

Species

Lectotypification of *Adenophora alpina* Nannf. (Campanulaceae)

To Cite:

Tiwari UL. Lectotypification of *Adenophora alpina* Nannf. (Campanulaceae). *Species* 2025; 26: e35s3167
doi: <https://doi.org/10.54905/disssi.v26i78.e35s3167>

Author Affiliation:

Central National Herbarium, Botanical Survey of India, 4-B Garden, Shalimar, Howrah – 711103, West Bengal, India

*Corresponding Author:

Central National Herbarium, Botanical Survey of India, 4-B Garden, Shalimar, Howrah – 711103, West Bengal, India;
Email: tigerumesh11@gmail.com

Peer-Review History

Received: 21 April 2025
Reviewed & Revised: 03/May/2025 to 23/July/2025
Accepted: 29 July 2025
Published: 09 August 2025

Peer-Review Model

External peer-review was done through double-blind method.

Species

pISSN 2319–5746; eISSN 2319–5754



© The Author(s) 2025. Open Access. This article is licensed under a [Creative Commons Attribution License 4.0 \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

Tiwari UL*

ABSTRACT

Adenophora alpina Nannf. was first described in 1930 from alpine meadows collected from Sichuan, China. However, no holotype was designated in the protologue, and the name has remained untypified in the taxonomic literature since then. To clarify the usage of this name, and in according to Article 9.12 of ICN, a lectotype has been designated based on original material collected by K.A.H. Smith in the year 1922. This typification provides a stable reference for the species, which is currently recognized as *Adenophora himalayana* subsp. *alpina* (Nannf.) D.Y. Hong.

Key words: *Adenophora alpina*, Campanulaceae, lectotype, nomenclature, taxonomy

1. INTRODUCTION

The genus *Adenophora* Fisch. (Campanulaceae) comprises approximately 60–100 species, primarily found in temperate and mountainous regions of East Asia. Among them, *A. alpina* Nannf. is a morphologically distinct species originally described from Sichuan Province, China (Nannfeldt, 1930). In 1983, Hong reclassified it as a subspecies of *A. himalayana*. However, the scientific name *Adenophora alpina* has not been assigned a type, resulting in contradictions in herbarium records and floristic investigations. By identifying a lectotype based on original material, this work resolves the problem.

2. METHODOLOGY

In the course of this study, I conducted a detailed examination of the protologues for all three names, carefully analyzing their morphological descriptions and available type information. To ensure that none of these names had been previously typified, I thoroughly searched relevant taxonomic literature and consulted major online databases, including the Biodiversity Heritage Library (BHL), International Plant Names Index (IPNI), JSTOR Global Plants, Plants of the World Online (POWO), Tropicos, and the World Checklist of Vascular Plants (WCVP). I also referred to Taxonomic Literature, vol. 2 (TL-2) to gather information about the authors, collectors, and the herbaria where original material might be housed. To trace and examine original specimens, I searched the collections of the following herbaria, through their digital repositories: E, LD, and GB were examined to locate and assess all original material associated with the name. Each specimen identified as original

material was critically assessed and compared with the relevant protologue. Based on the completeness, preservation quality, and alignment with the original species concept, I designated the most representative specimens as lectotypes, in accordance with Articles 9.3 and 9.17 of the Shenzhen Code (2018).



Fig. 1. Lectotype of *Adenophora alpina* Nannf. — Smith 3508 (E00265805, Royal Botanic Garden Edinburgh) Reproduced with kind permission of the Herbarium (E), Royal Botanic Garden Edinburgh.

3. RESULTS AND DISCUSSION

Taxonomic History

Adenophora alpina was validly published by Nannfeldt (1930) in *Acta Horti Gothoburgensis*, based on collection of K.A.H. Smith (collection number 3508, 8 August 1922, Dongrergo (modern Dongge'er Gully), Sichuan, China, 4000 m). The protologue refers to this gathering but does not designate a holotype. All specimens in this collection are regarded as syntypes in accordance with Art. 9.6 of ICN (ICN; Turland et al., 2025).

Hong (1983), in his revision of Chinese *Adenophora*, treated *A. alpina* as a subspecies of *A. himalayana* but did not designate a lectotype. This omission has been carried forward in subsequent works, including *Flora Reipublicae Popularis Sinicae* and *Flora of China*.

Original Material

A single collection is cited in the protologue—Smith 3508, which was gathered on 8 August 1922 from Dongrergo (now Dongge'er Gully), Sichuan Province, China, at an elevation of 4000 meters. Duplicate specimens from this collection have been preserved in several herbaria. These include the Royal Botanic Garden Edinburgh (E), under accession number E00265805; the Lund University Herbarium (LD), as LD1213861; and the Herbarium of Gothenburg (GB), catalogued as GB-0047101. Each specimen is annotated in Nannfeldt's handwriting and corresponds to the data cited in the protologue.

Lectotypification

As no holotype was designated in the protologue, all existing duplicates of Smith 3508 are treated as syntypes in accordance with ICN Article 9.6 (Wiersema et al., 2023). To stabilize the usage of the name, the specimen E00265805, housed at the Royal Botanic Garden Edinburgh (E), is hereby designated as the lectotype under ICN Article 9.12.

The selected specimen has been well preserved, is morphologically complete, and bears annotations made by Nannfeldt. A digital image of the specimen has been made publicly available, allowing for broad accessibility and independent verification.

Through this lectotypification, the continued use of the name *Adenophora himalayana* subsp. *alpina* (Nannf.) D.Y. Hong. is supported, and nomenclatural clarity is provided for the taxon (Hong, 1983; McNeill et al., 2012, 2023; Turland et al., 2018, 2025).

4. CONCLUSION

Lectotypification of *Adenophora alpina* Nannf. presented here brings taxonomic stability to a historically ambiguous name. The selected specimen at E (E00265805) fulfills the requirements of the ICN and represents the best-preserved and annotated material available.

Lectotype (designated here): CHINA. Sichuan: Dongrergo, alpine meadow, alt. 4000 m, 8 Aug. 1922, K.A.H. Smith 3508 (E [E00265805, image seen]; Fig. 1). **Isolectotypes:** LD [LD1213861], GB [GB-0047101].

Acknowledgment

The author thanks the curators and staff of the herbaria E, LD, and GB for providing access to specimens and digital images. Special thanks are due to the Royal Botanic Garden Edinburgh (E) for facilitating high-resolution imaging of the type material. I also acknowledge the use of literature and database resources provided by JSTOR Global Plants and Plants of the World Online. Constructive suggestions from the anonymous reviewers and editors significantly improved the manuscript.

Funding

The study has not received any external funding.

Conflict of Interest

The author declares that there are no conflicts of interests.

Informed consent

Not applicable.

Ethical approval & declaration

In this article, as per the plant regulations followed in the Central National Herbarium, Botanical Survey of India, 4- B. Garden, Shalimar, Howrah – 711103, West Bengal, India; the authors done the Lectotypification of *Adenophora alpina* Nannf. (Campanulaceae). The ethical guidelines for plants & plant materials are followed in the study for species observation, identification & experimentation.

Data and materials availability

All data associated with this study are present in the paper.

REFERENCES

1. Hong DY. Campanulaceae. In: *Flora Reipublicae Popularis Sinicae*, 1983; 73(2): 1–302. Science Press, Beijing.
2. McNeill J, Barrie FR, Buck WR, Demoulin V, Greuter W, Hawksworth DL, Herendeen PS, Knapp S, Marhold K, Prado J, Prud'homme van Reine WF, Smith GF & Wiersema JH. *International Code of Nomenclature for algae, fungi, and plants* (Melbourne Code). Regnum Veg., Koeltz Scientific Books, Königstein, 2012; 154. Available at: <http://www.iapt-taxon.org/nomen/main.php>
3. Nannfeldt JA. *Adenophora alpina*. Acta Horti Gothob, 1930; 5: 14.
4. Turland NJ, Wiersema JH, Barrie FR, Gandhi KN, Gravendyck J, Greuter W, Hawksworth DL, Herendeen PS, Klopffer RR, Knapp S, Kusber WH, Li DZ, May TW, Monro AM, Prado J, Price MJ, Smith GF, Zamora Señoret JC. *International Code of Nomenclature* (Madrid Code), Regnum Veg, Koeltz Botanical Books, 2025; 160. <https://press.uchicago.edu/ucp/books/book/chicago/I/bo251991590.html>
5. Turland NJ, Wiersema JH, Barrie FR, Greuter W, Hawksworth DL, Herendeen PS, Knapp S, Kusber WH, Li DZ, Marhold K, May TW, McNeill J, Monro AM, Prado J, Price MJ, Smith GF (eds.). *International Code of Nomenclature* (Shenzhen Code). Regnum Veg, Koeltz Botanical Books, 218; 159. <https://doi.org/10.12705/Code.2018>
6. Wiersema JH, Schori M, Zijlstra G, Gandhi KN, McNeill J. (369–373) Proposals regarding Article 20.2. *Taxon* 2023; 72: 1158–1167. <https://doi.org/10.1002/tax.13041>