

Lysionotus gamosepalus var. *gamosepalus* (Gesneriaceae): A new record for India

Akhil M.K.¹, Santhosh Nampy^{1*} & Javad P.²

¹Department of Botany, University of Calicut, Malappuram District, Kerala–673 635, India.

²Department of Botany, St. Alberts College, Ernakulam, Kerala– 682 018, India.

*Email: santhoshnampy2019@gmail.com

Abstract: *Lysionotus gamosepalus* W.T.Wang var. *gamosepalus*, a variety native to China, is reported here as a new distributional record for India from Arunachal Pradesh. Detailed description and photographs are provided to facilitate easy identification.

Keywords: Arunachal Pradesh, Gesneriaceae, India, *Lysionotus gamosepalus* var. *gamosepalus*.

INTRODUCTION

Lysionotus D.Don (Gesneriaceae), comprising of c. 31 species (Mabberly, 2017; Borah & Joe, 2018), is distributed in Bhutan, China, north India, south Japan, Laos, Myanmar, Nepal, north Thailand and north Vietnam. The genus is represented by eight species in India, including the two recently described taxa from this region (Moller *et al.*, 2017; Joe *et al.*, 2017; Borah & Joe, 2018).

While inventorying the family Gesneriaceae of India, the authors collected an interesting specimen of the genus *Lysionotus* from Cheta village, near Roing, Lower Dibang Valley district of Arunachal Pradesh. After critical examination of the specimen with pertinent literature including type, it was identified as *L. gamosepalus* W.T.Wang var. *gamosepalus*, a variety so far reported only from southeast Xizang, China. It differs from *L. gamosepalus* var. *biflorus* A.Joe *et al.* by its epiphytic nature, dentate to spinose leaf margins, having more than ten flowers in an axil, larger bracts, filaments and anther connective appendages and possessing three staminodes. It is reported here as a new addition to the flora of India.

Lysionotus gamosepalus W.T.Wang, Guihaia 3(4): 278. 1983; Wang *et al.* in Z.Y.Wu & Raven, Fl. China 18: 393. 1998; Z.-Y. Li & Y.-

Z. Wang, Pl. Gesneriaceae China, t. 1.382, p. 412. 2004, var. ***gamosepalus***. Type: CHINA, Tibet, Medog County, 29.06.1980, Chen Weilie 10754 (PE00030827 digital image!). **Figs. 1–3**

Epiphytic sub-shrubs. Stems branched, 20–60 cm long, terete, green with claret dots, glabrous; nodal region slightly bulged with claret ring; internodes 2.5–4 cm long. Leaves 3 per node, unequal; petioles 0.5–1.8 cm long, glabrous. Lamina 4–15 × 3–8.5 cm, ovate to ovate-elliptic, oblique, dark green above, pale green beneath, glabrous, acute to acuminate at apex, slightly oblique to cuneate at base, margins dentate-spinose; lateral veins 6–8 on each side. Cymes axillary, c. 11-flowered; peduncles 3.5–5 cm long, terete, claret at base, greenish-yellow at tip; bracts 2, c. 1.7 × 1.4 cm, cordate, persistent, yellowish-green, margins entire to wavy, slightly incurved, minutely pubescent, cordate at base, acute to obtuse at apex; pedicels c. 0.5 cm long, terete, pale green, glabrous. Calyx c. 1.5 × 0.8 cm; tube 0.6–0.8 cm long; lobes 5, c. 0.7 cm long, divided from middle of the calyx, acute-rounded at apex, pale green, sparsely puberulent, margin entire, reflexed. Corolla c. 5 cm long, lilac-white with two yellow folding on the floor of throat; tube c. 3 cm long, funnel-shaped, densely glandular hairy outside and sparsely within; limb 2-lipped; lower lip 1.8–2 × c. 0.5 cm; upper lip 0.8–1 × c. 0.5 cm; ovate with rounded apex. Stamens 2, coherent; filaments c. 1.5 cm long, coiled, geniculate, white; anthers cream coloured, c. 0.3 cm diam.; connective appendages horn-like, c. 2.5 mm long, yellowish-brown, gland dotted. Staminodes 3; lateral two c. 0.8 cm long, coiled, coherent; median c. 0.2 cm long. Disc ring-like, 5-lobed. Ovary c. 1.8 × 0.2 cm, cylindrical, slightly curved, greenish-white, glabrous; style c. 1 cm long, cylindrical, white, glabrous; stigma c. 8 mm in diam., bilobed. Capsules c. 10 cm long.

Received: 23.08.2019; Revised & Accepted: 24.09.2019

Published Online: 30.09.2019

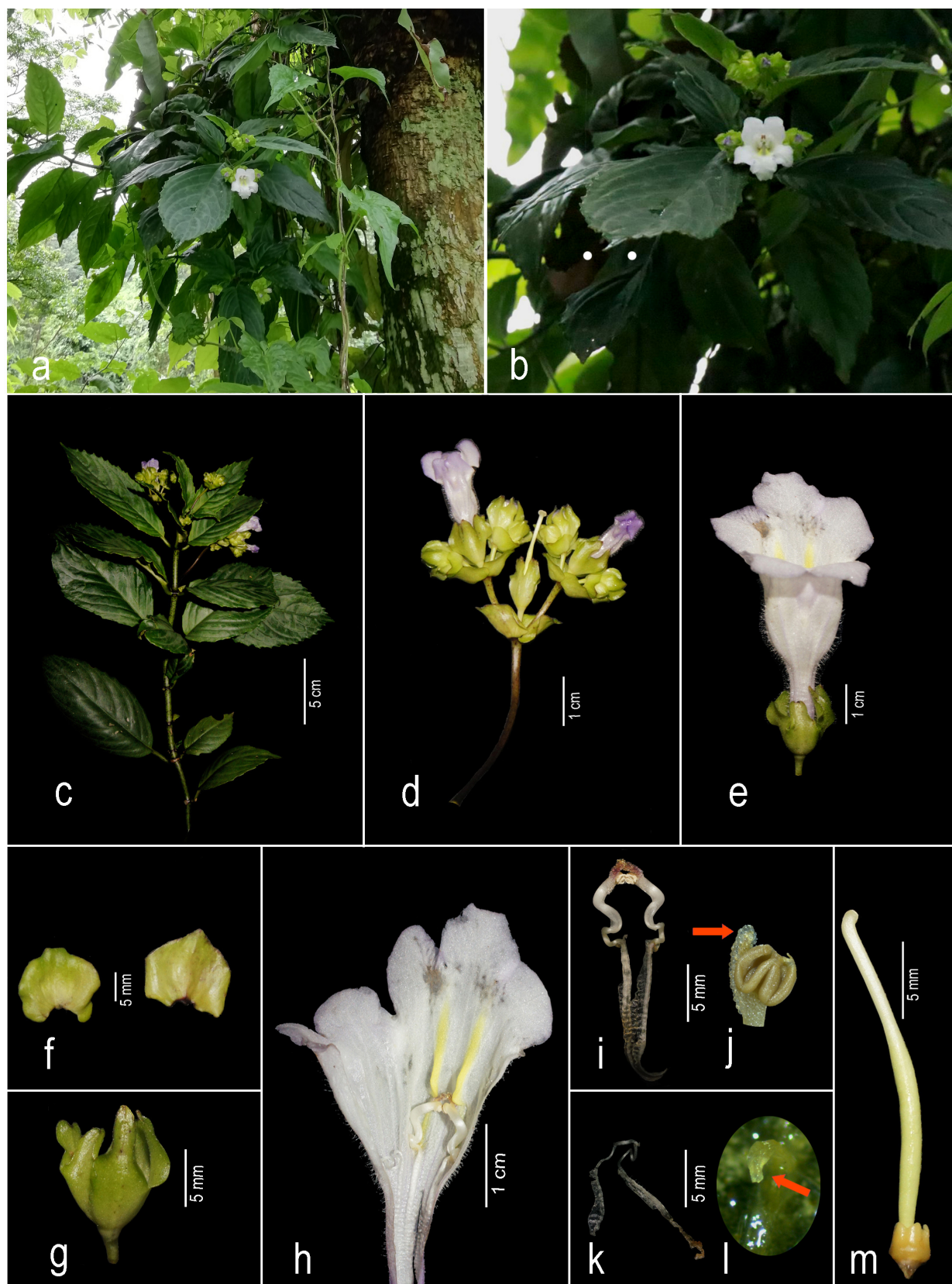


Fig. 1. *Lysionotus gamosepalus* W.T.Wang var. *gamosepalus*. **a.** Habitat; **b.** Habit; **c.** Flowering twig; **d.** Inflorescence; **e.** Flower; **f.** Bracts; **g.** Calyx; **h.** Corolla—split open; **i.** Stamens; **j.** Anthers with horn like connective appendage; **k** & **l.** Staminodes (long & short respectively); **m.** Pistil (from Akhil, Javad & Santhosh Nampy, 169301).



Fig. 2. Type of *Lysionotus gamosepalus* W.T.Wang (PE00030827). © Institute of Botany, Chinese Academy of Sciences.



Fig. 3. Distribution of *Lysionotus gamosepalus* W.T. Wang.

Flowering & fruiting: June–August.

Habitat: Grow attached on to the trunks of large trees in evergreen forest margins.

Notes: This variety is morphologically similar to var. *biflorus* in having half way fused calyx, hairy corolla and horn-like anther connective appendages but differs by its habitat (epiphytic *vs* terrestrial in var. *biflorus*), leaf margins (dentate to spinose *vs* sub-serrate), number of flowers in the axil (11 *vs* 2), size of bracts (1.7×1.4 cm *vs* $0.6\text{--}0.8 \times 0.8\text{--}0.9$ cm), shape of bracts (cordate *vs* ovate/orbicular), length of filaments (*c.* 1.5 cm *vs* $0.7\text{--}0.8$ cm), size of anther connective appendages (*c.* 2.5 mm *vs c.* 1 mm) and number of staminodes (3 *vs* 2).

Lysionotus gamosepalus has been reported only from a few localities in China, ranging between 4000–5000 m while the present report is from about 800 km away from the type locality at an elevation of 1900 m. The flowers were described as glabrous by Wang (1983) but they are glandular hairy in the present collections.

Specimens examined: INDIA, **Arunachal Pradesh**, Lower Dibang Valley district, Cheta village, Roing, $28^{\circ}13'34''$ N; $95^{\circ}85'06''$ E; 1960 m, 10.06.2019, Akhil, Javad & Santhosh Nampy 169301, 169302 (CALI!).

Acknowledgements

AMK and SN are grateful to the Head, Department of Botany, University of Calicut for facilities and Science and Engineering Research

Board (New Delhi) for financial assistance (No. EMR/2016/007346 dated 01.11.2018). The authors are also thankful to Mr. Jyothish (IISR, North East Regional Centre) and Mr. Naba and family (Idhu tribe, Roing) for their immense help during specimen collection.

Literature Cited

- BORAH D. & A. JOE 2018. A new species of *Lysionotus* (Gesneriaceae) from Northeastern India. *Taiwania* 63: 232–234.
- DON D. 1822. Description of two new genera of Nepal plants. *Edinburgh Philosophical Journal* 7: 82–86.
- JOE A., HAREESH V.S. & M. SABU 2016. A new taxon of *Lysionotus* (Gesneriaceae) from northeastern India. *Taiwania* 62: 337–339.
- MABBERLEY D.J. 2017. *Mabberley's Plant-Book: A portable dictionary of plants, their classification and uses*. Fourth edition. Cambridge University Press, Cambridge.
- MÖLLER M., NAMPY S., JANEESHA A.P. & A. WEBER 2017. The Gesneriaceae of India: Consequences of updated generic concepts and new family classification. *Rheedea* 27: 23–41.
- WANG W.T. 1983. Revision of *Lysionotus* in China. *Guihaia* 3: 249–284.
- WANG W.T., PAN K.Y., LI Z.U., WEITZMAN A.L. & L.E. SKOG 1998. Gesneriaceae. In: Wu Z.Y. & P.H. RAVEN (Eds.), *Flora of China*. 18. Science Press, Beijing. pp. 349–358.