

Mesotaenium macrococcum

(Kützing) J.Roy & Bisset, 1894

Most likely ID: n.a.

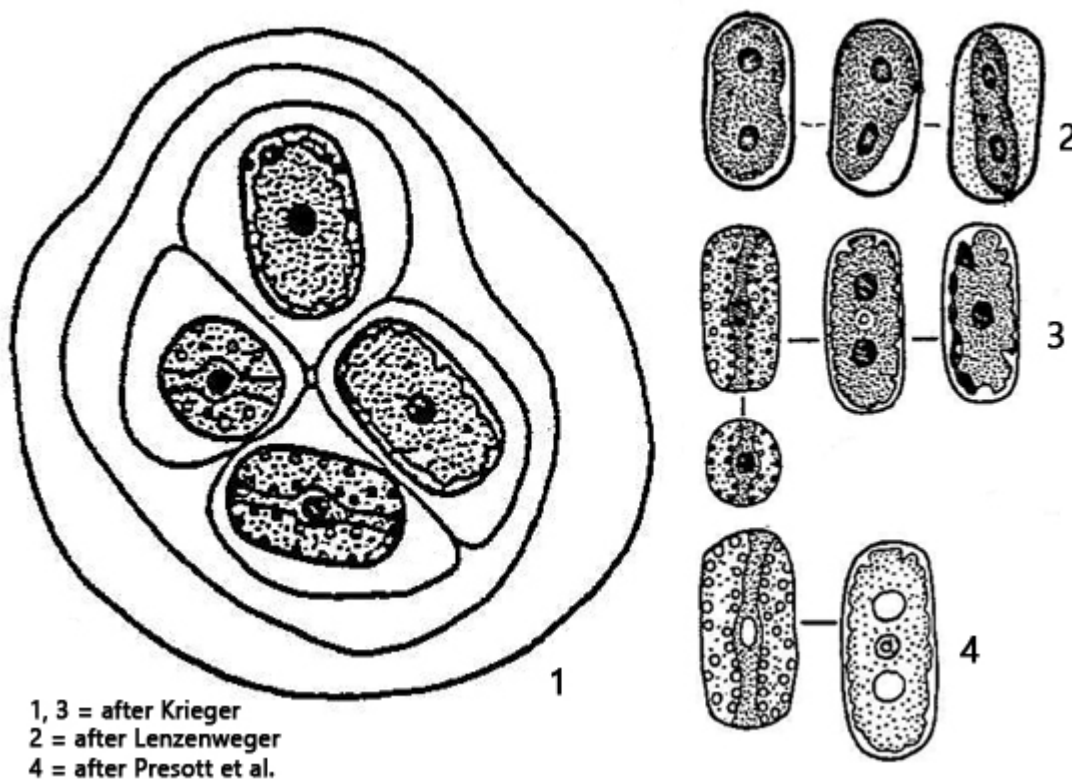
Synonym: n.a.

Sampling location: [Schwemm Moor \(Austria\)](#)

Phylogenetic tree: [Mesotaenium macrococcum](#)

Diagnosis:

- cells cylindrical, sometimes ovoid, apices broadly rounded
- length 10-44 µm, width 5-20 µm
- one chloroplast plate shaped, with wavy margin
- 1-2 central pyrenoids, covered with starch grains
- cells embedded in layered gelatinous mass
- nucleus central
- cytoplasm sometimes colored slightly violet



Mesotaenium macrococcum

I have only found *Mesotaenium macrococcum* once in samples from the [Schwemm Moor](#) in Austria. According to Lenzenweger (2003), the species should also occur on moist soils, rocks and between mosses.

The samples from the Schwemm Moor contained colonies with approx. 10-30 cells in a indistinctly layered gelatinous matrix. The cells were quite widely separated from each other in the matrix (s. fig. 1). The most important characteristic of *Mesotaenium macrococcum* is the plate-shaped chloroplast. (s. figs 4 a-b and 5 a-b). The cells of my population were between 20-36 µm long. This means that the largest cells were significantly longer than in the variety *Mesotaenium macrococcum* var. *minus* with 19-26 µm. In the second similar species *Mesotaenium chlamydosporum* with cells of comparable length (15-33 µm), the plate-shaped chloroplast is clearly divided into two parts in larger cells, which was not the case in my species.



Fig. 1: *Mesotaenium macrococcum*. D = 600 μm (of colony). A slightly squashed colony in a layered gelatinous mass. Obj. 20 X.



Fig. 2: *Mesotaenium macrococcum*. L = 21-35 µm (of cells). Some cells of the colony as showed in fig. 1. Obj. 40 X.



Fig. 3: *Mesotaenium macrococcum*. L = 18-34 µm. Some cells with a plate-shaped chloroplast in frontal view and in lateral view. Obj. 60 X.



Fig. 4 a-b: *Mesotaenium macrococcum*. L = 36 μm . A cell with the plate-shaped chloroplast in lateral view. The pyrenoid (PY) is located in the center of the chloroplast. Obj. 100 X.



Fig. 5 a-b: *Mesotaenium macrococcum*. L = 38 μ m. A cell with frontal view on the plate-shaped chloroplast. The pyrenoid (PY) is covered with tightly packed starch grains. The nucleus (Nu) is located adjacent to the chloroplast. Obj. 100 X.



Fig. 6 a-b: *Mesotaenium macrococcum*. L = 38 μ m. A specimen during cell division. Obj. 100 X.