

ON THE APPLICATION OF THE NAME
AGARICUS LACRYMABUNDUS BULL.: FR.

C. BAS

Rijksherbarium, Leiden

In literature the name *Psathyrella lacrymabunda* (Bull.: Fr.) Moser is being applied to two species which in this note will be called *Psathyrella cotonea* (Quél.) Konr. & Maubl. and *Lacrymaria velutina* (Pers.: Fr.) Konr. & Maubl. or '*L. velutina*' s. auct.

Taxonomically the distinction between the two species involved offers no problems. The former is keyed out satisfactorily by Kühner & Romagnesi (1953: 370) as *Drosophila cotonea* and by Moser (1982: 272) as *Psathyrella cotonea*, in both cases with reference to Lange's plate (1939:) 146C; the latter by Kühner & Romagnesi (1953: 371) as *Drosophila velutina* and by Moser (1982: 272) as *Psathyrella velutina*, in both cases with reference to Lange's plate (1939:) 144B.

For both species the name *Agaricus lacrymabundus* could be the oldest available one: for *P. cotonea* because *A. lacrymabundus* Bull. (1785): Fr. (1821) is much older than the name *Stropharia cotonea* Quél. 1877 (the basionym of the name *P. cotonea*); for '*L. velutina*' because Fries in 1821 sanctioned the epithet *velutinus* Pers. on variety level under *A. lacrymabundus*.

As the decision about the correct application of the name *A. lacrymabundus* depends on its lecto- or neotypification, the most relevant information on the history of this name and arguments for the several possible typifications are given here point by point.

1. In 1785 Bulliard published in his 'Herbier de la France' plate 194, depicting a pale form of '*L. velutina*'. Plate and French description give all the diagnostic macroscopical characters of *L. velutina*, viz. a dry tomentose pileus, a cortina-like veil and crowded spotted gills with droplets along the edge. Bulliard named this fungus very appropriately *Agaricus lacrymabundus*. Under the 'International Code of Botanical Nomenclature' as modified in 1981 in Sydney, this name is to be considered validly published in 1785, as the later starting points for fungus names have been abolished.

In 1791 Bulliard published on pl. 525 fig. 3 of the same work a second picture of his *A. lacrymabundus*; this time a more slender fungus with a red-brown pileus, but again with droplets along the edge of the gills. Also this fungus undoubtedly belongs to the genus *Lacrymaria*. It probably represents the taxon *L. pyrotricha* (Holmskj.) Konr. & Maubl., which is perhaps nothing more than a form or variety of '*L. velutina*'.

Finally in 1792 (: 438) Bulliard published an extensive description under the name *A. lacrymabundus* with references to both his earlier plates.

2. According to the recently changed rules of botanical nomenclature, Fries (1821: 287) sanctioned the name *Agaricus lacrymabundus* (in the Index he wrote '*A. lacrymabundus* Bull.')

3. In 1821 Fries gave a rather concise description of *A. lacrymabundus* Bull.: Fr., adding the abbreviation 'v.v.', which means that he saw specimens of this species in fresh state, at the same time citing Bulliard's plate 525, a plate of Sowerby (1796: pl. 41) and a description by de Candolle (1805: 146).

4. As Fries did not keep herbarium specimens of the species, we have to look for the most suitable elements in his 'protologue' of 1821 for the selection of a lecto- or neotype.

As mentioned under point 1 above, Bulliard's plate 525 represents a species of *Lacrymaria*, viz. a taxon that is either a red-brown form of '*L. velutina*' or *L. pyrotricha*.

The cited description of de Candolle undoubtedly concerns '*L. velutina*' also; moreover it refers to both plates of Bulliard.

Fries' 1821 description contains some elements (e.g. the pileus '..... albidus dein fuscus') that could point to Fries having had in hand specimens of another species than '*L. velutina*', but it is impossible to decide which species that could have been. (Later descriptions by Fries were altered in such a way that they fitted *P. cotonea*, but that was not yet the case in 1821).

5. As Fries, when taking up *A. lacrymabundus* Bull. in 1821, referred to two excellent plates and one unambiguous description, all representing a species of *Lacrymaria* and not a species of *Psathyrella*, it cannot be said that he made a mistake when he added a slightly deviating description of material seen by himself, but at most that he extended the species concept of *A. lacrymabundus* to include the material in hand.

6. Under the present wording of Article 13 of the 'Code' there are two or three possible lectotypes for *Agaricus lacrymabundus* Bull.: Fr.

(i) If we select Fries' description of 1821 (which is allowed according to Article 9.3 of the 'Code'), *A. lacrymabundus* becomes a dubious name as the 'lectotype' cannot be identified.

(ii) If we select one of the plates cited by Fries as lectotype (another possibility according to Article 9.3 of the 'Code'), it is most logical to select the cited plate of the author of the name, viz. Bulliard's plate 525 fig. 3. It is then a matter of interpretation of this plate and of taxonomic concepts whether the name *A. lacrymabundus* has to be used for '*L. velutina*' or for *L. pyrotricha*; a decision only to be taken after a careful study of the '*L. velutina*' complex.

(iii) However, I prefer to select Bulliard's first plate (1785, pl. 194), not directly but indirectly cited by Fries in 1821 by taking up Bulliard's name, and by referring to de Candolle's description in which that plate is cited, as the lectotype of *A. lacrymabundus* Bull.: Fr.; it is also the plate accompanying the (now) valid publication of the name *A. lacrymabundus* Bull. in 1785.

7. In 1821 Fries added to *A. lacrymabundus* the variety ' β *A. velutinus*', with reference to *A. velutinus* Pers. described in 1801. Fries knew this taxon in 1821 only from

plates and descriptions ('Abbild. d. Schw. 3'¹; 'Holmskj. Ot. II t. 35'). It probably is the more brightly coloured *L. pyrotricha* (Persoon: 'pileo ferrugineo'; Holmskjöld 1799: pl. 35 represents the type of *A. pyrotrichus*!).

That Persoon's *A. velutinus* (1801: 409) certainly is a species of *Lacrymaria* and not a *Psathyrella* appears from Persoon's description and references and from material in Persoon's herbarium studied by Singer (1961: 49), who, however, did apparently not consider the possibility that Persoon's lectotype material belongs to *L. pyrotricha* and not to '*L. velutina*' s. auct.

As Persoon's *A. velutinus* has been sanctioned by Fries as a variety of *A. lacrymabundus*, the latter name, simultaneously sanctioned, has priority on species level when typified as indicated under point 7b and 7c above and *L. pyrotricha* and *L. lacrymabunda* are considered conspecific.

It should be stressed that those who reject the selection of plates as lectotypes in favour of the selection of neotypes, have nevertheless to follow a reasoning similar to that given above, in order to find out what the neotype should look like and where it preferably should come from.

Another point I want to put forward is that this note could have been reduced to not more than 2 or 3 paragraphs, if in Sydney the new Article 13 of the Code about the sanctioning of mycological names had not been extended with the, in my opinion very unfortunate, rule that for the typification of a sanctioned name any element in the 'protologue' of the sanctioning author can be taken. The aim was flexibility in the 'Code' which would allow typification of sanctioned names in accordance with current usage of such names. The result is a complex situation which will cause much confusion and dispute in the future.

Where there are choices, there are differences of opinion resulting in different solutions. Mycological nomenclature would be saved much trouble if the present rule about the typification of sanctioned names would be replaced by one declaring that the sanctioning of a name does not alter its typification in accordance with the (real) protologue and material studied by the author who validly published the name.

CONCLUSIONS

I. Fries' 'protologue' of *Agaricus lacrymabundus* Bull.: Fr. in 1821 comprises so many elements clearly pointing to a species of *Lacrymaria* that this name has to be typified in such a manner that it has to be used for a species of that genus.

II. The name *Psathyrella cotonea* (Quél.) Konrad & Maubl. for a true species of *Psathyrella* cannot on any account be replaced by the name *Pl. lacrymabunda* (Bull.: Fr.) Moser.

¹ This is a reference to the plate and description of *Agaricus macrourus* Pers. in Hoffman's 'Abbildungen der Schwämme' the third fascicle (1793) of which is considered to be written by Persoon (see Stafleu, 1967: 205).

III. The most opportune lectotype for *A. lacrymabundus* Bull.: Fr. is Bulliard's plate 194 representing the type of Bulliard's name when it was validly published in 1785, and is here chosen as such. Thus *Lacrymaria lacrymabunda* (Bull.: Fr.) Pat. becomes the correct name for '*L. velutina*' s. auct. s.l., or, if *L. pyrotricha* is recognized as a taxon on species level, for '*L. velutina*' s. auct. s. str.

IV. The possibility should be considered that *Agaricus velutinus* Pers. (1801) is a synonym of *A. pyrotrichus* Holmskj. (1799).

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