

## *Qiongzhusia* and *Dendrocalamopsis* (Poaceae-Bambusoideae): publication by *descriptio generico-specifico* and typification

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*Qiongzhusia* and its species have received considerable attention concerning the validity of publication of names in different publications. However, it has apparently not been appreciated that both *Qiongzhusia* and a further bamboo genus, *Dendrocalamopsis*, were validly published by *descriptio generico-specifico*. Consequently they were validly published at an earlier date, with different types, than has been generally understood. The correct place of publication, authorship and typification is given and discussed for both genera, and a new section name, *Chimonobambusa* sect. *Neoqiongzhusia*, is published for those species of that genus with greatly swollen nodes.

KEYWORDS: Article 42, bamboo, China.

### QIONGZHUSIA

*Qiongzhusia* was first described by Hsueh & Yi (1980), along with three new species. Their nomenclature has caused considerable problems. When first published, two type collections were cited for *Q. tumidinoda*, the species name designated as representative of the generic type, one collection with flowers, and one with good vegetative material. Consequently *Q. tumidinoda* was not validly published. Therefore the generic name *Qiongzhusia* was also not validly published, as the designated type was not a validly published species name. In addition, because the generic name was not validly published, none of the three species were validly published either.

Eleven further species were added progressively, most of them as new species. Ohrnberger & Wen (1990) were the first to appreciate that *Q. tumidinoda* was not validly published because it had two types. They republished it with a slightly different epithet, as *Chimonobambusa tumidissinoda*, also reducing *Qiongzhusia* to a section of *Chimonobambusa*, and transferring to it all the species described under *Qiongzhusia*.

Hsueh & al. (1996) were the first to realise that not only was *Q. tumidinoda* not validly published, but also the generic name *Qiongzhusia*, as well as any names of species described along with it. They concluded that *Qiongzhusia* at generic level, and all combinations in *Qiongzhusia*, still lacked a place of valid publication in 1996. Interpreting the transferral of *Qiongzhusia* with its species into *Chimonobambusa* as a section (Ohrnberger & Wen, 1990) as publication of new names, Hsueh & al. (1996) elevated *C.* sect. *Qiongzhusia* to generic level, and made new combinations for species within it, based on

the names in *Chimonobambusa*.

As three species had been included within the original, invalid publication of the genus *Qiongzhusia* (Hsueh & Yi, 1980), it was not considered to constitute a monotypic genus. However, after the inclusion of Note 1 in Article 42 of the Sydney Code (Voss & al., 1983), the publication of a single, fourth, new species, *Qiongzhusia rigidula* Hsueh & T. P. Yi earlier in 1983 (Hsueh & Yi, 1983a) had satisfied the revised criteria for a *descriptio generico-specifico*, as it can be considered to have constituted the only validly published species. Consequently *Qiongzhusia* was validly published then (Hsueh & Yi, 1983a), and all later names in *Qiongzhusia* were perfectly valid when first published. Only the initial three species were not validly published.

Li & Hsueh (1988), when adding a seventh new species in *Qiongzhusia*, had listed all species published previously, citing the earlier places of publication in full. As *Qiongzhusia* had meanwhile been validated, these citations validated two of the three original species, *Q. communis* and *Q. opienensis*, with authorship Hsueh & T. P. Yi ex D. Z. Li & Hsueh, and possibly also *Q. puberula* and *Q. luzhiensis* if they were not valid when first published, which is dependent upon the precise timing of their original publication (Hsueh & Yi, 1983b) relative to that of the valid publication of *Qiongzhusia* (Hsueh & Yi, 1983a). Thus, after Li & Hsueh (1988), only *Q. tumidinoda* remained not validly published, as it still had two types. Therefore all but one of the 14 names supposedly still requiring validation in 1996 (Hsueh & al., 1996) were already validly published. Only one species was published validly for the first time in *Chimonobambusa* (as *C. tumidissinoda*), and apparently only that name still required the new combination *Q.*

*tumidissinoda*, as given by Hsueh & al. (1996).

The correct type of *Qiongzhusia* is now *Q. rigidula*, and not *Q. tumidissinoda*, and the implications of this need to be assessed. ‘*Qiong zhu*’ is the local name for *Q. tumidissinoda*, a distinctive bamboo species with greatly swollen nodes, used for ornamental walking sticks. There seem to be only two species exhibiting substantial nodal swelling, *Q. tumidissinoda* and *Q. intermedia*. *Qiongzhusia rigidula*, in contrast, has only minimal swelling of the culm nodes, and slightly quadrangular internodes. Like many of the species described in *Qiongzhusia* it is very similar to the species of section *Oreocalamus* of *Chimonobambusa*. It has even been transferred as *Oreocalamus rigidulus* at a time when *Oreocalamus* was recognized at generic level.

Although *Qiongzhusia* has sometimes been maintained as a separate genus (Hsueh & Zhang, 1988; Keng & Wang, 1996), it is not generally recognized any longer. Molecular evidence has not supported it as a monophyletic group (Ni Chonghaile, 2002), and the characters used to describe it are inconsistent and minor. Absence of thorns does not distinguish it from the type of *Chimonobambusa*, and highly exaggerated swelling of the nodes is really confined to just one species. Therefore, conservation of the name with a conserved type would not appear to be justified. *Chimonobambusa* is currently divided into three sections (Wen, 1994; Ohrnberger, 1999), *Chimonobambusa*, *Oreocalamus* and *Qiongzhusia*. It would appear that with *Q. rigidula* as type of *Qiongzhusia*, *C.* sections *Oreocalamus* and *Qiongzhusia* are taxonomically synonymous. As sectional epithets, *Oreocalamus* and *Qiongzhusia* were published simultaneously, but at generic level *Oreocalamus* takes priority over *Qiongzhusia*, and could possibly be recognized in the future. Therefore it seems most appropriate to recognize *C.* sect. *Oreocalamus* and to synonymize *C.* sect. *Qiongzhusia*, in order to avoid conflicting applications of the names at different ranks. If the new epithet *Neoqiongzhusia* is then provided for the small section of *Chimonobambusa* containing the only two species with substantially swollen nodes, this seems to cater adequately for any reasonable and likely taxonomic eventualities.

- Chimonobambusa* sect. *Oreocalamus*** (Keng) T. H. Wen & Ohrnb. in *Bamboos of the World: Gen. Chimonobambusa*: 11. 1990 ≡ *Oreocalamus* Keng in *Sunyatsenia*, 4: 146 (1940). – Type: *Chimonobambusa szechuanensis* (Rendle) Keng f.  
= *Chimonobambusa* sect. *Qiongzhusia* (Hsueh & T. P. Yi) T. H. Wen & Ohrnb. in *Bamboos of the World: Gen. Chimonobambusa*: 12. 1990 ≡ *Qiongzhusia* Hsueh & T. P. Yi in *Acta Phytotax. Sin.*, 21: 96. 1983 (descr. gen.-spec.) – Type: *Chimonobambusa rigidu-*

*la* (Hsueh & T. P. Yi) T. H. Wen & Ohrnb. in *D. Ohrnberger, Bamboos of the World Edition 1 Gen. Chimonobambusa*: 42. 1990.

- Chimonobambusa* sect. *Neoqiongzhusia*** Stapleton & N. H. Xia, **sect. nov.**: descr. of “*Qiongzhusia*” Hsueh & T. P. Yi, *Acta Bot. Yunnan.*, 2: 92. 1980, non rite publ. (non Hsueh & T. P. Yi in *Acta Phytotax. Sin.*, 21: 96. 1983). – Type: *Chimonobambusa tumidissinoda* Ohrnb., *Bamboos of the World Edition 1 Gen. Chimonobambusa*: 45. 1990.

## DENDROCALAMOPSIS

*Bambusa* subg. *Dendrocalamopsis* L. C. Chia & H. L. Fung, with type *Bambusa oldhamii* Munro was published in 1980 (Chia & Fung, 1980) and has been recognized at generic level in several Chinese publications (Zhu & al., 1994; Keng & Wang, 1996), Keng (1983) having elevated it to generic rank as *Dendrocalamopsis* (L. C. Chia & H. L. Fung) Keng f. One species, *Dendrocalamopsis grandis* Q. H. Dai & X. L. Tao, was described (Dai, 1982 1980?) before the subgenus was given new status at generic level. Dai & Tao omitted any citation of the publication of *B.* subg. *Dendrocalamopsis*, and it would appear that Article 33 does not allow for this to represent valid publication of *Dendrocalamopsis* (L. C. Chia & H. L. Fung) Q. H. Dai & X. L. Tao with new status as a genus, unless Article 33.2 were to be amended to include names with new rank (stat. nov.) as well as new combinations.

As several species had been included in *B.* subg. *Dendrocalamopsis*, it was not obvious that the genus *Dendrocalamopsis* could be treated as monotypic. After the inclusion of Note 1 in Article 42 of the Sydney Code (Voss & al., 1983), however, publication of *Dendrocalamopsis grandis* Q. H. Dai & X. L. Tao can nevertheless be considered to have provided a *descriptio generico-specifico*. Therefore *Dendrocalamopsis* Q. H. Dai & X. L. Tao is a validly published name, and *Dendrocalamopsis* (L. C. Chia & H. L. Fung) Keng f. is an illegitimate later homonym.

As the genus was monotypic at publication, the type of *Dendrocalamopsis* is clearly *D. grandis*. It is not yet possible to determine whether this change of type from *Bambusa oldhamii* will affect the recognition or circumscription of *Dendrocalamopsis*. Several genera closely related to *Dendrocalamus* and *Bambusa* have been described, including *Sinocalamus*, *Neosinocalamus* and *Lingnania*, but their circumscriptions have not been investigated critically. At the current time *Dendrocalamopsis* Q. H. Dai & X. L. Tao would still be considered taxonomically synonymous with *Bambusa* subg. *Dendrocalamopsis* L. C. Chia & H. L. Fung. In accor-

dance with Chia & Fung (1980), on the grounds of *Dendrocalamopsis* species having very similar inflorescence structure to other species of *Bambusa*, it is likely to continue to be recognized at subgeneric level, where *B.* subg. *Dendrocalamopsis* L. C. Chia & H. L. Fung remains the correct name.

- Bambusa* subg. *Dendrocalamopsis*** L. C. Chia & H. L. Fung in *Acta Phytotax. Sin.*, 18: 214. 1980 ≡ *Dendrocalamopsis* (L. C. Chia & H. L. Fung) Keng f., *J. Bamboo Res.* 2: 11. 1983, nom. illeg. – Type: *Bambusa oldhamii* Munro.  
= *Dendrocalamopsis* Q. H. Dai & X. L. Tao in *Acta Phytotax. Sin.* 20: 210. 1982 (descr. gen.-spec). – Type: *Bambusa grandis* (Q. H. Dai & X. L. Tao) Ohrnb. in *Bamboos of the World Intro.* 4: 18. 1997 (*Dendrocalamopsis grandis* Q. H. Dai & X. L. Tao).

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