(2438–2439) Proposal to conserve the names *Taeniopteris* and *T. vittata* with a conserved type (fossil *Tracheophyta*: '*Taeniopterides*')

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(2438) ***Taeniopteris*** Brongn., Prodr. Hist. Vég. Foss.: 61. Dec 1828, nom. cons. prop.
Typus: *T. vittata* Brongn., typ. cons. prop.

(2439) ***Taeniopteris vittata*** Brongn., Prodr. Hist. Vég. Foss.: 62, 194. Dec 1828, nom. cons. prop.
Typus: Great Britain, Oxfordshire, Stonesfield; Middle Jurassic (Oxford University Museum: OUM J23456); [illustrated in] Sternberg, Vers. Fl. Vorwelt 1(3): t. XXXVII, fig. 2. Jan–Mai 1823.

Taenopteris is a widely used generic name for fossil sterile leaves with an entire margin, a middle vein and secondary veins that may or may not be divided. Moreover, it gave its name to a larger group of sterile leaves of fossil plants: *Taeniopterides*. It contains leaves that belonged either to certain ferns (*Marattiales*) or to cycadophyte gymnosperms (*Cycadales*, *Bennettitales*, *Pentoxylales*) and includes fossils of both Mesozoic and Palaeozoic age.

In the protologue of *Taeniopteris*, Brongniart (l.c. 1828) mentioned three species combinations: *Taeniopteris vittata*, "*Taeniopteris latifolia*", and "*Taeniopteris bertrandii*". All three lacked any descriptive material, although with the first (*T. vittata*) a direct reference was made to a Sternberg (l.c.: t. 37, fig. 2) illustration, but one without analysis or associated description. Publication of the genus *Taeniopteris* was in the treatment of "Cryptogames vasculaire" in "Chaptre 1" of the work. In the simultaneously published "Chaptre 2", dealing

with the distribution of plant fossils, Brongniart again mentioned *T. vittata* (on p. 194) but with the inclusion of a var. *major* in which he placed *Marantoidea arenacea* Jaeger (Pfl.-Versteiner.: 28, t. 5, fig. 5. 15–22 Sep 1827), as a synonym. This provides a reference to a species description, thus *T. vittata* was validly published here but as a superfluous name for *M. arenacea*. The latter, being the only original species, provided the type of *Marantoidea* Jaeger 1827, a name rejected in favour of *Danaeopsis* Heer ex Schimp. 1869 (nom. cons.), a fern of the *Marattiaceae*. Since in 1828, only one species name in *Taeniopteris* was validly published, *T. vittata* already provided the type of *Taeniopteris*, making it a superfluous and illegitimate name for *Marantoidea* typified by the type of *M. arenacea*. Brongniart (Hist. Vég. Foss. 1: 362. 28 Mar 1836) reinforced this by specifically designating *T. vittata* as the type of *Taeniopteris*. Without conservation *Taeniopteris* is thus a synonym of *Marantoidea*.

To avoid the disruption to nomenclature that this would cause, Doweld (in Taxon 62: 1348–1349. Dec 2013) proposed that *T. vittata* (and thus *Taeniopteris*) should be conserved with a different type: the specimen figured by Brongniart (Hist. Vég. Foss. 1: t. 82, fig. 2. 28 Nov 1831) which originated from Jurassic strata near Scarborough, Yorkshire, U.K. (Mus. Natl. d'Hist. Nat., Paris: No. MNHN.F.522). Unfortunately, this proposal includes a number of errors (e.g., the suggestion that *Marantoidea arenacea* shows epidermal characters). More importantly, the Brongniart specimen proposed as a potential replacement type is almost certainly of bennettitalean affinity (Harris, Yorks. Jur. Fl. 3: 68. 1969). If, as most palaeobotanists accept, the different groups of taeniopterid fossil leaves (Bennettitales, Cycadales, etc.) are to be taxonomically separated, Doweld's proposal would mean that *Taeniopteris* would have to take priority over the more usually used *Nilssoniopteris* for the bennettitalean leaves. Also as a result, the name *Taeniopteris* could no longer be used in its traditionally accepted way, for entire cycadophyte or marattialean fossil-leaves of uncertain affinity. For these reasons, Doweld's proposals have been recommended for rejection by the Nomenclature Committee on Fossils (Herendeen in Taxon 65: 383. 2016).

To avoid the disruption to taxonomic nomenclature that Doweld's proposal would cause, we are making an alternative proposal to conserve as the type of *T. vittata* the first specimen that Brongniart mentioned in the generic protologue, viz. the Sternberg (l.c.: t. 37, fig. 2) specimen from Stonesfield; this follows a similar suggestion for the lectotypification of *T. vittata* made by Cleal & Rees (in Palaeontology 46: 742. 2003). This has the merit that neither this nor any of the other Stonesfield cycadophyte leaf fossils in museum collections yields a cuticle (Cleal & Rees, l.c.: 742) and the prospect of collecting new, fresh material from the Stonesfield localities is almost non-existent (Cleal & al., Mesozoic Tert. Palaeobot. Gr. Brit. 2001). Consequently, the taxonomic position of this Sternberg specimen is never likely to change, thereby ensuring the nomenclatural stability of the generic name for which it will be type.

A publication on the various genera (besides *Taeniopteris* and *Taeniozamites*, also *Nilssonia* and *Nilssoniopteris*) in which usages of "*Taeniopteris vittata*" were prominent, is in preparation (for Rev. Palaeobot. Palynol.). This publication will also include photographs of specimens and of cuticles of *Nilssoniopteris solitarium* (Phillips) Cleal & Rees (l.c.) and its taxonomic synonyms *Nilssoniopteris tenuinervis* Nathorst 1909 (from Scania, Sweden) and *Nilssoniopteris vittata* sensu Florin 1933 (from Yorkshire, Great Britain).

That publication will hopefully also reach palaeobotanists who wish to know the differences between certain groups, but are not familiar with complicated conservation discussions.