

(2563) Proposal to conserve the name *Lichen ferrugineus* (*Blastenia ferruginea*) with a conserved type (*Teloschistaceae*, lichenised *Ascomycota*)

Linda in Arcadia¹ & Jan Vondrák²

¹ *Kastri, 22013, Arkadias, Greece*

² *Institute of Botany, Academy of Sciences of the Czech Republic, Zámek 1, 252 43 Průhonice, Czech Republic*

Author for correspondence: Linda in Arcadia, linda_in_arcadia@cantab.net

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(2563) *Lichen ferrugineus* Huds., Fl. Angl.: 444. Jan–Jun 1762, nom. cons. prop.

Typus: France, Alpes-de-Haute-Provence, Gorges Du Verdon, SW-S from La Palud-sur-Verdon, alt. 850 m, 43.76294°N, 6.31700°E, 9 Mai 2015, *Frolov 966* (PRA; isotypi: BM, GZU, herb. Frolov), typ. cons. prop.

For over 150 years Hudson's epithet has been applied to a common and widely distributed member of *Teloschistaceae* with a grey thallus and dark red apothecia without a thalline margin. For most of that time it was known as *Caloplaca ferruginea*, and that name has appeared in dozens of publications, including several major Floras. *Caloplaca* is now being subdivided, and the species belongs in the recently resurrected *Blastenia* A. Massal. (in *Flora* 35: 573. 1852), a genus with over 20 species (Arup & al. in *Nordic J. Bot.* 31: 16–83. 2013). *Blastenia ferruginea* (Huds.) A. Massal. (l.c.: 574) was selected as type of *Blastenia* by Clements & Shear (*Gen. Fungi*: 323. 1931).

Hudson described his species as having red apothecia (*tuberculis rufis*) and a whitish, granular (*leprosus albicans*) thallus. The first character fits the species usually known as *Blastenia ferruginea*.

The second does not: *B. ferruginea* has a pale grey thallus but it is smooth, not granular.

Hudson's name has not been typified. He described the species from England but did not cite any collections. The remnants of his herbarium, now in LINN, do not include any lichens. The name must therefore be lectotypified on one of the two figures cited by Hudson: "Dill. musc. ... t. 18. f. 4. t. 55. f. 8.", i.e., plate 18, figure 4 and plate 55, figure 8 in Dillenius, *Hist. Musc.* 1. 1741.

Plate 18 figure 4 shows a single piece of bark with what can be interpreted as rounded apothecia. The material from which the figure is said to have been prepared still exists in OXF. That material now includes three pieces of bark, and the piece on the left appears to be from a different tree than the two on the right. The latter have the lichen *Arthonia cinnabarina*, and the orange patches on the thallus of that species do not match Hudson's description. The piece on the left has a lichen that does match Hudson's description, and is presumably the material from which Dillenius's figure was prepared.

The material has an annotation slip by P.W. James, dated November 1961. James determined the material as "*Bilimbia luteola*" and noted that ascospores are 7-septate and about 50 µm long. This can

only refer to the material on the left piece of bark. “*Bilimbia luteola*” is an unpublished name for *Bacidia luteola* (Ach.) Mudd, now *Bacidia rubella* (Hoffm.) A. Massal. That species has red apothecia and a granular thallus, and fits Hudson’s description. *Blastenia ferruginea* in the usual sense has very different ascospores.

Plate 55 figure 8 shows a moss on a piece of bark. The bark has rounded patches that can be interpreted as apothecia of a lichen. Unfortunately the corresponding material in OXF now has only the moss. It must have been separated from the bark, which is now missing. No lichen is present overgrowing the moss itself. However, we presume that the bark also had *Bacidia rubella*. We have no reason to doubt Dillenius’s claim that the same lichen was present in both cases. Although *Bacidia rubella* and *Blastenia ferruginea* both have reddish apothecia, they cannot be confused when compared side by side.

Lichens in the Dillenian herbarium were studied by Crombie, who reported his findings in *J. Linn. Soc., Bot.* 17: 553–581. 1880. He evidently made only external observations, as he did not report any measurements of, e.g., ascospores made from thin sections. Crombie did not mention plate 55 figure 8, so probably the bark had been lost even then. He determined the material for plate 18 figure 4 as “*Lecanora ferruginea* (Huds.)”, i.e., *Blastenia ferruginea*, and “*Arthonia cinnabarina* var. *kermesina* (Schaer.)”, a synonym of *A. cinnabarina*. Crombie’s determination of *Lecanora ferruginea* is inconsistent with James’s determination of the same material as *Bacidia rubella*, and we believe that James was correct, not Crombie. We suspect that Crombie merely recorded what he was expecting to find, after what could only have been superficial study.

Crombie remarked that “Of these [the two lichens in t. 18. fig. 4] the [*Lecanora ferruginea*] has been correctly determined, except by Fries, who referred it to *Biatora vernalis* ...” The epithet *vernalis* was often misapplied in the first half of the 19th century to *Bacidia rubella*, and Fries was closer to the truth than Crombie realised. See Fries, *Lichenogr. Eur. Reform.* 260–261. 1831, where, under *Biatora vernalis* a item a. *luteola*, he cites Dillenius’s figure, whereas item b. *conglomerata* is *Biatora vernalis* in today’s sense. See also Smith & Sowerby (*Engl. Bot.*: t. 845. 1801), where the description of *Lichen*

vernalis is in fact of *Bacidia rubella*, and *Verrucaria rubella* is cited in synonymy. Smith knew that there was a problem with Hudson’s epithet, and he repeated his concern later (*Engl. Bot.*: t. 1650. 1806).

In summary, the name *Lichen ferrugineus* must be lectotypified on one of two Dillenian illustrations. One of them was certainly prepared from material of *Bacidia rubella*, not the species to which Hudson’s epithet has long been applied. The other was almost certainly prepared from *Bacidia rubella* too, although that cannot be proven as the relevant piece of bark was lost over a century ago.

We could lectotypify the name on the latter figure, and designate an epitype that matches the usual usage, as it would be difficult to prove that Dillenius’s missing collection was not *Blastenia ferruginea* in the usual sense. However, we feel that such a course of action would not be good practice in the light of the available evidence.

Conservation seems preferable. It will fix the application of the name *Blastenia ferruginea* in the sense in which the epithet has been used for over 150 years. It will also remove any threat to the name *Bacidia rubella* (Hoffm.) A. Massal., as Hoffmann’s epithet has priority only from 1796.

The proposed conserved type is an ample recent collection, in good condition, with the normal phenotype, from a region where the species is common, and we have DNA data from it. (Our only two modern collections from southern England have few apothecia, and neither would be a good choice as type.)

If this proposal is not accepted, we will have to lectotypify the name on an illustration that is known to represent a species other than that to which the name has long been applied.

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