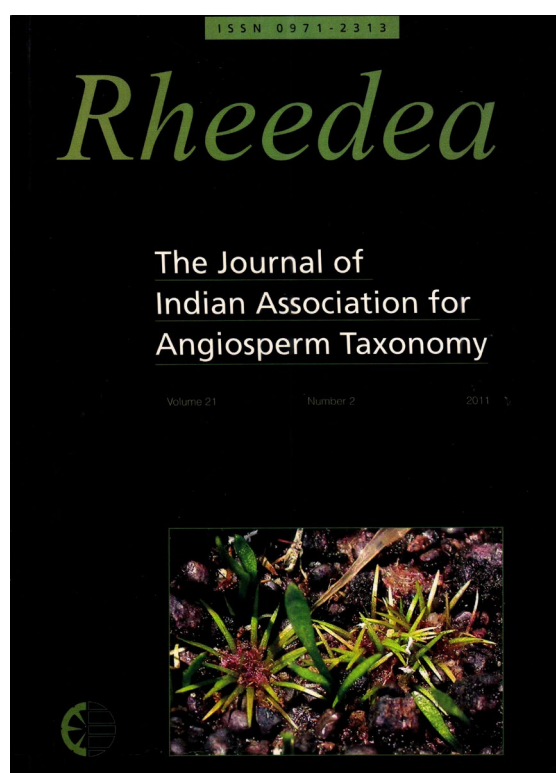




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Status of *Juncellus stylosus* (Cyperaceae) in Indian Flora

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Abstract

Juncellus stylosus (C.B. Clarke) C.B. Clarke is excluded from the flora of India. It is based on a misidentified specimen of *Pycnus nitidus* (Lam.) J. Raynal which was erroneously included in flora of India. Actual distribution of *P. nitidus* is in tropical Africa, South Africa, Madagascar, Israel and Syria.

Keywords: Cyperaceae, *Juncellus stylosus*, Khasia, *Pycnus nitidus*

Introduction

Clarke (1885) described *Cyperus monti* L.f. var. *stylosus* and later (1893) elevated it to the status of a species as *Juncellus stylosus*. It was based on a single specimen (Khasya Hills, Griffith s.n., holotype, K!). Clarke subsequently identified the plant as *Pycnus umbrosus* Nees as indicated on his determination slip dated 16 December 1897. Nevertheless, Karthikeyan *et al.* (1989) included *Juncellus stylosus* (C.B. Clarke) C.B. Clarke in the Indian flora stating it as being distributed in northeastern India.

A detailed study of Griffith's specimen (**Fig. 1**) confirms that it belongs to the genus *Pycnus*. Clarke (1885, 1893) may have originally mistaken the identity of this specimen because of the immature nuts in the spikelets. Close observation of the spikelets revealed the immature, laterally compressed nutlets with an angle facing the rachilla. The 2-fid style is also very distinct. Both of these are distinguishing characters for *Pycnus*. After the publication of *Juncellus stylosus*, Clarke must have realised his mistake, hence the later identification as *Pycnus umbrosus* Nees. *Pycnus umbrosus* is now treated as a synonym of *P. nitidus* (Lam.) J. Raynal, although Hooper & Raynal (1969) did not include it under the synonymy of the latter.

Further problems arise in relation to the locality and collector cited on the specimen. *Pycnus nitidus* is distributed in tropical Africa, South Africa, Madagascar, Israel and Syria. Clarke's annotation on the determination slip suggests that he was aware of this as it goes on to say "I have no doubt about the plant. The locality Khasya Hills written by Sir W.J. Hooker must be a herbarium error". Moreover, Griffith never collected outside Indian subcontinent and Malaysia. This suggests that the

specimen was incorrectly labelled and that is more likely to be from a locality within the known distribution range of *P. nitidus*. Therefore, we conclude that *P. nitidus* should not be included in Indian flora.

Haines & Lye (1983) cited India as the type locality of *P. nitidus*, probably considering the Griffith specimen to be the type. However, Raynal (in Hooper & Raynal, 1969) typified *Pycnus nitidus* with s. loc., *Herb. Lamarck s.n.* (lectotype, P-LA). There is no evidence to suggest that this specimen came from India.

Govaerts *et al.* (2007) treated *Cyperus monti* var. *stylosus* and *Juncellus stylosus* as synonyms of *Cyperus serotinus* Rottb. However, as indicated above, the type specimen has characteristics typical of the genus *Pycnus*, whereas, *C. serotinus* has characteristics typical of the genus *Cyperus*, namely 3-sided nutlets and a 3-fid style. Therefore, the inclusion of these names under the synonymy of *C. serotinus* is erroneous. The correct synonymy is summarised below

Pycnus nitidus (Lam.) J. Raynal, Kew Bull. 23: 314. 1969. – Type: s. loc., Herb. Lamarck (Lectotype, P-LA).

Cyperus nitidus Lam., Tabl. Encycl. 1: 145. 1791.

C. lanceus Thunb., Prodr. P1. Cap.: 18. 1794. – Type: Not designated.

Pycnus lanceus (Thunb.) Turrill, Bull. Misc. Inform. Kew 1925: 67. 1925.

Pycnus umbrosus Nees, Linnaea 10: 130. 1836. – Type: Not designated.



Fig. 1. Holotype of *Cyperus monti* L.f. var. *stylosus* C.B. Clarke

Cyperus monti L.f. var. *stylosus* C.B. Clarke, J. Linn. Soc., Bot. 21: 73. 1885. – Type: 'India, Khasya Hills, Griffith s.n.' (Holotype, K!). This specimen is not really from India as explained above.

Juncellus stylosus (C.B. Clarke) C.B. Clarke in Hooker, Fl. Brit. India 6: 595. 1893.

Cyperus lanceus var. *palastinensis* Kuk. in Engler, Pflanzenr. IV, 20 (Heft. 101): 336. 1936. – Type: Syria, Ras al Ain, Fred. S. Meyers & J.E. Dinsmore 3425 (Lectotype, K!, selected here).

Specimens examined: MADAGASCAR, Ambohim-ito forest (Tanala), 23.11.1894, Dr. Forsyth Major 233; Tsimbazaza, 6.12.1950, R. Benoist 894; Central Madagascar, Aug. 1880, G.W. Parker s.n. (K). SOUTH AFRICA, Tshifhawe village on road to Phadzima, Limpopo Province, 7.11.2007, Mabatha et al. 2301; Amatole Mountains, Eastern Cape, 16.2.1986, P.B. Phillipson 1297; Riverbank at West falis Estate, near Duiwelskloof, N. Transvaal,

5.2.1964, J.J. Bos 1251; Zululand, near Richards bay, Natal, July 1950, K.D. Gorden Gray 1172; Cape of Good Hope, December 1833, John Mac Gillivray 417(K). SWAZILAND, Marsh near hot spring, 4.3.1979, Richard W. Haines 7026 (K). TROPICAL AFRICA: SENEGAL, Berr Tialane, dans la Thieve, 22.5.1960, J & A. Raynal 5892; Northern limit of Senegal, s. die, J & A. Raynal 13653, without date; Env. Lac Retba, 29.4.1960, J.G. Adam 17.638 (K). DAHOMEY, Cadjeoun pres Cotonou, s. die, J & A. Raynal 13528 (K). NIGERIA, Oyo on Ilesha road, 15.8.1961, Latilo & Taylor 43398; 2 miles East of Babeni, 17.4.1962, M. Brunt 372; Matyoro, A.S., Feb. 1931 Thomewill 158 (K). GAMBIA: Without locality, 2.8.1948, J.P. Ruxton 82 (K). GHANA, Sampa, N.W. Ashanti, 26.4.1958, J.K. Morton A3268 (K). IVORY COAST, Upper Volta, 18 km North of Banfora, 1962, A.J.M. Leeuwenberg 4358 (K). CAMEROON, 21 km. on road from Bamenda to Jakikri, 4.11.1975, J.J. F.E. de Wilde, 8637 (K). CONGO, Kapanga, Katanga, 1933, Overlact 611; Parc. Nat. de la Garamba, 7.3.1952, G. Troupin 335 bis; Rusengo Buyogama Weundi, 29.5.1952, Michel 4373 (K). RWANDA, P.N.K. lac Ihema, 28.6.1957, Mat Alcool 3603; Bugesera, Ruanda-Urundi, s. die, L. Liben 7377 (K). BURUNDI, Ifota marais, Prov. Muramwya, 24.5.1981, M. Reekmans 10342; Muremera, Ruyigi Colline Rugoti, 13.10.1978, M. Reekmans 7242 (K). SUDAN, Chabat al Arab, Bahr el Chazal, 10.3.1930, s. coll. 7661 (K). ETHIOPIA, Bei Shembekober, 5 km von Bahar Dar, Prov. Godjam, 25.6.1968, Q. Sebald 2286; At Kochi, about 5 km E of Jimma along road to Addis Ababa, Kaffa Prov., 2.1.1973, Friis et al. 2056 (K). UGANDA, Kampala – Jinga Road, 26 km. East of Kampala, 16.5.1972, C. Parker U56; Namanve, Kaigwe, March 1932, W.J. Eggeling 482(K); Busoga, Kamuli district, 11.2.1999, K.A. Lye et al. 23446. KENYA, Kavirondo Gulf, 11.6.1970, P.J. Terry EAH14741; Ondiri swamp, 4.2.1951, A. Bogdan AB2894; Kitale, Sundam bridge, 19.5.1969, D.M. Napper 2107 (K). TANZANIA, Lihogosa swamp, Njombe district, 18.1.1957, Mrs. H.M. Richards 7906; Ruaha Nat. Park, Iringa district, 2.12.1972, A. Bjrnstad AB 2015; Ngurdoto Natl. Park, Arusha region, 15.4.1965, Mrs. H.M. Richards 20195; Gera camp, Bukoba district, 31.8.1934, H. Gillman 139 (K). MOZAMBIQUE, Inhaca Island, Portuguese E. Africa, 23.9.1957, A.O.D. Mogg 27504 (K). MALAWI, Mgimba, Kasitu valley, 5.12.1937, J.E.L. Fenner 19; Eroded Brachystegia farm around Zambwe farm, March 1939, S.G. Wilson 16 (K). ZAMBIA, Mongn, 5.3.1966, E.A. Robinson 6863; Laupula swamps, north of Mbereshi, 26.5.1933, A.P.G. Michelmores 317; Simansunda, 2 m. East of Mapanza, 5.1.1954, E.A. Robinson 431 (K). ZIMBABWE, Matopos, 13.12.1931, C.K. Brain

7558; Stapleford Forest Reserve, 9.6.1934, *H.B. Gilliland* 240; Matobo, January 1960, *Ob. Miller* s.n. (K). BOTSWANA, Ngamiland, Toakhe River swamp, Okavango, 21.3.1961, *Mrs. H.M. Richards* 14831; Near Gaenga Island, Northern district, 19.2.1915, *P.A. Smith* 1254; Okavango river, 8 km downstream from Samosima, 29.4.1975, *G.E. Gibbs Russell* 2865 (K). WESTERN ASIA: SYRIA, Ras al Ain, 11.7.1912, *Fred. S. Meyers & J.E. Dinsmore* 3425 (K). ISRAEL, Philistean Plain, Wadi Rubin, *A. Eig, M. Zohary, N.* 14.7.1926, *Feinbrun* s.n. (K).

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