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Burt

**Old World Gesneriaceae. IV. Notes on Didymocarpus and
Lysionotus.**

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OLD WORLD GESNERIACEAE. IV. NOTES ON *DIDYMOCARPUS* AND *LYSIONOTUS*

O. M. HILLIARD* & B. L. BURTT*

Didymocarpus rodgeri (incl. var. *siamensis*) is reduced to a synonym of *D. aureoglandulosus* (SE India, Burma and Thailand); *D. subalternans* var. *curvicapsa* (Nepal-Sikkim) is raised to specific rank, and a new species, *D. triplotrichus* (Darjeeling distr. and Sikkim), is described. *Lysionotus himalayensis* is redetermined and reduced to synonymy under *L. serratus*; as a result *L. atropurpureus*, which name it had recently superseded, is reinstated. *Aeschynanthus kingii* and *A. levipes* are both transferred to *Lysionotus*, while *L. wardii* and *L. gracilipes* are reduced to synonymy under *L. pubescens*. Notes and new records are provided for *L. confertus* and *L. serratus* var. *pteroaulis*.

INTRODUCTION

The following items have accrued from our respective studies for the *Flora of Bhutan* (Hilliard) and for the *Flora of Thailand* and *Flore de Cambodge, Laos et Vietnam* (Burtt).

Didymocarpus aureoglandulosus C. B. Clarke in Fedde, Rep. Sp. Nov. 4: 292 (1907); Hosseus in Bot. Centralbl., Beih. 28(2): 439 (1911); Pellegrin in Lecomte, Fl. Gén. Indo-Chine 4: 525 (1930); Barnett in Fl. Siam. Enum. 3(3): 211 (1962) p.p. (excl. *Larsen* 6148).

Type: Thailand, Chiangmai distr., SE side of Doi Sutep, c.1650m, 12 xii 1904, *Hosseus* 220 (holo. K; iso. BM, P).

Syn.: *D. rodgeri* W. W. Smith & Banerji in Rec. Bot. Surv. India 6(2): 42 (1913); Fischer in Rec. Bot. Surv. India 12(2): 118 (1938). Type: Burma, Ruby Mines Div., Mogok, 4000ft, *Rodger* 161 (CAL, n.v.).

D. rodgeri var. *siamensis* W. W. Smith in Rec. Bot. Surv. India 6(2): 43 (1913); Barnett in Fl. Siam. Enum. 3(3): 217 (1962). Type: Thailand, Chiangmai distr., Doi Sutep, 27 xi 1911, *Kerr* 1996 (K; iso. ABD).

[*D. pinetorum* Kurz: T. A. Rao, Compend. Fol. Sclereids Angios. 225 (1991), *nomen nudum*.]

Additional specimens examined. INDIA. Mizoram, Lushai Hills, Sairep, 5000ft, *Parry* 16 (K); *ibid.*, Hmuifarg, *Parry* 16 (K; Mrs Parry's numbers refer to species recognized in the field, not to individual collections); S Lushai, 4000-5000ft, *Wenger* 237 (K).

BURMA. Pegu, Pegu Yoma, Kambala Tourg, c.3000ft, *Kurz* 2090 (CAL).

THAILAND. Chiangmai distr., Doi Inthanon (Doi Angka), *Garrett* 1110 (K); Doi Sutep,

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Soradet 67 (BKF); *Sorensen, Larsen & Hansen* 4341 (ABD, C), 4551 (C), 4650 (C), 4902 (ABD, C); (cult. Edinb.) *Burt* 5606 (E); Doi Chong (cult. C), *Hansen* (C); Ba Ta Fang, *Vidal* 5381 (P); Doi Chiangdao, *Smitinand & Sleumer* 1012 (BKF, E). Chiangrai distr., Doi Langka (Doi Pacho), *Iwatsuki & Fukuoka* T.3650 (KYO). Kanchanaburi distr., Sisawat [c.14°41'N 99°02'E], *Prayad* 1496 (BK—see discussion).

The type specimen of *Didymocarpus aureoglandulosus* consisted of old fruits and young 'winter' leaves only, these leaves being very densely silvery pilose above and very densely clad with golden glands below. The name has hitherto been applied only to a few similar specimens. In 1967 Dr Tem Smitinand took me to Doi Sutep for a couple of days at the beginning of November and I collected (*Burt* 5606) from a mossy tree-trunk a *Didymocarpus* that was in a similar winter-state and I was able to bring it back to Edinburgh where it flowered in 1968. I had expected the usual claret-coloured flower of *D. kerrii* Craib or an allied species. To my amazement it turned out to be *D. rodgeri* var. *siamensis*, the flowers white with red veins.

Didymocarpus rodgeri was originally described from Burma but has since been collected in India in the Lushai Hills (now in Mizoram State) by Mrs Parry. In the same locality Mrs Parry also collected winter leaves and fruits that exactly match the type of *D. aureoglandulosus*, and the structure of the golden glands on the leaves is the same. There is no doubt that *D. rodgeri* represents the flowering phase of *D. aureoglandulosus* and the latter name must be adopted.

Didymocarpus aureoglandulosus was first collected by Sulpice Kurz in Burma on 24 February 1871, some thirty years before it was found on Doi Sutep in Thailand by Hosseus. In his diary, Kurz (*Prelim. Rep. Forest Pegu*, App. E: 17, 1875) describes his ascent of Kambala peak, which lies at about 18°30'N 96°5'E in the Pegu Yoma: '[We] found the highest peak of the Kambala Tourg before us, covered with dwarfy crooked treelets and looking quite black and desolate, for the jungle fires had raged over it only a few days ago ... Scrambling up the proper Kambala we soon had our hands and faces blackened by the coal and ashes of the burnt down vegetation. The rests of a *Didymocarpus* were all the trophies of the ascent'. That specimen (*Kurz* 2190) is now in the Calcutta herbarium: Kurz wrote the name *Didymocarpus pinetorum* on the label, but the name was never validly published, although it has quite recently appeared as a *nomen nudum*. The specimen, although it consists only of a few winter leaves, is clearly *D. aureoglandulosus*. The habitat falls within the Upper Dry Forests in Kurz's forest classification and was at an altitude of about 3000ft; the rocks were reported to be a calcareous sandstone. In these Upper Dry Forests the trees are only 10–30ft high, scattered and crooked; in this particular area the prevailing tree was *Hiptage candicans* (Malpighiaceae). In Thailand *D. aureoglandulosus* is found both in evergreen and in dry forest.

Didymocarpus rodgeri var. *siamensis* was described at the same time as the species. With only one specimen of each for examination, the varietal distinction may have been reasonable. With more copious material it can be seen that the differences noted, the more compact habit and more glandular leaves, simply represent an earlier stage of growth. There is at present no reason to distinguish Burmese and Thai

specimens at variance from Thailand (see

In describing *Didymocarpus* 'are to note a species *D. aureoglandulosus* SE India across E and a few other (BKF) from Kanchanaburi (the more northerly c.9mm) and short plant just coming until more is known between Sisawat

Didymocarpus aureoglandulosus some distinctive features of a much more densely are so deeply divided in sect. *Didymocarpus* another. The thir purple veins and other species of the falcate and the sti

This species in sect. *Didymocarpus* species (even if the and all need to be

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Type: Sikkim, Lac Syn.: *D. subalternans* Phan. 5(1): 78 (1:

D. subalternans 4: 348 (1884) non

The most striking *D. subalternans* R strongly appressed axils of upper caul only in *D. aromatica* *Didymocarpus cur* made by Hooker in 8332108 (E), from

specimens at varietal level, with the possible exception of the most southerly specimen from Thailand (see below).

In describing var. *siamensis* Wright Smith remarked that most Indo-Malayan *Didymocarpus* 'are so restricted in their specific distribution that it is interesting to note a species of comparatively wide distribution'. The wide distribution of *D. aureoglandulosus* is now known to extend from the Lushai Hills of Mizoram in SE India across Burma to N Thailand (Doi Inthanon, Doi Sutep, Doi Chiangdao and a few other localities). Then there is a single outlying collection (*Prayad* 1496, BK) from Kanchanaburi district (Sisawat at 14°41'N 99°02'E), which differs from the more northerly specimens at least in having shorter calyx lobes (6mm only, not c.9mm) and shorter corolla (12mm, not 28mm). The specimen consists of a single plant just coming into flower. It would be premature to recognize it taxonomically until more is known about it. The species must surely occur in the 445km gap between Sisawat and Doi Inthanon.

Didymocarpus aureoglandulosus is certainly placed in the correct genus, but it has some distinctive floral features which make it a rather isolated species. The calyx is of a much more delicate texture than usual in section *Didymocarpus* and the segments are so deeply divided that they often fall separately as the flower passes over to fruit: in sect. *Didymocarpus* the thicker segments, even if divided, remain attached to one another. The thin-textured corolla of *D. aureoglandulosus* is whitish with red or purple veins and is more evenly infundibuliform and wider at the mouth than in other species of the section: the staminodes are remarkably large (4mm long) and falcate and the stigma, scarcely wider than the style, is distinctly two-lipped.

This species might possibly warrant some form of taxonomic segregation from sect. *Didymocarpus* when the genus is fully revised, but it is not the only anomalous species (even if the Malayan sections *Didymanthus* and *Heteroboaea* are excluded), and all need to be considered at the same time.

***Didymocarpus curvicapsa* Hilliard, nom. et stat. nov.**

Type: Sikkim, Lachen, 7000–8000ft, 4 viii 1849, *Hooker* (holo. K, iso. BM).

Syn.: *D. subalternans* R. Br. var. *curvicapsularis* C. B. Clarke in A. & C. DC., Mon. Phan. 5(1): 78 (1883).

D. subalternans R. Br. var. *curvicapsa* C. B. Clarke in Hook. f., Fl. Brit. Ind. 4: 348 (1884) *nom. illegit.*

The most striking differences between this species and *D. aromaticus* D. Don (= *D. subalternans* R. Br.) are the indumentum on the leaves: patent in *D. curvicapsa*, strongly appressed in *D. aromaticus*, and the disposition of the cymes: in the axils of upper cauline as well as terminal leaves in *D. curvicapsa*, terminal leaves only in *D. aromaticus*. *Didymocarpus curvicapsa* dries dark, *D. aromaticus* pale. *Didymocarpus curvicapsa* is known to me from three collections, the original one made by Hooker in Sikkim, *Ohashi et al.* 771781 (E) from E Nepal, and *Ohba et al.* 8332108 (E), from Central Nepal, while *D. aromaticus* is known from western Nepal

(only unlocalized specimens seen) and neighbouring Kumaun and Northern Garhwal in the Indian Himalaya, as well as two collections from Bhutan.

Didymocarpus triplotrichus Hilliard. sp. nov.

Species adhuc cum *D. cinereo* D. Don confusa, sed petiolo lamina semper brevior (nec longior), inflorescentia omnia folia superante (nec foliis primariis brevior), corolla glabra (nec pubescente), antheris glabris (nec barbatis) statim distinguenda. Type: India, Darjeeling distr., Pankhabari, 2000ft, viii 1880, *Gamble* 8322 (holo. K). Syn.: *D. obtusa* auct. non [Wall. ex] R. Br.; C. B. Clarke, Comm. & Cyrt. Bengal t. 61 (1874).

Perennial herb c.6–15cm tall, stem short, arising from a small stock clad in scale leaves, 1–6.5cm long, thickly clad in tiny appressed upward-pointing acute hairs together with some longer (up to 0.5–1.5mm) acute patent hairs, shining sessile globose glands as well. *Leaves* opposite, lowermost pair almost radical, subequal, blade 6–18 × 4.6–14cm, broadly ovate to subrotund, apex obtuse, base cordate, margins crenate, upper surface pubescent, hairs acute patent 0.4–1.5mm long, sessile globose glands as well, lower surface gland-dotted, acute hairs up to c.0.5mm long scattered between veins, veins felted with tiny appressed hairs, acute patent hairs up to 1.5mm long also plentiful; petioles 1–8.5cm long, hairy as the veins; 1 or 2 pairs of greatly reduced almost sessile leaves at apex of stem. *Peduncles* solitary in axils of terminal, reduced, leaves, or from axils of primary leaves as well, cymes c.4–12cm long, both peduncles and pedicels glandular-pubescent. *Bracts* c.3–4 × 4–5mm, broadly ovate, gland-dotted, strigose and with some patent glandular hairs on backs. *Pedicels* c.8–18mm long. *Calyx* campanulate, tube 3–4mm long, lobes 1.5–2 × 1.5–2mm, triangular, ± acute, with a few globose glands and glandular hairs. *Corolla* c.3.5–4.2cm long, glabrous, tube narrowly cylindrical abruptly dilated in upper half, limb large, oblique, lobes rounded, dark purple. *Anthers* glabrous. *Ovary* glabrous, disc c.1mm long, cupular. *Capsule* stipitate, c.40–45 × 2.5mm.

Additional specimens examined. INDIA. Darjeeling distr., Pankhabari road, second zigzag, 2500ft, 23 viii 1878, *Gamble* 3480A (K). Makaibari, 4000ft, viii 1881, *Gamble* 9741 (K). Near Rangee Chang (bridge?), below Pankhabari, 1500ft, 23 viii 1875, *Gamble* 3481A (K).

SIKKIM (?). Kurseong, below Constantia, 4500ft, viii 1874, *Gamble* 3489B (K).

The specific epithet draws attention to the three different sorts of hairs present on the plant: short acute appressed ones, longer acute patent ones, and gland-tipped ones. C. B. Clarke confused this species with *D. cinerea*, first in 1874 (as *D. obtusa*), then again in 1884 (in Hook. f., *Fl. Brit. Ind.* 4: 346). True *D. cinerea* [= *D. obtusa* R. Br.] is rendered unmistakable by the extraordinarily long petioles of the lowermost leaves, which bring the blades well above the inflorescences; in *D. triplotrichus*, the inflorescences overtop the leaves. They differ further in indumentum (*D. cinereus* lacks long spreading hairs on the veins on the lower leaf surface), in the shape of the corolla (narrowly funnel-shaped with a small limb in *D. cinereus*), and in colour patterning (*D. triplotrichus* seems to lack conspicuous lines on the floor of the tube

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and on the lower lip). Furthermore, both corolla and anthers are glabrous in *D. triplotrichus*, hairy in *D. cinereus*.

✓ *Lysionotus atropurpureus* Hara in J. Jap. Bot. 48: 359, fig. 4 (1973) and in Fl. East. Himalaya, 3rd Rep. 105, pl. 6a (1975).

Type: India, W Bengal, Darjeeling distr., Siri Khola-Rimbick, 2100–2200m, 5 viii 1972, Kanai et al. 723147 (T1, n.v.).

Hara's species was recently reduced to synonymy under *L. himalayensis* (Lévl.) W. T. Wang & Z. Y. Li, but the characters of that species fit better with *L. serratus* D. Don (see below), and *L. atropurpureus* is therefore reinstated.

Lysionotus confertus C. B. Clarke in A. & C. DC., Mon. Phan. 5(1): 58 (1883) and in Hook. f., Fl. Brit. Ind. 4: 344 (1884).

Type: India, 'Assam' [Arunachal Pradesh, Tirap Frontier Div.], Patkai Range near 'Kamtee-chick' river, 27 ii 1837, Griffith, Kew distr. no. 3819 (K).

Syn.: [*Aeschynanthus confertus* Griffith, Journ. Travels 63 (1847) *nom. nud.*, C. B. Clarke in A. & C. DC., Mon. Phan. 5(1): 59 (1883) in syn.]

Additional specimens examined. BURMA. Kachin State, Sumprabum Div., E approaches from Sumprabum to Kumon Range, c.26°40'N 97°20'E, N'Dum Zup to Mapi Zup, 4000–5000ft, epiphytic on small tree, 16 i 1962, Keenan, *U Tun Aung & U Tha Hla* 3263 (E); *ibid.*, surrounds of Hpuginhku village, c.5000ft, epiphyte in mixed evergreen and deciduous forest, ii 1962, Keenan, *U Tun Aung & U Tha Hla* 3660 (E).

C. B. Clarke took up Griffith's manuscript epithet for this plant, but correctly referred it to *Lysionotus* rather than to *Aeschynanthus* where Griffith had placed it. The type specimen has only dehisced fruits, and the same applies to the recent collections by Keenan et al. cited above. Until flowers are known its position in the genus must remain uncertain; its characteristic features are stout branches, thick leaves with subentire margins, more or less ovate in outline and with rather spreading nerves. The record of *L. confertus* from Vietnam (Pellegrin in *Fl. Gén. Indo-Chine* 4: 503, 1930) is incorrect. The specimen belongs to *L. serratus* D. Don, *sensu lato*.

Lysionotus kingii (C. B. Clarke) Hilliard, *comb. nov.*

Type: India, Sikkim, 6000ft, King 2166 (CAL).

Syn.: *Aeschynanthus kingii* C. B. Clarke in A. & C. DC., Mon. Phan. 5(1): 31 (1883) and in Hook. f., Fl. Brit. Ind. 4: 342 (1884).

Additional specimens examined. INDIA. Sikkim, Rungnion [=Ragyung Chhu] and without precise locality, 25 vii 1874, Gamble 3571A (K); Rungbee, 5000ft, 4 vii 1884, 'Collecteurs natifs' (G); Mongopo, 5500ft, 10 x 1884, Clarke 36467B (G—Barb.-Boiss.).

Lysionotus kingii is distinguished from *L. serratus* by its entire leaves and by the calyx having a distinct tube 2–5mm long; in this it approaches the Chinese *L. gamosepalus* W. T. Wang from SE Xizang, but that is described as having dentate or denticulate leaf margins and shorter calyx lobes (2–6mm long as against 10–15mm

in *L. kingii*). A photocopy of the type of *L. kingii* (2 sheets) was kindly provided by Dr C. J. Raju, Deputy Director in charge of the National Herbarium at Howrah (CAL).

Lysionotus levipes (C. B. Clarke) B. L. Burtt, **comb. nov.**

Type: India, 'Assam' [Arunachal Pradesh], Mishmee, in monte Laim-planj, Griffith, Kew distr. no. 3815 (holo. K, iso. P).

Syn.: *Aeschynanthus levipes* C. B. Clarke in A. & C. DC., Mon. Phan. 5(1): 28 (1883) and in Hook. f., Fl. Brit. Ind. 4: 341 (1884); W. T. Wang in Acta Phytotax. Sin. 13(2): 65 (1975).

Lysionotus angustisepalus W. T. Wang in Guihaia 3(4): 269, pl. 3 figs. 9-11 (1983) and in Fl. Reip. Pop. Sinicae 69: 545 (1990). Type: China, Yunnan, Gunshan, 1200m, 26 ix 1938, T. T. Yu 20454 (holo. PE, iso. KUN — n.v.).

Additional specimens examined. BURMA. Valley of Nam Tamai, 5000ft, 9 xi 1922, Kingdon Ward 5525 (E).

LAOS. Vientiane prov., Ban Kai So, env. Vang Vieng, c.900m, 20 x 1971, Vidal 5433 (E, P).

C. B. Clarke saw just one specimen of this species; the flowers were imperfect but he saw the similarity to those of *Aeschynanthus chiritooides* C. B. Clarke and described it as a related species. Prof. Wang Wentsai identified with it a plant collected in Yunnan by T. T. Yu, but later he found that this plant had only two stamens and realized it must belong to *Lysionotus* rather than *Aeschynanthus*. He described it as *L. angustisepalus*, not realizing that his first identification had been quite correct and that it was Clarke's placement of the species in *Aeschynanthus* that was at fault. Dr Vidal observed that his specimen from Laos had only two fertile stamens, but he also spotted the remarkable resemblance between his plant and Griffith's specimen labelled *Aeschynanthus levipes*. It is now possible to draw all these threads together and unite them under *Lysionotus* as *L. levipes*.

In addition to the type locality in the Mishmi Hills in Arunachal Pradesh, this species is also known from one locality in Yunnan, one in SE Xizang, one in Upper Burma and one in Laos (Vientiane prov.), indicating a remarkably wide range for an apparently uncommon plant. Its closest ally is undoubtedly *L. metuoensis* W. T. Wang, also from SE Xizang but differing in its less deeply divided calyx and puberulous pistil.

Lysionotus pubescens C. B. Clarke in J. Linn. Soc., Bot. 25: 5, tab. 23 (1889).

Type: India, N Muneypore [Manipur], 5500ft, Clarke 41283 (K).

Syn.: *Lysionotus wardii* W. W. Smith in Notes RBG Edinb. 10: 186 (1918). Type: Upper Burma, valley of Naung-chaung, 6000-7000ft, Ward 1895 (E).

L. gracilipes C. E. C. Fischer in Kew Bull. 1940: 41. Type: 'Assam' [Nagaland], Kohima, Bor 6232 (K).

Additional specimens examined. BHUTAN. Punakha, Riuchu, 5000ft, 21 viii 1914, Cooper 3298 (E); Punakha, Neptaika, 6000ft, 2 ix 1914, Cooper 3446 (E).

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Lysionotus pubescens was described by Clarke in 1889, some 5 years after publication of the *Flora of British India* containing his account of Gesneriaceae. Since then the name has been virtually ignored. When *L. wardii* was described comparison was made only with *L. serratus*, suggesting that Wright Smith was unaware of *L. pubescens*. C. E. C. Fischer did compare his *L. gracilipes* with *L. pubescens* but the characters used to distinguish it ('caulibus anisophyllis, foliis ellipticis minoribus subtus pubescentibus, capsula graciliore') are simply not adequate. Anisophyly is common throughout the genus, and though not well shown in the illustration of *L. pubescens* it can be seen in the type material in the rare instances where both leaves of a pair are still attached; the lesser size of the leaves is a valid difference, but scarcely enough to justify specific rank, and the pubescence on the undersurface is exactly as in *L. pubescens*; finally the capsule measurements are the same and it is not clear how else 'graciliore' can be interpreted. The floral description given by Fischer can safely be added to that of leaves and fruits given by Clarke for *L. pubescens*.

The type specimens of the three species names united here all came from, broadly speaking, a single area. The species is now recorded also from north of the Brahmaputra valley, in Bhutan. The species (as *L. wardii*) is also on record from S and W China (Wang in *Fl. Reip. Pop. Sinicae* 69: 543 (1990) and in *Edinb. J. Bot.* 49(1): 68 (1992)).

Lysionotus serratus D. Don in *Edinb. Phil. Journ.* 7: 85 (1822); Hook. f. in *Bot. Mag.* 107: t. 6538 (1881); C. B. Clarke in A. & C. DC., *Mon. Phan.* 5(1): 58 (1883). Type: Nepal, *Wallich* (BM).

Syn.: *L. ternifolius* Wall., *Pl. As. Rar.* 2: 20, t. 118 (1831), *nom. illegit.*

Hemiboea himalayensis Lévl. in *Rep. Sp. Nov.* 9: 329 (1910). Type: India, Sikkim, Kishap, Mongpoo, 600–900m, v–vii 1884, 'Collecteurs natifs' (G—Barb.-Boiss., drawing only in E).

Lysionotus himalayensis (Lévl.) W. T. Wang & Z. Y. Li in *Acta Phytotax. Sin.* 30: 481 (1992).

The pen and ink sketch of *Hemiboea himalayensis* (initialled R.V.) in Léveillé's herbarium (now at E: Fig. 1) for long provided the only clue for the identification of this species as the brief description provides no useful information. W. T. Wang & Z. Y. Li were undoubtedly correct in referring this sketch to *Lysionotus* but we cannot follow them in applying the name to *L. atropurpureus* Hara (Fig. 2). That species differs from the commoner *L. serratus* (with which it was long confused) not only in flower-colour, but in its axillary inflorescences being distributed along the upper part of the stem, whereas in *L. serratus* they are fewer, stouter and subterminal. In these features the sketch wholly agrees with *L. serratus* and, on the basis of the sketch alone, we had reached this conclusion. However, we have just paid a visit to Geneva and have found, on the large-size sheets of the Barbey-Boissier herbarium, three sheets bearing Léveillé's own determinations, *Hemiboea himalayensis*. Two of



Hemiboa himalayensis



FIG. 1. The sketch of *Hemiboa himalayensis* Lévl. from Léveillé's herbarium. It was for long the only known basis for the name and is determined as *Lysionotus serratus* D. Don.

them can be dismissed promptly: they carry specimens of a species of *Impatiens*. The third sheet bears two specimens of *Lysionotus serratus* and the top right-hand specimen exactly matches the sketch in Léveillé's herbarium (now at E). It also bears exactly the locality information quoted by Léveillé: no collector is named but this is one of a whole series of specimens, scattered through the herbarium, with a printed label headed Sikkim Himalaya and at the bottom the words 'Collecteurs natifs'. The

HERB. HORT. EDINB.



562 *Lysionotus atropurpureus*
H. Hara.
Det. B.L. HUNT 2/1992

FLORA OF SIKKIM

Lysionotus atropurpureus H. Hara

SIKKIM, WEST DISTRICT: Rathong
Chhu valley between Hintok Khola
and Paha Khola, 27°23'N, 88°13'E

Mixed evergreen forest with
Castanopsis

Epiphyte with woody base, flowers
purple

ALT. 2000m 27 July 1992

D. G. LOHSE, R. J. D. McBEATH,
H. J. KORTLE & H. F. WATSON
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FIG. 2. *Lysionotus atropurpureus* Hara: note the numerous slender inflorescences in the upper part of the shoot.

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determination of *Hemiboea himalayensis* Lévl. as a synonym of *Lysionotus serratus* is thus placed beyond doubt.

L. serratus is a wide-ranging and variable species under which a number of varieties have been recognized. The whole group needs critical revision. One of the varieties merits comment here:

Lysionotus serratus D. Don var. ***pteroaulis*** W. T. Wang in *Guihaia* 3(4): 277 (1983), in *Fl. Reip. Pop. Sinicae* 69: 553 (1990), and in *Edinb. J. Bot.* 49: 70 (1992).
Type: China, S Yunnan, Pingbian county, *P. Y. Mao* 2631 (holo. KUN, iso. PE — n.v.).

Additional specimens examined. CHINA. SE Yunnan, Maguan, Z. R. Xu GL5346 (E).

VIETNAM. Prov. Cao Bang [c.22°40'N 106°16'E], route de Nam Kep au Cao Ouac, 1200m, rochers humides de granulite dans un ravin, vii 1924, *Pételot* 717 (P).

This variety was previously known only from S Yunnan. Its occurrence in Vietnam, perhaps 200km east of the localities in Yunnan, suggests that further consideration of its rank is desirable. As yet it has been distinguished only by its winged stem but the specimen from Maguan cited above also has notably short fruits: they are barely 4.5cm long, though perhaps not yet fully ripe.

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