

***Eremosphaera viridis* de Bary, 1858**

Most likely ID: n.a.

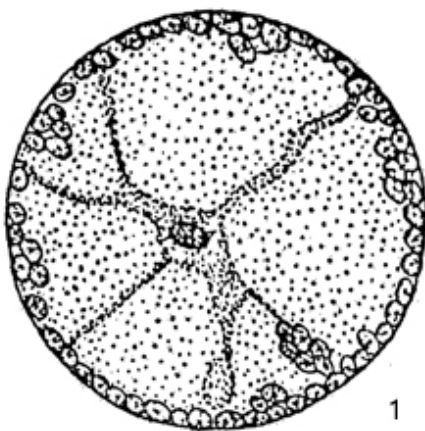
Synonym: n.a.

Sampling location: [Simmelried](#)

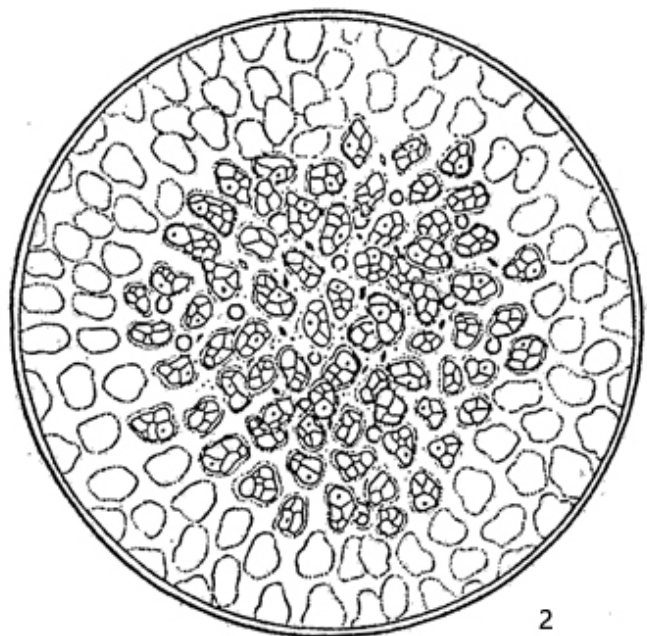
Phylogenetic tree: [Eremosphaera viridis](#)

Diagnosis:

- cells solitary or forming a 2-4-celled coenobia
- cells spherical, 30-200 µm diameter
- chloroplasts numerous, disc-like or angular
- 1-3 pyrenoids per chloroplast, often covered with starch grains
- spherical central nucleus
- within cell radial strands of cytoplasm
- chloroplasts arranged in a thin spherical layer of cytoplasm



1



2

1 = after Moore
2 = after Fott & Kalina

Eremosphaera viridis

This large alga is mainly found in boggy waters, with a low pH. In [Simmelried](#) it was quite common until about 2010. After that the population been shrinking more and more, which is probably related to the increasing siltation of the area. Nevertheless, I regularly find *Eremosphaera viridis* in the samples, mostly among floating plants or in decomposing plant masses from the bottom of the water body. Because of the size of the cells (diameter mostly around 150 μm) and the radial plasma strands (s. fig. 1) it is easy to identify.

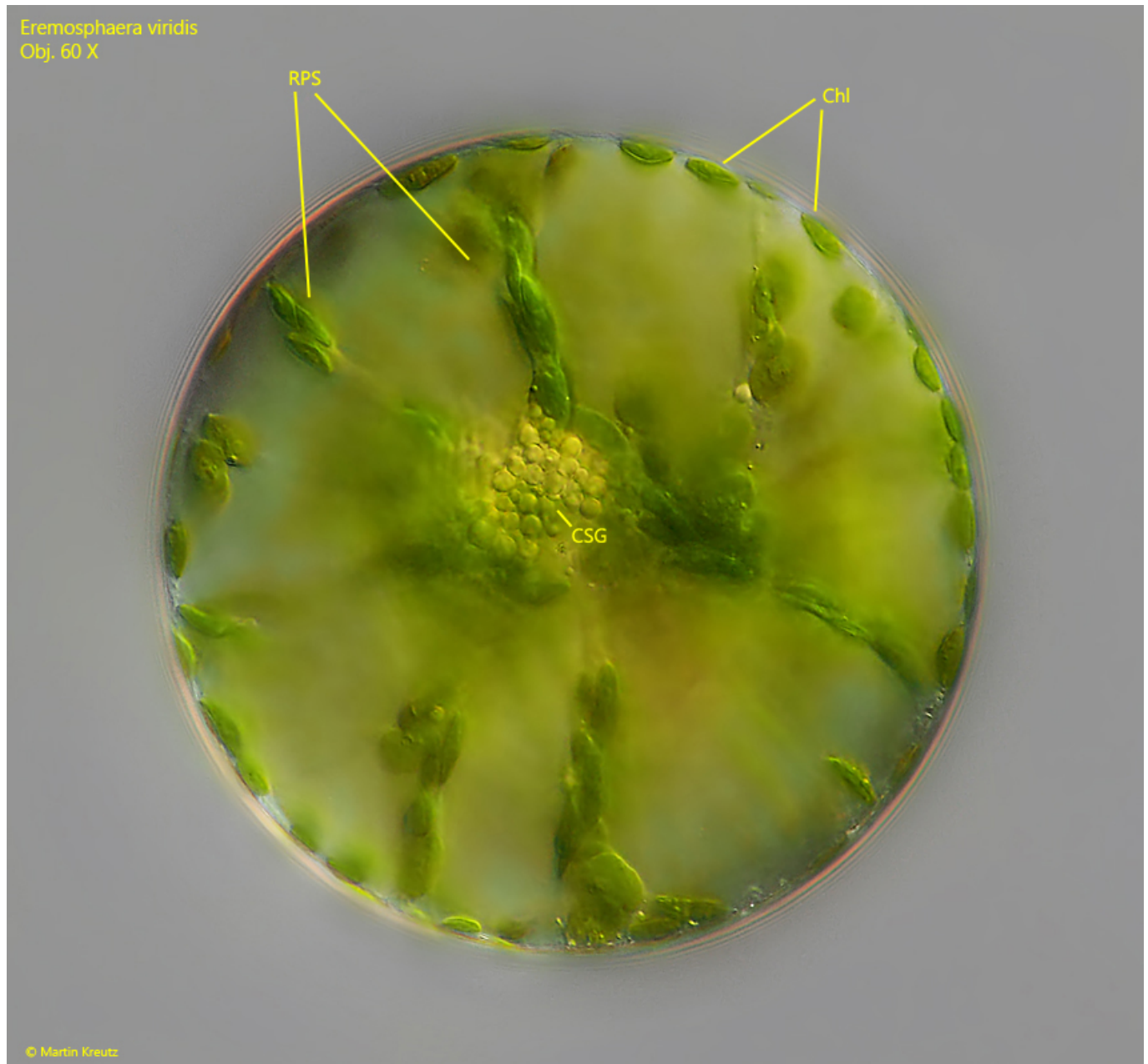


Fig. 1: *Eremosphaeria viridis*. $D = 140 \mu\text{m}$. Focus on the equatorial plane of a slightly squashed specimen. In the center of the cell an accumulation of starch grains is visible (CSG). The chloroplasts (Chl) can move in the radial plasm strands (RPS) from the periphery to the center of the cell. Obj. 60 X.

Eremosphaera viridis
Obj. 60 X



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Fig. 2: *Eremosphaera viridis*. $D = 140\ \mu\text{m}$. Focus on the periphery of a slightly squashed specimen, where the chloroplasts (Chl) are arranged. In each chloroplast a small pyrenoid (PY) is visible covered by small starch grains. The „cracks“ in the cell is the folded cell wall caused by the pressure of the coverslip. Obj. 60 X.

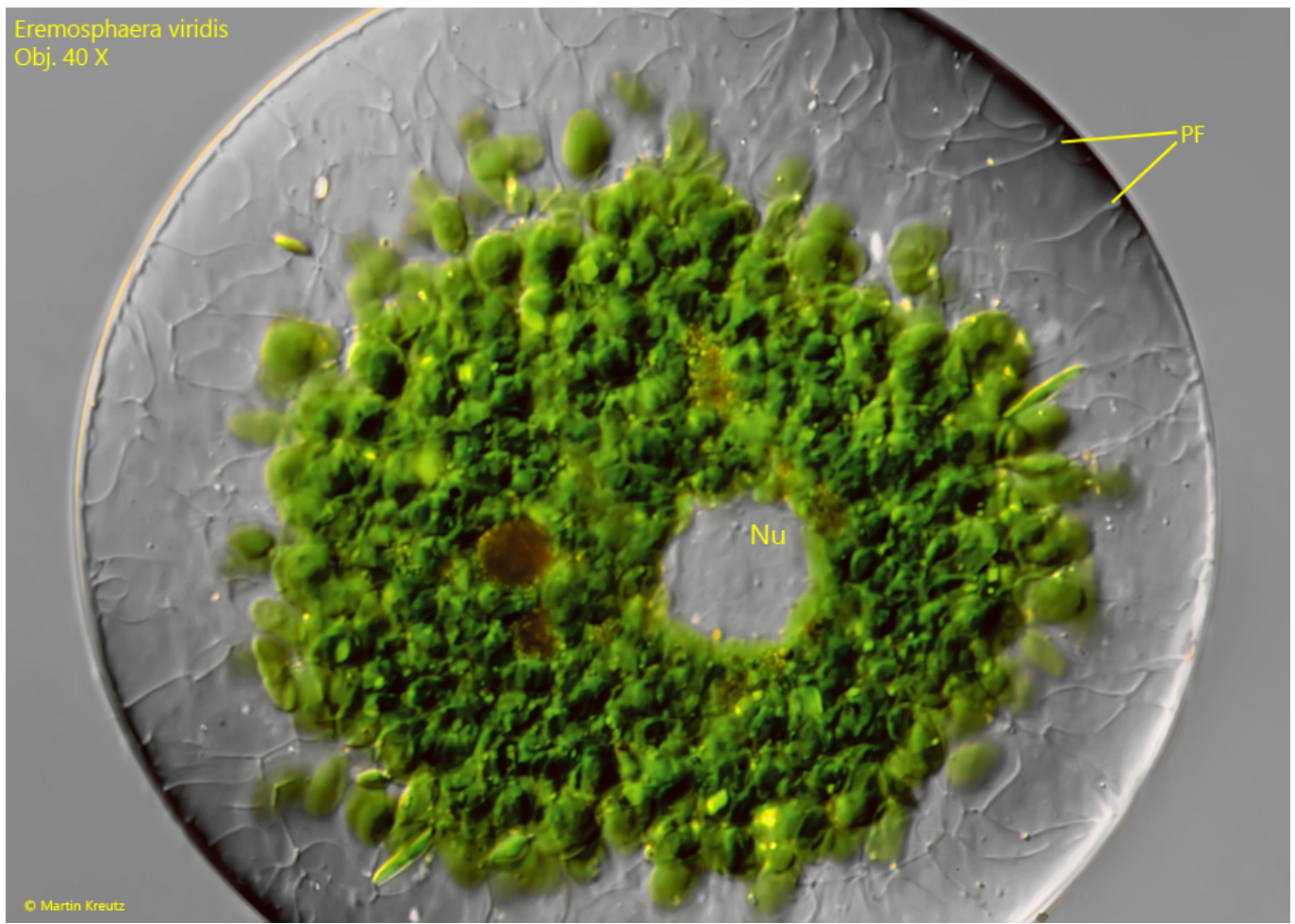


Fig. 3: *Eremosphaera viridis*. $D = 135\ \mu\text{m}$. A more strongly squashed specimen offers a view of the centrally located nucleus (Nu). The chloroplasts have all retracted to the center of the cell, caused by mechanical stress due to the thin water layer under the coverslip. Fine filaments of plasm (PF) can be seen in the outer layer. Obj. 40 X.

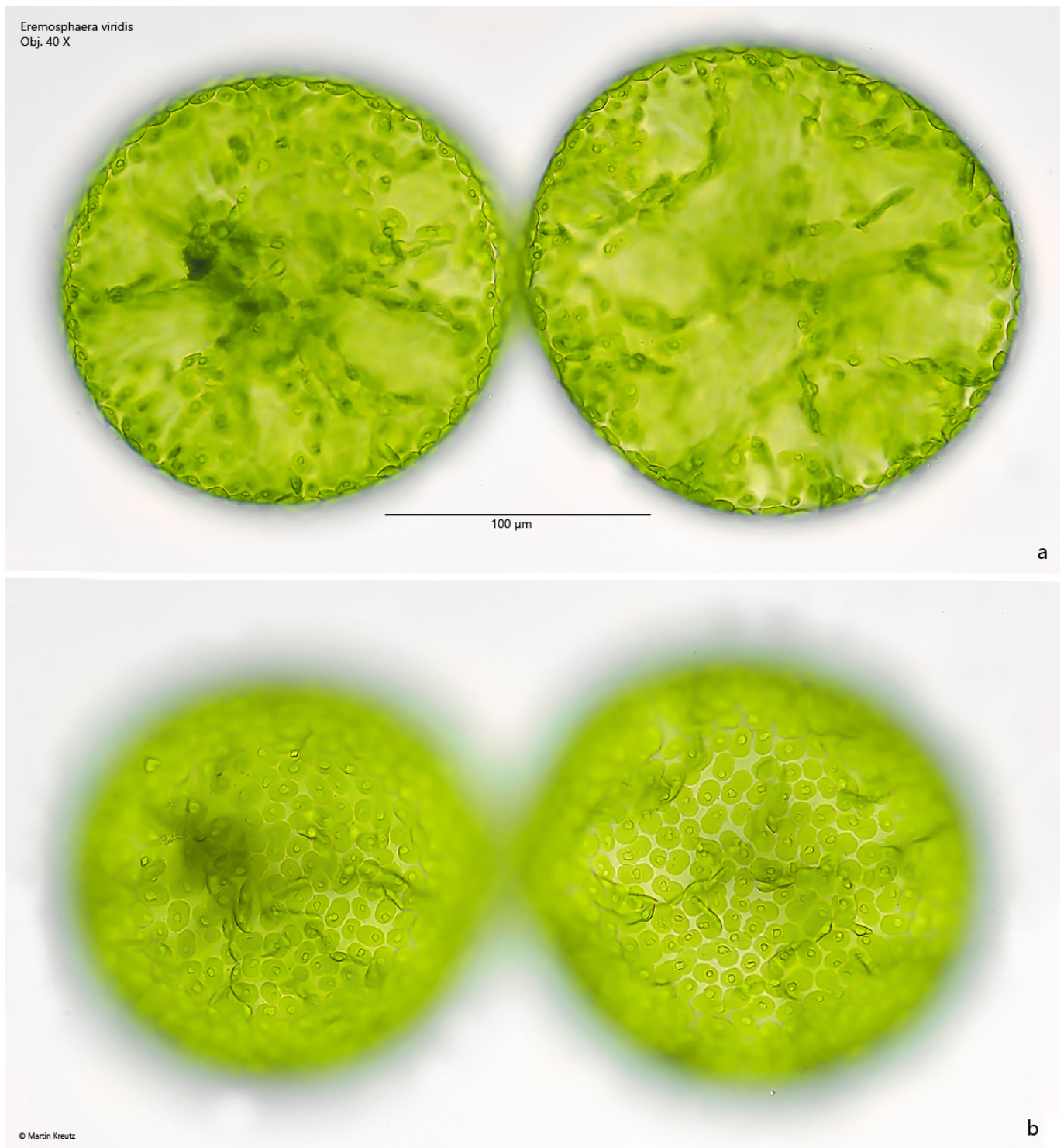


Fig. 4 a-b: *Eremosphaera viridis*. D = 180 - 200 µm. Two focal planes of two slightly squashed cells in brightfield illumination. Obj. 40 X.

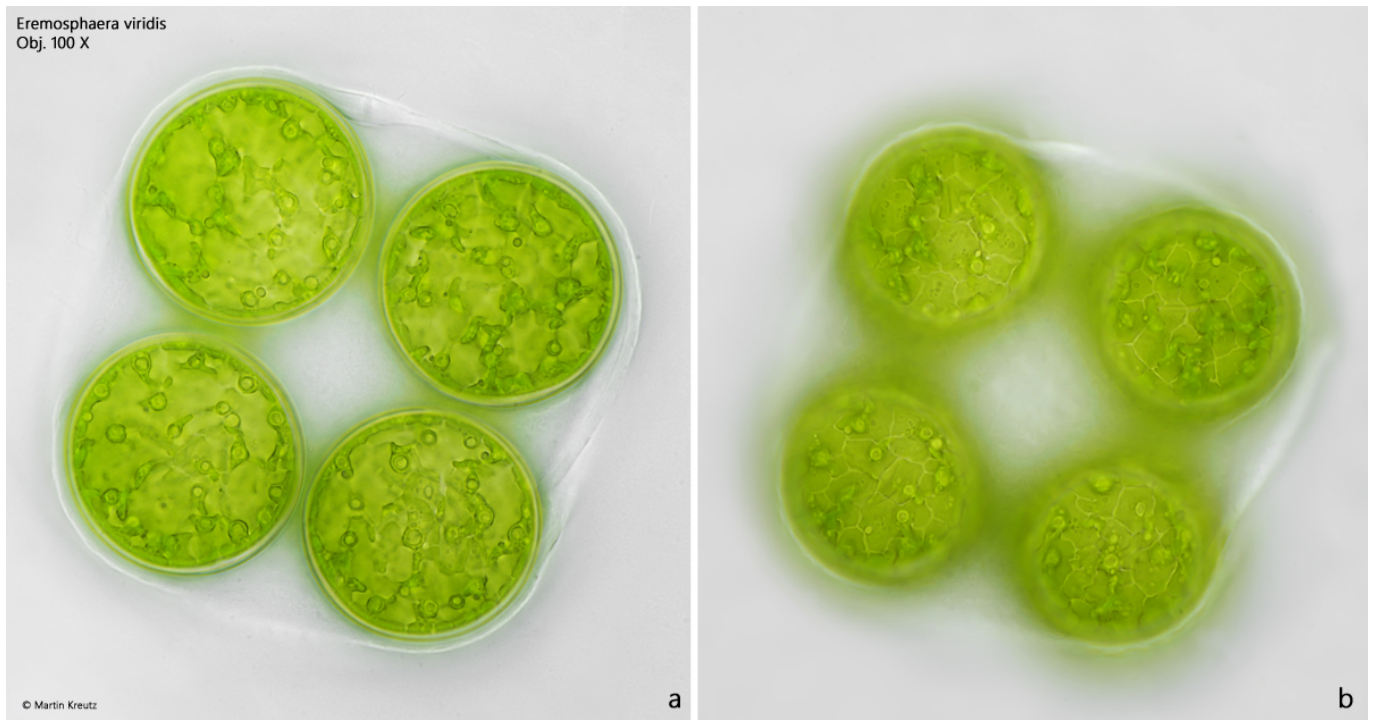


Fig. 5 a-b: *Eremosphaera viridis*. An autospore with 4 daughter cells. Obj. 100 X.

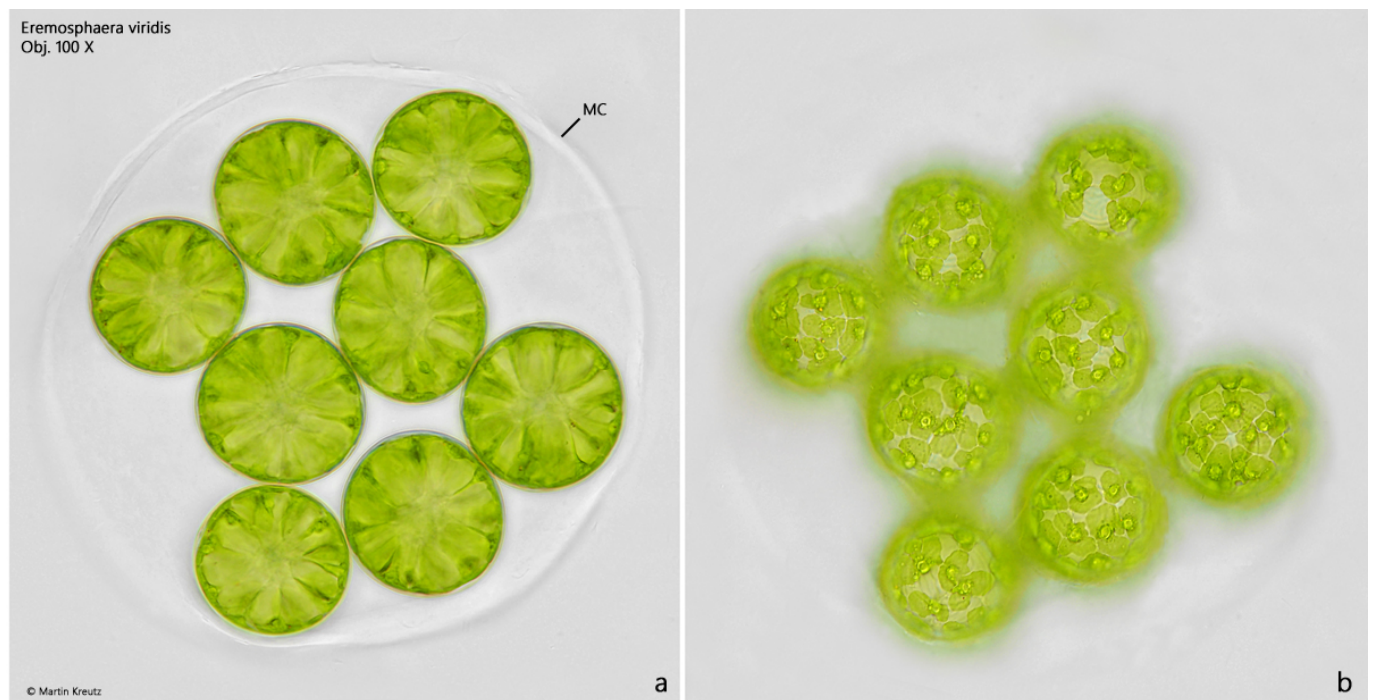


Fig. 6 a-b: *Eremosphaera viridis*. A second autospore with 8 daughter cells enclosed in the cell wall of the mothercell (MC). Obj. 100 X.