

(1530) Proposal to conserve the name *Protopodocarpoxylon* (fossil *Gymnospermae*, *Coniferales*) with a conserved type

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(1530) *Protopodocarpoxylon* Eckhold, Hoftüpfel Rezent. Fossil. Koniferen [4]. 1921 [*Coniferales*], *nom. cons. prop.*
 Typus: *P. bedfordense* (Stopes) Kräusel (in *Palaeontographica*, Abt. B, Paläophytol. 89: 144. 1949) (*Podocarpoxylon bedfordense* Stopes), *typ. cons. prop.*

Protopodocarpoxylon was published without mention of any species name. Two years later, Eckhold (*Jahrb. Preuss. Geol. Landesanst.* 42: 490. 1923) repeated the generic diagnosis, and included two species, namely *P. jurassicum* Eckhold and *P. blewillense* (O. Lign.) Eckhold (l.c.: 491), without designation of a type. Although both species display a mixed type of radial pitting, their cross-fields are very different. The type specimen of *P. jurassicum* has 1–3 badly preserved oculipores, that might be oopores, per cross-field (Gothan—who was the first to describe this specimen, albeit without naming it - in *Verh. Russ.-Kaiserl. Mineral. Ges. St.-Petersburg* 44: 456. 1906; Eckhold, l.c.: 488. 1923; Vogellehner, *Palaeontographica*, Abt. B, Paläophytol. 124: 139. 1968), whereas the type specimen of *P. blewillense* has up to 12 small cupressoid oculipores arranged in an araucarioid manner (Lignier, *Mém. Soc. Linn. Normandie* 22: 267. 1907; Lauvergat & Pons, *Compt. Rend. Congr. Natl. Soc. Savantes, Sect. Sci.*, 103: 129. 1978). Because Lignier (l.c.: Pl. XXI, fig. 66) illustrated some badly preserved oculipores with a single circle (not showing the aperture), Eckhold (l.c.: 500, third column) thought *Protopodocarpoxylon blewillense* had oopores. Because of these misinterpretations, both syntypes are in contradiction with the generic diagnosis as given by Eckhold, especially in view of his definition of podocarpoid cross-field pits (l.c.: 476. 1923).

Such different species as *P. jurassicum* and *P. blewillense* cannot be considered congeneric from a palaeo-logical point of view, a fact already underlined by Kräusel (*Palaeontographica*, Abt. B, Paläophytol. 89: 144. 1949). Kräusel placed *P. jurassicum* within

Xenoxylon W. Gothan (*Abh. Königl. Preuss. Geol. Landesanst. ser. 2.* 44: 38. 1905) and kept *P. blewillense* in *Protopodocarpoxylon*. In line with that choice, Andrews (*Bull. U.S. Geol. Surv.* 1013: 219. 1955) typified *Protopodocarpoxylon* by *P. blewillense*. As *P. blewillense*, having araucarioid cross-fields and mixed type of radial pitting, clearly belongs to *Brachyoxylon* Hollick & Jeffrey (*Mem. New. York Bot Gard.* 3: 54. 1909), with this type *Protopodocarpoxylon* would become a taxonomic synonym of that generic name.

Vogellehner (l.c.: 138) realised the confusion generated by Andrew's choice of *P. blewillense* as the lectotype of *Protopodocarpoxylon*, and announced his intention of proposing a different conserved type, namely *P. bedfordense* (Stopes) Kräusel; he never did so formally, however. Despite that, Vogellehner's taxonomic position has predominantly been followed by most palaeo-xylogists since 1968. When checking the relevant literature we noticed that after 1968 all palaeo-xylogists followed Vogellehner's concept of *Protopodocarpoxylon*, except Boureau's students (see e.g., Attims, *Notes Mém. Serv. Géol. Maroc*, 210: 35. 1969; or Vozenin-Serra & Pons, *Palaeontographica*, Abt. B, Paläophytol. 216: 119. 1990) who used *Protopodocarpoxylon* for woods fitting with *Brachyoxylon* diagnosis.

With *P. blewillense* as type, *Protopodocarpoxylon* cannot be used to accommodate species with 1–2 (– 4) podocarpoid pits per cross-field. This is, however, how this name has been used predominantly, e.g. in Australia (Pole in David, *Ngarrabullgan*, p. 56. 1998), Chile (Torres et al., *Ser. cient. INACH*, 47: 59. 1998), China (Ding, *Act. Pal. Sinica*, 39: 209. 2000), Germany (Müller-Stoll & Schultze-Motel, *Z. dt. geol. Ges.*, 140: 56. 1989), Russia (Shilkina & Doludenko, *Bot. Zhurn.*, 70: 1023. 1985), Uzbekistan (Gomolitzky et al., *Palaeobot. Uzbek.* 3: 27. 1981). For the last forty years most colleagues (17 out of 24) have placed in that genus only samples with 1–2 (– 4) podocarpoid pits per cross-field, that is with podocarpoid cross-fields (Vogellehner, l.c.: 128; Philippe, *Palaeontographica*, Abt. B,

Paläophytol. 236: 48. 1995).

This predominant use of *Protopodocarpoxylon* is not, however, justified under the Code. Andrews's typifications are considered to be based on a largely mechanical method of selection, and therefore they may be superseded (ICBN, Art. 10.5). Then we have to consider the choice of the other syntype, *P. jurassicum*. This choice is problematical as well. This species might have only oopores in its cross-fields, a fact neither compatible with Eckhold's diagnosis nor with the way most palaeoxylologists use *Protopodocarpoxylon*. In fact the type is not well preserved, and it could even be defended that it does not deserve more naming than Gothan's original '*Podocarpoxylon* sp.' Moreover, *P. jurassicum* provides the type of *Protopolyporoxylon* Vogellehner 1968, and has sometimes been assigned to *Xenoxylon* (Kräusel, l.c.). *P. jurassicum* is thus unsuitable as type of *Protopodocarpoxylon*.

According to our data base, for *Protopodocarpoxylon* during the last twenty years 10 taxa at specific level have been published which fit the Vogellehner's concept, versus only 2 fitting with *P. blevillense*. For the sake of stability of nomenclature we propose *Protopodocarpoxylon* as a nomen conservandum, with, as conserved type, *P. bedfordense* with its typical podocarpoid cross-field pits.

ACKNOWLEDGEMENT

John McNeill (E) is thanked for his very useful editorial comments.