STUDIES IN THE GESNERIACEAE OF THE OLD WORLD XXXIV: A MISCELLANY FROM SOUTH EASTERN ASIA

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ABSTRACT. Twenty eight species are annotated. These include one new monotypic genus from Sarawak (*Platyadenia descendens*), one new species of *Paraboea* from the Malay Peninsula, 4 new species from Sarawak in the genera *Boea*, *Didissandra*, *Didymocarpus*, *Loxocarpus* and one new species of *Cyrtandra* from New Guinea. There are also 10 new names or combinations. Miscellaneous notes and new or corrected records complete the tally.

Boea divaricata Ridl. in Journ. As. Soc. Str. Br. 44: 75 (1905) et Fl. Mal. Pen. 2: 535 (1923). Henderson in Journ. Mal. Br. Roy. As. Soc. 17: 62 (1939).
MALAYA. Kedah: P. Langkawi, "Ayer Hangat and small islands", *Curtis* 3683 (SING); limestone hill on N bank of Sungei Kisap, 30 iv 1962, *Burtt & Woods*, *B.* 1775 (also seen at Ayer Hangat and Gua Cherita).

In his account of the limestone floras of Malay, Henderson only listed *B. divaricata* as a dubious record, because Ayer Hangat "is not in the limestone area, as far as can be ascertained". There is, however, a conspicuous limestone ridge running parallel to the shore and it was here that we saw *B. divaricata*, as no doubt Curtis had done many years before. We had previously found this species at two other localities on limestone and there is no doubt that it is a good limestone plant.

Boea elegans Ridley in Journ. Linn. Soc. 32: 522 (1896) et in Journ. As. Soc. Beng. 74, 2: 777 (1908) et Fl. Malay Penins. 2: 536 (1923).
Syn.: *Paraboea obovata* Ridley in Journ. Roy. As. Soc. Str. Br. 44: 71 (1905) et in Journ. As. Soc. Beng. 74, 2: 775 (1908) et Fl. Malay Penins. 2: 533 (1923).
MALAYA. Kedah: Gunong Jerai (Kedah Peak), on granite precipices, *Ridley* (holo SING); rock faces in crevices, 23 ix 1949, *B. Allen* (E, SING); P. Langkawi, Gunong Machinchang, *Curtis* (holo *P. obovata*); *ibidem*, 1 v 1962, *Burtt & Woods*, *B.* 1795.

This is the only Malayan *Boea* definitely known from non-limestone rock. The Gunong Machinchang habitat was an outcrop of quartzitic sandstone in forest. Two other gesneriads were growing on the same small outcrop: *Didymocarpus inaequalis* and *D. purpureus*. Both had also been described by Ridley from Curtis's collecting in this area and it seems quite possible that we had re-discovered the type locality of all three species. The flora of Gunong Machinchang should be carefully compared with that of Gunong Jerai (Kedah Peak). *Paraboea obovata* has proved conspecific with *Boea elegans*; *Didymocarpus purpureus* may also occur on Gunong Jerai (fruiting specimen only seen). Furthermore, a small *Sonerila* from Gunong Machinchang is *S. congesta* Stapf (*Burtt & Woods*, *B.* 1801) and *S. calophylla* Ridl.

from Gunong Jerai may well represent the same species. *Staurogyne merguensis* (T. And.) O. Kuntze grew on the same rock outcrop with the three gesneriads; it is a species that ranges from Tenasserim to Perak, but it is interesting to note that it too occurs on Gunong Jerai.

Boea speluncarum B. L. Burtt, **species nova** *B. lanatae* Ridl., plantae etiam lanatae inflorescentiis axillaribus, affinis, sed caulibus lignosis elongatis, floribus caeruleis (nec magentis) foliis ternatis facile distinguenda.

Herba perennis, dense arachnoideo-tomentosa, caule lignoso longe pendulo parce ramoso. *Folia* ternata, sessilia, oblongo-elliptica, in caule primario 12–16 × 4–5 cm, in ramis minora, apice plus minusve abrupte angustata acuta vel subobtusa, basi attenuata, supra tenuiter araneosa et breviter sed dense scabro-pubescentia, subtus dense arachnoideo-tomentosa nervis lateralibus untrinsecus c. 12–15 subtus prominulis. *Inflorescentiae* ex axillis foliorum superiorum, c. 12–15 cm longae; pedunculi tomentosi ad 7 cm longi, apice cymosim ramosi, flores c. 12 per paria gerentes; bracteae tomentosae, primariae ad 1 cm longae; pedicelli 1–1·5 cm. *Calyx* c. 3 mm (post anthesi ad 4 mm) longus, fere ad basin in segmenta 5 lanceolata divisus, extra lanato-tomentosus et sub tomento acute patenter pubescens, intus praecipue ad apicem glandulosus. *Corolla* caeruleo-violacea, tubo 1·5 mm longo, limbo plano patenter bilabiato; labium superius e lobis duobus c. 4 × 6 mm; labium inferius 3-lobum, lobis lateralibus 4 × 5 mm, mediano 4 × 4·5 mm. *Discus* nullus. *Ovarium* 2·5 mm longum, conicum, glabrum, in stylo 5 mm longo glabro attenuatum; stigma terminale, vix incrassatum, viscidum. *Fructus* c. 1·5 cm. longus, tortus, castaneo-brunneus, glaber.
SARAWAK. Third Division: Niah Caves, on limestone tufa stalactites within overhanging mouth of cave, stems pendulous and branched, flowers blue-violet, anthers bright yellow, 3 vi 1962, *Burtt & Woods*, *B.* 1992; *ibidem*, *Alphonso & Samsuri*, *A.* 241; Gunong Subis, mouth of cave, 5 vi 1962, *Burtt & Woods*, *B.* 2019 (holo E; iso SAR).

While all the Malaysian species of *Boea* are plants of the limestone, *B. speluncarum* is the only one which seems to show a preference for the shelter of cave-mouths, and the specific epithet therefore records this.

It is remarkable that this species has remained undescribed till now, for it grows profusely on the soft limestone stalactites at the far end of the famous Niah caves (near the archaeologists' hut!) which have been visited by so many Sarawak collectors. Perhaps it has not been distinguished in the field from *B. treubii* (see below) which grows on the exposed cliff edge above the caves.

B. speluncarum has long pendent straggly and branched stems which hang down from the limestone but turn upwards at the leafy flowering ends. The inflorescences are axillary. This is an important character in *Boea* (see Burtt in *Phenetic & Phylogenetic Classification* ed. Heywood & McNeill, p. 13, 1964), not only taxonomically but biologically. With a persistent vegetative terminal bud growth in length is potentially unlimited and there seems no reason for plants to die until weight or accident cause their dislodgment.

Because other Sarawak species of *Boea* have terminal panicles, it has been necessary to look elsewhere for a close ally of *B. speluncarum*, to *B. lanata* from the Langkawi islands in N Malaya. At one place where we collected

this species (Gua Cherita, N Langkawi, *Burtt & Woods, B.* 1776), field notes sound remarkably like these for the Niah plant: "white tomentose leaves, axillary inflorescences; little branched woody stem pendent from high limestone tufa on cliff". However this particular plant had been collected, with much trouble, because it was at first thought to be different from the common *B. lanata* which usually formed much tighter woolly rosettes on the exposed cliffs of hard limestone above the sea (*Burtt & Woods, B.* 1768). *B. lanata* has a magenta rather than a violet-blue flower; its peduncles vary from tomentose to viscid or glandular pubescent (even in the same population), and its leaves are much more densely woolly on the upper surface.

Boea treubii H. O. Forbes in Journ. Linn. Soc. Bot. 19: 297 (1882), et Nat. Wand. E. Archip. 251, 279 (1885).
SUMATRA. Palembang Res., in monte calcareo Karangnata, prope Napal Nitjin, 300 m, xi 1881, *Forbes* (holo BM).
MALAYA. Pahang, Gua Tipus, on limestone, 17 x 1927, *Henderson*, SFN 19459.
SARAWAK. Fourth Division, Miri distr.: Niah Caves, *Synge* 589 (K); *ibidem*, stem unbranched, old leaves persisting withered, growing out from limestone cliff, 6 vi 1962, *Burtt & Woods, B.* 2032; W side Gunong Subis, c. 120 m, shrub 4 ft high on bare exposed limestone rock, near summit of limestone hill, 6 vi 1962, *Anderson S.* 16045 (SAR).

Although Forbes does not mention the duration of this species, it is clear from the unbranched stem and terminal panicle that it is probably monocarpic. Forbes's description of the Karangnata caves and then this *Boea* growing amongst limestone rocks on top of the hill, reminds one immediately of Niah in Sarawak. There *B. treubii* is on the exposed rocks above the caves and under the overhang grows *B. speluncarum*. Thus it would be no suprise if the latter species were eventually found to occur also in Sumatra.

I have little hesitation in assigning the Malayan and Sarawak specimens quoted above to *B. treubii*; nor have I any hesitation in excluding *Pierre* 4538 from Indo-China and the New Guinea synonym *Didymocarpus lawesii* F. Muell. quoted by C. B. Clarke (in DC., Mon. Phan. 5: 142, 1883). The precise limits to be assigned to *B. treubii* are, however, by no means certain. There are two sources of difficulty. We have no precise information on the taxonomic value of the monocarpic (as opposed to the perennial) habit, and the character itself is not easy to determine in the herbarium.

There are two names for Sarawak plants that may well be synonyms of *B. treubii*. They are *B. havilandii* Ridl. (in Journ. As. Soc. Str. Br. 44: 73, 1905) and *B. brettiana* W.W.Sm. (in Notes R.B.G. Edinb. 8: 319, 1915). Both differ from *B. treubii* in detail of indumentum and nervature on the underside of the leaf. In *B. treubii* this is smooth, close-fitting, tawny in colour; the lateral nerves are rather numerous and regular: on the type a 14 cm leaf just below the panicle has 26 lateral nerves at 5 mm spacing. In *B. havilandii* and *B. brettiana* the indumentum is also dense but it is white and somewhat looser; a comparable leaf has only about 12 lateral nerves.

Both these names are based on specimens from the limestone hills of the First Division, Sarawak. There are no unequivocal notes on habit.

In this area we have seen two large species of *Boea*. One, at Seburan Mine, Bau (*Burtt & Woods, B.* 1832) is certainly monocarpic. The other from Gunong Staat (*Burtt & Woods, B.* 1929) is not: it forms clumps with 3–4 stems arising from the same rootstock. These stems are not all of the same age and they evidently do not reach flowering in their first year's growth, but each apparently dies after fruiting. This plant from Gunong Staat has a smaller inflorescence than that from Seburan Mine, but we know little about ranges of size and herbarium specimens have not so far proved distinguishable by any other character. The habit differences between these two plants have been shown diagrammatically (Burtt in *Phenetic & Phylogenetic Classification* ed. Heywood & McNeill, fig. 7 nos. 5 & 6). That does not complete the problems, however, for plants have been found on cliffs in the Melinau Gorge below Gunong Api (Sarawak, c. 4°5′N, 114°50′ E) which have the indumentum of *B. treubii*, close fitting and tawny, and similar lateral nerves, though the leaves tend to be slightly shorter and broader. However these plants are also perennial. They grow on cliff faces, and have rather straggling stems, much branched from the base. After fruiting the infructescence and part of the stem dies but growth is renewed from a lateral bud someway down the stem. This is the pattern of growth found in *B. verticillata* Ridl. of the Malay Peninsula (Burtt, *l.c.* fig. 7 no. 4).

In the Melinau gorge area, it should be mentioned there are at least two further species of *Boea* that are apparently undescribed, but the evaluation of the characters is obviously difficult. The distribution now established for *Boea treubii* suggests that it may be advisable to move slowly and try to obtain material from other areas before describing additional species.

Cyrtandra tarsodes B. L. Burtt, **species nova** *C. auriculatae* C.B. Cl. maxime affinis, foliis minoribus subaequalibus et ovario styloque glabro inter alia facile distinguitur.

Herba prostrata, repens, radicans, caulibus tenuibus primum dense serius laxe sericeis demum glabrescentibus. *Folia* subaequalia; petiolus 5 mm usque longus, sericeus; lamina plus minusve elliptica, 1·5–2 cm longa c. 8 mm lata, apice obtusa, basi angustata, marginibus crenato-dentata, supra inter venas laxe sericeo-pilosa, subtus in venas dense sericeo inter venas glabro turritibus stomatum siccitate albo-notata. *Flores* axillares, solitarii; pedicelli 5 mm longi, sericei, medio bibracteolati; bracteolae foliaceae, petiolo 2 mm longo, lamina ovata 2·5 × 2·5 mm uti folia sericea. *Calyx* tubo 5 mm longo, lobis triangularibus 3 mm longis basi 1 mm latis, extra pilosus. *Corolla* 2–2·5 cm longa, extra pilosa tubus 15–18 mm, medio (ut videtur) leviter deflexus, sursum ampliatus; lobi rotundati crenulati, superiores 5 × 5 mm, laterales c. 5 × 6 mm, mediani 5–8 × 6 mm. *Stamina* fertilia 2; filamenta c. 11 mm supra corollae basin orientia, basi dorso incrassata, robusta, glabra, 4 mm longa; antherae 1·5 mm longae; staminodia vix 1 mm longa, plana, c. 6–7 mm supra corollae basin orientia. *Discus* 1·5 mm altus, undulato-lobulatus. *Ovarium* conicum, 4 mm longum, glabrum; stylus 7 mm longus, robustus, sericeus; stigma e lamellis duobus ovatis 2 × 1 mm compositum. *Fructus* ovoideus, 10 × 5 mm, apiculatus.

NEW GUINEA. Finisterre Mts., Madang distr. Saidor subdistr., 2700 m, Sewe, on steep bank by creek in *Nothofagus-Pandanus* forest, locally abundant, herb forming tight mats on moss communities, 2 in. tall, leaves pale green, flowers pale lemon yellow, 5 xi 1964, *Sayers*, NGF 21351 (holo E; iso BM). Eastern Highland distr., Mt. Wilhelm, 145°5′E, 5°45′S, Kombugomambuno, base of Pindunde valley, 3300 m, creeping soft-stemmed herb, humus-rich wet forest floor forming a closed cover together with bryophytes, plant with brownish-white hairs, calyx green, corolla white slightly yellowish, filaments white, anthers grey, young fruit green enclosed by calyx, when ripe yellow-green and calyx drops, 20 v 1965, *Balgooy* 390 (E, L).

This is not only a very distinctive species amongst New Guinea Cyrtandras, it is of particular phytogeographical interest. The creeping herbaceous mat-forming habit (whence the epithet *tarsodes*) and solitary flowers compose a facies unlike that of any other New Guinea species, and matched only, I think, by the Philippine (Luzon) endemic *C. auriculata* C.B. Cl. It is true that there are well-marked differences between *C. tarsodes* and *C. auriculata*, notably in the size of the leaves (the larger one being 2·5 × 2 cm in *C. auriculata*) and in the indumentum of the ovary (densely sericeous in *C. auriculata*, glabrous in *C. tarsodes*); nevertheless each species is distinctive in its own area in just the same way, and it seems certain that they are allied to one another. They do not fit naturally into any section proposed by C. B. Clarke (in DC., *Mon. Phan.* 5, 1: 202, 1883), or by Schlechter (in *Bot. Jahrb.* 53: 311, 1923), but the sectional classification of *Cyrtandra* is so unsatisfactory that no innovation is at present desirable.

There are, of course, many links between the floras of the Philippines on the one hand and the New Guinea and Solomon Islands on the other and mention was made of these in a discussion of the results of the Royal Society's expedition to the Solomon Islands (*Phil. Trans. Roy. Soc. B.* 255, 1969: Corner on *Ficus* p. 569, Burtt p. 615). Corner refers to the old Melanesian Foreland, and it is therefore noteworthy that *Cyrtandra tarsodes* is found on Mt. Wilhelm and the Finisterre Range on the northern side of New Guinea. It may well turn out that other groups of New Guinea *Cyrtandra*, especially the more branched species with medium to small leaves, also have their western affinities in the Philippines, whereas the little-branched larger-leaved species are paralleled further west amongst the Cyrtandras of Java, Sumatra and Borneo.

There are no sclereids in the leaf of this species. Stomatal turrets, looking superficially like tiny scales, are a conspicuous feature of the undersurface of the leaf.

Dichiloboea speciosa (Ridl.) Stapf in Kew Bull. 1913, 356; Ridl., Fl. Mal. Pen. 2: 537 (1923); Henderson in Journ. Mal. Br. Roy. As. Soc. 17: 61 (1939); Barnett in Fl. Siam. Enum. 3, 3: 237 (1962).
Syn.: *Phylloboea speciosa* Ridl. in Journ. Linn. Soc. Bot. 32: 522 (1895).
MALAYA. Kedah: P. Langkawi, *Curtis* (holo); limestone hill on N bank Sungei Kisap, 30 iv 1962, *Burtt & Woods*, *B.* 1773; P. Dayong Bunting, spur S of Tanjong Nyiru, 28 iv 1962, *Burtt & Woods*, *B.* 1753. Perlis: Bukit

Chupeng (also seen on Bukit Papan), dry rocks near summit, 23 iv 1962, *Burtt & Woods*, *B.* 1701; Bintang Forest Reserve, c. 360 m, on dry limestone rocks, desiccated but reviving slowly if soaked in water, 26 iv 1962, *Burtt & Woods*, *B.* 1741.

Both in Ridley's Flora and in Henderson's account of the limestone floras, *Dichiloboea speciosa* is given as a Langkawi endemic. The Thailand records given by Barnett are more recent, but it is remarkable that records from the Malayan mainland do not seem to be in print. This is a characteristic species of exposed rock on the summits of the limestone hills of Perlis. At the end of the dry season in April many of the shoots were shrivelled, but the plants evidently have great recuperative powers. Cuttings sent back to Edinburgh survived and flowered, and in fact still do so, though this species has never really established itself or grown happily.

Didissandra elongata (Jack) C. B. Clarke in DC., Mon. Phan. 5, 1: 67 (1883).
Syn.: *Didymocarpus elongatus* Jack in Trans. Linn. Soc. 14: 37 (1825).
Didymocarpus violascens Ridl. in Kew Bull. 1925, 87.
SUMATRA. Lubok Tandai, near Bencoolen, *Brooks* 7185 (holo *D. violascens*, K).

The type specimen of *Didymocarpus violascens* clearly has four fertile stamens and is therefore to be referred to the genus *Didissandra* in current classifications. It proves, in fact, to be inseparable from *D. elongata* which is the type species of the conserved generic name *Didissandra*.

Didissandra sect. **Stilpnothrix** C.B.CL.

C. B. Clarke (in DC., *Mon. Phan.* 5, 1: 69, 1883) established the section *Stilpnothrix* of *Didissandra* for two species, *D. ornata* C.B.Cl. and *D. rufa* C.B.Cl. The former species has been taken as the lectotype of the section (*Notes R.B.G. Edinb.* 21: 197, 1954) because it is better known, conforms more closely to Clarke's sectional description and was the one illustrated. Clarke's diagnosis of the section reads "Suffrutices humiles, a pilis longis multicellularibus lucidis ornati—Folia apicem versus caulis conferta.—Pedunculi uniflori [sphalm. pluriflori]; bracteae 2 angustae, oppositae.—Corolla campanulata, parva, tubo brevi.—Filamenta brevia; antherae 4 conniventes." The name *Stilpnothrix* (printed in error as *Stilpnotrix*, but correctly spelt by Clarke on the herbarium sheets) refers to the glistening hairs which are such a conspicuous feature of these plants. In *D. ornata* they are white, in *D. rufa* reddish brown.

In a previous note (*Notes R.B.G. Edinb.* 24: 42, 1962) I gave a description of the corolla of *D. rufa* which showed that Clarke had been wrong to dismiss it as being very similar to that of *D. ornata*. The corolla of *D. rufa* has a very short tube about 3 mm long and a flat limb nearly 2 cm in diameter. In pattern it is more like some species of *Boea* and *Saintpaulia* and the large anthers are exserted at its mouth in the same way. Clarke's description of the corolla of sect. *Stilpnothrix* as campanulate did not therefore hold, even for the two species he named.

In the same note I drew attention to another specimen (*Winkler* 1512)

which seems indistinguishable from *D. rufa* in vegetative features, but has a tubular corolla 2·3 cm long with small lobes.

The plant described below, as *D. tenella*, has a tubular campanulate type of corolla which in general form may be regarded as intermediate between the campanulate corolla of *D. ornata* and the tubular one of *Winkler* 1512.

With this striking range of corolla form, the diagnostic features of the section given by C. B. Clarke collapse. Only the long glistening white or reddish-brown hairs remain, for although these species all have a single-flowered peduncle, that feature is not exclusive to sect. *Stilpnothrix*. Nevertheless, the indumentum is so striking that this little group of Bornean species probably are closely related and simply provide another example of the way in which corolla form can vary within a narrow affinity.

It may be noted that the variations in the stamens that accompany the changes in corolla form scarcely deserve to be treated as independent characters. All the four anthers of *D. rufa* are exserted at the mouth of the tube and are coherent together; in the long-tubed *Winkler* 1512 they are included, coherent in pairs and distinctly didynamous. Tube-length and staminal arrangement are no doubt correlated components of the floral mechanism.

Didissandra tenella B. L. Burtt, **species nova** sectionis *Stilpnotrichos* C.B. Cl., habitu tenui, corolla tubulosa, foliis tenuibus ovato-ellipticis inter alia distinguenda. Fig. 1.

Herba humilis pilis longis brunneis at aliis albis intermixtis ornata; caules tenues radicantes. *Folia* opposita, leviter vel valde inaequalia, petiolo 12 mm usque longo; lamina elliptica, 35 mm usque longa at 18 mm usque lata, apice acuta vel obtusiuscula, basi abrupte et inaequaliter angustata, marginibus crenulatis. *Flores* solitarii, axillares, pedicellis gracilibus c. 30 mm longis suffultis; bracteolae binae c. 1·5 mm longae ad calycem approximatae. *Calyx* 3–4 mm longus, in segmentis lineari-oblongis divisus. *Corolla* tubularis, limbo bilabiato patente; tubus 1 cm longus, extra parcissime pubescens, intus glaber; labium superius lobis duobus 6 × 6 mm rotundatis ciliolatis; labium inferius trilobum 1 cm longum, lobis 6 × 7·5–8 mm rotundatis ciliolatis. *Stamina* didynama, per paria cohaerentia; filamenta superiora 2 mm supra corollae basin orientia 4 mm longa, inferiora 1·5 mm supra corollae basin orientia 5 mm longa, omnia gracilia glabra. *Ovarium* c. 6 mm longum, pubescens, in stylo 2 mm longo glabro angustatum; stigma claviforme minute papillosum. *Capsula* recta, 13 mm longa, glabrescens, dorso loculicide dehiscens. *Semina* fusca, ellipsoidea, utrinque acuta, 0·4 mm longa reticulata. SARAWAK. Third Division: SE Hose Mts., hill west of falls in Ulu Melinau, in moss on wet shaded rock face, flowers palest mauve, solitary, 22 viii 1967, *Burtt & Martin, B.* 5059 (holo E; iso SAR); Ulu Temalad, Mujong, Hose Mts., damp rhyodacite rock face, shade, 900 m, fl. white but for mauve margin, 22 iii 1964, *Ashton* S. 17629 (E, SAR).

Didissandra tenella as described above is the nameable representative of a group of specimens that obviously have much in common, but which it is as yet impossible to divide into species in any satisfactory fashion.The material of only one other of these is adequate and is illustrated in figure 1B a–d. The plant is:—*Sarawak*. Fourth Division, Gunong Mulu, c. 1200 m

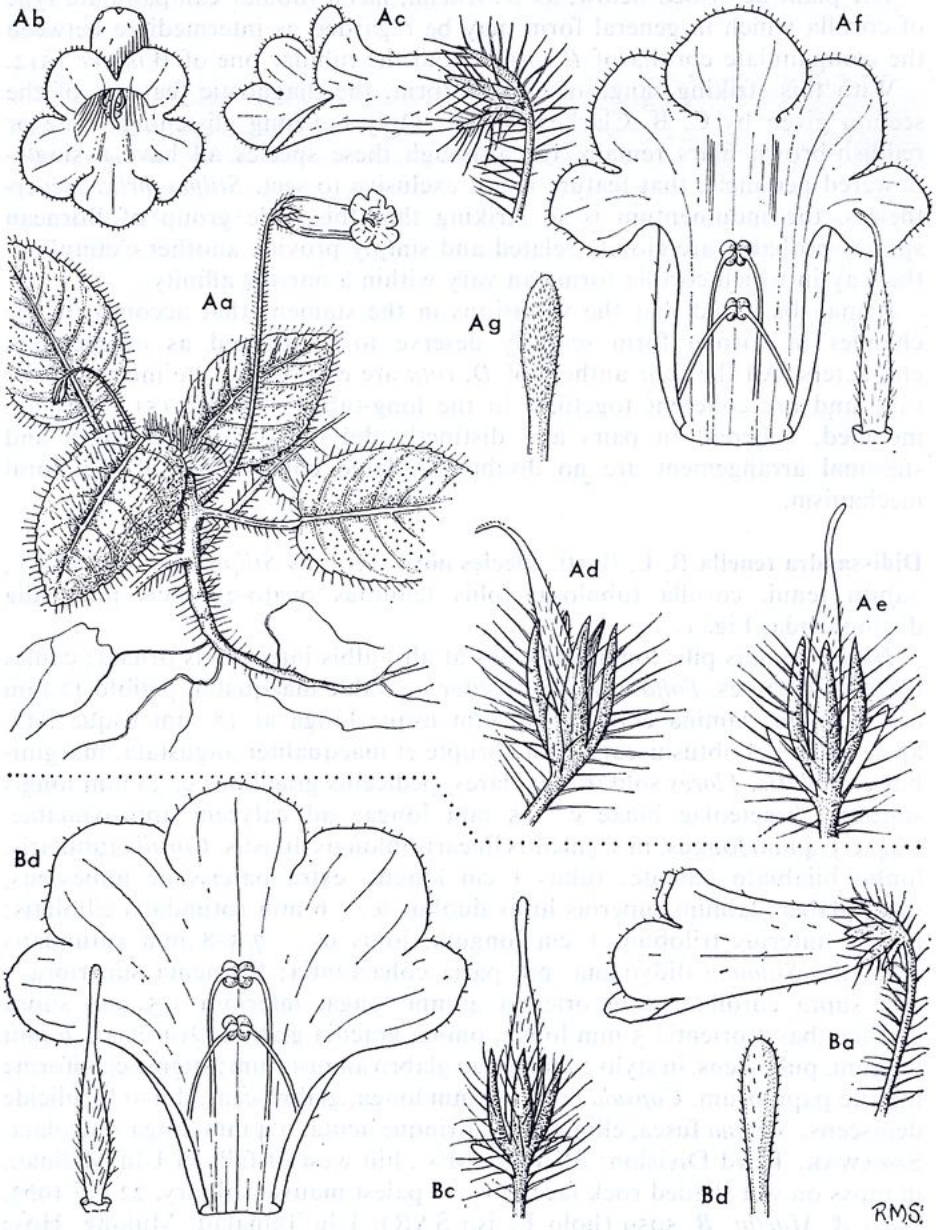

FIG. 1. A. *Didissandra tenella* B. L. Burtt (*Burtt & Martin, B.* 5059) : a, habit x 1; b, flower, from front x 2; c, flower, lateral view x 2; d, calyx, lateral view x 3; e, calyx, dorsal view x 3; f, corolla, dissected x 3; g, stigma x 10.
B. *Didissandra aff. tenella* (*Burtt & Woods, B.* 2157): a, flower x 2; b, calyx, dorsal view x 3; c, corolla, dissected x 3; d, style x 10.

in dry sandy soil under large overhanging rock, flowers pure white, 16 vi 1962 *Burtt & Woods, B.* 2157.

There are obvious differences between this plant and *D. tenella*: the pure white flower, the somewhat broader corolla tube in which the stamens arise at a somewhat higher level. The similarities are, however, marked and until we know more about this group it seems unnecessary to provide more than one specific name. Geographically it is wide-ranging as the following records show:—

Sabah. Mt. Kinabalu, Penibukan, 1200–1500 m, fl. white, violet upper part of petals, canyon below camp, 4 i 1933, *Clemens* 30732. Colombon R., 1350 m, fl. cream, 9 i 1933, *Clemens* 32520. Penataran R., 1200 m, fl. white, purple tips, 22 vii 1933, *Clemens* 34032.

Didymocarpus sect. **Salicini** Ridley in Journ. Linn. Soc. Bot. 32: 514 (1896) et in Journ. As. Soc. Str. Br. 44: 30 (1905).
Syn.: *Paraboea* sect. *Campanulatae* Ridley in Journ. As. Soc. Str. Br. 44: 63 (1905) et Fl. Mal. Pen. 2: 528 (1923).
Lectotype: *D. salicina* Ridl.; Burtt in Notes R.B.G. Edinb. 21: 204 (1954).

When offering tentative keys to the Old World genera of Gesneriaceae (*Notes R.B.G. Edinb.* 24: 205–220, 1963), I dealt with *Paraboea* in the sense that Ridley had used the genus (*Fl. Mal. Pen.* 2: 527, 1923). That work was, however, written before I had seen the three genera *Boea*, *Paraboea* and *Didymocarpus* in the field. Having done so I felt convinced that Ridley's concept of *Paraboea* included two quite distinct groups, and I so reported in a talk given subsequently, but not hitherto in print. *Paraboea* sect. *Euparaboea* Ridl. includes plants with short narrow straight corolla tube, flat spreading limb, large yellow stamens presented at the centre of the flower, and normally woolly leaves. These are plants of limestone and are clearly congeneric with the Sarawak *P. clarkei* B. L. Burtt (*Didymocarpus paraboea* C.B. Cl.), the type species of the genus, which may be retained in this sense. Ridley's other section, *Campanulatae* differs in having an open shortly campanulate corolla lacking the flat limb, included stamens and pubescent indumentum (at least never woolly). These are plants of non-calcareous habitats.

The two groups thus reflect the ecological preferences of their related genera. *Paraboea* sect. *Paraboea* may comprise little more than species of *Boea* in which the capsule does not twist as it ripens: *Boea* in Malaya, Sumatra and Borneo is a characteristically limestone genus. *Paraboea* sect. *Campanulatae*, on the other hand, simply contains short-flowered species of *Didymocarpus*, which is just as characteristically a genus of non-calcareous rocks in this area.

Sect. *Campanulatae* should therefore be returned to *Didymocarpus*, where, in fact, Ridley had previously provided a sectional name, *Salicini*, as shown at the head of this item. However at least two species, the rather isolated *Didymocarpus cordatus* and *D. tahanicus* (*D. grandifolius* Ridl.—see p. 46) do not belong in this section.

Although it has not been possible to confirm the botanical validity of every species, it seems desirable to provide names in *Didymocarpus* if they are not already available.

Didymocarpus azureus B. L. Burtt, **nom. nov.**
Syn.: *Paraboea caerulea* Ridley in Journ. Roy. As. Soc. Str. Br. 44: 66 (1905).
The epithet *caerulea* is not available in *Didymocarpus* having been already used for another species.
Didymocarpus campanulatus (Ridl.) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea campanulata* Ridl. in Journ. Roy. As. Soc. Str. Br. 44: 65 (1905).
Didymocarpus floribundus (Henderson) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea floribunda* Henderson in Gard. Bull. Sing. 7: 117 (1933).
Didymocarpus holttumii (Henderson) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea holttumii* Henderson in Gard. Bull. Sing. 4: 54 (1927).
Didymocarpus pubiflorus (Ridl.) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea pubiflora* Ridl. in Journ. Fed. Mal. St. Mus. 4: 51 (1909).
This species was completely omitted by Ridley from his Flora. It is difficult to place in his key and may belong elsewhere. As it has once been forgotten it seems a justified risk to transfer it to *Didymocarpus* so that it does not again suffer the same fate. The type locality is Gunong Irau, Perak (coll. Robinson & Kloss).
Didymocarpus rubiginosus (Ridl.) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea rubiginosa* Ridl. in Journ. Linn. Soc. Bot. 38: 319 (1908).
Didymocarpus scortechinii (Ridl.) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea scortechinii* Ridl. in Journ. Roy. As. Soc. Str. Br. 44: 65 (1905).
Didymocarpus tiumanicus (Ridl.) B. L. Burtt, **comb. nov.**
Syn.: *Paraboea tiumanica* Burk. ex Ridl., Fl. Mal. Penins. 2: 530 (1923).

Didymocarpus crenatus Bak. in Kew Bull. 1896, 25.
Syn.: *D. multinervius* Merr. in Journ. As. Soc. Mal. 1: 32 (1923).
SABAH. Sandakan, *Creagh* (holo K). sine loc., *Ramos* 1145 (iso *D. multinervius*, K). Tawau, S Serudong, 15 m, primary forest on hillside, 0·3 m high, flowers white, 8 ix 1961, *A. Bakar* SAN 21679 (K).

Didymocarpus pleuropogon B. L. Burtt, **species nova,** inter species borneenses descriptas caule elongato foliis per pariis distantis dispositis corolla pallide flava intus brunneo-notata, staminibus ad latus tortis et corollae tubo intus unilateraliter barbato distinguenda. Fig. 2.

Herba ad 0·5 m alta; caules plures pilis brevibus acutis ubique dense vestiti, subsucculentes internodiis leviter ampliatis c. 4 cm longis. *Folia* opposita, decussata; petioli 1–2 cm longi, uti caules pubescentes, supra leviter canaliculati; lamina c. 5–9 × 4–5 cm, ovato-elliptica, apice subacuta, basi abrupte angustata vel subrotundata, marginibus obtuse denticulatis, supra parce pubescens, infra costa et nervis breviter et dense subappresse pubescentibus inter nervos parce pubescens et turritibus stomatum notata. *Inflorescentiae* axillares, 2–6-florae; pedunculus 5 cm usque, uti caulis pubescens. *Calyx* 1 cm longus fere ad basin in segmenta lineari-lanceolata divisus, pubescens. *Corolla* infundibuliformis, pallidissime flava fauce brunneo-notata; tubus 4 cm longus ad basin cylindricus, superne leviter ampliatus, ore 1·3 cm diam., extra parce pubescens, intus unilateraliter barbatus; lobi duo posteriores semicirculares, 8 × 12 mm; anteriores c.

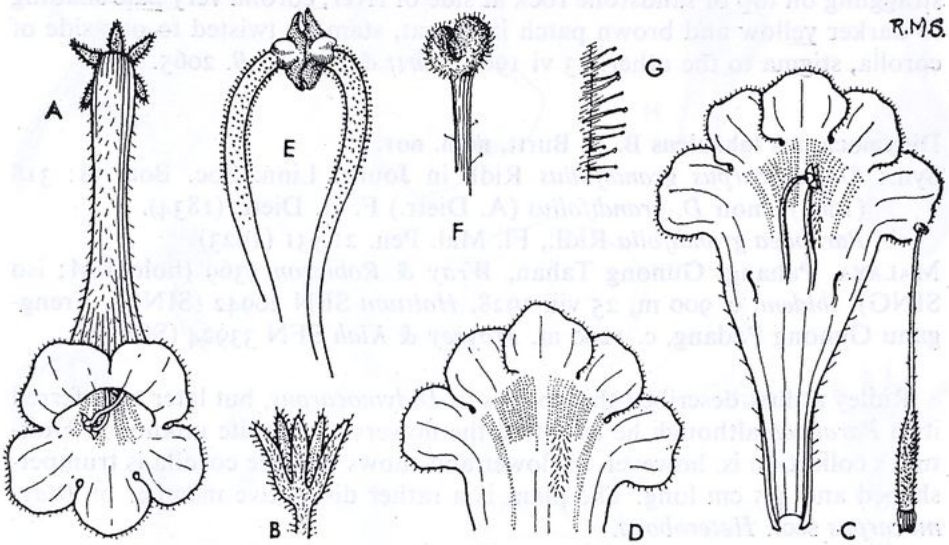

FIG. 2. *Didymocarpus pleuropogon*: A, flower x 1; B, calyx x 1; C, corolla dissected x 1; D, upper half of corolla, stamens removed to show unilateral band of hair x 1; E, stamens x 3; F, stigma x 3; G, ovary hair (much enlarged).

8 × 8 mm. *Stamina* in triente superiore tubi paulo inaequaliter orientia; filamenta c. 14 mm longa, breviter glanduloso-pubescentia; antherae coram cohaerentia, dorso connectivo incrassato; stamina ad unum latus tubi torta. *Discus* cupularis, 2·5 mm altus. *Ovarium* cylindricum, 12 mm longum pilis patentibus aliis glandulosis aliis brevioribus eglandulosis vestitum, in stylo 22 mm longo parce glanduloso gradatim attenuatum; stigma capitatum, papillosum, subbilobum.

SARAWAK. Third Division, SE Hose Mts., hill E of overhang at Bukit Semako, on mossy rocks with light-veined leaves, vegetative only, 16 viii 1967, *Burtt & Martin*, *B.* 5050, cult. in R.B.G. Edinb. *C.* 5639 (holo E.).

The way in which the stamens are twisted to one side of the corolla tube, while the style and stigma are held on the other side, is not a new character in Gesneriaceae. It has long been known to occur in some species of *Streptocarpus* (*S. caulescens*, *glandulosissimus*, *holstii* etc.). This *Didymocarpus*, however, is thought to be the first species in which a correlated unilateral development of the corolla itself has been noted, and the one-sided patch of hairs associated with the position of the anthers is commemorated in the specific epithet.

D. pleuropogon is referable to sect. *Didymanthus* C.B.Cl. as that name is used by Ridley (*Fl. Mal. Pen.* 2: 506, 1923), and comes in the general affinity of *D. malayanus* Hook. fil.

The following material either belongs to this species or is very closely allied:—*Sarawak*. Third Division: Rejang, Pelagus rapids, young fruit dark red, 21 vii 1962, *Burtt & Woods*, *B.* 2591; "Gat, Upper Rejang river" [S Gaat, a tributary of Batang Balleh], forested ravines, 1929, *Clemens* 21641. Fourth Division: foot of Gunong Mulu, herb 18 inches from rootstock

straggling on top of sandstone rock at side of river, corolla very pale shading to darker yellow and brown patch in throat, stamens twisted to one side of corolla, stigma to the other, 13 vi 1962, *Burtt & Woods, B.* 2065.

Didymocarpus tahanicus B. L. Burtt, **nom. nov.**

Syn.: *Didymocarpus grandifolius* Ridl. in Journ. Linn. Soc. Bot. 38: 318 (1908)—non *D. grandifolius* (A. Dietr.) F. G. Dietr. (1834).
Paraboea grandifolia Ridl., Fl. Mal. Pen. 2: 531 (1923).

MALAYA. Pahang, Gunong Tahan, *Wray & Robinson* 5369 (holo BM; iso SING); *ibidem*, c. 900 m, 25 viii 1928, *Holttum* SFN 20942 (SING). Trengganu Gunong Padang, c. 1200 m, *Moysey & Kiah* SFN 33924 (SING).

Ridley at first described this species in *Didymocarpus*, but later transferred it to *Paraboea* although he admitted the flowers were quite unknown. Holttum's collection is, however, in flower and shows that the corolla is trumpet-shaped and 4·5 cm long. The plant is a rather distinctive member of *Didymocarpus* sect. *Heteroboea*.

Unfortunately the epithet *grandifolius* is not available for this plant in *Didymocarpus*; it is preoccupied by *D. grandifolius* (A. Dietr.) F. G. Dietr. which is the name in *Didymocarpus* for *Chirita macrophylla* Wall. if the two genera are combined. I have taken a new epithet from the type locality.

Hexatheca fulva C. B. Clarke in DC., Mon. Phan. 5, 1: 193, t. 22 (1883). Fig. 3.

Syntypes. Sarawak: sine loc., *Lobb*; Mt. Matang, *Beccari* 2640; near Kuching, *Beccari* 230, 1069; Mt. Sakarang [Second Division], *Beccari* 3852. Kalimantan: Landuk, *Teysmann* 11213.

SARAWAK. First Division: frequently collected on the limestone around Bau (*Sinclair* S.F.N. 38476, Forest Dept. S. 10090, 12234, 14599, 25624, *Clemens* 20678, *Burtt & Woods, B.* 1886), and on Mt. Matang (*Clemens* 22329, *Brooke* 9822, *Burtt & Woods, B.* 1943); Bukit Serapat, 13 miles from Kuching on Simanggang road N side, 25 vii 1967, *Burtt & Martin, B.* 4743; Serian distr., Bukit Selabor, Lobang Mawang, Tebakang road, on limestone cliff, 255 m, *Paie* S. 28042. Third Division: SE end of Hose Mts., c. 2°6′N, 113°42′E, below Bukit Mabong, c. 450 m, 5 viii 1967, *Burtt & Martin, B.* 4791; *ibidem*, cliffs below Bukit Nibong, c. 750 m, 8 viii 1967, *Burtt & Martin, B.* 4861.

Hexatheca fulva is one of the very few species of Gesneriaceae which is equally at home on limestone (as in the Bau area) and on sandstone (as on Mt. Matang). Plants from these two localities are quite indistinguishable. The specimens cited above from the Third Division (SE Hose Mts.) were on sandstone. They were generally smaller plants than those from around Kuching, but clearly belong to the same species.

Hexatheca usually grows out horizontally from a rock face and the leaves arrange themselves in a fan at the end of the stem, those on the lower side being distinctly larger. The species has, however, been grown in a pot in the greenhouses at Edinburgh, the stem is then erect and the leaves stand in regular opposite and decussate pairs.

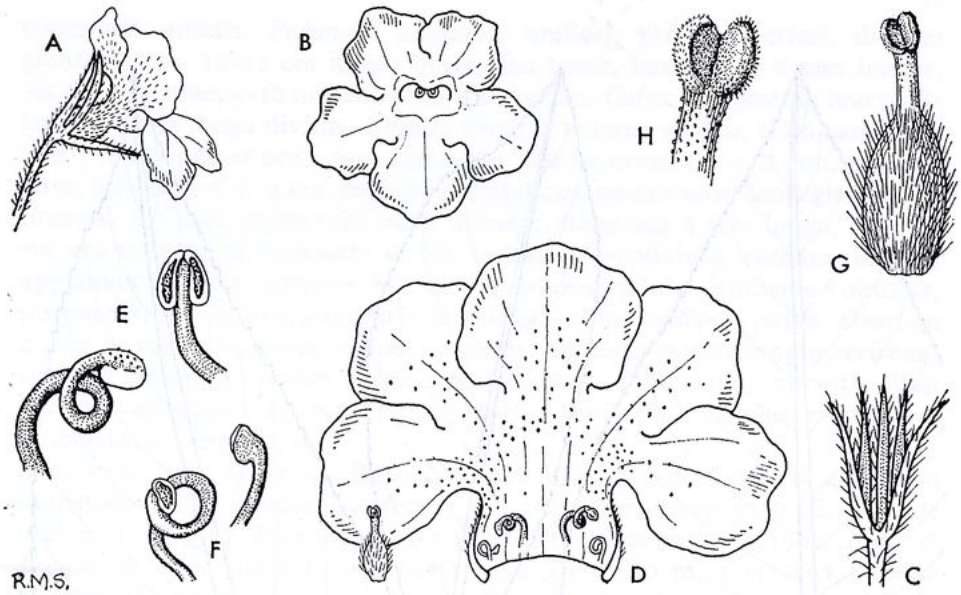

FIG. 3. *Hexatheca fulva*: A & B, flower x 1; C, calyx x 2; D, corolla, dissected x 2; E, long stamens x 6; F, short stamens x 6; G, gynoecium x 6; H, stigma x 12.

Hexatheca johannis-winkleri Kraenzl. in Mitt. Inst. Allg. Bot. Hamburg 7: 93 (1927). Fig. 4.
Syntypes. Kalimantan: Bukit Tilung, 750 m, [c. 0°38′N. 113°30′E], *Winkler* 1486; *ibidem*, 900 m, *Winkler* 1507.
SARAWAK. Ulu Sungei Sedampa, extreme headwaters of Batang Balleh, Kapit distr., 1°34′N, 114°30′E, sandstone outcrops, 450 m, 2 vii 1969 *Anderson & Paie* S. 28292 (E, SAR).

Hexatheca johannis-winkleri differs most conspicuously from *H. fulva* in its relatively broader leaves, more abruptly narrowed at the base, and with more slender petioles. In *H. johannis-winkleri* a large leaf may have lamina 23 × 10·5 cm, petiole c. 6 cm; in *H. fulva* lamina 30 × 8 cm very gradually narrowed into a petiole c. 7 cm.

This first record of the species from Sarawak is particularly interesting because it is from a place only some 65 miles away from the recent records of *H. fulva* in the Hose Mts.

Hexatheca minor Kraenzl. in Mitt. Inst. Allg. Bot. Hamburg 7: 93 (1927).

The plant from Kalimantan (Bidang Menabei, *Winkler* 761) given this name by Kraenzlin proves to be a species of *Staurogyne* (Acanthaceae).

Loxocarpus argenteus B. L. Burtt, **species nova** corollae lobis acutis *L. longipetiolato* B. L. Burtt affinis, sed floribus solitariis majoribus et foliis ellipticis dense sericeo-argenteis distinguitur.

Herba argenteo-sericea rosulata saxicola, caudice robusto 7·5 mm diametro. *Folia* 12–15 usque, petiolis exteriorum c. 4 cm longis supra canaliculatis; lamina elliptica, 10 cm usque longa, 3–4 cm lata, apice acuta, basi cuneata leviter inaequalia, marginibus integris, nervis lateralibus ascendentibus utrinsecus c. 5, utrinque appresse argenteo-sericea, subtus etiam turritibus

FIG. 4. *Hexatheca*: variation in leaf form, x $\frac{2}{3}$. A, *H. johannis-winkleri* (S.28292). B–D. *H. fulva*: B, *Burtt & Woods* 1943; C, *Burtt & Martin* 4791; Da, Db, *Burtt & Martin* 4861.

stomatum notatis. *Pedunculi* axillares, uniflori, primum sericei, demum glabrescentes, 10–12 cm longi; bracteolae binae, lineares, c. 8 mm longae, vix 0·5 mm latae, 5–10 mm infra florem orientes. *Calyx* in segmenta bracteolis similia 6 mm longa divisus. *Corolla* lilacina, externe sericea, tubo campanulato 3 mm longo et ore 3 mm diametro; lobi superiores 2 × 2 mm, triangulares, inferiores 5 × 2 mm anguste triangulares, omnes acuti intus glandulosi. *Stamina* c. 1 mm supra tubi basin orientia, filamenta 3 mm longa, superne sursum curvata et incrassata et hic verrucoso-glandulosa, summo incurva, applanata et facie interiore breviter glanduloso-pilosa; antherae robustae, purpureae, thecis divergentibus 1 mm longis; staminodia 3, parva. *Ovarium* 2 mm longum, conicum, dense sericeum; stylus 4–5 mm longus,sericeus; stigma terminale, leviter expansum. *Capsula* follicularis, curvata, basi superne ampliata, 10 mm longa, dorso dehiscens. *Semina* ellipsoidea, reticulata, 0·5 mm longa.

SARAWAK. First Division: Bako National Park, Telok Asam, c. 45 m, on sandstone rocks in karengas forest, 5 ii 1947, *Purseglove* 5530 (E, SING); *ibidem*, 17 v 1956, *Purseglove* 4913 (E, SING); *ibidem*, 17 v 1962, *Burtt & Woods, B.* 1840 (holo E, iso SAR); Ulu Tajor, 60 m, 7 vi 1963, *Ashton* S. 17963 (E, SAR).

The measurements of leaves and peduncles given in the description are from well-developed rosettes; smaller young plants may produce a single or a few flowerswith smaller leaves and shorter peduncles. *L. argenteus* is a beautiful soft vivid green when wet, white and silvery when dry. It grows in pockets on rough rock and wet and dry plants are often seen quite close together.

Loxocarpus sericeus (Ridley) B. L. Burtt, **comb. nov.**

Syn.: *Didymocarpus sericeus* Ridley in Journ. Linn. Soc. Bot. 33: 513 (1896).

INDONESIA. P. Lingga. Native collector (*Nong Chie*). Batu Gajah, 1893, *Hullett*. Gunong Daik, ± 250 m, 12 vii 1919, *Bünnemeyer* 6580.

This species must have provided the distributional entry "Lingga" given by Ridley under *L. angustifolius* (Fl. Malay. Penins. 2: 527, 1923). The entry can only be explained as a clerical error: had Ridley deliberately intended to unite the two plants under one species he would surely have used, or at least quoted, his earlier name. This name was missed when the species of *Loxocarpus* were listed (*Notes R.B.G. Edinb.* 24: 44, 1962).

Loxonia hirsuta Jack in Trans. Linn. Soc. 14: 41 (1823); C.B.Cl. in DC., Mon. Phan. 5, 1: 158 (1883); Ridley, Fl. Mal. Pen. 2: 541 (1923); Back. & Bakh. f., Fl. Java 2: 522 (1965).

Syn.: *L. discolor* Jack in Trans. Linn. Soc. 14: 40 (1823).
Loxophyllum racemosum Bl., Bijdr. 751 (1825).
Loxonia acuminata R. Br. in Benn., Pl. Jav. Rar. t. 25 (1838), p. 105 (1840).

SARAWAK. Fourth Division: Lobang Angin on Sungei Melinau, 29 vi 1962, *Burtt & Woods, B.* 2355. Third Division: S end Hose Mts, camp below Bukit Nibong, c. 720 m, 7 viii 1967, *Burtt & Martin, B.* 4850; Ulu Sungei

Sedampa, extreme headwaters of Batang Balleh, 1°34′N, 114°30′E, 450 m, 2 vii 1969, *Anderson & Paie* S. 28293.
SABAH. Ulu Sebuku, 7 ix 1912, *Amdjah* 532 (K). Mt. Kinabalu, Tenampok, 1500 m, 2 xii 1932, *Clemens* 27372 (K), Mt. Kinabalu, Sungei Kepangit, 6°05′N, 116°36–40′E, 900 m, 2 vi 1961, *Corner* s.n. (K).
KALIMANTAN. Batu Babi—Lumoia, 10 vii 1908, *Winkler* 2834 (K). E. Koetai, near L. Petah, 500 m, 20 ix 1925, *Endert* 3489 (K).
Distribution: Malay Peninsula, Sumatra, Java.

Loxonia hirsuta has apparently not been put on record for Borneo till now. It is a widespread species whose insignificant flowers may lead to its being overlooked. All the material apparently belongs to a single species, and the genus is thus monotypic. The illustration of *L. acuminata* R. Br. (in Bennett, *Pl. Jav. Rar.* t. 25: 1838) shows bright blue flowers: this is probably sheer error and no collector's notes suggest that the flowers are ever blue. Generally the corolla is white or greenish white, sometimes stained dark red at the edge of the mouth, or with some reddish-purple streaks, or with a yellow patch on the palate. A characteristic feature of this plant is the hooked hairs which give the leaf surface a tacky feeling: these combined with the unequal-sided leaf base make it easy to recognize in the vegetative condition.

Monophyllaea hirticalyx Franch. in Bull. Soc. Linn. Paris, n.s. 1: 125 (1899). Syn.: *M. patens* Ridl. in Journ. Roy. As. Soc. Str. Br. 44: 82 (1905) et in Journ. As. Soc. Beng. 74, 2: 785 (1908) et in Fl. Malay Penins. 2: 540 (1923).
MALAYA. Perak: near Ipoh, "in spelunca Boukit Tcheura dicta", *de Morgan* (holo P); Ampang, limestone cliffs, 25 vi 1924, *Burkill* SFN 13941. Pahang, Gua Tipus, 14 x 1927, *Henderson* SFN 19380. Selangor, Gua Batu, xii 1896, *Ridley* 8222. Kelantan, Gua Lambok, Sungei Betis, 16 vii 1935, *Henderson* SFN 29709.

I have examined the type specimen at Paris and it is clearly the species that has been known by Ridley's later name, *M. patens*. It seems likely that Ridley was unaware that Franchet had ever published any Malayan species, for he also missed the other one in this paper, *Didissandra morgani* (*D. filicina* Ridl.).

Paraboea (C.B.Cl.) Ridl.

The return of sect. *Campanulatae* Ridl. to *Didymocarpus* is effected above. The status of one or two species in Thailand, such as *P. glanduliflora* Barnett, remains uncertain. However the generic name may be properly retained at least for those species with short corolla tube, flat limb with massive yellow stamens and straight fruit. Nearly all these plants grow on limestone and have (except *P. vulpina*) an arachnoid-tomentose undersurface of the leaf; they are the exact counterparts of Malayan species of *Boea* without having the twisted fruit. It is further north, in Thailand, Burma and southern China, that both *Boea* and *Paraboea* become "untypical" and taxonomic difficulties ensue.

Paraboea bintangensis B. L. Burtt, **species nova** *P. capitatae* Ridl. affinis sed bracteis glabris, floribus paucioribus, staminodiis magis evolutis inter alia distinguitur.

Herba rosulata. *Petioli* foliorum majorum 6–9 cm longi, supra leviter canaliculati, dense pannosi (in plantis in tepidario cultis laxe lanati). *Lamina* crassiuscula, late elliptica usque 9 × 4·5 cm, basi plus minusve abrupte et inaequaliter angustata, apice obtusa, marginibus obtuse serrata, supra nitide viridis, subtus stramineo-tomentosa, nervis lateralibus utrinsecus c. 5 supra impressis subtus prominulis. *Pedunculi* axillares, 12 cm usque longi, primum araneosi demum glabrescentes. *Bracteae* virides, glabrae, ovatae vel ellipticae, 1·5–2 × 0·8–1·2 cm. *Flores* subumbellati, 6–8, pedicellis 2·2–2·5 cm suffulti. *Calyx* fere ad basin in segmenta 7 mm longa lanceolata primum lanato-marginata divisus. *Corolla* alba, tubo perbrevi 1·5 mm diam.; limbus plano-patens, bilabiatus; lobi superiores per 3 mm connati per 6 mm liberi; labium inferius trilobum, lobis lateralibus partibus liberis c. 8 × 7 mm, lobo mediano per 6 mm cum lateralibus connato parte libera 7 × 6 mm. *Stamina* fertilia 2 mm longa, flava crassa curvata; antherae validae lobis 1·5 mm longis divergentibus, inter se coram cohaerentes, intense flavae; staminodium dorsale vix 1 mm longum, lateralia 1·5 mm. *Discus* nullus. *Ovarium* conicum, 2–3 mm longum, glabrum. *Stylus* 4–5 mm, stigmate oblique capitato leviter umbilicato coronatus. *Capsula* 1·5 cm longa, demum in valvas 4 fissa.
MALAY PENINSULA. Perlis, Bukit Bintang, on limestone rocks in evergreen forest, *Burtt & Woods, B.* 1737 (sterile), cult. in hort. bot. reg. Edinb., *C.* 4088 (holo E).

A small non-flowering colony of this plant was found on rather bare limestone rock together with another gesneriad *Aeschynanthus marmoratus* T. Moore. *Paraboea capitata* is a rather widespread species which is a more robust plant than *P. bintangensis* with a more floriferous inflorescence and distinctly hairy bracts.

Platyadenia B. L. Burtt, **gen. nov.** *Loxocarpo* R. Br. et *Didymocarpo* Wall. affinis. A *Loxocarpo* corolla tubulari, a *Didymocarpo* fructu brevi basi superne ampliato, ab ambobus disco unilateraliter expanso trilobulato et habitu singulari recedit.

P. descendens B. L. Burtt, **species nova** adhuc unica. *Herba* caule repente radicante 5 mm diametro. *Folia* alterna, petiolis 1–2 cm longis strigoso-pilosis; lamina subfalcata, oblonga, 17 cm usque longa et 5 cm usque lata, apice breviter acuminata, basi altero latere attenuata altero abruptius angustata, utrinque pilosa praecipue secundum margines et ad apicem et subtus in venis. *Inflorescentia* axillaris, c. 6-flora, pedunculo c. 15 cm. longo, glanduloso-pilosa, superne laxe ramosa; bracteae lineares, obtusae 1–1·5 mm longae. *Calyx* atropurpureus, glanduloso-pilosus, vix 1·5 mm longus, in segmenta oblongo-ovata divisus. *Corolla* tubularis, bilabiatus, extra parce pilosa; tubus rectus, c. 10 × 2 mm; labium superius lobis duobus erectis 2 mm longis rotundatis; labium inferius 6 mm longum, trilobatum, lobis lateralibus 2 × 2·5 mm, mediano 3 × 2·5 mm. *Stamina* 6 mm supra corollae basin orientia, filamentis 1·5 mm longis glabris (post anthesin tortis?); antherae thecae divergentes 0·5 mm longae. *Discus* tenuis ventraliter expansus,

1 mm longus et apice trilobulato 1 mm latus, dorsaliter perbrevis. *Ovarium* 2 mm longum, conicum in stylo 5 mm longo angustatum, utrumque glanduloso-pilosum; stigma bilobum. *Capsula* (stylo persistente excluso) c. 6 mm longa, basi 2·5 mm alta, follicularis, dorso dehiscens.

SARAWAK. First Division: Bako National Park, Telok Delima, 100 m, rocks in forest, herb with creeping stem adpressed to rocks, leaves dark green above, very pale below, white tubular corolla 1·2 cm long with yellow patch on lip, 19 v 1956, *Purseglove* 4996 (E); *ibidem*, on wet sandstone rocks with creeping stem growing downwards and fleshy subfalcate leaves appressed to rock, flowers tubular, almost white, flushed mauve, palate with greenish yellow stain, 19 v 1962, *Burtt & Woods*, *B.* 1856 (holo E, iso SAR).

Platyadenia descendens has only been found in the Telok Delima area of the Bako National Park, on the Sarawak coast some 10 miles from Kuching. It grows on vertical sandstone rock, leaves and stem being flat against the surface while the inflorescence stands out at an angle. Curiously, the creeping stems grow downwards, a fact which supplies the specific epithet, *descendens*. The subfalcate leaves, which hang down towards the stem apex, are thick and fleshy and the coarse hairs are notably dense along the margins and at the tip.

Generic limits in Gesneriaceae-Didymocarpeae are difficult to define and those we now use will almost certainly prove, in part, unstable over the next 25 years. The erection of another monotypic genus therefore has to be rather carefully justified.

When first discovered it seemed that the plant now named *Platyadenia descendens* was simply an awkward species with the corolla of *Didymocarpus* and the fruit of *Loxocarpus*, and in fact provided a good reason for not separating those two genera. Further study, however, suggests that this view is mistaken. *Didymocarpus* and *Loxocarpus* are very closely related genera and are difficult to keep apart: but the area where they tend to merge is in the affinity of *Loxocarpus verbeniflos* and *L. conicapsularis* on the one side, *Didymocarpus violoides* and *D. follicularis* on the other.

Platyadenia descendens has nothing to do with this problem, for, far from linking the two genera, it has no close affinity in either. In its appressed creeping habit, its large rather fleshy leaves and curious gland it stands quite apart. It would therefore be quite misleading to say that it links the two genera because the corolla is of the "Didymocarpus-type" and the fruit of "Loxocarpus-type". At present it is far more helpful to the classification of the family to take the view that these two characters are here uniquely associated and occur in conjunction with a special type of gland and an unusual habit. It is therefore better to erect a new genus.