

Nomenclatural and taxonomic notes on *Lysimachia loeflingii* (Primulaceae) in Nepal

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Abstract: The occurrence of *Lysimachia arvensis* (L.) U.Manns & Anderb. (Primulaceae) in Nepal, as reported in several previous publications, is attributable to misidentification, and the taxon concerned is correctly identified as *L. loeflingii* F.J.Jiménez-López & M.Talavera. *Lysimachia loeflingii* differs from other *Lysimachia* species reported from Nepal in having loose stems, ovate or lance-ovate leaves, pedicels usually longer than internodes, blue or purplish-blue petals with a purplish-red base, and petals longer than sepals. Besides the nomenclatural and taxonomic notes on *L. loeflingii*, this study provides the evidence for its occurrence in Nepal, including its diagnostic characteristics, distribution, and ecology.

Keywords: Central Himalaya, distribution, *Lysimachia arvensis*, Primulaceae, taxonomy.

Introduction

Lysimachia Tourn. ex L. (Primulaceae) is a genus of perennial herbs consisting of 292 species and distributed in temperate and subtropical to tropical mountains (POWO, 2026). In Nepal, the genus is represented by 14 species (Rajbhandari *et al.*, 2021; Shrestha *et al.*, 2022).

During the botanical exploration in Sarlahi District, Central Nepal, in February 2025, the first author came across large populations of a species of *Lysimachia* in different localities. After examination of the species and checking literature, it was identified as *L. loeflingii* F.J.Jiménez-López & M.Talavera. *Lysimachia loeflingii* differs from other *Lysimachia* species

reported from Nepal in having loose stems, ovate or lance-ovate leaves, pedicels usually longer than internodes, blue or purplish-blue colored petals with a purplish-red base, and petals longer than sepals (Linnaeus, 1753; Jiménez-López *et al.*, 2022). The specimens of *L. loeflingii* from Nepal in various herbaria (BHAG, E, KATH, and TI) were identified as *L. arvensis* (L.) U.Manns & Anderb. *Lysimachia arvensis*, formerly treated as *Anagallis arvensis* L., was reported from Nepal by different authors (Gould, 1982; Press *et al.*, 2000; Singh, 2001; Rajbhandari *et al.*, 2021; Shrestha *et al.*, 2022) because the blue-flowered Nepalese *Anagallis* was erroneously identified as *A. arvensis*. This error to some extent may be because the blue-flowered species was delimited at the variety level as *A. arvensis* var. *caerulea* (L.) Gouan. Linnaeus (1753) described scarlet-flowered plants as *A. arvensis*. Two names were given by Linnaeus to the blue-flowered ones, *A. latifolia* L. and *A. caerulea* L., in 1753 and 1759, respectively (Linnaeus, 1753; 1759). *Anagallis caerulea* was subsequently treated as a variety of *A. arvensis* (var. *caerulea*) by Antoine Gouan (1764). As a result, both the species, *A. latifolia* and *A. caerulea*, are treated as conspecific to each other (POWO, 2026; WFO, 2026). However, Jiménez-López *et al.* (2022) overlooked the treatment of *A. caerulea* as a heterotypic synonym of *A. latifolia*. *Lysimachia loeflingii* is the replaced name of *A. latifolia*, as discussed by Jiménez-López *et al.* (2022). Therefore, *L. loeflingii* is the accepted name for the taxon described under the names *A.*

Received: 08.04.2026; Revised & Accepted: 16.08.2026

Published Online: 30.09.2026

caerulea, *A. arvensis* var. *caerulea*, and *A. latifolia*.

Lysimachia loeflingii is distributed from Europe, Macaronesia, Central Asia and Middle East to West Nepal (GBIF, 2026; POWO, 2026) but has not been reported from Nepal in any literature (Gould, 1982; Press *et al.*, 2000; Singh, 2001; Rajbhandari *et al.*, 2021; Shrestha *et al.*, 2022). Plants of the World Online (POWO, 2026) referred to the book entitled 'An enumeration of the flowering plants of Nepal' by Hara *et al.* (1982) for the distribution of *L. loeflingii* in Nepal. However, Gould (1982) has mentioned blue-flowered *A. arvensis* in the aforementioned book edited by Hara *et al.* (1982). A recent study by Jiménez-López *et al.* (2022) solved the long dispute regarding pink and blue-flowered plants in *L. arvensis* based on the molecular evidence supported by morphology and delimited the scarlet-flowered species as *L. arvensis* and the blue-flowered species as *L. loeflingii*. As all the *L. arvensis* reported from Nepal are blue or purplish-blue-flowered, they actually belongs to *A. latifolia*, which is now treated as *L. loeflingii*. Therefore, the occurrence of *L. loeflingii* is confirmed here in Nepal.

Materials and Methods

Plant specimens were collected from different parts of Nepal. Herbarium specimens were prepared following Bridson and Forman (1998). The voucher specimens of *L. loeflingii* have been deposited at the National Herbarium and Plant Laboratories (KATH), Godawari, Lalitpur, Nepal. In addition, the specimens of *L. loeflingii* collected from Nepal and stored in different herbaria, including BHAG, E, KATH, and TI, were examined. The acronyms of herbaria followed Thiers (2026).

Taxonomic Treatment

Lysimachia loeflingii F.J. Jiménez-López & M. Talavera, Bot. J. Linn. Soc. 199: 571. 2022. *Anagallis latifolia* L., Sp. Pl. 1: 148. 1753 [syn. subst.]. *Lectotype* (designated by Jiménez-López *et al.*, 2022): Herb. Linn. 208.3, 'H.U.3. latifolia. ex Hispanica foly amplexicauly' [m. Linnaeus].

Anagallis caerulea L., Amoen. Acad. 4: 479. 1759.

Anagallis arvensis var. *caerulea* (L.) Gouan, Fl. Monsp. 30. 1764. **Fig. 1**

Creeping herb. Stem quadrangular, often trailing along the ground or slightly ascending, up to 25 cm long, internodes usually shorter than pedicels. Leaf ovate or lance-ovate, sessile, opposite in pairs along the stem, margin entire. Flowers blue or purplish-blue; petals longer than sepals, brightly colored on the upper surface, with a purplish-red base.

Vernacular names: Armale and Krishnaneel.

Flowering & fruiting: Flowering and fruiting from December to May.

Habitat: As a segetal in the mustard, wheat, and potato fields, sometimes in open areas, in sandy-loam soil, 80–1850 m.

Distribution: Europe, Macaronesia, Central Asia and Middle East to Nepal (after GBIF, 2026; POWO, 2026; and this study).

Specimens examined: NEPAL, **Central Nepal**, Bagmati Province, Bhaktapur District, Sanga Bhanjyang, 09.03.1975, D.P. Joshi & K.R. Rajbhandari 75-334 (KATH); Kathmandu District, Dallu, 07.01.1975, Joshi, Rajbhandari & Ghimire 75-103 (KATH); Paknajole, 27.03.1961, S.B. Malla & S.B. Rajbhandari 148 (KATH); Tripureshwar, 20.09.1970, N.P. Manandhar & P.R. Shakya 16775 (KATH); Lalitpur District, Chapagaon, 26.02.2025, S. Desai SDC1 (KATH); Chapagaon, Jharuwarasi, 28.04.1997, K.R. Rajbhandari & R. Joshi 97-72 (KATH); Godawari, 19.03.1966, P. Pradhan 4293 (KATH); *Ibid.*, 16.04.1962, S.B. Malla & Rajbhandari 710 (KATH); *Ibid.*, 18.12.1992, N. Joshi & I. Shrestha 309 (KATH); Naudhara, 18.02.2025, P. Chalise & Y.R. Paneru 25021801 (KATH); Sindhupalchowk District, Sahare Khola, 14.04.1974, J.F. Dobremez 2493 (KATH, E *n.v.*); Madhesh Province, Bara District, Gumi, 18.02.1993, L.P. Kattel 210/93 (KATH); Dhanusha District, Barkurwa, 03.02.1986, N.P. Manandhar 10510 (KATH); Sarlahi District, Chhatauna, 10.02.2025, G. Parmar 1 (KATH). **East Nepal**, Koshi Province, Jhapa District, Dhulabari to Bhadrapur, 20.03.2003,

T. Watanabe & Team 10004985 (TI *n.v.*); Morang District, Biratnagar, *M. Siwakoti* 338 (BHAG *n.v.*). **West Nepal**, Sudurpashchim Province, Dadeldhura District, Dadeldhura, 31.03.1984, *P. Pradhan, R.K. Uprety, N. Pradhan & N. Dabadi* 1026 (KATH); Kailali District, Dhangadhi, 31.03.1974, *N.P. Manandhar & Team* 8220 (KATH); Tikapur, 26.03.2003, *G.D. Bhatta & S. Khatri* 69 (KATH); Kanchanpur District, Mahendranagar, 14.01.1983, *H.L. Rijal & B.R. Chhetri* 1392 (KATH); Mahendranagar, 28.03.1981, *Bhattacharya* 3693 (KATH); Mahendranagar, 29.01.1981, *L.P. Kattel & K.J. Malla* 181 (KATH); Karnali Province, Dailekh District, Chhipachhipe Pani, 25.02.1991, *N.P. Manandhar* 393-91 (KATH); Lohari, 28.02.1991, *N.P. Manandhar* 538-91 (KATH); Salyan District, Damachaur, 05.05.1982, *Sharma, Bhatta & Shukla* 4492 (KATH); Surkhet District, Solighopte, 21.02.1991, *N.P. Manandhar* 21-91 (KATH); Kalyam, 23.02.1991, *N.P. Manandhar* 248-91 (KATH); Lumbini Province, Banke District,

Chisapani, 08.01.1983, *P.P. Kurmi & D.K. Shrestha* 4740 (KATH); Kohalpur, 20.12.1979, *Bhattacharya* 2021 (KATH); Nepalgunj, 25.12.1972, *Chandrabali* 10378 (KATH); Nepalgunj, 09.03.1979, *S. Dayal* 3667 (KATH); *Ibid.*, 06.01.1993, *P.P. Kurmi* KB517 (KATH); Puraina, 03.02.1983, *R.N. Shukla* 5042 (KATH); Salyani Bagh, 30.01.1982, *D.K. Sharma & S. Dayal* 4660 (KATH); Bardia District, Rajwara, 31.12.1984, *P.R. Shakya* 3755 (KATH); Sonaha, 18.02.1993, *P.P. Kurmi* KB610 (KATH); Thakurdwara, 29.01.1995, *P.P. Kurmi & M.P. Pudasaini* 10069 (KATH); Dang District, 08.03.1976, *N.P. Manandhar & P.M. Regmi* 268 (KATH); Koilabas, 23.03.1973, *N.P. Manandhar & Team* 10301 (KATH); Palpa District, Channebhanjyang, 01.03.1976, *N.P. Manandhar & P.M. Regmi* 58 (KATH); Pyuthan District, Sepung, 14.02.1983, *Paudyal & Team* 5372 (KATH); Rupandehi District, Semlar, 16.04.2021, *P. Chalise & Y.R. Paneru* P0010 (KATH); *Ibid.*, 27.02.2022, *P. Chalise & G.S. Chalise* P00101 (KATH).

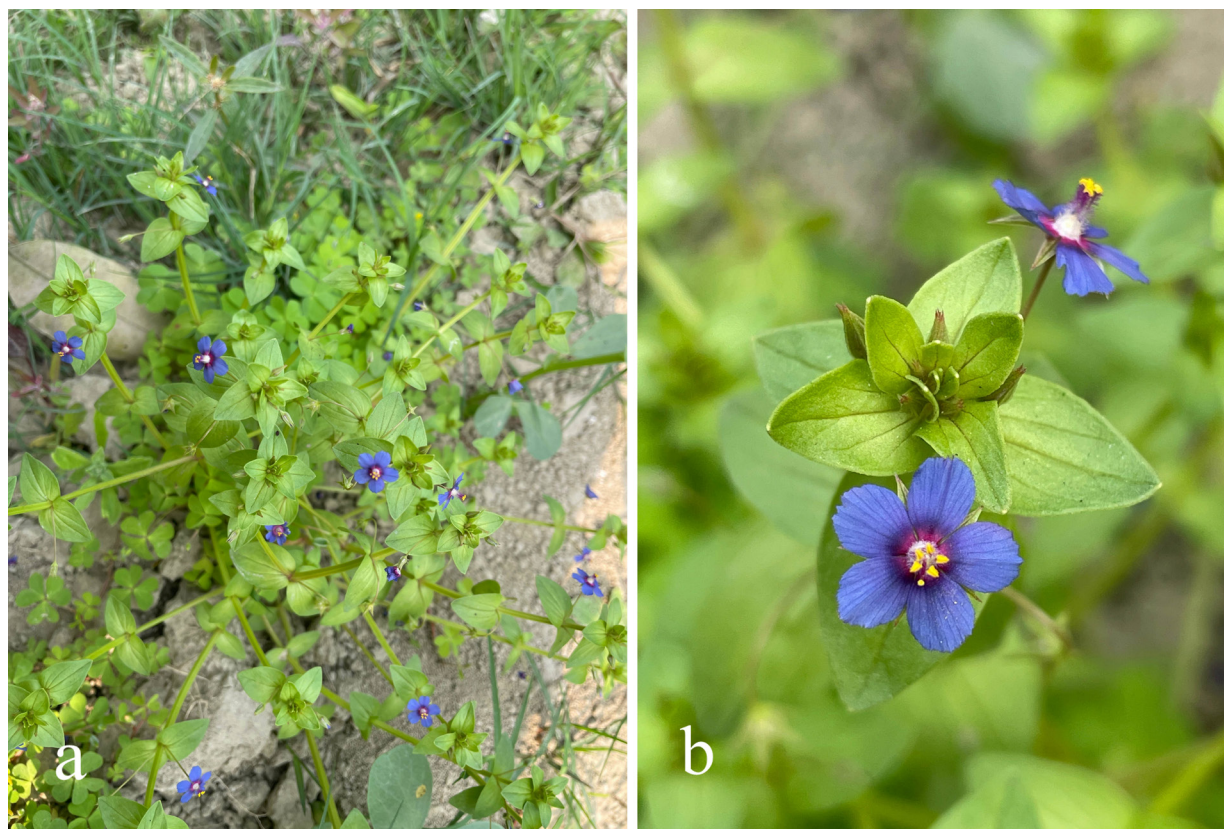


Fig. 1. *Lysimachia loeflingii* F.J.Jiménez-López & M.Talavera. **a.** A flowering plant in its natural habitat; **b.** Closer view of flowering branch (Photographed by G. Parmar).

Note: Based on the observation in the field and the label information of the herbarium specimens collected from Nepal, all the individuals examined had blue or purplish-blue flowers; not a single specimen had scarlet or red flowers, confirming their identity as *L. loeflingii*. During the present study, the authors neither encountered *L. arvensis* (characterized by scarlet or red flowers) in the field in Nepal nor located any Nepalese specimens in the herbaria examined. Consequently, it was not possible to assess morphological characters other than flower color that could aid in distinguishing the aforementioned species.

Acknowledgements

The authors are grateful to the curator of the National Herbarium and Plant Laboratories (KATH) for providing access to the herbarium specimens. The authors are also thankful to Ghanashyam Chalise and Sujana Desai for their assistance in the field.

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