

Lectotypification of six names in the genus *Sida* (Malvaceae)

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Abstract: Six names in *Sida* L., viz., *S. cuneifolia* Roxb., *S. mysorensis* Wight & Arn., *S. ovata* Forssk., *S. repens* Dombey ex Cav., *S. scabrida* Wight & Arn. and *S. schimperiana* Hochst. ex A.Rich. are lectotypified here. Of these names, *S. mysorensis* Wight & Arn. and *S. schimperiana* Hochst. ex A.Rich. involve second-step lectotypification.

Keywords: India, Lectotypes, Malvaceae, *Sida*, Typification.

Introduction

The genus *Sida* L. was established by Linnaeus (1753) to include ten species, of which four, viz., *S. spinosa* L., *S. rhombifolia* L., *S. alnifolia* L. and *S. cordifolia* L. are now retained in *Sida*: two species in *Wissadula* Medik. and one each in *Abutilon* Mill., *Herissantia* Medik., *Anoda* Cav. and *Malachra* L. *Sida* is one of the largest genera in the family Malvaceae, and distributed mainly in tropical and subtropical regions of the world with c. 250 species (Mabberley, 2017; POWO, 2019). Paul and Nayar (1988) and Paul (1993) reported 12 species of *Sida* from India, subsequently Sivarajan and Pradeep (1996) recorded 17 species from southern Peninsular India. Two new species were described by Tambde *et al.* (2016, 2020) while the occurrence of *S. angustifolia* Medik. in India is discussed by Gavade *et al.* (2020). With these reports, the genus is represented by 22 species in India. In the present paper lectotypes are

designated for six names in *Sida*, viz., *S. cuneifolia* Roxb., *S. mysorensis* Wight & Arn., *S. ovata* Forssk., *S. repens* Dombey ex Cav., *S. scabrida* Wight & Arn. and *S. schimperiana* Hochst. ex A.Rich. in accordance with the ICN (Turland *et al.*, 2018) after having consulted the original material.

Typification

***Sida cuneifolia* Roxb., Fl. Ind. 3: 170. 1832.**

Lectotype (designated here): *Sida cuneifolia* Roxb. drawing in Icones Roxburghianae no. 341 (K digital image!). Fig. 1

Notes: The name *S. cuneifolia* was proposed by Roxburgh (1832), in ‘*Flora Indica*’. According to Stafleu and Cowan (1983) Roxburgh’s specimens and types are known to be placed at BM, BR, E, G, K and LIV; small set at B (Willd), C, DBN, E, FI, NY, OXF, P, PH, UPS (Thunb.). Stafleu and Cowan (1983) also stated that Roxburgh’s drawings are of great importance for the typification of Roxburgh’s species. As Roxburgh’s collection or specimens referred for description could not be traced for the name *S. cuneifolia*, Roxburgh’s drawing with ‘Roxburgh number 341’ is referred to study as an original material which depicts the characters mentioned in the protologue, and it is designated here as lectotype.

***Sida mysorensis* Wight & Arn., Prodr. Fl. Ind. Orient. 1: 59. 1834.**

Lectotype (first-step designated by Borssum, 1966; second-step designated here): INDIA, Karnataka, Mysore, 14.05.1800, Heyne 183 (K [K000659370



Fig. 1. Lectotype of *Sida cuneifolia* Roxb. drawing in *Icones Roxburghianae* no. 341 (K) (<http://apps.kew.org/floraindica/img/illustration/large/23372.jpg>) © Copyright of the Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with permission.

digital image!]; *isolecto* K [K000659371 digital image!]).

Fig. 2

Notes: Wight and Arnott (1834) described *S. mysorensis* based on collections by different collectors. They can be considered as syntypes. Among which, Borssum (1966) cited Wight's specimen with number '183' which is from Heyne's herbarium as mentioned by Noltie (2005) and connected to Wallich catalogue no. 1855. Two sheets of Heyne's collection from Mysore are housed at K, one with number '183' and the other without a number, but the date of collection (14th May, 1800) for both specimens indicates that the specimens are part of a single gathering. Moreover, the sheet with number '183' has two specimens mounted on it with two different barcode numbers (K000659370, K000659371). One of them (K000659370) is designated here as the second-step lectotype considering the type

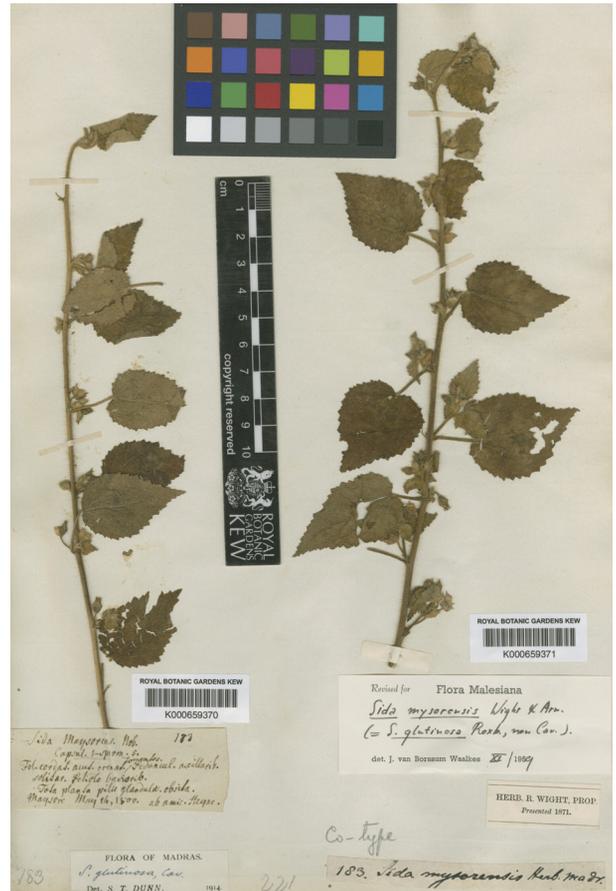


Fig. 2. Lectotype of *Sida mysorensis* Wight & Arn. (K000659370 <http://specimens.kew.org/herbarium/K000659370>) © Copyright of the Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with permission.

citation by Borssum (1966) as a first-step lectotypification.

Sida ovata Forssk., *Fl. Aegypt.-Arab.* 124. 1775.

Lectotype (designated here): ARABIA, Surdud, February 1763, *P. Forsskal* 1728 (C [C10003059 digital image!]).

Fig. 3

Notes: Forsskal (1775) in the protologue cited his collection from Surdud, Arabia. Two relevant specimens could be traced at C (C10003059, C10003061) and one at BM (BM000603910). Of those, C10003059 with fruits is designated here as the lectotype. The specimen is determined as 'proposed lectotype' by O.A. Leistner in May, 1967, but this has not been seen as published so far and this cannot be considered as effective publication (Art. 7.10 of ICN, Turland *et al.*, 2018).

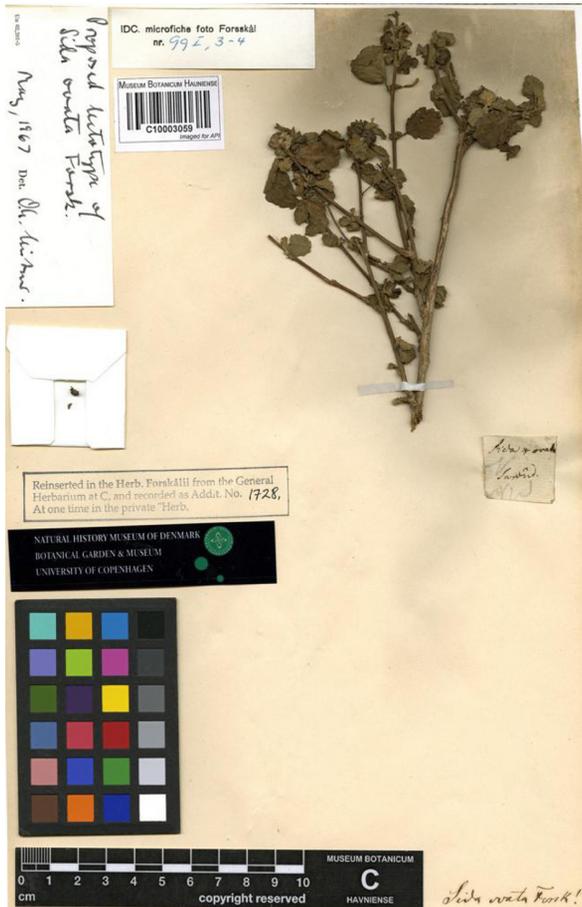


Fig. 3. Lectotype of *Sida ovata* Forssk. (C10003059 <http://digit.snm.ku.dk/www/ctyp/full/C10003059.jpg>) © Copyright of the Natural History Museum of Denmark, University of Copenhagen. Reproduced with permission.

Sida repens Dombey ex Cav., Diss. 1, Diss. Bot. Sida 7. 1785.

Lectotype (designated here): PERU, *s.l.*, Dombey J. *s.n.* (MA [MA656279 digital image!]). Fig. 4

Notes: The herbarium and types of Cavanilles are at MA, and many of his names are based on specimens in P, P-LA, and P-JU (Stafleu and Cowan, 1976). As the name *S. repens* is published based on Dombey's collection, search for the specimen was attempted in MA as well as P. Two specimens of *S. repens* collected by Dombey at P could be traced which matches well with the protologue description. Moreover, one specimen (MA-656279) from 'Cavanilles Type collection' section was found at MA and as per the discussion with Eva Garcia Ibanez, Curator of the herbarium,



Fig. 4. Lectotype of *Sida repens* Dombey ex Cav. (MA656279 <http://161.111.171.57/herbarioV/visorVCat.php?img=MA-01-00656279>) © Copyright of the MA Herbarium, Real Jardín Botánico Madrid. Reproduced with permission.

Joseph Dombey was part of Ruiz & Pavon's expedition to Peru, which took place between 1778 and 1788. Some of the herbarium specimens of this expedition were taken out by Cavanilles in order to create his separate 'Type collection'. With this in mind, the specimen which is part of 'Cavanilles type collection' is selected here as lectotype.

Additionally, the specimen (MA-656279) bears the number '29787' on a small label, which was added to the specimen at the beginning of the 20th century, when it was on loan to the Field Museum (USA). The number '29787' was used in some publications (Fryxell, 1985) and electronic database (Tropicos), but it is added to the sheet when the specimens was lodged and renumbered at the Field Museum (USA), and it is neither a 'collection

number' nor an accession number or barcode number added by MA.

Sida scabrida Wight & Arn., Prod. Fl. Ind. Orient. 1: 57. 1834.

Lectotype (designated here): INDIA, **Tamil Nadu**, (Madras), *s.d.*, Wight 198 (K [K000659357 image!]).

Fig. 5

Notes: A specimen at K (K000659357), part of the Wight Herbarium is identified as type material of the name *Sida scabrida* Wight & Arn., supported by Wight's catalogue No. 198 as mentioned in the protologue and it precisely matches with it. Therefore, the specimen is designated here as lectotype. Sivarajan and Pradeep (1994) cited the type of *S. scabrida* as 'Wight 166', but the specimen cited in the protologue is 'Wight! cat. n. 198' and

should only serve as type material. Noltie (2005) also noted that the type material for this name is 'WC 198'. He also commented that he could not trace a specimen at K. However, the specimen referred to in the protologue was traced at K and an image of the same is provided here.

Sida schimperiana Hochst. ex A.Rich., Tent. Fl. Abyss. 1: 66. 1847.

Lectotype (first-step designated by Vollesen, 1986; second-step designated here): ABYSSINIA (Ethiopia), 04.06.1837, G.H.W. Schimper 282 (P [P00761807 digital image!]).

Fig. 6

Notes: While describing *Sida schimperiana*, Richard (1847) cited collections of G.H.W. Schimper, Richard Quartin-Dillon and Anton Petit in the protologue. Vollesen (1986) inadvertently



Fig. 5. Lectotype of *Sida scabrida* Wight & Arn. (K000659357 <http://specimens.kew.org/herbarium/K000659357>) © Copyright of the Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with permission.

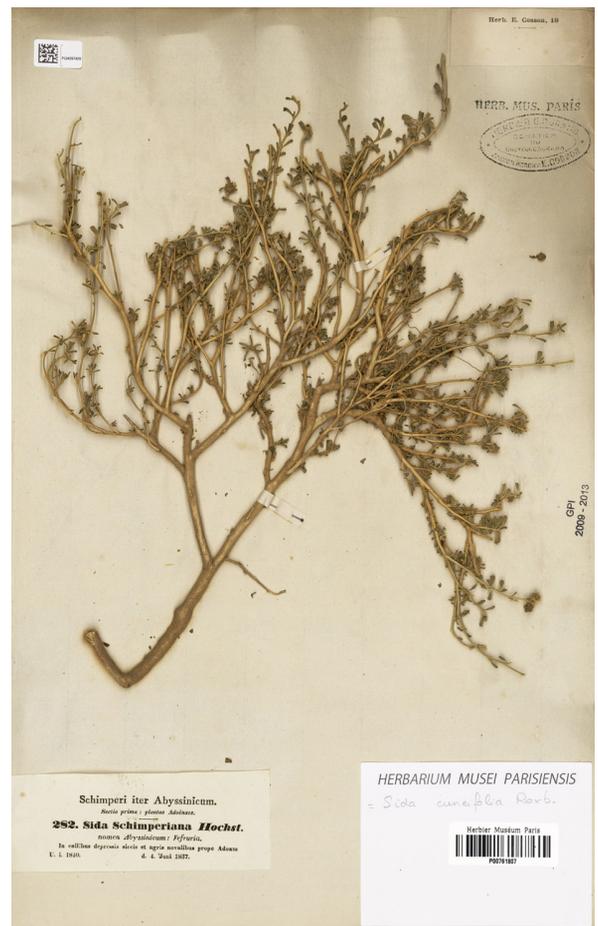


Fig. 6. Lectotype of *Sida schimperiana* Hochst. ex A.Rich. (MNHN-P-P00761807 <http://coldb.mnhn.fr/catalognumber/mnhn/p/p00761807>) © Copyright of the Muséum National d'Histoire Naturelle, Paris. Reproduced with permission.

lectotypified the name (Art. 7.11 of ICN, Turland *et al.*, 2018) by citing Schimper's collection at P as the type. There are five such relevant specimens at P (*viz.*, P00761802, P00761804, P00761805, P00761806 and P00761807, of the same gathering Schimper 282) and it cannot be ascertained which particular specimen was designated as lectotype. Thus, we have considered the type citation of Vollesen (1986) as first-step lectotypification and one of the specimens (P00761807) is designated here as the second-step lectotype, which bears fruit and a label indicating the specimen from Schimper's herbarium.

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