

THREE NEW SPECIES OF THE GENUS LASIANTHUS (RUBIACEAE) FROM VIETNAM

H. ZHU¹ & M.C. ROOS

Nationaal Herbarium Nederland, Universiteit Leiden branch,
P.O. Box 9514, 2300 RA Leiden, The Netherlands

SUMMARY

Three new species of the genus *Lasianthus* (Rubiaceae) from Vietnam are recognised as *L. elevatineurus*, *L. longissimus* and *L. oblongilobus*.

Key words: *Lasianthus*, Rubiaceae, Vietnam.

INTRODUCTION

Lasianthus Jack is a large genus in the family Rubiaceae with more than 180 species. It occurs from tropical Asia (more than 160 species) and Australia (only one species) to tropical Africa (c. 20 species) as well as tropical America (3 species) and has the centre of species diversity in tropical Asia. The species of the genus occur almost exclusively in primary forests. Some of them are dominant understory shrubs or treelets of tropical Asian rain forest and many of them are rare plants. As *Lasianthus* is a 'difficult' genus, few taxonomic studies were undertaken, although there are a few regional revisions. *Lasianthus* from Vietnam was initially studied by Drake (1895; as *Mephitidia* Reinw. ex Blume). Pitard (1924) treated Rubiaceae for Flora Indochina (including Vietnam, Laos and Cambodia) and parts of Siam (Thailand). He recorded 37 species including 5 varieties. While checking specimens on loan from AAU for revising *Lasianthus* for Flora Malesiana, three species from Vietnam are recognised as new. All three new species are known from type collections from specimens on loan from AAU.

Lasianthus elevatineurus H. Zhu, *spec. nov.* — Fig. 1

Proximus *L. lucido* Blume, sed foliis majoribus ellipticis vel elliptico-lanceolatis, nervis 7–8 binis, stipularis oblongis vel oblongi-lanceolatis, bracteis linearis differt. A *L. loeiensis* H. Zhu ramulis foliis subtus sparse hirsutis vel subglabris, nervulis supra prominentibus, bracteis numerosis longioribus, stipularis oblongis sparse hirsutis, fructibus glabris differt. — Typus: *L. Averyanov et al. VH 3045* (holo AAU), Vietnam, Lam Dong, 12° 06' N, 108° 39' E, 2100–2200 m alt., in broad-leaved cloud forest, 22 March 1997.

1) Permanent address: Xishuangbanna Tropical Botanical Garden, the Chinese Academy of Sciences, Kunming 650223, People's Republic of China.



Fig. 1. *Lasianthus elevatineurus* H. Zhu, showing holotype with enlarged fruits (*L. Averyanov et al.* VH 3045).

Lasianthus elevatineurus H.Zhu, sp. nov.

Det. H. Zhu 06/2001
(Rijksherbarium, Leiden)

FLORA OF VIETNAM

Lasianthus aff. *L. tamirensis* Pierre ex Pilg.

S. Vietnam, Prov. Lam Dong, 29 km to NE from Dalat city, dist. Lac Haung, municipal Da Chay. Primary wet closed broad-leaved cloud forest along main ft. (top ridge at 2100-2200 m; alt. 18.1° 08' E; 108° 59').

Shrub up to 2.5 m. lg. Common.

No. V.H. 3045 22.03.1997
International Botanical Expedition of the U.S.A., National Geographic Society (grants No. 5803-96)

Collectors: L. Averyanov, N.Q. Binh, P.K. Lac

Shrub, up to 2.5 m high; branchlets terete or slightly compressed, sparsely hirsute, or glabrescent. *Stipules* oblong to oblong-lanceolate, 4–5 mm long, sparsely hirsute. *Leaves* elliptic-lanceolate, 8–10 by 2–3.5 cm, subcoriaceous, glabrous above except sparsely hirsute midrib, glabrous or puberulous beneath except hirsute midrib and nerves, base acute, apex acuminate, aristate, arista 2–3 mm long, hirsute, margin recurved, slightly undulate, midrib prominent both surfaces, nerves prominent both surfaces, 7 or 8 pairs, nervules prominent both surfaces, parallel; petioles short, c. 2 mm long, hirsute. *Flowers* in axillary, sessile fascicles; bracts linear, 5–6 mm long, hirsute; calyx obconical, calyx tube c. 2 mm long, subglabrous, calyx lobes 5, linear, c. 3 mm long, hirsute; corolla not seen; ovary 5- or 6-locular. *Drapes* globose, 3–4 mm diam., with 5 or 6 obtuse ridges, glabrous, crowned by calyx lobes; the persistent calyx lobes linear to linear-lanceolate, 3–4 mm long, sparsely hirsute; pyrenes 5 or 6, smooth on the abaxial face, orbicular in transverse section.

Distribution — South Vietnam, known only from the type locality.

Habitat & Ecology — In montane cloud forest. Fruiting: March.

Note — This species is related to *L. lucidus* Blume by having a similar calyx with linear or linear-lanceolate lobes which are longer than the tube. It differs from *L. lucidus* Blume by having relatively big elliptic to elliptic-lanceolate leaves with 7 or 8 pairs of nerves, oblong to oblong-lanceolate stipules (4–5 mm long) and numerous linear bracts (*L. lucidus* Blume has relatively small ovate leaves with 3–6 pairs of nerves, small triangular stipules (1–2 mm long) and bracts absent). It is also related to *L. loeiensis* H. Zhu from NE Thailand, but the latter differs in having densely tomentose branchlets and lower leaf surface, hairy drupes, obscure nervules above, linear-subulate and densely tomentose stipules, and few and shorter bracts.

***Lasianthus longissimus* H. Zhu, *spec. nov.* — Fig. 2**

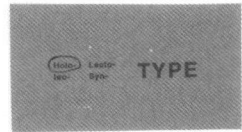
Proximus *L. lancefolio* Hook. f., sed foliis minoribus, apice longicaudis, nervis 5-binatis, lobis calycis subspathulatis tubo longioribus differt. Similis *L. japonico* Miq. subsp. *longicaudo* (Hook. f.) H. Zhu, sed nervis 5-binatis, cymis sessilibus, lobis calycis 5 subspathulatis tubo longioribus differt. — Typus: P.K. Loc et al. CBL 2055 (holo AAU), Vietnam, Ha Giang, 23° 56' N, 105° 13' E, 1100–1200 m alt., in primary evergreen broad-leaved wet montane forest, 3 May 1999.

Shrub, 2–3 m high; branchlets slender, terete, c. 1.5 mm diam., puberulous on the youngest part, glabrescent, dark-brown. *Stipules* very small, broadly triangular, c. 0.5 mm long, puberulous. *Leaves* lanceolate, 10–16 by 1.2–2 cm, chartaceous, dark-brown in desiccate, glabrous except puberulous midrib and nerves beneath, base acuminate to acute, apex long-caudate, margin slightly undulate, midrib slightly depressed above, prominent beneath, nerves depressed above, prominent beneath, 5 pairs, nervules faint above, conspicuous beneath, parallel, glabrous; petioles 5–6 mm long, puberulous. *Flowers* in axillary, sessile fascicles; bracts inconspicuous, very small, 0.5–1 mm long; calyx tube c. 2 mm long, sparsely puberulous on external surface, calyx lobes 5, rare 6, subspathulate to obovate, c. 3 mm long, sparsely puberulous on external surface; corolla bud densely pubescent on external surface; stigma lobes 5; ovary 5-locular. *Drapes* not seen.



Lasianthus longissimus H. Zhu, sp. nov.

Det. H. Zhu 06/2001
(Rijksherbarium, Leiden)



FLORA OF VIETNAM
Fam. Rubiaceae
Lasianthus sp.

N. Vietnam, prov. Ha Giang, distr. Yen Minh, municipality Du Gia, E slopes of Phu Thu Ca mountain system at 1100-1200 m elev. (N 23°56' E 105°13'). Primary evergreen broadleaved very wet mountain forest on shale very steep slopes. Shrub 2-3 m lg in open place. Flowers light violet. Not common.

No CBL 2055 03 May 1999

International Botanical Expedition of the U.S.A. National Geographic Society (grant No 6300-98)

Collectors: P.K. Loc, P.H. Hoang, Averyanov L.

Fig. 2. *Lasianthus longissimus* H. Zhu, showing holotype with enlarged inflorescence (P.K. Loc et al. CBL 2055).



Fig. 3. *Lasianthus oblongilobus* H. Zhu, showing holotype with enlarged axillary flower (*L. Averyanov et al. HN 4153*).

Distribution — North Vietnam, known only from the type locality.

Habitat & Ecology — In primary evergreen broad-leaved very wet montane forest, on very steep shale slopes between 1100–1200 m altitude. Flowering: May.

Note — This species is related to *L. lancifolius* Hook. f. It differs from the latter by having relatively small leaves with 5 pairs of nerves and a long-caudate apex, and subspathulate calyx lobes which are longer than the tube (*L. lancifolius* Hook. f. has relatively big leaves with 9 pairs of nerves and a long-acuminate apex, and subulate calyx teeth which are conspicuously shorter than the tube). It is also similar to *L. japonicus* Miq. subsp. *longicaudus* (Hook. f.) H. Zhu, but the latter differs in having leaves with numerous slender nerves, short-peduncled cymes, 4-merous flowers, and a calyx with 4 minutely triangular teeth which are shorter than the tube.

***Lasianthus oblongilobus* H. Zhu, *spec. nov.* — Fig. 3**

Proximus *L. myrtifolius* Ridl., sed foliis majoribus, nervis subtus mine prominentibus, ebracteis, lobis calycis oblongis longioribus differt. — Typus: *L. Averyanov et al. HN 4153* (holo AAU), Vietnam, Khanh Hoa, 12° 11' N, 108° 43' E, 1500–1600 m alt., in broad-leaved cloud forest, 22 April 1997.

Shrub, 2–2.5 m high; branchlets terete, compressed in the youngest part, striate, glabrous. *Stipules* small, broadly triangular, c. 0.5 mm long, hirsute. *Leaves* elliptic-lanceolate, 7–9 by 2–3 cm, coriaceous, glabrous, base acute, apex acuminate, margin recurved, midrib depressed above, prominent beneath, glabrous, nerves plain above, prominent beneath, 6 pairs, glabrous, nervules obscure above, prominent beneath, subreticulate, glabrous; petioles 5–10 mm long, glabrous. *Flowers* sessile, solitary in leaf axils; bracts absent; calyx campanulate, calyx tube c. 1.5 mm long, pubescent, calyx lobes 5 or 6, oblong, 2 by 1–1.5 mm, puberulous on external surface, pubescent on internal surface (especially the lower part); corolla (tube and lobes together) c. 7 mm long, densely pubescent on external surface, corolla lobes 4, densely pubescent on external surface, floccose on internal surface; stamens 4, inserted in the throat of corolla, filaments short, anthers oblong, c. 0.6 mm long; style c. 4 mm long, with 4 linear stigma lobes; ovary 4-locular. *Drupe*s not seen.

Distribution — South Vietnam, known only from the type locality.

Habitat & Ecology — In montane cloud forest. Flowering: April.

Note — This species has glabrous branchlets and leaves, sessile solitary flowers, bracts absent and oblong calyx lobes which separate it from other Vietnamese *Lasianthus* species. It is closely related to *L. myrtifolius* Ridl. from western Malesian mountains. It differs from the latter by having relatively big leaves with less prominent nerves on lower surface, absent bracts and longer oblong calyx lobes. *Lasianthus myrtifolius* Ridl. has relatively small leaves with conspicuously prominent nerves on both surfaces, small bracts and shorter triangular calyx lobes (c. 1 mm long).

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