Lectotypification of *Artemisia nilagirica* (Anthemideae, Asteraceae) from India

Liyaqat ALI*, Anzar Ahmad KHUROO, Aijaz Hassan GANIE1 and Debabrata MAITY2

Centre for Biodiversity & Taxonomy, Department of Botany, University of Kashmir, 190006, Srinagar, Jammu and Kashmir, India
1Department of Botany, University of Kashmir, North Campus, Delina Baramula, 193103, Jammu and Kashmir, India
2Taxonomy & Biosystematics Laboratory, Department of Botany, University of Calcutta, 700073, West Bengal, India

**ABSTRACT:** The current study of *Artemisia nilagirica* (C. B. Clarke) Pamp. aims to present research that demonstrates a rigorous scientific approach to resolving taxonomic challenges by meticulously examining the protologue and herbarium specimens and designating a lectotype for *A. nilagirica*.

**KEYWORDS:** Artemisia, Asteraceae, lectotype, taxonomy

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**INTRODUCTION**

The genus *Artemisia* L. (1753) is one of the largest genera in the Asteraceae family, which comprises 522 (Oberprieler et al., 2009) to 540 species globally (Mabberley, 2008). The genus is distributed primarily in the temperate zones of Northern hemisphere, though few species are found in the Southern hemisphere (Oberprieler et al., 2009; Garcia et al., 2011; Ling et al., 2011). The genus is conventionally classified into five subgenera, i.e. *Artemisia*, *Absinthium* (Miller) Lessing, *Dracunculus* (Besser) Rydberg, *Seriphidium* (Besser ex Lessing) Fourreau, and *Tridentatae* (Rydberg) McArthur, mainly based on capitula and floral characters (Shultz, 2006). So far, 39 species of *Artemisia* have been reported from India (Singh et al., 2019). The genus is mostly distributed in the Himalaya (Kaul and Bakshi, 1984; Ali et al., 2023), but *A. nilagirica* (C. B. Clarke) Pamp. (1876) is distributed down to the southern India (Clarke, 1876; Pampinini, 1926). During the course of our ongoing revisionary studies on the genus *Artemisia* in the Himalayan region, we have identified the need for clarification regarding the typification of *A. nilagirica*, i.e., given that neither Clarke (1876) nor Pampinini (1926) specified a holotype or provided any typification for *A. nilagirica*, there is indeed a need for specification in selecting a reference specimen for this species. This emphasizes the importance of establishing a clear typification to ensure consistency and accuracy in the classification and identification of *A. nilagirica*. Therefore, to ensure correct taxonomic identification, we designated a lectotype for the name *A. nilagirica*.

**MATERIALS AND METHODS**

For typification, we physically examined the plant specimens deposited at the following national herbaria: Botanical Survey of India, Northern Regional Centre (BSD; 000042921, 000042918), The Natural History Museum, England (BM; 011031606, 011031604, 011031603, 01103161, 011031605, 011031607, 011031609, and 011031609), Muséum National d’Histoire Naturelle, Paris (P; 03386390, 03386391, 000042976, 000042978, and 000042940). The herbarium studies were supplemented with perusal of protologue (Clarke, 1876) and other literature sources (Pampinini, 1926).

**RESULTS AND DISCUSSION**

In our current study, we thoroughly assessed Pampinini’s (1926) taxonomic proposal, which encompassed five infraspecific taxa: *A. nilagirica f. genuina* Pamp. (leaves incised, apices of lobes pointed), *A. nilagirica f. toliosa* Pamp. (stern and panicles very leafy, leaves often cut, capitula larger), *A. nilagirica...
nilagirica subf. minor Pamp. (branches sparsely branched, capitula often larger), A. nilagirica f. lobata Pamp. (stem deeply angular-grooved, leaves lobed, apices obtuse or rounded), A. nilagirica var. septentrionalis Pamp. (stem erect, slender, sparsely tomentose or pubescent, leaves slightly lobed, lobes ovate, apices shortly pointed, panicle lax). After thorough analysis of the herbarium specimens deposited at various herbaria and critical evaluation of the protologue (Clarke, 1876), and other literature source (Pampinini, 1926) the diagnostic characters of infraspecific taxa were found to be poor and almost without any taxonomic value, i.e. leaf; incised (f. genuina), often cut (f. toliosa), lobed (f. lobata), slightly lobed (var. septentrionalis) and capitula; larger (f. toliosa) and often larger (f. minor). These characters vary even on the same twig of an individual plant and are grossly subjective, unstable and non-reproducible. Therefore, the current study merges the five infraspecific taxa by Pampinini (1926) under the name A. nilagirica (C. B. Clarke) Pamp. due to invalid publication. Additionally, in our effort to designate a lectotype for A. nilagirica, we scrutinized a herbarium specimen of A. nilagirica collected by C. B. Clarke on March 25, 1870, from Nilgiri Hills, Tamil Nadu, India, housed at BM (BM011031609). The specimen aligned with the protologue of A. nilagirica, and we hereby designate it as the lectotype (Fig. 1) for A. nilagirica, adhering to the guidelines outlined in Articles 8.1, 9.3, and recommendations 9A.1, 9A.2, and 9A.3 of the Shenzhen Code (Turland et al., 2018).

**TAXONOMIC TREATMENT**


Artemisia vulgaris var. nilagirica C. B. Clarke, Compos. Ind. 162, 1876.—TYPE: INDIA, Nilgiri Hills, Tamil Nadu, 25 Mar 1870, C. B. Clarke 11246, barcode No. BM011031607 (Lectotype, designated here: BM image!) (Fig. 1).

**Notes:** C. B. Clarke (1876), in his treatment did not designate holotype for this taxon. Though it is not clear how many specimens were consulted by C. B. Clarke (1876), however we traced a single specimen i.e., BM011031609 collected by C.B. Clarke himself from Nilgiri Hills of Tamil Nadu, India. The specimen is appended with the original notes of both C. B. Clarke and R. Pampinini. Though, the specimen was earlier identified as A. grata Wall. ex Besser (1832), but it was a typical case of misidentification with A. grata (= A. indica var. indica), which was predating the publication of A. nilagirica. Furthermore, A. nilagirica can be readily distinguished by its leaves, which are simple and slightly cut, occasionally pinnatifid, (vs. leaves pinnatifid, lobules oblong, apices acute in A. grata = A. indica var. indica).

The specimen perfectly matches with the protologue (C. B. Clarke, 1876). Therefore, in contrary to the earlier identifications, based on the results of the present study, the specimen (i.e., BM011031609) shall be identified as A. nilagirica (C. B. Clarke) Pamp. Also the specimen is the earliest and better preserved, thus this specimen is designated here as lectotype of A. nilagirica.

**ORCID:** Liyaqat ALI https://orcid.org/0000-0003-0523-1521; Anzar Ahmad KHUROO https://orcid.org/0000-0002-0251-2793; Aijaz Hassan GANIE https://orcid.org/0000-0002-8890-8050;

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CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

LITERATURE CITED


