

Notes on typification of two names in *Bauhinia* (Leguminosae: Cercidoideae), currently in *Phanera*

S. Bandyopadhyay¹ & A. Kumar²

¹23F, Fern Road, Kolkata 700019, West Bengal, India

²Central National Herbarium, Botanical Survey of India, PO – Botanic Garden,
Howrah 711103, West Bengal, India
anand_kum234@rediffmail.com

ABSTRACT. A thorough search of literature reveals that the type of *Bauhinia cardiophylla* Merr. is deposited at PNH but it was erroneously assumed to be at A. The earlier holotype citation of the name is corrected here to lectotype. Additionally, *Bauhinia williamsii* F.Muell. is lectotypified here.

Keywords. Fabaceae, holotype, lectotype, Madrid Code, protologue

Introduction

While preparing a list of *Bauhinia* L. and allied genera for the Legume Taxonomy Working Group, we found that there is need of clarification on typification of two names in *Bauhinia* viz., *B. cardiophylla* Merr. and *B. williamsii* F.Muell., both of which are now placed in *Phanera* Lour.

Materials and methods

The protologues of two names, *Bauhinia cardiophylla* Merr. and *B. williamsii* F.Muell. were studied. We contacted the correspondents of the following herbaria: A, BM, K, MEL, NY, PNH, and W (acronyms according to Thiers, continuously updated), to request information on type specimens of both names. We also referred to the P and UC herbarium database online. Type images were also consulted via the JSTOR Global Plants website. The *Madrid Code* (Turland et al., 2025) was followed to correct the typification of these two names in *Bauhinia*.

Typifications

Phanera wrayi (Prain ex King) de Wit var. *cardiophylla* (Merr.) Bandyop., Ghoshal & M.K.Pathak, Bangladesh J. Pl. Taxon. 19: 60 (2012). – *Bauhinia cardiophylla* Merr., Philipp. J. Sci., C 11: 79 (1916). – TYPE: Borneo, Sarawak, *Native collector 1858* (lectotype PNH [acc. no. 32152], designated by Larsen & Larsen (1996)). (Fig. 1)



Fig. 1. Lectotype of *Bauhinia cardiophylla* Merr. at PNH (acc. no. 32152). Digitised herbarium specimen provided by the Philippine National Herbarium of the National Museum of the Philippines.

Notes. Merrill (1916) in the protologue of *Bauhinia cardiophylla* Merr. cited “SARAWAK, *Native collector 1858* (type), 1857 (Bur. Sci.); Baram District, *Hose* 289, October 26, 1894”. Subsequently, de Wit (1956) cited “TYPE.—*Native collector 1858* (holotype; *n.v.*)”, and Larsen & Larsen (1996) cited “Type: *Native coll. 1858* (A holo), Sarawak”. In an earlier publication (Bandyopadhyay et al., 2012) it was stated: ‘Dr Emily W. Wood (A) informed that only a photograph of the specimen attributed to *Native collector 1858* (A 00266505) is found at A without any physical specimen as cited by Larsen & Larsen (1996)’. Dr Anthony Robert Brach (pers. comm., 2025) confirmed that there is no specimen of *Native collector 1858* at A. This photograph has been taken after the valid publication of the name and so do not qualify as original material (see Staples & Prado, 2018). According to Stafleu & Cowan (1981) herbarium specimens and types of Elmer Drew Merrill are deposited at A, FH, NY, PNH and UC. We could not locate the type of *Bauhinia cardiophylla* at UC after searching online. We also contacted NY and PNH, and found that the actual type specimen whose photograph is at A is deposited at PNH with a typescript attached to the sheet having almost the full data as given as in the protologue. This photograph at A bears the stamp “Herb. Bur. Sci., Manila” (Herb. Bur. Sci. = Herbarium of the Bureau of Science established in 1901 by Dr E.D. Merrill, later known as the Philippine National Herbarium) but without the accession number stamp of PNH.

Knapp (2024) stated that E.D. Merrill did not have the habit of citing the herbaria for the type of the names of the new species he described from the Philippines and it is likely that he used duplicate sets of specimens for morphological description before distributing them to other herbaria. Similarly, Merrill (1916) did not mention the place of deposition of the types of *Bauhinia cardiophylla*. We agree with the approach outlined by Knapp (2024), that any extant sheet of *Native collector 1858* should be treated as a syntype (also see McNeill, 2014). Unfortunately, all specimens originally housed at the Philippine National Herbarium (PNH) were destroyed during the Second World War II in the 1940s, including the building itself. Reopening of the herbarium took place in 1946 (Thiers, updated continuously). After Dr Merrill, distinguished Filipino botanist Dr Eduardo Quisumbing took charge of the Herbarium from 1924 until his retirement in 1961, and was successful in retrieving many duplicate collections that were distributed to European and American herbaria before the World War II (NMOP, 2025a, 2025b). The specimen *Native collector 1858* (PNH) of *Bauhinia cardiophylla*, though is not collected from the Philippines but from Sarawak, is apparently one of such specimens and A kept a photograph after sending the specimen to PNH. As such, the holotype citation by Larsen & Larsen (1996) should also be corrected as lectotype following Art. 9.10 (Turland et al., 2025).

Phanera williamsii (F.Muell.) de Wit, Reinwardtia 3: 528 (1956). – *Bauhinia williamsii* F.Muell., Descr. Notes Papuan Pl. 1(4): 61 (1876). – TYPE: Papua New Guinea, Port Moresby, *Goldie 5* (lectotype MEL [MEL69820], designated here).

Notes. Sir Ferdinand Jacob Heinrich (“Baron”) von Mueller (1876) in the protologue of *Bauhinia williamsii* F.Muell. stated “This showy species is dedicated to the gentleman, under whose auspices the important travels of Mr. Goldie originated”. Andrew Goldie arranged a deal in March 1875 with Benjamin Samuel Williams of Upper Holloway Nursery in London to go plant collecting in Papua New Guinea where he first collected this species (NAH, 2025) and later described by Mueller (1876). This species is said to be endemic to New Guinea (Larsen & Larsen, 1996; POWO, 2025) whose present accepted name is *Phanera williamsii* (F.Muell.) de Wit. Although Mackinder & Clark (2014) mentioned Papua New Guinea and Australia under the distribution of this species, Larsen & Larsen (1983) did not include it in their treatment on the taxonomy and palynology of *Bauhinia* s.l. in Australia. This species is interesting because de Wit (1956: 528) stated that *P. williamsii* is the ultimate outlier of the genus *Phanera* towards the east. De Wit (1956: 528) cited “TYPE. – *Goldie s.n.*, near Port Moresby (holotype, n.v.)” and Larsen & Larsen (1996: 498) cited “Type: *Goldie s.n.* (n.v.), near Port Moresby”. The type data seems to be taken from the protologue (Mueller, 1876) without locating and examining the type. According to Stafleu & Cowan (1981) the herbarium and types of Sir Ferdinand Jacob Heinrich (‘Baron’) von Mueller are housed at MEL and important sets at BM, K, P and W. We could not locate the type of *Bauhinia williamsii* at P after searching online. We located a type specimen labelled as “HOLO-TYPE” of *Bauhinia williamsii* at MEL. Mueller (1876) in the protologue stated “Climbing; *tendrils circinate, simple*” and also recorded “*Cirrhi short*” but careful examination of the specimen image revealed that there is no tendril in MEL69820. In the protologue the leaves were said to be measuring 2½–4 inches, i.e. approximately 6–10 cm but the measurement of the leaves in MEL69820 also do not exactly match with the measurement given in the protologue. Furthermore, there is no indication in the protologue that Mueller (1878) used only one specimen. We communicated with MEL and were informed that there is no other collection of Goldie of this species at MEL and stated that MEL69820 is not necessarily a ‘holotype’. As such, we are designating this specimen as the lectotype.

On our query Dr Vaughan also kindly informed us that the contents of the packets have been removed and placed on top of the right-hand packet, and just below the left-hand packet. Further, there is an issue with the collection number 5 of Goldie. As pointed out by one of the reviewers, the Australian Virtual Herbarium (AVH) (https://avh.ala.org.au/occurrences/search?q=record_number%3A5+AND+collector_text%3AGoldie#tab_recordsView) shows that *Goldie 5* is associated with four more collections which are not of *Bauhinia williamsii*. Dr Alison Vaughan (pers. comm., 2025) informed us that she had checked their collection of correspondence to see if any reference was made to Goldie’s system of numbering but could not find anything. She thought that it was either not a collection number in a strict sense or the labels were somehow mixed up.

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