Validation of *Qiongzhuea* and correlated species names (*Gramineae, Bambusoideae*)

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**Summary**


*Qiongzhuea*, when first published, was based on “*Q. tumidinoda*” as designated type. However, the latter name was not validly published because two different type specimens were cited. Therefore the generic name, and all specific names that were subsequently published under it, are not validly published either. A new name for *Q. tumidinoda* was later validated by Ohnberger under *Chimonobambusa*, *C. tumidissinoda*, whereas the generic name still needs to be validated. The terms and conditions are here met for validating the name *Qiongzhuea*, and all species names concerned, under the provisions of the Code.

*Qiong zhu* (pronounced approximately *chiung tsu*, or in international phonetic script: *t'iu̯n zu*), is the Pinyin transliteration of the Chinese vernacular name of a bamboo species that has been famous since the Han dynasty (206 B.C. to 220 A.D.). *Qiong* is derived from Mt Qiong-Lai, in Sichuan Province, where that bamboo was presumably thought to be growing, although according to its present known distribution it is not. *Zhu* is the general Chinese designation for bamboos. According to *Han Shu*, the book for the Han dynasty, *qiong zhu* sticks were at that time exported to Persia via India. It was also recorded in *Zhu Pu*, the treatise of bamboos by Dai Kai-zhi (265-316 A.D.) who wrote: “qiong zhu, with very prominent nodes which look like man-made, is the best for walking sticks”. Until recently, *qiong zhu* was interpreted in Chinese language dictionaries as “an ancient bamboo in the classic books or legends”. Its discovery ranks with that of living fossils: it is a fossil, not from geological strata but from ancient books. Jointly with other evidence, it supports the existence of a second “silk way” connecting ancient China and the West, now known as the “southern silk way”, along which *qiong zhu* sticks and Sichuan cloths were traded. This bamboo is now only found in a very restricted area in S.W. Sichuan and N.E. Yunnan, where it is endangered due to over-exploitation as source of peculiar swollen-noded sticks and for its delicious young shoots. It is listed in the Chinese *Plant red data book* (Fu & Jin, 1992) as one of the only two bamboos included.

Although a sterile herbarium specimen of *qiong zhu* was collected as early as 1942, when the universities of E. China were forced to move west during the war, the first attempt to name it in modern botany had to wait until 1980. In spite of its curious nodes, no one could name the sterile 1942 specimen. The first flowering specimen was gathered in 1965 and was again too poor for the purposes of bamboo taxonomy (Soderstrom & Young, 1983). The first set of complete specimens was collected in 1973 by T. P. Yi in S.W. Sichuan. The flowering cycle of this species is fortunately not as long as that of some other bamboos: it flowered again in 1976,

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when further specimens were obtained by T. P. Yi. By then the picture was clear, and eventually *Qiongzhuea tumidinoda* was published, with both the generic and specific names newly created and with *Q. tumidinoda* designated as the type of the generic name (Hsueh & Yi, 1980).

Most unfortunately, two "types" were designated for *Qiongzhuea tumidinoda*, one with flowers and fruits, the other a vegetative specimen. The intention of the authors was to make the name "well typified", in view of the notorious difficulty of bamboo taxonomy, but the effect is that the specific name is not validly published under the provisions of Art. 37.1 and 37.3 (see also Art. 8.1) of the *Code* (Greuter & al., 1994). The problem is exacerbated by the fact that *Q. tumidinoda* is designated as type of *Qiongzhuea*. Under Art. 12.1, a name of a taxon has no status under the *Code* unless it is validly published. *Q. tumidinoda* therefore has no status under the *Code*. Under Art. 37.2, for the purpose of valid publication of a name of a new genus, "reference (direct or indirect) to one species name only, or the citation of the holotype or lectotype of one previously or simultaneously published species name only, constitutes indication of the type". Since *Q. tumidinoda* had no status and cannot accordingly provide the type of a generic name, *Qiongzhuea* shares its fate and, by default of indication of its type, was not validly published.

Obviously, most authors ignored the problem. Both *Qiongzhuea* and *Q. tumidinoda* have been widely used (Chen & Chia, 1988; Crampton, 1994; Fu & Jin, 1992; Greuter & al., 1993; Yin & al., 1993; and Zhu & al., 1994), and will be adopted in the forthcoming bamboo volume of *Flora Reipublicae Popularis Sinicae*. A major exception is Ohrnberger: while at first disregarding the problem (Ohrnberger, 1989), he later (Ohrnberger, 1990) correctly noted that the indication of two types made the name *Q. tumidinoda* invalid. Since he treated the species under *Chimonobambusa*, and having been misguided by "authorities" into believing that validation of a name "*C. tumidinoda*" was "not sanctioned" under the *Code*, he changed the specific epithet to *tumidissinoda*. It would have been much more appropriate for him to maintain the original spelling when he validated the specific name.

The validation of the specific name under another genus still does not make the generic name *Qiongzhuea* simultaneously valid under the provisions of the *Code* (Art. 45). Ohrnberger (1990) accepted it, not for a separate genus but for designating a section of *Chimonobambusa*, when he validated the name *C. sect. Qiongzhuea*. We consider this taxon to be generically distinct, since it differs from *Chimonobambusa* in having a conspicuous bract on each node of the primary inflorescence branches, single-spiket racemes on secondary branches subtended by several spathes, papyraceous glumes and lower lemmas, and a nut-like caryopsis: it also differs vegetatively by its culm-nodes with no root-thorns between ridges, shooting in spring rather than autumn, and shoots not turning black. To the present day, this genus *Qiongzh- huea* has no valid name, nor have any combinations been validly published under (Art. 43.1). The following names are required, and are validated here.


Qiongzhuhe rigidula (T. H. Wen & Ohrnberger) C. J. Hsueh & T. P. Yi, comb. nov. = Chimonobambusa rigidula T. H. Wen & Ohrnberger in Ohrnberger, Bamb. World, Chimonobambusa: 42. 1990. – Type: China, Sichuan Province, Muchuan Xian, alt. 1300 m, You-Guang Li J (SIFS).


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Literature cited