MANIPULUS RUBIACEARUM - V. A REVISION OF THE GENUS Capirona.

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SUMMARY

The taxonomic history of the genus **Capirona** *is presented. Complete synonymies, descriptions, common names, distributions and discussions are given for* **Capirona** *and its two species* **C. descorticans** *and* **C. leiophloea**. *The generic distribution is the Amazon valley and eastern Guianas and coincides with that of the genus* **Hevea**. **C. descorticans** *is known from the western and southeastern Amazon valley;* **C. leiophloea** *is reported from the eastern Guianas and the northeastern Amazon valley. The zone of contact between the two species is along the southern edge of the Amazon River and the lower drainage of the Rio Tapajoz in Pará, Brazil.*

Taxonomic History

Capirona was published by Spruce based on a collection made in the area of Tara - poto, Peru, in 1855. The generic name is the common name used in that region for the type species. During 1859, Spruce was traveling in the central Andian valleys of Ecuador (Spruce, 1970) when **Capirona** was published in London (Spruce, 1859). Therefore he had recognized his collection as a new genus in the field and prepared the description in Peru.

A year later, Karsten (1860) presented the same genus again as **Monadelphanthus** based on a collection made in the llanos of eastern Colombia. His generic epithet describes the basal connation of the filaments.

In volume I of **Index Kewensis** (Jackson, 1893) **Capirona boiviniana** Baillon (1880) is listed. Baillon (1880) published the new genus **Pleurocoffea** with a single new species, **P. boiviniana**. After comparing **Capirona** to **Pleurocoffea**, he mentions "**C. boiviniana**", an obvious typographic error, which was picked up by the compliers of **Index Kewensis** as a new species of **Capirona**.

In 1912 while conducting studies of areas in which Brazil-nuts were collected near the Rio Trombetas, Brazil, Adolpho Ducke discovered the second species of **Capirona**

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(Ducke, 1913). Unfortunately he presented the new species as a **nomen nudum**, **C. ducke**i Huber **in** Ducke (1913). After making two additional collections of the species in 1918 and 1922, he validly published it as **C. huberiana** (Ducke, 1922).

In 1914, Benoist collected the same species in French Guiana, but his collection was sterile. In 1920, M. Wachenheim, supervisor of the penal administration in French Guiana, collected the species with flowers in the vicinity of the penal encampment at Godebert. Benoist (1921) then used both collections as the basis of his new species **C. leiophloea** which has priority over that of Ducke.

In the preparation of the Rubiaceae for the **Flora of Suriname** (Bremekamp, 1934a), Bremekamp (1934b) presented the necessary taxonomic changes and novelties in an extensive prior publication. Among the novelties is a new species of **Capirona**, **C. surinamensis**. He felt that it showed a strong resemblance to **C. leiophloea**, but he was unable to obtain the original description of **C. leiophloea**. If he had been able to see it, I am confident that he would not have published his species which is, in my opinion, a taxonomic synonym of **C. leiophloea**.

In 1936, Standley (1936a) presented the new Peruvian genus **Loretoa** and its single new species, **L. peruviana**. It is prophetic that Standley states, "The writer takes no particular pride in describing this tree as a new genus ..." This is without doubt the third naming of the genus. He unfortunately had a specimen with only a single very small foliar calyx lobe which he apparently overlooked.

In 1940, Standley published a new species of **Capirona**, **C. erythroxylon**, based on a collection made by Ruiz and Pavon in Peru in 1800. He was overimpressed by the foliar calyx lobe and failed to examine the flowers in detail. If he had, he would have discovered that their aestivation is valvate and the locules contain many small, horizontally attached ovules. This species is a member of the genus **Pogonopus** Klotzsch.

The last species of **Capirona**, **C. wurdackii**, was presented by Steyermark (1964) in the "Botany of the Guayana Highlands." He distinguished his species from **C. decorticans** by its shorter, pink-colored corollas, more broadly infundibuliform limb of the carolla, longer foliar calyx lobe, shorter style, rounded calyx lobes and somewhat shorter stipules. When **C. wurdackii** is compared with specimens from the entire known range of **C. decorticans**, it is obvious that these "differential" characteristics occur sporadically throughout the latter species. **Capirona wurdackii** is a local variation which has brought these characteristics together, but it does not merit, in my opinion, formal taxonomic recognition as a species.

Capirona is presented here as comprising two species, **C. decorticans**, the type, and **C. leiophloea**.

Capirona Spruce, J. Proc. Linn. Soc., Bot. 3: 200. 1859. Type: **C. decorticans** Spruce. (Figs. 2, 3, 4).

Monadelphanthus Karsten, Fl. columb. 1: 67, **t. 33**. 1860.

Type: **M. floridus** Karsten.

Loretoa Standley, Field Mus. Nat. Hist., Bot.Ser. 11:221. 1936. Type: **L. peruviana** Standl.

Trees without raphides, glabrous or with various organs sericeous, the branches terete; stipules intrapetiolar, persistent; leaves opposite, petiolate, the petiole terete and abaxially canaliculate to weakly so, with the blade varyng from moderate to large in size, with those subtending inflorescences significantly smaller than those not subtending inflorescences; inflorescences terminal and axillary reduced thyrses, sessile or pedunculate, with the peduncle terete, with one bract subtending each branch; flowers pedicellate to subpedicellate, the pedicel terete, with 1 or 2 bracts subtending each flower, the calyx tubular with the tube campanulate, with 5 lobes, sometimes with one lobe expanded into a large brightly colored foliar organ with a pseudopetiole and a pseudoblade, with the pseudoblade elliptic, attenuate at the base, obtuse at the apex, with 4 or 5 acrodromus primary veins, the corolla glabrous with a sericeous band internally at the level of stamen separation, with the aestivation dextrose contorted, with the tube plicate in bud with 15 folds, after expansion strongly infundibular, with 5 lobes, the stamens with the filaments connate near their base and separating from the corolla tube near its base, with the included anthers basifixed, narrowly oblong, the disk cup-shaped or rarely circular, the style terete, in the bottom of the disk or its center, the stigma included bilobate, the 2 locules turbinate, the placenta narrowly turbinate, afixed to the center of the septum, with numerous vertically imbricate peltate ovules, the ovules elliptic or obovate; fruits capsular, turbinate, speticidal, crowned with the persistent calyx, the numerous seeds biwinged, narrowly elliptic, with the apices of the wings obtuse or irregular, the testa cells rectangular to rarely elliptic, with the walls thick, with large circular pits in the internal wall.

Distribution

The genus **Capirona** is known to occur in the Amazon valley, the llanos of Colombia and the eastern Guianas (Fig. 1). It is a typical element of the flora of the Amazon basin and defines its limits as does the genus **Hevea** (Ducke & Black, 1953, 1954). **Capirona decorticans** is found in the western end of the Amazon valley, both north and south of the Amazon River, reaching as far as the gallery forests in the llanos of Colombia where they meet the Andes. To the north, it has been collected along the Casiquiare canal and once in the very uppermost reaches of the Rio Orinoco heawaters. In the eastern end of the Amazon in the state of Pará, Brazil, it is a found only south of the Amazon River.

The other species of **Capirona**, **C. leiophloea**, is found in the eastern Guianas, that is Suriname and French Guiana, and extends southward into the state of Pará, Brazil. It occurs both north and south of the Amazon River, and south of the river, it has been more frequently collected in the lower drainage of the Rio Tapajoz.

Taxonomic Position

When Spruce (1857) presented the genus **Capirona**, he placed it in family Rubiaceae tribe Cinchoneae, and it has remained there ever since (Hooker, 1873; Baillon,1881;Schumamm, 1889, 1891; Wernham, 1916; Standley, 1930,1936b: Bremekamp, 1934a; Steyermark,1974). It has been maintained in the tribe based on its lack of raphides, contorted corolla aestivation, biloculate ovary, placenta affixed to the center of the septum, numerous vertically imbricate ovules, capsular fruit, numerous biwinged seeds, and testa cells with numerous large pits in the internal wall (Fig. 2). Even in the newest classifications (Verdcourt, 1958; Bremekamp, 1966) of the Rubiaceae, it will continue in tribe Cinchoneae.

Within Cinchoneae, **Capirona** has always been associated with those genera that have contorted aestivation of the corolla and one calyx lobe sometimes expanded into a large colored foliar organ, **Schizocalyx** Wedd. and **Calycophyllum** DC. (Hooker, 1873; Schumann, 1891; Wernham, 1916; Standley, 1930). It is easily distinguished from these genera by its intrapetiolar stipules, lobate calyx and connate stamens.

Key to the Species of Capirona

1. Trees with all organs glabrous; Amazonian Colombia, Ecuador, and Peru, the uppermost headwater of the Rio Orinoco, Venezuela, and Amazonias, Acre, Rondônia and southern Pará, Brazil.

C. decorticans

1. Trees with various organs densely to sparsely sericeous or glabrate; Suriname, French Guiana and Pará, Brazil.

C. leiophloea

Capirona decorticans Spruce, J. Proc. Linn. Soc., Bot. 3: 200. 1859. Type: **Spruce 4202**, Oct 1855, Tarapoto, San Martín, Peru (holotype: K; isotypes; F, K, NY, P). (Figs. 2,3).
Monadelphanthus floridus Karsten, Fl. columb. 1:67, t. 33. 1860. Type: **Karsten sn**, Jiramene Caño Giramena, Llano de San Martín, Meta, Colombia (lectotype: W; isotype: LE).
Loretoa peruviana Standl., Field Mus. Nat. Hist., Bot. Ser. 11:222. 1936. Type: **Klug 2022**, Mar-Apr 1931, Florida, Rio Putumayo, at the mouth of the Rio Zubineta (holotype: F).
Capirona wurdackii Steyerm., Mem. New York Bot. Gard. 10:190. 1964. Type: **Wurdack & Adderley 43383**, Caño Duquiapo, Rio Casiquiare, 2 km above Solano, Amazonas, Venezuela (holotype: NY; isotypes: F, K, NY, P, SP, U, VEN).

Trees 7-33 m tall with a trunk diam. of 10-35(-100) cm, glabrous; stipules ovate or rarely elliptic, acute to narrowly so or rarely narrowly acuminate at the apex, 1.5-4.5(-8) x 0.6-2.2(-2.5) cm; leaves subtending the inflorescences slightly smaller than those which do not, with the petiole 1-3 cm long, with the blade elliptic, cuneate or attenuate or obtuse at the base, acuminate or acute at the apex, 11-41x6-24cm, 1.5-2

times longer than wide, with (6-)7-10(-17) arcuate secondary nerves on each side of the midrib, the midrib and nerves subprominent above and prominent beneath; inflorescences 7-20 x 10-30 cm, with 25-150 flowers, with 1-6 flowers or rarely none with an enlarged foliar calyx lobe, with the peduncle 5-8 cm long, with 2-3 pairs of lateral branches 3-10 cm long, with one bract subtending each branch, the bracts ovate or elliptic, acute or acuminate at the apex, 0.6-3 x 0.4-1 cm; flowers with the pedicel 2-7 mm long, with 1 or 2 bracts subtending each flower, the bracts ovate, acute at the apex, 3-4.5x2-3mm, with the hypanthium turbinate, 5-6 mm tall, 3-4(-5) mm in diam., the calyx with the interior sericeous, with the tube (1-)3-5 mm tall, (5-)7-11 mm in diam. at the orifice, with the lobes very broadly acute or rarely very broadly obtuse, 0.5-3 x 3-5 mm, with the foliar lobe red, with the pseudopetiole 2-4 cm long, with the pseudoblade 4-8.5 x 2.5-5cm, the corolla tube white to pink, 20-35 mm long, with the lobes white to pink, ovate to broadly so, obtuse at the apex, 11-15 x 8-15 mm, the stamens separating from the corolla tube 2-3 mm from the base, connate for 4-6 mm from their base, with the free portion 9-14 mm long, with the anthers 6-9 mm long, the disk circular or cup-shaped up to 2 mm in diam. and depth, the style 5-8 mm long, the stigma lobes ovate, obtuse at the apex, 2 x 0.5 mm, the locules 3.5-4.5 mm tall, 1-1.5 in diam., the placenta 3-4 mm tall, ca 0.5mm in diam., with the sub-basally peltate ovules elliptic or obovate with the apex truncate to subtruncate, 0.6-0.8 x 0.5 mm; fruits 2-3.5 cm tall including the calyx, 0,8-1cm in diam., the seeds 6-8 x 1-2 mm, the testa cells rectangular to elliptic, 104-301($\bar{x}$=186) µm long, 36-75($\bar{x}$=61) µm wide, with the walls 6-7 µm thick, with 14-34 large pits in the internal wall, the pits (5-)12-32($\bar{x}$=17) µm in diam.

Specimens examined. COLOMBIA. Meta: La Serranía, Llano Grande, 26 Nov 1939, **Cuatrecasas 7890** (COL, F); Llano de San Martín, **Triana 1791** (3264.1) (COL, F, P). Vichada: ca 10 km W of Las Gaviotas along road to Puerto Gaitán, 180 m, 30 Dec 1973, **Davidse & Llanos 5337** (COL, MO). VENEZUELA. Amazonas: Cerro Sipapo (Paráque), 25 Jan 1949, **Maguire & Politi** 28613 (NY). FRENCH GUIANA. Vallée encaissée de la crique Parépou, sur des collines à environ 18 km de son confluent, 23 Sep 1968, **Oldeman 2852** (NY); pied du saut Couéki, riv. Yaroupi, affluent de l'Oyapock, 10 Apr 1970, **Oldeman 3065** (NY). ECUADOR. Pastaza: Tzapino, 23 May 1976, **Oldeman & Arevalo 47** (US). PERU. Loreto: Varadero-Mazán, distrito Mazán, provincia Maynas, 1 Feb 1963, **Arostegui 90** (F); Varadero Amazonas, Mazán distrito Mazán, provincia Maynas, 22 Jun 1963, **Arostegui 107** (F); trail from caserio of San Andrés, Rio Momon, tributary of Río Nanay, distrito Iquitos, provincia Maynas, 29 Mar 1977, **Rimachi 2936** (F); campamento del Bosque Nacional Alexander von Humboldt, distrito Callería, provincia Coronel Portillo, 23 Feb 1972, **Schunke 5275** (F). San Martín: Tarapoto, Dec 1929, **Williams sn** (F). BRAZIL. Amazonas: Maraã, Rio Japurá, 18 Apt 1970 **Albuquerque & Lima** 335 (INPA); Manaus-Caracaraí Road, km 148, 27 Sep 1973, **Berg, Bisby, Steward & Ramos** P18134 (INPA, K, MO, NY, U); south Alalau river, entre o Amazonas e Território Roraima, 26 Feb 1968, **Boyan 269** (INPA); estrada Manaus-Itacoatiara, km 118, Jul 1976, **Coêlho 798** (INPA); Tabatinga, 8 Mar 1944, **Ducke 1556** (F, K, NY); Cucuhy, Rio Negro, 26 Sep 1935, **Ducke 35060** (F); Marará, Padauiry, Rio Negro, 4 Oct 1947, **Fróes** 22511

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(IAN, U); Reserva Florestal Ducke, Manaus, 5 Jun 1964, **Rodrigues & Loureiro 5838** (INPA, RB); São Gabriel, Rio Negro, 8 Mar 1975, **N. T. Silva 3755** (IAN). Pará: Santarém, Curuá-Una (Barreirinha), 17 Oct 1964, **Campbell & Osmarino sn** (INPA); Boa Vista, 8 Mar 1933, **Capucho 550** (F); Juruty Velho, 28 May 1927, **Ducke 21685** (K, P, U); Rio Vermelho, 23 Apr 1961, **Fróes 26982** (IAN, U, UB); serraria, Serra dos Carajás, Marabá, 1 Apr 1977, **Silva & Bahia 2990** (UB); entrada da estrada para a serraria, Serra dos Carajás, Marabá, 5 Apr 1977, **Silva & Bahia 3042** (UB). Acre: Colonia Dias Martins, Rio Branco, 12 Feb 1962, **Vasconcelos & Coêlho sn** (INPA). Rondônia: Porto Velho (Rio Madeira), 9 Jan 1930, **Ducke 22844** (K, P); Cachoeira de Santa Cruz, Rio Jamari, 28 Jun 1965, **Pires & Martin 9950** (NY, RB, UB); 1km south of Riberão, road Abunã-Guajará-Mirim, 27 Jul 1968, **Prance, Forero, Wigley, Ramos & Farias 6564** (F, INPA). Mato Grosso: Dardanelos, estrada Santa Elena, Rio Aripuanã, 16 Jun 1974, **Cordeiro 122** (IAN, NY); Aripuanã, 20 Aug 1976, **Gomes & Miranda 216** (INPA), 14 Mar 1977, **Gomes, Miranda & Oliveira 946** INPA); Aripuanã, próximo ao Aeroporto, 24 May 1976, **Monteiro, Leite & Andrade 1043** (INPA); margem direita do Rio Juruena, arredores do campo de aviação, 28 Jun 1977, **Rosa & Santos 2190** (INPA, MO, NY, RB); estrada para Aripuanã, Fontanilha, Aripuanã, Rio Juruena, 30 Jun 1977, **Silva & Maria 3234** (MO, NY, UB). Common names. COLOMBIA: Palo de indio. ECUADOR: Oyuwãe. PERU: Capirona, Capirona de altura, Capirona negro, Meta guais, Meto huayo. BRAZIL: Mulateiro, Pau mulato.

Discussion. **Oldeman 2852** and **3065**, both sterile, have been identified as **C. decorticans** on the basis of their totally glabrous condition. They have the largest stipules known in the genus, up to 8 cm long and 2.5 cm wide. Flowering collections are needed to confirm without doubt, the presence of **C. decorticans** in French Guiana.

Capirona leiophloea Benoist, Bull. Mus. Hist. Nat. (Paris) 27: 367. 1921. Types: **Wachenheim 215**, 20 Dec **1920, environs du camp de Godebert**, French Guiana (lectotype: P; isolectotypes: F, K, P); **Benoist 1192**, 8 May 1914, Saint Jean du Maroni, French Guiana (paratypes: P). (Figs. 2, 4).

Capirona Duckey Huber in Ducke, Bol. Mus. Paraense Hist. Nat. 3:185. 1913. **Nom. nud.**

Capirona huberiana Ducke, Arch. Jard. Bot. Rio de Janeiro 3:257. 1922. Types: **Ducke 11865**, 29 Jun 1912, entre os Rios Cuminá-mirim e Ariramba, Rio Trombetas, Pará, Brazil (lectotype: RB; isolectotypes: F, P); **Ducke 10468**, 12 Oct 1922, Bella Vista, Rio Tapajoz, Pará, Brazil (paratypes: RB, U); **Ducke 17126**, 18 Jul 1918, perto de Cachoeira Terminal, Alto Ariramba, Rio Branco - Óbidos, Pará, Brazil (paratypes: F, P. RB).

Capirona surinamensis Brem., Recueil Trav. Bot. Néerl. 31:261. 1934. Types: **Forest Bureau 1829** (tree no. 710) 9 May 1916, Bosch forest reserve, sectie O, Suriname (lectotype: U, isolectotypes: K); **Forest Bureau 1141** (tree no. 710) 8 Nov 1916 (paratype: U), **2100** (tree no. 1115) 18 Jul 1916 (paratype: MO, U), **2407** (tree no. 106) 13 Nov 1916 (paratype: U), **2416** (tree no. 710) 6 Sep 1916 (paratype: U), **4246** (tree no. 106) 13 Feb 1919 (paratype: U), **4397** (tree no. 106) 3 Nov 1919 (paratypes: K, NY, RB, U), Bosch forest reserve, sectie O, Suriname.

Trees 11-32 m tall with a trunk diam. of 20-45 cm, the branches sparsely sericeous when very young and then glabrate to glabrous; stipules ovate or elliptic to narrowly so, acute at the apex, 2.5-5 x 1-1.6 cm, with the abaxial surface sparsely sericeous, with the adaxial surface with a few appressed hairs; leaves of vegetative branches with the petiole 2-2.5 cm long, sparsely sericeous, with the blade elliptic or obovate to narrowly so, obtuse or cuneate at the base, broadly acute or acuminate or obtuse at the apex, 22-40 x 8-22 cm, 1.5-3.3 times longer than wide, glabrous or glabrate above and sparsely sericeous or with a few appressed hairs below, with (10-)12-24 arcuate secondary nerves on each side of the midrib, the midrib and nerves plane above and prominent beneath, the leaves of fertile branches with the petiole terete, 0.5-1.5 cm long, sparsely sericeous, with the blade narrowly to broadly elliptic, obtuse or rarely cordate at the base, broadly acute or obtuse at the apex, 5-15 x 2-8.5 cm, 1.2-2 times longer than wide, glabrous or glabrate above and sparsely sericeous beneath, with 5-9 arcuate secondary nerves on each side of the midrib, the midrib and nerves plane and subprominent to prominent beneath; inflorescences 9-25 x 12-30 cm, with (10-)25-100 flowers, with 1 or 2 flowers or rarely none with an enlarged foliar calyx lobe, with the peduncle 6-8 cm long, sparsely sericeous, with 2-5 pairs of lateral branches 2.5-15 cm long, sparsely sericeous, with the one bract subtending each branch ovate, acute at the apex, 1.2-2 x 0.5-0.8 cm, with the abaxial surface glabrate to sparsely sericeous, with the adaxial surface glabrous to glabrate; flowers with the pedicel 2-7 mm long, glabrate to sparsely sericeous, with one bract subtending each flower, the bract broadly ovate, acute at the apex, 4.5-6.5 x 3-5 mm, with the abaxial surface glabrate to sparsely sericeous, with the adaxial surface glabrous to glabrate, with the hypanthium fusiform, 4-7 mm tall, 3-4 mm in diam., sericeous, the calyx with the exterior sericeous to weakly so, with the interior densely sericeous, with the tube 4-6 mm tall, 7-10 mm in diam. at the orifice, with the lobes very broadly acute or very broadly obtuse, 1-2 x (3-)4-7 mm, with the foliar lobe with the pseudopetiole 1-4.5 cm long, sparsely sericeous to glabrate, with the pseudoblade 2.5-7 x 1-4 cm, glabrate above, sparsely sericeous below, the corolla tube 25-30mm long, with the lobes circular, obtuse at the apex, 10-13 x 10-13 mm, the stamens separating from the corolla tube 3 mm from the base, connate for 5-6 mm from their base, with the free portion of the filaments 10-12 mm long, with the anthers ca 8 mm long, the disk cup-shaped, 1.5 mm in diam. and depth, the style 9 mm long, the stigma lobes elliptic, obtuse at the apex, 2 x 1 mm, the locules 5-6 mm tall, 1-1.5 mm in diam., the placenta ca 4 mm tall, ca 0.5 mm in diam., with the centrally peltate ovules elliptic, 0.6-0,9 x 0.4 mm; fruits 2.5-3.5 cm tall including the calyx, 1-1.3 cm in diam., glabrate or sparsely sericeous, the seeds 6-8 x 1.5-2 mm, the testa cells rectangular, 156-333($\bar{x}$ = 232) µm long, 35-67($\bar{x}$ = 54) µm wide, with the walls 4-8 µm thick, with 14-27 large pits in the internal wall, the pits 12-33($\bar{x}$ = 21) µm in diam.

Specimens examined. SURINAME. Hoogbosarboretum Kamp 8 Mapanegebied, 3 Sep 1970, **Elburg & Roberts 12634** (U); Bosch forest reserve, sectie O, **Forest Bureau 172**, Dec 1942 (K, NY, U), **172a**, May 1945 (COL, K, MO, NY, SP, U); from confluence of Lucie and Oost

Rivers to 5 km east, alt. 275-325 m, 8 Sep 1963, **Irwin, Prance, Soderstrom** & **Holmgren 55528** (COL, F, K, MO, NY, SP, U); Jodensavanne-Mapane kreek area (Suriname R.), 2 Apr 1953, **Lindeman 3681** (U), 2 Mar 1961, **Schulz 8583** (F, U); Brownsberg Nature Park near main park headquarters, 90 km S of Paramaribo, Mazaroni Plateau, 26 Sep 1976, **Mori** & **Bolten 8413** (K, MO, NY, U); Brownsberg, 24 Jun 1970, **Tawjoeran 12851** (U).FRENCH GUIANA. Route de Cayenne, km 7,980, 23 Mar 1956, **collector unknown 7408** (P, U). BRAZIL. Pará: Igarapé do Lima, planalto de Santarem, 25 Jun 1954, **Fróes 30960** (IAN, K, NY, U); Itaituba, Rio Tapajoz, 4 Feb 1952, **Pires 4054** (IAN); estrada entre PIlão e Repartimento, região do Jari, 6 May 1970, **N. T. Silva 3113** (IAN); estrada do Munguba km 10, região do Jari, 22 Oct 1970, **N. T. Silva 3388** (IAN). Common names. SURINAME: Akatombe,Akatomno, Akegoemio, Akepemio, Akhorok, Kalidan, Kalidan, Kantasie hoedoe, Moentene, Moentenehe, Toelalahoedoe. FRENCH GUIANA: Bouchi Banda.

Discussion. The pubescence density of **C. leiophloea** forms a cline from north to south. The most densely sericeous members of the species are found in the northern part of its range, Suriname and French Guiana. The most sparsely sericeous forms are found at the southern limits of its range, south of the Amazon River along the lower drainage of the Rio Tapajoz. Those collections from north of the Amazon River and south of the Guianas exhibit an intermediate pubescence density. The area in which the sparsest pubescence is found, is also the zone of contact between **C. leiophloea** and **C. decorticans**. Perhaps the sparser pubescence of **C. leiophloea** in this region indicates a possible exchange of genes sometime in the past. Our present knowledge is insufficient to evaluate this situation. Intensive collecting in the zone of contact and hybridization studies are needed to clarify this situation.

Excluded Species

Capirona boiviniana Baillon, Bull. Mens. Soc. Linn. Paris 1: 270. 1880, is a typographic error for **Pleurocoffea boiviniana** Baillon.

Baillon (1880) presented the new genus **Pleurocoffea** with a single species, **P. boiviniana**, and validated both jointly. He compared his new genus to **Platycarpum** Humb. & Bonpl., **Capirona**, **Coffea** L., **Posoqueria** Aubl. and **Canthium** Lam. **Pleufocoffea boiviniana** was transferred to the genus **Coffea** and was remained there (de Wildeman,1941;Chevalier, 1947). In comparing his genus to **Coffea**, Baillon (1880) mentioned "**C. boiviniana**". Undoubtedly "c" was substituted for "p" by mistake. The first genus beginning with "c" to appear before "**C. boiviniana**" was **Capirona**, so in volume I of **Index Kewensis** (Jackson, 1893) **boiviniana** was cited as a new species of both **Pleurocoffea** and **Capirona**.

Capirona erythroxylon Standley, Publ. Field Mus. Nat. Hist., Bot. Ser. 22: 48. 1940. = **Pogonopus erythroxylon** (Standl.) Kirkbride, **comb. nov.** Type: **Ruiz** & **Pavon sn**, Peru (holotype: MA (specimen with autographic label, "Pentandria Monogynia, Genus novum [crossed out.]. Vulgo Palo Colorado. F. H. D. 139. L 495. Año de 1800. 1ª Sp. (Macrocnemum)."); isotype: MA (duplicate specimen without autographic label).

Standley was apparently overimpressed with the calyx structure of **C. erythroxylon**. If he had looked at the specimens in more detail, he would have discovered that they have valvate aestivation and many small, horizontal ovules in each locule. The only genus combining these characters with one calyx lobe sometimes expanded into a large colored foliar organ, is **Pogonopus** Klotzsch. The genus was reported to have two species, **P. speciosus** (Jacq.) Schum. and **P. tubulosus** (DC.) Schum. (Oersted, 1852; Schumann, 1889, 1891; Standley, 1938; Sandwith, 1949; Steyermark, 1974; Dwyer, 1980), which differ markedly from **P. erythroxylon** by persistent stipules, generally smaller leaves and slightly longer, slenderer corollas.

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RESUMO

Apresenta-se um histórico taxonômico do gênero ***Capirona****, sinonímia completa, descrições, nomes vulgares e discussões referentes, tanto para o gênero, como para as duas espécies,* **C. decorticans** *e* **C. leiophloea**. *A distribuição geográfica do gênero abrange as bacias dos Rios Amazonas e Solimões, e coincide com a distribuição do gênero* **Hevea**. **Capirona decorticans** *é conhecida do oeste e do sudeste do Amazonas e* **C. leiophloea** *do leste das Guianas e do nordeste do Amazonas. A zona de contacto entre as duas espécies é a beira sul do Rio Amazonas e a parte baixa da bacia do Rio Tapajós no Estado do Pará, Brasil.*

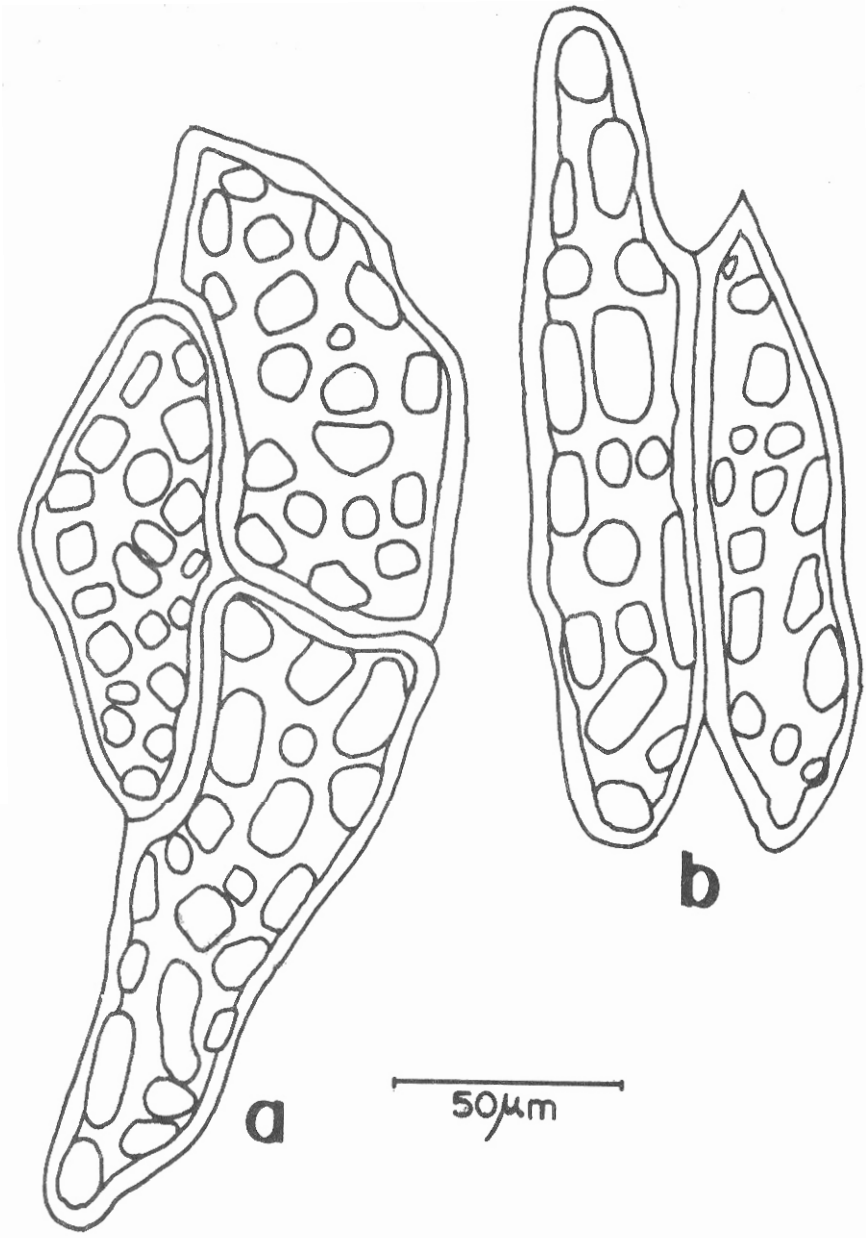

FIG. 1. Testa cells of: a) **Capirona decorticans** (**Prance et al. 6564** INPA) and b) **C. leiophloea** (**Irwin et al. 55528** NY).

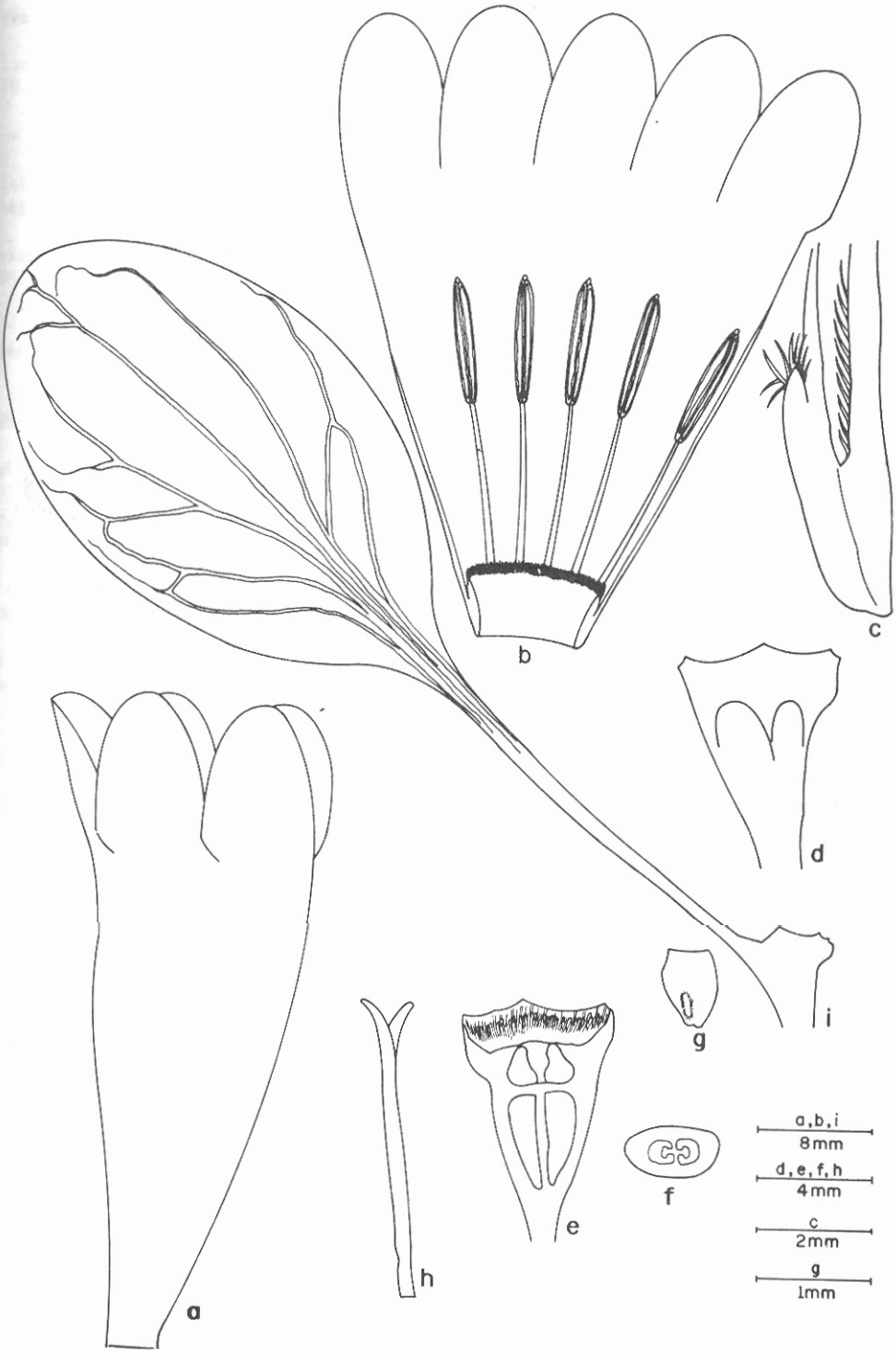

FIG. 2. Floral analysis of **Capirona decorticans:** a) the corolla, b) the corolla spread open, c) section of the base of the corolla with a filament, d) the hypanthium, e) transverse section of the hypanthium and locules with the placentas and ovules removed, f) cross-section of the hypanthium and locules with the placentas and ovules removed, g) an ovule, h) the style and stigma, and i) the hypanthium with one calyx lobe a large foliar organ (**Boyan 269** INPA).

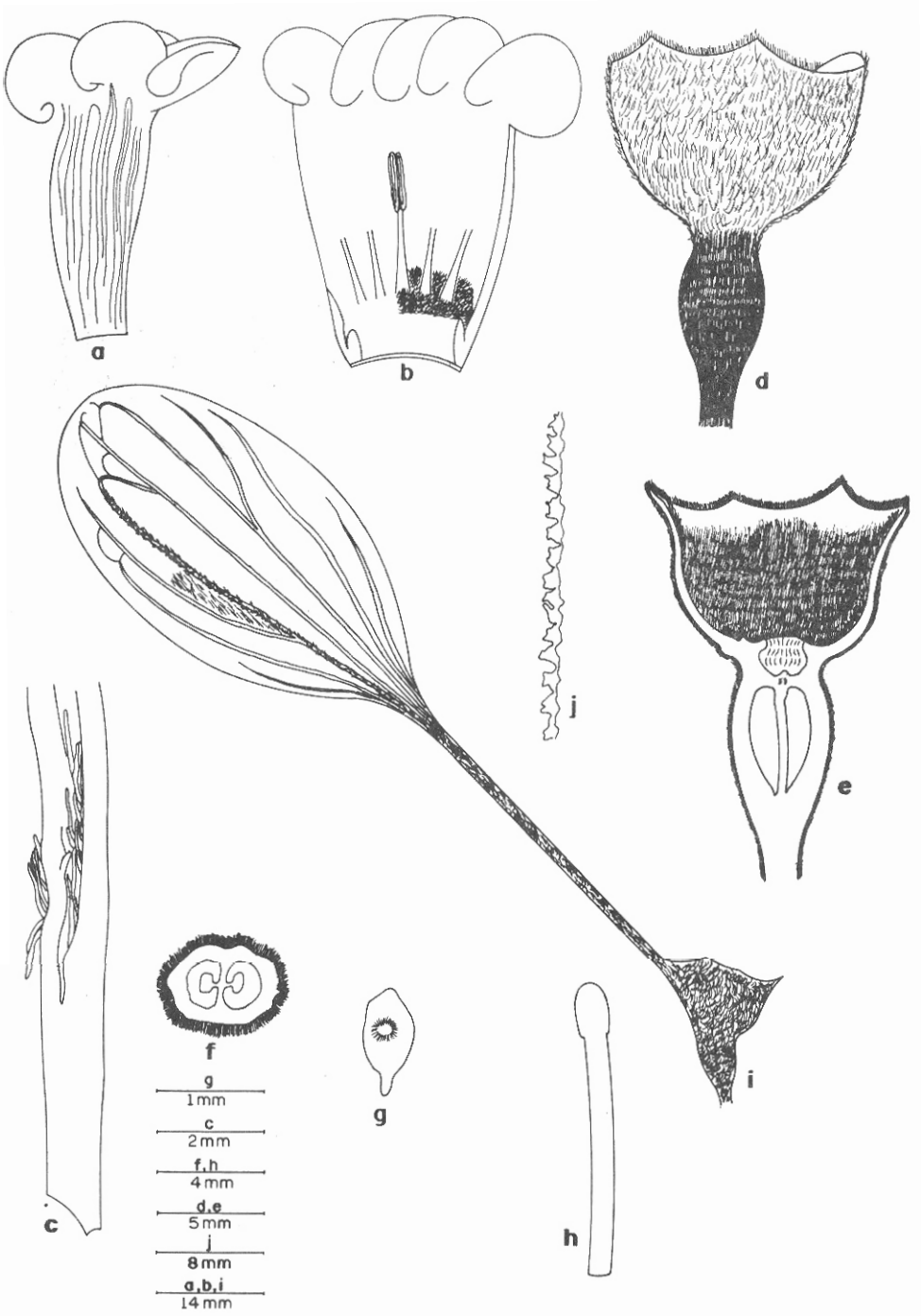

FIG: 3. Floral analysis of **Capirona leiophloea**: a) the corolla, b) the corolla spread open, c) section of the base of the corolla with a filament, d) the hypanthium, e) transverse section of hypanthium and locules with the placentas and ovules removed, f) cross-section of the hypanthium with the placentas and ovules removed, g) an ovule, h) the style and stigma, i) the hypanthium with one calyx lobe a large foliar organ, and j) cross-section of the corolla wall showing the plicate folds, exterior to the left and interior to the right (**Silva 3113** IAN).

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