MISCELLANEOUS BOTANICAL NOTES X [1])

by

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67. The identity of Vitex lanceolata Turcz. (Verbenaceae)

Through the kind assistance of Prof. Dr D. K. Zerov large photographs were obtained of type specimens of two dozen *Verbenaceae* which have been described by Turczaninow and are preserved in his Herbarium of the Botanical Institute of the Academy of Science of the Ukrainian S. S. R. at Kiew. These have been studied by Dr Moldenke and have been deposited in his files. He discarded one of them as it did not seem verbenaceous, viz *Vitex lanceolata* Turcz. (Bull. Soc. Nat. Mosc. 36, 1863, ii, p. 224).

The provenance of the specimen on the label reads "Göring coll. Japon: Java" — No. 90.

Dr Bakhuizen van den Brink Jr and I have studied this photograph and the specimen appears doubtless to represent the rubiaceous *Psychotria sarmentosa* Bl. in fruiting state; it could be exactly matched by certain specimens from Java where the specimen will have been collected, as the species does not occur in Japan.

68. Three new Malaysian species of Kopsia (Apocynaceae)

During a preliminary revision of the genus *Kopsia* in Malaysia it appeared that there are three undescribed species, for which Dr R. C. Bakhuizen van den Brink Jr kindly supplied the Latin descriptions.

Kopsia mitrephora v. d. Sleesen, nov. sp. *)

Frutex nanus, 30(—? 90) cm altus, ramis glabris. Folia elliptico-oblonga, 6—10 × 2—3½ cm, basi cuneata, apice late caudata, nervatione et venulis delicatis, nervis 7—9 paribus inarcuatis, venulis intermediis sat conspicuis; petiolus 3—5 mm. Inflorescentia ramis paucis monochasialibus, internodiis brevibus; bracteae ovatae glabrae 1 mm longae. Calycis lobi oblongo-ovati glabri 1½ mm longi. Corollae tubus dilatatus, parte dilatata

[1]) 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, 467—481; the 5th in Acta Bot. Neerl. 2, 1953, 298—307; the 6th in Blumea 7, 1954, 595—598; the 7th in Blumea 8, 1955, 170—174; the 8th in Blumea 8, 1957, 514—517; the 9th in Nova Guinea n.s. 10, 1959, 207—212.

*) By Mrs E. Timmerman—née van der Sleesen.

intervallo $^1/_3$ corollae tubi metiente a basi remota, intervallo aequilonga, apicem versus constrictus, extus glaber, intus a fauce villosa basin versus ultra staminum insertionem villosus. Stamina paullum infra corollae tubi dimidiam inserta; filamenta $^1/_2$ mm; antherae $1^1/_2$ mm. Fructus ovatus puberulus, $1^1/_2 \times 1$ cm, rostratus, appendice laterali subrecurva ornatus.

Typus: *SAN 16118* (L.), North Borneo, Sandakan, 300 m alt.; fl., fr. March.

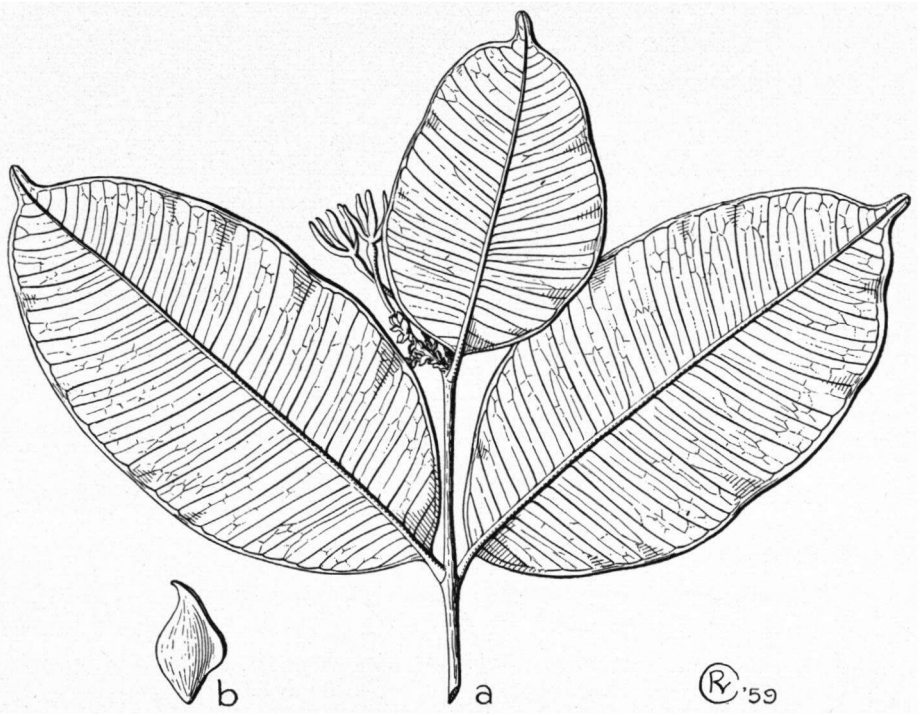

Fig. 1. *Kopsia lapidilecta* v. d. Sleesen. a. Habit, × $^2/_3$, b. young fruit, × $^4/_3$ (*van Steenis 1384*, type).

Kopsia lapidilecta v. d. Sleesen, nov. sp. *) — *Fig. 1.*

Frutex vel arbor parva, ramis glabris. Folia elliptico-oblonga, 9—25 × 4—9 cm, basi rotundata vel late cuneata, decurrentia, apice acuminata, nervis 18—22 paribus parallelis densissimis a costa transverse positis, venulis intermediis et nervis aequaliter evolutis; petiolus 3 mm. Inflorescentiae rami distincte monochasiales glabri; bracteae triangulares glabrae 1—$1^1/_2$ mm. Calycis lobi ovati apice glandula muniti, glabri, $1^1/_2$ mm. Flores clare rubri odorati, vel flavi inodori (flores obsoleti?). Corollae tubus 2 cm, apice dilatatus, dein constrictus, extus glaber, intus pilosus a staminum insertione basin versus usque ad dimidiam, fauce glabra, lobis lanceolatis 1 × 0.2 cm. Stamina apice inserta, filamentis $^3/_4$ mm antheris 2 mm. Fructi immaturi ovati rostrati glabri 1.2 × 0.6 cm, appendice laterali recurva ornati.

Typus: *Van Steenis 1384* (L); *do, 1385*; *Henderson SF 20395*. Anambas & Natuna Islands.

Kopsia tenuis Leenh. & Steen. n. sp. — *Fig. 2.*

Frutex 2 m altus, omnino glaber. Folia elliptico-oblonga ad lanceolata, tenuiter chartacea, breviacuminata, basi cuneatim in petiolum brevem decurrentia, apice 1—2 cm longe acuminata ad caudata, 8—14 × 3—5 cm; nervi tenuissimi dense paralleli, ca 30—45 paria, utrimque vix prominentes,

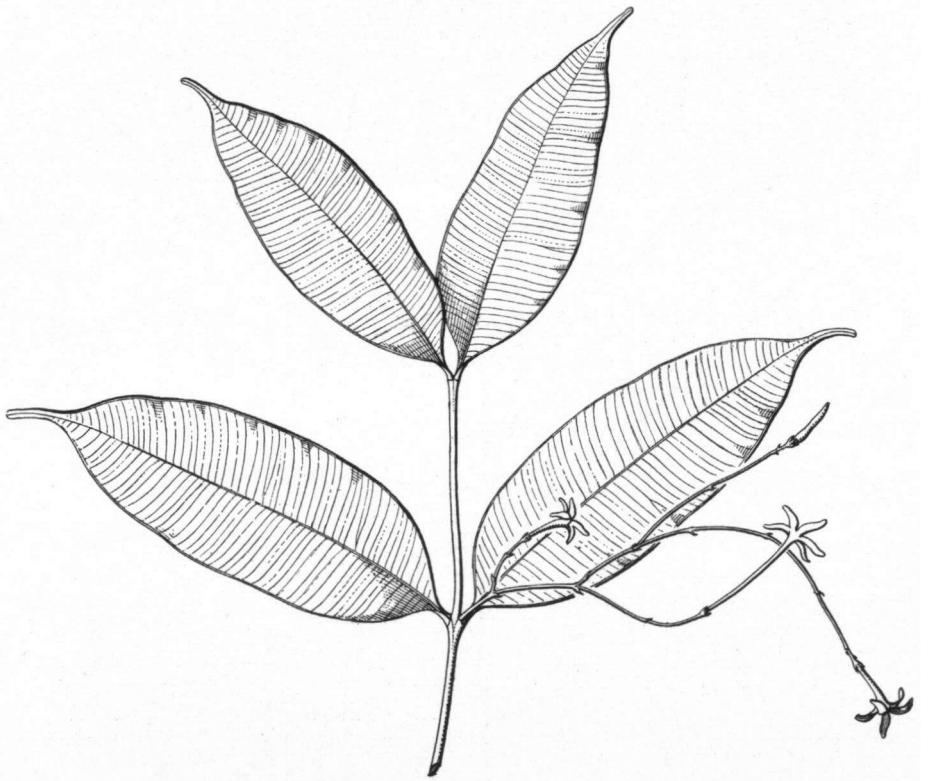

Fig. 2. *Kopsia tenuis* Leenh. & Steen. Habit, × $^{2}/_{3}$ (*Ridley s.n.*, type, Kew).

suberecti, cum vena intramarginali transverse connecti, vix a venis intermediis discernandis. Inflorescentiae pauciflorae, subramosae, valde delicatae, ad 12 cm longae, bracteis inconspicuis; pedunculus, internodia et pedicelli ca 1—2 cm longi. Calyx vix 1 mm, lobis ellipticis apice rotundatis, ciliatis. Flores albi vel pallide flavi, corollae fauce glabro, tubo 12 mm longo, apice dilatati, lobis angustis, ca 6 × ca $1^{1}/_{2}$—2 mm.

Typus: *Ridley s.n.* (K).

BORNEO. Sarawak: Mattang, *Ridley s.n.* Jan. 1915 (K); *Beccari 1861* (K); Mt Poi, *Clemens 20129* (K, BO, sterile).

Note. An extremely characteristic species, its nervation resembling that of *K. griffithii* and *K. lapidilecta*; these species have however thickish

rachis covered with many bracts; besides, *K. griffithii* has coarser flowers and *K. lapidilecta* much coarser leaves.

A fourth species not described here has also similar leaves, but coarser flowers and inflorescential stalks.

69. A new Hippocratea from Borneo (Hippocrateaceae)*)

Hippocratea beccarii P. Tuyn, nov. sp. — *Fig. 3.*

Differt a H. glaga Korth. fructu elliptico 7½ × 5 cm, calyce tenuiter carnosa margine tenuiori destituto, petalis oblongis 2½—3 × 1 mm, stylo brevissimo, disco margine erecto munito.

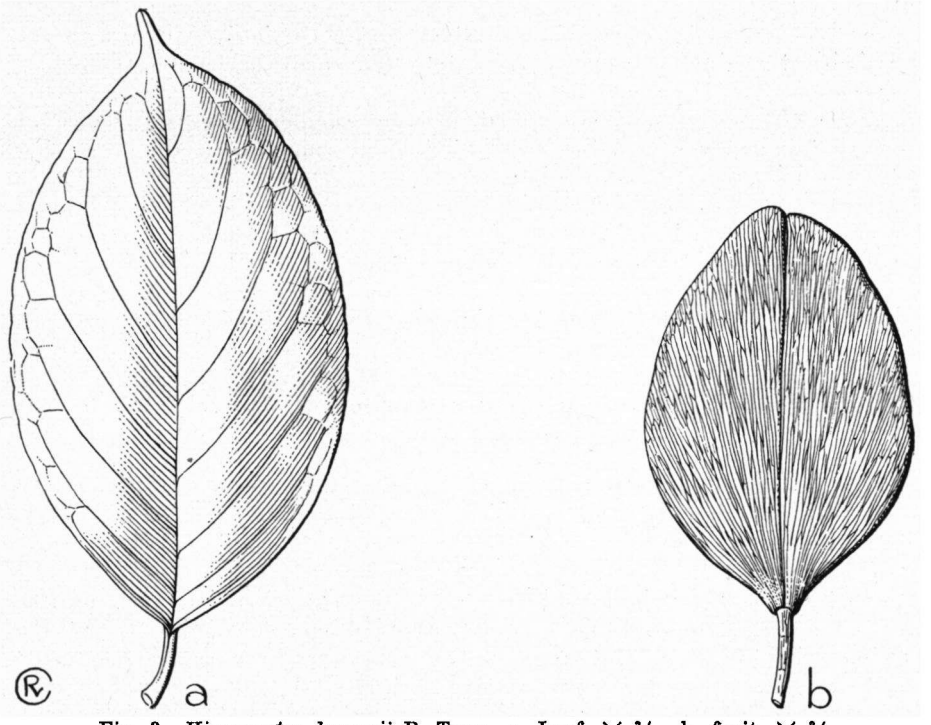

Fig. 3. *Hippocratea beccarii* P. Tuyn. a. Leaf, × ²/₃, b. fruit, × ²/₃ (*Beccari PB 3426*, type).

Coarse, glabrous liana. Leaves broad-elliptic, coriaceous, rounded at the base, (rather short-)acuminate, remotely very shallowly crenate, 10—14 by 6—8 cm; nerves mostly 6 pairs, rather straight; petiole 1—1½ cm. Panicles terminal on leafy, lateral branches c. 35 cm long; partial inflorescences both axillary and making part of the terminal part of the panicle c. 7½—10 cm long, 3—5 cm peduncled; main dichotomies with 1—2 short flowering stalks. Bracts ovate-acute, c. 1 mm diam. Flowers almost sessile. Buds globular, c. 1½ mm diam. Calyx lobes 5, imbricate, slightly connate

*) By P. Tuyn, Leyden.

at the base, half-ovate, broad, rounded to very blunt, entire, thin-fleshy, $^1/_2$—1 mm diam. Petals 5, oblong, fleshy, blunt, inside densely puberulous, $2^1/_2$—3 by 1 mm. Stamens 3, filaments 0.4 by 0.3 cm, inserted on the inner margin of the disk. Anthers extrorsely and horizontally dehiscing, 0.2—0.3 by 0.4—0.6 mm, kidney-shaped, papillose. Style slightly shorter than or as long as the stamens; stigma indistinctly 3-lobed, c. 0.1 mm. Ovary 3-angular, partly immersed in the disk, 3-celled; pistil $^1/_2$ mm long. Disk 5-angular, 0.8—1 mm diam., the erect margin 0.2 mm high. Fruit 1, broad-elliptic, retuse, $7^1/_2$ by 5 cm, very flat (immature), the surface shining and with numerous parallel, flabellate veins; peduncle 5 cm, woody.

Typus: *Beccari 2426* (FI), West Borneo. Sg. Kantu, near Pontianak, May 1867.

The new species seems closest allied to *H. cassinoides* DC. which I can (with the single specimen from the Reinwardt herbarium I had at my disposal) not distinguish from *H. glaga* Korth.

From *H. hasseltiana* Miq. it differs by smaller flowers, absence of long-crisped hairiness on the corolla, globular buds, with distinctly imbricate sepals, and probably different fruits.

Compared with *H. indica* Willd. it has very much larger and coarser flowers, larger, thicker leaves, and a very different shape of the fruit.

I have described this new species in *Hippocratea* as I cannot very well see the urgency of splitting this genus into three parts, the differences between which seem to be very feeble and some not constant, as proposed by A. C. Smith.

70. The identity of the genus Calyptosepalum S. Moore (Santalaceae) with Drypetes (Euphorbiaceae)

In 1925 S. Moore described a new genus and species *Calyptosepalum sumatranum* S. Moore from South Sumatra, based on Forbes collections (n. 2847, 2862), which he ascribed to the *Santalaceae* (J. Bot. 1925, Suppl. 91, fig.).

In 1953 I. W. Bailey & A. C. Smith described another species from Fiji (J. Arn. Arb. 34, 1953, 52) of which I could examine recently a specimen in the Kew Herbarium. There has already been some doubt about its santalaceous nature; Swamy (Am. J. Bot. 36, 1949, 671) found it non-santalaceous in anatomical characters and suggested its affinity with *Olacaceae* but refrained from a definite conclusion in the absence of female flowers.

To me there is no doubt that it represents a *Euphorbiacea,* and more specifically a species of the genus *Drypetes,* the stigma of which has frequently the peltate shape as figured by Bailey & Smith in their paper, the greyish, white-lenticellate twigs; the lead-coloured leaf and the peculiar reticulate venation are also like that of many *Drypetes.* The genus *Drypetes* is a very large one and I have not found a specimen which exactly matches the type collection of *Calyptosepalum pacificum* Bail. & A. C. Smith. The only specimen I have of *Drypetes vitiensis* Croiz. is in a less mature state; it could be that species though.

As to *Calyptosepalum sumatranum* there is no doubt in my mind that

it is also not santalaceous; it has distinctly distichous leaves which are provided at the base with small triangular stipules, which are never found in *Santalaceae*; they were not mentioned by Moore. These characters and the unisexual flowers are also strongly suggesting of *Euphorbiaceae*. Mr F. H. Hildebrand examined the vegetative characters and found them to agree very well indeed with those of *Drypetes*: the pith of the twigs is stellate, the vessels are in radial groups, from the star-ends of the pith some rays are thicker than the others, the tangential parenchyma-bands in the wood are very fine. According to him the plant can not possibly belong to either *Santalaceae* or *Olacaceae*. We both accept it as a *Drypetes* sp.

71. Cladopus in Thailand (Podostemaceae)

On the botanical excursion to the waterfalls near Nangrong, about 100 miles northeast of Bangkok, during the eighth Pacific Science Congress, Nov. 1957, I collected on the granite rocks in the stream below the rest-house, where the excursion ended, two *Podostemaceae*. The rocks are very large boulders and probably partly solid rock and very exposed to the sun. The spot is situated where the foothills begin; these have been partly deforested.

In the riverbed there are some other rheophytes, amongst which an *Eugenia* and *Homonoia riparia*. The water table was low during our visit and remains of withered *Podostemaceae* were found up to 2 m above the water table at that time.

Dr P. van Royen, of the Rijksherbarium, has been so kind to identify the material which I collected. It has appeared most interesting as one of the species is the Malaysian *Cladopus nymani*, which had hitherto not been found outside Java and Celebes. The records are as follows:

Cladopus nymani H. Möll. Ann. Jard. Bot. Buitenzorg 16 (1899) 115; Steen. Fl. Mal. I, 4 (1949) 66, fig. 1.

Thailand. Nangrong, Nov. 11, 1957, Van Steenis 19570, c. 100 m alt., on large granite boulders; fl. fr.

Hydrobryum griffithii (Wall. ex Griff.) Tulasne, Ann. Sc. Nat. III, 11 (1849) 104; Hook. Fl. Br. Ind. 5 (1886) 63. — *Podostemon griffithii* Wall. ex Griff. in As. Res. 19, 1 (1836) 105, t. 17; Ic. Pl. As. (1854) t. 544.

Thailand, Nangrong, same locality, Van Steenis 19569.