

Some operculate *Discomycetes* from the park in Ilidža near Sarajevo (Jugoslavia)

Několik operkulátních diskomycetů nalezených v parku nedaleko Ilidže u Sarajeva (Jugoslaviie)

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The author treats 5 operculate *Discomycetes* which were found during his several hours' touring visit to the public park in Ilidža near Sarajevo (Jugoslavia). They are: *Ascobolus carbonarius* P. Karst., *Ascobolus furfuraceus* Pers. ex Hook., *Melastiza greletii* Le Gal, and 2 new species: *Marcelleina brevicostatispora* J. Moravec spec. nov. and *Scutellinia pseudoumbrarum* J. Moravec spec. nov.

Autor uvádí 5 operkulátních diskomycetů, které našel během své několikahodinové turistické návštěvy veřejného parku v Ilidži u Sarajeva (Jugoslaviie). Jsou to: *Ascobolus carbonarius* P. Karst., *Ascobolus furfuraceus* Pers. ex Hook., *Melastiza greletii* Le Gal a 2 nové druhy: *Marcelleina brevicostatispora* J. Moravec spec. nov. a *Scutellinia pseudoumbrarum* J. Moravec spec. nov.

During the ten days of my stay in Jugoslavia in August of 1969, my attempts to find a *Discomycete* in the southern part of the Adriatic sea-coast were unsuccessful. That was quite natural, because the sunny weather made the soil dry up. But neither the parks near the sea showed any fructifications of *Discomycetes*.

A quite different situation was in the inland of Bosna and Hercegovina. Unfortunately, my stay in this beautiful country drew to an end and so I could visit only the interesting towns of Mostar and Sarajevo.

Near Sarajevo, there is the small spa of Ilidža, which is well-known by its beautiful public park. The park is large and in a good care. A beautiful plane-tree avenue borders the road which connects the park with Ilidža. The park is very much visited by the inhabitants of Sarajevo, who find there a quiet and wholesome environment. There are the sources of River Bosna in the park and the old trees offer sufficient shade so that the soil retains the moisture which is necessary for the fructification of the operculate *Discomycetes*.

Unfortunately, I had little time to look for *Discomycetes* and so the mentioned 5 species were found only randomly near the public paths. This contribution may also excite attention of other (mainly native) mycologists, since the park near Ilidža would deserve periodical mycological survey.

The specimens are deposited in the herbarium of the Nat. Museum, Prague (PR), and duplicates are in my private herbarium of *Discomycetes* (J. Moravec).

Ascobolus carbonarius P. Karst.

On burnt ground in the public park near Ilidža (district of Sarajevo), 12. VII. 1969, leg. J. Moravec.

Ascobolus furfuraceus Pers. ex Hook.

On horse dung along the road from Ilidža (district of Sarajevo) to the public park, 12. VII. 1969, leg. J. Moravec.

Melastiza greletii Le Gal.

Syn.: *Melastiza chateri* (Smith) Boud. sensu Grelet, non sensu Boud.

On damp soil near a path in the public park near Ilidža (district of Sarajevo), 12. VII. 1969, leg. Pavlína Moravcová et J. Moravec (one apothecium only).

Apothecium 4 mm in diameter, sessile, convex, thecium very shallow cup-shaped (nearly flat), pale pinkish red, outer surface paler, margin only very finely, hardly visibly dotted. Excipulum (textura glubulosa vel angularis) con-

sists of cells 8–27–46 μm in diameter with walls 1.5 μm thick, of brown color in the marginal area. Hairs 20–80–100 \times 8–19 μm , light brown, septate, obtuse and mostly clavate above. Asci 230–245 \times 11–15 μm , cylindrical, obtuse, not blued by iodine. Paraphyses 2.7–4 μm thick, enlarged at the tip to 5.5 μm , with orange granules. Ascospores 14–19–24.5 \times 8–9.5 μm , narrowly ellipsoid with coarse rounded warts up to 1.7 μm in diameter, which are irregularly connected by thin buckles forming irregular and incomplete reticulation. The warts at the ends of the ascospores are conspicuously enlarged.

Melastiza greletii is a rather rare species. It differs from *Melastiza chateri* (W. G. Smith) Boud. [= *M. miniata* (Fuck.) Boud.] mainly by its quite different incomplete ornamentation of the ascospores. The ascospores of *M. greletii* are narrower and the apothecia are smaller and more convex. The ascospores of *M. chateri* have in contrast to *M. greletii* a complete regular reticulum with spine-like projections. The material of *M. greletii* from the Ilidža Park agrees with the description of Le Gal (1958) and the ornamentation of the ascospores well agrees with fig. 52, p. 208, pictured by Le Gal (1947), which represents *M. chateri* sensu Grelet (= *M. greletii* Le Gal according to Le Gal 1958). I know both species from my own collections from Czechoslovakia, where *M. greletii* is a rare species, too.

Marcellina brevicostatispora J. Moravec spec. nov.

Apothecia 5–10 mm diam., leniter patellaria dein explanata, saepe margine pallescentia, thecio violaceo-caeruleo dein obscure caeruleo. Excipulum e cellulis globosis vel irregulariter ellipsoideis, 13–55 μm diam., constat. Asci cylindracei, 190–200 \times 11–15 μm , obtusi, non amyloidei. Paraphyses filiformes, 2.5–3.5 μm crassae, apice sensim curvatae et 4 μm crassae. Ascospores globosae, 9–11 μm diam., verrucosae, verrucae irregulariter protractae, breviter costiformes, costis brevibus saepe curvatae (sub immersione oleacea 1500 \times + Cotton bleu Geigy, s. 123 in acido lactico = Anilinblue wasserl. = CB). A *Marcellina personii* (Crouan) Brumm. sporis verrucosis vel breviter costatis, non reticulatis, discrepat.

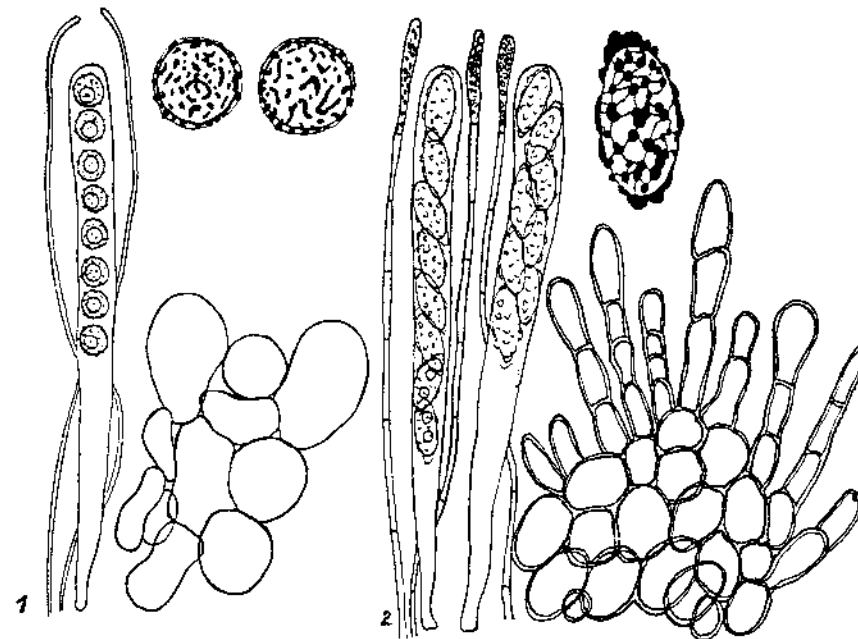
Hab.: Ad terram humidam humosam sub *Platano* sp. haud procul Ilidža, districtus Sarajevo, 12. VII. 1969 legit J. Moravec. Typus PR 710001 et duplicatum in herb. priv. J. Moravec.

Apothecia 5–10 mm broad, shallow cup-shaped, later expanded, thecium and outer surface blue-violet, later dark-blue, margin paler. Excipulum consists of globular to irregular ellipsoid cells 13–55 μm in diameter. Asci 190–200 \times 11–15 μm , cylindrical, obtuse, not blued in Melzer's reagent. Paraphyses 2.5–3.5 μm thick, slightly curved above, reaching a diameter up to 4 μm at their apices, or not thickened. Ascospores 9–11 μm in diameter, globose, warted, with irregular narrow or irregularly curved warts or short ridges, which are often very variable in size. The short ridges are much shorter and of very different form from the ridges of *Marcellina personii* (Crouan) Boud. (Used Cotton bleu Geigy, s. 123, in acido lactico = Anilinblue wasserl. = CB).

Locality of holotype: on humid soil in plane-tree avenue along the road from Ilidža to the public park (district of Sarajevo), 12. VII. 1969, leg. J. Moravec.

Marcellina brevicostatispora differs from *Marcellina personii* (Crouan) Brumm. by its different ornamentation of the ascospores (see drawing). Brummelen (1967) explained the problem of Crouan's type specimens of *Ascobolus personii* Crouan and found that these were two different fungi: *Marcellina personii* (Crouan) Brumm. having rough ascospores with an almost complete net-work of ridges and *Marcellina atrovioleacea* (Delile ex de Seynes) Brumm. [its correct name being *Marcellina planchonii* (Dun. ex Boud.) J. Moravec 1969] with smooth ascospores. There are two other species which should be compared with *M. brevicostatispora*, i.e. *Barlaea amethystina* (Quélet) Sacc. and *Lamprospora georgii* Svrček. As regards *Barlaea amethystina*, this species was described with small apothecia and with ascospores having rounded isolated warts. Dennis (1968) noted that *Humaria personii* var. *amethystina* Quélet

seems to be a synonym of Crouan's species, viz *Marcellina personii* (Crouan) Brum. It is the same opinion which was already held by Boudier (1907). Also *Lamprospora georgii* Svrček was described with isolated to spine-like warts but with a different colour of the apothecia (Svrček 1958).



1. *Marcellina brevicostatispora* J. Moravec — Ascus, paraphyses, spores (CB+immers. 1500 \times), cells of excipulum. Ilidža near Sarajevo (Jugoslavia), 12. VII. 1969, leg. J. Moravec. — 2. *Melastiza greletii* Le Gal — Asci, paraphyses, spore (CB+immers. 1500 \times), cells of excipulum, hairs. Ilidža near Sarajevo (Jugoslavia), 12. VII. 1969. J. Moravec del.

Scutellinia pseudoumbrarum J. Moravec spec. nov.

Apothecia 5–20 mm diam., solitaria vel gregaria, sessilia, humiliter patellaria vel discoidea, thecio obscure rubro vel laete cinnabario, extus margineque pilis brevibus, obscure fuscis obsita (thecio in statu exsiccato luteo). Excipulum textura globulosa, angularis vel prismatica, e cellulis globosis, ellipsoideis vel prismaticis, 20–60 \times 13.5–27 μm . Pili recti, sursum acuti vel obtusi, fusci, basi saepe ramoso-radicantes, septati, membranis 4–5.5 μm crassis. Asci 270 \times 16.3–24–29 μm , cylindracei, apice obtusi. Paraphyses filiformes, 4 μm crassae, apice irregulariter ad 5.5–11 μm clavato-incrassatae, clavula cacumine obtuse acutata. Ascospores 19–24.5 \times 12–16.3 μm , saepe late ellipsoideae, guttula unica magna vel rarius guttulis 1–3 minoribus (sed plasma non granulosa) impletae, verrucosae, verrucis globosis, 0.5–2.2–2.7 μm diam., isolatis sed saepe conjunctis et confluentibus (sub immersione oleacea 1500 \times + Cotton bleu Geigy, s. 123, in acido lactico = Anilinblau wasserl. = CB).

Hab. Ad terram humidam in gramine ad viam in orto publico prope Ilidža, districtus Sarajevo (Jugoslavia), 12. VII. 1969 J. Moravec legit. Typus PR (710003) et duplicatum in herb. privato J. Moravec asservantur. Ibidemque ad chartam putridam in viam.

Apothecia 5–20 mm in diameter from locality no. 1 and only 5–6 mm from locality no. 2, solitary to scattered, sessile, shallow cup-shaped to discoid, thecium dark red (loc. 1) or a vermilion bright red (loc. 2), outer surface and margin densely covered with dark-brown and rather short hairs. Excipulum

(textura globulosa to angularis or prismatica) consisting of globular to ellipsoid or prismatic cells 20–60 μm in diameter. Hairs abundant, usually rooting on their base, rather short, $100\text{--}450 \times 13.6\text{--}27 \mu\text{m}$, septate, wall 4–5.5 μm thick, brown, with pointed or blunt tips. Asci $270 \times 16.3\text{--}24\text{--}(29) \mu\text{m}$, cy-

lactico = Anilinblue wasserl. Geigy. s. 123 = CB) and oil immersion 1500 \times — see drawing.

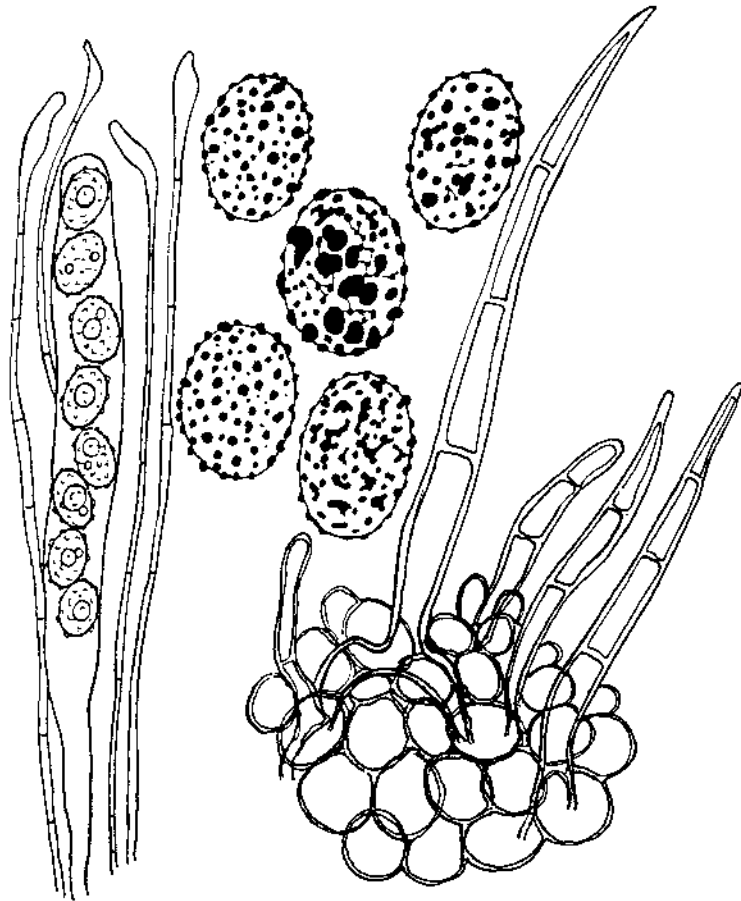
H a b. Loc. 1 (= Loc. of holotype): On damp soil near a path in the public park near Ilidža, district of Sarajevo, 12. VII. 1969 leg. J. Moravec (Typus PR with duplicate in the private herbarium of J. Moravec). Loc. 2: On humid soil and also on rotten paper on a path in the public park mentioned above.

S. pseudoumbrarum and *S. umbrarum* have a similar sculpture of ascospores, but the ascospores of *S. umbrarum* are $17\text{--}26 \times 12\text{--}20.5 \mu\text{m}$ in size and thus broader than those of *S. pseudoumbrarum*. Moreover the apothecia of *S. umbrarum* are smaller (see Le Gal 1966a) — as the neotype of *S. umbrarum* was selected by Le Gal (1966b) from Boudier's herbarium in Mus. Nat. Hist. Paris (PC): Montmorency, Julio 1883, No 369. *Scutellinia umbrarum* sensu Denison seems to be another species (Denison 1959), whose ascospores and apothecia are similar in size to *S. pseudoumbrarum*, but the sculpture of its ascospores is different as it consists of warts which are only 0.5–1.5 μm in diameter. Denison described warts of ascospores as rounded and also his microphotograph of ascospores "from a neotype" fig. 4-H, shows ascospores with their sculpture consisting of rounded warts. Notwithstanding, Le Gal (1966a) noted that *S. umbrarum* sensu Denison 1959 (specimen from Ellis and Everhart, North Am. fungi 2911, July 1893, which was designated by Denison as a neotype) was a different species; *Scutellinia ampullacea* (Limm.) O. Kuntze with ascospores $22\text{--}30 \times 13\text{--}19.5 \mu\text{m}$ of a different sculpture. In any case, *S. ampullacea* differs from *S. umbrarum* and also from *S. pseudoumbrarum* by the different sculpture of its ascospores (see Le Gal 1966a, fig. 2, C.).

As to *Scutellinia arenosa* (Quél.) Le Gal, this species has ascospores of the same or very similar sculpture as compared with *S. umbrarum* and *S. pseudoumbrarum*, but the size of the ascospores is $20.5\text{--}24 \times 16\text{--}20.5 \mu\text{m}$ (of the neotype $18\text{--}26.5 \times 15\text{--}23.5 \mu\text{m}$ teste Le Gal 1966b) and therefore they are broader than the ascospores of *S. pseudoumbrarum*. In my opinion there is almost no difference between *S. umbrarum* and *S. arenosa*, but *S. pseudoumbrarum* differs more from the both species.

Other species are evidently different. *Scutellinia hirta* (Schum. ex Fr.) Cooke sensu Le Gal [= *Scutellinia stenosperma* Le Gal 1953, *Scutellinia ceipii* (Velen.) Svrček 1971], has ascospores with different sculpture and of very different size ($19.5\text{--}35 \times 10\text{--}17 \mu\text{m}$) (Le Gal 1953). Quite different are also *Scutellinia kerguelensis* (Berk.) O. Kuntze [= *Scutellinia nympharum* (Velen.) Svrček et Kubička] and *Scutellinia superba* (Velen.) Le Gal: both differ in several features, mainly by another sculpture and size of the ascospores. Not closely related and quite different are also some tropical species.

Scutellinia pseudoumbrarum is a species which is related to *Scutellinia umbrarum* (Fr.) Lamb. and to *Scutellinia arenosa* (Velen.) Le Gal. The author is fully aware of the fact that the genus *Scutellinia* (Cooke) Lamb. emend. Le Gal represents a very complicated group of *Discomycetes*. There are many taxonomical problems in the genus *Scutellinia*, which comprises species that are very variable and it is therefore possible that some species originally described as macrospecies should be evaluated as mere microspecies. Several problems remain, even though many previous ones were explained by Le Gal (1966), who re-examined a large number of type specimens.



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3. *Scutellinia pseudoumbrarum* J. Moravec — Ascus, paraphyses, spores (CB+immers. 1500 \times), cells of excipulum, hairs. Ilidža near Sarajevo (Jugoslavia), 12. VII. 1969. J. Moravec del.

lindrical, blunt, eight-spored. Paraphyses about 4 μm thick, narrowly clavate and here 5.5–11 μm thick — apex of clavate part is usually narrowly pointed. Ascospores $19\text{--}24.5 \times 12\text{--}16.3 \mu\text{m}$ rather broadly ellipsoid, with 1 large or rarely with 1–3 smaller guttules (but the plasma is not granulose), sculptured; sculpture of epispore consisting mostly of rounded warts 0.5–2.2–2.7 μm in diameter, which are isolated or rarely form small groups. The sculpture of ascospores is often variable as to the size of the warts. (Used Cotton bleu in acido-

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