



Comments on the typification of two names in *Arundinaria* (Poaceae)

Anand Kumar

Central National Herbarium, Botanical Survey of India, P.O. Botanic Garden, Howrah – 711 103, West Bengal, India.

Abstract: The paper deals with the second-step lectotypification of two names, *Arundinaria maling* Gamble and *A. pantlingii* Gamble.

Key words: *Arundinaria maling*; *Arundinaria pantlingii*; lectotypification; Poaceae.

Introduction

The genus *Arundinaria* Michx. comprises three species restricted to North America (Triplett & Clark, 2010). Munro (1866) treated 29 species in his monograph and Gamble (1896) treated 28 species from British India. Chao and Renvoize (1989) segregated the genus *Arundinaria* into 8 genera and 42 species in their revision and retained only 2 species of *Arundinaria* namely, *A. baviensis* Balansa and *A. racemosa* Munro which are now placed in *Chimonocalamus baviensis* (Balansa) N.H. Xia, V.L. Le & Y.F. Deng and *Sarocalamus racemosus* (Munro) Stapleton, respectively. Subsequently, Shukla (1996) reported 12 species from India which is presently placed in different genera: *Cephalostachyum* Munro, *Chimonobambusa* Makino, *Drepanostachyum* Keng f., *Himalayacalamus* Keng f., *Kuruna* Attigala, Kaththr. & L.G. Clark, *Melocanna* Trin., *Pleioblastus* Nakai, *Sarocalamus* Stapleton and *Yushania* Keng f. Kandwal and Singh (2016) reported *Arundinaria faberi* Rendle as a new record for India which was also transferred to *Sarocalamus faberi* (Rendle) Stapleton. Therefore, at present the genus *Arundinaria* sensu stricto is absent in India.

While checking the type status of *Arundinaria* names during digitization of type specimens at CAL, I came across a publication of Chao and

Renvoize (1989) and identified the issues in the lectotypification of the two names, *A. maling* Gamble and *A. pantlingii* Gamble which are discussed here and resolved for precise application of the names.

Typification of names

Arundinaria maling Gamble, Bull. Misc. Inform. Kew 1912: 139. 1912.

Type (first-step lectotype, designated by Chao and Renvoize 1989: 356): India, West Bengal, Darjeeling district, Tonglo Mt., 9000 ft., 23 May 1904, *B.B. Osmaston* s.n. (K, five specimens); **second-step, designated here:** India, West Bengal, Darjeeling district, Tonglo Mt., 9000 ft., 23 May 1904 (K000872577 digital image!); isolectotypes (CAL0000002512!, K000246101, K000246102, K000246104, K000246105 digital images!) (**Figure 1**)

Note: *Arundinaria maling* Gamble was described based on the collections of Osmaston, Hooker and Thomson, Kurz, G.A. Gammie and J.S. Gamble from “Sikkim”. Chao and Renvoize (1989) lectotypified the name *A. maling* by designating *Osmaston* s.n. (K). There are five herbarium specimens of *Osmaston* s.n. at K and all specimens bear Chao and Renvoize’s annotation “Osmaston lectotype”. Therefore, it cannot be established that which of the

*Corresponding Author:

Anand Kumar

E-mail: anand_kum234@rediffmail.com

specimen at K was designated as lectotype and it must be considered as first-step lectotypification and warrants second-step lectotypification by narrowing to single specimen under Art. 9.17 of the Shenzhen Code (Turland *et al.*, 2018). So, I designate here *B.B. Osmaston* s.n. (K000872577) as the second-step lectotype because it bears drawing of flowers with notes in Gamble's handwriting. Further, I also traced one specimen at CAL.



Figure 1. Second-step lectotype of *Arundinaria maling* Gamble (K000872577). ©The Board of Trustees of the Royal Botanic Gardens, Kew. <http://specimens.kew.org/herbarium/K000872577>

Arundinaria pantlingii Gamble, Ann. Roy. Bot. Gard. (Calcutta) 7: 129, t. 118. 1896.

Lectotype (first-step lectotype, designated by Chao and Renvoize 1989: 359): Sikkim-Bhutan frontier, Rechi-La', 11000 ft., September 1895, R. Pantling s.n. (K, five specimens); second-step, designated here: Sikkim-Bhutan frontier,

Rechi-La', 11000 ft., September 1895, R. Pantling s.n. (K001067619 digital image!); isolectotypes (CAL0000002539!, CAL0000002540!, CAL0000002541!, CAL0000002542!, CAL0000002543!, K000246107, K000246108, K001067620, K001067621 digital images!). (**Figure 2**)



Figure 2. Second-step lectotype of *Arundinaria pantlingii* Gamble (K001067619). © The Board of Trustees of the Royal Botanic Gardens, Kew. <http://specimens.kew.org/herbarium/K001067619>

Original material: Sikkim-Bhutan frontier, Rechi-La, 9000 ft., September 1895, R. Pantling s.n. (K000246109 digital image!).

Note: *Arundinaria pantlingii* Gamble was described based on single gathering of R. Pantling from Rechi La of British Bhutan at an

altitude of 11000 ft. I found five specimens each at CAL and K which should be considered as syntypes under the Art. 9.6, 40 Note 1 of the Code (Turland *et al.*, 2018). Chao and Renvoize (1889) cited Pantling collection at K as holotype which is an error to be corrected to lectotype under Art. 9.10 of the Code. There are five specimens at K and all specimens bear Chao's annotation label. Therefore, it cannot be established that which of the specimen at K was designated as lectotype by Chao and Renvoize and it must be considered as first-step lectotypification. It warrants second-step lectotypification by narrowing to single specimen under Art. 9.17 of the Code and I designate here the specimen K001067619 as second-step lectotype because the specimen bears leaf-branch, flowering branch, culm-sheath and annotation "*Arundinaria Pantlingi nov. sp.*".

Acknowledgements


The author is thankful to Dr. A. A. Mao, Director, Botanical Survey of India, Kolkata and Dr. V.P. Prasad, Head of Office, Central National Herbarium, Howrah for the facilities. I am also grateful to the Directors, Royal Botanic Gardens, Kew for putting the images online.

References

1. Chao, C.S. and S.A. Renvoize. "A revision of the species described under *Arundinaria* (Gramineae) in South East Asia and Africa." *Kew Bulletin* 44 (1989): 349-367. Print.
2. Gamble, J.S. "The Bambuseae of British India." *Annals of the Royal Botanic Garden, Calcutta.* 7 (1896): 1-133. Print.
3. Kandwal, M.K. and P. Singh. "*Arundinaria faberi* (Poaceae): a new record of bamboo from India." *Nelumbo* 58 (2016): 100-103. Print.
4. McNeill, J. "Holotype specimens and type citations: General issues." *Taxon* 63.5 (2014): 1112-1113. Print. <https://doi.org/10.12705/635.7>
5. Munro, W. "A monograph of the Bambusoideae, including descriptions of all the species." *Transactions of the Linnean Society of London* 33 (1866): 1-157. Print.
6. Shukla, U. "*Grasses of North-Eastern India.*" Scientific Publishers, Jodhpur (1996) 404 pp. Print.
7. Triplett, J.K. and L.G. Clark. "Phylogeny of the temperate woody bamboos (Poaceae: Bambusoideae) with an emphasis on *Arundinaria* and allies." *Systematic Botany* 35 (2010): 102-120. Print.
8. Turland, N.J., J.H. Wiersema, F.R. Barrie, W. Greuter, D.L. Hawksworth, P.S. Herendeen, S. Knapp, W.-H. Kusber, D.-Z. Li, K. Marhold, T.W. May, J. McNeill, A.M. Monro, J. Prado, M.J. Price and G.F. Smith "*International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017.*" *Regnum Vegetabile* 159. Koeltz Botanical Books, Glashütten, (2018) 254 pp. Print. <https://doi.org/10.12705/Code.2018>

Cite this article as:

Anand Kumar, Comments on the typification of two names in *Arundinaria* (Poaceae). *Annals of Plant Sciences.* 9.2 (2020) pp. 3727-3730.

 <http://dx.doi.org/10.21746/aps.2020.9.2.2>

Subject Editor: Dr. Sateesh Suthari, University of Hyderabad, Telangana, India.

Source of support: Nil; **Conflict of interest:** Nil.