A new combination in *Cephalostachyum* with notes on names in *Neomicrocalamus* (*Gramineae–Bambusoideae*)

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Summary. A new combination, *Cephalostachyum mannii* (Gamble) Stapleton & D. Z. Li, is made for a scandent bamboo from N E India after comparison with new material from Yunnan Province of China, and Burmese collections of *Cephalostachyum scandens* Bor, which is very similar and may prove to be a synonym when further collections have been made. *Cephalostachyum* is defended as a separate genus, distinct from *Schizostachyum* Nees. *C. mannii* had previously been treated as *Neomicrocalamus mannii* (Gamble) R. B. Majumdar. Eight other species placed in *Neomicrocalamus* at different times are reviewed, but only two are now recognized and accepted in that genus, *N. prainii* (Gamble) Keng f. and *N. andropogonifolius* (Griff.) Stapleton.

Arundinaria mannii Gamble is a scandent bamboo, with narrow culms and a distinctive culm sheath bearing a contiguous, very long, rolled, narrow, erect, internally hirsute blade. It was described from sterile material collected in Meghalaya, N E India in 1889 by Gustav Mann, then Conservator in the Assam Forest Service. Although Gamble initially annotated the specimens as *Cephalostachyum mannii*, he published the species in *Arundinaria* (1896) on account of its 'resemblance generally' to *A. prainii* Gamble, while noting that the leaves resembled those of *Cephalostachyum*.

Cephalostachyum scandens Bor is also a scandent bamboo, collected in flower in Burma by Kingdon-Ward in 1953. The leaves are indistinguishable from those of *A. mannii* Gamble, but culm sheaths were not collected, so it could not be compared adequately with *A. mannii*. The synflorescences are strongly congested, and are similar to those of the type species of *Cephalostachyum*, *C. capitatum* Munro.

Material given the illegitimate name *Cephalostachyum scandens* J. R. Xue & C. M. Hui was more recently collected in flower in W Yunnan, quite close to the Burmese border. The flowers and leaves place it in *Cephalostachyum*, while the culm sheaths are very similar to those of *A. mannii*, with distinctively long, narrow blades.

The similarity between the leaves of *A. mannii* and *Cephalostachyum* species, the similarity between its culm sheaths and those of the collections from Yunnan, and the similarity between the flowers from Yunnan and Burma complete the connection between *A. mannii* and *Cephalostachyum scandens*. Together, this evidence suggests very strongly that *A. mannii* should have been published as a species of *Cephalostachyum* in the first place, as Gamble may have originally intended. Clearly the three names *A. mannii*, *Cephalostachyum scandens* Bor and *C. scandens* J. R. Xue &

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C. M. Hui should all be congeneric at least. However, until culm sheaths are collected in Burma, and flowers are collected in N E India, it will not be possible to decide on morphological grounds whether they are all conspecific. Meanwhile Indian collections should be known as *C. mannii*, while material from Yunnan and Burma will be identified as *C. scandens* Bor, bearing in mind that this name may prove to be a synonym of the earlier *C. mannii*, although the culm sheaths and the culms of *C. scandens* do seem rather more densely hirsute.

Majumdar transferred all Indian species of *Cephalostachyum* into *Schizostachyum* without any justification whatsoever (1989). Naithani & Bennet (1991) transferred the Burmese species because Indian species had already been transferred by Majumdar, but also claiming that merger of these genera 'solves the taxonomic confusion'. However, *Cephalostachyum* species differ from those of *Schizostachyum* in their dense synflorescences, and preliminary molecular data (Xia, pers. com.) suggest that they are not very closely related after all.

Neomicrocalamus Keng f. was described for two scandent bamboo species, *N. prainii* (Gamble) Keng f. from N E India and *N. microphyllus* (J. R. Xue & T. P. Yi) Keng f. from S E Tibet (Keng 1982 – 3). They also have erect, narrow culm sheath blades, but the synflorescences are very open, and the culm sheath blade is entirely acicular. The leaves of *Cephalostachyum* can be distinguished from those of *Neomicrocalamus* by the more distinct central and secondary veins, and by a more sudden transition to a fine hair-pointed apex. Presumably as a consequence of Gamble's observation (1896) that *A. mannii* was similar to his *A. prainii* and the establishment of *Neomicrocalamus* (Keng f. 1983) with *N. prainii* as the type species, *A. mannii* was incorrectly transferred as *Neomicrocalamus mannii* (Majumdar 1989).

Naithani (1994) claimed to have rediscovered *Cephalostachyum mannii* (as *Neomicrocalamus mannii*) in Arunachal Pradesh, but the photographs would appear to depict the papery leaves and acicular culm sheath blade of a true *Neomicrocalamus* species, most probably *N. andropogonifolius* (Griff.) Stapleton, well-known in adjoining areas of E Bhutan.

Cephalostachyum mannii (*Gamble*) *Stapleton & D. Z. Li*, **comb. nov.** Type: India, Meghalaya, *Mann* 21845, Amkasar, Jarain, 900 m, 24 April 1889 (holotype K!).

Arundinaria mannii Gamble in Ann. Roy. Bot. Gard. (Calcutta) 7: 26 (1896).

Neomicrocalamus mannii (Gamble) R. B. Majumdar in S. Karthikeyan *et al.*, Fl. Ind. Enumerat. - Monocot.: 279 (1989).

Cephalostachyum scandens *Bor* in Kew Bull. 1957: 419 (1958). Type: Burma, Hkinlum, 1200 m, 13 Aug. 1953, *Kingdon-Ward* 21262 (holotype, K!).

Schizostachyum scandens (Bor) H. B. Naithani & Bennet in Indian Forester, 117(1): 68 (1991).

[*Cephalostachyum scandens* (as *Cephallogtachyum acandens*) J.R. Xue & C.M. Hui *illeg. hom.* in C. M. Hui (Ed.) *et al.* Res. on Bamboos from Nuijiang (1996). Type: China, Yunnan, Lushui, Pianma, Wuzhonggang R., 2150 m, 28 March 1992, *J. S. Wang , C. M. Hui et al.* 92024 (holotype in SWFC!).]

NOMENCLATURAL NOTE: *Cephallogtachyum acandens* is treated as a typographic error, as the illustration accompanying the description (Hui *et al.* 1996) is entitled *Cephalostachyum scandens*.

MATERIAL EXAMINED: BURMA: Hkinlum, North Triangle, 1200 m, 13 Aug. 1953, *Kingdon-Ward* 21262 (BM!); Nam Tamai Valley, 28°0′N, 97°40′E; 1600–1800m, 5 Sept. 1937, *Kingdon-Ward* 13127 (BM!). CHINA: Yunnan, Sronwang, Taron (Kuikiang) Valley, 1600 m, 7 July 1938, *T. T. Yu* 20171 (KUN!); Yunnan, Longchuan Xian, Luliangjian Shan, 1600 m, 30 Dec. 1995, *Y. M. Yang & Jia R. Xue* 9605 (K!, KUN!, SWFC!); Yunjiang, Shudian Mt, 1970 m, 4 Aug. 1984 *D. Z. Li* 84026 (SWFC!).

Confirmation that *C. mannii* does not belong in *Neomicrocalamus* leads to a consideration of the remaining eight species that have been placed in that genus at different times.

N. dongvanensis T. Q. Nguyen from Vietnam was published (Nguyen 1991) without a description of either flowers or culm sheaths. As it is only 1–2m tall it seems unlikely to be scandent, and either the culm sheath or synflorescence would be required to demonstrate affinity to *Neomicrocalamus*.

Transferrals into the scandent genus *Neomicrocalamus* of the self-supporting bamboos *Ochlandra setifera* Gamble by Hsueh & Yi (1987), as well as *Vietnamosasa ciliata* (A. Camus) T. Q. Nguyen and *V. pusilla* (A. Chev. & A. Camus) T. Q. Nguyen by Demoly (1995) do not seem in any way justified. *Ochlandra* is a genus of thin-walled reed-like bamboos from S India remarkable for its large and variable number of stamens. *Vietnamosasa* is a genus with a distinct rhizome form adapted to seasonal fire in dry areas of S E Asia.

The identity of *N. clarkei* (Gamble ex Brandis) R. B. Majumdar remains obscure, but it has been treated as a synonym of *C. mannii* (Campbell 1988, Stapleton 1994).

It has recently been possible to compare type specimens of *N. prainii* and the later *N. microphyllus* and we found them to be clearly conspecific, with leaves of similar size and identical culm sheath indumentum.

N. andropogonifolius (Griff.) Stapleton from Bhutan and Nagaland is similar to *N. prainii* in its scandent habit and acicular culm sheath blades, although it has not been collected in flower. It differs in its smooth culm sheaths, hollow culms and broader leaves.

Thus it would now seem that only two good species belonging in *Neomicrocalamus* have been published so far, *N. prainii* (Gamble) Keng f. and *N. andropogonifolius* (Griff.) Stapleton. Both are scandent Sino-Himalayan bamboos from high-rainfall localities reaching a height of 15 m or more, with distinctive acicular culm sheath blades and delicate leaves. The former has ebracteate synflorescences and six stamens.

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