens. A single number, therefore, might refer to a series of specimens, often different taxa, collected at different places and dates, often some years apart.” (Fig. 1).

CHARLES WRIGHT IN CUBA 1856-1867

by

RICHARD A. HOWARD

The Arnold Arboretum of Harvard University

collecting localities are listed alphabetically in Appendix #3 with dates taken from representative specimens. Unfortunately, Wright used only the month and day on most of his field tickets, and as he was often in an area on the same month in successive years, many specimens cannot be dated exactly as to the year.

→ The numbering system used on the Wright Cuban collections as published by Grisebach and later by Sauvalle refers to species, not specimens. A single number, therefore, may refer to a series of specimens, often different taxa, collected at different places and dates often some years apart. Thus in most instances Wright's numbers cannot be used to determine his itinerary or the date or place of his collection. Wright used an unsolved four-digit numbering system on his first trip. He also sent some fragments to Gray at various times which were numbered for convenience in correspondence. Further, in sending sets of specimens to various specialists for identification, other temporary serial numbers were used which were not always replaced with "species numbers" when the identifications were returned and sets distributed to purchasers. This will be discussed in detail later, but suffice it to point out now that Wright's numbers can not safely be used alone to determine the holotype or the lectotype.

Grisebach, Asa Gray, and Charles Wright *Journal of the British West Indian Islands*. He apparently received a favorable

16

before 1857. On June 11, 1857, Grisebach wrote to Gray:

1. Howard (1988), explaining how C. Wright's collections were numbered.

Thus, all of C. Wright's Cuban palm collections are identified by a species number, not a collector number, and specimens distributed under the same number are not necessarily duplicates. In the specific case of Grisebach (1863, 1866), only specimens at GH and GOET that note the same collection locality (as it appears in GOET), are syntypes that need to be lectotypified (Werner Greuter and Rosa Rankin, pers. comm., 14 March 2024).

Unfortunately, C. Wright's numbering system for Cuban palms collections is rarely recognized when designating types, and the vast majority of current publications and herbarium annotations continue incorrectly to designate all specimens of the same number to some type category, perpetuating this misinformation.

On the Harvard University Herbaria and Libraries online specimen catalog, all of C. Wright's Cuban palm collections of the same species with the same collection number are generally considered duplicates if that they were collected at the same location and on the same date without presenting evidence to show otherwise. Here, I designate as holotype or lectotype only those specimens whose collection information matches the protologue; the remainder are not considered duplicates and therefore have no type status.

For updating the genera described from C. Wright's Cuban palm collections, I consulted Wendland (1865, 1879) (**Fig. 2**), Grisebach (1864, 1866) (**Figs. 3–4**), and Hooker f. (1883) (**Fig. 5**). Also, I updated the references of Grisebach, Richard and Sauvalle according to Moya (2023d).

I examined all protologues, descriptions, and status changes related to Wright's Cuban palm collections. I found 599 Wright Cuban palm collections in 26 herbaria: A, B, BH, BM, BR, BRU, F, FI, FLAS, FTG, G, GH, GOET, K, LE, M, MA, MICH. MO, NY, P, S, UC, US, VT, and YU (acronyms from Thiers 2024).

I also reviewed all pertinent material in all specimens I cite. I examined specimens from high-resolution digital images provided by pertinent herbaria, except those at HAC, the National Herbarium of Cuba "Onaney Muñiz" of the Institute of Ecology and Systematics, which I examined in person. For the citation of specimens from HAC, I followed Regalado et al. (2008). Specimens seen by the author are marked with "!", those not seen with "[n.v.]," and those without such designations I saw as digital images.

I used destroyed as "destr." and fragment as "frag."

FLORA

OF THE

BRITISH WEST INDIAN ISLANDS.

BY

A. H. R. GRISEBACH, M.D., F.L.S.,

PROFESSOR OF BOTANY IN THE UNIVERSITY OF GÖTTINGEN.

LONDON:

LOVELL REEVE & CO., HENRIETTA STREET, COVENT GARDEN.

1864.

518

PALMÆ.

16. *G. oxycarpa*, Mart. "Trunk 4' high" (Mart.); leaf-segments 3-4-jugal adnate, broadly oblong (or partly lacerate), obliquely acute, subequal, little distant; spadix-branches divided, subfastigate, pubescent; spathes several (3" long); flowers 4-5-seriate, lax; lip of the alveoles shortly deltoid or subtruncate, entire; exterior ♂ perigone two-thirds as long as the interior; staminal tube short, half as long as the latter; berry subglobose with a bluntish broadly conical point (3" long).—Leaves 3' long, 1' broad; segments 3½"-6" broad, uppermost broadest; spadix long-peduncled, 2'-2½', secondary branches 6" long.—HAB. Trinidad!, Cr., at Irais; [Haiti].

10. CALYPTRONOMA, Gr.

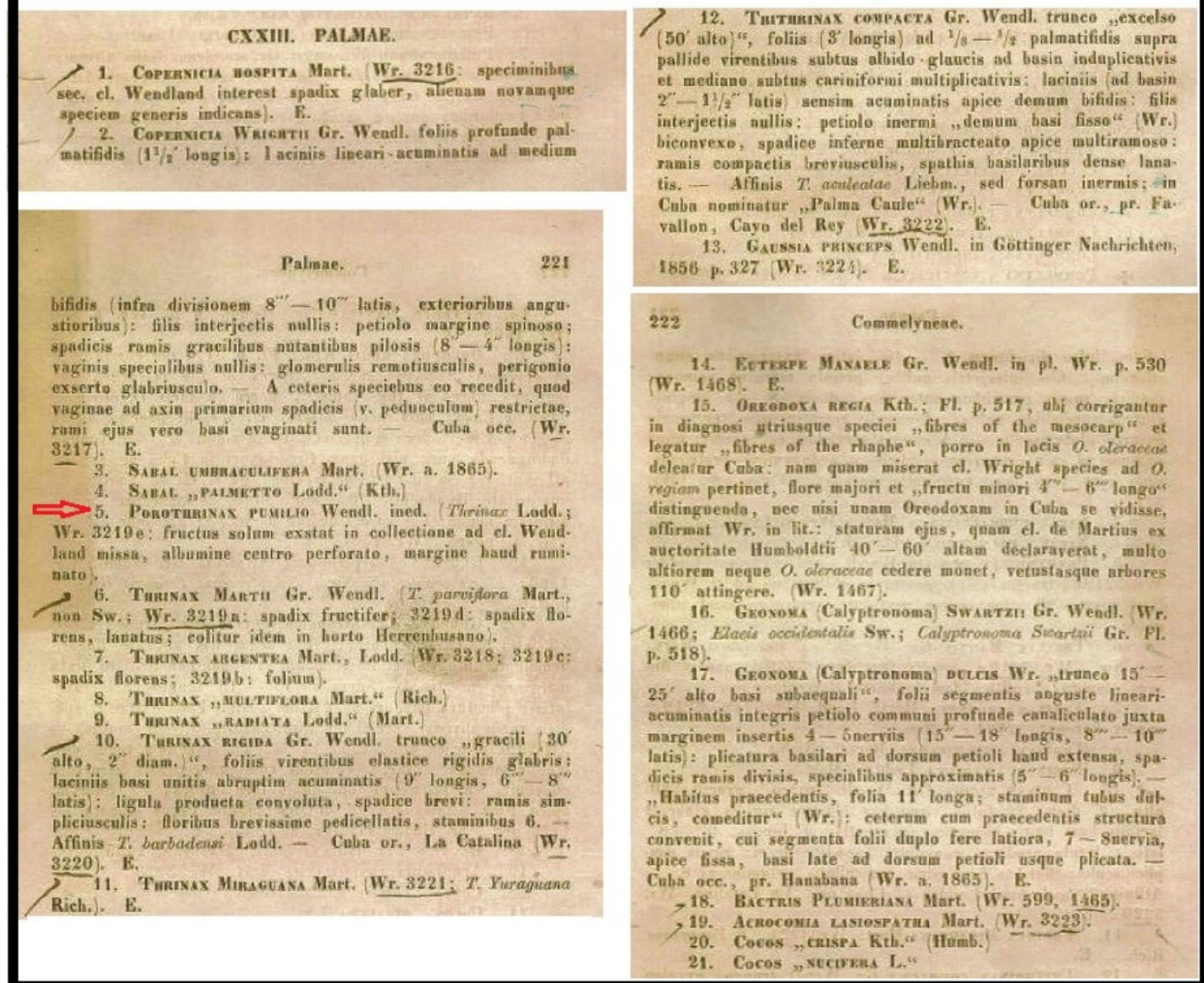
Flowers and staminal tube of *Geonoma*. Anthers sagittate: cells cohering except at the base. Ovary 3-celled, with 1-2 cells 1-ovulate, the rest abortive: style excentric-terminal. "Fruit subangular, 1-seeded."—"A high, unarmed tree;" leaves equally pinnatisect: pinnae deeply reduplicate at the base, 2-fid at the top; spadix equalling the inner, large, rigid-leathery spathe: branches 3-partite: divisions long, thickish, bearing flowers to their base.

This genus, constructed upon the *Elæis occidentalis*, Sw., is said to approach in habit *Euterpe*, but in character is somewhat analogous to *Calyptrix*, Wendl., from which however it is much distinguished by habit, by the infundibular, exerted staminal tube, the sagittate anthers (resembling those of *Geonoma synanthera*, Mart. t. 13), the structure of the ♀ flower, the divided spadix, and the basilar "2-valved" spathe. Swartz's description as far as it goes, is correct, except in the staminal tube, which he believed to be a corolla: from what he says of the fruit, it may be conjectured, that *Calyptronoma* will be distinguished from *Geonoma* in carpological characters.

17. *C. Swartzii*, Gr. "Trunk 50'-60' high, smooth;" leaf-segments linear-acuminate, 2-fid; spadix-branches divided: alveoles hexastichous: lip deltoid-roundish, entire; staminal tube slender, shortly 6-fid.—*Elæis occidentalis*, Sw. (*Geonoma*, *Elk.*). *Euterpe* sp., Pd. in *Kew Museum*.—The trunk, if confidence is to be put upon Sloane's and P. Browne's synonyms, quoted by Swartz, would be "as thick as one's thigh, very hard, somewhat crooked, with a great swelling at the root;" leaves "5'-10' long: segments 2½'-2' long, 1½" broad at the flat middle, 2-fid to 4"-6" from the point, green, glabrous: double basilar insertion-line 5" broad; spadix 2'-3' long, 1" thick at the base, dissolved into a few primary branches: the secondary ones 6"-12" long, 2"-3" thick: alveoles 2"-4" distant in each longitudinal series; inner spathe flattish, about 2" broad above, externally smooth, dull-green, red within; flowers ternate in most alveoles, half-exserted, 2 lateral usually ♂, central ♀; perigonal leaflets of ♂ lanceolate-oblong, cartilaginous, brownish-purple, the exterior 1", the interior 2" long; staminal tube 3" long; ♀ perigone about 1" long: cupule calyptrate: remaining lower part somewhat adhering to the inner perigone.—HAB. Jamaica!, Pd., in the lower region of the interior hills; Barbadoes? (Sw.); [South-eastern Cuba!, Fr. 1466].

3. Grisebach (1864) consulted for this study, showing *Calyptronoma*.

Grisebach. A. 1866. *Catalogus Plantarum Cubensium*.
Wilhelm Englemann, Leipzig.



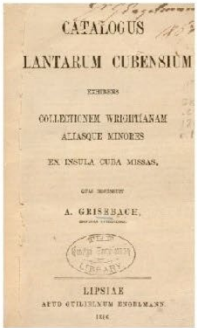
4. Grisebach 1866) consulted for this study, showing *Porothrinx*, now *Thrinax*.

For multiple specimens mounted on the same herbarium sheet with original barcode in common but with different collection numbers, a period "." is added to the barcode, linked by consecutive lowercase letters "a, b, c . . ." For single specimens mounted on different herbarium sheets with original barcode in common, a period "." is added to the barcode, linked by consecutive numbers "1, 2, 3 . . ."

For typification of names, I followed the recommendations of the International Code of Nomenclature (The Shenzhen code, Turland et al. 2018), referred to in the text by the word "Code."

12. *TRITHRINAX COMPACTA* Gr. Wendl. trunco „excelso (50' alto)“, foliis (3' longis) ad $\frac{1}{3}$ — $\frac{1}{2}$ palmatifidis supra pallide virentibus subtus albedo-glaucis ad basin induplicativis et mediano subtus cariniformi multiplicativis: laciniis (ad basin 2" — $1\frac{1}{2}$ " latis) sensim acuminatis apice demum bifidis: filis interjectis nullis: petiolo inermi „demum basi fisso“ (Wr.) biconvexo, spadice inferne multibracteato apice multiramoso: ramis compactis breviusculis, spathis basilaribus dense lanatis. — Affinis *T. aculeatae* Liebm., sed forsan inermis; in Cuba nominatur „Palma Caule“ (Wr.). — Cuba or., pr. Favallon, Cayo del Rey (Wr. 3222). E.

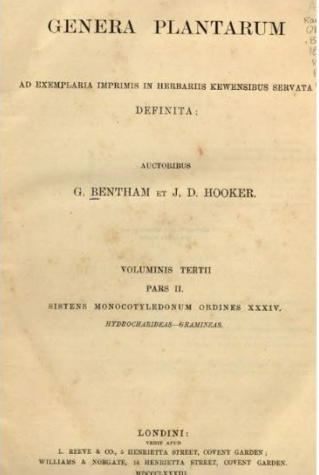
5A



101. *Hemithrinax*, Hook. f. gen. nov. — Flores hermaphroditi, minuti, in ramis spadiceis interfoliacei duplicato-ramosi sparsi, sessiles v. breviter stipitati, solitarii v. 2-3-ni, ebracteati et ebracteolati; perianthium obsoletum, ad stipitem brevissimum basi truncatum setulis 6 minutissimis coronatum reductum. Anthere 6, sessiles, breves, late, in anulum ovarium cingentem dispositae, medio dorso affixae, reversae, loculis discretis ellipsoideis extus dehiscentibus, connectivo crassissimo subquadrato siccis rugoso. Ovarium ovoideum, 1-rarius 2-3-loculare, in stylum crassum curvum antheras superantem attenuatum, stigmatibus subinfundibulari flabellatim expanso obscure 3-lobo; ovula basilaria, erecta. Fructus pisiformis, breviter stipitatus, stylo apicali, pericarpio tenuiter crustaceo. Semen depressoglobosum, erectum, liberum, ad hilum late et profunde intrusum in fossam testa suberosa farsam, testa atra, hilo parvo basilari, raphe subbasilari indistincta, albumine corneo aequabili; embryo fere apicalis. — Palma . . . Folia terminalia, coriacea, orbicularia, plicato-multifida, subtus glauca, laciniis latis acuminatis induplicatis breviter 2-fidis, costa valida, nervis utrinque ad 8. Spadices breves, rhachi evaginata, ramulis crassiusculis curvis pubescentibus; spathae plures, papyraceo-coriaceae, elongatae, acuminatae, longo fissae. Flores diametro ramulis minores. Fructus pallidus.

Species 1, Cubensis. Griseb. Cat. Pl. Cub. 221 (*Trithrinax compacta*). Liebm. v. b. 1866: 221.

5B



158 Gattungen und Arten.

153. *Hemithrinax* Hook. fil.
Benth. & Hook. Gen. pl. III., II. 930, 101. — Griseb. Fl. Cub. 221 (*Trithrinax*).
Stamm kurz; Blätter endständig, kreisrund, gefurcht und viel-spaltig, lederartig, unterseits graugrün mit starken Rippen. Blütenkolben zwischen den Blattachsen, kurz, verzweigt; Blüten zwit-terig, kurzgestielt, fast sitzend, klein; Frucht erbsenförmig, bleich; Samen kugelig zusammengedrückt. Kolbenscheiden pergament-artig.
997. *compacta* Hook. fil. „Ge- Kuba.
drungene H.“ Kultur im Warmhaus.
Trithrinax Griseb.

Die Palmen 5C

nebst
ihren Gattungen und Arten
für
Gewächshaus- und Zimmer-Kultur
von
Carl Salomon
Königlicher Gärten-Inspector in Wilmberg.
BERLIN
VERLAG VON PAUL PAREY.
Vergrößerung der Landrechtshandlung, Gärten und Gärten.
1887.
Mit 22 in den Text gedruckten Abbildungen.

5. *Hemithrinax compacta*. A. Grisebach (1866) showing basionym *Trithrinax compacta*. B. Hooker f. (1883) establishing *Hemithrinax* but not clearly relating *T. compacta*. C. Salomon (1887) publishing *Hemithrinax compacta*.

For all Wright palm collections, no duplicates exist. Here, I correct my previous publications where all numbers I cited in the protologues are now considered syntypes (Article 9.6 of the

Code) because no evidence exists that they were collected at the same locality on the same date. Also, based on articles 9.2, and Recommendation 47A.1 of the Code, knowing that no conflict is present with the protologue, I decided to amend the different “pro parte,” very common in C. Wright's collections, adding consecutive capital letters after p. p. to distinguish them from each other, whether referring to mixtures of taxa or to different dates or localities, even in many cases when the collection locality is unknown.

I use the “correct name” (Article 11.4 of the Code) for any taxon below the rank of genus, which is the combination of the final epithet of the earliest legitimate name of the taxon at the same rank, with the correct name of the genus or species to which it is assigned.

The information is provided in alphabetical order of the species. The list of taxa always begins with a bullet point preceding the C. Wright collection number, followed by the name of the taxon and who described it. Below, the complete scientific name is listed, along with its synonyms, type, and who updated it and when.

All information of the list of the native palms of Cuba, which were collected or studied by Charles Wright, is divided into six topics published in two parts: Part 1. The C. Wright collection number listed in the protologue, used or not in the descriptions: 1.1. Six genera described from C. Wright collections, and 1.2. Species described from C. Wright collections with some type status. Part 2. Species collected or observed by C. Wright that were previously described: 2.1. Collections of C. Wright without type status; 2.2. Collections of C. Wright without collector number or type status, and with or without definition of precise identification; 2.3. Palms reported in Grisebach (1866) or Sauvalle (1871) as observed but did not officially collect by C. Wright; and 2.4. Solution to C. Wright collection numbers with several “pro parte.” Part 3. A miscellaneous note. Part 4. A table summarizing all C. Wright Cuban Arecaceae collections.

Results and Discussion

I decided to publish these results before the new Code was approved at the XX International Botanical Congress in Madrid (2024). I did so because Dr. Werner Greuter, a foremost student of the Code, explained in Research Gate on August 28, 2024, that “The IBC in Madrid did not achieve much in order to clarify the Code provisions regarding typification. It did, however, authorize the creation of a special committee (General Committee on Nomenclature) to take a careful look at these provisions, and present a report with its conclusions (with relevant proposals, if required) to the next Congress.”

Part 1. C. Wright Collection Numbers Listed in the Protologue, Used or Not in the Descriptions.

1.1. Six genera described from C. Wright collections.

Grisebach (1864: 518 and 1866: 221), Hooker f. (1883: 930, and Wendland (1865: 327 and 1879: 148) described six new genera of Cuban palms based on C. Wright's collections.

- *ACOELORRAPHE*, Wendland (1879: 148). (*C. Wright 3217 p. p. A, emend. Moya*). Updated by Moya (2019b, 2020b).

ACOELORRAPHE H. Wendl., Bot. Zeitung (Berlin) 37(10): 148. 1879. (**Fig. 2B**).

Type. *Acoelorrhaphe wrightii* (Griseb. & H. Wendl.) H. Wendl. ex Becc. ('*Colormap*', '*Acoelorrhaphe*'). [Cuba].

= *Paurotis* O. F. Cook, Mem. Torrey Bot. Club 12(1): 21. 1902.

Type Species: *Paurotis androsana* O. F. Cook. [Bahamas].

= *Acanthosabal* Prosch. Gard. Chron., ser. 3, 77: 91. 1925.

Type Species: *Acanthosabal caespitosa* Prosch. [Brazil, cultivated].

One species: Bahamas (northern), Cuba (central and western), USA (southern Florida), and to the Caribbean coasts of Belize, Costa Rica, Guatemala, Honduras, Nicaragua, México (southern), Panama, and Providencia Island of Colombia (Moya 2020b). POWO (2024) lists *Acoelorrhaphe wrightii* as occurring in Colombia, but it is only reported for the Caribbean islands of Colombia.

Note. I (Moya 2019b) showed that Article 60.1 of the Code states that the original spelling of a name in the protologue must be maintained. Thus, *Acoelorrhaphe*, as Wendland (1879) originally spelled it, is currently the accepted spelling.

- *CALYPTRONOMA* Griseb. (1864: 518). Updated by Dransfield et al. 2008: 478). (**Fig. 3**).

CALYPTRONOMA Griseb., Fl. Brit. W. I. 6-7: 518. 1864. (**Fig. 3**).

Type: *Calyptronoma swartzii* Griseb. (illegitimate name) = *C. occidentalis* (Sw.) H.E. Moore (*Elaeis occidentalis* Sw.). Dransfield et al. 2008: 478).

= *Cocops* O.F. Cook, Bull. Torrey Bot. Club 28: 568 (1901).

Type: *Cocops rivalis* O.F. Cook ($\equiv$ *Calyptronoma rivalis* [O.F. Cook] L.H. Bailey).

= *Calyptrogyne* subgenus *Calyptronoma* (Griseb.) Wess. Boer., Verh. Kon. Ned. Akad. Wetensch., Afd. Natuurk., Tweede Sect. 1968.

Three species: Cuba, Jamaica, Hispaniola, Puerto Rico (POWO 2024).

Note. In the case of *Calyptronoma*, Wessels Boer (1968: 63), when publishing the subgenus *Calyptronoma* for *Calyptrogyne*, designated as basonym *Calyptronoma* Grisebach (1864: 518) (**Fig. 3**) as a type the species *Calyptrogyne occidentalis* (Sw.) M. Gómez. Although Grisebach (1864: 518), by co-publishing the genus *Calyptronoma* and *Calyptronoma swartzii* noted as a synonym *Elaeis occidentalis* Sw., making *C. swartzii* nomenclaturally superfluous upon publication, he based the description on *C. Wright 1466* from eastern Cuba. He cited as synonym the legitimate name *E. occidentalis*; therefore, the type of *C. swartzii* must be the type of *E. occidentalis*.

- **COLPOTHRINAX**, Wendland (1879: 148). (*C. Wright 3964 p. p. A*). Updated by Moya and Hodel (2022), Moya (here).

COLPOTHRINAX Griseb. & H. Wendl., Bot. Zeitung (Berlin) 37(10): 148. 1879. (**Fig. 2B**).

Type. *Colpotherinax wrightii* Griseb. & H. Wendl. ex Voss. ('*wightii*'). [Cuba].

Three species: Belize, Costa Rica, Cuba, Guatemala, Honduras, Nicaragua, Panamá (POWO 2024).

- **GAUSSIA**, Wendland (1865: 327). (*C. Wright 3224 p. p. A*). Updated by Moya (here).

GAUSSIA H. Wendl., Nachr. Königl. Ges. Wiss. Georg-Augusts-Univ. 1865(14): 327. 1865. (**Fig. 2A**).

Type. *Gaussia princeps* H. Wendl. [Cuba].

Five species: Belize, Cuba, Dominican Republic, Guatemala, Mexico Gulf, Mexico Southeast, Mexico Southwest, Puerto Rico (POWO 2024).

- *HEMITHRINAX*, Hooker f. (Hooker f. 1883: 930). (*C. Wright 3222 p. p. A*). Updated by Moya (here).

HEMITHRINAX Hook.f., in Bentham & Hooker f., Gen. Pl. 3(2): 930. 1883. (**Fig. 5B**).

Type. *Trithrinax compacta* Griseb. & H. Wendl. (**Fig. 5A**). [Cuba]. ≡ ***Hemithrinax compacta*** (Griseb. & H. Wendl.) Hook. f. ex Salomon. (**Fig. 5C**).

Three species: Cuba: Holguín, Guantánamo), Santiago de Cuba, Villa Clara (Rodríguez et al. 2020a).

- *POROTHRINAX*, Grisebach (1866: 221), as *Thrinax* by Read (1975: 77). (*C. Wright 3219 p. p. E*). Updated by Moya (2019a).

POROTHRINAX H. Wendl. ex Griseb., Cat. Pl. Cub.: 221. 1866. [Cuba]. (**Fig. 4**).

Type. *Porotherinax pumilio* H. Wendl. ex Griseb. [Cuba] = ***Thrinax radiata*** Lodd. ex Schult. & Schult. f.

1.2. Species described from C. Wright collections with some type status.

- *Acoelorrhaphe wrightii* (*C. Wright 3217 p. p. A*). Updated by Moya (2019b, 2020b, here).

Acoelorrhaphe wrightii (Griseb. & H. Wendl.) H. Wendl. ex Becc., Webbia 2: 109. 1907. '*Acoelorrhaphe*'. ≡ *Copernicia wrightii* Griseb. & H. Wendl., Cat. Pl. Cub.: 220. 1866. ≡ *Paurotis wrightii* (Griseb. & H. Wendl.) Britton, in N. L. Britton & J. A. Shafer, N. Amer. Trees: 141. 1908. (**Fig. 6**).

Type. CUBA. Pinar del Río province, Mantua municipality, [jurisdicción Mantua], "Cuba occ.", fl., 25. Nov. 1862, *C. Wright 3217 p. p. A*, emend. Moya (2019b). (lectotype, designated here: GOET009313; isolectotypes: GOET009316, GOET009317, GOET025472.1 ex HAN, GOET025472.2 ex HAN).

= *Acoelorrhaphe wrightii* var. *geronensis* Becc., Ann. Roy. Bot. Gard. (Calcutta) 13: 307. 1931. '*Acoelorrhaphe*'. ≡ *Acoelorrhaphe wrightii* var. *novo-geronensis* Becc., Webbia 2: 113. 1907. '*Acoelorrhaphe*'. [Cuba].

= *Acoelorrhaphe wrightii* f. *inermis* Hadač, Folia Geobot. Phytotax. 5: 432. 1970. [Cuba].



6. Flowering *Acoelorrhaphe wrightii* in habitat, La Barbarita, Pinar del Río, Cuba. Note the blackened trunks from periodic fire. © 2016 D. R. Hodel.

= *Acoelorrhaphe arborescens* (Sarg.) Becc., Webbia 2: 113. 1907. ≡ *Serenoa arborescens* Sarg., Bot. Gaz. 27: 90. 1899. ≡ *Paurotis arborescens* (Sarg.) O. F. Cook, Amer. Nat. 48: 314. 1914. [USA].

= *Paurotis androsana* O. F. Cook, in Northr., Mem. Torrey Bot. Club 12: 22. 1902. [The Bahamas].

= *Acanthosabal caespitosa* Prosch., Gard. Chron., ser. 3, 77: 92. 1925. [Brazil, cultivated].

= *Acoelorrhaphe pinetorum* Bartlett, Publ. Carnegie Inst. Wash. 461: 33. 1935. [Belize].

= *Paurotis psilocalyx* (Burret) Lundell, Wrightia 2: 116. 1961 ≡ *Brahea psilocalyx* Burret, Notizbl. Bot. Gart. Berlin-Dahlem 11: 1037. 1934. [Belize].

Notes. Grisebach and Wendland associated with and had available when preparing the description of *Copernicia wrightii* five specimens of *C. Wright* 3217 at GOET. Thus, these are

considered original material (Article 9.4(a) of the Code). Both Grisebach and Wendland, without mentioning the other, designated as type “Wr. 3217” collected in western Cuba. Meanwhile, Grisebach wrote on GOET9313 “*Copernicia wrightii* Gr. & Wendl.,” “Cuba occ. nov. 1862.”

According to Appendices 2 and 3 of Howard (1988), Wright visited the Guane-Mantua area in November 1862, coinciding with Wright's note in GOET025472 “Jurisdic Mantua Nov 25.” For these reasons, I consider that the five GOET specimens were collected in the same location and date: jurisdiction of Mantua on November 25, 1862. Thus, all are considered original material with type status.

In an expanded introduction to the taxonomic analysis of the species, Grisebach (1866) effectively and validly published *Copernicia wrightii* Griseb. & H. Wendl. when he provided the description of the *C. Wright 3217* palm collected in Western Cuba. In the protologue of *C. wrightii*, Grisebach and Wendland noted that they had available when preparing the description additional specimens of the original material deposited in GOET (Article 9.4(a) of the Code), five in this case, which they did not cite and cannot be considered as holotypes (Note 1, Article 9.1 of the Code). The reference to a complete collection, or to part of a collection, is considered a citation of the included specimens (Article 9.6 of the Code); thus, they are considered syntypes.

I (Moya 2019b) erroneously designated three specimens at GOET as lectotypes that were not collected in Hanábana, which was repeated in Moya (2020b). Here, I designate GOET9313 as a lectotype and the four duplicates at GOET isolectotypes of *C. wrightii*.

- *Geonoma dulcis* (C. Wright s.n.2 p. p. A), *Geonoma intermedia* (Wright 3972 p. p. A), and *Calyptrogyne clementis* (Wright 1466 p. p. A), now *Calyptronoma plumeriana*. Updated by Moya and Zona (2018), Moya and Méndez (2020), and Moya (here).

Calyptronoma plumeriana (Mart.) Lourteig, Phytologia 65: 484. 1989. ≡ *Geonoma plumeriana* Mart., in A. D. d'Orbigny, Voy. Amér. MÉR. 7(3): 34. 1843. ≡ *Calyptrogyne plumeriana* (Mart.) Roncal, Palms 49: 149. 2005. [Haití]. (**Fig. 7**).

= *Calyptronoma dulcis* (C. Wright ex Griseb.) H. Wendl., in Kerchove, Palmiers: 238. 1878.

≡ *Geonoma dulcis* C. Wright ex Griseb., Cat. Pl. Cub.: 222. 1866. ≡ *Calyptrogyne dulcis* (C. Wright ex Griseb.) M. Gómez, Dicc. Bot. Nom. Vulg. Cub. Puerto-Riqueños: 72. 1889.



7. *Calyptronoma plumeriana* in habitat, Moa, Holguín, Cuba. © 2016 D. R. Hodel.

Type. Cuba. Matanzas Province, Calimete municipality, “Cuba occ., pr. Hanabana”, fl., 10 Jun. 1865, *C. Wright s.n.2 p. p. A, emend Moya* (lectotype Moya and Zona, 2018: 134, GOET009325; isoelectotypes: GOET009326 ex HAN, GOET009327 ex HAN, GOET009328 ex HAN).

= *Calyptrogyne intermedia* (B. S. Williams) M. Gómez, Noc. Bot. Syst. 50. 1893. ≡ *Geonoma intermedia* B. S. Williams, Cat. 1882: 27. 1882.

Type. CUBA. Artemisa province, San Cristóbal municipality, Banks of Taco Taco river, [s.d.], *C. Wright 3972 p. p. A, emend. Moya*. (neotype, [first-step]: León 1944: 10, GH; [second-step]: Moya & Zona 2018: 134, GH00028372; isoneotypes: GOET025617.1 ex HAN, GOET025617.2 ex HAN).

= *Calyptronoma microcarpa* (León) A. D. Hawkes, Phytologia 3: 145. 1949 ≡ *Calyptrogyne microcarpa* León, Contr. Ocas. Mus. Hist. Nat. Colegio “De Le Salle” 3: 10. 1944.

= *Calyptronoma clementis* (León) A. D. Hawkes, Phytologia 3: 145. 1949 ≡ *Calyptrogyne clementis* León, Contr. Ocas. Mus. Hist. Nat. Colegio “De Le Salle” 3: 11. 1944.

Syntypes of *Calyptrogyne clementis*, now *Calyptronoma plumeriana*. Updated by Moya (here):

CUBA. Guantánamo province, Yateras municipality, Monte Verde, 20 Jun. 1859, *C. Wright 1466 p. p. A, emend. Moya*. (designated here: GH00028209, GOET019973 [frag.], GOET019974.1 ex HAN [frag.], GOET019974.2 ex HAN, GOET019974.3 ex HAN).

= *Calyptronoma clementis* subsp. *orientensis* O. Muñiz & Borhidi, Acta Bot. Acad. Sci. Hung. 28: 342. 1982.

Notes. Moya and Méndez (2020: 30) designated the lectotype of *Geonoma plumeriana* as that which Martius (1843: 34) proposed.

Moya and Zona (2018) designated GOET9325 as the lectotype of *Geonoma dulcis*, which is annotated in Wright's hand “Hanabana ... June 10.” The other three GOET specimens are designated as isoelectotypes (Article 9.4(d) of the Code).

GOET9325 has a note from Grisebach with identification and from Wright with locality and date, while GOET9326, GOET9327, and GOET9328 have a note from Wendland with identification, locality, and date.

Sauvalle (1871: 563) was the first to relate the name “*Geonoma intermedia* Gris. & Wendl.” with *C. Wright* 3972, but as a nomen nudum.

Leon (1944) designated *C. Wright* 3972 at GH as the type of *Calyptrogyne intermedia*; Moya and Zona (2018) designated GH28372 as a neotype, which I designate here as a neotype in the second-step.

GH28372 has a note from León with identification, and a note from Wright with a locality (Banks of the river Taco Taco), which is the same locality of GH28371 on the Harvard University Herbaria and Libraries online specimen catalog. GOET25617.1 and GOET25617.2 have a note from Wendland with identification and locality; for these reasons the latter two specimens are designated here as isoneotypes.

The *C. Wright* 1466 specimens from Monte Verde have syntype status for *Calyptrogyne clementis sensu* León (1944: 12); thus, I (here) added for each case “pro parte, p. p. A” for Monte Verde.

GH28209 has a note from León with identification, and a note from Wright with locality (Monte Verde [M.V.]) and date; the locality is the same as GH00028210 at the Harvard University Herbaria and Libraries online specimen catalog. GOET19973 has a note from Grisebach identifying it as *Calyptronoma* while GOET19974 (three) has a note from Wendland.

- *Coccothrinax acuminata* (*C. Wright* 3966 p. p. A). Updated by Moya and Méndez (2018), Moya (2020a, here).

Coccothrinax acuminata Sarg. ex Becc., Webbia. 2: 313. 1907. (Fig. 8).

Type. CUBA. Locality and date unknown, *C. Wright* 3966 p. p. A, emend. Moya. (lectotype Moya & Méndez 2018: 47, K000462859; isolectotypes: FI051879 ex K, K000462858).

= *Coccothrinax miraguama* var. *novo-geronensis* Becc., Ann. Roy. Bot. Gard. Calcutta 13: 336. 1931. ≡ *Coccothrinax miraguama* [without rank] (*novo-geronensis*) Becc., Pomona Coll. J. Econ. Bot. 3: 409. 1913.

= *Coccothrinax miraguama* subsp. *arenicola* (León) Borhidi & O. Muñiz, Bot. Közlem. 58: 175. 1971. ≡ *Coccothrinax miraguama* var. *arenicola* León, Mem. Soc. Cub. Hist. Nat. “Felipe Poey” 13: 114. 1939.



8. *Coccothrinax acuminata* in habitat on white sands, Guane, Pinar del Río, Cuba.
© 2017 D. R. Hodel.

Notes. Sauvalle (1871: 563) was the first to associate the name '*Thrinax acuminta* Gris. & Wendl.' with *C. Wright* 3966, but as a nomen nudum.

Beccari (1907: 313), when referring to a complete collection, created syntypes; thus, Moya and Méndez (2018) designated K462859 as the lectotype of *Coccothrinax acuminata*, based on the protologue where Beccari (1907) wrote "*Thrinax acuminata* Gris. et Wendl..., no. 3966 (nomen) in H. Kew." Beccaria also handwrote an annotation in March 1907, "*Coccothrinax acuminata* (Sargent)." However, Moya and Méndez (2018) misinterpreted the Code relating to Article 46.4, because Beccari (1907) attributed *C. acuminata* to Sargent but in the same rank, which the name should then be attributed to Sarg. ex Becc. (Turland, pers. comm., 1 September, 2023). They also mistakenly considered the remaining specimens of *C. Wright* 3966 to be isolectotypes, which are here corrected to be syntypes.

The original material that Beccari used at the time of the description are considered isolectotypes, as they do not conflict with the protologue, namely the other specimen at K and the fragments at FI ex K.

- *Coccothrinax martii* (*C. Wright* 3219 p. p. G). Updated by Moya (2023a, here).

Coccothrinax martii Becc., Webbia 2: 305. 1907.

Type. CUBA. Locality and date unknown, *C. Wright* 3219 p. p. G, emend. Moya. (holotype, S15-24621, S15-24623, S15-24625; isotypes: F1940333 [photo S24625], FI0511881 ex S [frag.]).

Note. When Beccari (1907: 305) established *Coccothrinax martii* Becc., he explained that the description was based on a specimen of a *Coccothrinax*, without referring to "pro parte," existing in the herbarium at S, as *C. Wright* 3219 "*senza lettera*" [without letter]; thus, the remaining *C. martii* of 3219 [with letter] are considered without type category. Also, he noted that the specimen "consists of half a leaf and two portions of inflorescences, one with flowers and the other with almost ripe fruits, currently mounted on three herbarium leaves." Even though the term "type" or its equivalent was not used in the protologue, Beccari clearly used the three specimens at S, and, therefore, they constitute the holotype (Article 9.1 of the Code). The preceding shows that *C. martii* Becc., was effectively and validly published (Articles 29-31 and 32-45 of the Code).

- *Thrinax rigida* (*C. Wright* 3220 p. p. A), now *Coccothrinax rigida*. Updated by Moya (here).



9. Old, fruiting *Coccothrinax rigida* in habitat at or near the type locality, Sagua de Tánamo, Holguín, Cuba. © 2017 D. R. Hodel.

Coccothrinax rigida (Griseb. & H. Wendl.) Becc., *Webbia* 2: 299. 1907. $\equiv$ *Thrinax rigida* Griseb. & H. Wendl., *Cat. Pl. Cub.*: 221. 1866. (**Fig. 9**).

Type. CUBA. Holguín province, Sagua de Tánamo municipality, Cuba or. [oriental], La Catalina, fl., 22 Mar. 1861, *C. Wright* 3220 *p. p.* A emend Moya (lectotype, designated here: GOET009333; isoelectotypes: GH00028292, GOET009334 [frag.]).

Notes. In the introduction, the taxonomic analysis of the species is expanded, except that Grisebach (1866) effectively and validly published *Thrinax radiata* Griseb. & H. Wendl. when he provided the description of the *C. Wright* 3220 palm collected in La Catalina, Eastern Cuba. In the protologue of *T. rigida*, Grisebach and Wendl. noted that they had available additional specimens of original material deposited at GOET as they prepared the description but did not cite them; thus, these cannot be considered holotypes (Article 9.4(a) and Note 1, Article 9.1 of the Code). The reference to a complete collection, or to part of a collection, is considered a citation of the included specimens (Article 9.6 of the Code) and are considered syntypes.

I (Moya 2020a) accepted the designation of Beccari (1907) that the lectotype was at G, without considering that Grisebach and Wendl. had available at the same time as preparing the description, the original material deposited in GOET.

Here, I designate GOET9033 as the lectotype of *Thrinax rigida*, which contains handwritten notes by Grisebach and by Wright “Farallones La Catalina ... Mar 22” (Moya 2020a). The specimen GH28292, not seen by the authors of the species and the other duplicate GOET specimens are designated isoelectotypes (Article 9.4(d) of the Code).

- *Colpothrinax wrightii* (*C. Wright* 3964 *p. p.* A). Updated by Moya (here).

Colpothrinax wrightii Griseb. & H. Wendl. ex Voss, *Vilm. Blumengärtn.* ed. 3, 1: 1147. 1896. ‘*wrightii*’. $\equiv$ *Pritchardia wrightii* (Voss) Becc., *Webbia* 2: 203. 1907. (**Fig. 10**).

Type. CUBA. Pinar del Río province, locality and date unknown, [Sept. 1865 or 1866], fl. *C. Wright* 3964 *p. p.* A, emend. Moya. (holotype: GOET025466.1, GOET025466.2, GOET025466.3, GOET025466.4).

Notes. Sauvalle (1871: 563) was the first to associate the name “*Colpothrinax wrightii* Gris. & Wendl.” with *C. Wright* 3966, but as a nomen nudum.



10. *Coccothrinax wrightii* in habitat, Pinar del Río, Cuba. © 2017 D. R. Hodel.

I contend that Voss did not indicate any type; however, those specimens at GOET that Voss associated with the taxon and that were available when he prepared the description validating the name constitute the holotype specimen of *Colpothrinax wrightii*, *Wright 3964* (GOET025466). This specimen consists of a leaf mounted on four herbarium sheets. I have decided to replace the neotype with the holotype of *C. wrightii*. I base these decisions on Articles 9.1(b), 9.4(a), 9.19(a), and 8.3 of the Code.

Voss, the horticulturist at Göttingen, assigned the name *Colpothrinax wrightii* to Grisebach & H. Wendland. By examining the GOET images from H. Wendland's herbarium in Hannover (HAN), Voss (1896) assigned the name and description, basing them on *C. Wright 3964*, which was present at HAN at the time but is now at GOET. Wendland annotated the specimen with two notes, "*Colpothrinax Wrightii* Griseb. Wendl." and the other note with a brief description (not validly published). He also wrote "*Palma barrigona*" (common name) and "*Colpothrinax Wrightii* gen. & sp. nov.," referring to the genus *Colpothrinax* that he and Grisebach had validly published 20 years earlier in 1876.

Voss's (1896) description, "Division of the leaf surface extending to the petiole. Petiole flat at the top; the main veins of the leaf do not end in filaments. Blade fan-shaped, rigid-coriaceous; its segments very numerous, rigid, with long tips, two slits; elongated rachis, with free semicircular tongue (ligule)." and note about the absence of hairs on the leaves, constituted valid publication of the name.

Moya and Hodel (2022) misinterpreted the Code relating to Article 46.4, because when Voss (1896) attributed the name *Colpothrinax wrightii* to Griseb. and H. Wendl., it was in the same rank; thus, the name could correctly be attributed to Griseb. & H. Wendl. (Turland, pers. comm., 31 August, 2023).

- *Copernicia glabrescens* (*C. Wright 3968 p. p. A*). Updated by Moya (2022b, 2023d, here).

Copernicia glabrescens H. Wendl. ex Becc., Webbia 2: 170. 1907. (**Fig. 11**).

Type. CUBA. Locality and date unknown, *C. Wright 3968 p. p. A*, emend Moya (lectotype, Dahlgren and Glassman 1963: 125, A: A00028318, isolectotype: F279241 [photo A, n.v.]).

Syntypes of *Copernicia glabrescens*. Updated by Moya (here).:

CUBA. Pinar del Río province, Consolación del Sur municipality, Herradura, 16 IX 1905, *Hermann 904* (designated here: B[destr.], HAC ex ECA.1!, HAC ex ECA.2!).



11. Mature *Copernicia glabrescens* in habitat, Pinar del Río, Cuba. © 2017 D. R. Hodel.

= *Copernicia glabrescens* var. *havanensis* León, Mem. Soc. Cub. Hist. Nat. "Felipe Poey" 10: 217. 1936.

Notes. Sauvalle (1871: 562) was the first to associate the name "*Copernicia glabrescens* Wendl." with *C. Wright* 3968, but as a nomen nudum.

Unfortunately, Moya (2022b) misinterpreted Article 46.4 of the Code, when he decided that the correct name was *Copernicia glabrescens* Becc. (Turland, pers. comm., 31 August 2023). Thus, Moya (2023e) addressed this error and noted the correct name should be *Copernicia glabrescens* H. Wendl. ex Becc.

- *Copernicia* × *leoniana* (*C. Wright* 3969 p. p. A), now *Copernicia* × *escarzana*. Updated by Moya (2021b, here).

Copernicia* × *escarzana León, Revista Soc. Geogr. Cuba 4: 42. 1931. (*C. hospita* × *C. macroglossa*). (**Fig. 12**).

= *Copernicia* × *burretiana* León, Mem. Soc. Cub. Hist. Nat. "Felipe Poey" 10: 208. 1936. ≡ *C. macroglossa* Becc. p. p., emend León, Revista Soc. Geogr. Cuba 4: 41. 1931. (non Becc.), replacement name.

= *Copernicia* × *leoniana* Dahlgren & Glassman, Principes 2: 103. 1958.

Type. CUBA. Sancti Spíritus province, Trinidad municipality, "Potrero Manatí, Trinidad," 19 Mar. 1867, fl., ft., *C. Wright* 3969 p. p. A, emend. Dahlgren & Glassman (holotype, specified Moya 2021a: 17, A00028320, A00028323; isotypes: GH00028322, GOET025467.1a ex HAN).

Paratypes of *Copernicia* × *leoniana* Dahlgren & Glassman (Moya (2021b: 17).):

CUBA. Camagüey province and municipality: N Cromo, 8 Feb. 1949, *Dahlgren and Cutler* 49/041 (F); finca Santa Rosa, 1 Apr. 1950, *Dahlgren* 50/016 (F); Sabana de Juan Grande, 7 Feb. 1952, *Dahlgren and G. Moore* 52/028 (F); finca Carbonera, 24 Jan. 1953, *Dahlgren* 53/003 (F [n.v.], *Dahlgren* 53/004 (F [n.v.]), *Dahlgren* 53/005 (F [n.v.]); Florida municipality: W Caobillas, 3 Mar. 1954, *Dahlgren* 54/010 (F). Cienfuegos province, Abreus municipality: Florecita, N Antón Recio, 23 Jan. 1949, *Dahlgren and Cutler* 49/017 (F). Sancti Spíritus province, Trinidad municipality: near Macio Bay, Casilda, 27 Jan. 1931, *León* 14922 (A, BH, MT, NY×2, P); 2 Feb. 1949, *Dahlgren and Cutler* 49/069 (F); finca Molina, Trinidad, 1 Mar. 1951, *Dahlgren and Macbride* 51/052 (F).



12. Flowering *Copernicia* × *escarzana* in habitat, La Pimienta, Cienfuegos, Cuba. The presence of a petiole shows it is a hybrid. © 2007 D. Suárez Oropesa.

Notes. Dahlgren and Glassman (1958) designated *Wright 3969a* (now *C. Wright 3969 p. p. A*) as the holotype of *Copernicia leoniana* when they wrote, “TYPE, A-2 sheets . . . ,” (Moya 2022a) (the barcode of each one is specified). They also showed in Figure 119 that the corresponding image at A, which did not include the Arnold Arboretum herbarium code (A), was a mixture of the lectotype of *C. macroglossa* on the left and isotype of *Copernicia leoniana*, now synonymous with *Copernicia × escarzana*, on the right (Moya 2021a). The mixed specimen in question from the Harvard University Herbaria was separated and mounted on two different herbarium sheets at an unspecified date, one sheet for each taxon and now with the Gray Herbarium code GH28322.

In the protologue of *Ccopernicia leoniana*, Dahlgren and Glassman (1958) stated the type locality, apparently referring to the specimen GH28325 of *C. macroglossa*, which C. Wright had collected at the same locality and distributed with the same number, *C. Wright 3969*. Respecting that decision, I considered the authors' amendment for the pro parte of the holotype as “*C. Wright 3969 p. p. A*, emend Dahlgren & Glassman” (Moya 2021a).

- *Copernicia macroglossa* (*C. Wright 3969 p. p. B* and *C. Wright 3969 p. p. C*). Updated by Moya (2023e, here).

Copernicia macroglossa H. Wendl. ex Becc., Webbia 2: 177. 1907. (**Fig. 13**).

Type. CUBA. Locality and date unknown, *C. Wright 3969 p. p. B*, emend. Moya. (lectotype, [first-step]: Dahlgren & Glassman 1963: 153, A*, [second-step]: designated Moya 2023e: 5, GH00028326).

Syntypes of Copernicia macroglossa. Updated by Moya (2021a: 4).

CUBA. Locality and date unknown, *C. Wright 3969 p. p. C* (B [destr.], FI072324 [frag. ex B], HAC4536 [frag. ex B!], HAC [photo B!]).

CUBA. La Habana province, Guanabacoa municipality: Guanabacoa, Jata, La Havanne, 1829, *Sagra 101* (B [dest.], BR0000005737697, F248567 [photo G], FI [n.v.], G00005833, HAC [photo B!], HAC [frag. ex G in B!], P00725609, P01796655).

CUBA. Cienfuegos province and municipality: Calicita RR, 13 Jul. 1895, *Combs 335* (B [dest.], FI0723234 [frag. ex B], GH, K000462347 [n.v.], NY1662393).

= *Copernicia torreana* León, Revista Soc. Geogr. Cuba 4: 10. 1931.



13. Mature *Copernicia macroglossa* in habitat, Potrero Manatí, Trinidad, Cuba. © 2016 C. Moya López.

Notes: Sauvalle (1871: 562) was the first to associate the name "*Copernicia macroglossa* Gris. & Wendl." with *C. Wright* 3966, but as a nomen nudum.

Unfortunately, I (Moya 2021b) misinterpreted the Code relating to Article 46.4, when I decided that the correct name was *Copernicia macroglossa* Becc. (Turland, pers. comm., 31 August 2023). For that reason, I (Moya 2023d) addressed these errors and made the correct name *Copernicia macroglossa* H. Wendl. ex Becc.

I (Moya 2023d) explained that Dahlgren and Glassman (1963: 154, 155) had designated *Wright* 3969 "*pro parte*" in A* as the lectotype of *Copernicia macroglossa*. They also showed in Figure 119 that the corresponding image at A, which did not include the Arnold Arboretum herbarium code (A), was a mixture of the lectotype of *C. macroglossa* on the left and isotype of *Copernicia leoniana*, now synonymous with *Copernicia* × *escarzana*, on the right (Moya 2021a). The mixed specimen in question from the Harvard University Herbaria was separated and mounted on two different herbarium sheets, at an unspecified date, one sheet for each taxon and now with the Gray Herbarium code GH28326.



Fig. 14. *Gaussia princeps* on limestone habitat, Viñales, Pinar del Río, Cuba. © 2016 D. R. Hodel.

Beccari (1907: 181) used the destroyed specimen of B for the description of *Copernicia macroglossa*; thus, the fragments from B at FI and HAC, as well as the photo of it at HAC, are considered original material, C. Wright 3969 p. p. C, and are, therefore, syntypes (Art. 9.4 of the Code).

The *Copernicia macroglossa* portion now has the barcode GH28326, which I consider here as a second-step lectotype. It still has Howard's notation on the cardboard "A. *Copernicia torreana* (C. *macroglossa*) and B. *Copernicia burretiana* (C. $\times$ *escarzana*)," with an arrow with A pointing to the portion of the inflorescence of C. *macroglossa*.

Knowing that there is no conflict with the protologue, the collection number in the case of *Copernicia macroglossa* becomes C. Wright 3969 p. p. B, emend Moya, for the lectotype (Moya 2021b).

- *Gaussia princeps* (C. Wright 3224 p. p. A). Updated by Moya (2020b, here).

Gaussia princeps H. Wendl., Nachr. Königl. Ges. Wiss. Georg-Augusts-Univ. 1865(14): 328. 1865. (**Fig. 14**).

Type. CUBA. Pinar del Río province, unknown locality, ft., [1862-1863], C. Wright 3224 p. p. A, emend. Moya. (holotype, GOET009338).

Notes. Grisebach presented the Hermann A. Wendland communication to the Royal Society of Sciences and the Georg-August University on August 5, 1865, "about the new report on the new palm genus *Gaussia*," which is why he annotated the holotype at GOET with "*Gaussia princeps* Wendl."

Two herbarium specimens of *Gaussia princeps*, one at GH and one at GOET, with labels written by Wright, show that they do not correspond to the same plant at the type locality. Wright collected the specimen at GOET from a taller plant than the specimen at GH.

- *Trithrinax compacta* (C. Wright 3222 p. p. A), now *Hemithrinax compacta*. Updated by Moya (2019a, here).

Hemithrinax compacta (Griseb. & H. Wendl.) Hook. f., ex Salomon, Palmen 158. 1887. $\equiv$ *Trithrinax compacta* Griseb. & H. Wendl., Cat. Pl. Cub.: 221. 1866. $\equiv$ *Thrinax compacta* (Griseb. & H. Wendl.) Borhidi & O. Muñiz, Acta Bot. Hung. 31: 226. 1985. (**Fig. 15**).

Type. CUBA. Santiago de Cuba province, Mella municipality, "Cuba or., Farallon [Farallón] Cayo del Rey", 1 Sep. 1860, fl., C. Wright 3222 p. p. A emend. Moya (2024b). (lectotype,



15. *Hemithrinax compacta* on limestone habitat, Mayarí, Holguín, Cuba. © 2017 D. R. Hodel.

designated here: GOET009340; isoelectotypes: GH00028560, GOET009341, GOET009342, GOET009343).

Notes. Here, I designated GOET9034 as the lectotype of *T. compacta*. The specimen contains handwritten notes by Grisebach with a description and a note by Wright that states “Farallon at Cayo del Rey Sept 1” (Moya 2019a). Another specimen, GH28560, not seen by the authors, is also type material. The GH specimen and three other duplicates at GOET I designate as isoelectotypes (Article 9.4(d) of the Code), because the specimens are not clearly labelled as being part of that same specimen, or bear a single, original label in common (Article 8.3 of the Code).

- *Thrinax drudei* (Wright 3965 p. p. A and Wright 3965 p. p. B), now *Leucothrinax morrisii*. Updated by Read (1975: 88), Moya (here.)

Leucothrinax morrisii (H. Wendl.) C. Lewis & Zona, Palms (1999+) 52: 87. 2008. $\equiv$ *Thrinax morrisii* H. Wendl., Gard. Chron., ser. 3, 11: 104. 1892. (**Fig. 16**).

= *Thrinax drudei* Becc., Webbia 2: 269. 1907.

Type. CUBA. Locality and date unknown, *C. Wright 3965 p. p. A*, emend. Moya. (lectotype, [first-step]: Read 1975: 88, GH, [second-step], designated here, GH00028573; isoelectotypes: A00028571, A00028572).

Syntypes of *Thrinax drudei*:

CUBA. Locality and date unknown, *C. Wright 3965 p. p. B*. (designated here: B [destr.], FI018278 ex A [frag.], FI018279 ex B [frag.]).

Notes. Grisebach (1866) and Sauvalle (1871: 563) noted that C. Wright had observed *Thrinax multiflora* Mart. but they did not list any collection numbers.

Beccari (1907: 269) was the first to cite *C. Wright 3965* as *Thrinax drudei*, which Asa Gray distributed as *Thrinax multiflora* Mart.

Based on the original material of *C. Wright 3965* that Beccari used, which was distributed as *Thrinax multiflora* and deposited at B (destroyed) and GH, Read (1975: 88) designated as the lectotype of *Thrinax morrissii* the *C. Wright 3965* specimen at GH. In doing so he referred to three specimens, thus creating syntypes. Here, I designate Read's action as lectotype [first



Fig. 16. Fruiting *Leucothrinax morrisii* in habitat, Cayo Romano, Camagüey, Cuba.
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step]. I designate here GH28573 as lectotype [second-step] because Beccari used the flowers to differentiate it from other *Thrinax* species.

Beccari (1907: 269) used the destroyed specimen of B for the description of *Thrinax drudei*; thus, the fragments from B at FI, are considered original material, *C. Wright* 3965 p. p. B, and are, therefore, syntypes (Art. 9.4 of the Code).

- *Euterpe manaele* (*C. Wright* 1468 p. p. A), now *Prestoea acuminata* var. *montana*. Updated by Moya (2023c, here).

Prestoea acuminata* var. *montana (Graham) A. J. Hend. & Galeano, Fl. Neotrop. Monogr. 72: 53. 1996. $\equiv$ *Euterpe montana* Graham, Bot. Mag. 67: t. 3874 [text]. 1841. $\equiv$ *Prestoea montana* (Graham) Hook.f. in Rep. Progr. Condition Roy. Gard. Kew 1882: 56. 1884. $\equiv$ *Prestoea acuminata* subsp. *montana* (Graham) Greuter & R. Rankin in Espermat. Cuba Invent. Prelim.: XI. 2016. (**Fig. 17**).

= *Oreodoxa manaele* Mart., Hist. Nat. Palm. 3: 310. 1849. [Haiti].

= *Euterpe manaele* Griseb. & H. Wendl. ex Griseb, Pl. Wright. 2, in Mem. Amer. Acad. Arts 8(2): 530. 1863.

Type. CUBA. Guantánamo province, Yateras municipality, “Prope Monte Verde”, 30 Jun. 1859, *C. Wright* 1468 p. p. A, emend. Moya. (lectotype, Moya 2023c: 8, GH00028362).

= *Acrista monticola* O. F. Cook, Bull. Torrey Bot. Club 28(10): 557. 1901. [Puerto Rico].

= *Euterpe pertenuis* L. H. Bailey, Gentes Herb. 7(4): 425. 1947. [Trinidad and Tobago].

= *Euterpe tobagonis* L. H. Bailey, Gentes Herb. 7(4): 423. 1947. [Trinidad and Tobago].

Note. Moya (2023c) was unable locate the original material used for the description of the species. Thus, he designated the GH28362 specimen as lectotype containing the note written by C. Wright, which corresponds with the locality “Monte Verde” in the protologue (Moya 2023c: 8).



17. Fruiting *Prestoea acuminata* var. *montana* in habitat, la Gran Piedra, Santiago de Cuba, Cuba. © 2017 D. R. Hodel.



18. *Sabal palmetto* in habitat, Playa Santa María, Havana, Cuba. © 2017 D. R. Hodel.

- *Sabal parviflora* (C. Wright 3970 p. p. A and C. Wright 3970 p. p. B), now *Sabal palmetto* by Zona (1990: 646). Updated by Moya (here).

Sabal palmetto (Walter) Lodd. ex Schult. & Schult. f., Syst. Veg. 7: 1487. 1830. ≡ *Corypha palmetto* Walter, Fl. Carol.: 119. 1788. ≡ *Chamaerops palmetto* (Walter) Michx., Fl. Bor.-Amer. 1: 206. 1803. ≡ *Inodes palmetto* (Walter) O. F. Cook, Bull. Torrey Bot. Club 28: 532. 1901. [USA]. (**Fig. 18**).

= *Inodes schwarzii* O. F. Cook, Bull. Torrey Bot. Club 28: 532. 1901. ≡ *Sabal schwarzii* (O. F. Cook) Becc., Webbia 2: 39. 1907. [USA].

= *Sabal palmetto* var. *bahamensis* Becc., Webbia 2: 38. 1907. ≡ *Sabal bahamensis* (Becc.) L. H. Bailey, Gentes Herb. 6: 417. 1944. [Bahamas].

= *Sabal jamesiana* Small, J. New York Bot. Gard. 28: 182. 1927. [USA].

= *Sabal viatoris* L. H. Bailey, Gentes Herb. 6: 403. 1944. [Cultivated, USA]

= *Sabal parviflora* Becc., Webbia 2: 43. 1907. [Cuba].

Type: CUBA. Locality and date unknown, C. Wright 3970 p. p. A, emend. Moya. (lectotype, [first step] Glassman 1972: 200, NY, designated here [second step]: NY00071237).

Syntypes of *Sabal parviflora*:

CUBA. Locality and date unknown, C. Wright 3970 p. p. B (designated here: B [destr.], FI [frag. ex B, n.v.]).

CUBA. Mayabeque province, Batabanó municipality, Batabanó, 3 Oct. 1904, *Baker & Wilson 2308* (FI ex ECA [n.v.], HAC ex ECA.1!, HAC ex ECA.2!, NY1662554, US00012151 [n.v.], US00012152 [n.v.]).

CUBA. Isla de la Juventud municipality, near Nueva Gerona, 27 May 1904, *Curtiss 484* (A [n.v.], B [destr.], BH [n.v.], CM333350 [n.v.], FI ex A [n.v.], FI ex B [n.v.], HAC ex WIP!, L1414527, LE00000799, M0208382, M0208383, NY1662537, NY1662584, P [n.v.], US00012252 [n.v.], US00012324 [n.v.], VT115418, VT117060).

Notes. Sauvalle (1871: 562) was the first to associate the name “*Sabal mexicana* Mart.” with C. Wright 3970. Beccari (1907) was the first to identify C. Wright 3970 as *Sabal parviflora*

Becc., which Asa Gray distributed as *Sabal mexicana* Mart. Zona also cited *C. Wright 3970* for *S. parviflora*, which he transferred to *Sabal palmetto* (1990: 646).

When describing *Sabal parviflora*, Beccari (1907) cited, without naming a type, several specimens, including *C. Wright 3970*, *Baker and Wilson 2308*, and *Curtiss 484*, thus, creating syntypes. Dahlgren (1936) and León (1946) considered it a valid species. However, Glassman (1972) designated *Wright 3970* at NY as the type, without specifying one of the four existing duplicates; thus, he created syntypes again, which is why it is considered a first-step lectotypification (Article 9.17 of the Code) and has priority over the fragment and photo at FI that Zona (1990) designated as a holotype, as well as the destroyed duplicate at B. Here, I complete the lectotypification (second-step), by designating the specimen at NY (NY71237).

Beccari (1907: 46) designated *C. Wright 3970* in B as the type of *Sabal parviflora*, now destroyed. Cuccuini and Nepi (2006: 137) related fragments in FI ex B. Both are considered syntypes (Art. 9.4 of the Code).

Zona (1990) cited *Curtiss 484* for *S. palmetto*.

- *Sabal yapa* (*Wright 3971 p. p. A* and *Wright 3971 p. p. B*). Updated by Moya et al. (2021b) and here.

Sabal yapa Becc. Webbia 2: 64. 1907. ≡ *Inodes yapa* (Becc.) Standl., Publ. Field Columb. Mus., Bot. Ser. 3: 219. 1930. (**Fig. 19**).

Type. CUBA. Locality and date unknown, *C. Wright 3971 p. p. A*, emend. Moya. (lectotype, Bartlett 1935: 36: US00087509 [US33398]; isolectotype: HAC28874! [photo US87509]).

Syntypes of *Sabal yapa*:

CUBA. Locality and date unknown, *C. Wright 3971 p. p. B* (B [destr.], FI052579.1 ex B [frag.], FI052579.2 [draw. of B, mix Sagra]).

CUBA. Locality and date unknown, *Torralba 179* (B [destr.], FI052579.1 [frag. ex B, mix]).

CUBA. Locality and date unknown, 1829, *Sagra 222* (F233583 [photo G], FI052579.4 [frag. ex G, mix], G [n.v.], P01794502, P01794505).

MÉXICO. Plantæ Yucatanæ, *Gaumer 317* (FI052579.5 [frag. ex MO, mix], MO976848 [n.v.], NY02320293).



19. *Sabal yapa* in habitat, Bahía Honda, Artemisa, Cuba. © 2017 D. R. Hodel.

= *Sabal mayana* Bartlett, Publ. Carnegie Inst. Wash. 461: 35. 1935. '*mayarum*'.

= *Sabal peregrina* L. H. Bailey, Gent. Herb. 6: 400. 1944.

= *Sabal yucatanica* L. H. Bailey, Gent. Herb. 6: 418. 1944.

Notes. Wright in Sauvalle (1871: 562) was the first to associate the name "*Sabal japa*. Sp. nov." with *C. Wright 3971*, but as nomen nudum, which Beccari (1907: 64) confirmed by naming "*Sabal yapa* Wright" as a nomen nudum.

In the introduction the taxonomic analysis of the species is expanded, except that Moya (2023b) noted that Beccari (1907) discussed various collections without defining a type, thus creating syntypes. Bartlett (1935: 36) published the statement, "*description ex specimine typico cl. C. Wright, no. 3971, Cuba, in US Nat. herb. No. 33398,*" which fulfills all requirements of Article 7.11 of the Code. Thus, Bartlett's statement constitutes lectotypification.

Beccari (1907: 37) used the destroyed specimen of B for the description of *Sabal yapa*; thus, the fragments from B at FI, are considered original material, *C. Wright 3971 p. p. B*, and are, therefore, syntypes (Art. 9.4 of the Code).

- *Porotherinax pumilio* (*C. Wright 3219 p. p. E [e]*), now *Thrinax radiata*. Updated by Moya (2019a, 2023a).

Thrinax radiata Lodd. ex Schult. & Schult.f., Syst. Veg. 7(2): 1301. 1830. ≡ *Coccothrinax radiata* (Lodd. ex Schult. & Schult.f.) Sarg., Bot. Gaz. 27: 89. 1899.

= *Porotherinax pumilio* H. Wendl. ex Griseb., Cat. Pl. Cub.: 221. 1866. = ***Thrinax radiata***.

Type. CUBA. Locality and date unknown, *C. Wright 3219 p. p. E [e]* (holotype, GOET009186).

= *Thrinax floridana* Sarg., Bot. Gaz. 27: 84. 1899. [USA]

- *Thrinax wendlandiana* (*C. Wright 3219 p. p. F* and *2329 p. p. A*), now *Thrinax radiata*. Update by Moya (2019a, here.)

Thrinax radiata Lodd. ex Schult. & Schult. f., Syst. Veg. 7(2): 1301. 1830. = *Thrinax wendlandiana* Becc., Webbia 2: 265. 1907. (**Fig. 20**).



Fig. 20. *Thrinax radiata* in habitat, Matanzas, Cuba. © 2017 D. R. Hodel.

Type. CUBA. Locality and date unknown, *C. Wright 3219 p. p. F*, emend. Moya. (lectotype, [first-step]: Glassman 1972: 221, G, [second-step], Moya 2019a: 5, G00099985.1, G00099985.2, G00099985.3; isolectotypes: F25330.1 [photo G99985.2], F25330.2 [photo G99985.3]).

Syntypes of *Thrinax wendlandiana*:

CUBA. Locality and date unknown, *C. Wright 2329 p. p. A* (designated here: B [destr.], FI052551 [photo ex B]).

CUBA. Mayabeque province, Batabanó municipality, Batabanó, 6 Nov. 1904, *Hermann 3928* (B [destr.], HAC ex ECA!, NY1661708, US00014071 [n.v.], US00014072 [n.v.]).

CUBA. Artemisa province, Candelaria municipality, Santa Catalina, PR, 1905, *Hermann 3464* (B [destr.]).

CUBA. Locality and date unknown, *Sagra s.n.* (B [destr.], P00725676, P00725686, P01794819, P01794820), identified by Moya (2024c).

MÉXICO. Quintana Roo state, Islas Mujeres municipality, “Mujeres [Mugueres] Island, Bay of Honduras”, Aug. 1886, *Gaumer and Godman s.n.* (B [destr.], FI [photo B]).

MÉXICO. Quintana Roo state, Cozumel municipality, “Cozumel [Gozumel] Island”, *Gaumer s.n.* (B [destr.], K [n.v.], FI [photo B ex K]).

Notes. When publishing *Thrinax wendlandiana*, Beccari (1907) did not indicate any type. He noted that he saw different specimens from Cuba: *C. Wright 3219* at G (here consider as *C. Wright 3219 p. p. F*), *C. Wright 2329* at B (here consider as *C. Wright 2329 p. p. A*), *Hermann 3928* and *3464* at B, and *Sagra s.n.* at B. From México he saw: *Gaumer s.n.* at B and *Gaumer s.n.* at B ex K, creating syntypes (Article 9.6 of the Code).

I (Moya 2019a) overlooked the Glassman (1972) designation of *Wright 3219* at G as the lectotype, which takes precedence over Read (1975); thus, here I correct it by designating the Glassman (1972) action as lectotype [first step] and I designate the G00099985 specimen and three specimens at FI from G with original labels in common as lectotype [second-step].

Unfortunately, I (Moya 2023b) misinterpreted Note 1 of Article 52 of the Code (Govaerts, pers. comm., 13 February, 2023) when I put a question mark at the end for the type of the

name, which implicitly excluded that name, making it not superfluous. I correct this error here. The preceding shows that *Thrinax wendlandiana* Becc., was effectively and validly published (Articles 29–31 and 32–45 of the Code).

Part 2. Previously Described Species Collected or Observed by C. Wright.

2.1. Collections of C. Wright lacking type status.

All Cuban collections by C. Wright are identified by a species number, not by a collector number; thus, every collection not listed in the protologue as a type, even if it has the same number, is not a duplicate and does not have type status.

- *C. Wright 3217 p. p. B, 3217 p. p. C, 3217 p. p. D, 3217 p. p. E, 3217 p. p. G.* Not types of *Copernicia wrightii*, now *Acoelorrhaphe wrightii*. Updated by Moya (here).

CUBA. Pinar del Río province, Los Palacios municipality, Dayanigua, 26 Apr. 1864, *Wright 3217 p. p. B* (GH00028339).

CUBA. Pinar del Río province, Mantua municipality, El Salado, Aug. 1865, *Wright 3217 p. p. C* (F78917.1, F78917.2).

CUBA. Locality and date unknown. *Wright 3217 p. p. D* (B [destr.], BRU00054981, BRU00054982, BRU00054983, F279278 [photo G, n.v.], FI052576 [frag. ex G], FI052577 [frag. ex G], FI052578 [frag. ex G], G00005835.1, G00005835.2, G00005835.3 [frag.], G00420227, HAC ex HABA.1, HAC ex HABA.2, LE00000803, MO104336, NY1662257, NY1662258, P00725613, P00725630, P00725631, S06-2457, S06-2458, UC937005, YU034580).

CUBA. Pinar del Río province, locality and date unknown, *C. Wright 3217 p. p. E*. (LE00000804.a, MA607607.a, MO104335.a, P00725614, YU034581.a)

CUBA. Matanzas Province, Calimete Municipality, Hanábana, 13 Mar. 1862, *C. Wright 3217 p. p. G*, not type *Acoelorrhaphe wrightii*: (GH00028340).

Note. The previous *C. Wright 3217* specimens of *Acoelorrhaphe wrightii* are not duplicates and lack type status; thus, I (Moya 2022b) added for each case “pro parte, p. p.” with capital letters followed by the collector number. I (here) added to *C. Wright 3217* “p. p. B” for

Dayanigua, “p. p. C” for El Salado; and “p. p. D” for those without known locality and date. In the case of mixtures with *Copernicia glabrescens*, it would be *C. Wright* 3217 “p. p. E.” I here interpret the collection from Hanábana at GH to be *C. Wright* 3217 “p. p. G.”

- *C. Wright* 3223 p. p. A, 3223 p. p. B, 3223 p. p. C. Not types of *Acrocomia lasiospatha*, now *Acrocomia crispa*. Updated Moya (here).

CUBA. Santiago de Cuba province, Mella municipality, Hato del Nuevo, NW Alto Cedro, 30 Aug. 1860, *C. Wright* 3223 p. p. A (GH00549108, GH00549109).

CUBA. Locality and date unknown, *C. Wright* 3223 p. p. B (MA607604, MO2292818, MO2292819, P00725976, YU034555).

CUBA. Locality and date unknown, *C. Wright* 3223 p. p. C (G-DC [n.v.]). Beccari (1912: 366) cited that his description of *Acrocomia crispa* was based on *C. Wright* 3223 in G-DC.

Notes. I (here) updated Beccari (1912: 364), who considered the Grisebach (1866: 222) citation of *Cocos crispa* Kunth as a basonym of *Acrocomia crispa*. Beccari also attributed the name *A. crispa* to C. F. Baker, when he wrote the name on exsiccate *Baker* 4566, which Baker collected on 1 March 1905 in the vicinity of Santiago de Las Vegas. But Beccari's description was based on *C. Wright* 3223 at G-DC [n.v.]. Also, Beccari (1912) considered as synonyms of *A. crispa* the following: *A. lasiospatha* (non Mart.) Griseb.; the *C. Wright* citation of Sauvalle (1871) of *Astrocaryum* sp. n. sec. H. Wendl.; and *Gastrococos armentalis* Morales (as “corojo”), which on GH28365 is incorrectly labeled, attributing it to “Sauvalle 2973,” and upon which *C. Wright* left a note identifying it as *G. armentalis*.

Wright left a note on GH549109 defining the locality and date as “Hato del Nuevo Aug. 30.” For the location and date of the *C. Wright* 3223 collection, Howard (1988, Appendix 2) wrote “Hato del Medio, Oriente, NW of Alto Cedro,” while in Howard (1988, Appendix 3) he wrote “Hato del Medio August 1860 23-28.” Underwood (1905) cited Hato del Medio [four miles NW of Alto Cedro] as the location of the collection. Mella municipality in Santiago de Cuba province is the actual, present-day municipality where *C. Wright* made his 3223 collection.

- *C. Wright* 599 p. p. A, *C. Wright* 599 p. p. B, *C. Wright* 599 p. p. C, 599 p. p. D, 1465 p. p. A, and 1465 p. p. B. Not types of *Bactris cubensis*. Updated herbarium specimens by Moya (here).

CUBA. Guantánamo province, Yateras municipality, “Monteverde”, 29 Jun. 1857, *C. Wright* 599 p. p. A (GH000549096 [n.v.]).

CUBA. “Cuba Orientalis”, date unknown, *C. Wright* 599 p. p. B (not type of *Bactris cubensis*: BH [photo 2768 of herb. Martius, Bruxelles], herb. Martius, Bruxelles [n.v.]).

CUBA. Locality and date unknown, *C. Wright* 599 p. p. C (K [n.v.]), MO [n.v.].

CUBA. Guantánamo province, Yateras municipality, Yateras, no date, *C. Wright* 599 p. p. D (HAC ex HABA!).

CUBA. Guantánamo province, Yateras municipality, Yateras, no date, *C. Wright* 599 p. p. D (HAC ex HABA!).

CUBA. Guantánamo province, Yateras municipality, Monteverde, 27 Jun. 1857, *C. Wright* 1465 p. p. A (GH00549100).

CUBA. Locality and date unknown, *C. Wright* 1465 p. p. B (F235409 [photo G420183], F868993 [frag.], G00420182.1, G00420182.2, G00420183.1, G00420183.2, G00420184.1, G00420184.2, GH00549099, GH00549101, GOET025056, P02145691, P02145701).

Note. Grisebach (1863) noted that Cuba Orientali was the location of *C. Wright* 599 and *C. Wright* 1465 for *Bactris plumeriana*. Harvard Herbaria and Libraries' states the locality for GH549096 as “locality: Monte Verde, date collected: 1857-06-29, determined by Salzman 1994.” GH549100 has a note by C. Wright “M.V. [Monteverde], Jun. 27.”

- *C. Wright* s.n.2 p. p. B. Not type of *Geonoma dulcis*, now *Calyptronoma plumeriana*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright* s.n.2 p. p. B (F78919, GH00028368, GH00028369, HAC ex HABA!, K000526415, K000526416).

Note. The other *C. Wright* s.n.2 specimens are not duplicates so they do not have type category of *Calyptrogyne dulcis*; thus, I (here) added for each case “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 3972 p. p. B*. Not type of *Geonoma intermedia*, now *Calyptronoma plumeriana*. Updated by Moya (here.)

CUBA. Locality and date unknown, *C. Wright 3972 p. p. B* (A00056321, BRU00056868, BRU00056869, F78943, F78944, GH00028372, HAC ex HABA!, NY00007094, NY00007095, NY00007096, NY00007097, NY00007098, P00725498, S-PL-277 ex P [n.v.], US00065135, US00075616, US00075617).

Note. The other *C. Wright 3972* specimens are not duplicates so they do not have type category of *Calyptrogyne intermedia*; thus, I (here) added for each case “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 1466 p. p. B*. Not type of *Calyptrogyne clementis*, now *Calyptronoma plumeriana*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright 1466 p. p. B* (BRU00055596, F78912, F78913, FI052582.a [frag. ex G, FI052582.b [draw.], G00025019, G000192023, G000428464, GH00028210, HAC4216! [frag. ex GH], MO2204537 [n.v.], NY1663119, P00725499, P00725500, S-PL-276 ex P [n.v.], YU034585).

Note. All *C. Wright 1466* specimens are not type categories of *Calyptrogyne clementis sensu* León (1944: 12); thus, I (here) added for each case “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 3966 p. p. B*, *3966 p. p. C*, and *3966 p. p. D*. Not types of *Coccothrinax acuminata*. Updated by Moya (here).

CUBA. Artemisa province, San Cristóbal municipality, Balestena, ft., 23. Feb. [1862 or 1864], *C. Wright 3966 p. p. B* (GH00028253).

CUBA. Artemisa province, San Cristóbal municipality, Cliff along the river Sta. Cruz. 18 Sep., and Mogote de Mono, near Balestena, in crevices of limestone cliffs, Jul. *Wright 3966 p. p. C* (GOET025854.1, GOET025854.1).

CUBA. Locality and date unknown, *C. Wright 3966 p. p. D* (BRU00055644, BRU00055645, F0092098.1, F0092098.2, F0092098.3, F358405.a [photo NY73078], F358405.b [photo

NY73079], GH00028254, GH00028255, NY00073060, NY00073076, NY00073077, NY00073078, NY00073079, P00725688, P00725689, US00087368, US00087369).

Note. These other *C. Wright 3966* specimens are not duplicates and lack type status; thus, I (here) added for each case “pro parte, p. p. B” for Balestena; “p. p. C” for the river Sta. Cruz, and “p. p. D” for those without known locality and date.

- *C. Wright 3967 p. p. A* and *3967 p. p. B*. Not types of *Coccothrinax crinita*. Updated by Moya (here).

CUBA. Artemisa province, Bahía Honda municipality, Las Pozas, 18 May 1866, *C. Wright 3967 p. p. A* (GH00028271, GOET025851.1 ex HAN, GOET025851.2 ex HAN).

CUBA. Locality and date unknown, *C. Wright 3967 p. p. B* (A00028269, A00028270, F0092097.1, F0092097.2, FI051880 [frag. ex A], GH00028272, K000462862, K000462863, NY00073063, NY00073064, NY00073080, NY00073081, P00725678, US00087384, US00087385).

– “*Antia crinita*” (R. D. Hoyt) O. F. Cook, Natl. Hort. Mag. 20: 50. 1941.

(Note. *Antia crinita* is legitimate because it belongs to the illegitimate genus *Antia* (Gandhi, pers. com., 5 July 2024).

Note. Sauvalle (1871: 563) was the first to associate the name “*Thrinax crinita* Gris. & Wendl.” with *C. Wright 3967*, but as a nomen nudum.

- *C. Wright 3218, 3219 p. p. B, 3219 p. p. C, 3219 p. p. H, 3219 p. p. I, and 3219 p. p. J*. Not types of *Coccothrinax martii*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright 3218* (GH00549103, GOET025850.1 ex HAN, GOET025850.2 ex HAN, HAC ex HABA!).

CUBA. [Locality and date unknown], *C. Wright 3219 p. p. B* (n.v.).

CUBA. [Locality and date unknown], *C. Wright 3219 p. p. C* (n.v.).

CUBA. Santiago de Cuba province, Santiago de Cuba municipality, Savannas between N. Sophie and Saltadero (now Guantánamo city), fl., ft., 17 Jan. 1859, *C. Wright 3219 p. p. H*, sensu Moya (2023a: 18) (GH00549107).

CUBA. Locality and date unknown, *C. Wright 3219 p. p. I*, sensu Moya (2023a: 18) (GH00549106, HAC ex HABA [mix], HAC ex IM [frag.], NY1662010, UC937097, UC937098).

CUBA. Santiago de Cuba province, Santiago de Cuba municipality, Savannas between Saltadero (now Guantánamo city) and N. Sophie, fl., ft., 25 Sept. 1859, *C. Wright 3219 p. p. J*, sensu Moya (here) (GH00549102 [frag.], GOET009332).

Notes. The *C. Wright 3218* specimens of *Coccothrinax martii* were published as *Thrinax argentea* sensu Grisebach (1866: 221) and sensu Wright in Sauvalle (1871: 562). Moya (2023a: 11, 16) updated the specimen for *C. martii* but without type status.

The other *C. Wright 3219* specimens of *Coccothrinax martii* are not duplicates and lack type status; thus, (Moya 2023a) wrote, "... two new ones corresponding to *C. martii* are added here, both without type category." Here, I corrected and updated it by adding for each case "pro parte, p. p." with capital letters followed by the collector number: "p. p. B" and "p. p. C" to *C. Wright 3219* for the unseen specimens, cited as *C. martii* by Beccari (1907: 308), and as *Thrinax argentea* sensu Grisebach (1866); "p. p. H" to *C. Wright 3219*, sensu Moya (2023a: 18) collected in January 1859 in Savannas between N. Sophie and Saltadero; "p. p. I" to *C. Wright 3219*, sensu Moya (2023a: 18) collected in locality and date unknown; and "p. p. J" to *J. Wright 3219*, sensu Moya (here) collected in September 1859 in Savannas between Saltadero and N. Sophie.

- *C. Wright 3221 p. p. A* and *3221 p. p. B. Thrinax miraguana* Mart. as Grisebach (1866: 221). Updated as *Coccothrinax moaensis* by Moya (2022a, here).

CUBA. Holguín province, Mayarí municipality, Pinal Mayari abajo [Meseta de Pinares de Mayarí], 6 Aug. 1860, *C. Wright 3221 p. p. A* (GH00549105, GOET025852.1 ex HAN, GOET025852.2 ex HAN).

CUBA. Locality and date unknown, *C. Wright 3221 p. p. B* (BRU000055648, BRU000055652, FI051883 ex G [frag.], FI051889 [draw.], G00301706.1, G00301706.2, G00355863.1, G00355863.2, GH00549104, HAC ex HABA.1!, HAC ex HABA.2!, MA607605, MO636606, MO636607, P01794331, P01794333, YU034633, YU034634).

- *C. Wright 3220 p. p. B*. Not type of *Thrinax rigida*, now *Coccothrinax rigida*. Updated by Moya (here).

CUBA. Holguín province, Sagua de Tánamo municipality, locality and date unknown, *C. Wright 3220 p. p. B* (BH [frag.], F358404 [photo G], FI051878 ex G, G00305375, G00355869, HAC ex IM!, K000462856, K000462857, MO104645, P00725684, YU034635, YU034636).

Note. The other *C. Wright 3220* specimens are not duplicates so they do not have type status for *Coccothrinax rigida*; thus, I (here) added “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 3964 p. p. B* and *3964 p. p. C*. Not types of *Colpothrinax wrightii*. Updated by Moya (here).

CUBA. Pinar del Río province, pinales & savannas, [Sept.], fl. *C. Wright 3964 p. p. B* (GH00028451).

CUBA. Pinar del Río province, locality and date unknown, fl. *C. Wright 3964 p. p. C* (A00028453, A00028454, A00028455, B [dest.], BH [photo B, n.v.], BRU00054034, BRU00054035, F0092035.1, F0092035.2, F0092035.3, F278818 [photo, n.v.], F278819 [photo, n.v.], F278820 [photo, n.v.], FI052574 [frag. ex B], GH00028452, GH00028456, HAC ex HABA!, K000462844, K000462845, K000462846, K000462847, MO [photo ex GOET, n.v.], NY00071129, NY00071130, NY00071131, NY00312170, NY00312171, NY00312172, P00725575, P00725576, P00725577, US00087423, US00087424, US00087425, US00087426).

Note. The other *C. Wright 3964* specimens are not duplicates so they do not have type status for *Colpothrinax wrightii*; thus, I (here) added for each case “pro parte, p. p. B” for “pinales & savannas,” and “pro parte, p. p. C” for those without known locality and date.

- *C. Wright 3968 p. p. B*, *3216 p. p. B*, *3216 p. p. D*, *3216 p. p. F*, and *3217 p. p. F*. Not types of *Copernicia glabrescens*. Updated by Moya (2022b and here).

CUBA. Locality and date unknown, *C. Wright 3968 p. p. B*: (B [destr.], BRU00054977, BRU00054978, F0075033, F0075034, FI ex G.DC.1 [n.v.], FI ex G.DC.2 [n.v.], FTG10204 [photo F248561], FTG63885 [photo US87463], GH00028316, GH00028317, HAC28904!)

[photo US87463], HAC28909! [photo US87464], K000432904, K000432905, MICH1138439 [n.v.], MO [n.v.], NY00071168, NY00071169, NY1662338, P00725589, US00087463, US00087464).

CUBA. Locality and date unknown, *C. Wright 3216 p. p. B* (I ex G-DC [n.v.], G00302587.1, G00302587.2, G00302589.2, G00302589.3 [frag.], G00302590.2, G00302590.3 [frag.], GOET025476.2 ex HAN, GOET025476.3 ex HAN, LE [n.v.], P01796420, S11-24594, S11-24595, UC937034).

CUBA. Artemisa province, San Cristóbal municipality, “savanna Charco de Toro”, 7 Apr. 1864, *C. Wright 3216 p. p. D*. (GH00549142 [Inflorescence right]).

CUBA. Locality and date unknown, *C. Wright 3216 p. p. F*. (not type of *Copernicia glabrescens*: F248561 [neg. 20780 HAN], G302589.1b, GOET025476.1b ex HAN, HAC ex IM.b!, MA886548.b, P01796421).

CUBA. Pinar del Río province, locality and date unknown, *C. Wright 3217 p. p. F* (LE00000804.b, MA607607.b, MO104335.b, P00725612.b, YU034581.b).

Notes. The other *C. Wright 3968* specimens are not duplicates so they do not have type status for *Copernicia glabrescens*; thus, I (Moya 2022b, 2023d, here) added for each case “pro parte, p. p. B” for those without known locality and date.

Dahlgren (1959) mistakenly wrote “Wright 39682 (?)” on negative no. 20780 at F from HAN. Reviewing the HAN original now mounted on three herbarium sheets in GOET25476, shows that C. Wright left a note as “Nr. 3216 *Copernicia hospita* Mart.”, which H. Wendland identified as “*Copernicia glabrescens* sp. n.”, as a nomen nudum. Here, only the long inflorescence on the right with rachillas longer than 1 cm is defined as *C. glabrescens*, while the inflorescence on the left and in the center belongs to *Copernicia hospita*.

- *C. Wright 3216 p. p. A*, *3216 p. p. C*, *3216 p. p. E*, and *3216 p. p. H*. Not type of *Copernicia hospita*. Updated by Moya (2022b)

CUBA. Locality and date unknown, *C. Wright 3216 p. p. A* (A00549144, A00549146, B [dest.], BH000038847.a [frag. ex B], BH000038847.b [frag. ex B], BH000038847.c [photo B], BRU00055669, BRU00055670, BRU00055671, G00302590.1 [frag.], GH00549143, HAC! [frag. ex B], HAC! [photo B], MA607609, MO [n.v.], P00725591, P00725592).

CUBA. Matanzas province, Calimete municipality, “Hanabana”, 29 Mar. 1862, *C. Wright* 3216 p. p. *C* (*Copernicia hospita*: GH00549141 [Inflorescence on left]).

CUBA. Locality and date unknown, *C. Wright* 3216 p. p. *E*. (G00302589.1a, GOET025476.1a ex HAN, HAC ex IM.a [frag.], MA886548.a [frag.], P04021665 [frag.]).

CUBA. Sancti Spíritus province, Trinidad, “Potrero Manatí”, Mar. 1867, *C. Wright* 3216 p. p. *H* (GOET025465.1 ex HAN, GOET025465.2 ex HAN, GOET025465.3 ex HAN, GOET025465.4 ex HAN, GOET025465.5 ex HAN).

- *C. Wright* 3969 p. p. *D* and 3969 p. p. *E*. Not types of *Copernicia macroglossa*. Updated by Moya (here).

Copernicia macroglossa H. Wendl. ex Becc., Webbia 2: 177. 1907.

CUBA. Locality and date unknown, *C. Wright* 3969 p. p. *D* (A00028328, BRU00054980, F0092049.1, F0092049.2, F0092049.3 ex CHI, F279245 [photo A, n.v.], F279246 [photo GH, n.v.], F78918, FI072424 [frag. ex B], G00005833, GH00028325, GH00028327, GH00028329, HAC ex HABA!, K000209133, K000209134, K000462348, NY00071177 [mix. p.p. Right], NY1662386, NY1662387, P00725593.a [p.p.], P00725594, P00725595).

CUBA. Sancti Spíritus province, Trinidad, “Potrero Manatí.” Mar. 1867, *C. Wright* 3969 p. p. *E* (GOET025467.1b ex HAN, GOET025467.2 ex HAN, GOET025467.3 ex HAN, GOET025467.4 ex HAN, GOET025467.5 ex HAN).

Note. The other *C. Wright* 3969 specimens are not duplicates so they do not have type status for *Copernicia macroglossa*; thus, I (here) added for each case “pro parte, p. p. *D*” for those without known locality and date; and “pro parte, p. p. *E*” for Potrero Manatí (**Fig. Z**).

- *C. Wright* 3969 p. p. *F*. Not type of *Copernicia* × *leoniana* Dahlgren & Glassman, now *Copernicia* × *escarzana*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright* 3969 p. p. *F* (B [destr.], BRU00054979, F0092050.1, F0092050.2, F0092050.3, F0092050.4, GH00028321, GH00028324, HAC4535 [frag. ex B!], HAC [photo B!], K000209135, K000209136, K000209137, NY00071175,

NY00071178 [mix, p.p. Left], NY1662385, NY1662390, NY1662391, P00725596, P00725597, US00016510).

Note. The other *C. Wright 3969 specimens* are not duplicates so they do not have type status for *Copernicia × leoniana*; thus, here I add for each case “pro parte, p. p. F” for those without known locality and date.

- *C. Wright 3224 p. p. B*. Not type of *Gaussia princeps*. Updated by Moya (here).

CUBA. Pinar del Río province, locality and date unknown, *C. Wright 3224 p. p. B* (A00549112, A00549113, B [destr.], BM000839370, BRU00055646, BRU00055647, F0075059, F0075060, FI052580 ex B [frag.], GH00549110, GH00549111, K000462913, K000462914, NY00023754, NY00023755, NY1662663, P00725355, P01794804, US00087562, US00087563).

Note. The other *C. Wright 3224 specimens* are not duplicates so they do not have type category of *Gaussia princeps*; thus, I (here) added for each case “pro parte, p. p. B” for those of Pinar del Río province without known locality and date.

- *C. Wright 3222 p. p. B*. Not type of *Trithrinax compacta*, now *Hemithrinax compacta*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright 3222 p. p. B* (B [destr.], BH [frag., n.v.], BRU00072301, FI018276 ex B [frag.], FI018277.1 [frag. ex G], FI018277.2 [draw.], G00164697, G00355817.1, G00355817.2, HAC ex HABA!, K000462854, K000462855, LE00000791, MO104471, MO104472, NY0064447 [frag.], P007255561, YU034631).

Notes. Fragments of *C. Wright 3222* are at FI from B and G-DC and at BH, the latter Reveal and Nixon (2013) cited. Beccari (1907) reviewed the specimens present at B and G-DC.

The other *C. Wright 3222 specimens* are not duplicates so they do not have type category of *Hemithrinax compacta*; here, I add for each case “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 3965 p. p. C* and *3965 p. p. D*. Not types of *Thrinax drudei*, now *Leucothrinax morrisii*. Updated by Moya (here).

CUBA. Artemisa province, San Cristóbal municipality, Santa Cruz, Cliffs along the river, Aug. 1862, *C. Wright 3965 p. p. C* (GH00028574).

CUBA. Locality and date unknown, *C. Wright 3965 p. p. D* (BRU00055649, BRU00055650, F0075106, F0075107, GH00028570, K000462852, K000462853, NY00073065, NY00073066, NY00073067, NY00073068, US00087345, US00087346, US00087347).

Note. The other *C. Wright 3965* specimens are not duplicates so they do not have type category of *Thrinax drudei*; thus, here I add for each case “pro parte, p. p. C” for Santa Cruz, and “pro parte, p. p. D” for those without known locality and date.

- *C. Wright 1468 p. p. B*. Not type of *Euterpe manaele*, now *Prestoea acuminata* var. *montana*. Update by Moya (here).

CUBA. Locality and date unknown, *C. Wright 1468 p. p. B* (FI052581.1 ex G [frag.], FI052581.2 [draws.], G00305454, LE00000885, MO104452, NY00039299 [frag.], P00725183, YU034584).

Note. The other *C. Wright 1468* specimens are not duplicates so they do not have type status for *Euterpe manaele*; thus, I (Moya 2023c) added for each case “pro parte, p. p. B” for those without known locality and date.

- *C. Wright 1467 p. p. A*, *1467 p. p. B*, *1467 p. p. C*. Not types of *Oreodoxa regia*, now *Roystonea regia*. Updated by Moya (here.)

CUBA. Guantánamo province, Yateras municipality, Monteverde, 28 Jun. 1859, *C. Wright 1467 p. p. A* (GH00549114).

CUBA. Artemisa province, San Cristóbal municipality, El Retiro, 22 Oct. 1866, *C. Wright 1467 p. p. B* (not type of *Roystonea regia*: GH00549115, GH00549116).

CUBA. Locality and date unknown, *C. Wright 1467 p. p. C* (not types of *Roystonea regia*: BRU00055597, BRU00055598, F78952, F78953, F78954, F78955, P02146605).

Notes. The Harvard University Herbaria and Libraries online specimen catalog states, “This is a complex collection object (2 items with 2 preparations), “collected by C. Wright, 1467, [Oct.

22 [1859, 1860 crossed out on one label]].” GH549116 has a note by C. Wright “Palma Real. Retiro Oct. 22.”

Here I identified the four specimens at F as *Roystonea regia*.

- *C. Wright 3970 p. p. C* and *3970 p. p. D*. Not types of *Sabal parviflora*, now *Sabal palmetto*. Updated by Moya (here).

CUBA. Artemisa province, San Cristóbal municipality, Chirigota, *C. Wright 3970 p. p. C* (A00028539).

CUBA. Locality and date unknown, *C. Wright 3970 p. p. D* (not types *Sabal parviflora*: A00028538, F78939, GH00549117, GH00549118, GH00028540, GH00028541, HAC [photo US87504!], HAC [photo US87505!], HAC ex HABA!, MO [n.v.], NY00071238, NY00071239, NY00071240, P00725546, P00725548, US00087504, US00087505).

Notes. In the protologue of *Sabal parviflora*, Beccari (1907) did not state a locality for *Wright 3970*, and Glassman (1972) erroneously located it on “Isle de Pines.” Harvard University Herbaria and Libraries online specimen catalog states: “This is a complex collection object (4 items with 4 preparations),” and adds locality and date collected, “Chirigota [June [1859, 1860 crossed out other sheets]]. Savanas” for A28539. These *C. Wright 3970* are not duplicates so they do not have type category for *Sabal parviflora*; thus, I (here) added for each case “pro parte, p. p. C” for Chirigota; and p. p. D” for those without known locality and date.

Beccari (1907: 46) designated *C. Wright 3970* in B as the type of *Sabal parviflora*, now destroyed. Cuccuini and Nepi (2006: 137) related fragments in FI ex B. Both are considered not types because the locality and date are unknown and they have no relation to the NY lectotype. One *C. Wright 3970* specimen is not a duplicate so it does not have type status for *S. parviflora*; thus, here I add “pro parte, p. p. C” for the Chirigota location.

- *C. Wright 3971 p. p. C*. Not type of *Sabal yapa*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright 3971 p. p. C* (A00028542, A00028543, A00028544, F920958.1, F920958.2, GH00028545, GH00028546, GH00028547, GH00549126, HAC ex HABA.1!, HAC ex HABA.2!, HAC28877 [photo US87507!], HAC28878 [photo US87508!], K000462867, K000462868, K000462869, K000462870, NY00071241,

NY00071242, NY00071243, NY1661990 [mix *Coccothrinax*], NY1661991, P00725549, P00725550, US00087507, US00087508).

The other *C. Wright 3971* specimens are not duplicates so they do not have type status for *Sabal yapa*; thus, here I add for each case “pro parte, p. p. C” for those without known locality and date.

- *C. Wright 3219 p. p. A* and *3219 p. p. D*. Not Types of *Thrinax martii*, now *Thrinax radiata*. Updated by Moya (2023a).

CUBA. [Locality and date unknown] *C. Wright 3219 p. p. A* (n.v.).

GERMANY. Cultivated in Hannover [Herrenhausen Gardens] from Cuba, *C. Wright 3219 p. p. D*, (GOET009185).

- *C. Wright 3219 p. p. K*, *3219 p. p. L*, *3219 p. p. M*, *C. Wright 2329 p. p. B*, and *2329 p. p. C*. Not types of *Thrinax wendlandiana*, now *Thrinax radiata*. Updated by Moya (here).

CUBA. Artemisa province, Bahía Honda municipality, “Toscano”, 5 Aug. 1866, *C. Wright 3219 p. p. K*, sensu Moya (GH00028575).

CUBA. Artemisa province, Bahía Honda municipality, “Toscano”, 29 Oct. 1866, *C. Wright 3219 p. p. L*, sensu Moya (GOET025856.1 ex HAN, GOET025856.2 ex HAN, GOET025856.3 ex HAN).

CUBA. Locality and date unknown, *C. Wright 3219 p. p. M*, sensu Moya (F0075109 [frag. ex US], G00355870.1, G00355870.2, G00355870.3, HAC ex HABA!, K000462850, K000462851, LE00000792, MA607606, MA886547, MO589605 [photo of F25330], MO2204538, MO2204539, MO2204540, P00725679, P00725680, P00725681, YU034630, YU034632).

Note. The other *C. Wright 3219* specimens are not duplicates so they do not have type status for *Thrinax wendlandiana*; thus, I (here) added for each case “pro parte, p. p. K” for Toscano collected in August, and “p. p. L” for Toscano collected in October.

CUBA. Matanzas province, Martí municipality, “La Palma Sola”, sandy ridges near the sea, 6 Aug. 1865, C. Wright 2329 *p. p. B* (GH00549120, GOET025857.1, GOET025857.2).

CUBA. Locality and date unknown, *C. Wright 2329 p. p. C* (A00549123, BRU00055651, GH00549121, GH00549122, GH00549124, GH00549125, NY01661715, NY01661716, NY01661717, NY01661718, P01794519, P01794520, US00087365, US00087366, US00087367).

Notes. Beccari (1907: 267) cited *C. Wright 2329* at B as a syntype of *Thrinax wendlandiana*. Moya (2023a) noted that on GH549120, Wright had left a written note, “La Palma Sola, sandy ridges near the sea, Aug. 6.” Howard (1988, in Appendices 2 and 3) noted that Wright visited La Palma Sola in 1865; here, I confirm that the date of collection was 6 August 1865. The same is written on two GOET specimens.

The other *C. Wright 2329* specimens are not duplicates so they do not have type status for *Thrinax wendlandiana* (now *Thrinax radiata*); thus, here I add for each case “pro parte, *p. p. B*” for La Palma Sola and “*p. p. C*” for those without known locality and date.

2.2. Collections of *C. Wright* without collector number or type status, and with or without defining precise identification.

- ***C. Wright s.n.1 p. p. A* and *C. Wright s.n.1 p. p. B*.** Not types of *Sabal umbraculifera*, updated as ***Sabal yapa*** by Moya (here).

CUBA. Locality and date unknown, “savannas”, 30 Oct. 1865, *C. Wright s.n.1 p. p. A* (F78951.1, F78951.2, GOET028523.1 ex HAN, GOET028523.2 ex HAN, GOET028525 ex HAN)

CUBA. [Locality and date unknown, *C. Wright s.n.1 p. p. B* (NY1662485, P00725547, US00012284).

Notes. The leaf base in F78951.2 and GOET25823.2 shows connate segments typical of *Sabal yapa*. In F78951.1 and GOET25823, Wright wrote “savannas Oct. 30.” Grisebach (1866) wrote “Wr. a. 1865.”

- ***C. Wright s.n.2 p. p. A*, and *C. Wright s.n.2 p. p. B*.** Not types of *Geonoma dulcis*, now *Calyptronoma plumeriana*. Updated above by Moya (here).

Cuba. Matanzas Province, Calimete municipality, “Hanabana”. (GOETx4).

CUBA. Locality and date unknown. (F, GHx2, HAC, Kx2).

- ***C. Wright s.n.3.*** Not type of *Astrocaryon* [*Astrocaryum*] *sp.* or *Gastrococos armentalis*, now *Acrocomia crispa*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright s.n.3* [“Sauvalle 2393”] (GH00028364, GH00028365).

Note. Wright annotated GH28365, identifying it as “*Gastroccos crispa*.” Sauvalle (1871) stated that *Astrocaryon* [*Astrocaryum*] *sp.* or *Gastrococos armentalis* Morales, which *C. Wright* had observed but without a collection number, was distributed as *Sauvalle 2393*.

- ***C. Wright s.n.4.*** Not type of *Sabal yapa*, identified by Zona in GH. Updated by Moya (here).

CUBA. Pinar del Río province, Minas de Matahambre municipality, La Güira, Luis Lazo, 12 Dec. 1866, *C. Wright s.n.4* (GH00549119, GOET025419.1, GOET025419.2).

Note. Wright annotated GH549119, writing the common name “*Cana de la sierra or cana del monte*” and the locality “La Guira in Luis Lazo Dec.,” on the specimen with an inflorescence that Zona identified in May 1989 as *Sabal yapa*. Someone copied this annotation on to GOET25819.

- ***C. Wright s.n.5.*** Not type of *Sabal palmetto*, identified by Zona in GH. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright s.n.5* (GH00549118).

Note. Zona identified GH549118, a specimen with an inflorescence, as *Sabal palmetto* in April 1989.

- ***C. Wright s.n. 6.*** Not type of *Coccothrinax acuminata*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright s.n.6* (GOET025853.1, GOET025853.2, GOET025853.3)

- *C. Wright 3216 p. p. G.* Not type of *Copernicia sp.1*. Updated by Moya (2022b).

CUBA. Locality and date unknown, *C. Wright 3216 p. p. G. Copernicia sp.* (K209143 [n.v.], K209144 [n.v.]).

- *C. Wright 3969 p. p. G.* Not type of *Copernicia sp.2*. Updated by Moya (here).

CUBA. Locality and date unknown, *C. Wright 3969 p. p. G* (: US00989863, US01008732 [n.v.], P00725593.b [p.p. Left]). Only a couple segments or leaf sheath are present, making it impossible to identify the species.

2.3. Palms reported in Grisebach (1866) or Sauvalle (1871) as observed but that C. Wright did not officially collect.

Cocos nucifera L., Sp. Pl. 2: 1188. 1753.

Grisebach (1866: 222) reported the naturalized species *Cocos nucifera* L.

Sabal palmetto (Walter) Lodd. ex Schult. & Schult. f., Syst. Veg. 7: 1487. 1830.

Grisebach (1866: 221) identified *C. Wright 3970*, an unrelated specimen, as *Sabal palmetto* Lodd. Zona (1990) identified another specimen at GH549118 as *S. palmetto*.

Thrinax radiata Lodd. ex Schult. & Schult. f., Syst. Veg. 7(2): 1301. 1830.

Grisebach (1866: 221) reported that C. Wright observed *Thrinax radiata* Lodd., without citing any specimen. However, Moya (2019a, 2023a) updated as synonyms of *T. radiata*: *C. Wright 3219 p. p. E.* as *Porotherinax pumilio* by Grisebach (1866: 221) and *C. Wright 3219 p. p. F.* and *C. Wright 2329* as *Thrinax wendlandiana* by Beccari (1907; 295).

2.4. Summary of C. Wright collection numbers with several “pro parte.”

Summarizing C. Wright's collections with several “pro parte” is helpful because for the same collection number Wright included different species, localities, and dates. Only the herbarium code is listed here, the barcode was provided earlier in the text.

A. *C. Wright 3216*, associated with two names and six “pro parte.” Updated by Moya (2022b, here).

C. Wright 3216 p. p. A (Ax2, B [destr.], BHx3, BRUx3, FI, G, GH, MA, Px2), by Moya (2022b), not type of *Copernicia hospita*, locality and date unknown.

Wright 3216 p. p. B (B [destr.], FI, Gx6, GOET, LE, P, Sx2, UC), by Moya (2022b), not type of *Copernicia glabrescens*, locality and date unknown.

C. Wright 3216 p. p. C (GH), by Moya (2022b), not type of *Copernicia hospita*, mixed with *C. glabrescens*, Matanzas Province (Calimete), Hanábana, March 29, 1862.

C. Wright 3216 p. p. D (GH), by Moya (2022b), not type of *Copernicia glabrescens*, mixed with *C. hospita*, Artemisa province (San Cristóbal), Charco de Toro, April 7, 1864.

C. Wright 3216 p. p. E (G, GOET, HAC, MA, P), by Moya (2022b), not type of *Copernicia hospita*, mixed with *C. glabrescens*, locality and date unknown.

C. Wright 3216 p. p. F (G, GOET, HAC, MA, P), by Moya (2022b), not type of *Copernicia glabrescens*, mixed with *C. hospita*, locality and date unknown.

C. Wright 3216 p. p. G (Kx2), by Moya (2022b), not type of *Copernicia* sp., locality and date unknown.

C. Wright 3216 p. p. H (GOETx5), by Moya here, not type of *Copernicia hospita*, from Sancti Spíritus province (Trinidad), potrero Manatí, March, 1867.

B. *C. Wright 3217*, associated with two names and six “pro parte.” Updated by Moya (2019b, here).

Wright 3217 p. p. A (GOETx5), by Moya (here). lectotype of *Acoelorrhaphe wrightii*, Pinar del Río province (Mantua), Mantua, Nov. 25, 1862.

C. Wright 3217 p. p. B (GH), by Moya (2019b), not type of *Acoelorrhaphe wrightii*, Pinar del Río province (Los Palacios) Dayanigua.

C. Wright 3217 p. p. C (Fx2), by Moya (2019b), not type of *Acoelorrhaphe wrightii*, Pinar del Río province (Mantua) El Salado.

C. Wright 3217 p. p. D (B [destr.], BRUx3, F, Flx3, Gx4, HACx2, LE, MO, NYx2, Px3, Sx2, UC, YU), by Moya (2019b), not type of *Acoelorrhaphe wrightii*, from locality and date unknown.

C. Wright 3217 p. p. E (LE, MA, MO, P, YU), by Moya (2019b) and here, not type of *Acoelorrhaphe wrightii*, mixed with *Copernicia glabrescens*, Pinar del Río province, locality and date unknown.

C. Wright 3217 p. p. F (LE, MA, MO, P, YU), by Moya (2019b) and here, not type of *Copernicia glabrescens*, mixed with *Acoelorrhaphe wrightii*, Pinar del Río province, locality and date unknown.

C. Wright 3217 p. p. G (GH) by Moya (here), not type of *Acoelorrhaphe wrightii*, Matanzas Province (Calimete) Hanábana.

C. *C. Wright 3219*, associated with six names and eleven “pro parte.” Update by Moya (2023a, and here).

Wright 3219 p. p. A ([n.v.]) as “a” by Grisebach (1866: 221), for *Thrinax martii* sensu Grisebach (1866: 221, *nom. nud.*), now not type of *Thrinax radiata* by Moya (2023a, here), locality and date unknown.

C. Wright 3219 p. p. B ([n.v.]), as “b” by Grisebach (1866: 221), for *Thrinax argentea* (Lodd.) Mart., now not type of *Coccothrinax martii* by Moya (here), locality and date unknown.

C. Wright 3219 p. p. C ([n.v.]), as “c” by Grisebach 1(1866: 221), for *Thrinax argentea* (Lodd.) Mart., not type of *Coccothrinax martii* by Moya (here), locality and date unknown.

C. Wright 3219 p. p. D (GOET), as “d” by Grisebach (1866: 221), for *Thrinax martii* sensu Grisebach (1866: 221, *nom. nud.*), not type of *Thrinax radiata* by Moya (2023a, here), cultivated in Hannover.

C. Wright 3219 p. p. E (GOET), as “e” by Grisebach (1866: 221), holotype of *Porotherinax pumilio* H. Wendl. ex Griseb., now *Thrinax radiata* by Moya (2019a, 2023a), locality and date unknown.

C. Wright 3219 p. p. F (Gx3, Fx2) by Moya (2019a, here), lectotype of *Thrinax wendlandiana* by Beccari (1907: 267), now *Thrinax radiata*, locality and date unknown.

C. Wright 3219 p. p. G (Sx3, F, FI) by Moya (2023a, here), holotype of *Coccothrinax martii* by Beccari (1907: 308), locality and date unknown.

C. Wright 3219 p. p. H (GH) by Moya (2023a, here) not type of *Coccothrinax martii*, Santiago de Cuba province, Savannas between N. Sophie and Saltadero [presently Guantánamo city], Jan. 17, 1859.

C. Wright 3219 p. p. I (HACx2, NY, UCx2) by Moya (2023a, here) not type of *Coccothrinax martii*, locality and date unknown.

C. Wright 3219 p. p. J (GH, GOET) by Moya (here) not type of *Coccothrinax martii*, Santiago de Cuba province, Saltadero [presently Guantánamo city] and savannas between N. Sophie, Sep. 25, 1859.

C. Wright 3219 p. p. K (GH) by Moya (here), syntype of *Thrinax wendlandiana*, now *Thrinax radiata*, Artemisa province (Bahía Honda) Toscano, Aug. 5, 1866.

C. Wright 3219 p. p. L (GOETx3) by Moya (here), syntype of *Thrinax wendlandiana*, now *Thrinax radiata*, Artemisa province (Bahía Honda), Toscano, Oct. 29, 1866.

C. Wright 3219 p. p. M (Fx2, Gx5, HAC, Kx2, LE, MAx2, Mox4, Px3, YUx2) by Moya (here) syntypes of *Thrinax wendlandiana*, now *Thrinax radiata*, locality and date unknown.

Part 3. Miscellaneous Note.

3.1. Why *Colpothrinax wrightii* and *Copernicia macroglossa* of Schaedtler (1875) are considered nomen nudum.

Here I confirm the determination of Moya (2021a: 6) and Moya and Hodel (2022: 6): that Schaedtler's characterization (Schaedtler 1875: 160) of *Colpothrinax wrightii* and *Copernicia macroglossa* provides no characters to distinguish them from other palmate-leaved palm species. Furthermore, Schaedtler did not provide characters of an individual taxon; thus, his writings cannot be considered a description or do they provide any information that relates them to the taxa in question (*Colpothrinax wrightii* and *Copernicia macroglossa*). Clearly his writings do not

satisfy Article 38.1(a) of the Code. The two palms could even be interpreted as originating anywhere in the world because he did not mention Cuba as he did with *Copernicia maritima* “Syn.: *Corypha maritima* H. et Kth.) Cuba.” The only relationship with the genera in question is that Schaedtler took the names of C. Wright in Sauvalle (1871: 562, 563) without citing their origin or attribution, which is an ethical lapse although it is not reflected in the Code (Turland et al. 2018). Therefore, I ratify the findings of Moya and Hodel (2022: 6) and Moya (2021a: 6) that Schaedtler's names for these taxa must be excluded:

- “*Colpothrinax wrightii*” Griseb. & H. Wendl, sensu C. Wright, in Sauvalle (1871: 563), nom. nud.
- “*Colpothrinax wrightii*” sensu Schaedtler (1875: 160), nom. nud.
- “*Copernicia macroglossa*” Griseb. & H. Wendl., sensu C. Wright, in Sauvalle (1871: 562), nom. nud.
- “*Copernicia macroglossa*” sensu Schaedtler (1875: 160), nom. nud.

Part 4. Summary of C. Wright's Cuban palm collections.

Table 1. Summary of C. Wright's Cuban Palm (Arecaceae) Collections: Collection Numbers, Type Status, Original Species Name, and Correct Species Name.

C. Wright Collect. No.	Type Status	Original Species Name	Correct Species Names
599 p. p. A	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
599 p. p. B	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
599 p. p. C	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
599 p. p. D	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
1466	not type	<i>Calyptronoma swartzii</i> *	<i>Calyptronoma plumeriana</i>
1465 p. p. A	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
1465 p. p. B	not type	<i>Bactris plumeriana</i>	<i>Bactris cubensis</i>
1466 p. p. A	syntype	<i>Calyptrogyna clementis</i>	<i>Calyptronoma plumeriana</i>
1466 p. p. B	not type	<i>Calyptrogyna clementis</i>	<i>Calyptronoma plumeriana</i>
1467 p. p. A	not type	<i>Oreodoxa regia</i>	<i>Roystonea regia</i>
1467 p. p. B	not type	<i>Oreodoxa regia</i>	<i>Roystonea regia</i>
1467 p. p. C	not type	<i>Oreodoxa regia</i>	<i>Roystonea regia</i>
1468 p. p. A	lectotype	<i>Euterpe manacla</i>	<i>Prestoea acuminata</i> var. <i>montana</i>
1468 p. p. B	not type	<i>Euterpe manacla</i>	<i>Prestoea acuminata</i> var. <i>montana</i>

C. Wright Collect. No.	Type Status	Original Species Name	Correct Species Names
2329 p. p. A	syntype	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
2329 p. p. B	not type	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
2329 p. p. C	not type	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
3216 p. p. A	not type	<i>Copernicia hospita</i>	<i>Copernicia hospita</i>
3216 p. p. B	not type	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3216 p. p. C	not type	<i>Copernicia hospita</i>	<i>Copernicia hospita</i>
3216 p. p. D	not type	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3216 p. p. E	not type	<i>Copernicia hospita</i>	<i>Copernicia hospita</i>
3216 p. p. F	not type	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3216 p. p. G	not type		<i>Copernicia sp.1</i>
3216 p. p. H	not type	<i>Copernicia hospita</i>	<i>Copernicia hospita</i>
3217 p. p. A	lectotype	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3217 p. p. B	not type	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3217 p. p. C	not type	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3217 p. p. D	not type	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3217 p. p. E	not type	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3217 p. p. F	not type	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3217 p. p. G	not type	<i>Copernicia wrightii</i>	<i>Acoelorrhaphe wrightii</i>
3218	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. A	not type	<i>Thrinax martii</i>	<i>Thrinax radiata</i>
3219 p. p. B	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. C	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. D	not type	<i>Thrinax martii</i>	<i>Thrinax radiata</i>
3219 p. p. E	holotype	<i>Porotherinax pumilio</i>	<i>Thrinax radiata</i>
3219 p. p. F	lectotype	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
3219 p. p. G	holotype	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. H	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. I	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. J	not type	<i>Coccothrinax martii</i>	<i>Coccothrinax martii</i>
3219 p. p. K	not type	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
3219 p. p. L	not type	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
3219 p. p. M	not type	<i>Thrinax wendlandiana</i>	<i>Thrinax radiata</i>
3220 p. p. A	lectotype	<i>Thrinax rigida</i>	<i>Coccothrinax rigida</i>
3220 p. p. B	not type	<i>Thrinax rigida</i>	<i>Coccothrinax rigida</i>
3221 p. p. A	not type	<i>Thrinax miraguana</i>	<i>Coccothriunax moaensis</i>
3221 p. p. B	not type	<i>Thrinax miraguana</i>	<i>Coccothriunax moaensis</i>
3222 p. p. A	lectotype	<i>Trithrinax compacta</i>	<i>Hemithrinax compacta</i>
3222 p. p. B	not type	<i>Trithrinax compacta</i>	<i>Hemithrinax compacta</i>

C. Wright Collect. No.	Type Status	Original Species Name	Correct Species Names
3223 p. p. A	not type	<i>Acrocomia lasiospatha</i>	<i>Acrocomia crispa</i>
3223 p. p. B	not type	<i>Acrocomia lasiospatha</i>	<i>Acrocomia crispa</i>
3223 p. p. C	not type	<i>Acrocomia lasiospatha</i>	<i>Acrocomia crispa</i>
3224 p. p. A	holotype	<i>Gaussia princeps</i>	<i>Gaussia princeps</i>
3224 p. p. B	not type	<i>Gaussia princeps</i>	<i>Gaussia princeps</i>
3964 p. p. A	holotype	<i>Colpothrinax wrightii</i>	<i>Colpothrinax wrightii</i>
3964 p. p. B	not type	<i>Colpothrinax wrightii</i>	<i>Colpothrinax wrightii</i>
3964 p. p. C	not type	<i>Colpothrinax wrightii</i>	<i>Colpothrinax wrightii</i>
3965 p. p. A	lectotype	<i>Thrinax drudei</i>	<i>Leucothrinax morrisii</i>
3965 p. p. B	syntype	<i>Thrinax drudei</i>	<i>Leucothrinax morrisii</i>
3965 p. p. C	not type	<i>Thrinax drudei</i>	<i>Leucothrinax morrisii</i>
3965 p. p. D	not type	<i>Thrinax drudei</i>	<i>Leucothrinax morrisii</i>
3966 p. p. A	lectotype	<i>Coccothrinax acuminata</i>	<i>Coccothrinax acuminata</i>
3966 p. p. B	not type	<i>Coccothrinax acuminata</i>	<i>Coccothrinax acuminata</i>
3966 p. p. C	not type	<i>Coccothrinax acuminata</i>	<i>Coccothrinax acuminata</i>
3966 p. p. D	not type	<i>Coccothrinax acuminata</i>	<i>Coccothrinax acuminata</i>
3967 p. p. A	not type	<i>Coccothrinax crinita</i>	<i>Coccothrinax crinita</i>
3967 p. p. B	not type	<i>Coccothrinax crinita</i>	<i>Coccothrinax crinita</i>
3968 p. p. A	lectotype	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3968 p. p. B	not type	<i>Copernicia glabrescens</i>	<i>Copernicia glabrescens</i>
3969 p. p. A	holotype	<i>Copernicia</i> × <i>leoniana</i>	<i>Copernicia</i> × <i>escarzana</i>
3969 p. p. B	lectotype	<i>Copernicia macroglossa</i>	<i>Copernicia macroglossa</i>
3969 p. p. C	syntype	<i>Copernicia macroglossa</i>	<i>Copernicia macroglossa</i>
3969 p. p. D	not type	<i>Copernicia macroglossa</i>	<i>Copernicia macroglossa</i>
3969 p. p. E	not type	<i>Copernicia macroglossa</i>	<i>Copernicia macroglossa</i>
3969 p. p. F	not type	<i>Copernicia</i> × <i>leoniana</i>	<i>Copernicia</i> × <i>escarzana</i>
3969 p. p. G	not type		<i>Copernicia</i> sp.2
3970 p. p. A	lectotype	<i>Sabal parviflora</i>	<i>Sabal palmetto</i>
3970 p. p. B	syntype	<i>Sabal parviflora</i>	<i>Sabal palmetto</i>
3970 p. p. C	not type	<i>Sabal parviflora</i>	<i>Sabal palmetto</i>
3970 p. p. D	not type	<i>Sabal parviflora</i>	<i>Sabal palmetto</i>
3971 p. p. A	lectotype	<i>Sabal yapa</i>	<i>Sabal yapa</i>
3971 p. p. B	syntype	<i>Sabal yapa</i>	<i>Sabal yapa</i>
3971 p. p. C	not type	<i>Sabal yapa</i>	<i>Sabal yapa</i>
3972 p. p. A	neotype	<i>Geonoma intermedia</i>	<i>Calyptronoma plumeriana</i>
3972 p. p. B	not type	<i>Geonoma intermedia</i>	<i>Calyptronoma plumeriana</i>
s.n.1 p. p. A	not type	<i>Sabal umbraculifera</i>	<i>Sabal yapa</i>
s.n.1 p. p. B	not type	<i>Sabal umbraculifera</i>	<i>Sabal yapa</i>

C. Wright Collect. No.	Type Status	Original Species Name	Correct Species Names
<i>s.n.2 p. p. A</i>	lectotype	<i>Geonoma dulcis</i>	<i>Calyptronoma plumeriana</i>
<i>s.n.2 p. p. B</i>	not type	<i>Geonoma dulcis</i>	<i>Calyptronoma plumeriana</i>
<i>s.n.3</i>	not type	<i>Gastrococos armentalis</i>	<i>Acrocomia crispa</i>
<i>s.n.4</i>	not type	<i>Sabal umbraculifera</i>	<i>Sabal yapa</i>
<i>s.n.5</i>	not type		<i>Sabal palmetto</i>
<i>s.n.6</i>	not type		<i>Coccothrinax acuminata</i>

* Illegitimate name. See text under Part 1.1.

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Celio E. Moya López is an Associate Researcher at the Botanical Garden of Havana, Cuba, "Quinta de los Molinos," and specializes in the biology of Cuban and Caribbean palms.

celio.moya@gmail.com

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