(1656) Proposal to reject the name Lecidea flavocoerulescens (lichenized Ascomycota, Porpidiaceae)

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(1656) Lecidea flavocoerulescens Hornem., Fl. Dan. 8, fasc. 24: 5; tab. 1431, fig. 1 (1810), nom. utique rej. prop.

The name Lecidea flavocoerulescens Hornem. is based on the original description (Vol. 8, fasc. 24: 5) and illustration (tab. 1431, fig. 1) in Flora Danica (1810), although neither Hornemann’s description (“Crusta tartarea flava, patellulis elevates, disco subconcavo coerulescente-glauco, margine libero nigro”) nor his illustration (see http://www.pictures.dnlab.dk/FloraDanica/Hefte24/www/1431.jpg) are particularly informative. The name is now used for Porpidia flavocoerulescens (Hornem.) Hertel & A.J. Schwab. This taxon has an obligate orange thallus, but the lightly, only partly oxydated thallus in Hornemann’s illustration suggests that it is only dubiously referable to that taxon, and is equally likely to represent a species of Lecidea or Porpidia with a grey, partly oxydated thallus (e.g., Porpidia macrocarpa or Lecidea lapicida).

Confusion over the correct spelling of the epithet appears to have arisen because Acharius (Synopsis Methodica Lichenum: 23, 1814) spelled it “flavo-coerulescens”. In Flora Danica, Hornemann spelled the specific epithet “flavo-coerulescens”. As “coeruleus” is given as an alternative to the more usual “caeruleus” by, for example, Stearn (Botanical Latin: 387, 1992), this should be retained as the correct spelling (and only the hyphen removed as required under ICBN Art. 60.11; Greuter & al. in Regnum Veg. 138, 2000), rather than considered an orthographic error and ‘corrected’ to flavocoerulescens.

Lynge (Meddel. Gronland 104(5): 10, 1933) was the first to point out critically the existence of esorediate and sorediate forms of this taxon, reserving the name L. flavocoerulescens for the esorediate taxon and proposing the name Lecidea soredizodes var. ochracea for the sorediate one. Although Lynge says “This is the well-known Arctic plant. Th. Fries called it L. flavicunda (Lich. Arct.: 208, 1860)”, Fries clearly describes a fertile taxon with no mention of soredia. However, Lynge later (Skr. Svalbard Nordishavet. 76: 18–19, 1939) recognized this taxon as Lecidea melinodes (Körb.) H. Magn., giving “L. contigua B. flavicunda Th. Fr. Lich. Spitsb.: 38, 1867”, although not his own earlier name, as a synonym. Degelius (Acta Horti. Gothob. 12: 112–114, 1937) further investigated the nomenclature, agreeing that L. flavocoerulescens referred to the esorediate taxon and recognizing the sorediate taxon as L. flavocoerulescens var. ochracea (Lynge) Degelius.

Degelius (l.c.) also mentioned the existence of a sorediate specimen in the herbarium at Upsala that had been annotated by E. Fries as originating from the original collection used for the protologue. It would appear, therefore, that Hornemann used more than one specimen when describing the taxon. Hertel (Khumbu Himal 6: 216–217, 1977) duly choose the specimen in UPS as lectotype thus associating the name with the sorediate taxon, which was contrary to previous usage. However, Gowan & Ahti (Ann. Bot. Fennici 30: 59–60, 1993) showed that, as this specimen was sorediate, it was in serious conflict with the protologue (ICBN Art. 9.17b), and the lectotypification had to be rejected. Instead they chose the illustration in Flora Danica as the lectotype, thus re-associating the name with the esorediate taxon.

Because of the confusion surrounding the application of the name, Santesson (Lichens and Lichenicolous Fungi of Sweden & Norway 178, 1993) rejected the use of P. flavocoerulescens for the esorediate taxon and continued to use the unambiguous Porpidia flavicunda (Ach.) Gowan. However, a formal proposal to reject the name was not made and subsequent checklists have used either P. flavocoerulescens (e.g., Coppins, Checklist of lichens of Great Britain and Ireland: 47, 2002; Esslinger & Egan, Bryologist 98: 522, 1995; Vitikainen & al., Nrrlinia 6: 51, 1997) or P. flavicunda (e.g., Elvebakk & Hertel, Lichens. In Elvebakk & Prestrud (eds.): A Catalogue of Svalbard Plants, Fungi, Algae, and Cyanobacteria, Norsk Polarinstitutt Skrifter: 323–324, 1996), and the on-line checklists for Italy (http://dbiodbs.univ.trieste.it/askrata.html) and Iceland (http://www.biologie.uni-hamburg.de/checklists/iceland_1.htm) for the esorediate taxon. Thomson (American Arctic Lichens. 2: 492, 1997) continued to use the name P. flavocoerulescens for the sorediate taxon.

The situation surrounding the application of the name has been further confused by recent morphological (Fryday, Lichenologist 36: 9–12, 2005) and molecular investigations (Buschbom & Mueller, Molecular Phylogenetics and Evolution 32: 74–76, 2004). These have demonstrated that there is at least one additional esorediate species of Porpidia with an obligate orange thallus, P. flavocruenta Fryday & Buschbom, that is indistinguishable from P. flavo-
coerulescens by gross morphology alone, but readily separated from it by apothecial anatomy, chemistry, and molecular characters. Consequently, if the name *P. flavocoerulescens* is accepted for the esorediate taxon, it will be necessary to designate an epitype to settle the application of the name.

Therefore, there are several good reasons why the name should be formally rejected:


2. Recent attempts to typify the name have not been universally accepted.

3. The name is apparently based on a mixed type, with the only available specimen being in serious conflict with the protologue.

4. The illustration and description in Flora Danica constitute only rudimentary description from which it is impossible to determine the identity of the taxon being described.

5. *Porpidia flavocoerulescens* is indistinguishable macroscopically from *P. flavocruenta*, so, if accepted, it will be necessary to choose an epitype to establish the correct application of the name.

6. The delimitation of *P. flavocoerulescens* is still unclear because both morphological (e.g., thickness of hypothecium, length of conidia, etc.) and molecular characters (Buschbom, pers. comm.) suggest that *P. flavocoerulescens* comprises at least two, closely related lineages.

7. There is a readily available, unambiguous alternative name, *L. flavicunda* Ach., published in the same year as *L. flavocoerulescens*, for which there is a good, well developed holotype with apothecia and pycnidia.

Given the confusion of the application of the name, the need to select an epitype if the name is accepted, and the availability of a suitable alternative, *Lecidea flavocoerulescens* is here formally proposed for rejection.

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