(2187–2188) Proposals to conserve the names Beania against Sphaereda and B. gracilis against S. paradoxa (fossil Cycadophyta, Nilsoniales)

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(2187) Beania Carruth. in Geol. Mag. 6: 98. Mar 1869, nom. cons. prop. 
Typus: B. gracilis Carruth. 

Typus: S. paradoxa Lindl. & Hutton

(2188) Beania gracilis Carruth. in Geol. Mag. 6: 98. Mar 1869, nom. cons. prop. 


The genus Beania was established by Carruthers (l.c.) for peculiar cycadophyta loose strobili with seeds of the Jurassic age from Gristhorpe, Yorkshire, Great Britain. These perfectly preserved fossils were originally compared by him with the two previously described, but fragmentarily preserved, specimens of Sphaera paradoxa Lindl. & Hutton (l.c.: t. 159, figs. 1–2). One of the figured specimens in Lindley & Hutton (l.c.: t. 159, fig. 1) is a cone that was later named Beania mamayi H.H. Thomas & T.M. Harris (in Senckenberg, Leth. 41: 139. 1960; Harris, Yorkshire Jurass. Fl. 2: 168. 1964), although the original specimen was already lost in the 19th century (Seward, Cat. Mesoz. Pl., Jurass. Fl. 1: 272. 1901 [‘1900’]) and therefore is not available for detailed comparison and study; the other figure in Lindley & Hutton (l.c.: t. 159, fig. 2) is no doubt what is now called Beania gracilis. Carruthers thought that Sphaera paradoxa was a mixture of two fossil species, the one described by Murray [t. 159, fig. 1] that he considered to be S. paradoxa, and a fragment, described by Williamson [t. 159, fig. 2], that he considered to be what he was describing as Beania gracilis. However, the resemblance and generic identity of the two fossil cones Beania and Sphaera were evident to nearly all subsequent students of these fossil remains such as Seward (Foss. Pl. 3: 502. 1917), Kräusel (in Engler & Prantl, Nat. Pflanzenfam. ed. 2, 13: 84. 1926), and Harris (l.c. 1964), who came to the conclusion that they were congeneric. The original material of Sphaera described and illustrated in the Fossil Flora of Lindley and Hutton was not found (presumably lost), although Seward (l.c. 1901 [‘1900’]) stated “Type of Lindley & Hutton, in the Oxford Museum” (i.e., with respect to S. paradoxa), but at the present time no specimens of Sphaera could be found except for a good specimen of Phillips (l.c.), presumably of the same collection from Mr. Murray as the specimens figured in Lindley & Hutton (l.c.). Seward (l.c. 1917) explicitly stated that “The same type of shoot [as that of Beania] was figured by Lindley and Hutton as Sphaera paradoxa”. Kräusel (l.c.) synonymized both genera under the name Beania. Harris (l.c. 1964) provided a detailed analysis of the remains of the supposedly monotypic Sphaera and concluded that the two specimens figured by its authors in 1835 [t. 159, figs. 1 & 2] belonged to two different species in his treatment, namely B. gracilis Carruth. [t. 159, fig. 2] and B. mamayi H.H. Thomas & T.M. Harris (l.c.) [t. 159, fig. 1]. Thereby, the generic name Sphaera has nomenclatural priority over Beania, being a heterotypic, earlier synonym.


The lectotypification of Sphaera paradoxa made by Harris (l.c. 1964: 166) by the illustration in the original publication was permissible under the Montreal Code (Lanjouw & al. in Regnum Veg. 23. 1959) then in force, but inadmissible under the current Code (McNeill & al. in Regnum Veg. 154. 2012) that requires that the type of the name of a fossil-taxon be a specimen (Art. 8.5); an effective typification is provided above. This leads to the formal nomenclatural synonymy of S. paradoxa with Beania gracilis, and therefore, the latter species name together with the generic name Beania would have to disappear from palaeobotanical systematics for solely nomenclatural reasons in spite of being widely used in current systematic palaeobotany. We should adhere to the policy of stabilizing the nomenclature of the fossil genus, by conserving Beania against Sphaera, and I think it is appropriate also to propose formally to conserve the species name B. gracilis Carruth. against S. paradoxa Lindl. & Hutton.

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