

This species was not recorded from Borneo, BECCARI having referred the Bornean sterile material of this species to *Calamus brachystachys*. Hewitt's collection has a fruiting spadix and representative portions of a leaf which shows that *Cornera conirostris* does occur in Borneo.

BECCARI had apparently intended to include Scortechini's collection from Gopeng, Perak, among the syntypes of the basynym of this species, but this collection was not cited in the original publication by HOOKER who, while condensing BECCARI'S descriptions for his Flora of British India, saw in the Kew herbarium only Kunstler's specimen and none from Scortechini's collection. The plate given by BECCARI (1908) is based entirely on Scortechini's specimens.

2. *Cornera Lobbiana* (Becc.) Furtado comb. nov.

Calamus Lobbianus Becc. in Hook. f., Fl. Brit. Ind. VI (1893) 462; Ridl., Mat. Fl. Mal. Pen. II (1907) 204; Becc. in Ann. Roy. Bot. Gard. Calc. XI (1908) 482 t. 221; Ridl., Fl. Mal. Pen. V (1925) 59: (**Basynym.**).

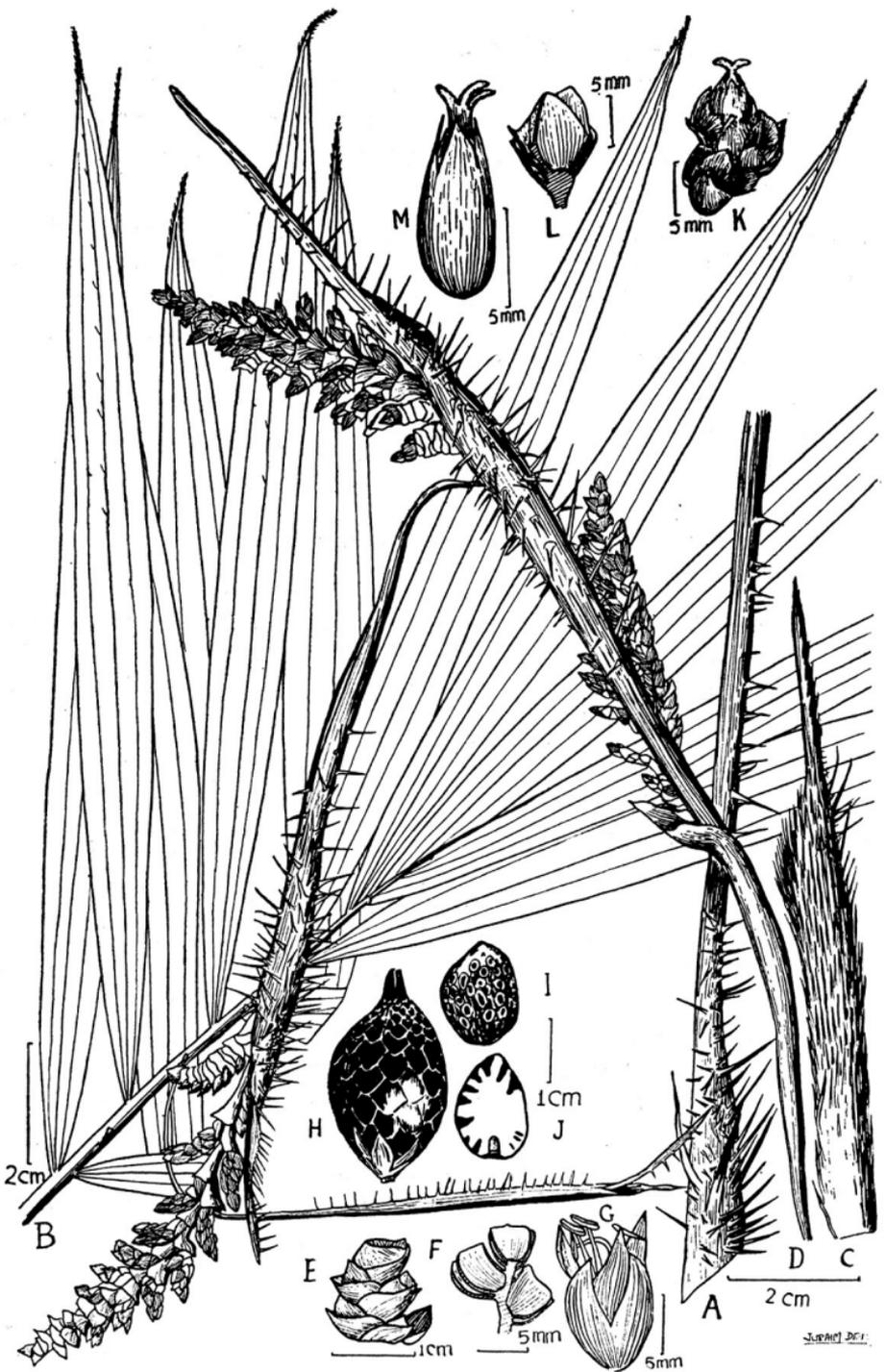
C. brachystachys Becc. in Rec. Bot. Surv. Ind. II (1902) 215; et in Ann. cit. (1908) 485 t. 222 quoad spadicem tantum (quoad frondem = *C. conirostris*): **syn. nov.**

C. melanocarpus Ridl. in Trans. Linn. Soc. Lond. III (1893) 392.

Stem short, solitary, 1-1.5 m. long, 2.5-3 cm. through with sheaths, scandent or semi-scandent. *Leaf-sheaths* sometimes flagelliferous especially when old and climbing, densely armed with unequal ascending or spreading, light coloured spines, the largest being 2-5 cm. long. *Leaves* non-cirriforous, 1.25-2 m. long. *Leaflets* paripinnate, ensiform, equidistant, conspicuously white beneath, 3-costulate, sometimes caudiculate at apex, 3-5 cm. apart, opposite or subopposite, the largest ones about 40-45 cm. long, 3.5 cm. broad, the two terminal shortly connate at base.

Spadix 40-60 cm. long including the appendix, usually divided into 1-3 erect branches bearing short congested spikelets, the female spadix being shorter and less branched; primary spathes long-beaked, spiny. *Fruit* large, 3 cm. long, 2 cm. in diam., ovoid conic, beaked, covered with black, yellowish at base, shining scales arranged in 15 longitudinal series, sometimes.

MALAYA: Kelantan, Sungai Ketch (Nur 11,987). Pahang, Bukit Kuman in Raub (Burn-Murdoch, comm. sub Ridley's no. 13,298); Tahan River (Mat on 21-IX-1893, vern. nom. *Rotan Chin Chin*); Pulau Tawar (Ridley on 10-VI-1891, Holotype of *C. melanocarpus*); Kuala Lipis at Ulu Chimeras (Burkill & Haniff 15,685). **Negri Sembilan**, Beremban by Sungai Bendol (Furtado 33,123, vern. nom. *Rotan Ayer*, both male and fruiting under the same number); Gunong Angsi, alt. 670 m. (Nur 11,598). **Johore**, between Gunong Belumut and Gunong Bechua, alt. 750 m. (Holtum 10,845); Castlewood (Ridley in VI-1904); Sungai Kayu Ara (Corner & Furtado 29,493);



2. *Cornera Lobbiana* (A-G: Furtado 33,123; H-J: Furtado 33,123a; K-M: Ridley s.n.).

A, Pars petioli. B, Fragmentum frondis apicale. C, Spatha primaria basalis. D, Spadix sine spatha basali. E, Spicula. F, Eadem spicula verticaliter discissa ut dispositio involucrophori involucrique appareat. G, Flos masculus. H, Fructus. I, Semen. J, Semen verticaliter discissum. K, Spicula feminea. L, involucrophorum cum spathella et involucro verticaliter discissum. M, Flos femineus cum calyce paulo longiore quam corolla.

Mawai-Jermaluang Road (Corner on 1-IX-1940); Batu Pahat (Ridley in IX-1900); Ulu Batu Pahat at Kampong Chin Chin (Lake & Kelsall in 1892, vern. nom. *Rotan Manana*); Gunong Panti (Ridley on 9-XII-1892); Ulu Sungai on Gunong Panti, alt. \pm 100 m. (Nur (20,013). **Selangor**, Ginting Simpah (Hume 9,476); Petaling (Ridley on 5-VII-1889); Pahang Track (Ridley 8,776). **Singapore**, Selitar (Goodenough on 3-1-1889 and on 12-VIII-1890, spadices only; Ridley 1,665, leaves only); Bukit Timah (Ridley 8,961 and in 1890 & in 1907); Chan Chu Kang (Ridley in Nov. 1889); Pulau Damar (Mat in 1894).

BORNEO: Sarawak, Bau (Ridley 11,820); Matang (Ridley in VII-1903 & in VII-1905).

C. melanocarpus Ridl. was published with a meagre description in English in November 1893, that is, about a month and a half after the publication of *C. Lobbianus* Becc., so that the latter binomial has the priority. *C. brachystachys* Becc. was based on a fully developed fruiting spadix collected in Kuching in Sarawak, and as a fully developed fruiting spadix of *C. Lobbianus* was not available for him and as this species was not then recorded from Borneo, BECCARI thought that this Kuching material represented a new species. Later he completed the description of *C. brachystachys* by adding to it the description of the leaf which he thought to be of the same species but which really belongs to *C. conirostris* Becc. = *Cornera conirostris* (Becc.) Furtado.

The male flowers show some variations; some develop and shed their pollen when the perianth is well opened, while others shed pollen when the perianth is closed. In some neutral flowers a few pollen grains may be seen and so it is possible that these grains are able to fertilise the female flowers from the same spadix.

Female spadices sometimes also show various grades of abnormalities and the secondary spathes may be ligulate instead of being truncate as shown in the plate.

The syntypes of *C. Lobbianus* were collected in Singapore by Lobb and on Gunong Panti in Johore by King's collector.

3. *Cornera pycnocarpa* Furtado spec. nov.

Ab alteris hujus generis speciebus haec differt: aculeis vaginae frondalis minoribus paucioribus; petiolis basi minus aculeatis; foliis paucioribus et minoribus, duobus apicalibus basi conspicue connatis; inflorescentiis partialibus spiculisque minoribus; fructibus obscure brunnescentibus, haud nigris politisque; albumine homoganeo vel superficialiter ruminato.

Caudex gracilis, scandens, caespitosus, 15 m. usque longus, cum vaginis circa 1.5 cm. in diam. *Vaginae* frondium flagelliferae, striatae, aculeis basi tumescentibus apicem versus valde angustatis, summo atrescentibus vel non, ascendentibus vel horizontalibus, solitariis vel interdum confluentibus, maximis 10 mm. longis, minimis 1 mm. usque