Eucapsis alpina

Clements & Schantz, 1909

Most likely ID: n.a.

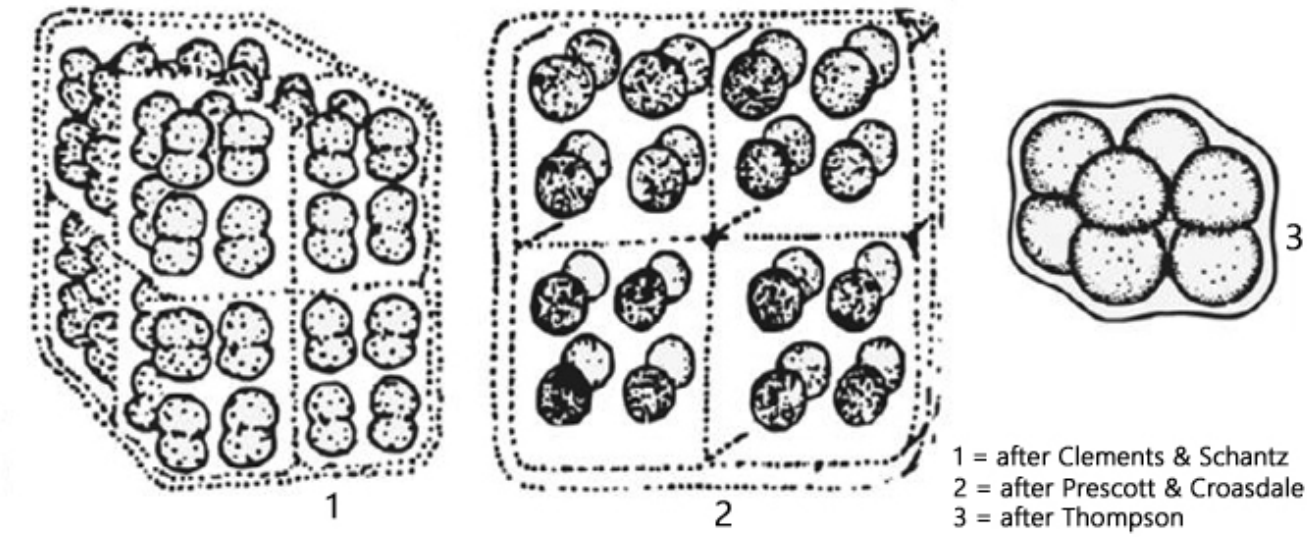
Synonym: *Merismopedia cubica*

Sampling location: Schwemm Moor (Austria)

Phylogenetic tree: *Eucapsis alpina*

Diagnosis:

- colonies of 2–128 cells
- colonies regular cubic. rarely slightly irregular
- cells spherical or oval, length 5–7.3
- gelatinous sheat diffluent, not layered
- cytoplasm with granules
- color bright blue-green or olive-green



Eucapsis alpina

So far, I have only found *Eucapsis alpina* in the Schwemm Moor in Austria. The

colonies stand out due to their regularly arranged cells and their bright, blue-green coloration. Each eight cells are regularly arranged within a cubic volume. At low magnification, this creates the impression of small cubes. In my population, all cells were distinctly blue-green colored. I was also able to find colonies with cells measuring up to 8.2 µm in length (s. fig. 2 a-b), which is about 15% larger than the 7.3 µm maximum reported by Komarek & Anagnostidis. However, the authors also mention findings with cells up to 10.3 µm in length, which have not been confirmed as *Eucapsis alpina*.

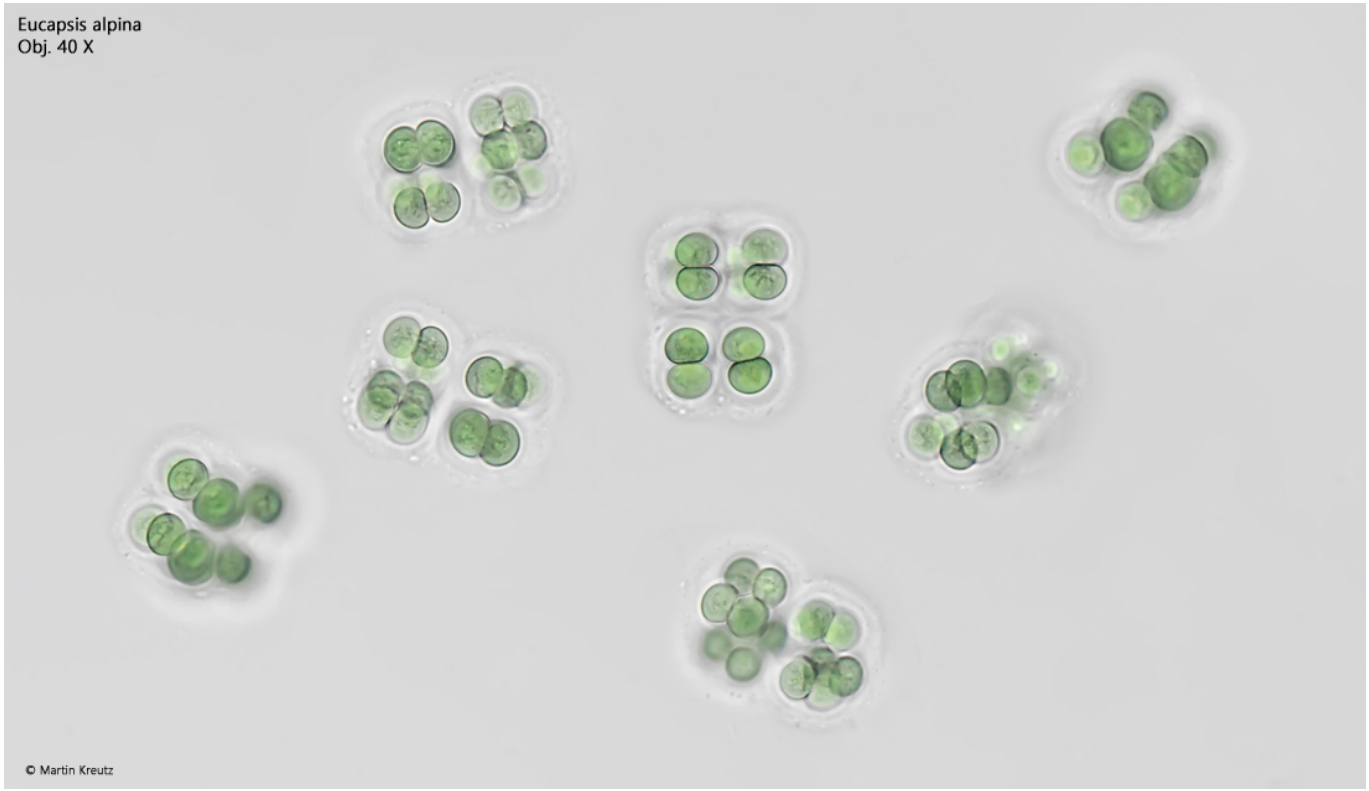


Fig. 1: *Eucapsis alpina*. D = 48–64 µm (of colonies). Several colonies in brightfield illumination. Obj. 40 X.

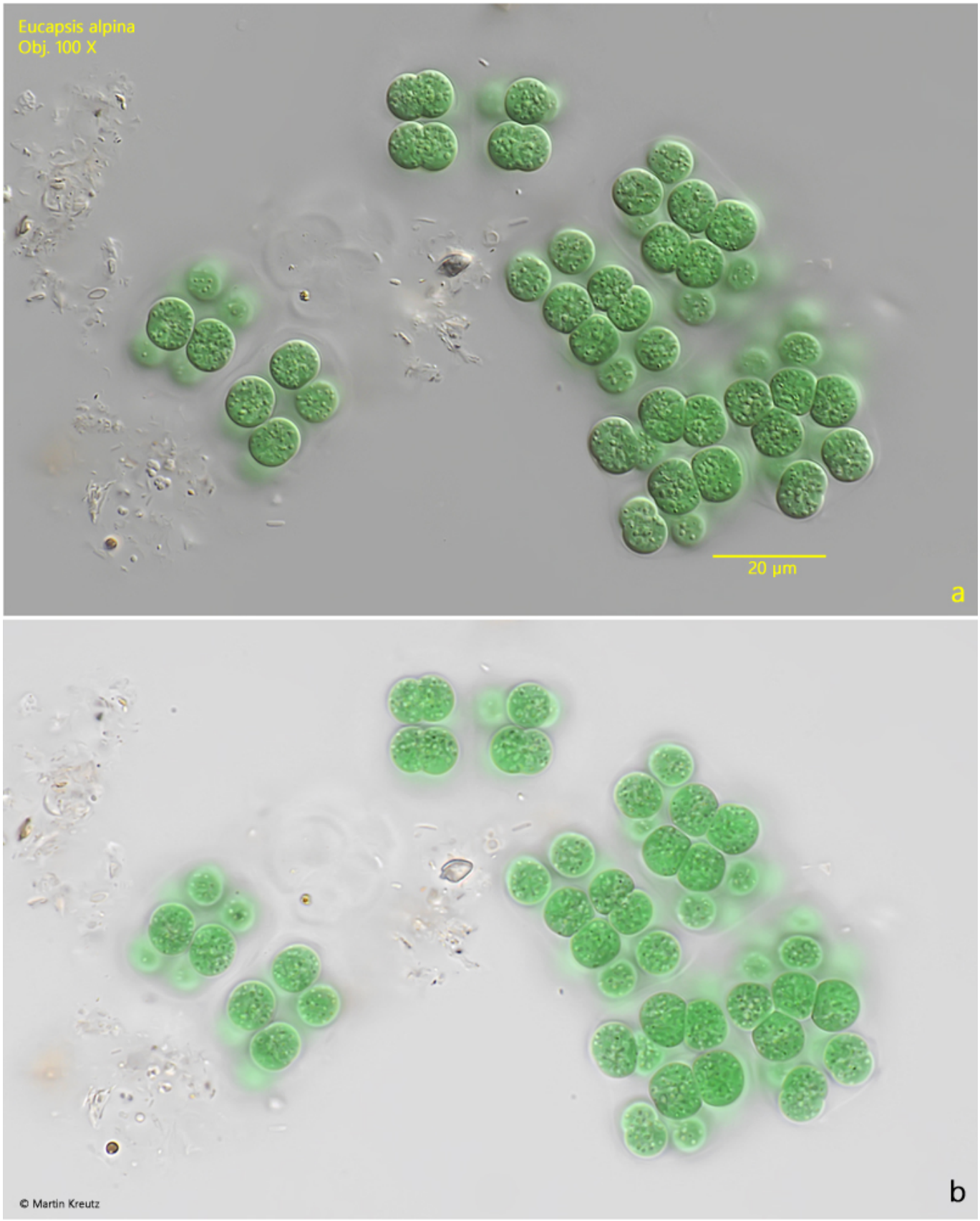


Fig. 2 a-b: *Eucapsis alpina*. L = 8.0–8.2 µm (of cells). Several colonies in a detritus flake in DIC (a) and in brightfield illumination (b). Obj. 100 X.

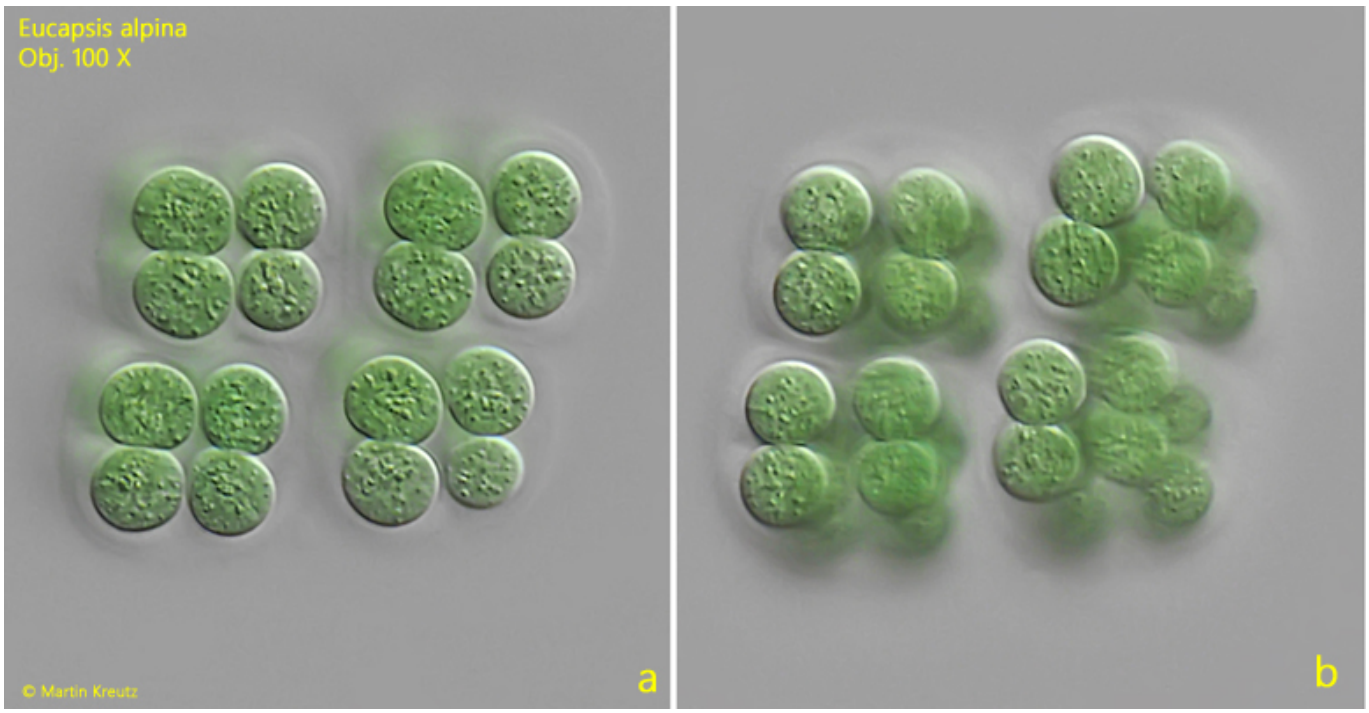


Fig. 3 a-b: *Eucapsis alpina*. L = 6.2–6.7 µm (of cells). Two focal planes of a colony of 32 cells. Each 8 cells are arranged in a cube. Obj. 100 X.

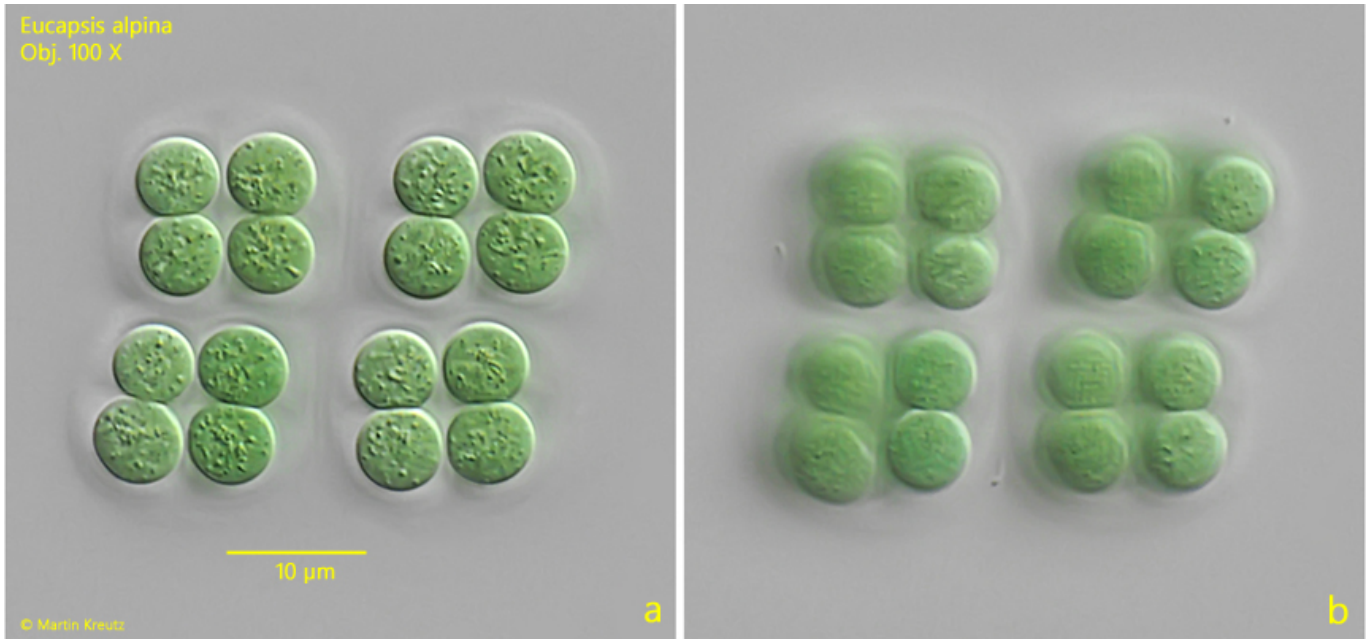


Fig. 4 a-b: *Eucapsis alpina*. L = 6.4–6.7 µm (of cells). Two focal planes of a second colony of 32 cells. Obj. 100 X.