

NOTES ON MYXOMYCETES V

ON THE IDENTITY OF THE GENERA CRIBRARIA AND DICTYDIUM

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The genus *Dictydium* was created by SCHRADER (1797) for *Cribraria*-like forms lacking a cup. ROSTAFINSKI (1875) gave it its modern definition: i.e. having meridional costae which are joined at frequent intervals by fine, more or less parallel threads. He further created a genus *Heterodictyon* for a species (*H. mirabile*) which has ribs in the lower part and a *Cribraria*-like net in the upper. Masee in his monograph (1892) transferred *Heterodictyon* to *Cribraria* (*C. mirabilis* Mass.), pointing out that there is "every shade of transition between the two extremes," and that *Heterodictyon bienaszii* Racib. i.e. (*Cribraria macrocarpa* of the later monographs) "closely connects the genus *Cribraria* in the wider sense with *Dictydium*."

Jahn in 1901 described a variety "anomalum" of *Dictydium umbilicatum* (i.e. *D. cancellatum* Batsch), with a rigid stem "ohne die hakenförmige Aufhängung in das Sporenkörbchen", with a rather long sporangium, always without a cup, with the ribs merging into a *Cribraria*-like net in the upper part, and with a more persistent silvery peridium than is found in the typical form. He studied this taxon for some years, and came to the conclusion that it was not more than a variety of *Dictydium umbilicatum*. Later MEYLAN (Bull. Soc. Vaud. 44: 295. 1908) raised it to specific rank (*Dictydium anomalum*), mentioning a similar variation in presence or absence of the cup as occurs in *D. cancellatum*, and never finding any "formes transitoires vers *D. umbilicatum*". He further was of opinion that *D. anomalum* would probably be identical with Rostafinski's *Heterodictyon mirabile*. In 1911 Lister reduced *D. anomalum* Meylan to his var. *alpinum* of *D. cancellatum*. In Bull. Soc. Vaud. 57: 305. 1932 Meylan went a step further, and sank *Dictydium cancellatum* (Batsch) var. *alpinum* Lister into *Dictydium mirabile* (Rost.) Meylan. In a later paper wherein G. LISTER describes *D. rutilum* (Journ. of Bot 71: 222, 1933), this author states that *D. cancellatum* var. *alpinum* is clearly the same as Rostafinski's species, adding that Meylan considered this variety worthy of specific rank. Dr G. W. Martin (private communication, shortly to be published), agrees with Meylan that this taxon merits specific rank.

Dictydium rutilum G. Lister is another *Dictydium* with a *Cribraria*-like net in the upper part. Therefore, as this *Cribraria*-like aspect is normal in two of the three species of *Dictydium*, and fairly common in the

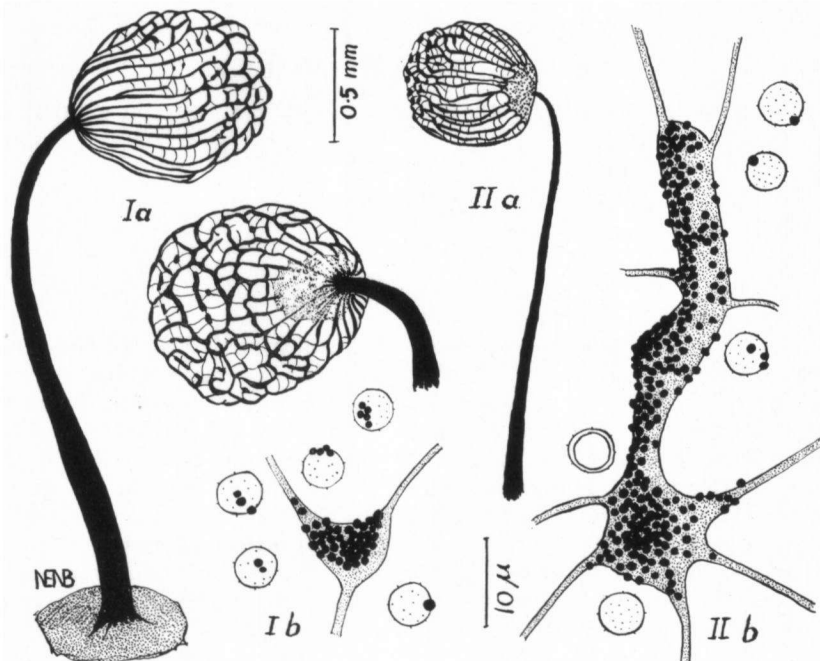


Fig. 1. *Cribraria mirabilis* (Rost.) Massee. I (2132): a, two sporangia; b, spores and a node of the peridial net. *Cribraria cancellata* (Batsch.) nov. comb. var. *fusca* (G. Lister) nov. comb. II (4031): a, a sporangium; b, peridial rib ending in node, and spores. The black dots in Ib and IIb are "dictydine" granules. Corresponding parts drawn to the same scale.

variety *fuscum* of the type species (Fig. IIa), there seems to be no point in keeping the two genera apart. The dictydine (plasmodic) granules which are found in the nodes and ribs of the peripheral net, and sometimes also in the spores, are also common to both genera; this is therefore another reason to unite them.

The diagnosis for *Cribraria* Pers. then becomes: "Sporangia globose, subglobose or pyriform, stalked. Peridium evanescent with the exception of a net of slender threads which are more or less expanded and thickened at the nodes, or of ribs extending from base to apex, or of a combination of ribs and nodes connected by slender threads, which sometimes persist at the base as a cup or disc."

The species transferred from *Dictydium* to *Cribraria* are:

Cribraria cancellata (Batsch) nov. comb. var. *cancellata*

Cribraria cancellata (Batsch) nov. comb. var. ***fusca*** (G. Lister) nov. comb.

Cribraria mirabilis (Rost.) Massee

Cribraria rutila (G. Lister) nov. comb.