

Paullicorticium curiosum, presumably an imperfect state

by

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Paullicorticium curiosum Parm. was described as a primitive representative of the *Corticaceae*. However, a close examination of the description and figures leaves little doubt that it is the conidiferous state of a member of *Hyphoderma* Wallr. emend. Donk, possibly *H. populneum* (Peck) Donk or a closely related species. The new combination *Oedocephalum curiosum* (Parm.) Donk is proposed.

Paullicorticium curiosum Parm. & Žukov apud PARMASTO (1969) was instituted for a species that was considered to be a primitive representative of the *Corticaceae*. Some of the features that were supposed to support this conclusion were, amongst others, the variable number of spores per basidium, which varies from two to between four and eight; the variable shape of the holobasidia, which are not divided into a hypo- and epibasidium (pro- and metabasidium); the scattered basidia, which do not form a continuous hymenium; and the smooth spores. The basidiomycetous nature of the fungus is testified to by the presence of occasional clamp connections.

Moreover it was noted that the spores lack an apiculus and that they are probably not the typical ballistospores so characteristic of the Hymenomycetes in general. A careful inspection of the drawings strongly supports this assumption: the sterigmata appear rather variable in shape and also somewhat different in length. To make a long story short, the basidia give the impression that they do not forcibly discharge the spores so that in this respect they are 'gasteromycetoid' — if they are basidia at all.

In my opinion the truth is that *Paullicorticium curiosum* is not a species of *Paullicorticium* and not even a basidiferous state. The so-called basidia are conidiophores that are to be assigned to the form-genus *Oedocephalum* Preuss, although the number of spores produced per conidiophore is much smaller than

in most species of this genus. Quite similar structures were described by McKEEN (1952) for three closely related species of *Peniophora*, viz. *P. heterocystidia* Burt, *P. populnea* (Peck) Burt, *P. mutata* (Peck) Höhn. & L. These species were transferred by DONK (1957, p. 15) to the emended genus *Hyphoderma* Wallr. In a later discussion of the genus he (DONK, 1962, p. 221) inserted the following paragraph (slightly adapted to the present need):

However, in extensive studies of several other species of *Hyphoderma*, like *H. heterocystidium* (Burt) Donk, *H. populneum* (Peck) Donk, and *H. mutatum* (Peck) Donk by McKEEN (1952) no stephanocysts were reported. The species of this second set all form *Oedocephalum* states, viz. capitate conidiophores producing conidia simultaneously over the upper portion of the apical swelling. It would seem that the production of stephanocysts and *Oedocephalum* conidiophores in cultures are mutually exclusive and may provide a welcome basis for a future characterization of sections. On the other hand it must be remembered that *Oedocephalum* conidiophores are produced by several apparently not closely related Hymenomycetes: *Heterobasidion annosum* (Fr.) Bref. (BREFELD, 1888, p. 163—171, pl. 10 fs. 10—16, pl. 11), *Laurilia sulcata* (Burt) Pouz. (MAXWELL, 1954, p. 265, fs. 1—7, 23—28; DAVIDSON & AL., 1961, p. 272, f. 5; as *Stereum sulcatum* Burt), *Vararia 'granulosu'* (Fr.) Laurila (MAXWELL, 1954, p. 268, fs. 8—11, 29—31), and *Corticium [Gloeocystidiellum] furfuraceum* Bres. (MAXWELL, 1954, p. 269, fs. 12—15, 32—34).

Two of the noteworthy features of the *Oedocephalum* states belonging to *Hyphoderma* are the shape and length of the conidia; these are elongate, oblong-cylindrical, often slightly curved, with a barely distinguishable apiculus, 9—19 μ long.

As defined by HUGHES (1951, p. 593), '*Oedocephalum* spp. are characterized by simple, erect conidiophores producing conidia more or less simultaneously on denticles on a swollen terminal cell (ampulla).' The conidiospores are formed not in chains but singly; furthermore they are not distinctly coloured. *Oedocephalum* states are known to occur mainly in Asco- and Basidiomycetes.

Although it is too early to conclude that these various *Oedocephalum* states have been characterized sufficiently sharply to make possible specific determination of the basidiferous states with which they are to be associated, I would timidly suggest that *Paullicorticium curiosum* could belong to *Hyphoderma populnea*. In excluding the former from the perfect fungi and transferring it to the form-genus *Oedocephalum* the following combination is proposed: *Oedocephalum curiosum* (Parm. & Žukov apud Parm.) Donk, comb. nov.; basionymum, *Paullicorticium curiosum* Parm. & Žukov apud E. PARMASO in *Česká Mykol.* 23, p. 73, fig. (1), 1969.

It would not be the first time that *Oedocephalum* conidiophores have been mistaken for basidia. When BREFELD (l.c.) studied *Fomes annosus* (Fr.) P. Karst. he believed he had found all the intermediate states between these and true basidia. This led him to introduce the genus *Heterobasidion* Bref. for this former species of *Fomes* (Fr.) Fr. and to launch the theory that the basidium was nothing but a stabilized form of conidiophore. When the cytology of the basidium became better known this theory could not be upheld. Conidiophores, even when formed on dikaryotic mycelium, are supposed to lack the fusion of a dikaryon followed

by reduction divisions. The conidial state of *Heterobasidion annosum* received the names *Cunninghamella meineckella* OLSON (1941) and *Oedocephalum lineatum* BAKSHI (1952).

Literature

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Samenvatting

Paullicorticium curiosum Parm. werd beschreven als een primitieve vertegenwoordiger van de *Corticiaceae*. Een nauwgezette studie van de beschrijving en de figuren liet echter weinig twijfel, dat het hier ging om een conidiaal stadium van een soort van *Hyphoderma* Wallr. emend. Donk, waarschijnlijk *H. populneum* (Peck) Donk of een nauw verwante soort. De nieuwe combinatie *Oedocephalum curiosum* (Parm.) Donk wordt voorgesteld.