



Typification of names in the genus *Anaphyllum* (Araceae)

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Abstract

The little-known and small genus *Anaphyllum* (Araceae), represented by only two species endemic to India, namely *A. beddomei* and *A. wightii*, has remained without correctly designated types. Their syntypes are recognized and the names are here typified. The correct bibliographic reference to the protologue of *A. wightii* is provided for the first time.

Key words: Endemic, Lasioideae, lectotypes, syntypes, types

Introduction

The genus *Anaphyllum* Schott (1857: 126) (Araceae) is endemic to India with only two species confined to South India on the Western Ghats in Tamil Nadu, Kerala and Karnataka states. *Anaphyllum* was published by Schott with the only species *Anaphyllum wightii* Schott (1857: 127) based on specimens collected by Wight in 1835 from Courtallum in the present Tamil Nadu state, India. Engler (1911) added *Anaphyllum beddomei* Engler (1911: 26) to this then-monotypic genus based on specimens collected by Major R.H. Beddome in 1873 from Tinnevely Hills of former Malabar and Travancore Province, now in Tamil Nadu state, India.

During revisionary work of the genus and also while updating the checklist of Araceae as part of a project on preparation of a ‘Checklist of plants of India’, it was noticed that both the species, *Anaphyllum beddomei* and *A. wightii* appear to be as yet untypified and are investigated here.

Typification

Anaphyllum beddomei Engler, Pflanzenr. Heft 48 (IV. 23C): 26. 1911.

Lectotype (designated here):—INDIA. Tinnevely Hills, Prov. Malabar & Travancore, no date, *R.H. Beddome* 7869 or 7873 (BM!, BM000958557). Fig. 1

Other specimens studied:—INDIA. Tinnevely Hills, 1873, *R.H. Beddome s.n.* (K!, K000499256); Anamallays, 4000 ft. elev., 1873, *R.H. Beddome s.n.* (CAL!, CAL0000027004); Prov. Malabar & Travancore, *R.H. Beddome* 217 (BM!, BM000957455).

In the protologue of *Anaphyllum beddomei* (Pflanzenr. Heft 48 (IV. 23C): 26–28. 1911), Engler (1911) cited specimens as “*Beddome n. 7869-7873—Herb. Hort. Calcutta, Herb. Brit. Mus.*”, which can be assumed to refer to a total of five specimens numbered consecutively from 7869 to 7873. In the absence of indicating a single specimen as the type, all of the specimens cited in the protologue are to be treated as syntypes (Art. 9.5 of ICN, McNeill *et al.* 2012).

There are two specimens in the herbarium of The Natural History Museum, London (BM), both are probably syntypes, and one among them (BM000958557) bears a label reading “Prov. Malabar & Travancore: Tinnevely Hills.



FIGURE 1. Lectotype of *Anaphyllum beddomei* (BM000958557). (Image reproduced with permission from Natural History Museum, London).

Coll. R.H. Beddome, No. 7869 or 7873” seems to have been remounted. It is probable that during remounting the collection number might have been mixed up or changed, and might be the reason for the entry of two numbers on

the label as “*Beddome 7869 or 7873*” by whoever entered label data on the specimen. The other remounted specimen at BM (BM000957455) was labelled as “Prov. Malabar & Travancore, Coll. Major R.H. Beddome No. 217” with an annotation as “[damaged Engler det. label. See capsule]”. The “capsule”—a paper envelope—contained part of a burnt determination slip by Engler bearing the caption “Bearbeitet für das Pflanzenreich” indicating that this specimen was seen and studied by Engler and would likely represent one of the syntypes. The damage of the specimen by burning could have caused loss of the original collection number, and whoever remounted it might have assigned a different number to it. Otherwise this specimen also would be a syntype.

The single Beddome specimen in the herbarium of the Royal Botanic Gardens, Kew (K) (K000499256) is labelled “Tinnevely Hills, Coll. Major R.H. Beddome, Date. 1873” with a tag bearing the number ‘694’. This number tag was not attached to the specimen and is likely a later addition by error. As this was another of Beddome’s specimens collected in 1873, and seen, studied and determined by Engler, it can be considered as one of the syntypes. Based on thorough scrutiny of all of the syntypes, one of the two specimens at BM (BM000958557) is selected and designated here as the lectotype of *Anaphyllum beddomei*.

The first author examined Beddome’s specimens of *A. beddomei* at BM, the Central National Herbarium of the Botanical Survey of India, Howrah (CAL), and K. The only specimen at CAL (CAL0000027004) collected from “Anamallays, 4000 ft. elev.” is without collection number. The specimen represents a juvenile plant and lacks the characteristic adult leaf and inflorescence, and was determined by Engler as *Anaphyllum wightii* and cited under this name (Engler, 1911). There is also a 1929 annotation by Fischer who correctly identified it as *A. beddomei*.

Anaphyllum wightii Schott, *Bonplandia* 5 (8): 127. (1857).

Lectotype (designated here):—INDIA. Peninsula Indiae Orientalis, Courtallem, September 1835, *Wight 2776* (S! S-G-8276). Fig. 2

Other specimens studied:—INDIA. Courtallem, August 1835, *Wight 2776* (CAL!, CAL0000001591); Bolimsuetty, November 1852, *Wight 2776* (K!, K000499254); “8968 Aroidea, A. Hb. Madr., B. Hb. Wight” (K!, K000499255); Courtallum, *Wight 2776* (GH!, GH00062327); Peninsula Indiae Orientalis. Courtallem, September 1835, *Wight 2776* (M!, M-0198865); Peninsula Ind. Orient., No. 2776 (M!, M-0198866); Courtallum, September 1835, Peninsula Indiae Orientalis. No. 2776, Herb. Wight (P!, P00748767); Peninsula Indiae Orientalis, Courtallem, August 1835, *Wight 2776* (C! C10006324).

Note:—Name of collection locality of *A. wightii* is seen variously spelt as “Courtallum” and “Courtallem”. Engler (1911: 28) cited it as “Courtallam”.

The bibliographic citation of the protologue in various literatures is erroneous. Schott (1857) published *Anaphyllum wightii* in *Bonplandia* [5(8): 126(–127)]. Treating the genus in *Genera Aroidearum*, Schott (1858) cited “*Bonplandia* 1857, p.126” referring to the first publication of the genus. The species *A. wightii* appeared on page 127 of *Bonplandia*. Hooker (1893) in *Flora of British India* cited “Schott Gen. Aroid. t. 83” as the place of publication of the species. Engler (1911) in his treatment of the species cited “Schott *l.c.*”, a reference to “Gen. Aroid. (1858) t. 83”. Hence in neither of the latter two publications are the bibliographic citations of the first publication of the species correct. Govaerts *et al.* (2015) cited “Schott, Gen. Aroid.: 83 (1858)”. In IPNI (2015) also it was entered as “Schott, *Gen. Aroid.* t. 83. 1858” instead of the correct citation as “*Bonplandia* 1857, p. 126”. D.H. Nicolson entered the publication details as “*Anaphyllum wightii* Schott, *Bonplandia* 5: 126. 1857” on the determination slip that he affixed to the specimen at the herbarium of the Swedish Museum of Natural History, Stockholm (S) which is designated here as the lectotype, but the page number pertains to the page where the generic name first appeared.

Schott (1857) published *Anaphyllum wightii* based on Wight’s collections made in 1835 available in Wight’s and Hooker’s herbaria. The collection locality was cited as “Indiae Or. Provincia Carnatic, prope Courtallum” and Wight’s specimens as “Wight” without any collection number. No additional details were provided in the protologue. In the absence of a designated type, all of Wight’s specimens from Courtallum are to be treated as syntypes (Art. 40. Note 1 of ICN, McNeill *et al.* 2012; McNeill 2014).

This species could be considered to already have been lectotypified by Hay (1992: 195), by the application of Art. 9.9 of ICN (McNeill *et al.* 2012). He specified the type as “Type: India. Karnataka: Courtallum, *Wight 2776* (holotype, K)”. Because there are two sheets at K that potentially trace to this gathering, one from Bentham’s and one from Hooker’s herbaria, this might be taken as a first-step lectotypification under Art. 9.17 (McNeill *et al.* 2012). The specimen from Hooker’s herbarium (K000499254) has a different locality and date (“Bolimsuetty, November 1852”) on one label, but “*Wight 2776*” on another. If the first label is correct this cannot be part of the same gathering as that cited by Schott. The “Bolimsuetty, November 1852” label could have been an erroneous entry during remounting, but the herbarium stamp from 1867, being partially on top of it, suggests it has been on the sheet at least that long. There is



FIGURE 2. Lectotype of *Anaphyllum wightii* (S-G-8276). (Image reproduced with permission from Swedish Museum of Natural History, Stockholm).

no basis for it being considered original material and hence it cannot be treated as a syntype. It can be established that the other specimen (K000499255), from Bentham's herbarium, was seen by Schott and would be original material, but it does not contain the locality or collector information cited by Schott in the protologue.

Hay's apparent designation of a type is faulty for the following reasons: 1) a single specimen was not designated as the type, since K has more than one of *Wight 2776* specimen, so a more precise indication of a particular specimen as type was required (Art. 9.17 of ICN, McNeill *et al.* 2012), 2) none of the specimens at K match the collection details Hay provided, 3) all the specimens cited, seen, or studied by the author of the species would be syntypes, so one among them should have been designated as lectotype and not as holotype, 4) "Courtaillum" in the present state of Tamil Nadu, India is the type locality of the species, but Hay cited "Karnataka" as the probable state of the type locality, perhaps by mistaking the name for "Carnatic" specified by Schott (1857: 127). Carnatic refers to a geographical region in South India lying between the Eastern Ghats and the Coromandel Coast; and now it covers most parts of the modern state of Tamil Nadu. Given these discrepancies, we therefore reject Hay's designation.

The ideal lectotype of the species would be one of the specimens seen and studied by Schott at the herbarium of the Natural History Museum, Vienna (W) where he worked on aroids and prepared pencil drawings apart from getting watercolor drawings by eminent plant painters of that time under his direct supervision. Riedl (1965) and Mayo *et al.* (1997) reported that Schott's aroid specimens and about 80 plates including those of the subfamily Lasioideae Engler (1876: 144) which includes *Anaphyllum* were destroyed towards the end of World War II in 1945. The first author studied illustrations of several aroids, including that of *Anaphyllum beddomei* (No. 238) and *A. wightii* (Nos. 236, 237), at W. The images of Schott's entire available aroid drawings have been microfilmed and published by IDC (1984) with an alphabetic index provided by Nicolson (1984). Wight's specimens in Hooker's herbarium have been distributed to various herbaria and the first author has examined the specimens available at CAL, herbaria of the Harvard University, Massachusetts (GH), K and herbarium of the Botanische Staatssammlung München, Munich (M). A recent search on JSTOR (2015) revealed availability of specimens of the species also at the herbarium of the Botanical Garden, University of Copenhagen, Denmark (C), herbarium of the National Museum of Natural History, Paris (P) and S, and high resolution images of the specimens were obtained from there. Detailed examination and close scrutiny of the specimens and images showed that a specimen (S-G-8276) at S presumably examined by Schott, matched well with the description provided in the protologue, and hence is designated here as the lectotype of the species.

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