

## RACODIUM PERS. NOT A GENUS OF LICHENES

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*Racodium* Pers. per Fr. 1821 (starting-point date of nomenclature, 1821) has to be typified by *Racodium cellare* Pers., which makes it a genus of imperfect fungi (Deuteromycetes). Even if *Racodium* Fr. 1829 is accepted as a genus nomenclatively distinct from *Racodium* Pers. per Fr. 1821 and as such is referred to the (imperfect) lichens (starting-point date, 1753), it still must be rejected as a later homonym. *Zasmidium* Fr. 1849 is another name for *Racodium* Pers. ex. Fr. 1821 and a later synonym of it. For the lichen genus *Racodium* Fr. 1829 the substitute name *Rhacodiopsis* Donk, nom. nov. is introduced and for its type species the name *Rhacodiopsis rupestris* (Pers. per. S. F. Gray) Donk, comb. nov.

In two recently published papers (Riedl, 1968; Hawksworth, 1970) their authors came to the conclusion that *Racodium* Pers. has to be typified by *Racodium rupestre* Pers., a genus of 'Lichenes imperfecti'. Riedl also concluded that *Racodium* Pers. if conceived as a genus of fungi cannot compete with the lichen genus because it was published before the starting-point date of nomenclature of the 'Fungi caeteri' of the 'Code' (1821) the starting-point date for lichens being 1753. Finally he concluded that *Zasmidium* Fr. 1849 was the correct name and genus for one of the original fungous elements, viz. *Racodium cellare* Pers. Hawksworth is less specific as to the last conclusion; he stated that "the species of non-lichenized 'Mycelia Sterilia' currently placed in *Racodium*, should therefore be transferred to other genera." He overlooked Riedl's paper.

I beg to disagree. Both Riedl and Hawksworth overlooked many facts pertinent to the subject. Most of these data were briefly mentioned in a résumé by Donk (1962: 96). The following lines do not contain new data in relation to typification; they include *inter alia* merely an elaborated version of my previous remarks.

*Racodium* Pers. 1794 (devalidated name). — The genus was already published before 1801, the date given by Riedl. It was introduced (Persoon, 1794: 123) with three species, viz. *Racodium aluta* Pers., *R. cellare* Pers., and *R. rupestre* Pers. Of these, the undisputable lectotype species is *R. cellare*. The reasons for this explicit conclusion are the following.

(i). The genus *Racodium* was considerably restricted by Link (1809: 21, 22, 23), who excluded two of the three original species. One was transferred to *Xylostroma*

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Tode; this is *R. aluta*, the first of the examples mentioned when the generic name was first published. The other was transferred to *Dematium* Pers.; this is *R. rupestre*, the imperfect lichen Riedl and Hawksworth had in mind. *Racodium* itself was restricted to a single and original species, *R. cellare*: 'Hujus loci *Racodium cellare* Pers.'

(ii). That to the author of the generic name himself *R. cellare* was the principal species becomes quite evident from reading a later account of the genus published by him: —

'Un autre genre, que communément on regarde aussi comme une espèce de moisure, est cette villosité à filaments dense qui couvre les vieux tonneaux de vin.... L'espèce vulgare est le Bisse des caves, *Racod. cellare*; bien sec, il peut servir d'amadou. Le *Racodium rupestre* est d'une texture plus serrée, et il est plus noir, presque toujours mêlé avec la croute blanche d'un *Lepraria*, avec lequel il croît sur les rochers.' — Persoon (1818: 60).

The introductory sentence to the genus; the way *R. cellare* is mentioned; and the fact that *R. rupestre* is spoken of by comparing it with the former species, all these facts leave no doubt about the importance Persoon himself attached to this member of *Racodium*.

(iii). The first author to indicate a lectotype species for *Racodium* in a straightforward way completely in agreement with the present 'Code' was de Brongniart (1824: 545). He followed Link and indicated *Racodium cellare* as the type of the generic name '*Racodium* [Pers. emend.] Link; *Racodii* spec. Pers.'

In my opinion *Racodium cellare* has to be retained as type species as long as it has not been explained why it should be abandoned as such in agreement with the 'Code'. The selection of *R. aluta* by Hughes (1958: 800) cannot stand the test of the above-raised arguments.

*R a c o d i u m* Pers. per Fr. 1821. — The generic name was validly published on the (arbitrarily fixed) starting-point date (January 1, 1821) and in the starting-point book (Fries, 1821: xlvi), where the genus was accepted as '*Racodium* P.', without any description comment; the reference 'P.' (=Persoon) ensures the valid publication of the name for a genus in Persoon's o r i g i n a l sense. The genus was also accepted in the same year by Hooker (1821: 34), with one species, *R. cellare*; and by Gray (1821: 557) again with one and the same species. Other authors followed, one of them being Persoon (1822: 67), with *R. cellare* as the first of 18 (and 3 doubtful) species (and *R. rupestre* as the fourth). More examples of authors who did not deviate from Persoon's or Link's conception can be given from the period between valid publication in 1821 and Fries's introduction of a homonymous genus in 1829. Gray (1821: 556) was the first author explicitly to exclude *Racodium rupestre* from *Racodium* Pers. after the starting-point date (1821). As stated above de Brongniart in 1824 was the first author explicitly to indicate the type species (*Racodium cellare*) for *Racodium* Pers.

*R a c o d i u m* Fr. 1829. — In a later volume of the starting-point book for 'Fungi caeteri' of the 'Code' Fries (1829: 229, in obs.) all at once went his own way; as he so

often did, he ignored what his predecessors had done: 'Generis *Racodii* mihi typus est species primaria in Pers. synopsi [1801: 702], nempe *R. rupestre*, quod ob vitam perennem, rupicolam etc. a Fungis exclusum ad Byssaceas refero.' Donk (l.c.) concluded that 'it would seem that Fries, when rejecting Persoon's genus *Racodium*, introduced a new one, *Racodium* Fr. (non Pers.), rather than that he misapplied the earlier name.' Compare also Fries (1832: Index p. 151) in a foot-note appended to *Racodium rupestre*, 'Byssacea', 'Huic et similibus a myceliis saltim certe diversis nomen servo.' Even, if it were to be concluded that Fries emended the earlier generic name, then '*Racodium* Pers. sensu Fr.' will have to be corrected into '*Racodium* Fr.' because he excluded the type, which he transferred to *Antennaria* Link (Fries, 1829: 229); This correction would be necessary to remain in accordance with the present wording of the 'Code' (Art. 48).

It will be obvious from the above that as a later homonym *Racodium* Fr. 1829 is impriorable (illegitimate) in view of *Racodium* Pers. per Fr. 1821.

*Zasmidium* Fr. — There is no need to adopt another generic name for *Racodium cellare* as long as the above-sketched facts are accepted as basically correct. *Zasmidium* becomes superfluous by assuming, first, that Fries had the same fungus in mind as Persoon when he published this new genus (Fries, 1849: 407) for it, and secondly, that Riedl is correct in equating the bodies that Fries called 'perithecia' with 'amorpe Klümpchen von Exkretionen'.

**CORRECT SPELLING.** — As far as I am aware the variant spelling *Rhacodium* 'Link' was first used by Sprengel (1827: 557). It has found a wide application and was expressly defended by Guéguen (1906: 81 foot-note); etymologically it is the more correct spelling if it is accepted as being derived from ῥαχος, rag.

**CORRECT NAMES.** — Judging from my notes (which may be far from complete) I would conclude that the correct name for the type species of *Racodium* Pers. per Fr. 1821 is

*Racodium cellare* Pers. per Hook.: Fr. — *Racodium cellare* Pers. in Neues Magazin Bot. 1: 123, 1794 (devalidated name). — *Racodium cellare* Pers. per Hook., Fl. scot. 2: 24. 1821; S. F. Gray, Nat. Arr. Br. Pl. 1: 557. 1821. — *Antennaria cellaris* (Pers. per Hook.) Fr., Syst. mycol. 3 (1): 229. 1829. — &c.

In case the typification of *Racodium* Pers. per Fr. 1821 by *Racodium cellare* Pers. is accepted the lichen species will appear to be nameless for the period before 1821 because the generic appellation of the binomium *Racodium rupestre* was not validly published during that period. The first validly published name for the species seems to be *Dematium rupestre* (Pers.) per S. F. Gray 1821.

The next problem to be solved is to provide the correct generic name for this species. A generic name often cited as a synonym of the lichen genus *Racodium* is *Cystocoleus* Thwait. (1849: 341) but this name must be kept for a different genus as was pointed out by Hawksworth. I have also thought of *Kanta* Adans. (1763: 3) and

*Loten* Adans. (1763: 3) as possible recipient genera but they do not appear to be typifiable by a species that is conspecific or congeneric with *Racodium rupestre*. Since a distinct genus for this species appears to be in order I revive *Racodium* Fr. 1829 but providing it with the necessary substitute name: **Rhacodiopsis** Donk, *nom. nov.*; basionymum, *Racodium* E. M. Fries, *Syst. mycol.* **3** (1): 229. 1829; holotypus, *Racodium rupestre* Pers. The correct specific name becomes

**Rhacodiopsis rupestris** (Pers. per S. F. Gray) Donk, *comb. nov.* — Basionymum: *Dematium rupestre* (Pers.) per S. F. Gray, *Nat. Arr. Br. Pl.* **1**: 558. 1821. — *Racodium rupestre* Pers. in *Neues Magazin Bot.* **1**: 123. 1794 = *Tent.* 43, 76. 1797 (generic name not validly published). — *Byssus rupestris* (Pers.) DC., *Lam. & DC. Fl. franç.*, 3e Ed., **2**: 592. 1805 (generic name not validly published). — *Dematium rupestre* (Pers.) Nees, *Syst. Pilze* 76 pl. 5f. 73. 1816 (generic name not validly published). — *Racodium rupestre* (Pers. per S. F. Gray) Pers., *Mycol. europ.* **1**: 68. 1822. — &c.

This synonymy presupposes that the generic name *Byssus* L. (1753: 1168) has as its selected type species (*cf.* Drouet & Daily, 1956: 145) *Byssus flos-aquae* L. (type in Linnaeus's herbarium) = *Oscillatoria prolifica* (Grev.) per Gom., a species of Nostocaceae Homocysteeae, of which the starting-point date is 1892-3.

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