(2191) Proposal to conserve the name Crowella against Actinostrobites and Frenelites (fossil Lauraceae)

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1 Note: the inclusion of Frenelites as a nomen rejiciendum would be unnecessary if the proposal to reject it under Art. 56 (Doweld in Taxon 62: 845–846. 2013) were accepted.

When Reid and Chandler conducted their revision of the Eocene flora of the London Clay, they created a new genus of lauraceous affinity, Crowella, upon the basis of supposedly coniferalean remnants attributed previously to the genus Cupressinites Bowerb. (Hist. Fruits London Clay: 51. 1840). Endlicher (Syn. Conif.: 273. 7–10 Jul 1847) with the first who tried to re-classify the components of the very artificial genus Cupressinites consisting of species now attributed to at least four (!) families of angiosperms (Lauraceae, Juglandaceae, Myrtaceae, Meliaceae) and a family of gymnosperms (Callitrichaceae). As a result, several fossil ‘conifer’ genera were created by Endlicher to accommodate species that Bowerbank included in Cupressinites. Later Gardner (in Monog. Palaeontogr. Soc. 37(1): 20. 1883) rejected Bowerbank’s and Endlicher’s attribution of these fossils to Cupressaceae or even to conifers on account of the radical dissimilarity of their reproductive structures.

Crowella, when established, unfortunately included the current lectotypes of the names of two of Endlicher’s conifer genera, Actinostrobites and Frenelites. Reid & Chandler (l.c.) designated Cupressinites globosus Bowerb. (= Crowella globosa (Bowerb.) E. Reid & M. Chandler), the only species that they recognised in the genus, as the “Genotype” (presumably meaning “generitype”) and included and synonymized under Crowella globosa both Actinostrobites elongatus (Bowerb.) Endl. and A. globosus (Bowerb.) Endl., the latter the lectotype of the generic name (Andrews l.c.: 13), and also Cupressinites recurvatus Bowerb., the type of Frenelites, designated by Andrews (l.c.: 91). Even although the selection of lectotypes for Actinostrobites and Frenelites was after its publication, Crowella is an illegitimate name because Reid & Chandler included within in it all elements eligible as type of Actinostrobites under Art. 10.2, i.e., the species names A. elongatus and A. globosus. This was overlooked by all subsequent researchers on fossil angiosperms, and the name Crowella came into wide use in systematic palaeobotany (Collinson in Foss. Pl. London Clay: 55. 1983; Vadala & Greenwood in Metcalfe & al., Faun. Fl. Migr. Evol. SE As.-Austral.: 208. 2001; Little & al. in Amer. J. Bot. 96: 637. 2009). “Conifer” genera, Actinostrobites and Frenelites, were used intermittently in palaeobotany in the 19th century (Endlicher, Gen. Pl. Suppl. 4: 12. 1847; Göppert in Natuurk. Verh. Holl. Maatsch. Wetensch. Haarlem, Verzam. 2, 6: 177–178. 1850; Unger, Syn. Pl. Foss.: 344. 1850) until Gardner’s (l.c.) critical treatise since which they nearly disappeared from palaeobotany due to their doubtful circumscription and lack of similarity in reproductive structures with true conifers.

When published, the genus Frenelites included two species, F. recurvatus (Bowerb.) Endl. that was placed by Reid & Chandler in the synonymy of Crowella globosa and F. subfusiformis (Bowerb.) Endl., for which ill-preservation and unclear structure of seeds does not permit confident assignment but which has been considered conspecific with Saxifragispermum spinosissimum E. Reid & M. Chandler, the type of that generic name. As questions have been raised as to whether the lectotypifications by Andrews might not be supersedable under Art. 10.5(b), Doweld (in Taxon 62: 845. 2013) suggests that an alternative option might be to propose the complete rejection of Frenelites under Art. 56. If this were accepted, there would be no need to include Frenelites as a name rejected in favour of Crowella.

Taking into account the ‘nomen oblitum’ status of Actinostrobites and Frenelites, it is formally proposed to legitimize continued usage of Crowella E. Reid & M. Chandler by its conservation against the forgotten, disused generic names, Actinostrobites and Frenelites.

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