

Lasianthus yaharae (Rubiaceae), a new species from Hon Ba Nature Reserve, southern Vietnam

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Received 14 Nov. 2014, final version received 27 June 2015, accepted 29 June 2015

Dang V.S., Tagane S., Toyama H. & Tran H. 2015: *Lasianthus yaharae* (Rubiaceae), a new species from Hon Ba Nature Reserve, southern Vietnam. — *Ann. Bot. Fennici* 52: 352–354.

Lasianthus yaharae V.S. Dang, Tagane & H. Tran (Rubiaceae) is described and illustrated here based on material discovered in the Hon Ba Nature Reserve, southern Vietnam. It is most similar to *L. dalatensis* but differs in having fewer secondary veins in the leaves, a larger calyx and larger flowers (corolla tube and corolla lobes), and a different flower color at anthesis.

Lasianthus includes at least 180 species, among which more than 160 are distributed in tropical Asia, ca. 20 in Africa, one in Australia, and three in tropical America (Zhu 2002). This genus is taxonomically difficult because the morphological characters of the leaves, stipules and bracts are very variable, while the flowers and fruits are relatively small and most of the time missing from herbarium specimens, therefore leaving only a few diagnostic characters available for delineating the species (Zhu *et al.* 2012).

In recent years, taxonomic revisions of *Lasianthus* have been published for Thailand (Zhu 2001), China (Zhu 2002) and Malesia (Zhu *et al.* 2012), whereas the Vietnamese taxa remain poorly studied. At present, there are 31 species of *Lasianthus* recognized for Vietnam (Pham 2000).

Between 2012 and 2014, we carried out numerous field surveys to assess the plant diversity at the Hon Ba Nature Reserve, southern

Vietnam. During one of our trips, we discovered a species of *Lasianthus* that was distinct from all the known congeners reported to occur in Vietnam. We were also unable to find a match for this unidentified taxon in the Vietnamese Herbaria (HN and VNM) and The Forest Herbarium, Bangkok (BKF).

***Lasianthus yaharae* V.S. Dang, Tagane & H. Tran, *sp. nova* (Fig. 1)**

TYPE: Vietnam. Khanh Hoa Province, Hon Ba Nature Reserve, near peak, montane evergreen forest dominated by Fagaceae, alt. 1521 m a.s.l., 12°07'06"N, 108°56'51"E, 18 July 2014 Tagane S., Kanemitsu H., Son V.D., Tran H. with Loi X.N., Thach N.D., Dinh N. & Hieu P.N.H. V1741 (holotype VNM; isotypes FU!, KYO!, Station of Hon Ba Nature Reserve!, VNM!). — PARATYPE: Vietnam. Khanh Hoa Province, Hon Ba Nature Reserve, 30 km west of Nha Trang City, alt. 1521 m a.s.l., 12°07'06"N, 108°56'51"E, 2 November 2012 Son V.D., Tagane S., Toyama H., Fuse K., Nagamasu H., Hop T., Lam T.T. & Yahara T. VHB44 (VNM!).



Fig. 1. *Lasianthus yaharae* (from the holotype). — **A:** Fruiting branches. — **B:** Close-up of an expanding young leaves. — **C:** Abaxial leaf surfaces. — **D:** Stipules. — **E:** Close-up of an inflorescence. — **F** and **G:** Close-ups of flowers. — **H:** Drupes. — **I:** Drupe.

ETYMOLOGY: The species is named in honor of Professor Dr. Tetsukazu Yahara of the Kyushu University, Japan for his contributions to the study of *Lasianthus* of Indochina.

Shrubs, 1–1.5 m tall. Branches and branchlets solitary, slender, glabrous, blackish when dry. Stipules triangular, 2–3.5 mm long, inner and outer surface strigose. Petiole 5–10 mm long, glabrous. Leaf blade ovate-lanceolate to ovate-elliptic, (8.2–)12–16 × 3–5(–6) cm, coriaceous, glabrous on both surfaces except on veins; leaf base cuneate; leaf apex acute to short-caudate, tip pointed, 1–2 mm long; leaf margin usually reflexed; midrib slightly prominent and glabrous adaxially, strongly prominent and sparsely pubescent abaxially; secondary veins 4–5 pairs, ascending at an angle of ca. 70° from midrib, curved to margin, prominent on both surfaces, sparsely pubescent abaxially; tertiary veins prominent on both surfaces, glabrescent, subreticulate. Inflorescences axillary, subsessile; bracts triangular or broadly to depressed ovate, 2–3 × 2–3 mm (in fruiting specimens), strigose, hairs brown on both surfaces, margin of outer surface densely hairy, inner surface densely hairy. Flowers sessile. Calyx campanulate, tube 2–3 mm long, crimson; lobes (4–)5, triangular, 1–1.5 mm long, minutely strigose. Corolla cylindrical, tube 5–10 mm long, outside tomentose, pinkish; lobes 5, triangular, 2–4 mm long, outside puberulous, inside villous. Stamens 5; 0.8–1.2 mm long, anthers oblong. Drupes ovoid, 6–8 mm long, 5–6 mm in diam., glabrous except for persistent calyx lobes, reddish brown when ripe; calyx lobes 5, triangular, 2–3 mm long. Pyrenes 5. Seeds ovoid, ca. 5–6 mm long, irregular sulcate. Flowering from November to January, fruiting from May to July.

DISTRIBUTION AND HABITAT. Hon Ba Nature Reserve, Khanh Hoa Province, southern Viet-

nam. In moist evergreen forest, dominated by members of Fagaceae, at ca. 1500 m a.s.l.

Lasianthus yaharae resembles *L. dalatensis* which is endemic to Dalat, southern Vietnam. However, *L. yaharae* differs from that species by having fewer secondary veins (4–5 pairs vs. 7–9 pairs), flowers pinkish at anthesis (vs. white), and a larger calyx (2–3 mm long vs. 1 mm), corolla tube (5–10 mm long vs. 4 mm long) and corolla lobes (2–4 mm long vs. 1.5 mm long). The leaf surfaces of *L. yaharae* on both sides have raphides, which are 0.15–0.2 mm long and visible under a binocular microscope. The density of the raphides on the abaxial surface is higher (more than 200 per cm²) as compared with that in *L. dalatensis* (25 per cm²).

Acknowledgements

We are grateful to the staff of Hon Ba Nature Reserve for their kind assistance in the field. We are also grateful to the curators of HN and BKF for their kind help and permission to access specimens for our studies. This work was partly supported by the Environment Research and Technology Development Fund (S9) of the Ministry of the Environment, Japan.

References

- Phạm H.H. 2000: *Cây cỏ Việt Nam: an illustrated flora of Vietnam*, vol. 3: 432–461. Youth Publication, Ho Chi Minh City.
- Zhu H. 2001: A taxonomic revision of the genus *Lasianthus* Jack (Rubiaceae) from Thailand. — *Acta Phytotaxonomica Sinica* 39: 116–150.
- Zhu H. 2002: A revision of the genus *Lasianthus* (Rubiaceae) from China. — *Systematics and Geography of Plants* 72: 63–110.
- Zhu H., Roos M.C. & Ridsdale C.E. 2012: A taxonomic revision of the Malesian species of *Lasianthus* (Rubiaceae). — *Blumea* 57: 1–102.