

MISCELLANEOUS BOTANICAL NOTES V<sup>1</sup>

BY

C. G. G. J. VAN STEENIS  
*Flora Malesiana, Leyden*

(Received Febr. 18th, 1953)

39. OCHROCARPUS IN NEW CALEDONIA (Guttif.)

In June 1952 Mr. J. WYATT SMITH, going through Malaysian *Calophyllum* at Leyden found that some sheets identified as *C. neurophyllum* Schltr. from New Caledonia (Bot. Jahrb. 39, 1906, 193) do not belong to *Calophyllum*. They were collected by Franc (no. 547) near l'Hermitage, along the border of a stream, Oct. 1906. It appeared they belong to *Ochrocarpus*.

The sheets were identified by BONATI and certainly fit the type description of SCHLECHTER, though the leaves are somewhat larger viz  $10\frac{1}{2}$ –14 × 4–5 $\frac{1}{2}$  cm and I found 4 petals (Schlechter mentioned 3). Their elliptic-oblong shape suggests that of *O. longifolius* (Wight) B. & H. and not that of *O. odoratus* (Raf.) Merr. (cf. J. Arn. Arb. 26, 1945, 94) which acc. to MERRILL is rather uniform though of wide distribution and formidable synonymy. *O. papuanus* Laut. is different and so is *O. glaucus* Merr. from Samoa, the latter having a glaucous leaf-underside.

Not having the intention to revise the genus, it seems for the present best to keep the species as it is and to transfer it to *Ochrocarpus* as *Ochrocarpus neurophyllum* (Schltr.) comb. nov.

It is certainly remarkable that no species of the genus, which is widely distributed in the paleotropics from Africa and specially Madagascar through SE. Asia to the West Pacific Islands has yet ever been found in the Australian continent.

40. NOTE ON KJELLBERGIODENDRON CELEBICUM (Koord.)

MERR. (Myrtac.)

After my notes on this genus (Acta Bot. Neerl. 1, 1952, 440–442) had been published some duplicates were received collected by PLEYTE in the N. part of the Island of Misool, West of New Guinea, belonging administratively to the Sorong Division.

<sup>1</sup> The first paper in this series appeared in Bull. Bot. Gard. Btzg III, 17 (1948) 383–411; the 2nd in Blumea 6 (1948) 243–246; the 3rd in Bull. Bot. Gard. Btzg III, 18 (1950) 457–461; the 4th in Reinwardtia 1 (1952) 476–481.

Misool. W of Fakal, bank of Kasim River, scattered, tree 7 m by 6 cm, fl. dirty yellow, fr. reddish, 30 m alt., Oct. 6, 1948, Pleyte 1112; near Waima, common but scattered, in forest, tree 20 m by 15 cm, fl. light yellow, Sept. 26, 1948, Pleyte 1050; ditto, Pleyte 743.

Through a mistake the specimens were accepted to have been collected in Sorong, off the coast of West New Guinea, and the corresponding cross on the map (l.c.) should be transferred a little to the SW to the island of Misool.

#### 41. CALLITRIS IN NEW GUINEA (Conif.)

In 1929 the occurrence of *Callitris* (cf. *robusta* R. Br.) was recorded by H. J. LAM in his *Fragmenta Papuana* (Natuurk. Tijds. Ned. Ind. 89, 1929, 304, 354; translated in *Sargentia* 5, 1945, 143, 168) on the basis of a specimen (Lam 2166) on the S. slope of Dika Valley, ca 1250 m alt., dd. 25 Nov. 1920: "treelet on an open deforested slope". This specimen recently came to hand; it is sterile, and apparently of a juvenile plant, but its morphology and anatomy prove it to belong to some species of *Casuarina* sect. *Tetragonae* Poiss.

The geographical area of *Callitris* (Australia, Tasmania, New Caledonia) certainly gives reason to expect it to occur in some parts of New Guinea; I assume this will be rather in the seasonal savannah areas than in the mountains.

#### 42. A NEW EAST MALAYSIAN SPECIES OF METROSIDEROS (Myrtac.). Fig. 1-2.

***Metrosideros nigroviridis*** sp. nov. — Arbor glaberrima; ramulis ultimis teretibus aequae ac petiolis in statu sicco nigricantibus; cortice ramulorum haud defoliante. Folia spiraliter ordinata rarissime opposita, in statu sicco laete viridia obovata, in petiolum attenuata, basi aequalia, apice obtusa vel (praecipue in speciminibus sterilibus, foliis majoribus instructis) longiter breviterve obtuse acuminata, 4-5 cm longa, 1½-2½ cm lata (in speciminibus sterilibus usque ad 10 cm longa, 3-4½ cm lata et tunc interdum oblongo-lanceolata); nervi laterales tenues paralleli, sub angulo ± 50° patentes, ca 12 utrinque (venis tertiariis parallelis interpositis), omnes reticulatim conjuncti, supra haud, infra paululo prominentes; nervus intramarginalis ± 1 cm a margine remotus; petiolus 1-1½ cm longus. Flores cymose ordinati; cymae in inflorescentias axillares terminalesque 1-1½ cm longe pedunculatas unitae, paniculam foliatam folia excedentem, ± 15 cm longam subglobosam efformantes; flores 5-meri; calycis tubus obconicus ± 2½ mm diam., ± 1 mm longus, interdum deorsum stipitiformiter attenuatus; ovarium apice planum; calycis segmenta lata, 1/4-1/3 mm tantum longa; petala basi lata inserta, in alabastro valde imbricata et concava, serius planiora, rotundiuscula, ± 4 mm longa, ± 3 mm lata, sub anthesi patentia. Stamina numerosissima (± 100), libera, duplice tripliceve serie annulatim ordinata, praefloratione inflexa; filamenta manifeste inaequalia (intima breviora)

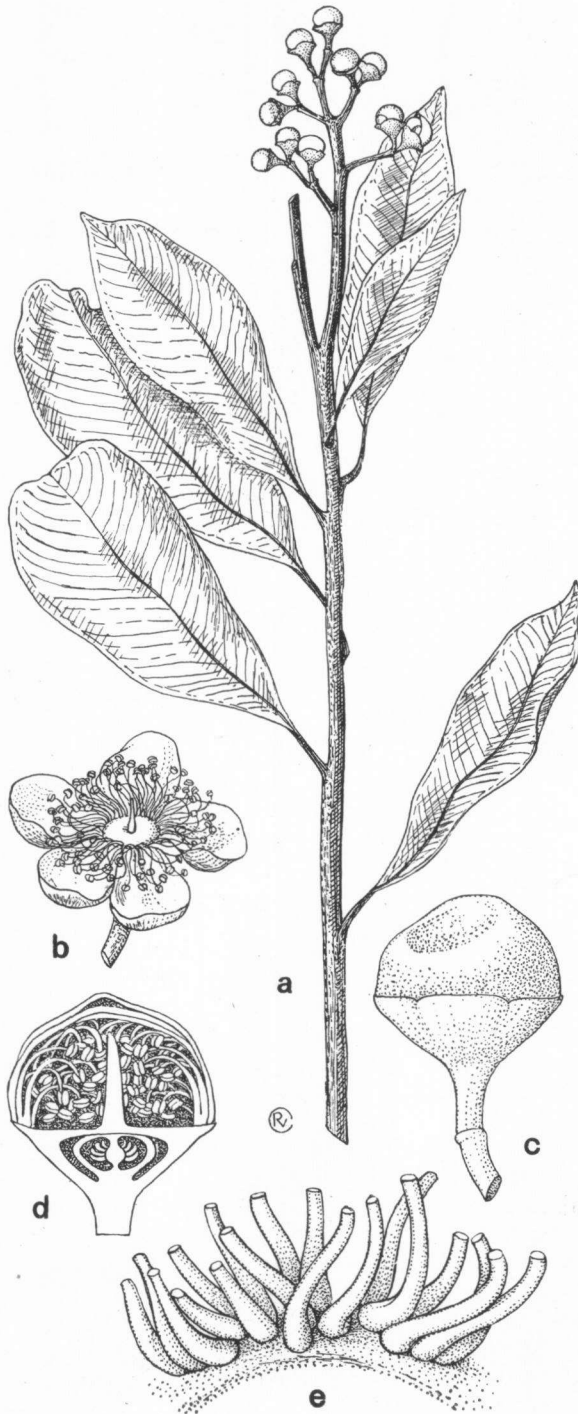


Fig. 1. *Metrosideros nigroviridis* Steen. a. Flowering twig, b. flower in anthesis, c. bud, d. flower in section, e. insertion of stamens (after type specimen, a  $\times 5/6$ , b—d  $\times 5$ , e  $\times 16$ ).

2–3 mm longa; antherae dorsifixae, minutae, late ovales; stylus in alabastro rectus,  $\pm$  2 mm longus; stigma punctiforme; ovarium stipite  $\frac{1}{2}$ –4 mm longo suffultum, 3–loculare; ovula in singulis loculis numerosa, placentae axili imposita, ascendencia; pericarpium ovarii e stratis pluribus compositipariis internis ut videtur corneus.

MOLUCCAS. Batjan: Masuring, 500 m, bb. 23144, vern. badenga mèrah perempuan; Saoran Domut, 100 m, bb. 23177, vern. palano sela = p. merah; Islet of Kasiruta, near Tawa, bb. 23220, vern. taolaté; ditto, bb. 23224, vern. marinteng utan. Buru: Balo-balo, 250 m, bb. 25168, vern. karihi; Ilat, 150, m bb. 24461, vern. kadièn. Ambon: Waai, 100 m, bb. 25976, vern. mèrah daun tjenkè kulit kasar, K. Ceram: W. Ceram, between Piru and W. Kawa, 400 m, Rutten 1903 (Leyden, typus), fl. 16/11/1918; Loki (W. Ceram), 100 m, bb. 13414, vern. waèasu = mèrah daun tjenkeh, K.; E. Ceram, Artafela, 60 m, bb. 25807, vern. tan mèrah.

WEST NEW GUINEA. Midden Vogelkop, bb. 22168; Hill N of Hollandia, bb. 25050. Biak Island: Serui, 50 m, bb. 30678, vern. senermus; ditto, Aet & Idjan (Exp. van Dijk) 862, vern. senermus; ditto, bb. 30681, vern. naskain; ditto, bb. 30765, vern. beriek, ai; ditto, bb. 30771, vern. senermus; ditto, bb. 30823, vern. beriek, ai; ditto, bb. 30829, vern. sinarèh.



Fig. 2. Localities of *Metrosideros nigroviridis* Steen.

A very typical species with black twigs and lightgreen leaves: the cited specimens, which are sterile except one, show a remarkable conformity. I did not find it described either in *Metrosideros* or in *Tristania*. Duplicate specimens have been distributed under these generic names or as *Kjellbergiodendron* sp. and will be found in several herbaria.

I have tentatively described it in the genus *Metrosideros* in absence of fruit and seed. It is unlike most Malaysian species of *Metrosideros*, but the leaf characters are found in some extra-Malaysian species.

#### 43. SPERMABOLUS T. & B. = ANAXAGOREA ST. HIL. (Annon.)

In 1865 Miquel (Ann. Mus. Bot. Lugd. Bat. 2, p. 22, t. 2) published the description and a figure of a plant from Batjan Island, Moluccas, which he had received from the curators of the Botanic Gardens,

Buitenzorg, J. E. Teysmann & S. Binnendijk, under the name of *Rhopalocarpus fruticosus* T. & B. as belonging to the Annonaceae.

Both he and the authors were unaware that the generic name *Rhopalocarpus* was already occupied by a genus *Rhopalocarpus* Bojer described from Madagascar. The latter name was originally published as a nomen nudum (Bojer, Hort. Maurit. 1837, p. 44) and in wrong orthography (*Rapolocarpus*). Subsequent authors corrected this name to *Ropalocarpus*, until Bojer gave his final diagnosis (Trav. Soc. Hist. Nat. Île Maurice 1846, p. 149; cf. Hook. Icon. Plant. 1900, t. 2774), in which the origin of the intended name *Rhopalocarpus* was explained. This publication must be regarded as the valid publication of Bojer's. The genus was originally referred to Tiliaceae, later also to Flacourtiaceae, and is now mostly regarded as belonging to a separate family *Rhopalocarpaceae*.

*Rhopalocarpus* T. & B. ex Miq. was rightly reduced to the genus *Anaxagorea* by Bentham & Hooker (Gen. Pl. 3: 957).

One of the authors, S. BINNENDIJK, had in the meantime discovered the pre-occupation of the name *Rhopalocarpus* and had changed it into *Spermabolus*. He had, in the Botanic Gardens, Buitenzorg, given the type-plant a new name, *Spermabolus fruticosus* (T. & B. ex Miq.) T. & B. This he wrote in an unpublished letter dated July 25th, 1864 (preserved at the Leyden Bot. Garden), to the curator of the Leyden Botanic Gardens, H. Witte, whom he had sent a living plant for the greenhouse.

The name *Spermabolus* was published by TEYSMANN & BINNENDIJK as a new generic name (nomen nudum) in the third Catalogue of the Bot. Gardens, 1866, p. 178 and referred to the Magnoliaceae! No synonym was cited. As such it was inserted in the Ind. Kew. and in De Dalla Torre & Harms, Gen. Siph.

However, SCHEFFER had already published its true status under *Anaxagorea fruticosa* (T. & B. ex Miq.) Scheff. in Natuurk. Tijd. Ned. Ind. 31, 1869, p. 9; transl. in Flora 52, 1869, p. 302. And BOERLAGE had thirty years later reduced the names of TEYSMANN & BINNENDIJK and of SCHEFFER to *Anaxagorea luzoniensis* A. Gray (Ic. Bog. 1, 1899, p. 108).

#### 44. A NEW AMORPHOPHALLUS FROM JAVA (Arac.). Fig. 3.

***Amorphophallus sagittarius*** n. sp. — Folia in specimine unico viso haud bulbifera, petiolo  $\pm$  34 cm longo sustentata; segmentis primariis lateralibus petiolulis 5–7 cm longis suffultis, semel furcatis; foliola totaliter 14, oblique oblonga, basi haud alatiforme decurrentia, manifeste caudato-acuminata, nervo marginali subundulato, 6–17 cm longa,  $2\frac{1}{2}$ –6 cm lata. Tuber subglobosum subdepressum, 4–5 cm latum, 3–4 cm altum. Pedunculus  $\pm$  12 cm longus,  $\pm$  8 mm crassus, basi munitus squamis plurimis vaginiformibus appressis brunneis, quarum intima ceteris longior pedunculum subaequans. Spatha spadici subaequilonga, ovata, obtusa, expansa ca 13 cm longa,  $\pm$  10 cm lata, extus basin versus pallida, juxta marginem superiorem intense

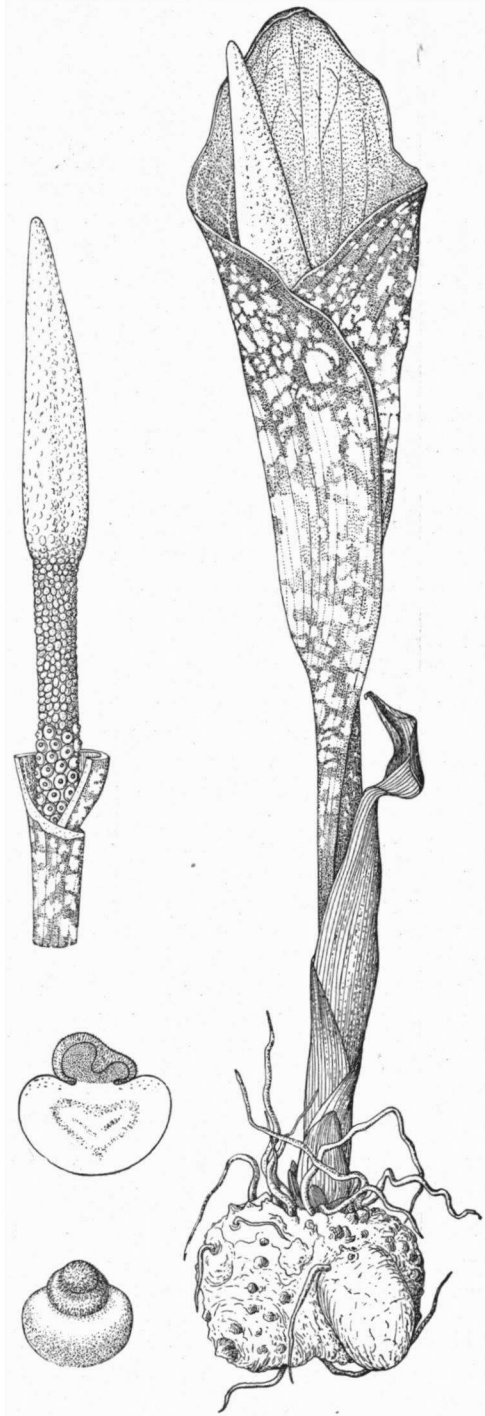


Fig. 3. *Amorphophallus sagittarius* Steen. Plant and spadix,  $\times \frac{1}{2}$ , ovary  $\times 3$ , ditto, in section,  $\times 5$ .

purpureo-olivacea, maculis pallide viridibus conspersa. Spadicis pars ♀ cylindrica ca 1½ cm longa, ± 8 mm crassa; ovaria intervallis sejuncta, subdepresso-globosa, viridia, 1-ovulata, 3-3½ mm lata; stigma sessile, capitatum integrum, ± 1½ mm diam.; spadicis pars ♂ subcylindrica, superne paullulo incrassata, ± 3½ cm longa, 8 mm lata; antheris confertis pallide aurantiaca, ± 2 mm longa, ± 1 mm lata. Appendix sterilis lanceolata, cremicolor, minute tuberculata, ± 7 cm longa, medio bene 1 cm lata.

Typus: L. van der Pijl 899a, ins. Java occid. pr. Tjisadea, 8/11-1941 (Bo).

Among the many living specimens of *Amorphophallus* received before the war at Bogor for identification, I failed to classify the specimen cited above with any species hitherto described. In determining it with Backer's excellent key of the Javan species (*Trop. Natuur* 9, 1920, 21-32) it is by its uniovulate ovaries nearest to *A. spectabilis* (Miq.) Engl., which I have personally collected on several occasions. This is distinctly different by its size, by the size, shape and colour of the spathe, and by the shape and relative dimensions of the spadic parts (♀, ♂, and appendix).

It is apparently closer related to two Sumatran species, viz *A. cobra* v.A.v.R. and *A. obovoideus* v.A.v.R.

Both differ, however, by the spathe exceeding the spadix, and the different shape of the appendix. In passing, it may be remarked that the latter two species appear to me to be conspecific.

It might be assumed that the new species is conspecific with the obsolete *A. giganteus* Bl. which is depicted as having an inflorescence of a similar habit, and which has never been found again in Java since BLUME described it (*Rumphia* 1, p. 144, t. 34). Apart from the fact that Backer assumes that Blume's description is based on leaves from one and an inflorescence from another species, BLUME's figure shows distinctly bilocular ovaries whereas the new species possesses only one ovule and one cell.

Prof. Dr L. van der Pijl unfortunately lost the pre-war specimens which he cultivated at Bandung; he wrote me that the specimens at Bandung developed glossy, brown purple spathes, a change in colour which he observed also in some *Arisaema* species in cultivation.

Measurements in the description above have been taken from the living plant.

#### 45. SOME NEW RECORDS OF NEW GUINEAN PLANTS

***Dumasia villosa*** DC. (Papil.). Widely distributed from Africa through SE. Asia to Malaysia; hitherto the Eastern border of this genus was Luzon-Celebes-Lombok.

East New Guinea. Mt. Hagen Distr., Wahgi Valley, Nondugl, ca 1600 m, Aug.-Nov. 1951, Countess Greta Gyldenstolpe s.n. (S).

***Drosera peltata*** Sw. (Droserac.). Widely distributed from Australia through Malaysia to SE. and E. Asia, in the montane area,

in Malaysia primarily in regions subject to a distinct dry season. One of the New Guinea localities is very high and certainly not situated in a seasonal climate.

New Guinea. Western part: grasslands, common on wet peaty soil containing a good deal of sand, plant red, flowers white, Lake Habbema, 3225 m, Aug. 1938, Brass 9195 (A, L). Eastern part: Plateau north base of Mt Giluwe, Central Highlands, near waterways, May 15, 1951, 2200 m, F. Shaw Mayer (BM).

**Protium macgregorii** (F. M. Bailey) comb. nov.<sup>1</sup> (Burser.). — *Bursera macgregorii* F. M. Bailey, Queensl. Agric. J. 3 (1898) 282. — *Santiria schlechteri* Laut. Bot. Jahrb. 56 (1920) 333. — *Protium schlechteri* Leenh. Blumea 7 (1952) 157.

Type specimen: SE. Papua, pr. Taupota, V-1898, Sir William MacGregor s.n. (Bri).

Miss L. M. PERRY kindly pointed my attention to Bailey's description which had not been recognized earlier in burseraceous studies. Mr FRANCIS kindly sent on loan the type specimen which appeared to be conspecific with LAUTERBACH's species. MACGREGOR's specimen bears female flowers and one fruit. The flowers are 5-merous, not 6-merous as BAILEY erroneously mentioned. The species seems to be confined to New Guinea and represents the only species of the genus in the island.

#### 46. SOME NOTES ON EASTERN BIGNONIACEAE

**Bignonia comosa** Roxb., Hort. Beng. (1814) 95, nom.nud.; Fl. Ind. ed. Carey 3 (1832) 103; DC., Prodr. 9 (1845) 144; Miq., Fl. Ind. Bat. 2 (1858) 751. — *Spathodea ?comosa* G. Don, Gen. Syst. 4 (1838) 222.

The identity of this species, described from the Moluccas, has up till now remained obscure. An authentic specimen (possibly an isotype) is present at Brussels, in the herbarium of v. Martius, with Roxburgh's handwriting and addition of the number "2652". However, this sheet, which was kindly loaned by Prof. ROBIJNS, does not wholly confirm to the description; it consists of a leafy twig, and a detached fruit, whereas the description points to leaves and flowers only. On the other hand the leaves *exactly* match the description. Both Dr MERRILL and I myself are of the opinion that the leaves doubtless represent a *Clerodendrum* (Verbenaceae). The capsule apparently belonging to a separate small label on which is written: "Capsule of No 14 Pou Madyro an Bignonia", we find doubtless bignoniaceous (but not *Bignonia chelonoides*, Roxb. l.c. 106), and I can add that it belongs to a species which is certainly not native in Malaysia, but presumably in SE. Asia. I assume the pod was added later, anyhow erroneously to the sheet, as it was not mentioned in the type description. The leaves, therefore, should be taken as typifying Roxburgh's species.

In verifying these leaves with the Rijksherbarium collections I have

<sup>1</sup> This note is by Mr P. Leenhouts, Rijksherbarium, Leyden.



found them *exactly* matching those of *Clerodendrum lanuginosum* Bl. (1825). *Bignonia comosa* Roxb. is therefore to be added to the synonymy of the latter.

**Nyctocalos brunfelsiiflorus** T. & B. ex Miq. in Journ. Bot. néerl. 1 (1861) 367.

Borneo. North Borneo: near Kudat, Jan. 1885, M. Fraser 113 (K), in fruit; near Niah, June 1894, on limestone, Haviland & Hose 3539 (K), in flower.

This is an interesting new locality of a very rare local-endemic Javanese species and one of the very few instances of plants known only from Borneo and Java.

**Nyctocalos pinnata** Steen. n. sp. Folia 5-foliolata; foliolo secundario parvo nonnunquam adjecto uni ex foliolis paris infimi; petiolus 4–5½ cm longus; rachis 4 cm; foliolis petiolulis 2–11 mm longis (petiolulo folioli terminalis ± 2½ cm longo) suffultis, e basi inaequilaterali ovatis vel ovato-oblongis obtuse acuminatis 6–8 cm longis 2–4 cm latis, penninerviis, nervis lateralibus utrinque 4–6. Flores incogniti, probabiliter iis *N. cuspidatae* et *N. shanicæ* similes; calyx fructifer 5 mm altus, glandulosus, 5-dentatus; dentibus singulis infra apicem corniculo munitis. Capsula basi in (pseudo) stipitem 2 cm longum angustata, oblonga, acute acuminata, plana, 13–15 cm longa (stipite haud computato) 4½–5 cm lata; valvulis carinatis. Semina (ala haud computata) reniformis emarginata 1¼ cm longa, 1 cm lata, circumdato ala annulari 2 cm lata; ala terminata margine tenui hyalino, ± 1½ cm lato; pars seminifera excentrica; semen totum ± 3½ cm diam.

China. Yunnan: Hzen-hu, Ma-an-shen, large climber, 1500 m alt., Henry 13408 (typus, K; NY).

The affinity of this species, the third to be reported from the Asiatic continent and the first from China, is not clear as flowers are not present. The fruit differs much from the linear capsule of *N. brunfelsiiflorus*. The leaves are much smaller than those of *N. thomsoni*, and it seems that the alliance is definitely with *N. cuspidatum*. From all species hitherto known it differs in the 5-foliolate leaves. The horn-like appendages on the back of the calyx-teeth are conspicuous.

**Radermachera bipinnata** (Coll. & Hemsl.) Steen. ex Chatterjee in Bull. Bot. Soc. Beng. 2 (1948) 71. — *Tecoma ?bipinnata* Coll. & Hemsl. J. Linn. Soc. 28 (1890) 102. — *Radermachera alata* P. Dop, Bull. Mus. Paris 32 (1926) 184; Fl. Gén. Indo-Chine 4 (1930) 584, fig. 36 1–2, syn. nov.

Upper Burma. Shan Hills, Lwe-kaw, 1200 m, May 1888, Collett 685 (typus, K), leaves immature, no fruits; Ruby Mine District, J. W. Oliver 166 (K); Wa States Panyan Ywa, April 30, 1937, Po Khant 15334 (K).

Yunnan. Szernao, Eastern Mts, 1800 m, Henry 13020 (K); same place, Western Mts, 1500 m, Henry 12447 (K).

Up till recently this species had been referred to the collective genus *Tecoma*. The additional collections allow to complete the original description: Shrub or treelet, 8–18 feet. Leaves up to 35 cm long; rhachis distinctly winged; leaflets puberulous underneath and glandular towards the base. Inflorescences hanging, in slender long-peduncled (1)-2-(3)-flowered cymes, 10–15 cm long, not branched, more or less ramiflorous to distinctly cauliflorous. Pedicels thin. Bracts narrow-lanceolate, 5 mm long. Corolla rather long-tubular, straight, yellow (ex Henry). Disk cupular. Ovules pluriseriate. Capsules terete, falcate, 20–25 cm long, 6–7 mm diam.; septum thin, perpendicular to the valves, with two rows of scars on either side. Seeds thickish, woody-corky, outside convex, more or less imbricate with the sharply wedge-shaped margins, in each cell distinctly in two rows.

Now that its fruit characters are known, it appears that this species occupies a singular position within the genus *Radermachera*. Its hanging, ramiflorous, unbranched inflorescences and narrowly winged leaf-rhachis it shares with *R. ramiflora* Steen. from Borneo (*J. Bot.* 72, 1934, 5), but in its fruit characters: a thin septum, unwinged, thick seeds of which only two rows develop in each cell, it deviates from all other species hitherto described. Therefore, it seems necessary to regard it as typifying a special section within the genus which I divide as follows.

Sectio *Alatae*, sect. nov. — Semina alata.

Typus: *R. gigantea* (Bl.) Miq., *Ann. Mus. Bot. Lugd.-Bat.* 3 (1867) 250.

Sectio *Exalatae*, sect. nov. — Semina exalata.

Typus: *R. bipinnata* (Coll. & Hemsl.) Steen. ex Chatterjee.

The genus *Radermachera* has been enriched during the last two decades with a relative large number of species described from various countries in Southeast Asia and Southern China, among which are several morphologically very interesting species. The centre of speciation and morphological diversity lays definitely in Southeastern Asia, as the Malaysian species are mutually closely related. The species treated above accentuates this picture. A close ally of *Radermachera* seems to be the equally SE. Asiatic, monotypic genus *Mayodendron* which differs from *Radermachera* by 2 rows of ovules in each cell (against many), a distinct longitudinal “false dissipation”, and a spathaceous calyx. Its habit is, however, very similar to that of a *Radermachera* and a closer study may show that it represents a distinct section of *Radermachera*.

***Radermachera glandulosa*** (Bl.) Miq., *Ann. Mus. Bot. Lugd.-Bat.* 3 (1867) 250. — *Spathodea glandulosa* Bl., *Bijdr.* (1825) 763. China. Kwangsi: W. T. Tsang 22326.

This is apparently a new record for China.