

NOTES ON SOME MALAYSIAN CUCURBITACEAE

by

M. J A C O B S

(Flora Malesiana Foundation, Leiden)

(Issued 18. XII. 1954).

GYNOSTEMMA BL.

Gynostemma hederifolia (Deene) Cogn. in D.C., Monogr. Phan. 3: 916, 1881. ("hederifolia"). — *Sicyos hederifolius* Decaisne in Nouv. Ann. Mus. Hist. Nat. Paris 3: 450, 1834.

KANGÉAN Island (N. of Bali): Gua Peteng, 1 m alt.; *Boeker 26948* (BO), 15-III-1919, ♂, filaments connate up to the top, leaves far more densely puberulous than in the next specimen.

SEMAU Isle (S.W. of Timor) 200 m alt.: *De Voogd 2323* (A, B, BISH, BO, K, L, NY, P, SING), 19-XI-1935, with bottle-shaped swelling at foot of stem, pictured in photographs in *De Trop. Natuur Jubileum-Uitg.*: 71. 1936 and 29: 6. 1940, ♂, filaments connate only in the lower half, leaves sparsely puberulous, nerves more densely puberulous.

Part of the latter number was cultivated in the Botanic Gardens at Bogor (sub no XVIII. A. 45). Van Steenis made on the living flowers the following observations: "Flower light green or green-yellow, 4—4.5 mm in diam. Receptacle green, excreting a juice (honey?). Sepals connate about half up, acute, green, margins recurved. Petals mucronulate, densely papillose. Filaments, except the top, connate into a column 1 mm long. Anthers 5, extrorsely dehiscent, pollen sulphureous."

The data on the coalescence of the filaments in this genus are not very satisfactory. Cogniaux states in his key (l. c. p. 347): "stamina 5, filamentis connatis", in the description of the genus (l. c. p. 912): "stamina 5, filamentis basi connatis, apice divergentibus", and in his description in Engler & Prantl Nat. Pfl. Fam. IV, 5: 37, 1894: "Staubfäden nur unterwärts verwachsen". But *G. pedata* and *G. simplicifolia* I found to possess filaments which are connate along their whole length, as has the specimen of Kangean, cited above. Although the Greek word "stemma" = chaplet, is neuter, Blume, the author of the genus, gives it the feminine gender.

Up to the present the species was only known from the type locality in Timor.

MELOTHRIA L.

Melothria cissybium M. Jacobs, sp. nov. — *Fig. 1—2.*

Probabiliter dioica. *Caulis* angulatus, sulcatus. *Petiolus* 0.8—1.2(—3.5) cm. *Folii* lamina simplex, oblonga ad triangularis, membranacea, 7—11 ×

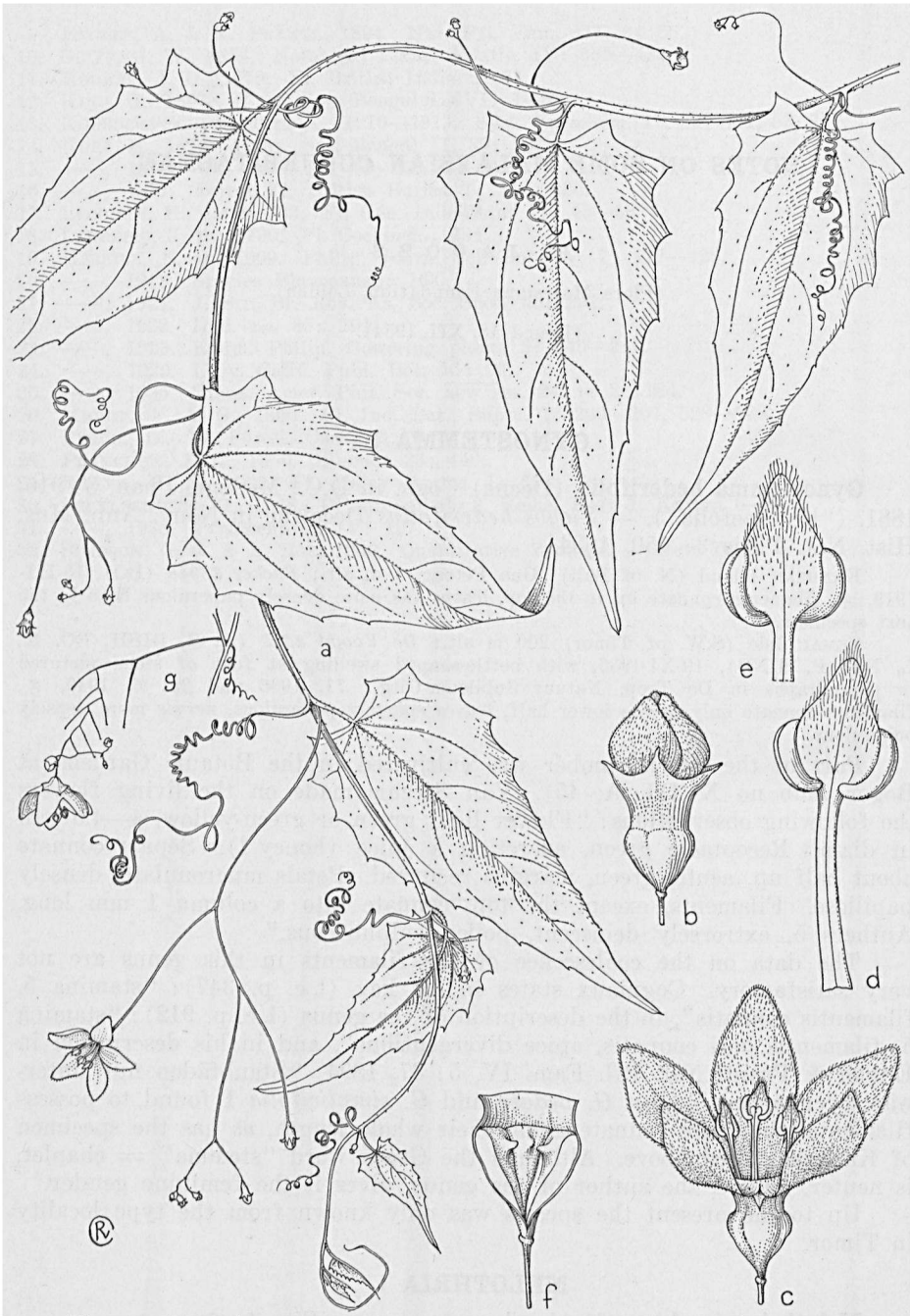


Fig. 1. *Melothria cissymbium* M. Jacobs, ♂ plant. — a. Habitus, $\times \frac{2}{5}$; b. flower in bud, $\times 2$; c. flower, $\times 9$; d. stamen, adaxial side, $\times 9$; e. stamen, abaxial side, $\times 9$; f. receptacle, longitudinal section, $\times 5$; g. inflorescence, $\times \frac{2}{5}$. (a—f. after Gyldenstolpe s.n.; g. after Womersley 5543).

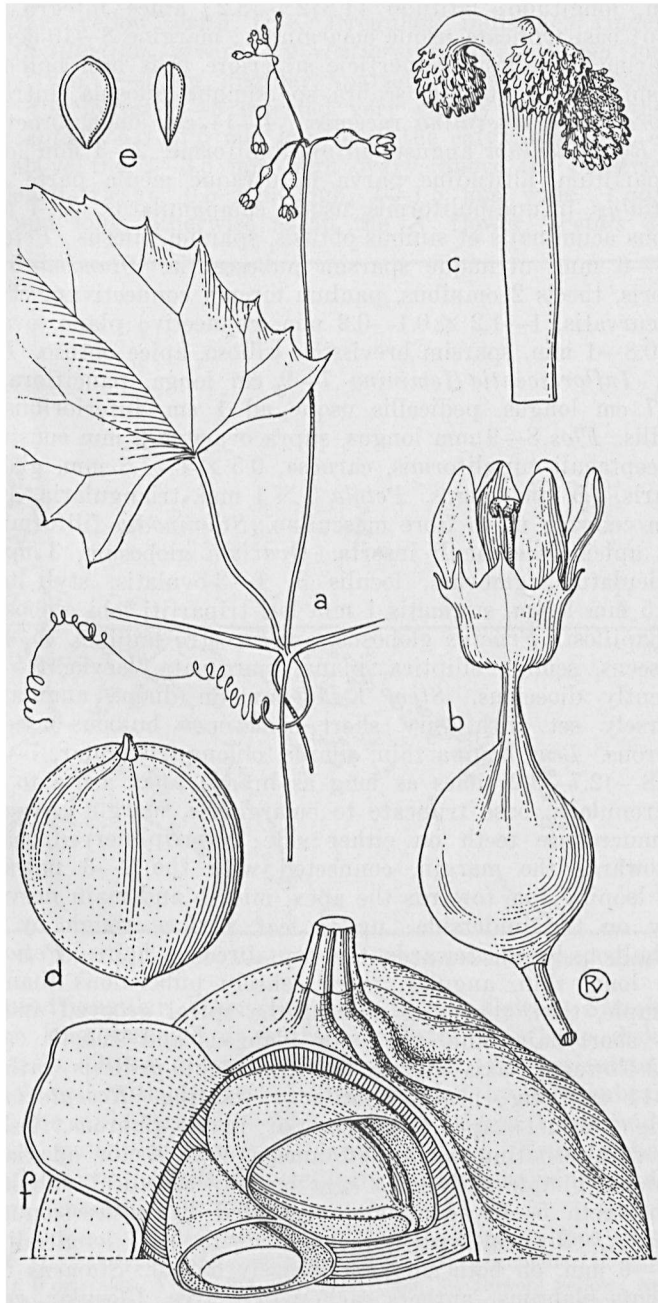


Fig. 2. *Melothria cissymbium* M. Jacobs, ♀ plant. — a. Habitus, $\times 1$; b. flower, $\times 7$; c. style, $\times 20$; d. fruit, $\times 4$; e. seeds, $\times 4$; f. section through upper part of 1 cell of the fruit, showing 2 young seeds in their membranous coat, $\times 12$. (after Womersley 5364).

2.5—4.5 cm, longitudo: latitudo (1.8)2.7—3.2; apice integro, acuminato, mucronulato; basi truncata usque emarginata; margine 8—10-dentato; costa nervisque primariis pilosis; superficie superiore pilis basi bulbosis. *Cirrhii* simplices; spira extra sulcata, scabra sparsimque pilosula, intra glabra et laevi. *Inflorescentia masculina* racemosa, 4—14 cm longa, bracteis minutis vel nullis. *Receptaculum* anguste infundibuliforme, 2—3 mm longum, carnosum, tripartitum, altitudine parva in utraque media parte instructum, glabrum. *Calyx* infundibuliformis usque campanulatus, 5—7 mm longus, 5—6 dentibus acuminatis et sinibus obtusis, sparsim pilosus. *Petala* elliptica 10—12 × 4—6 mm, utrimque sparsim pubescentia. *Stamina* 5 mm; filamentis glabris, thecis 2 omnibus, paulum circum connectivum et ad partem adaxialem curvatis, 1—1.2 × 0.1—0.2 mm, connectivo plano, ovato-triangulari, 1.5 × 0.8—1 mm, sparsim brevissime villosa, apice obtuso. *Pistilodium* non visum. *Inflorescentia feminina* 7—9 cm longa, pauciflora, racemosa, scapus 6—7 cm longus, pedicellis usque ad 1 cm, inferioribus confertis; bracteis nullis. *Flos* 8—9 mm longus, supra ovarium 2 mm constrictus, pars superior receptaculi cupuliformis, carnosus, 0.5 × 1—1.5 mm, glabra. *Calyx* infundibularis, 1.5 mm longus. *Petala* 3 × 1 mm, triangularia, apice acuta; perianthium ceterum ut in flore masculino. *Staminodia* filiformia, 1.5 mm, in margine apicis receptaculi inserta. *Ovarium* globosum, 3 mm crassum, minute reticulatum, glabrum, loculis 3, 1—3-ovulatis, styli teretis pars libera 2—2.5 mm longa, stigmatis 1 mm lati tripartiti lobi globosi, patentis-recurvati, papilloso. *Fructus* globosus, apice rostro minimo, ca. 8 mm crassus, indehiscens, semina elliptica, plana, marginata, laevia, 2.5 × 1.5 mm.

Apparently dioecious. *Stem* 1—1.5 mm in diam., angular, grooved, rather sparsely set with very short sometimes bulbous-based hairs to nearly glabrous. *Leaf* lamina thin, simple, oblong-triangular, 7—11 × 2.5—4.5 cm, (1.8—)2.7—3.2 times as long as broad; apex acute to acuminate, entire, mucronulate; base truncate to emarginate, margin coarsely dentate by 8—10 mucronate teeth on either side; subtriplinerved, basal nerves branched towards the margin, connected with the 2—3 pairs of upper nerves in a looping line towards the apex, midrib and main nerves puberulous, mainly on the underside; upper leaf surface rough by short sub-appressed bulbous-based, towards the top directed hairs. *Petiole* 0.8—1.2 (—3.5) cm long, thin, angular, more densely puberulous than the stem. *Tendrils* simple, thin, the outer side of the spiral grooved and rough by sparse very short hairs, the inner side glabrous and smooth. ♂ *Inflorescence* 4—15-flowered, axis zigzag, as the slight pedicels rather densely haired, 4—14 cm long; bracts minute or wanting. *Receptacle* 2—3 mm 2—3 mm high, funnel-shaped to subcupular, inside glabrous, fleshy, divided into 3 sectors alternating with the stamens, each sector adaxially with a small subconical pimple midway. *Calyx* broadly obconical, subglabrous, 3—4 mm high, teeth 5—6, acuminate, separated by obtuse sinuses. *Petals* connate for $\frac{1}{3}$, elliptical with blunt apex, with 5—7 longitudinal nerves, 10—12 × 4—6 mm, on both surfaces sparsely haired. *Stamens* 5 mm long, free; filaments glabrous; anthers each with 2 free, 1-ocular, curved cells, surrounding the lower half of the connective, slightly obliquely inserted adaxially at the base, 1—1.2 × 0.1—0.2 mm; connective flat, ovate, 1.5 × 0.8—1 mm, with blunt or acute top, sparsely haired on both surfaces;

pollen globular, yellow, with fine, irregular, indistinct fingerprint-like sculptures. *Pistillodium* absent. ♀ *Inflorescence* 7–10 cm long, pauciflorous, scape thin, 6–7 cm, angular, sparsely haired to glabrous; pedicels up to 1 cm, the lowest 3–5 inserted very closely to each other; bracts wanting. *Receptacle* 6.5–7.5 mm long incl. the calyx, glabrous, constricted over 2 mm above the 3–3.5 mm high ovary, above the constriction campanulate-widened, fleshy, 0.5 mm high, 1–1.5 mm wide. *Calyx* funnel-shaped, 1.5 mm long, otherwise as in the ♂ flower. *Petals* 3 × 1 mm,

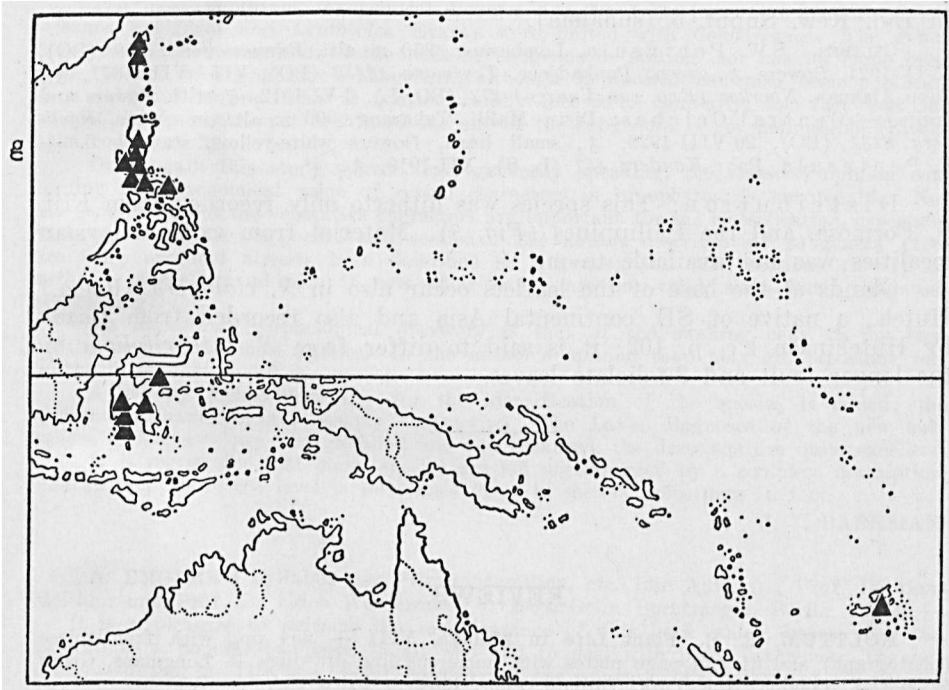


Fig. 3. Distribution of *Nealsomitra integrifoliola* (Cogn.) Hutch.

segments acute-triangular, otherwise as in the ♂ flower. *Staminodes* filiform, 1.5 mm long, inserted upon the margin of the fleshy disk-like apex of the receptacle. *Ovary* globular, 3 mm in diam., fine-reticulate, glabrous, 3-locular, each cell with 1–3 ovules surrounded by a membranous coat. Free part of the style terete, 2–2.5 mm long; stigma 1 mm wide, divided into 3 globose, patent to recurved, papillose lobes. *Fruit* globose, 8 mm in diam., indehiscent. *Seeds* flat, elliptic, narrow-margined, pale yellow, 2.5 × 1.5 mm, smooth.

EAST NEW GUINEA. Western Highlands: Al River, Nondugl, 2100 m alt., *Womersley*, NGF 5543 (L, *holotype*; LAE, *isotype*), 7-IX-1953, ♂, climber in forest, flowers yellow; *ibidem*: *Womersley*, NGF 5364 (L), 8-IX-1953, ♀, flowers yellow; same locality, Wahgi Mts, Weiga, 2300 m alt., *Greta Gyldenstolpe* s. n. (S), 1–3-X-1951, ♂.

The name is a transcription of the Greek word *κισσυβιον*, meaning wooden tub or cup for mixing and drinking, on account of the shape of the receptacle.

NEOALSOMITRA Hutch.

Neoalsomitra integrifoliola (Cogn.) Hutchinson in Ann. Bot. n. s. 6: 99, 1942. — *Gynostemma integrifoliola* Cogniaux in D. C. Monogr. Phan. 3: 916, 1881. — *G. elongatum* Merrill in Philip. Journ. Sci. 3: 267, 1908. — *Alsomitra integrifoliola* Hayata in Journ. Coll. Sci. Imp. Univ. Tokyo 30: 121, 1911; Hayata in Ic. Plant. Formos. 1: t. 38, 39, 1911; Cogniaux in Engler, Pflanzenr. 4, 275, 1: 17, 1916. — *Hemsleya elongata* (Merr.) Cogniaux in Engler, Pflanzenr. 4, 275, 1: 26, 1916. — *Alsomitra "integrifolia"* in Ind. Kew. Suppl. 5 (sphalma).

CELEBES. S.W. Peninsula, Lombasang, 950 m alt., *Binnemeijer 11159* (BO), 25-IV-1921, flowers ♂, green; Pankadjene. *Teysmann 12432* (BO), VII—VIII-1877, ♂; Cape Alakuan, *Noerkas (Exp. van Vuuren) 277* (BO, L), 6-VI-1912, ♀ with flowers and fruits. — Central Celebes; Distr. Malili, Takarang, 500 m alt., in groves, *Kjellberg 2131* (BO), 20-VIII-1929, ♂, small liana, flowers white-yellow, stamens 5. — E. Peninsula, Poh: *Kaudern 451* (L, S), XII-1919, ♂.

Distribution: This species was hitherto only recorded from Fiji, S. Formosa, and the Philippines (*Fig. 3*). Material from extra-Malaysian localities was not available to me.

Glands at the base of the leaflets occur also in *N. clavigera* (Roem.) Hutch., a native of SE. continental Asia and also recorded from Luzon by Hutchinson l. c. p. 102; it is said to differ from *N. integrifoliola* by the longer fruit and 3-foliolate leaves.