
Charles Wright and the Cuban Palms. Pt. 3. Update of *Acoelorrhaphe*, *Colpothrinax*, and *Gaussia*

Charles Wright y las Palmas Cubanas. Pt. 3. Actualización de *Acoelorrhaphe*, *Colpothrinax* y *Gaussia*

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Abstract

The nomenclature, typification, and distribution of Cuban species of *Colpothrinax* and *Gaussia* are reviewed and updated, as well as the distribution of *Acoelorrhaphe wrightii*. Of the total of 103 types, one lectotype and 28 isolectotypes are designated in second step, one neotype and 34 isoneotypes are designated in second step, and one holotype and 19 isotypes are identified. Also, a change of authors and neotype of *Colpothrinax wrightii* is proposed.

Resumen

Se revisa y actualiza la nomenclatura, tipificación y distribución de las especies cubanas de *Colpothrinax* y *Gaussia*, así como la distribución de *Acoelorrhaphe wrightii*. Del total de 103 tipos, se designan en el segundo paso un lectotipo y 28 isolectotipos, así como un neotipo y 34 isoneotipos y se identifican un holotipo y 19 isotipos. También se argumenta el cambio de autores y del neotipo de *Colpothrinax wrightii*.

Introduction

The Arecaceae (Palmae) family in Cuba includes 15 genera and 98 infrageneric taxa: 80 species; 10 infraspecific taxa; and 8 hybrids. Of the total, 85 infrageneric taxa are endemic (86.7 %), one of the highest proportions among the plant families in the country (Moya and Leiva 2000, Moya 2020 unpublished). This is the third part of my treatment of Charles Wright and his Cuban palms; the first was about *Coccothrinax acuminata* (Moya and Méndez 2018) and the second was about the genus *Calyptronoma* (Moya and Zona 2018).

Charles Wright (29 October 1811, Wethersfield, Connecticut to 11 August 1885, Wethersfield, Connecticut) was an American botanist who explored and collected plants in Cuba in the mid-

19th century in three expeditions over more than eight years. 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).

What *Acoelorrhapha*, *Colpothrinax*, and *Gaussia* have in common is that they were described from type materials that Charles Wright collected in western Cuba. Wendland (1865) described *Gaussia* from *Wright 3224*, Wendland and Grisebach in Grisebach (1866) described *Colpothrinax* from *Wright 3964*, and Wendland (1879) described *Acoelorrhapha* from *Wright 3217*. Dransfield et al. (2008) placed *Acoelorrhapha* and *Colpothrinax* in the Trachycarpeae tribe of the subfamily Coryphoideae and *Gaussia* in the Chamaedoreeae tribe of the subfamily Arecoideae.

Thirteen species from seven different genera have been described or treated that apply to *Acoelorrhapha*: *Copernicia* (Grisebach 1866), *Serenoa* (Sargent 1899), *Paurotis* (Cook 1902), *Acoelorrhapha* (Beccari 1907), *Brahea* (Beccari 1907), *Acanthosabal* (Proschowsky 1925), and *Erythea* (Moore 1951). Moya (2019) updated the typification and nomenclature and reestablished the accepted spelling of *Acoelorrhapha*, which had been somewhat contentious, maintaining Wendland's original spelling (Wendland 1879).

Acoelorrhapha, a monotypic genus of fan palms, differs from other Cuban palms with palmate leaves and thorns on the petiole by the clustered or cespitose growth habit and trunks covered with reddish brown, leaf-base fibers. Its only species, *A. wrightii*, occurs in seasonally wet or flooded conditions, often in brackish water in coastal swamps and marshes or in savanna thickets or pine forests, typically at low elevations, from southern Florida through the northern Bahamas and central and western Cuba to the Caribbean coasts of southern Mexico, Belize, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, and Providencia Island of Colombia (Moya 2019).

Colpothrinax includes three species with palmate leaves, and is found in Cuba and Central America, of which only *C. wrightii* occurs in Cuba where it is endemic to the western part of the country (Evans 2001). It grows in pine forests, swamp grasslands and anthropic savannas, on sandy quartz soils and clay-sandy deposits (Urquiola et al. 2010). It differs from other unarmed Cuban palms with palmate leaves by the ventricose trunk, which is very slender distally; the gynoecium composed of one to four carpels always free basally and leaf blades typically only with adaxial splits (Dransfield et al. 2008); and the color transitional stages of the of the fruits, from intense green, yellow, orange, to nearly black when ripe.

Gaussia includes five species in Mexico, Guatemala, Hispaniola, Puerto Rico, and Cuba. Two species are endemic to Cuba; *Gaussia princeps* occurs in western Cuba while *G. spirituana* is found in Central Cuba (Moya et al. 1993). They differ from other unarmed Cuban palms with pinnate leaves by their non-grayish, fusiform stems, a canopy of no more than six green leaves with simple segments, and the presence of roots growing directly on limestone (Quero and Read 1986).

The objective of this work is to provide an updated list of the taxa reported for Cuba of the genera *Acoelorrhapha*, *Colpothrinax*, and *Gaussia*, their nomenclatural synonyms for Cuba's endemic species, the type materials associated with these names, and updated distribution.

Materials and Methods

I examined the protologues, descriptions, and status changes for all taxa of Cuban *Acoelorrhapha*, *Colpothrinax*, and *Gaussia*, including Wendland (1865, 1879), Grisebach (1866), Sauvalle (1871, 1873), Schaedtler (1875), Kerchove (1878), Salomon (1887), Siebert and Voss (1895), Sargent (1899), Gómez de la Maza (188 and 1893), Cook (1902), Beccari (1907, 1911, and 1931), Beccari and Rock (1921), Proschowsky (1925), Bailey (1940), Moore (1963b), Hadač (1970), Glassman (1972), Quero and Read (1986), Moya et al. (1993), Moya (2019), and Evans (2001). Particular attention was paid to matters of nomenclature and the designation and disposition of type specimens.

Also, I consulted the main inventories of Cuban palms, including Dahlgren (1936), León (1946), Hawkes (1949), Moore (1963a), Glassman (1972), Muñiz and Borhidi (1982), Henderson et al. (1995), Moya and Leiva (2000), Govaerts and Dransfield (2005), Acevedo-Rodríguez and Strong (2012), Greuter and Rankin (2017), Quattrocchi (2017), Bisby et al. (2020), GBIF (2020), EOL (2020), Govaerts et al. (2020), IPNI (2020), Palmweb (2020), The Plant List (2020), and Tropicos (2020).

I found a total of 103 specimens of these three genera of Cuban palms with some category of type designation in 20 herbaria: A, BH, BM, BRU, CM, F, FI, GH, GOET, HAC, HAJB, K, LE, M, MO, NY, P, PR, US, and VT. I also reviewed additional specimens that have no type category in 19 herbaria: BH, BRU, FI, FTG, GH, HAC, HAJB, K, LE, MA, MO, MT, NY, P, S, U, UC, US and YU (all herbaria acronyms from Thiers 2016). I also reviewed all pertinent material in the National Herbarium of Cuba "Onaney Muñiz" of the Institute of Ecology and Systematics (HAC). All specimens cited were examined from high-resolution photographs except for those at HAC, which I examined in person.

There are many difficulties related to Wright's collections, especially with the precise identification of locations, collection dates, and species mixtures on the same specimen or with the same collection number (Howard (1988)). Aspects that we try to specify in this article.

For the typification of the names, I followed the recommendations of the International Code of Nomenclature for algae, fungi and plants (The Shenzhen code, Turland et al. 2018). Article 9.1 of the Code states that the holotype is “the one specimen or illustration (a) indicated by the author(s) as the nomenclatural type...; the holotype does not need to be explicitly designated, but article 8.3 explains that a specimen may be mounted as more than one preparation, as long as the parts are clearly labelled as being part of that same specimen, or bear a single, original label in common. Article 40.2 on Note 1 of the Code states that “when the type is indicated by reference to an entire gathering, or a part thereof, that consists of more than one specimen, those specimens are syntypes”. Article 9.17 states that “A designation of a lectotype, neotype, ... that later is found to refer to a single gathering but to more than one specimen must nevertheless be accepted . . . but may be further narrowed to a single one of these specimens by way of a subsequent neotypification or lectotypification...” Designation of a neotype or lectotype (first-step) that later is found to refer to a single gathering but to more than one specimen can be further refined by selecting one of them as the second-step neotype or lectotype.

Borhidi (1996) discussed and outlined the biogeography of Cuba, which we follow here. The geographical distribution information includes the country in uppercase letters, followed in alphabetical order by the province with the municipalities in parentheses. The biogeographical information includes the province in uppercase letters, followed by the subprovince and the corresponding sector, with the districts in parentheses. The origin of the information used for each municipality or district is denoted by adding the superscripts “^H” for herbarium specimen, “^R” for bibliographic reference, “^A” for author field observations, and “^P” for personal communications.

For *Acoelorrhaphe*, only the types collected in Cuba are and new distribution information are treated; the remainder of the information is available in Moya (2019).

Results and Discussion

Four Cuban *Acoelorrhaphe*, *Colpothrinax* and *Gaussia* taxa are listed and annotated, updating their nomenclature, taxonomy, types, and geographical and biogeographical distribution.



1. *Acoelorrhaphe wrightii*, in mixed-pine forest on white sands, Área Protegida Sabanalamar, Guane, Pinar del Río, Cuba. © 2017 Donald R. Hodel.

Acoelorrhaphe wrightii (Griseb. & H. Wendl.) H. Wendl. ex Becc. *Webbia* 2: 109 (1907). '*Acoelorrhaphe*'. **Fig. 1.**

≡ *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).

Type: CUBA. Matanzas province, Calimete municipality, Hanábana, 13 Mar. 1862, fl., *Wright 3217 p.p., emend. Moya* (lectotype, Moya 2019: 5, GOET 009313, GOET 009316, GOET 009317; isolectotype, GH 00028340).

= *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*'.

Type: CUBA. Isla de la Juventud municipality, near Nueva Gerona, Isla de Pinos, W.I., fl., 17 Apr. 1904, *Curtiss 449* (lectotype, Moya 2019: 10, M 0157947; isolectotypes, CM421986 [n.v.], FI052575 [frag.] ex M, GH 00028148, HAC!, LE 0000096, MO 104337, MO 104338, NY 1652557, US 00087439, US 00087440, VT 115377).

= *Acoelorrhaphe wrightii* f. *inermis* Hadač, *Folia Geobot. Phytotax.* 5: 432 (1970).

Type: CUBA. Pinar del Río province, Sandino municipality, Laguna Santa Bárbara, Guane, 14 Mar. 1968, *Hadač 1947* (holotype PR 925359, PR 925360; isotype HAC ex EEAB26892!).

Other heterotypic synonyms of *Acoelorrhaphe wrightii* not reported for Cuba are:

= *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), from USA.

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

= *Acanthosabal caespitosa* Prosch., *Gard. Chron.*, ser. 3, 77: 92 (1925), from Brazil, cultivated.

= *Acoelorrhaphe pinetorum* Bartlett, *Publ. Carnegie Inst. Wash.* 461: 33 (1935), from Belize.

= *Paurotis psilocalyx* (Burret) Lundell, *Wrightia* 2: 116 (1961).

≡ *Brahea psilocalyx* Burret, Notizbl. Bot. Gart. Berlin-Dahlem 11: 1037 (1934), from Belize (Moya 2019).

Synonyms cited by mistake for Cuba include *Acanthosabal caespitosa* Prosch. (Muñiz and Borhidi 1982) and *Paurotis androsana* O. F. Cook (Greuter and Rankin 2017).

Geographical Distribution. CUBA. Provinces Artemisa (Alquízar^A, Artemisa^H, Güira de Melena^P), Camaguey (Vertientes^R), Ciego de Ávila (Morón^A), Cienfuegos (Abreus^H, Aguada de pasajeros^A, Cienfuegos^H, Lajas^P, Rodas^P), Guantánamo (¿? San Antonio del Sur^P), Matanzas (Calimete^H, Ciénaga de Zapata^H, Martí^H), Mayabeque (Batabanó^H, Melena del Sur^P, Nueva Paz^P), Pinar del Río (Consolación del Sur^H, Guane^H, Los Palacios^H, Mantua^H, Minas de Matahambre^H, Pinar del Río, Sandino^H, San Juan y Martínez, San Luis^H and Viñales^H), Sancti Spiritus (La Sierpe^H, Yaguajay^P), Villa Clara (Sagua La Grande^R), and Isla de la Juventud^H municipality.

Biogeographical Distribution. CUBA province, Western Cuba subprovince, sectors Peninsularicum (Guanahacabibense^H, Zapatense^H), Pinaricum (Geronense^A, Indionense^R, Pinarense^H, and Sabaloense^H), and Rosaricum (Viñalense^R); Central Cuba subprovince: sectors Havanicum (Cascajalense^A and Casildense^H), and Camagüeyicum (Gibarense^A, Guaimarense^R, Sagüense^H); Eastern Cuba subprovince: sector Santiagicum (¿? Guantanamense^P).

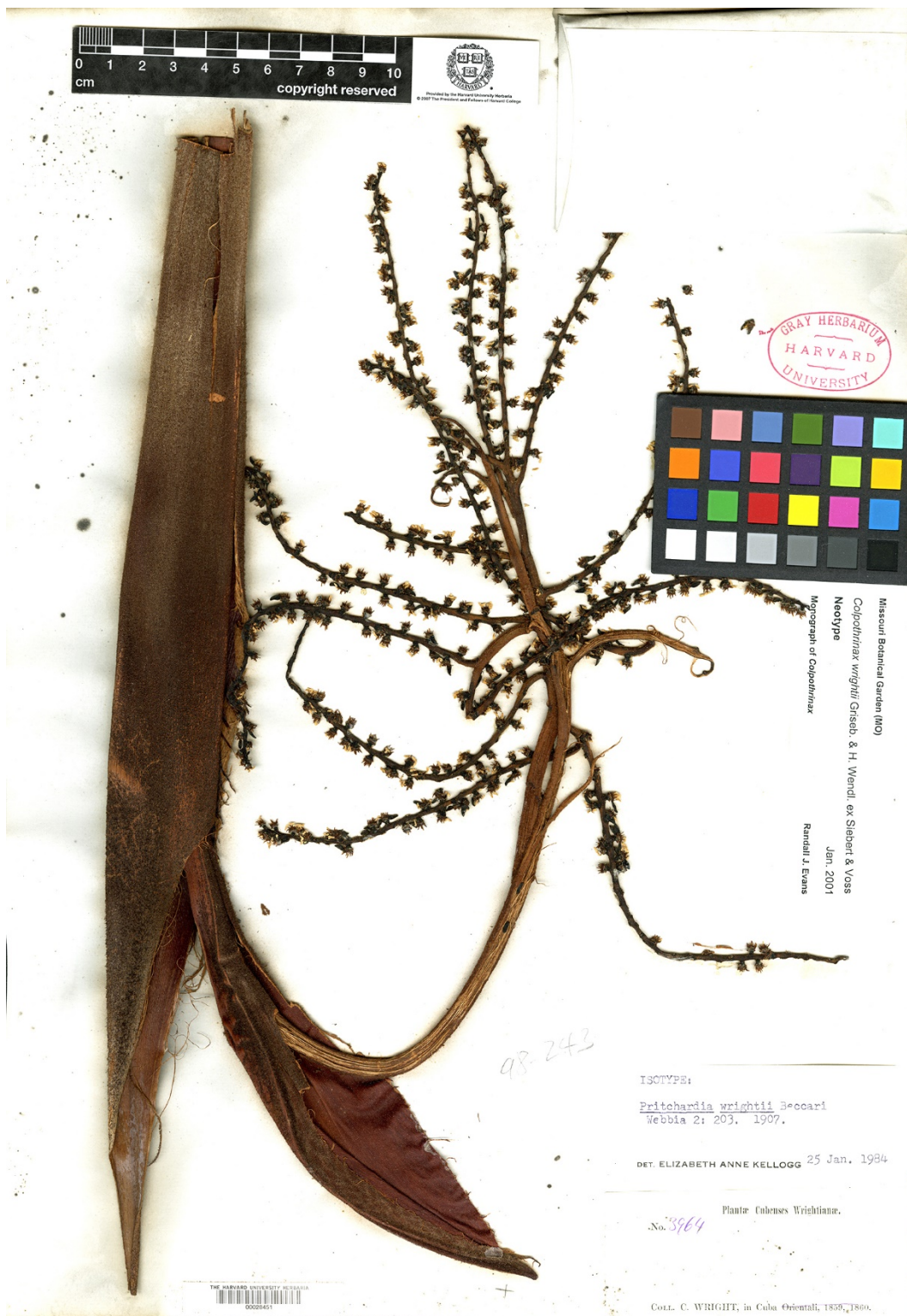
Colpothrinax wrightii Siebert & Voss, Vilm. Blumengärtn. ed. 3, 1: 1147 (1896).

‘*wrightii*’. **Figs. 2–3.**

≡ *Pritchardia wrightii* (Siebert & Voss) Becc., Webbia 2: 203 (1907).

Type. CUBA. [Pinar del Río province], [Sept. 1865 or 1866], fl. *Wright 3964* (neotype, [first-step]: Glassman 1972: 96, GH; neotype [second-step]: designated here, GH 00028451; isoneotypes: A 00028453, A 00028454, A 00028455, B [destroyed], BH ex B-photo [n.v.], BRU 00054034, BRU 00054035, F 0092035.1 F 0092035.2, F 0092035.3, F278818-photo [n.v.], F278819-photo [n.v.], F278820-photo [n.v.], FI052574 [frag.] ex B, GH 00028452, GH 00028456, HAC ex HABA!, K 000462844, K 000462845, K 000462846, K 000462847, MO ex GOET-photo [n.v.], NY 00071129, NY 00071130, NY 00071131, NY 00312170, NY 00312171, NY 00312172, P 00725575, P 00725576, P 00725577, US 00087423, US 00087424, US 00087425, US 00087426).

Geographical Distribution. CUBA. Province Pinar del Río (Consolación del Sur^H, Guane^H, Mantua^R, Minas de Matahambre^R, Pinar del Río^R, San Juan y Martínez^H, San Luis^H and Sandino^H, and Isla de la Juventud^H municipality (Urquiola et al. 2010).



2. The lectotype [second step], designated here, of *Colpothrinax wrightii* Siebert & Voss (GH00028451). © 2020 Gray Herbarium (GH) of the Harvard University Herbaria.



3. *Colpothrinax wrightii*, in pastureland, La Barbarita, km 110–120 W. of La Habana, Pinar de Río, Cuba. © 2016 Donald R. Hodel.

Biogeographical Distribution. Subprovince Western Cuba, sector Pinaricum (Geronense^H, Indiosense^H, Pinarense^H and Sabaloense^H) (Borhidi 1996).

Evans (2001) felt that when Glassman (1972) designated the GH specimens as types, he did so as neotypes; I consider Glassman's action as neotype [first-step], according to the current article 9.17 of the Shenzhen Code (Turland et al. 2018). Evans (2001) and Glassman (1972) both referred to a complete collection, thus creating syntypes, but Glassman's designation has priority. Here I designate GH00028451, as the lectotype [second-step] and designate as isolectotypes the 34 duplicates at A, BH, BRU, F, FI, GH, HAC, K, MO, NY, P, and US.

The authorship of *Colpothrinax wrightii* is complex and controversial; 12 different author citations have been published for the species. Sauvalle (1871) first used the name *Colpothrinax wrightii* Griseb. & H. Wendl., basing it on *Wright 3964*, but provided no description, diagnosis, or reference, which makes the name a *nomen nudum*, and invalid according to article 38.1 of the Shenzhen Code (Turland et al. 2018). This invalid name has continued to be used erroneously as a basionym for *C. wrightii*.

A few years later, Schaedtler (1875) provided the following description for *Colpothrinax wrightii*: “Wright’s palm. Is present as a seedling, with long and very narrow, slightly drooping leaf tips in a fine fan-shape, of seedling it already has a strong petioles.” Schaedtler’s description does not provide any distinguishing characteristic of the palm in question; a palm “with long and narrow fan-shaped leaves” could refer to nearly any palmate-leaved palm. This description is of purely esthetic characteristics that does not allow for differentiation from other palm species; thus, it does not comply with the requirements of article 38.1 of the Shenzhen Code (Turland et al. 2018) and, as such, is not validly published according to article 38.3 of the Shenzhen Code (Turland et al. 2018). At the time, herbarium specimens of *C. wrightii* already existed in Germany and neighboring countries. Schaedtler’s only words associated with the species were “Wright’s palm,” a name that Sauvalle (1871) had already used. Quattrocchi (2017), Palmweb (2020), GBIF (2020), Govaerts et al. (2020), and IPNI (2020) incorrectly linked *C. wrightii* Schaedtler with *C. wrightii* Siebert & Voss.

Siebert and Voss (1895) published the first valid combination of *C. wrightii*, attributing it to Griseb. & H. Wendl., which could not be used as a basionym because, as explained earlier about Sauvalle (1871), it was without description or diagnosis and, thus, is a *nomen nudum* and precluded from such use. Siebert & Voss (1895) offered a brief but qualifying, diagnostic description of the species, noting that a central rib (costa) separated the leaf blade segments and did not terminate in a thread and the petiole was flattened adaxially, which distinguished it from *Sabal*, and that the numerous segments ended in long, pointed, forked tips, thus, validating the name; however, they did not refer to the original material on which they based their description, which invalidated and precludes it as a lectotype according to article 9.3 of the Shenzhen Code (Turland et al. 2018). Moore (1963), Glassman (1972), Henderson et al. (1995), Moya and Leiva (2000), Evans (2001), and Tropicos (2020) accepted *C. wrightii* Griseb. & H. Wendl. ex Siebert & Voss. while Govaerts and Dransfield (2005), Bisby et al. (2010), Greuter and Rankin (2017), EOL (2020), and The Plant List (2020) accept *C. wrightii* Griseb. & H. Wendl. ex Voss.

Beccari (1907) transferred *Colpothrinax wrightii* to *Pritchardia*, making *P. wrightii* and expanded the description of the species (Beccari 1913, 1931, Beccari and Rock 1921). Burret (1929) and Dahlgren (1936) cited the authorship incorrectly as *Pritchardia wrightii* (Griseb. & H. Wendl.) Becc.

Bailey (1940) and Hawkes (1949) incorrectly cited the authorship as *Colpothrinax wrightii* H. Wendl. ex Bailey while Acevedo-Rodríguez and Strong (2012) cited it as *C. wrightii* Griseb. & H. Wendl. ex Voss in Kerch. IPNI (2020) listed *C. wrightii* Griseb. & H. Wendl. ex Siebert & Voss, (Vilm. Blumengärtn., ed. 3. 1: 1147. 1895.) as an incorrect author citation.

The author citation of *Colpothrinax wrightii* refers to Vilmorin's *Blumengärtnerei...* edition 3; according to TL-2, it was published in two volumes in October 1896. Considered to be a practically new work, it is unconfirmed that the species was previously listed in Fascicle 1 (2) of the unavailable edition of 1895; therefore, the year should be cited as 1896.

No precise information of the locality or of the collection date exists; it is estimated to be between 1865 and 1866 (Howard 1988).

In summary, the following names are *nomen nudum* and/or incorrect citation of author(s):

Colpothrinax wrightii Griseb. & H. Wendl., in Sauvalle, *Anales Acad. Ci. Med. Habana* 7: 563. 1871, *nom. nud.* Sauvalle (1873), Kerchove (1878), Salomon (1887), Gómez de la Maza (1889 and 1893), León (1946), and Muñiz and Borhidi (1982) also list the name as a *nomen nudum*.

Colpothrinax wrightii Schaedtler, in Otto, *Hamburger Garten- Blumenzeitung* 31: 160. 1875. Quattrocchi (2017), Palmweb (2020), GBIF (2020), and Govaerts et al. (2020) list it as not validly published.

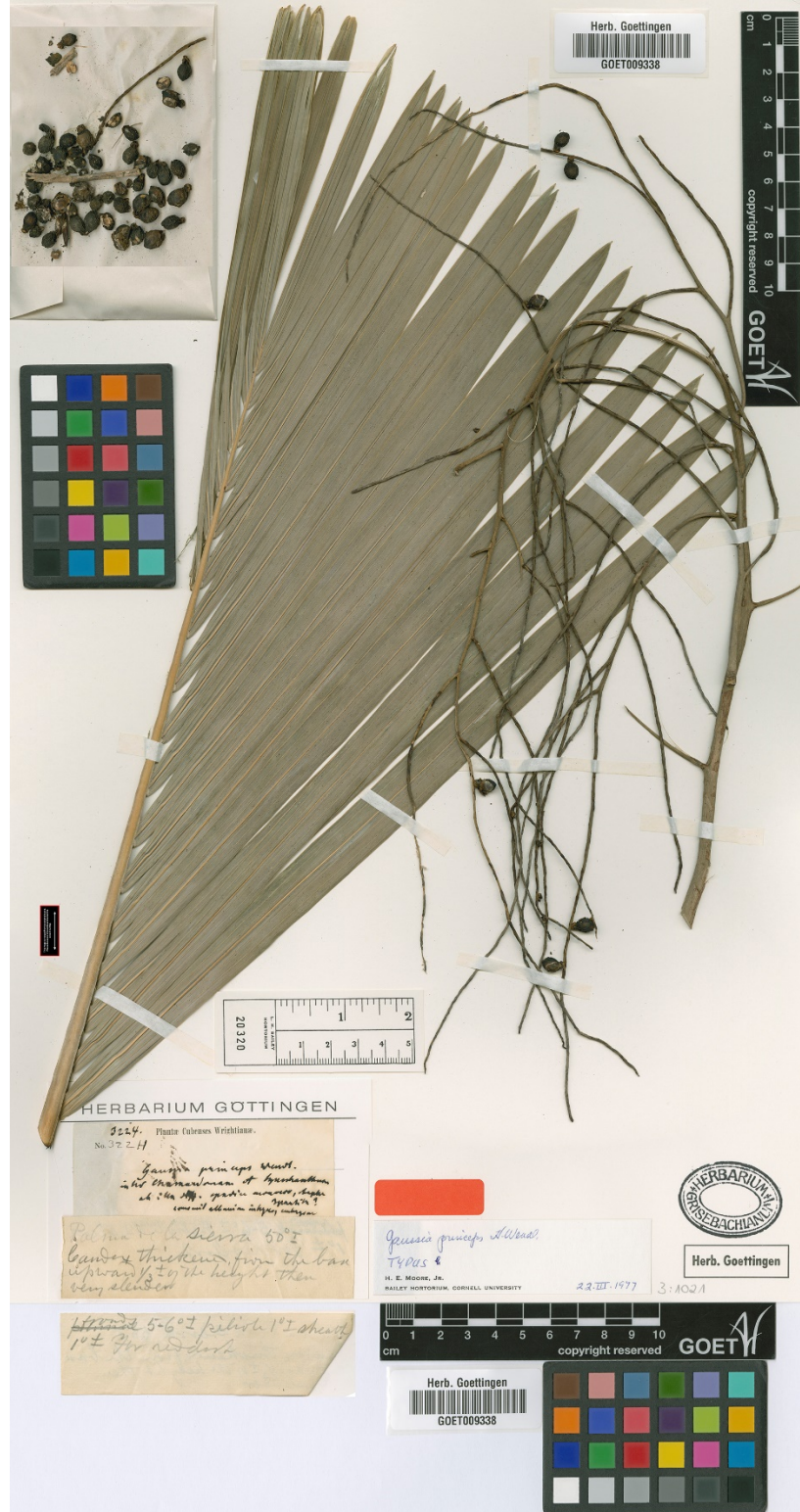
Colpothrinax wrightii Griseb. & H. Wendl. ex Siebert & Voss, in Siebert & Voss, *Vilm. Blumengärtn.*, ed. 3. 1: 1147. 1895. Moore (1963), Glassman (1972), Henderson et al. (1995), Moya and Leiva (2000), Evans (2001), IPNI (2020), and Tropicos (2020) list it as an incorrect author citation.

Colpothrinax wrightii Griseb. & H. Wendl. ex Voss, in Siebert & Voss, *Vilm. Blumengärtn.*, ed. 3. 1: 1147. 1895. Govaerts and Dransfield (2005), Bisby et al. (2010), Greuter and Rankin (2017), EOL (2020), and The Plant List (2020) list it as an incorrect author citation.

Pritchardia wrightii (Griseb. & H. Wendl.) Becc., in Beccari, *Webbia* 2: 203. 1907. Burret (1929) and Dahlgren (1936) list it as an incorrect author citation.

Colpothrinax wrightii H. Wendl. ex Bailey, in Bailey, *Hortus*: 166. 1930. Bailey (1940) and Hawkes (1949) list it as an incorrect author citation.

Colpothrinax wrightii Griseb. & H. Wendl. ex Voss, in Kerch., *Palmiers*: 24. 1878. Acevedo and Strong (2012) list it as an incorrect author citation.



4. The holotype specimen of *Gaussia princeps* H. Wendl. (GOET 009338). © 2020 Göttingen University Herbarium (GOET).



5. *Gaussia princeps*, on limestone hill, Finca El Mogote, Viñales, Pinar del Río, Cuba. © 2017 Donald R. Hodel.

Gaussia princeps H. Wendl., Nachr. Königl. Ges. Wiss. Georg-Augusts-Univ. 1865: 328 (1865). **Figs. 4–5.**

Type. CUBA. [Pinar del Río province], ft., [1862–1863], *Wright 3224*, (holotype, GOET 009338; isotypes: A 00549112, A 00549113, BM 000839370, BRU 00055646, BRU 00055647, F 0075059, F 0075060, FI 052580 [frag.] ex B, GH 00549110, GH 00549111, K 000462913, K 000462914, NY 00023754, NY 00023755, NY 1662663, P 0025355, P 01794808, US 00087562, US 00087563).

In the protologue of *Gaussia princeps*, Wendland (1865) designated *Wright 3224* as the type of the genus *Gaussia* and the species *G. princeps*. According to Note 1 of article 9.1 of the Shenzhen Code (Turland et al. 2017) GOET 009338 is the holotype because Wendland used only one specimen, uncited, when preparing the account of the new genus and species. The remaining 19 duplicates at A, BM, BRU, F, FI, GH, K, NY, P, and US, are isotypes. Wright wrote the vernacular name "*palma de sierra*" on the holotype label at GOET.

The designations made by Quero & Read (1986) and deposited at US and Glassman (1972) deposited at GH of *Wright 3224* as type material are void, as is the tag Moore left in 1977 on the *Wright 3224* specimen at GOET.

No precise information of the locality or of the collection date exists but is estimated to be between 1862 and 1863 (Howard 1988).

Beccari (1911) treated *Gaussia splendens* as a Cuban palm, without description or diagnosis, making it a *nomen nudum*. Later Beccari (1912) cited it as a synonym of *G. princeps*.

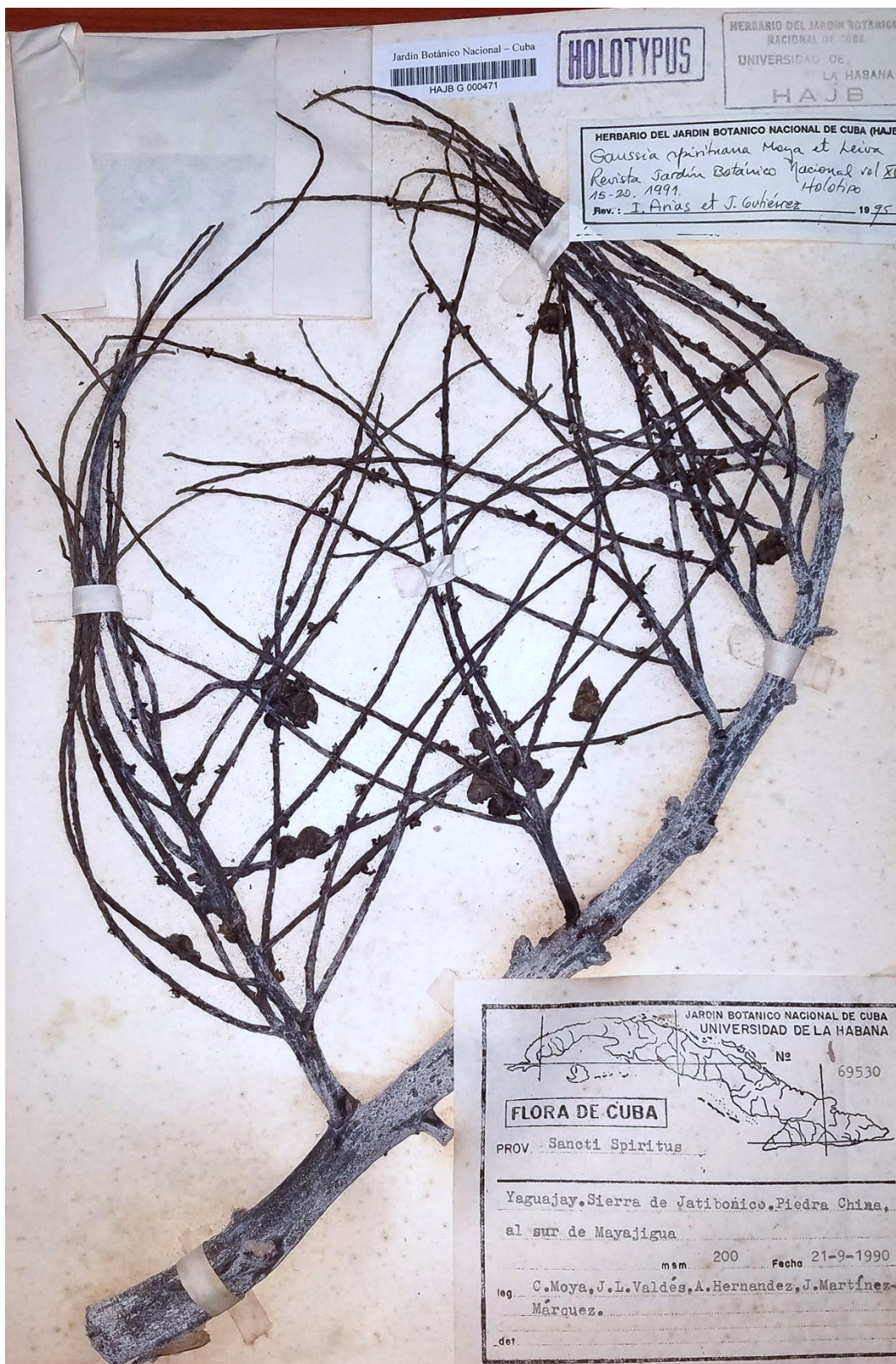
Geographical Distribution. CUBA. Province Pinar del Río (Guane^R, Minas de Matahambre^H, Viñales^H, La Palma^R and Los Palacios^H) (Urquiola et al. 2001).

Biogeographical Distribution. Subprovince Western Cuba, sector Rosaricum (Rosariense^H and Viñalense^H) (Borhidi 1996).

The following name is a *nomen nudum*:

Gaussia splendens Becc., in Beccari, Ann. Roy. Bot. Gard. Calcutta 12: 9. 1911, *nom. nud.*

Gaussia spirituana Moya & Leiva, Revista Jard. Bot. Nac. Univ. Habana 12: 16 (1991 publ. 1993). **Figs. 6–7.**



6. Lectotype [second step], designated here, of *Gaussia spirituana* Moya & Leiva (HAJB 000471). © 2020 Herbario del Jardín Botánico Nacional de Cuba (HAJB), Universidad de La Habana).



7. *Gaussia spirituana*, on limestone hill, type locality, Piedra China, Yaguajay, Sancti Spíritus, Cuba. © 2017 Donald R. Hodel.

Type. CUBA. Sancti Spíritus province, Yaguajay municipality, Piedra China, al sur de Mayajigua, Sierra de Jatibonico, Yaguajay, 200 m, fl., ft., 21 Sep. 1990, *Moya, Valdés, Hernández, and Martínez-Fortún s.n.* (lectotype [first-step]: Moya et al. 1993: 17, HAJB; lectotype [second-step]: designated here, HAJB 000471; isolectotypes, HAJB 000470, HAJB 000472, HAJB 00473, HAJB 000474, HAJB 000475, HAJB.1, HAJB.2, HAJB.3, HAJB.4, HAJB.5, HAJB.6, HAJB.7, HAJB.8, HAJB.9, HAJB.10, HAJB.11, HAJB.12, HAJB.13, HAJB.14, HAJB.15, HAJB.16, HAJB.17, HAJB.18, HAJB.19, HAJB.20, HAJB.21, HAJB.22, HAJB.23).

Moya et al. (1993) designated *Moya, Valdés, Hernández, and Martínez-Fortún s.n.* as the type of *Gaussia spirituana* at HAJB. In doing so he referred to a complete collection, thus creating syntypes. Gutiérrez et al. (1997) did the same, relating as the holotype all duplicates of *Moya, Valdés, Hernández, and Martínez-Fortún s.n.* at HAJB. The designation of Moya et al. (1993) is now considered as lectotypes [first-step]. Here I designate HAJB 000471 as the lectotype [second-step] and designate as isolectotypes the 28 duplicates at HAJB.

Geographical Distribution. CUBA. Provinces Ciego de Ávila (Florencia^R) and Sancti Spíritus (Yaguajay^H).

Biogeographical Distribution. Subprovince Central Cuba: sector Camagüeyicum (Sagüense^H).

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