

ARACEAE MALESICAE

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In this paper five new species are described, viz: *Cryptocoryne Nurii*, *Pothos borneensis*, *P. kinabaluensis*, *Raphidophora kinabaluensis* and *Schismatoglottis retineria*. Of these only the first mentioned is from the Malay Peninsula, the rest being from Borneo; and of these latter, three are endemic on the Kinabalu Mountains, while the fourth is recorded also from Sarawak. Three new names are proposed because the species in question were published under already preoccupied names: *Homalomena lunduensis* (*H. multinervia* Ridl. of 1907, not *H. multinervia* Ridl. of 1902), *Pothos Ridleyanus* (*P. ellipticus* Ridl., not Moon ex Miquel), and *Raphidophora Rosenburghii* (*R. crassifolia* v.A.v.R., not of Hook. f.). Twelve species are reduced: *Cryptocoryne grandis* Ridl. (= *C. cordata* Griff.), *C. pontederiifolia* Schott *sensu* Ridl. (= *C. johorensis* Engl.), *Pothos ovatifolius* Engl. (= *P. Rumphii* Schott), *Raphidophora Burkilliana* Ridl. (= *R. Maingayi* Hk. f.), *R. conocephala* v.A.v.R., *R. crassifolia* Hk. f., *R. nigrescens* Ridl. and *R. Wrayi* Hk. f. (= *R. silvestris* Engl.), *R. lancifolia* Schott (= *R. calophyllum* Schott), *R. Schottii* Hk. f. (= *R. hongkongensis* Schott), *Scindapsus hederaceus* Schott *sensu* Merrill (= *S. pictus* Hassk.) and *S. longisitipitatus* Merr. (= *S. perakensis* Hk. f.). *R. peepla* (Roxb.) Schott is redefined and all misconceptions that had gradually developed concerning this species have been eliminated. These reductions or redefinitions of the species have in some cases resulted in extending the distribution range, which in other cases has become restricted. A notable example of this restriction is *R. peepla*, which was regarded to occur wild in a very extensive region from India, Ceylon, Indochina, Borneo to Moluccas (cf. Engler et Krause in *Pflanzenr.* Hft. 37, 1908 p. 41; Ridley in *Journ. Linn. Soc. XLII* 1914, p. 171; Merrill, *Enum. Bornean Pl.* 1921, p. 89). Actually the species is known only from a small region in Assam (ie. Silhet) and appears to be very rare since it has not been collected again for the last one hundred years. The only specimens yet existing are those collected by Fernandez (Wallich's plant collector), Roxburgh's collections having been lost unless we assume that Wallich used Roxburgh's material to make his numbered sets. The other material that went by the name of *R. peepla* has been shown to belong to 5 distinct species exclusive of the Moluccan material which I have not seen and which may prove to be *R. Storckiana* Schott. *Pothos Rumphii* Schott which was known formerly only from the Philippines, Moluccas, Celebes and New

Guinea (cf. Merrill, *Enum. Phillip Pl.* I, 1922, p. 173) and recently from Sumatra (cf. v. Ald. v. Rosenburgh, in *Bull. Jard. Bot. Buitz.* IV, 1922, p. 337) has been recorded here from Borneo and Pulau Tioman, an island off the east coast of the Malay Peninsula.

The Key given by Engler and Krause in the *Pflanzenreich* Hft. 37 (1908) for the identification of the *Raphidophora* species having undivided or unperforated leaves has been found to be unsatisfactory since its main divisions are made on the basis of the length of the leaves. This criterion is apt to mislead one to regard specimens of the one and the same species having different length as belonging to different species. Hence a Key calculated to lead to more natural and less confusing main groups has been suggested (*vide* observ. under *R. silvestris*).

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The specimens cited are from the Singapore herbarium except when otherwise stated.

1. *Cryptocoryne cordata* Griff. Not. III (1851) 138 et. Ic. Pl. Asiat. III (1851) t. 172; Engl. Arac. Exsicc. et Illustr. no. 6; Hook f. Flor. Brit. Ind. VI (1893) 493; Ridl. Mat. Flor. Mal. Pen. III (1907) 4; Engl. Pflanzenr. IV. 23. F.=73 (1920) 242; Merr. Enum. Born. Pl. (1921) 108; Ridl. Flor. Mal. Pen. V (1925) 86.

C. grandis Ridl. in Journ. Roy. As. Soc. Str. Br. 44 (1905) 170; Engl. Pflanzenr. IV. 23. F.=73 (1920) 243; Merr. Enum. Born. Pl. (1921) 108. *syn. nov.*

I cannot find any difference between the typical *C. cordata* and Ridley's *C. grandis*. Burn-Murdoch's specimen, for instance, collected on Bukit Tapis in Pahang (comm. sub. n. 213) matches exactly with the type of *C. grandis* (Sarawak, leg. Haviland, n. 2319, in Herb. Sing.) not only as regards the length of the leaves and of the spathes but even as to the structure of the spadix and the venation of the leaves and Burn-Murdoch's specimen is clearly *C. cordata*. No doubt most of the specimens of this species preserved in various herbaria have much smaller leaves with much shorter petioles but such variations are dependent in this species not only on the age of the plant but also upon the depth of water in which they grow. Assuming that some of the smaller forms are specifically distinct from the larger ones, a new name should then

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be given to the smaller ones, for Griffith's species as represented by his plate and specimens is a larger form.

2. *Cryptocoryne johorensis* Engl. in *Engl. Pflanzenr.* IV. 23 F=73 (1920) 244.

C. pontederiifolia Schott *sensu* Ridley *Mat. Flor. Mal. Pen.* III (1907) 5 et *Flor. Mal. Pen.* V (1925) 8 f. *syn. nov.*

MALAY PENINSULA: *Johore*, between Gunong Pulai and Johore Bahru (Mat. comm. Ridley sub n. 3721. Type in Singapore, isotype in Kew); Track to Gunong Pulai (Ridley, 12, 141 in Singapore, Kew and British Museum).

Apparently Engler had not seen Ridley's *Materials* (*op cit.*, 1907) for he makes the following observation on this species: "Hæc species ex herbario Singaporense sub nomine *C. pontederiifolia* distributa est, at ab ea, cujus spatha incognita est, differt foliorum lamina minore atque minute denticulata." Nor does it appear that Ridley had consulted Engler's monograph on *Cryptocoryne* when preparing the Malayan material for his *Flora* (*op cit.*, 1925), for he has entirely omitted Engler's species in it.

3. *Cryptocoryne* (§ *Bitubulosæ*) *Nurii* Furtado spec. nov.

Affinis *C. Walkeri* Schott ut videtur, sed folio crassiore et majore, basi cuneato, (haud abrupte contracto), petiolo crassiore, spathæ limbo latiore, explanato (haud torto), differt. A *C. Wightii* Schott folio brevioris sed latiore, spathæ limbo latiore et cordato recedit.

Rhizoma circ. 5 mm. crassum. Foliorum *petiolus* circ. 17 cm longus, ad 3-9 cm longitudinis vaginatus; *lamina* elliptico-lanceolata, utrinque cuneata, basi sensim in petiolum transiens, apice acuta, 10-18 cm. longa, 3 cm. lata, supra viridis, subtus pallidior, margine crispata vel crispatulata, nervis primariis lateralibus utrinsecus 3-4, infra medium a costa abeuntibus, oblique adscendentibus, superioribus apicem versus arcuatim convergentibus, omnibus pagina superiore obscuris. *Pedunculus* circ. 7-12 cm longus, 2-3 mm in diam. *Spathæ* tubus inflorescentiam includens 2-2.5 cm longus, circ. 0.5 cm in diam.; superior tubo inferiore angustior, 5.5-12 cm. longus, circ. 0.3 cm in diam.; limbus in vivo atro-purpureus ut videtur, cordatus, apice caudato-acuminatus, cum cauda 1.5 cm longa 4-5 cm altus, basi 1.5 cm -2.5 cm latus. *Inflorescentia foeminea* 3 mm longa, a mascula aequilinga laxiflora intersitio nudo, tenuissimo, 1 cm longo sejuncta. *Pistilla* fertilia 5, stilis quam flores rudimentarii duplo longioribus.

MALAY PENINSULA: *Johore* at Sungei Pelepah (Nur, 20038. Type in Herb. Singapore and Kew).

C. Walkeri and *C. Wightii* are the only other *Cryptocoryne* species which have so long a peduncle to the inflorescence. In *C. Walkeri* the leaves are much smaller, thinner in texture and abruptly contracted at the base.

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The limb of its spathes is twisted and not cordate. *C. Wightii* has much narrower and elongate leaves with crispate-undulate margins, and spathes terminating in a much narrower, not cordate limb. In leaves the species appears very much like *C. ciliata* (Roxb.) Fisch. which belongs to the *Section Ciliatae* Engl. and which has also very much longer petioles to the leaves.

4. *Homalomena* (§ *Euhomalomena*) *lunduensis* Furtado, nom. nov.

H. multinervia Ridl, in *Journ. Roy. As. Soc. Str. Br.* XLIX (1907) 49; *Merr. Enum. Born. Pl.* (1921) 95. [non *H. multinervia* Ridl., in *Journ. Bot.* XL (1902) 36.]

BORNEO: *Sarawak*, Lundu (Ridley in Sept. 1905, Type in Singapore).

The binomial *H. multinervia* Ridl. is preoccupied for a species belonging to the section *Chamaecladon* and hitherto known only from Mount Ophir in Malacca.

5. *Pothos* (§ *Allopothos*, ser. *Longevaginati*) *borneensis* Furtado spec. nov.

Affinis *Pothoi Kingio* Hk. f., sed folio majore, valide inæquilatero, nervis collectivis folii pluribus, nonnullis supra mediam orientibus, spadice spathæ æquilongo, pistillis apicem versus subito attenuatis in stigma sensim transiensibus (haud truncatis vertice stigmatate conoideo abrupte instructis) recedit. Folia eis *Pothois Rumphii* Schott sat similia, sed a hac specie spatha latiore basi decurrente, pistillo oblongo subito angustato (haud truncato) ex tepalis valde exserto differt.

Scandens. *Rami* infra-axillares, internodiis ad 4 cm longis et 1 cm crassis. *Petiolus* ad circ. 25 longus, ad geniculum 8 mm longum usque late vaginatus, vagina in ochream (=auriculas) circ. 8 cm longam (longas) producta. *Lamina* petiolo 1½-plo longior, valide inaequilatera, altero latere alterius ½ latitudine aequante, elliptico-oblongata, maxima latitudine supra mediam sita, utrinque attenuata, apice subito acuminata, basi obtusa vel cordulata, circ. 35 cm longa, 10-12 cm lata, nervis collectivis pluribus, apicem versus margini arcuatim approximatis, intimis plerumque supra mediam a costa abeuntibus, lateralibus primariis quam tertiarii validioribus, porrectis. *Pedunculi* gemini, 7-9 cm longi, 3-4 mm crassi, in axillis cataphyllorum nascentes, cataphyllis circ. 9 cm longis, apice in caudam filiformem circ. 2 cm longam contractis. *Spatha* reflexa, concavato oblongo-vel ovato-lanceolata, apice abrupte cuspidata, stipite spadice decurrens, pars libera circ. 4-6 cm longa, 3 cm lata, in vivo lutea ut videtur. *Spadix* ad 2 cm stipitatus, stipite spathæ fere omnino adnato, cylindricus, spathæ æquilongus vel ea paullo