***Coelastrum microporum* Nägeli, 1855**

Most likely ID: n.a.

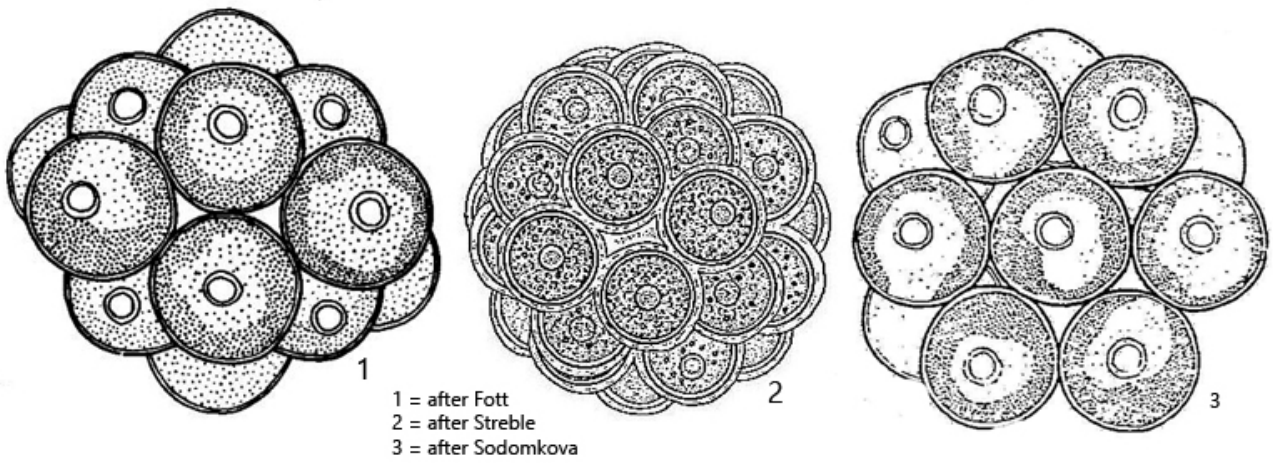
Synonym: n.a.

Sampling location: Pond of the waste disposal company Constance

Phylogenetic tree: *Coelastrum microporum*

Diagnosis:

- coenobia spherical
- 4–32 cells
- coenobia up to 100 µm diameter
- cells spherical or ovoid
- diameter of cells 6–10 µm
- cells connected via short, blunt projections
- cells without connecting projection to neighbour cells
- intercellular spaces about half of cell diameter
- one parietal chloroplast with one pyrenoid



Coelastrum microporum

I found many coenobia of *Coelastrum microporum* in the plankton of the pond of the waste disposal company Constance. The coenobia had a diameter of 50–70 µm. I mostly found spherical coenobia with 16 or 32 cells. I did not find smaller or larger

coenobia. Additionally, some coenobia were broken (s. fig. 4 a-b). Most coenobia were found in autumn.

The cells in the coenobia in my population were mostly slightly ovoid in shape with a slight tapering of the polar end of the cell, which points outward. The connection points between the cells were flattened, giving the cells a slightly polyhedral appearance (s. fig. 5).

Coelastrum microporum differs from the similar species *Coelastrum pseudomicroporum* in the shape of the cells and in the connections to neighboring cells. *Coelastrum pseudomicroporum* has ovoid cells that are connected not only to the lateral neighboring cells via short projections but also to the inner cells at their basal surfaces.

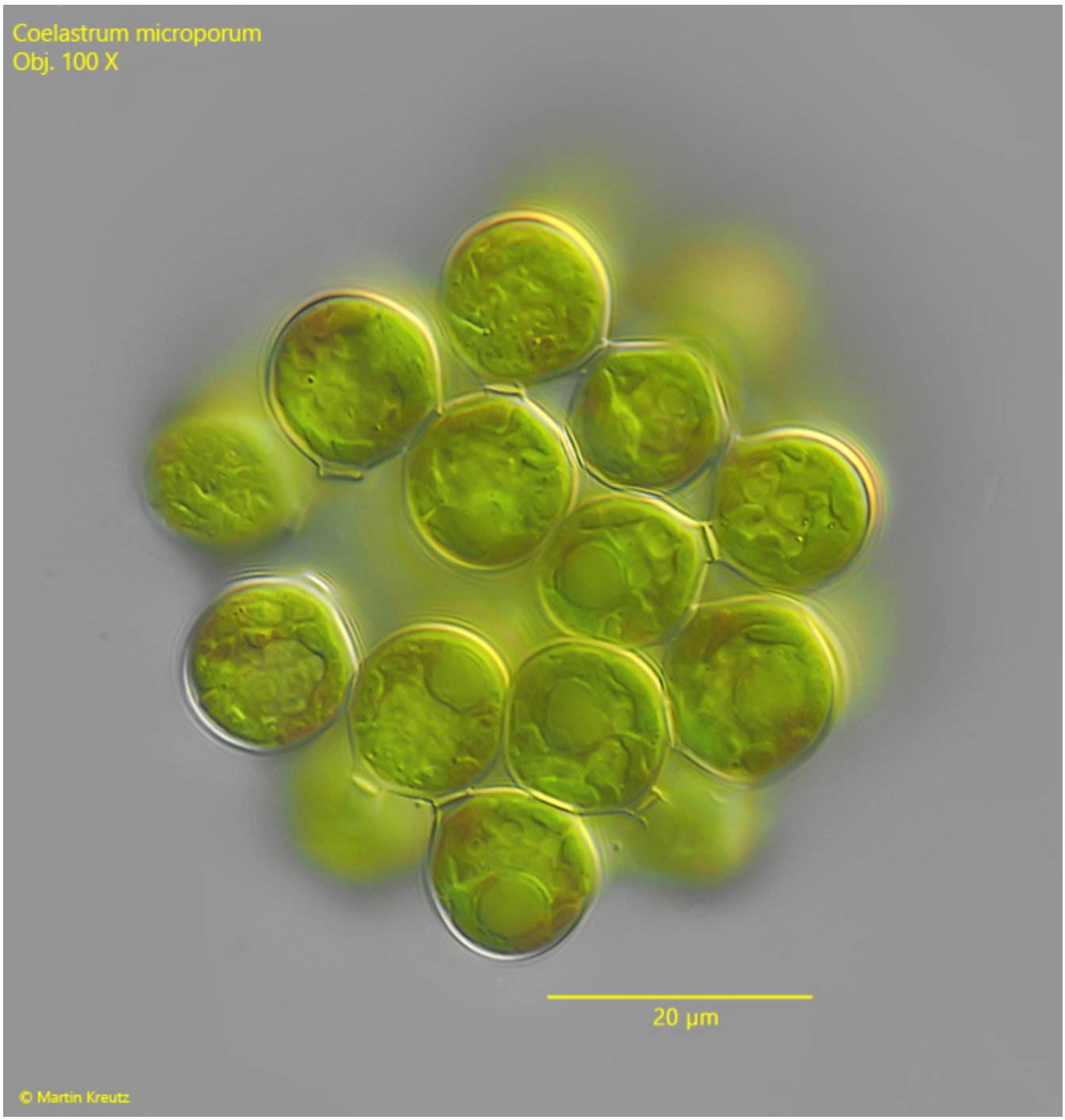


Fig. 1: *Coelastrum microporum*. D = 58 µm (of coenobium). A coenobium of 32 spherical cells. Obj. 100 X.

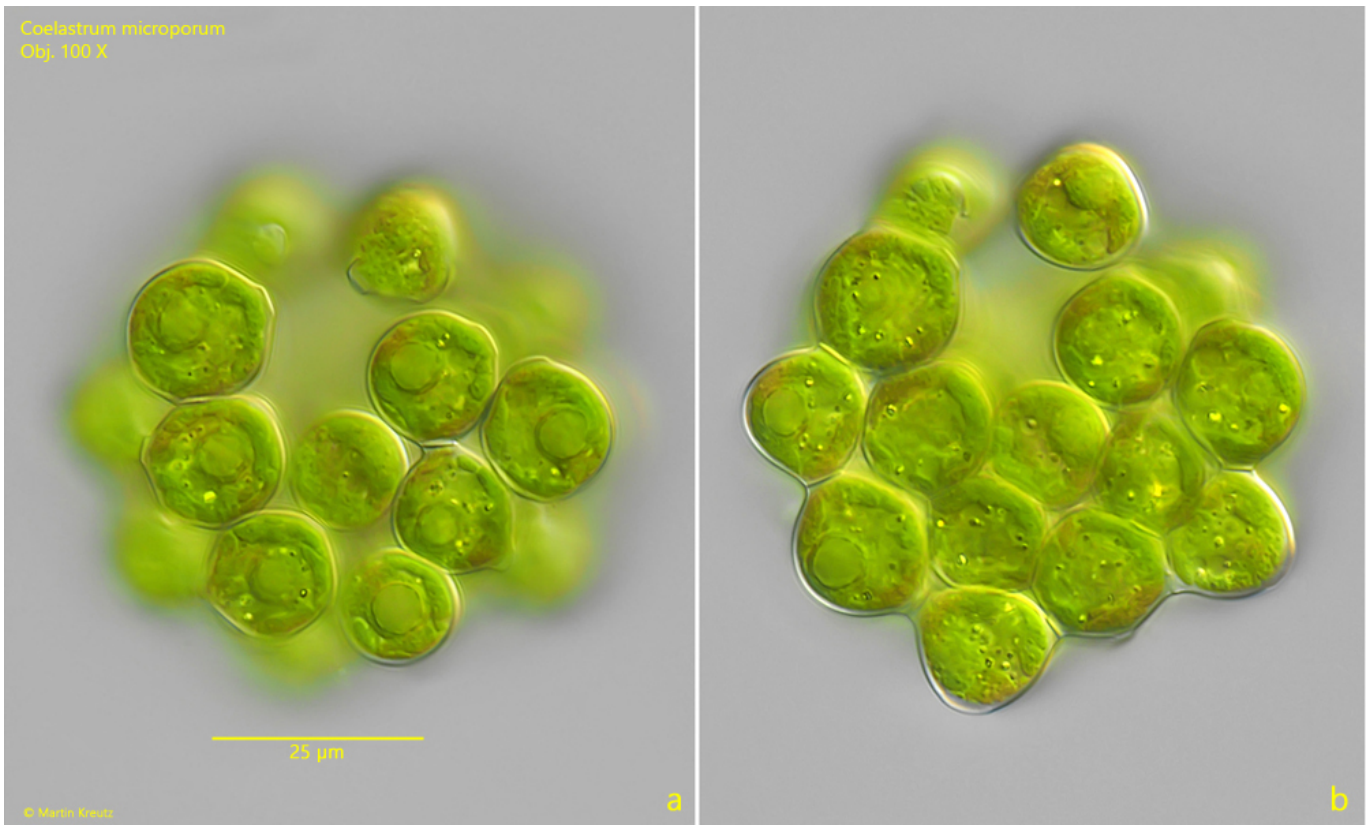


Fig. 2 a-b: *Coelastrum microporum*. D = 69 µm (of coenobium). Two focal planes of a second coenobium of 32 cells. Obj. 100 X.

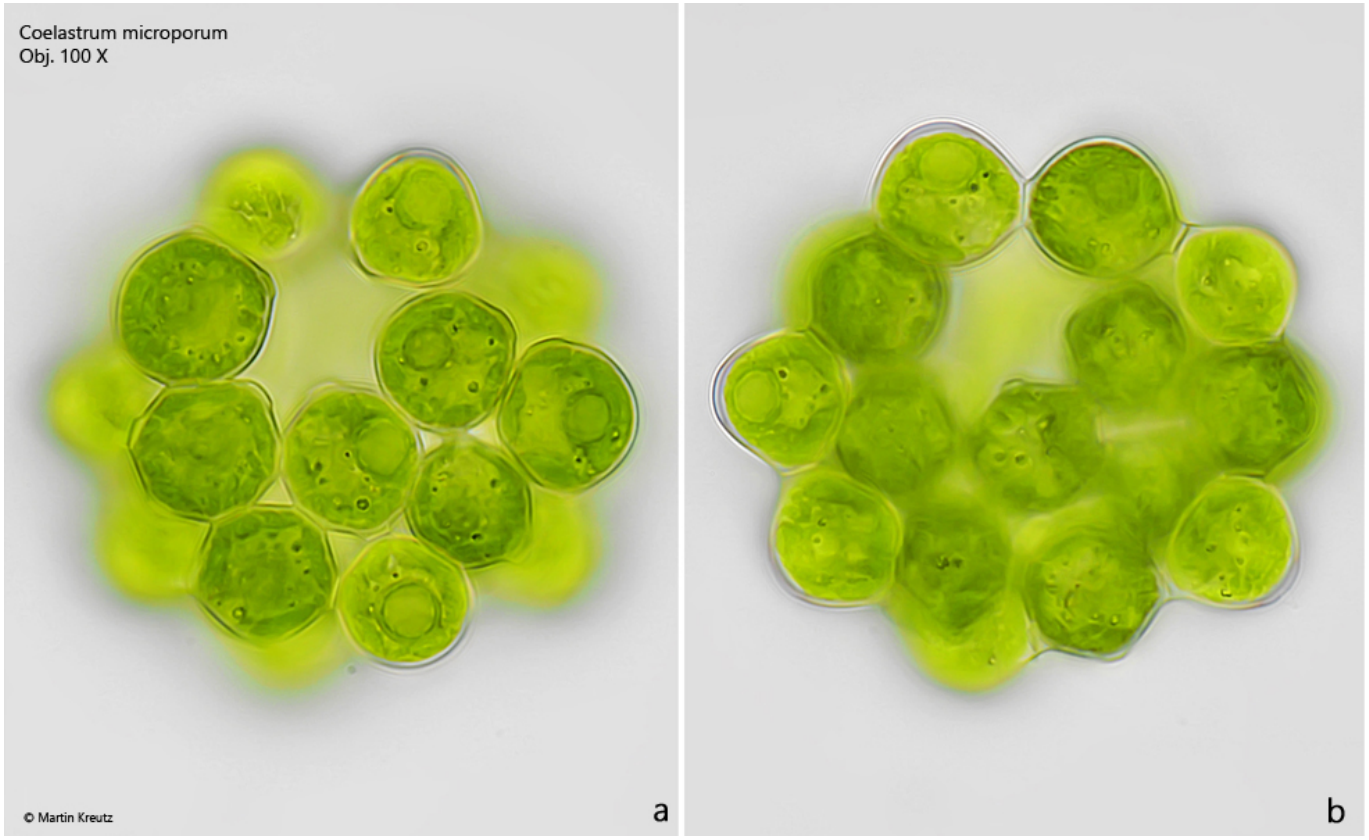


Fig. 3 a-b: *Coelastrum microporum*. D = 69 µm (of coenobium). The same coenobium as shown in fig. 2 a-b in brightfield illumination. Obj. 100 X.

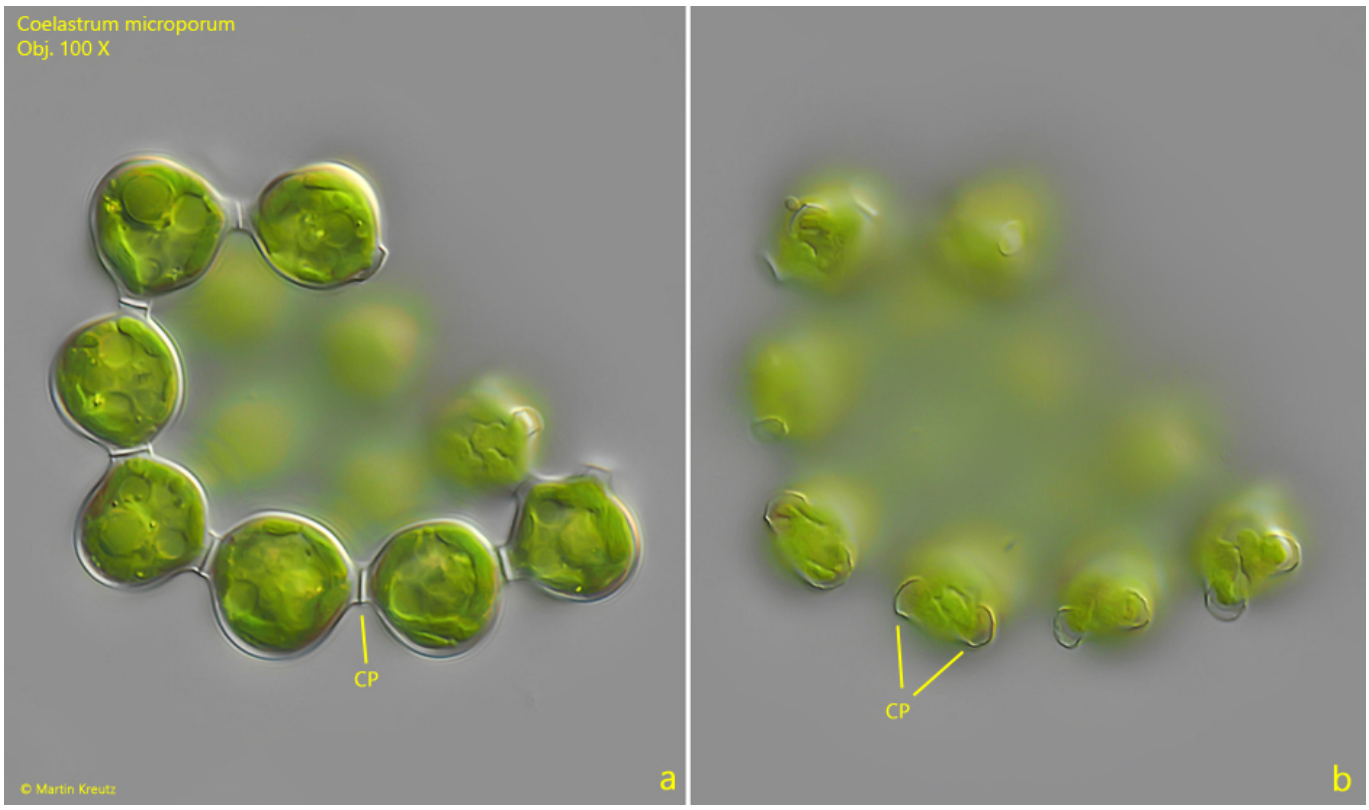


Fig. 4 a-b: *Coelastrum microporum*. A broken coenobium with focal plane on the connecting projections (CP) of the cells. Obj. 60 X.

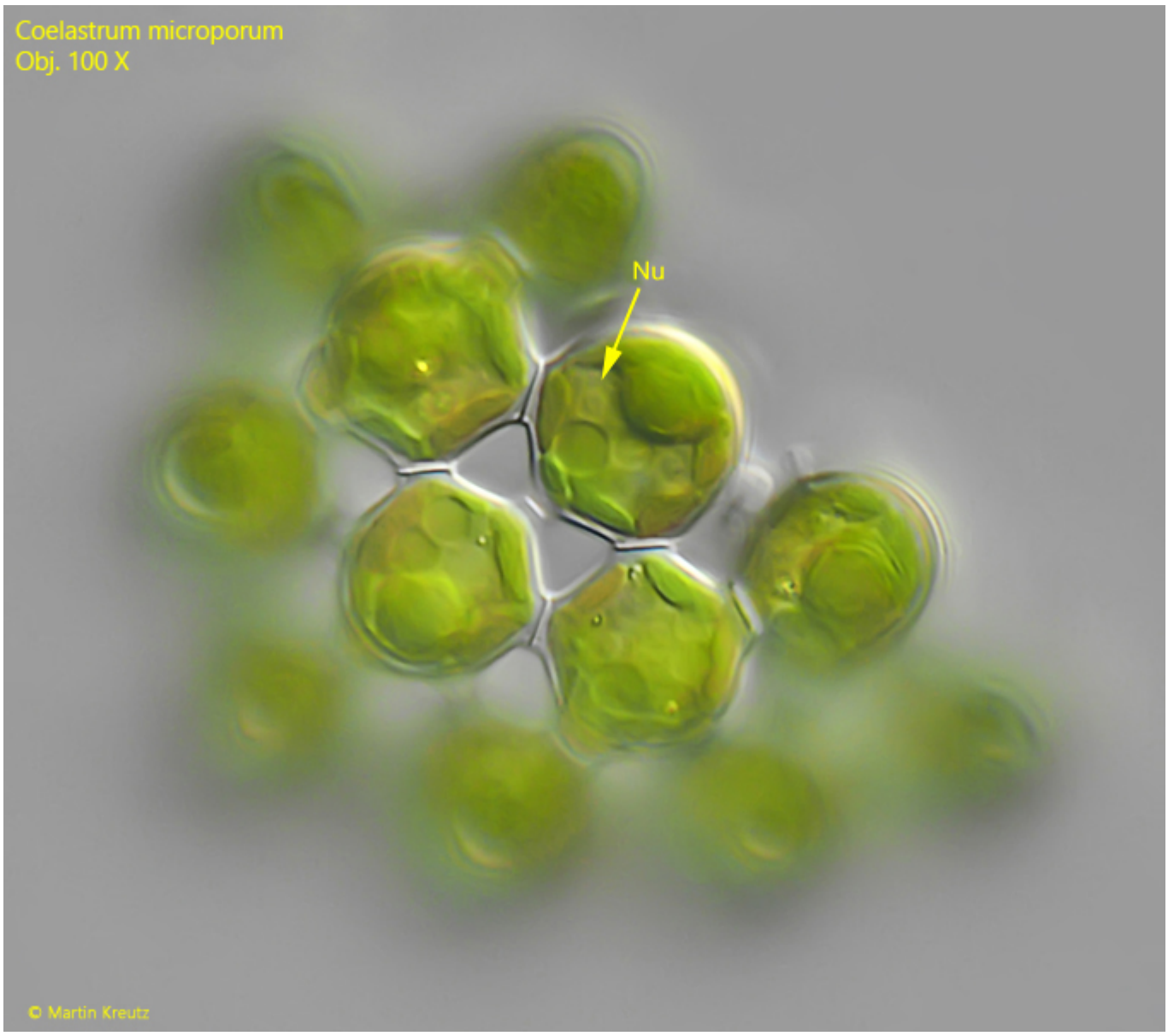


Fig. 5: *Coelastrum microporum*. Another broken colony. The focus is on some outer cells that are still connected to their neighboring cells. Nu = nucleus. Obj. 100 X.