

**Microcalicium Vainio**  
(CALICIALES)

After Tibell, 1978

Rev. 5/94

Thallus immersed. Photobiont absent. Apothecia black, sessile or stalked; true exciple well developed, dark, of paraplectenchymatous or thick-walled hyphae. Mazaedium with an aeruginose tinge. Paraphyses sparse, thick-walled. Asci broadly ellipsoid, formed in chains from ascogenous hyphae without crozeirs, with a single functional wall layer, deliquescing at maturity. Spores 1-3(-7)-septate, blue-green, with a distinctive ornamentation of spirally arranged ridges developing after the asci break down; forming a dry green-black spore mass. Pycnidia frequent in some species,  $\pm$  globose and sessile, black; conidiogenous cells  $\pm$  cylindrical, arising singly, enteroblastic with distinct broad collarettes; conidia terminal, formed singly, ellipsoid to subglobose, colorless, simple, extruded as a slimy drop. Ascospores, true exciple and stalk contain unidentified pigments which are generally green in acidic and red-brown in alkaline solutions (N+ green, K+ red-brown). Growing on lichens, amongst free-living algae, or saprobic, on bark, wood and rocks in humid and shaded sites.

Calicium is similar, but lichenized, with a black ascospore mass.

**1. Apothecia with long stalks (3-14 times the diameter of the capitulum); mature spores ellipsoid, 1-septate, 5.5-8  $\mu$ m long. ....2**

**1. Apothecia sessile or subsessile; mature spores cylindrical, 3(-7)-septate, (9-)11.5-15 x 3.4-4.2  $\mu$ m.** Apothecia 0.12-0.35 mm diam., 0.14-0.2 mm tall. Ascospore mass greenish black, protruding, with sclerotized hyphae; spores with spiral ridges. Excipulum and pycnidial wall very dark green, K+ brownish red. Asci broadly ellipsoid. Pycnidia frequent, appearing first, to 15 per host areole, erumpent, 40-60  $\mu$ m diam., the walls  $\pm$  blue-green and oth thick-walled cells; conidiogenous cells 6-9 x 2-3  $\mu$ m; pycnosporos subglobose to broadly ellipsoidal, 2-3 x 1.5-2  $\mu$ m. Infected lichen thalli are decolorized or brownish with the formation of extensive lesions. On free-living algae or growing on other Caliciales, parasitic or commensalistic, sometimes directly on bark or wood of old pine trees, in humid conditions. See Tibell 1998 for fuller description. .... M. disseminatum (Ach.) Vainio (synonym M. subpedicellatum)

**2. Apothecia 0.6-1.8 mm high, hyphae of the stalk distinct; mazaedium without persistent sclerotized hyphae. Ascospores mass dark brown or greenish black. Asci broadly ellipsoid. True exciple well developed.** Capitulum 0.14-0.28 mm diam. Spore mass not higher than width of head, pruina absent. Stalk 0.08-0.12 mm diam., dull black with a coarsely granular surface; true exciple in section reddish brown, N+ greenish. Spores 6.7-8.2 x 2.3-2.9  $\mu$ m, with spiral ridges. On green algae (Stichococcus or others) or lichens (Psilolecia spp.), parasitic or commensalistic, on rocks, or roots, in shaded and humid localities, often under overhanging siliceous rocks. See Tibell 1998 for fuller description. ....M. arenarium (Hampe ex Massal.) Tibell

**2. Apothecia 0.4-1 mm high, hyphae of the stalk strongly arched and forming an**

**almost paraplectenchymatous tissue; mazaedium with sclerotized hyphae. Ascospore mass green-black or blue-green. Asci cylindrical. True exciple poorly developed.** Apothecial stalks occasionally branched, black; ascospore mass not taller than width of head; pruina absent; stalks 0.06-0.12 mm wide, dull black with coarsely granular surface; true exciple in section reddish brown. Spores 5.7-7 x 2.2-2.8  $\mu$ m, 1-septate, with spiral ridges. On wood of ancient oaks and of pin trunks, parasitic or saprobic. ....M. ahlneri

### Literature

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