Cyanothece major

(Schröter) Komárek, 1976

Most likely ID: n.a.

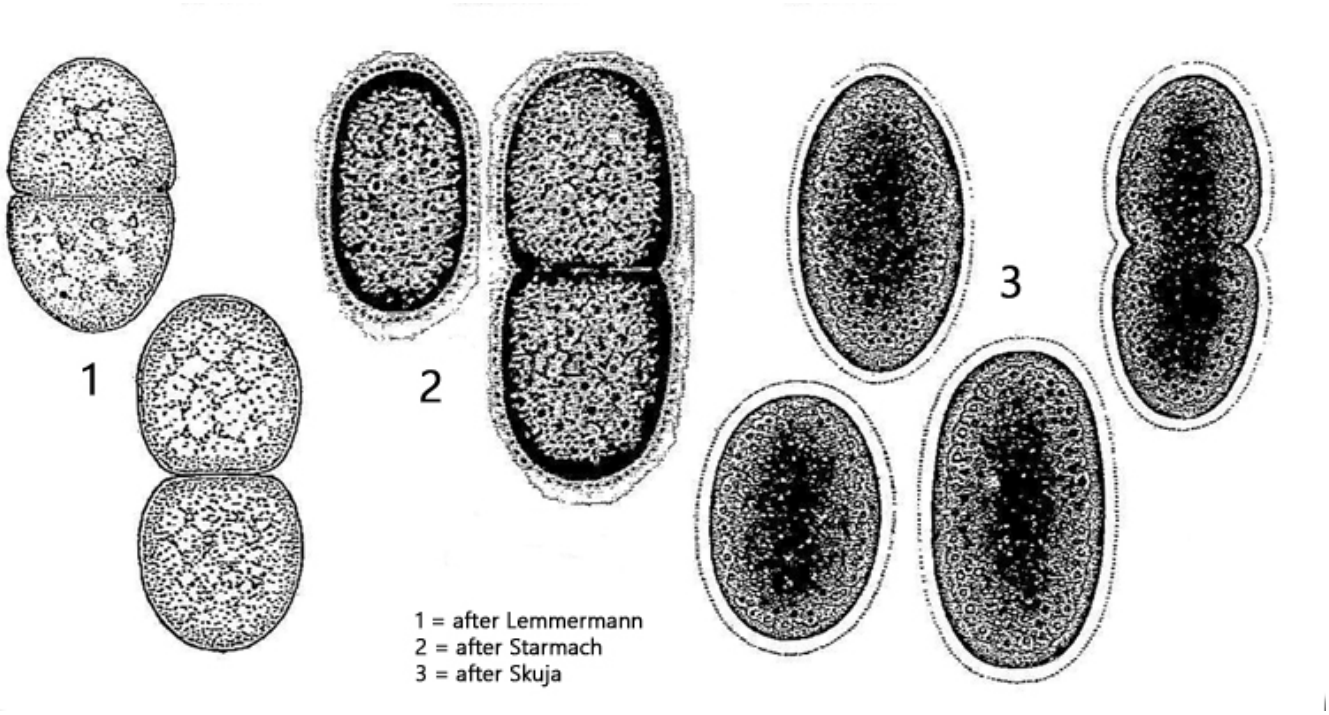
Synonym: *Synechococcus major*

Sampling location: Sima Moor (Austria)

Phylogenetic tree: *Cyanothece major*

Diagnosis:

- cells solitary, widely oval
- with structureless layer of mucilage
- length 30–70 µm, width 28–52 µm
- color blue-green
- granulated content



Cyanothece major

I have only ever found *Cyanothece major* in the Sima Moor in Austria. The cells are immediately noticeable in the samples due to their size and intense coloration. The cells are always single, except during cell division. The cells are surrounded by an unlayered and not sharply delimited mucus envelope. The cells in my population were mostly broadly oval, ovoid or oblong. The cytoplasm appeared mostly vacuolated with numerous oil-like droplets.

Cyanothece major differs from the similar species *Cyanothece aeruginosa* essentially only in size. The cells of *Cyanothece aeruginosa* are said to be 10–50 µm long. So there are overlaps between the species. However, as the cells in my population were often over 60 µm long, it must be *Cyanothece major*.

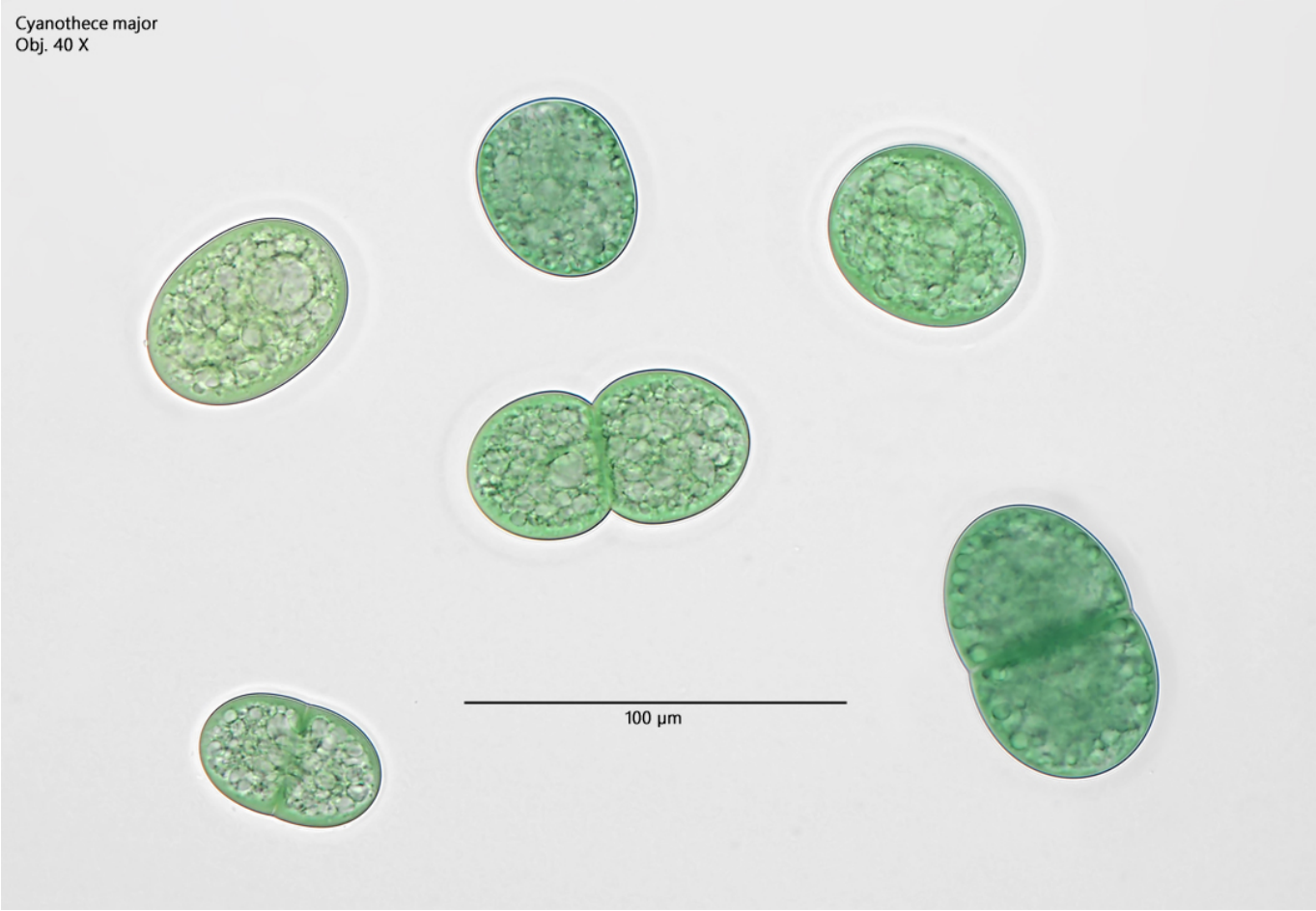


Fig. 1: *Cyanothece major*. L = 47–75 µm. Several specimens in brightfield illumination. Three of them during cell division. Obj. 40 X.

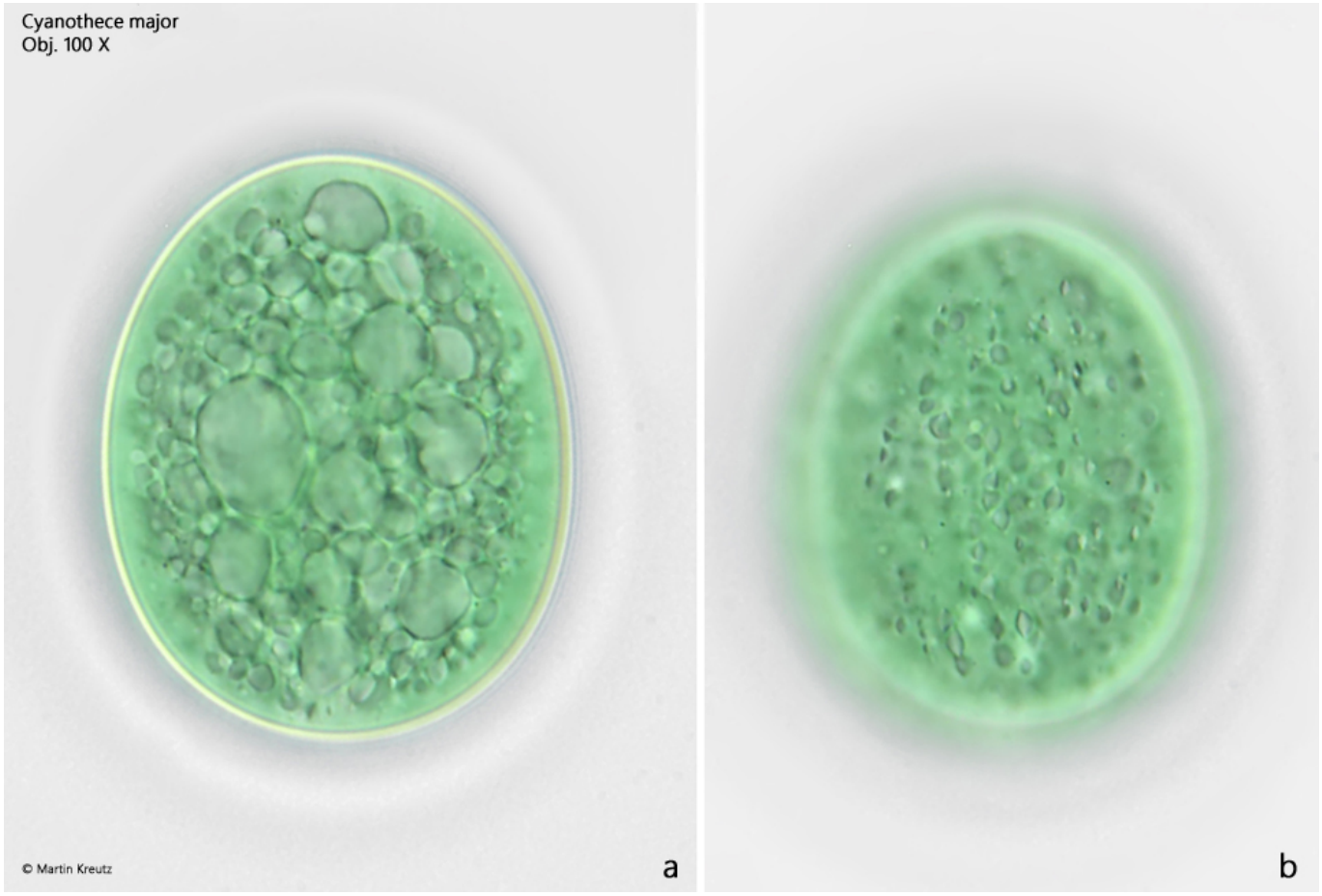


Fig. 2 a-b: *Cyanothece major*. L = 52 µm. Two focal planes of a specimen in brightfield illumination. Obj. 100 X.

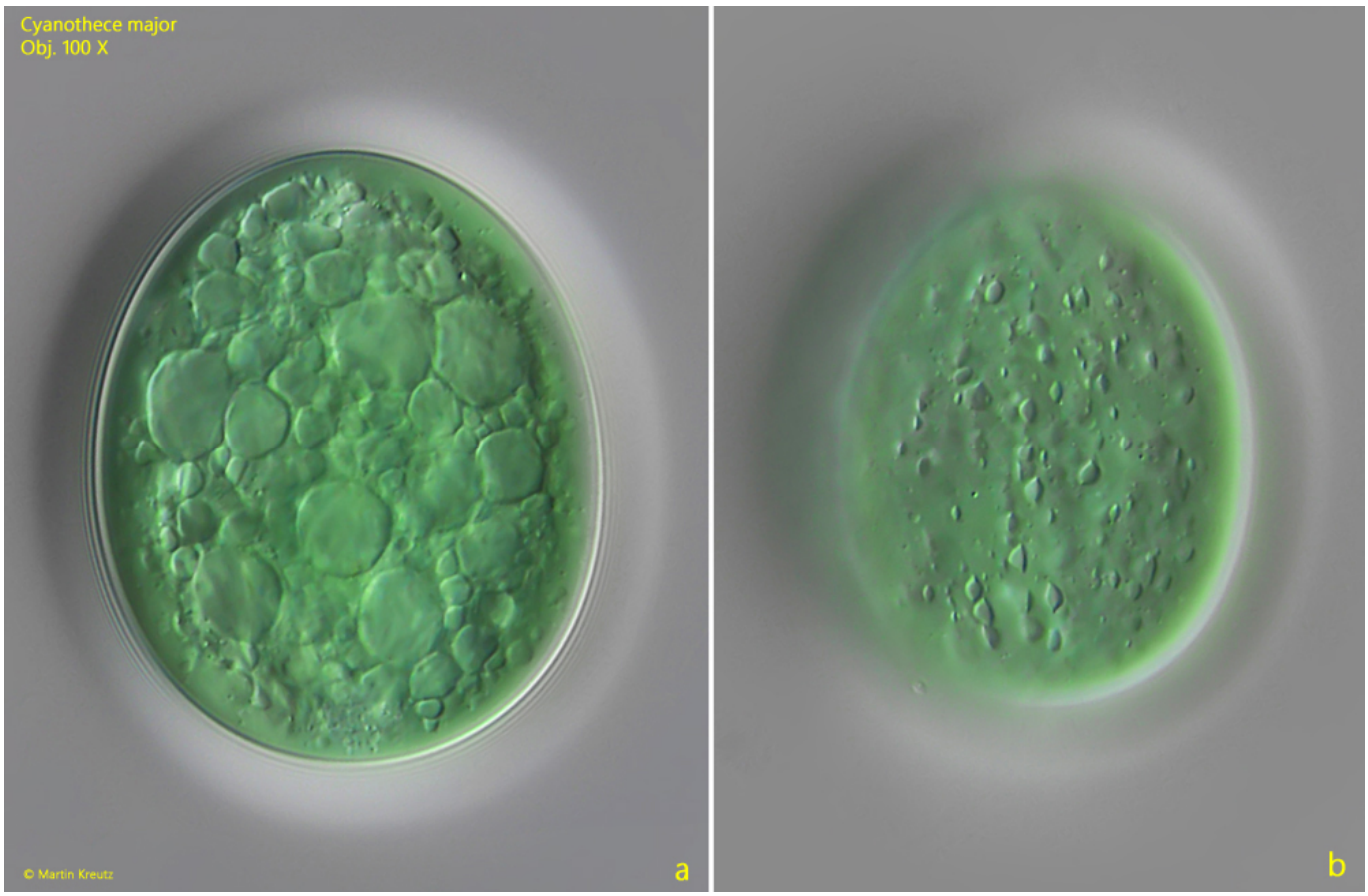


Fig. 3 a-b: *Cyanothece major*. L = 52 µm. The same specimen as shown in fig. 2 a-b in DIC. Obj. 100 X.

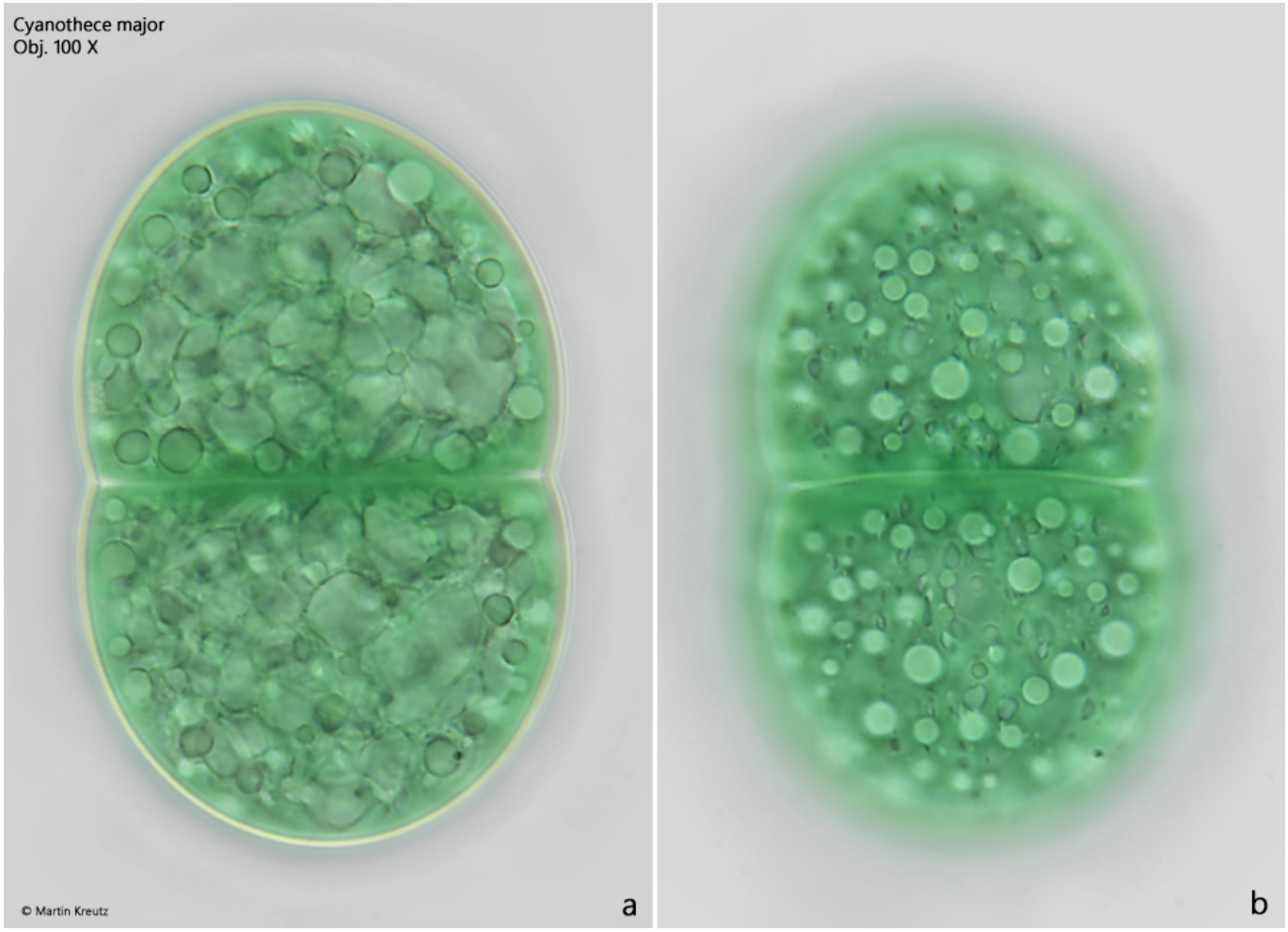


Fig. 4 a-b: *Cyanothece major*. L = 73 µm. Two focal planes of a specimen in cell division. Obj. 100 X.

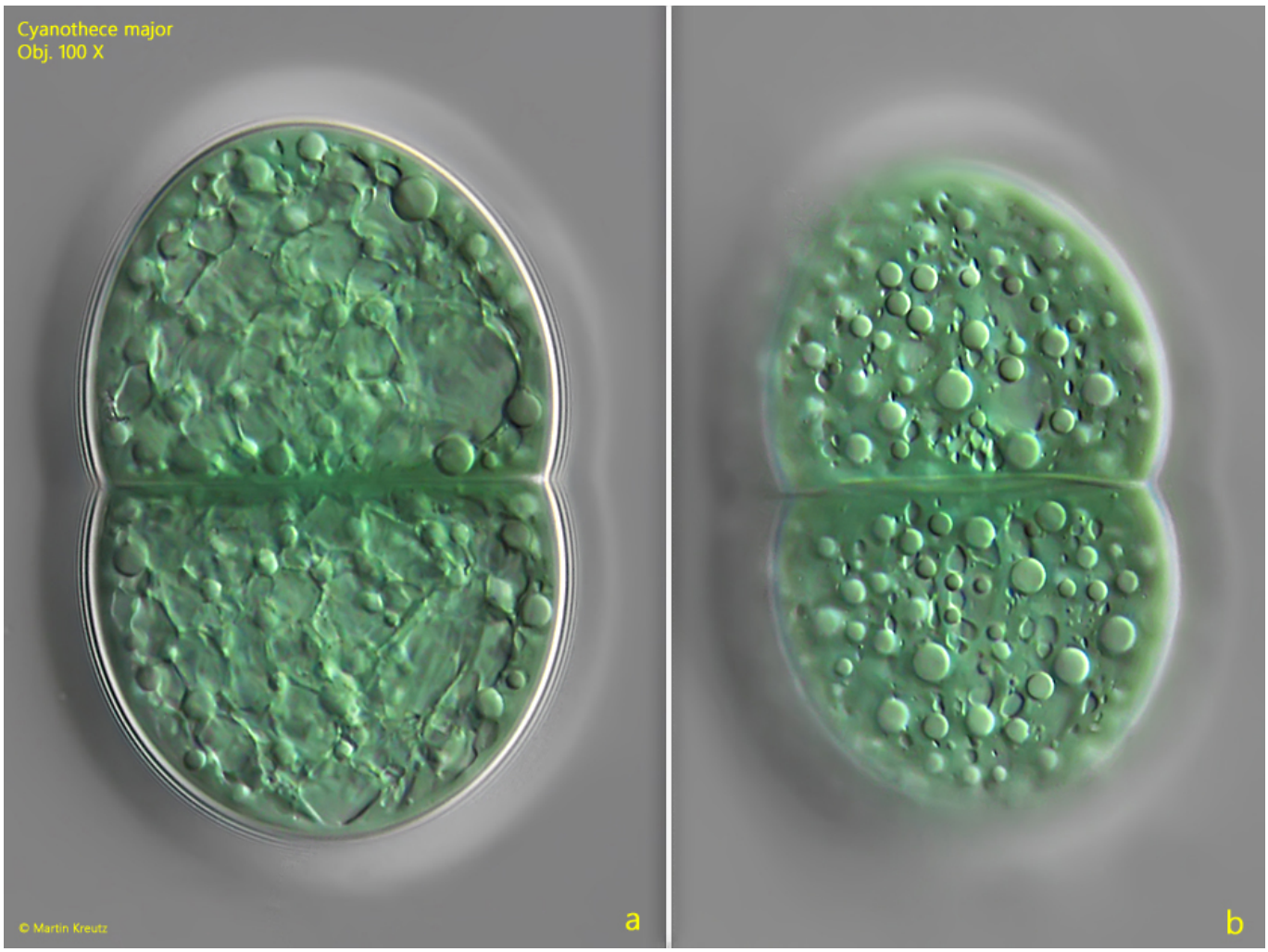


Fig. 5 a-b: *Cyanothece major*. L = 73 µm. The same specimen as shown in fig. 4 a-b in DIC. Obj. 100 X.