



Lectotypification and further notes on the identity of *Commelina hirsuta*, an endemic Indian species of Commelinaceae

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Abstract

The identity and nomenclature of the endemic Indian species *Commelina hirsuta* (Wight) Beddome (Commelinaceae) has puzzled taxonomists. This was further accelerated by the publication of a new name *Commelina beddomei* for this species recently. In the present paper, the identity and nomenclature of *Commelina hirsuta* (Wight) Beddome is discussed. A lectotype is designated and additional notes on the species are provided.

Key words: *Commelina hirsuta*, *Commelina beddomei*, *Commelina wightii*, lectotype, India

Introduction

Commelina Linnaeus (1753: 40) is the largest genus of Commelinaceae with about 233 taxa in the world (Govaerts & Faden, 2014). It is the second largest genus of this family in India with 25 species, of which 5 species (20%) are endemic (Sheba *et al.*, 2012; Nampy *et al.*, 2013; Sheba, 2013).

In the undisturbed grassy hill slopes of southern peninsular India, usually above 1800 m altitude, there grows an endemic species of *Commelina* characterized by hairy stems and leaves, linear-lanceolate leaves, complicate spathes with purplish margins, blue flowers and one seeded capsules. This species was first described by Robert Wight (1853) under the name *Heterocarpus hirsutus* Wight (1853: 29). Beddome (1880) transferred this species to *Commelina* as *C. hirsuta* (Wight) Beddome (1880: 122). However, his combination remained unnoticed for a long time. In the meanwhile, Clarke (1881) also made the same combination and '*C. hirsuta* (Wight) C.B. Clarke' was used by various authors in their floras (Hooker, 1892; Woodrow, 1900; Cooke, 1906; Rama Rao, 1914; Fischer, 1931; Nayar & Sastry, 1987; Ahmedullah & Nayar, 1987; Karthikeyan *et al.*, 1989; Henry *et al.*, 1989; Lakshminarasimhan & Sharma, 1991; Sharma *et al.*, 1996; Pullaiah, 1997; Matthew, 1999).

The name *Commelina hirsuta* was used earlier by various authors for different taxa (*Commelina hirsuta* Brown (1814: 62); *Commelina hirsuta* Willd. ex Link (1820:74); *Commelina hirsuta* Hort. ex Kunth (1843: 660); *Commelina hirsuta* Hochst. ex Richard (1850: 344). All these names were published either without accompanying description (*nom. nud.*) or as synonyms (*pro syn.*) and are hence invalid (McNiell *et al.*, 2012). After studying relevant literature and personal discussion with Dr. Kanchi N. Gandhi (Senior Nomenclatural Registrar, Harvard University), we conclude that *Commelina hirsuta* (Wight) Beddome (1880: 122) is the correct name for the endemic Indian species described by Robert Wight (1853) under the name *Heterocarpus hirsutus*. Since the name *Commelina hirsuta* (Wight) Beddome is valid and legitimate, the name *Commelina beddomei* published by Nandikar and Gurav (Nandikar & Gurav, 2014) is superfluous and illegitimate.

Wight (1853) described this species from Nilgiris, India. While searching for Wight's specimens in different herbaria it was found that there are three sheets at K, all apparently part of a single collection. There is one sheet at MH kept among Wight's collections, but this lacks any label or name in Wight's handwriting. According to Noltie (2005), there are no possible types at E. Of the three sheets at K, one lacks anything in Wight's handwriting, the second bears a description by Wight and on the third sheet a field label annotated 'Avalangy, October 1852'. This third sheet contains five specimens which are marked here as A–E. Among them, specimen 'A' is a perfect match for the description is designated here as the lectotype.

Flowering & Fruiting:—July–November.

Ecology and Distribution:—Endemic to India, among grasses on mountainous slopes, usually above 1800 m altitude.

Specimens examined:—INDIA. **Andhra Pradesh:** Karimnagar district, Aklasapur, 26 July 1964, *G.V. Subba Rao 20213* (MH). **Kerala:** Palaghat district, Meenbani, on the way to Koodam, Silent Valley Buffer Zone, 31 October 2013, *Manudev & Santhosh Nampy 135129*; On the way to Ankinda from Meenbani, Silent Valley Buffer Zone, 01 November 2013, *Manudev & Santhosh Nampy 135148* (CALI). **Tamil Nadu:** Dindigal district, Kodaikanal, 14 July 1898, *s.coll. 72869*; *Ibid.*, 1872, Bowha *s.n.*; *Ibid.*, May 1937, *s.coll. s.n.* (RHT); Kodaikanal-Kukal Pulneys, 17 July 1920, *s.coll. 16519* (MH); Konalar, 06 August 1984, *K.M. Matthew 40634*; Mahil Kundiam, 11 September 1986, *K.M. Matthew 46835*; Mannavanur Sheep Farm, 28 August 1987, *K.M. Matthew 50474* (RHT); Pulney, Curdon Valley, 23 June 1898, *A.G. Bourne 1233* (CAL); Vembadi Peak, 07 August 1984, *K.M. Matthew 40710*; *Ibid.*, 04 July 1987, *K.M. Matthew 49849*; *Ibid.*, 27 August 1987, *K.M. Matthew & N. Rajendran 50413*; La providence, Marian Shola, 06 October 1966, *K.M. Matthew 7452, 7453* (RHT). Nilgiri district, Dodabetta, August 1883, *s.coll. 52246*; Mukurti, 14 July 1970, *J.L. Ellis 34670* (MH); Naduvattom, 18 August 1878, *G. King s.n.* (DD, CAL); *Ibid.*, October 1884, *Gamble 14868, 14879* (DD); Pandian Dam site, 28 October 1972, *J.L. Ellis 43427*; Pykara, 12 September 1930, *V. Narayanaswami 4753*; *Ibid.*, 31 August 1970, *B.D. Sharma 35965* (MH); Ootty, 08 August 1878, *G. King s.n.* (DD); *Ibid.*, 12 August 1878, *G. King s.n.* (CAL); *Ibid.*, July 1883, *s.coll. s.n.* (MH).

Notes:—The flower colour is described differently by various authors. Wight (1853) described the genus *Heterocarpus* (= *Commelina*) as yellow-flowered and included two species namely, *H. hirsutus* (= *Commelina hirsuta*) and *H. glaber* (= *Commelina wightii*), specifically mentioning the colour as yellow in the latter but not in the former. Fischer (1931) described the flower as yellow, drying deep-blue, Barnes (1946) as deep turquoise blue and Matthew (1999) as blue. During the present investigation, we have collected plants with only blue flowers.

According to Fyson (1919), the yellow flowered species of Wight (1853) *Heterocarpus glaber* (= *Commelina wightii* Rao 1962:168) and *H. hirsutus* (= *Commelina hirsuta*) produce orange flowers on the lower slopes and blue flowers on the higher and assumed them as two varieties— a glabrous and a hairy of one species. However, we find that they are quite distinct and *C. hirsuta* can be separated from *C. wightii* in having a definite base, thick roots, linear-lanceolate leaves, hairy ovary and blue flowers. Though both species produce 1-seeded capsules, the seed is produced in the dorsal locule which is attached with the capsule wall in the former and in a ventral locule in the latter which is free from the capsule wall.

Acknowledgements

We are thankful to the Head, Dept. of Botany and Principal, St. Joseph's College, Kozhikode for facilities; Dr. Kanchi N. Gandhi (Harvard University) for nomenclatural discussions; Mr. K.P. Vimal, Research Fellow, Calicut University for assisting collections and Department of Forests, Government of Kerala for permission. SMJ is thankful to the University Grants Commission, New Delhi for Teacher Fellowship and MKM for Senior Research Fellowship.

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