



(1494) Proposal to Conserve the Name *Sigillaria* Brongn. 1822 (Fossil, Lycopsidea, Sigillariaceae) against *Sigillaria* Raf. 1819 (Liliaceae) and *Rhytidolepis* Sternb. 1821 (Fossil, Lycopsidea, Sigillariaceae)

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(1494) Proposal to conserve the name *Sigillaria* Brongn. 1822 (Fossil, *Lycopsidea*, *Sigillariaceae*) against *Sigillaria* Raf. 1819 (*Liliaceae*) and *Rhytidolepis* Sternb. 1821 (Fossil, *Lycopsidea*, *Sigillariaceae*)

Gea Zijlstra¹

(1494) *Sigillaria* Brongn., Mém. Mus. Hist. Nat. 8: 209, 222. May 1822, *nom. cons. prop.*

Typus: *S. scutellata* Brongn.

(H) *Sigillaria* Raf., Amer. Mag. & Crit. Rev. 4: 192. Jan 1819, *nom. rej. prop.*
 ≡ *Smilacina* Desf., Ann. Mus. Natl. Hist. Nat. 9: 51. 1807, *nom. cons.*

(=) *Rhytidolepis* Sternb., Vers. Fl. Vorwelt 1(2): 32. Jan–Aug 1821, *nom. rej. prop.*

Typus: *R. ocellata* Sternb.

Originally *Sigillaria* was described by Brongniart for bark fragments of an arborescent lycopod from the Carboniferous of France. By 1837 Brongniart (Hist. Vég. Foss. 1: 392–479. 1837) had already recognised 59 species. The genus is so well-known that in several languages common names exist (e.g., Dutch: zegelboom; German: Siegelbaum). On this generic name, the family name *Sigillariaceae* Unger [in Endlicher, Gen. Pl. Suppl. 2: 6 (“*Sigillarieae*”). 1842] was founded, which is quite often recognised [see e.g., Novik in Orlov, Osnovy Paleontol. (14): 613–649. 1963; Chaloner in Bouréau, Traité Paléobot. 2: 613–649. 1967; W. Remy & R. Remy, Floren Erdaltertums 324–341. 1977; Bateman & al., Ann. Missouri Bot. Gard. 79: 548. 1992; Stewart & Rothwell, Paleobot. Evol. Pl. ed. 2. 145. 1993; Kenrick & Crane, Origin Early Diversif. Land Pl. 224. 1997].

Sigillaria Raf. was published in a review of Nuttall’s *Genera of North American Plants* (1818), without description or diagnosis, but with a clear reference: “*Smilacina*, derived from *Smilax*, is our *Sigillaria*, and *Polygonatum*, derived from *Polygonum*, our *Axillaria*: no correct botanists will doubt that our names are preferable”. From this, one might wonder if Rafinesque might already have published his replacement names earlier, but although he used the name in several later publications (cf. Merrill, Index Rafin. 93. 1949), there are none that predated valid publication. In one of these later publications (J. Phys. Chim. Hist. Nat. 89: 261. Oct 1819), Rafinesque provides the rationale for what under modern Codes is an illegitimate replacement of *Smilacina*: he states that Desfontaine’s names must be replaced because they, being derived from *Smilax* and *Polygonum*, are against the rules of nomenclature (“sont contraires aux règles de la nomenclature”). As far as I know, this *Sigillaria* was used by Rafinesque himself only, e.g., in his Aut. Bot. (67–68. 1840), a place in which Rafinesque indicates he knows of “the fossil *Sigillaria*”.

In 1968, Vogellehner (Taxon 17: 265–269) proposed conservation of *Sigillaria* against two names said to have been published in the same year, but whose exact date had not been established: *Rhytidolepis* Sternb. and *Euphorbites* Mart. The

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proposal was rejected (Mamay, Taxon 18: 481. 1969) on the basis that the names should be assumed to have been published on the same date (“Vogellehner does not furnish convincing proof that Sternberg’s paper was published before Brongniart’s”), and that *Sigillaria* had been “long ago selected...as the proper name”, presumably, although this is not stated, under the provisions set out in the present Art. 11.5.

Vogellehner gave no argument as to why he considered part 2 of Sternberg’s work to have been published in 1822; I suppose Vogellehner took his date from Andrews’s Index (Bull. U.S. Geol. Surv. 1013: 85. 1955). By a reference to a preceding paper (Taxon 16: 128. 1967), Vogellehner did argue why he considered Brongniart’s article to have been published after Sternberg’s work. He noted that in the first half of Brongniart’s publication (p. 203–240. May 1822), he stated (l.c. 207, footnote 2) that he had not yet been able to obtain the second issue of Sternberg’s work, and at the end of the second half [l.c. 346 (Vogellehner has 246 in error), footnote 1. Sep 1822], Brongniart wrote: “M. Sternberg a distingué sous le nom de *Rhytidolepis* le genre que nous avons nommé *Sigillaria*, ...”.

Stafleu (Tax. Lit. 457. 1967) and Stafleu & Cowan (Tax. Lit. ed. 2. 5: 901. 1985) note that Heft 2 of Sternberg’s “Versuch...” bears the date Jan–Aug 1821 and gives no evidence that this is not the date to be accepted under Art. 31.1 of the *Code*, even although they do mention that the review of this part of Sternberg’s work did not appear in *Flora* until 7 June 1822. The 1821 date now appears to be generally accepted, e.g., by Kvaček & Straková (Cat. Foss. Pl. Sternberg 5. 1997), and in the revisions of the Appendices of the Berlin Code (1988) the date “1822” was replaced by “Jan–Aug 1821” for another name (*Rotularia*) published in Heft 2 of Sternberg’s work. It seems that the Committee for Fossil Plants in 1969 simply accepted 1822 as correct. On the other hand, there is no evidence that Martius’ publication of *Euphorbites* was earlier than that of Brongniart’s *Sigillaria*.

To conclude, the fossil *Sigillaria* deserves conservation against Rafinesque’s name as well as against *Rhytidolepis*. If the proposal were to be rejected, *Rhytidolepis* would have to replace *Sigillaria*, and a new family name would be necessary for this important group of fossils. It is difficult to estimate the total number of species that is recognised. According to Phillips & DiMichele (Ann. Missouri Bot. Gard. 79: 573. 1992), “*Sigillaria* is a diverse genus, comprising at least two subgenera”.

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