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Research Communication

Notes on the typification of three names in Indian *Ranunculus* L. (Ranunculaceae)

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Abstract

The erroneous designation of holotype and lectotype of three names in *Ranunculus* namely *R. reniformis* Wall. ex Wight & Arn., *R. subpinnatus* Wight & Arn. and *R. wallichianus* Wight & Arn. in one of the recent publications is discussed here. This paper also emphasizes the precise application of the phrase typification of the name and also rectifies here the erroneous designation of holotype and lectotype of names in a recent publication.

Keywords: *Ranunculus*; holotype; lectotype; typification

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Introduction

The genus *Ranunculus* L. comprises of c. 600 species, is mainly distributed in temperate regions of the world (1). Hooker and Thomson (2) documented 25 species of *Ranunculus* under three sections namely *Batrachium*, *Hecatonia* and *Echinella* from India, Afghanistan, Baluchistan, Bhutan, Nepal, Sri Lanka and Tibet. Subsequently, Hooker and Thomson (3) included 21 species and 4 varieties under four sections, *Batrachium*, *Ceratocephalus*, *Hecatonia* and *Echinella* from Indian subcontinent. Rau (4) included 34 taxa from India. Recently, Srivastava (5) revised the genus and recognized 41 species and four varieties from India.

Materials and Methods

The present investigation has been undertaken to rectify the erroneous designation of holotype and lectotype in one of the recent publications based on the careful study of literature and observation of relevant herbarium specimens at CAL and MH in India, and the available online images of specimens housed at herbaria, E, G, K, NY and P.

Results and Discussion

A name cannot be considered as having a holotype before 1990 unless one particular herbarium was indicated in the protologue or only one specimen or

illustration of the gathering was deposited there under Art. 9.1 (6, 7). Furthermore, if the specimens housed in more than one institution, these must all be treated as syntypes under Art. 40, Note 1 (6, 7). While digitizing type specimens at Central National Herbarium, Botanical Survey of India, Howrah (CAL), authors have identified problems in typification of three names in the genus *Ranunculus* (*R. reniformis* Wall. ex Wight & Arn., *R. subpinnatus* Wight & Arn. and *R. wallichianus* Wight & Arn.) designated by Srivastava (5). The problems in typification are discussed and the earlier erroneous usage of the phrase ‘Holotype designated here’ are rectified.

Typification

Ranunculus reniformis Wall. ex Wight & Arn., Prodr. Fl. Ind. Orient. 1: 3. 1834.

Type: INDIA. Tamil Nadu, Nilgiri district (‘Neelgherries’), Wight Cat. n. 14, Lectotype (P00193281, image!), designated by Srivastava (5) as ‘Holotype’; isolectotypes E00174053, E00174054, G00085168, G00085135, K000357826, MH00001733, images!].



Fig. 1. Lectotype of *Ranunculus reniformis* Wall. ex Wight & Arn. (P00193281) © Muséum national d’Histoire naturelle, Paris (<http://coldb.mnhn.fr/catalognumber/mnhn/p/p00193281>)

Residual syntype: INDIA. Tamil Nadu, Nilgiris district, *E. Noton* Numer. List n. 4709 (K001039738, image!). Fig. 1.

Note: *Ranunculus reniformis* was described based on two collections of Numer. List n. 4709 and Wight Cat. n. 14 from ‘Neelgherries’ (now Nilgiris, Tamil Nadu). Seven specimens of Wight Cat. n. 14 and one specimen of Numer. List n. 4709 are traced out at P, E, G, K and MH. Srivastava (5) stated that ‘*R. reniformis* is listed in Wallich Catalogue no. 4709, but Wallich had not collected this species’. Wight & Arnott (8) described this species based on the collection made by Wight (Cat. n. 14) from Nilgherries’. In fact, Wight & Arnott (8) clearly cited collection as ‘Wall! List n. 4709’ in the protologue. Thus, the species was described based on two syntypes. Hence, the phrase “Holotype designated” by Srivastava (5) should be treated as a correctable error to “lectotype designated” under Art. 9.10 (7). Srivastava (5) cited the specimen no. 1 on the left side as holotype while specimen no. 2 on the right side as isotype housed at P. In fact, these two specimens are to be considered as of a single gathering.

Ranunculus subpinnatus Wight & Arn., Prodr. Fl. Ind. Orient. 1: 4. 1834.

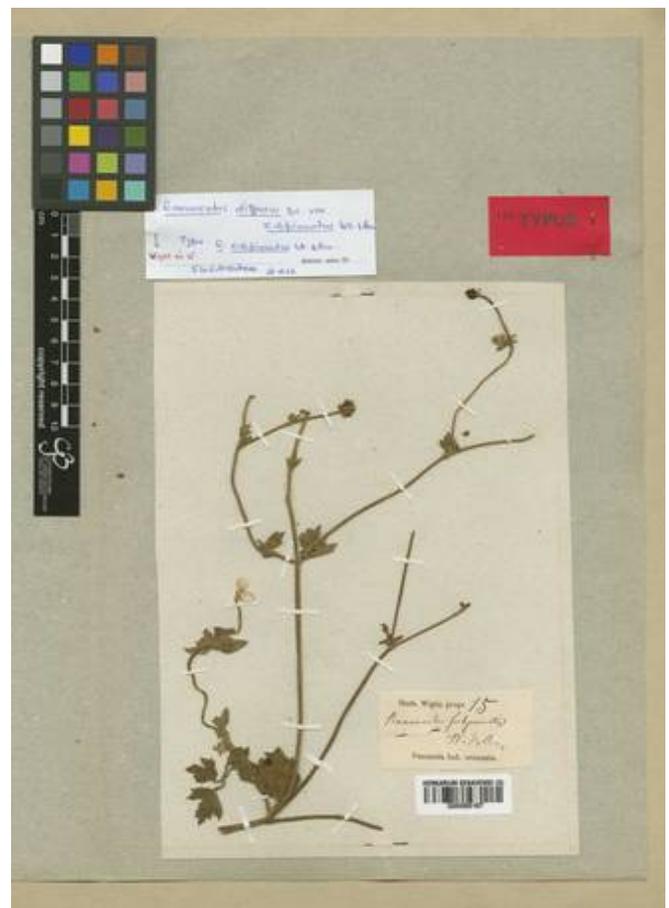


Fig. 2. Lectotype of *Ranunculus subpinnatus* Wight & Arn. (G00085167) © Conservatoire et Jardin botaniques de la Ville de Genève.

Type: INDIA. Tamil Nadu, Nilgiri district (‘Neelgherries’), Wight Cat. n. 15, Lectotype

(G00085167, image!) designated by Srivastava (5) as 'Holotype'; isolectotypes E00174050, E00174051, E00174052, K000357843, K000692705, NY00353544, MH00001732, images!]. Fig. 2.

Note: *Ranunculus subpinnatus* was described based on a single gathering of Wight Cat. n. 15 from 'Neelgherries' (now Nilgiris, Tamil Nadu). We traced out eight duplicates at G, E, K, NY and MH which although representing a single gathering, should be considered as syntypes under Art. 40, Note 1 (6, 7). Srivastava annotated 'Lecto-Type' on Kew sheet (K000692705) but later in his published revision on the genus, Srivastava (5) designated a specimen at G bearing the barcode G00085167 as the holotype of the name. The error is correctable to lectotype under Art. 9.10 (7). Further, we traced out one more collection at NY, which was not cited by Srivastava (5).

Ranunculus wallichianus Wight & Arn., Prodr. Fl. Ind. Orient. 1: 4. 1834.

Type: INDIA. Tamil Nadu, Nilgiri district ('Neelgherries'), Wight Cat. n. 16, Lectotype (MH00001731, image!) designated by Srivastava (5) as 'Holotype'; isolectotype E00174055 image!). Fig. 3.



Fig. 3. Lectotype of *Ranunculus wallichianus* Wight & Arn. (MH00001731) © Botanical Survey of India.

Note: *Ranunculus wallichianus* was described based on a collection of Wight Cat. n. 16 from 'Neelgherries' (now Nilgiris, Tamil Nadu). We traced out two duplicates of the collection at MH and E. Srivastava (5) cited the type as "India: Specimen no.2, Tamil Nadu, Nilgherries, Wight 16 'Holotype designated here': MH!; Isotype: specimens nos. 1, 3 & 4 MH!". After examining the herbarium sheet at MH, we found that all the four specimens cited by Srivastava (5) are mounted on single sheet, representing a single gathering. Thus, the specimens in MH and E should be considered as syntypes under Art. 40 Note 1 (6, 7) and the holotype designated by Srivastava (5) should be considered as an error correctable to lectotype under Art. 9.10 (7).

Competing Interests

The authors confirmed that they have no competing interest.

Authors' contributions

All the authors contributed equally to the work presented in this paper.

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