

# ON PEZIZA CALYCVLUS<sup>1</sup>

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## SUMMARY

*Peziza calyculus* Batsch is typified by its pale brown, semi-translucent variety (var.  $\gamma$ , 1783) and not by *Fungoides pyxidatum* P. Micheli (var.  $\alpha$ , 1783) nor by *Fungoides parvum* P. Micheli (var.  $\beta$ , 1783). As such *Peziza calyculus* Batsch is shown to be an earlier synonym of *Ciboria batschiana* (Zopf) N.F. Buchw. and not a synonym of *Peziza fructigena* Bull. The new combination *Ciboria calyculus* is proposed.

Within the scope of a revision of the Dutch representants of the discomycete genus *Hymenoscyphus* (Nees) S.F. Gray, long time known as *Helotium* Pers., I came to interpret the name *Peziza calyculus* Batsch, not to be confused with *Peziza calyculus* Sow. *Peziza calyculus* Batsch was treated both by Persoon (1822: 282–283) and Fries (1822: 118) as a synonym of *P. fructigena* Bull., the well-known Nut Disco<sup>2</sup> or Acorn Cup Fungus. *P. calyculus* Sow., on the other hand, was considered by them to be either a synonym or the correct name of a different, lignicolous species (in this article left out of account; see Hengstmengel, 1984).

After consultation of the original description and illustrations of *P. calyculus* Batsch in the ‘Elenchus fungorum’ (Batsch, 1783: col. 123–124, 181–184, tab. XII, figs. 57a–c) I got convinced that the homonyms *P. calyculus* Sow. and *P. calyculus* Batsch really refer to different species. However, concerning the interpretation of the latter I have come to another conclusion than Persoon and Fries.

Batsch (1783: col. 124) described ‘his’ *Peziza calyculus* or “Der langstielige Napfschwamm” [= long-stalked bowl-fungus] as “Ein napfförmiger, halbkugliger, ganzoffenstehender Schwamm; mit etwas verlängerten gleichbreiten, starken, nicht zusammenfliessenden Stiele” [= a bowl-shaped, hemispherical, entirely exposed fungus; with slightly elongated, equally wide, firm, not tapering stem]. Thereby he mentioned three “Abänderungen” [= varieties]:

- ( $\alpha$ ) “Von innen scharlachroth, aussen weiss” [= internally scarlet-red, externally white] (derived from Micheli, 1729: 205, no. 6, tab. 86, fig. 5);
- ( $\beta$ ) “Innwendig schwarz, aussen dunkelgraulich” [= internally black, externally dark greyish] (derived from Micheli, 1729: 205, no. 9, tab. 86, fig. 11);
- ( $\gamma$ ) “Ganz blassbräunlich, halbdurchsichtig” [= entirely pale brownish, semi-translucent].

About the first two varieties we can find (slightly) more data in the important botanical work of the Italian botanist Micheli, ‘Nova plantarum genera’ (1729). This book, which served as basic literature for later eighteenth century authors like Linnaeus, Gleditsch, Scopoli, Schaeffer, Haller and also Batsch, still dates from before the introduction of the binary nomenclature. The varieties concerned have been described therein by means of a polynomium consisting of 9–10 words starting with ‘Fungoides pyxidatum’ resp. ‘Fungoides parvum’.<sup>3</sup> The term ‘Fungoides’ [= fungus-like] could be regarded as a group name, like ‘Fungus’ for Gilled Fungus and ‘Erinaceus’ [= hedgehog-like] for Tooth Fungus.

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<sup>1</sup> This is a translation, with some corrections and additional footnotes, of an article in Dutch which was published in *Coolia* 25(1): 1–6. “1982” [ultimo December 1981].

<sup>2</sup> This English name is recommended by the British Mycological Society.

<sup>3</sup> Both facts imply that these names cannot be considered to be earlier, validly published synonyms.



Fig. 1. *Fungoides pyxidatum* P. Micheli  
(from Micheli, 1729: tab. 86, fig. 5)

‘*Fungoides pyxidatum* ...’ (var.  $\alpha$  of Batsch) has been found once by Micheli, in autumn time, in the forests near Scandicci, just southwest of Florence. On the base of the description and illustration of Micheli (see fig. 1) we could characterize this species as a stalked cup fungus. Also in view of the described colour – inside scarlet-red (‘*coccineum*’), outside white – this must have been a striking fungus which might very well have been observed and described by later authors too. It was easy to confirm this, especially due to the keyword ‘*coccineum*’.

‘*Fungoides pyxidatum* ...’ appears to be included already in the works of Gleditsch (1753: 47–48), Scopoli (1760: 53) and Haller (1768: 129; as a variety), in all these cases still without a binary name. The second edition of Scopoli’s ‘*Flora carniolica*’ (1772: 479) is the first publication in which the species has been provided with a binary name, viz. *Elvela coccinea* Scop. Bolton (1789: index) has synonymized ‘*Fungoides pyxidatum* ...’ with *Peziza coccinea* Bolt., which name is not a recombination of *Elvela coccinea* Scop. Bulliard (1790: tab. 467, fig. 3; 1791: 246) has given the name *Peziza epidendra* Bull. to the species concerned.

About the correct scientific name of this species, especially the authors’ names to be added, there are different opinions. Rifai (1968: 44) mentions *Sarcoscypha coccinea* (Jacq. ex S.F. Gray) Lambotte, Maas Geesteranus (1969: 52) *S. coccinea* (Scop. ex S.F. Gray) Lambotte and Dennis (1978: 76) *S. coccinea* (Fr.) Lambotte. This diversity has resulted from a real confusion of tongues in mycological literature from ca. 1774 up to 1822 about different species called *Peziza coccinea*. At all events it is certain that this wood inhabiting cup fungus, in English called Ruby Elfcup, belongs to the genus *Sarcoscypha* (Fr.) Boud.



Fig. 2. *Fungoides parvum* P. Micheli  
(from Micheli, 1729: tab. 86, fig. 11)

“*Fungoides parvum* ...” (var.  $\beta$  of Batsch), found by Micheli in the same area as “*Fungoides pyxidatum* ...”, is very similar in shape (see fig. 2). Clearly different, however, are the size [‘*parvum*’ = small] and the colour of the apothecia.

I have tried to trace this variety or species as well in more recent literature, but as yet without success. This might be related one way or the other to the less striking colours of the apothecium: hymenium inside black, receptaculum (i.e. the hymenium bearing structure) outside dark grey. By the way, considering the small dimensions – the illustrations of Micheli are probably displayed in real size – it is difficult to assess whether this fungus is a pezizoid fungus, like the first variety, or a helotioid fungus, like the third one.

The third variety is the only one which has been found by Batsch himself. In connection with this, it seems justified to regard this variety as the type variety of *Peziza calyculus* Batsch, i.e. as the taxon to which the epithet ‘*calyculus* Batsch’ is permanently attached.

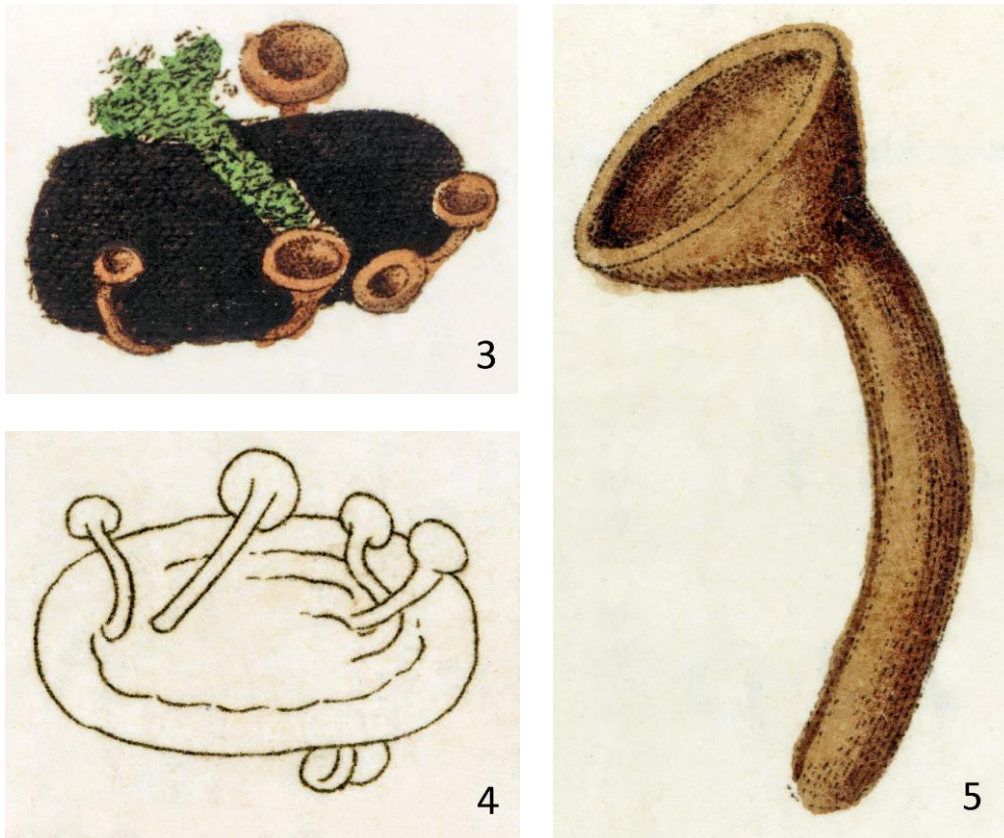


Fig. 3–5. *Peziza calyculus* Batsch (var.  $\gamma$ ): 3. A mummified *Quercus* cotyledon, as seen on the convex side, with a number of apothecia. – 4. As before, with view on the flat side of the cotyledon. – 5. Apothecium. (From Batsch, 1783: tab. 12, fig. 57a–c)

The original description of var.  $\gamma$  (see above) is so concise, that this variety impossibly could be determined if Batsch would not have provided some illustrations (tab. 12, fig. 57a–c) and particularly also an explanation concerning the substrate. This explanation in this entirely bilingual book (Latin/German) reads in German: “Ich habe diese Schwämmchen bey einander gefunden, da sie aus der untern und flachen Seite einer eyrunden schwarzen Körpers hervorkamen, und sich um den Rand desselben nach seiner öbern, runderhabnen Fläche zu wandten. Ich kann nicht sagen, was dieses für ein Körper sey. Er befand sich unter feuchtem Mooss in der Welmse, wo ich ihn im Oktober antraf” (column 182–184). Translated into English: “I found these fungi together, as they emerged from the lower and flat side of an egg-shaped, black body, and bended themselves around the edge of it to its upper, convex surface. I cannot say what kind of body this would be. It was located under moist moss in the Welmse [= Wöllmisse, a high plateau near Jena], where I encountered it in October”. In my opinion, this half egg shaped object can be nothing else than an old acorn. From the fact that *Peziza calyculus* Batsch according to Persoon and Fries is synonymous with *Peziza fructigena*, it appears that they too recognized the substrate as such. Still, I cannot agree with them entirely.

An acorn, indeed, consists of different parts. Firstly the pericarp (fruit wall), being the outer, green, leathery layer with remains of the style. Secondly the testa (seed coat), being a soft, whitish membrane beneath the pericarp. Thirdly the embryo (seedling), being the young plant of which especially the two cotyledons (seedling leaves) catch the eye. The fruit (nut) is connected with the associated twig by means of a greenish, bowl-shaped cupula (acorn cup) and a peduncle (stalk, actually of a simple female inflorescence).

Careful observation of Nut Disco's shows that these fungi are growing only on the cupula, the pericarp and/or the peduncle of fallen acorns. *Peziza calyculus* Batsch, however, was found by Batsch on the flat side of an egg-shaped black object of which the other side was convex. Therefore I conclude that this object involves an (embryonic) cotyledon mummified by and occupied with apothecia of *Ciboria batschiana* (Zopf) N.F. Buchw., in English sometimes called the Ciboria Fungus.<sup>4</sup> This "entirely pale brownish, semi-translucent" discomycete is also in the Netherlands a common appearance on mummified acorns (please note: only on the cotyledons). It may also occur on fruits/seeds of Chestnut species (*Castanea spec.*) (Buchwald, 1954).

In Great Britain, already soon after 1783 the name *Peziza calyculus* Batsch has taken on a life of its own. It became applied to the wood inhabiting, yellowish discomycete to which afterwards – by a combination of circumstances – the name *Peziza calyculus* Sow. was given (Hengstmengel, 1984). Notwithstanding this 'misinterpretation', the English author Purton (1821: 458) was the first author who published this name since 1 January 1821 (i.e. the starting point for the nomenclature of the 'Fungi caeteri'<sup>5</sup>).

A minor complication is that Fries (1822: 129) in part 2 of his 'Systema mycologicum' sanctioned *Peziza calyculus* Sow. Therefore the name *P. calyculus* Sow. has priority over *P. calyculus* Batsch. As a consequence, the latter is 'unavailable', but this does not apply to all recombinations of it.

It is noteworthy that after the publication of Batsch in 1783 it took almost a century before the Ciboria Fungus was described once more, that is to say as a heterotypic species with a different epithet. The length of this period might have been influenced by the conception of Persoon and Fries concerning *P. calyculus* Batsch, as mentioned before. In February 1880 Zopf (in Zopf & Sydow, 1880: no. 50) published a description of the fungus under the name *Sclerotinia batschiana*. This seems to be a clear reference to the species of Batsch. In later literature, by the way, the Ciboria Fungus can be found under many (valid and invalid) names.

It could be said that Batsch (1783: loc. cit.) had such a broad concept of *Peziza calyculus* Batsch, that under this name he subsumed at least two macroscopically clearly differing taxa, viz. the Ruby Elfcup (= var.  $\alpha$ ) and the Ciboria Fungus (= var.  $\gamma$ ).

Regarding var.  $\gamma$  as the type variety of *P. calyculus* Batsch, I believe I have demonstrated that '*calyculus* Batsch per Purton' is the oldest available specific epithet for this species. Therefore I propose the following recombination:

***Ciboria calyculus* (Batsch per Purton) Hengstmengel, comb. nov.**

Basionym: *Peziza calyculus* Batsch, Elench. fung.: col. 123, tab. 12, fig. 57a–c. 1783.

Most important synonyms:

*Octospora calyculus* (Batsch) Timm, Fl. megapol. prodr.: 261. 1788 ["caliculus"] – *Peziza calyculus* Batsch per Purton, App. Midl. fl. 3(2): 458. 1821 / non *Peziza calyculus* Sow., Col. fig. Engl. fungi 1: [53], tab. 116. 1797; sanctioned by Fries, Syst. mycol. 2(1): 129. 1822 / non *Peziza calycula* Schumach., Enum. pl. Saell. 2: 429. 1803.

*Sclerotinia batschiana* Zopf in Zopf & Sydow, Mycoth. March., cent. 1: no. 50. 1880 – *Ciboria batschiana* (Zopf) N.F. Buchw., Friesia 3(4): 255. 1947.

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<sup>4</sup> Also confusingly called Catkin Cup (Fungus), but that name could better be reserved for *Ciboria amentacea*. For *C. calyculus* (syn. *C. batschiana*) I would recommend the name Oak Goblet, analogous to the recommended name Alder Goblet for *C. caucis*.

<sup>5</sup> Under the International Codes of Botanical Nomenclature and precursors of 1912–1978.

*Peziza glandicola* Doass. & Pat., Bull. Soc. bot. Fr. 27: 356. 1880 [illeg.] / non *Peziza glandicola* Schwein., Trans. Am. phil. Soc., New series 4(2): 177. “1832” [1834] – *Phialea glandicola* Gillet, Champ. France discomyc. (4): 100. “1879” [1881] [replaced syn.].  
*Ciboria pseudotuberosa* Rehm, Ascomyc. exs., fasc. 3: no. 106. 1872 [nom. nud.] – *Peziza pseudotuberosa* (Rehm) Cooke, Grevillea 4(31): 132, pl. 65, fig. 288. 1876 [nom. nud.] – *Ciboria pseudotuberosa* Rehm ex Rehm, Ber. nat. Ver. Augsburg 26: 28. 1881 – *Sclerotinia pseudotuberosa* (Rehm) Rehm, Bull. Soc. mycol. Fr. 1: 115. 1885 – *Hymenoscyphus pseudotuberosus* (Rehm) W. Phillips, Man. Brit. Discomyc.: 119. 1887 [“-a” resp. “-a”] – *Stromatinia pseudotuberosa* (Rehm) Boud., Hist. classific. discomyc. Europe: 108. 1907.

For a more extensive list of synonyms can be referred to Buchwald (1954).

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## POSTSCRIPT (2024)

This article was originally published during the validity period of the ICBN 1978 (Leningrad Code), when the starting point for the ‘Fungi caeteri’ was 1 January 1821. Therefore it is now outdated at some points, e.g. concerning the use of the informal preposition ‘per’ between the names of two authors of a taxon name, indicating that the second author validated a name created by the first author, merely by using it firstly since the aforementioned starting point. The abolition of this usage, however, does not affect the validity of the proposed recombination in which the words ‘per Purton’ can be ignored (cf. Index Fungorum and Mycobank).

In case of reference to this article, please refer to the original Dutch version: Hengstmengel, J. (1981). Over *Peziza calyculus*. Coolia 25(1): 1–6 [“Jan. 1982”].