Lectotypification of Arisaema consanguineum Schott (Araceae)

Authors: Manudev, Kambiyelummmal Madhavan, and Nampy, Santhosh

Source: Candollea, 71(1) : 23-26

Published By: The Conservatory and Botanical Garden of the City of Geneva (CJBG)

URL: https://doi.org/10.15553/c2016v711a5

Lectotypification of Arisaema consanguineum Schott (Araceae)

Kambiyelummmal Madhavan Manudev & Santhosh Nampy

Abstract

MANUDEV, K.M. & S. NAMPY (2016). Lectotypification of Arisaema consanguineum Schott (Araceae). *Candollea* 71 : 23-26. In English, English abstract. DOI : http ://dx.doi.org/10.15553/c2016v711a5

The genus *Arisaema* Mart. is the largest genus of *Araceae* in India with 48 species and 13 infraspecific taxa. While updating the nomenclature of the genus in India, the authors found ambiguity in the typification of *Arisaema consanguineum* Schott. The designation of authentic type material by earlier authors was not satisfying. Therefore, a lectotype is designated here on a Joseph Dalton Hooker collection from Sikkim in India preserved at CAL.

Keywords

ARACEAE – *Arisaema* – Sikkim – India – Hooker – Typification

Addresses of the authors:

KMM : Department of Botany, St. Joseph's College, Devagiri, Kozhikode District, Kerala – 673 008, India. E-mail : **manudevkmadhavan@gmail.com**

SN : Department of Botany, University of Calicut, Thenhipalam P.O., Malappuram Dist., Kerala – 673 635, India.

Submitted on April 13, 2015. Accepted on December 16, 2015. First published online on March 14, 2016.

ISSN: 0373-2967 – Online ISSN: 2235-3658 – *Candollea* 71(1): 23-26 (2016)

The genus *Arisaema* Mart. *(Araceae)* with about 210 taxa in the world (Govaerts et al., 2015), is principally Asiatic in distribution. It is represented by 48 species and 13 infraspecific taxa in India (Manudev & Nampy, 2014). As part of a taxonomic revision of the genus in India, the authors made extensive field exploration for collecting living specimens, surveyed all the relevant literature, studied specimens housed at various Indian herbaria and virtual herbaria abroad including authentic type specimens. While updating the nomenclature of *Arisaema* species in India, we found ambiguity in the typification of *A. consanguineum* Schott.

Arisaema consanguineum, one of the widespread species extending from the Himalayas to Indo-China, Thailand, Hong Kong and Taiwan (Gusman & Gusman, 2006), was originally described by Schott (1859 : 27). When describing this species, Schott did not cite a type specimen but cited only a locality as "Sikkim". Schott (1860 : 52) subsequently in his "Prodromus Systematis Aroidearum" mentioned "Sikkim, Hook. f. vidi siccam et in icone" indicating that his description was based on a collection of Joseph Dalton Hooker from Sikkim. Hooker (1893) cited several others of its own collections (Temperate Himalaya, alt. 5-7,000 ft, from Garwahl to Sikkim; Khasia Hills, alt. 4-6,000 ft. Munnipore, Watt) under that name but did not specifically cite any type. Chatterjee (1955) cited the type as "Assam, Khasia, Hook. f." in his account of Indian and Burmese species of *Arisaema.* Mayo (1984 : 59-61) cited a painting by J.D. Hooker (probably the same icon cited by Schott in 1860) and the specimen *J.D. Hooker & T. Thomson 1069* from Khasia hills as syntypes. Subsequently, Gusman & Gusman (2006) cited a collection of Wallich from Nepal *(Wallich 8917)* as the holotype. None of these materials were from the type locality Sikkim as mentioned by Schott in his protologue and hence cannot be referred as the original material examined by him.

There is no specimen of *A. consanguineum* collected by J.D. Hooker from Sikkim in B, BM, E, G, K, L, P, PH, and WU, but two collections were found at CAL determined as types by A. Engler (*J.D. Hooker s.n.* [CAL0000001307, CAL0000001308]). Both of these sheets have a leaf and spathe separately mounted and have been collected at 1,500-1,800 m ["5,000-6,000 feet"] and 1,800-3,000 m ["6,000-10,000 feet"] respectively. Schott (1859) described *A. consanguineum* as "Segmenta (peltatisecta) subnovem, praelonge-angusteque, lanceolata, basi cuneata, margine interrima, apice longe subulate-acuminata … limbo recurvo … lamina oblonga, viridis … apice subrepetino in acumen subulatum praelongum…". The leaves mounted on both the sheets have radiate, sessile, oblong-linear leaflets with an acuminate-subulate tip that matches exactly with the protologue. However the spathe on *J.D. Hooker s.n.* [CAL0000001308] housed at CAL has a striped, narrow spathe limb which is narrower than the spathe tube which does not corroborate with the original description of *A. consanguineum*. This Hooker collection could be of either *A. erubescens* (Wall.) Schott or *A. concinnum* Schott.

Engler (1879 : 558) in his account of the genus reduced *A. consanguineum* as a variety under *A. erubescens* and cited as type : "Himalaya, Sikkim, alt. 2,000-3,300 m. (Hook. f. in H. Ind. Or.)". Engler's choice could be seen as an implicit lectotypification but from the altitude it is assumed that he selected CAL0000001308 that has been collected between 1800-3000 m ["6,000-10,000 feet"]. Since this specimen does not corroborate with the Schott's protologue (see above), Engler's choice is here therefore rejected and we designate another sheet of *J.D. Hooker s.n.* [CAL0000001307] as the lectotype, a collection that clearly match the protologue (Fig. 1).

Arisaema consanguineum Schott in Bonplandia (Hanover) 7 : 27. 1859.

Lectotypus (designated here) : India. Sikkim : Cherrigtum, 1500-1800 m, 21.V.1849, fl., *J.D. Hooker s.n.* (CAL [CAL0000001307]!) (Fig. 1).

Notes. – Arisaema consanguineum is morphologically close to *A. erubescens* but can be easily distinguished by its green spathe limb extending into a long tail (vs. a striped pinkish spathe limb devoid of long drooping tail in *A. erubescens*) and fruiting peduncle nodding upon maturity (vs. erect fruiting peduncle).

Acknowledgements

The authors are thankful to the Head, Department of Botany, University of Calicut and The Principal, St. Joseph's College, Kozhikode for facilities; the Director, Central National Herbarium, Botanical Survey of India for permission to publish the image of the type; Martin Callmander and an anonymous reviewer for their comments that improved earlier versions of this manuscript. SN is thankful to Department of Science and Technology, New Delhi for financial assistance (F.No.SERB/SR/SO/PS/09/2012) and MKM is thankful to University Grants Commission for Senior Research Fellowship.

Fig. 1. – Lectotype of *Arisaema consanguineum* Schott.
[*J.D. Hooker s.n.*, CAL] [© Botanical Survey of India, Central National Herbarium. Reproduced with permission]

References

Chatterjee, D. (1955). Indian and Burmese species of Arisaema. *Bull. Bot. Soc. Bengal* 8 : 118-139.

Engler, A. (1879). Aracaeae. *In :* Candolle, A. de & C. de Candolle, *Monographiae Phanerogamarum*. Vol. 2. Paris.

Govaerts, R., J. Bogner, J. Boos, P. Boyce, B. Cosgriff, T. Croat, E. Goncalaves, M.H. Grayum, A. Hay, W. Hetterscheid, S. Ittenbach, E. Landolt, S. J. Mayo, J. Murata, V.D. Nguyen, C.M. Sakuragui, Y. Singh, S. Thompson & G. Zhu (2015). *World checklist of Araceae.* Facilitated by the Royal Botanic Gardens, Kew [http ://apps.kew.org/wcsp].

Gusman, G. & L. Gusman (2006). *The genus Arisaema – A monograph for botanists and nature lovers.* 2nd ed. A.R.G. Gantner Verlag.

Hooker, J.D. (1893). Araceae. *Fl. Brit. India* 6 : 490-556.

Manudev, K.M. & S. Nampy (2014). Arisaema madhuanum, a new species of Araceae from India. *Edinburgh J. Bot.* 71 : 269-273

Mayo, S.J. (1984). Some choice cultivated Arisaemas. *Bot. Mag.* 1 : 51-67.

Schott, H.W. (1859). Aroideen-Skizzen. *Bonplandia (Hanover)* 7 : 26-31.

Schott, H.W. (1860). *Prodromus systematis Aroidearum*. Vienna.