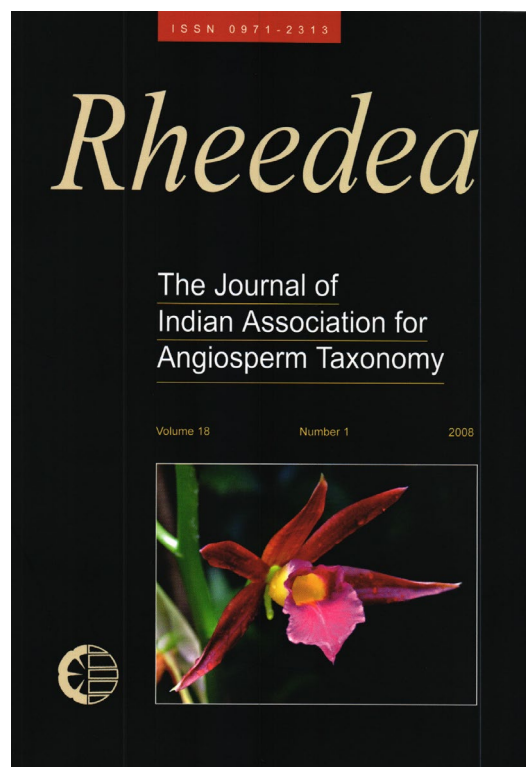




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On the Identity of *Murdannia juncooides* (Wight)

R. S. Rao & Kammathy (Commelinaceae)

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Abstract

The little known, rare and endemic *Murdannia juncooides* (Wight) Rolla & Kammathy is often considered conspecific with *M. semiteres* (Dalz.) Sant. Critical study of the types and live specimens have shown that both the species are distinct. Detailed description and illustration of *M. juncooides* are provided. Distinguishing characters separating *M. juncooides* from the allied *M. semiteres* are given.

Keywords: *Murdannia juncooides*, *M. semiteres*, Distinguishing characters

Introduction

Wallich (1828) included a Commelinaceae plant in his Catalogue under the name *Aneilema paniculatum* (*nom. nud.*). Dalzell (1851) described *Aneilema semiteres* from Konkan. Wight (1853) described *Dichaespermum juncooides* based on specimens collected from Courtallum in Tamil Nadu and Quilon (Kollam) in Kerala. While validating *Aneilema paniculatum*, Clarke (1881) included *Dichaespermum juncooides* and *Aneilema semiteres* as synonyms. Kammathy and Rao (1964), while revising the family Commelinaceae, treated *Aneilema paniculatum* as a synonym under *Murdannia* and proposed the new combination, *M. juncooides* (Wight) R. S. Rao & Kammathy. Santapau (1955), while studying *Murdannia* in Bombay state, transferred *Aneilema semiteres* to *Murdannia*.

Later authors (Hooker, 1892; Cooke, 1907) followed Clarke (*l. c.*) while Fischer (1931) considered *A. paniculatum* Wall. and *D. juncooides* as conspecific. Many authors treated *M. semiteres* and *M. juncooides* as conspecific. Manilal and Sivarajan (1982) treated *A. paniculatum* Wall. ex C. B. Clarke as synonym for *M. semiteres* while Sasidharan and Sivarajan (1996) considered both *A. paniculatum* and *M. semiteres* (*p.p.*) as synonyms for *M. juncooides*. Thus there exists some ambiguity concerning the identity of *M. juncooides*.

Wight (1853) described *D. juncooides* as 'erect, ramous; leaves linear subulate, glabrous, panicles few

flowered, axillary and terminal; filaments all glabrous, capsule oval-obtuse, 3-celled: cells 6-8 seeded, in 2 rows. 'This description can equally be applied to Dalzell's *Aneilema semiteres*. Kammathy and R. S. Rao (1964) treated both *M. juncooides* and *M. semiteres* as distinct species. Authors of different floras have treated these two species conspecific (Gandhi, 1976; Matthew, 1983; Vajravelu, 1990). They considered *M. juncooides* as a perennial species with underground bulb and reported chromosome number, $n = 12$ based on samples collected from Thenmalai in Quilon. In the same work they reported $n = 6$ and $n = 12$ for *M. semiteres* thereby not distinguishing *M. juncooides* from *M. semiteres* cytologically.

We provide nomenclature and detailed description of *M. juncooides*.

Murdannia juncooides (Wight) R. S. Rao & Kammathy, Bull. Bot. Surv. India 6(1): 3. 1964; Sasidh. & Sivar., Fl. Plants Thrissur Forest 477. 1996, *p.p.* *Dichaespermum juncooides* Wight, Ic. Pl. Ind. Or. 31. t. 2078(II). 1853.

Type: India, Tamil Nadu, Thirunelveli district, Courtallum, Aug. 1835, Wight 967 (K!)

Aneilema paniculatum Wall. ex C. B. Clarke in DC, Mon. Phan. 3: 215. 1881, *p.p.*; Hook. f., Fl. Brit. India 6: 381. 1894, *p.p.*; T. Cooke, Fl. Pres. Bombay 300. 1907, *p.p.*; C. E. C. Fisch. in Gamble, Fl. Madras.

1546. 1931 *p.p.* Wall. Cat. No.: 5216 A & B (K!).

Murdannia semiteres sensu Gandhi in C. J. Saldanha & Nicolson, Fl. Hassan Dt. 649. 1976, *p.p.*; K. M. Matthew, Fl. Tamil Nadu Carnatic 1666. 1983, *p.p.*; Vajr., Fl. Palghat 523. 1990, *p.p.*, non Dalzell, 1851.

Fig. 1, 2 a,b

Erect, perennial herb with bulbous base. *Roots* fibrous. *Stem* 9-15 cm in height, branching from base; first node of branches partly covered with a two teathed sheath; node purple; internode 1.5-6.5 cm long. *Leaves* cauline; sheath 0.6-1.6 cm long, greenish purple, glabrous; lamina 5-12 x 0.1 cm, needle like,

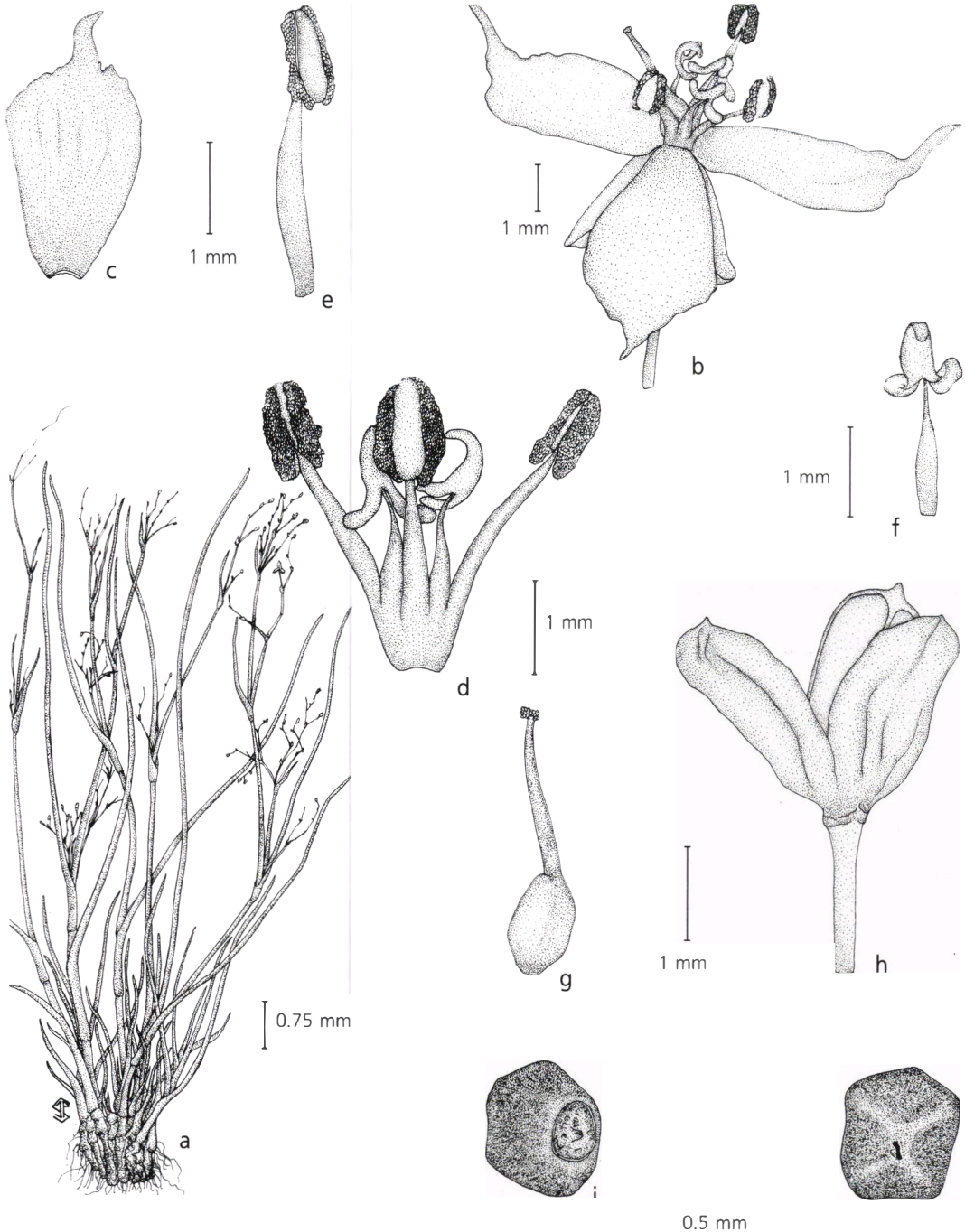


Figure 1. *Murdannia juncooides* (Wight) R. S. Rao & Kammathy – a. Habit; b. Flower; c. Sepal; d. Staminal sheath; e. Fertile stamen; f. Sterile stamen; g. Pistil; h. Dehisced capsule; i & j. Seed (from Joby & Nampy SJC 961).

falcate, base obtuse, margin entire, hyaline, apex acute to acuminate, upper and lower surfaces glabrous. *Inflorescence* terminal and axillary panicles; peduncle glabrous; bract 3.5 mm long, foliaceous, lanceolate, base amplexicaule; bracteole 1mm long, ovate, base amplexicaule, apex acute, margin entire, glabrous, persistent. *Flowers* 8 mm diameter, zygomorphic; pedicel upto 0.9 cm long, glabrous; sepals 3, 2.5 x 1 mm, glabrous, boat shaped, purple; petals 3, 5.0 x 3.5 mm, violet, apex acuminate, margin undulate above the middle; stamens 3, antisepalous; filament 2.2 mm long, violet, glabrous; anther lobes blue-purple, connective purple, upper surface of anther lobes purple, dehiscence valvular; pollen white; stamens and 2 staminodes out of 3 forming a sheath, third staminode free; staminodes antipetalous, filament 1 mm long, violet, glabrous, apex white; antherode white, trilobed, minutely papillose; ovary 1.0 x 0.5 mm, white, glabrous; style 2.2 mm long, violet, leaning away from fertile stamens; stigma simple.

Capsule 1.5 x 2.0 mm, ovate, glabrous, trivalved; seeds biseriate, 8 per locule, 0.5 x 0.6 mm, ovate pentangular, dark brown, smooth-striate, white farinose with flaky material in the testa, hilum elliptic, embryotega dorsal.

Note: Our collections of *M. juncooides* from Courtallum have bulbous base and fibrous roots. Further, flowers of this species open in the afternoon while those of *M. semiteres* open in the forenoon. SEM studies on seed surface indicate that the seeds of *M. juncooides* are smooth-striate with white farinose and flaky material on the testa which is faintly scrobiculate at 500 x (Fig. 2 a,b) while seed surface of *M. semiteres* is minutely striate with less farinose and without flaky materials on the testa at 500 x (Fig. 2 c,d).

Flowering & Fruiting: June-October, flowering in between 2.45 and 5.15 PM.

Habitat: On deposits of soil on large rocks and rocky crevices near streams.

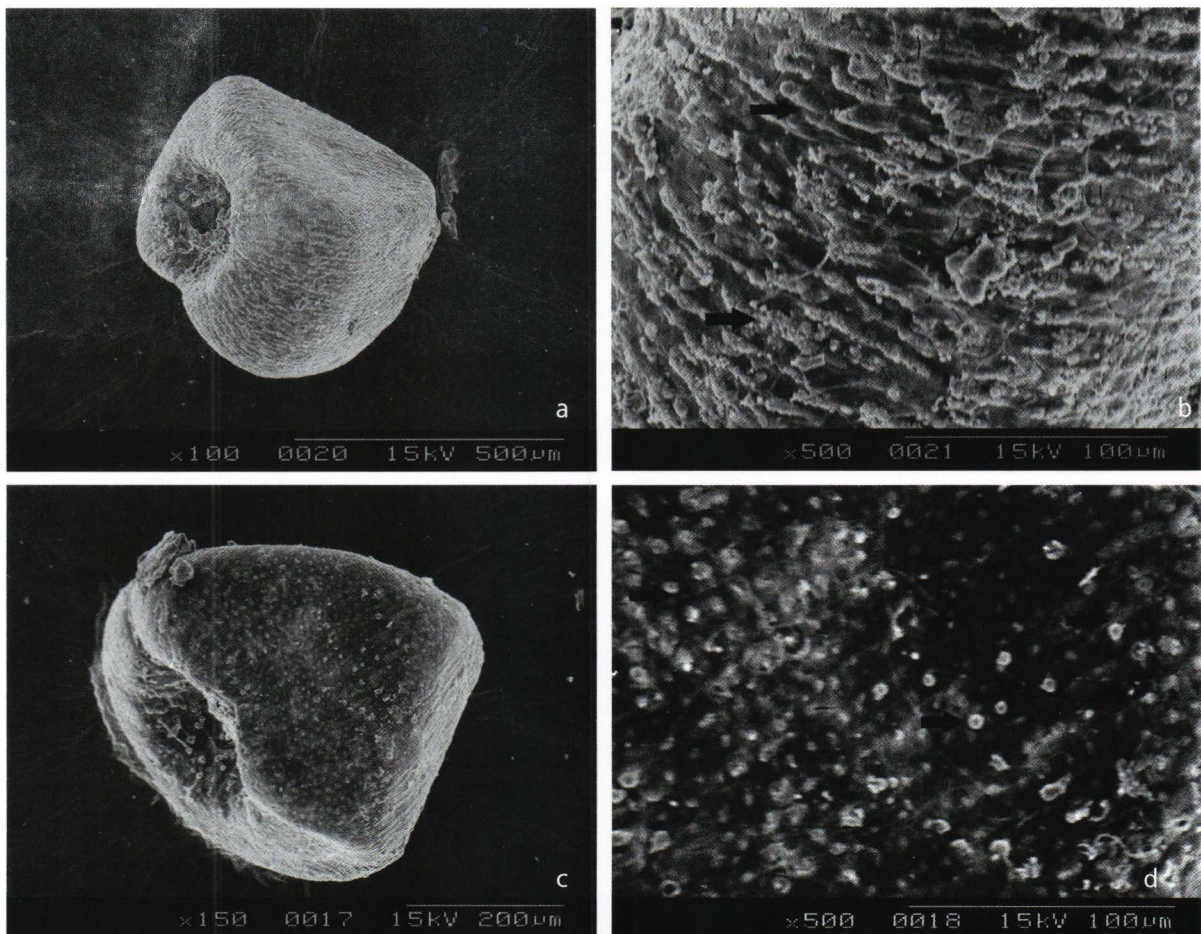


Figure 2. Scanning Electron Micrographs of seeds – *Murdannia juncooides* (Wight) Rolla & Kammathy a. x 100; b. x 500 – arrows indicate striations and flaky materials. *M. semiteres* – c. x 100; d. x 500 – arrows indicate faint scrobiculations and farinose granules on testa.

Distribution: India (Kerala, Tamil Nadu), rare and endemic.

Specimens Examined: INDIA, Kerala, Kollam district, Thenmalai, Ramesh 9460 (CALI). Tamil Nadu, Coimbatore district, Thekkumala, Devayani 15929 (CALI); Nilagiri district, Ooty, Sulekha 23367 (CALI); Thirunelvely district, Courtallam, Joby & Nampy 961, 965, 966 (St. Joseph's College Herbarium, Kozhikode), Majeed 20624, Priti 2273 (CALI), Wight 967 (K).

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