

Primula ianthina Balf.f. & Cave (Primulaceae): A New Record For Nepal

Til Kumari Thapa^{1*}, Pam Eveleigh² & Rita Chhetri¹

¹National Herbarium and Plant Laboratories (KATH), Godawari, Lalitpur, Nepal

²Founder of Primula World, Calgary, Canada

*Email: tilkumarithapa75@gmail.com

Abstract

Primula ianthina Balf.f. & Cave (Primulaceae) known endemic to Sikkim is reported as a new record for Nepal.

Keywords: *Aleuritia ianthina*, Endemic, Ilam, New distribution record

Introduction

Primula L. is the largest genus belonging to the family Primulaceae, distributed mainly in temperate regions of the northern hemisphere (Richards, 2003). It comprises ca. 500 species with its greatest diversity in the mountain ranges of East Asia (Hu & Kelso, 1996) and with 61 species listed in Nepal (Hara et al., 1982). *Primula ianthina* Balf.f. & Cave was first described in 1916 from material collected by G. H. Cave from Sandakphu (a village located in the border of Nepal and India), Darjeeling Himalaya in 1914. *Primula ianthina* is not described as occurring in Nepal by Hara et al. (1982), Press et al. (2000), Bista et al., (2001) & Rajbhandari et al., (2012, 2017). This species is a new record for the Flora of Nepal.

Materials and Methods

This work is based on the herbarium specimens preserved at National Herbarium and Plant Laboratories, Godawari, Lalitpur (KATH). The available literatures were reviewed. The type specimen and other herbarium specimens preserved at different herbaria were studied (<https://data.rbge.org.uk/search/herbarium>). The specimen preserved at KATH was digitized and barcoded as KATH023548 which is available online on plantdatabase.kath.gov.np.

Results and Discussion

While working on the herbarium specimens of the *Primula* genus preserved at the KATH we found a

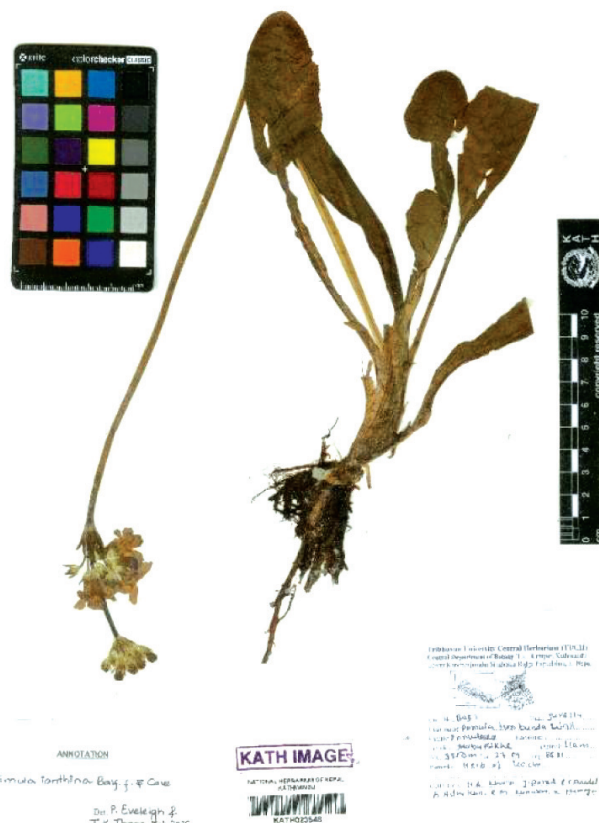


Figure 1: *Primula ianthina* Balf.f. & Cave

specimen determined as *Primula floribunda* Wall. which was different from typical *Primula floribunda*. On further study and herbarium examination we identified it as *Primula ianthina* Balf.f. & Cave. The taxonomical description is given below.

Primula ianthina Balf.f. & Cave in Notes Roy. Bot. Gard. Edinburgh, 9 (43):175-176 (1916); Smith, W. W. & Forrest, G. in Notes Royal Bot. Gard. Edinburgh, 16: 1-50 (1928) and in Journal Roy. Hort. Soc. London, 54:43 (1929); H. Hara in Spring Flora of Sikkim Himalaya 119. (1963); H. Hara in The Flora of Eastern Himalaya 1:248 (1966); A. J. C. Grierson, & D. G. Long in Flora of Bhutan 2(2):539 (1999); A.J. Richards *Primula* 221. (2003); Basak, et.al. The Genus *Primula* L. India: A Taxonomic Revision 322. (2014). (Figure 1).

Synonym: *Aleuritia ianthina* (Balf. f. & Cave) Soják

A perennial farinose herb with thick fibrous roots. Bud scales absent at anthesis. Leaves forming a rosette, lamina oblong to oblanceolate, 3-20 x 1.5-3cm, base attenuate into winged petiole, apex rounded, and finely denticulate margin, glandular pitted especially on the lower surface. Scape to 40cm tall, 2 umbels, superimposed, 10-12 flowers in each umbel. Bracts yellow farinose, lanceolate, gibbose at base, acute apex, as many as pedicels, 0.5-1.5 x 0.1cm. Pedicels 1-2cm long, farinose. Calyx green, covered with dense yellow farina, bell shaped, parted to the middle into triangular deltoid teeth, 5-7 x 3-4mm, apex acuminate, sometimes toothed. Corolla salver shaped, purple, 1.5-1.9 x 1.5-2cm, heteromorphic; lobes emarginate; tube 1cm long. Stamens 5, in pin morph, inserted towards the base of corolla tube. While the style reaches the apex of the tube or slightly exerted.

Type: Sikkim, Sandakphu, 11,500ft, 29 July 1914, Cave, G.H. (*Lectotype*: E00024399 in E).

Distribution: 3200m; previously endemic to Sikkim has been now reported from Ilam District, East Nepal.

Ecology: In pasture and damp meadows.

Flowering: June-July.

Specimens Examined: Province 1, East Nepal, Mubu, Bikhe, Ilam District, 3,200m, 14 June 2007, 27.09N and 88.01E, N. B. Khatri., J. Pandey., R. C. Paudel., B. Adhikari., R.M. Kunwar. & K. Humagain B087 (KATH023548); India, Darjeeling

Sandaphu-Garibans, 7.6.1960, 27°6'15" N and 88°0'4" E, H. Hara, H. Kanai, G. Murata, M. Togashi, & T. Tuyama, 5022 (KATH040625; KATH040626; KATH040627).

Notes: The species *Primula floribunda* differs from *Primula ianthina* having short, articulate-hairy, efarinose, yellow flowers in 1-6 umbels and grows at lower elevations of 500-2000m which is distributed from NW Himalaya to SW Nepal and Afghanistan. *Primula ianthina* is sometimes confused with *Primula prolifera* but the most obvious difference is flower color (*P. ianthina* is purple pink to violet whereas *P. prolifera* is yellow).

Conclusion

Primula ianthina, previously endemic to Sikkim has been now reported from Ilam District, East Nepal. This species is new addition for the Flora of Nepal.

Author Contributions

All the authors have equally contributed to bring this manuscript in its form.

Acknowledgements

We are thankful to Director General Mr. Sanjeev Kumar Rai, former Deputy Director General Mr. Mohan Dev Joshi, Department of Plant Resources, Thapathali, Kathmandu. We express our sincere gratitude to Dr. Keshav Raj Rajbhandari for the discussion and valuable suggestions. We gratefully acknowledge to Mr. Subhash Khatri Chief and all staffs of National Herbarium and Plant Laboratories (KATH).

References

- Balfour, L. B. (1915-1916). *New species of Primula*. Notes Royal Bot. Gard. Edinburgh, 9, 1-62; 142-206.
- Basak, S. K., Maity, G. G., & Hajra, P. K. (2014). *The Genus Primula L. India: A Taxonomic Revision*. Bishen Singh Mohendra Pal Singh, India, 657.
- Bista, M. S., Adhikari, M.K. & Rajbhandari, K.R.

- (2001). *Flowering Plants of Nepal (Phanerogams)*. Department of Plant Resources, Nepal.
- Grierson, A. J. C. & Long, D. G. (1999). *Flora of Bhutan: Including A Record of Plants from Sikkim and Darjeeling volume 2 Part 2*. Royal Botanic Garden Edinburgh & Royal Government of Bhutan.
- Hara, H. (1963). *Spring Flora of Sikkim Himalaya*. Hoikusha.
- Hara, H. (1966). *Flora of Eastern Himalaya*. University of Tokyo, Japan.
- Hara, H., Chater, A. O. & Williams, L. H. J. (eds.). (1982). *An Enumeration of the Flowering Plants of Nepal Vol 3*. British Museum (Natural History) & University of Tokyo.
- Hu, C. M., Kelso, S. (1996). *Primulaceae*. In Wu, Z.Y., P.H. Raven (Eds.), *Flora of China*. (Vol. 15) (pp. 99-185). Science Press & Missouri Botanical Garden Press.
- Press, J. R., Shrestha, K. K. & Sutton, D. A. (2000). *Annotated checklist of the flowering plants of Nepal*. The Natural History Museum, UK.
- Rajbhandari, K.R. (2012). *Primulaceae*. In K.R. Rajbhandari, K.R. Bhattarai. & S.R. Baral (Eds.), *Catalogue of Nepalese Flowering Plants-III: Dicotyledons (Compositae to Salicaceae)*. (pp. 52-59), Department of Plant Resources, Nepal.
- Rajbhandari, K.R., Rai, S.K., Bhatta, G.D., Chettri, R. & Khatri, S. (2017). *Flowering Plants of Nepal An Introduction*. Department of Plant Resources, Nepal.
- Richards, A.J. (2003) *Primula* (pp. 386). Timber Press.
- Smith, W.W. & Forrest, G. (1928). *The Sections of the genus Primula*. Notes Royal Bot. Gard. Edinburgh, 16, 1-50.
- Smith, W. W., & Fletcher, H. R. (1977). *The genus Primula: A facsimile reprint of 22 papers published in various journals, reprinted with original pagination as well as new continuous pagination*. Plant Monograph Reprints II.
- <http://www.primulaworld.com> (Retrieved at March 12, 2021)
- <https://data.rbge.org.uk/search/herbarium> (Retrieved at March 12, 2021)
- <https://www.catalogueoflife.org> (Retrieved at March 12, 2021)
- <http://plantdatabase.kath.gov.np> (Retrieved at March 12, 2021)