Oscillatoria limosa

C.Agardh ex Gomont, 1892

Most likely ID: n.a.

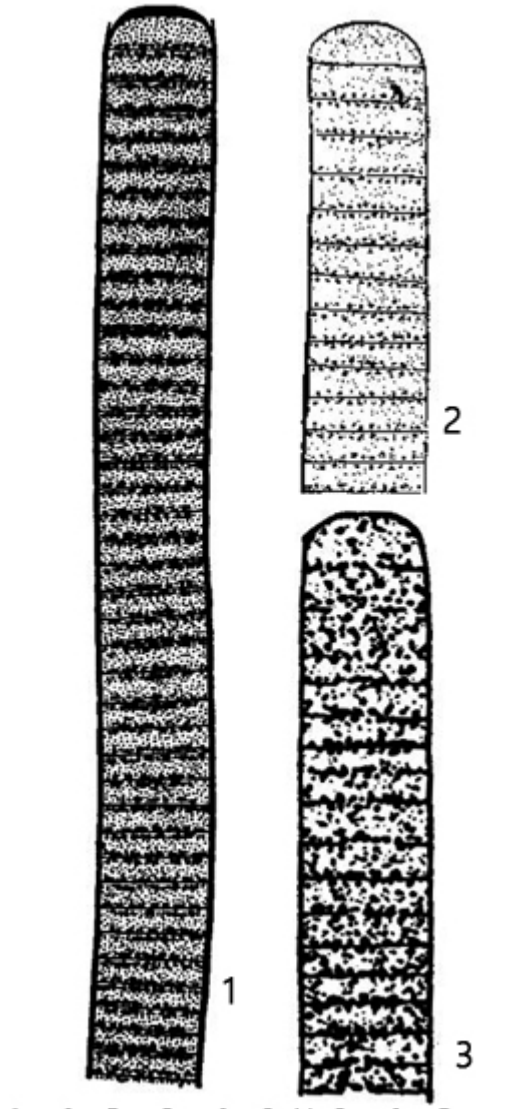
Synonym: *Phormidium limosum*

Sampling location: Ziegelhof pond

Phylogenetic tree: *Oscillatoria limosa*

Diagnosis:

- formig brownish or black-greenish mats
- filaments solitary, straight or slightly curved
- cells 11–22 µm wide, 2–5 µm long
- young cells often vacuolated
- blue-green, brown or olive green
- crosswalls without constrictions
- accumulations of granules near crosswalls
- terminal cells broadly rounded, with slightly thickened membrane



1 = after Fott, 2 = after Smith, 3 = after Gomont

Oscillatoria limosa

In older samples, *Oscillatoria limosa* forms dark green mats on the mud layer at the bottom or on the side of the container facing the light. There they can be collected easily without many impurities or foreign bodies.

The filaments of *Oscillatora limosa* often lie parallel together and move against each other (s. figs. 1 and 2). In my population the filaments were between 14–18 µm thick. The individual cells in the filaments are flat disc-shaped, which is typical for the genus *Oscillatoria*. The filaments show practically no constrictions on the crosswalls. In the cells, however, granules are often accumulated adjacent to the crosswalls (s. fig. 4 a-b). An important feature for identification of the species is the shape of the terminal cells. In *Oscillatoria limosa* these are broadly rounded (s. figs. 6 a-b and 7 a-b), sometimes with short projections of a membrane sheath (s. fig. 8 a-b). Young cells in the filaments are often strongly vacuolated (s. fig. 6 b). The

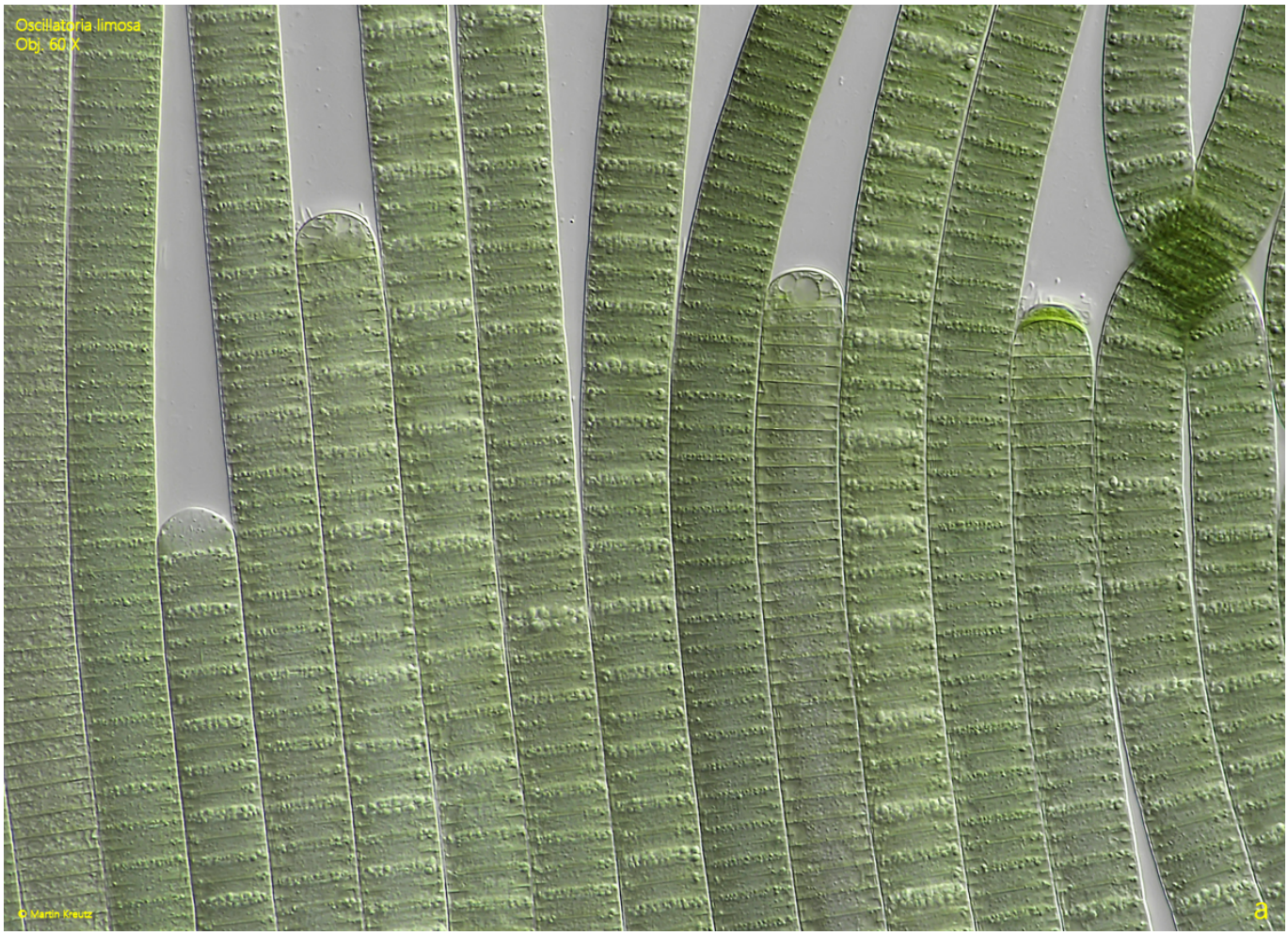
color of the filaments in my population was consistently blue-green.



Fig. 1: *Oscillatoria limosa*. A bundle of filaments in brightfield illumination. Obj. 20 X.



Fig. 2: *Oscillatoria limosa*. A second bundle of filaments in DIC. Obj. 20 X.



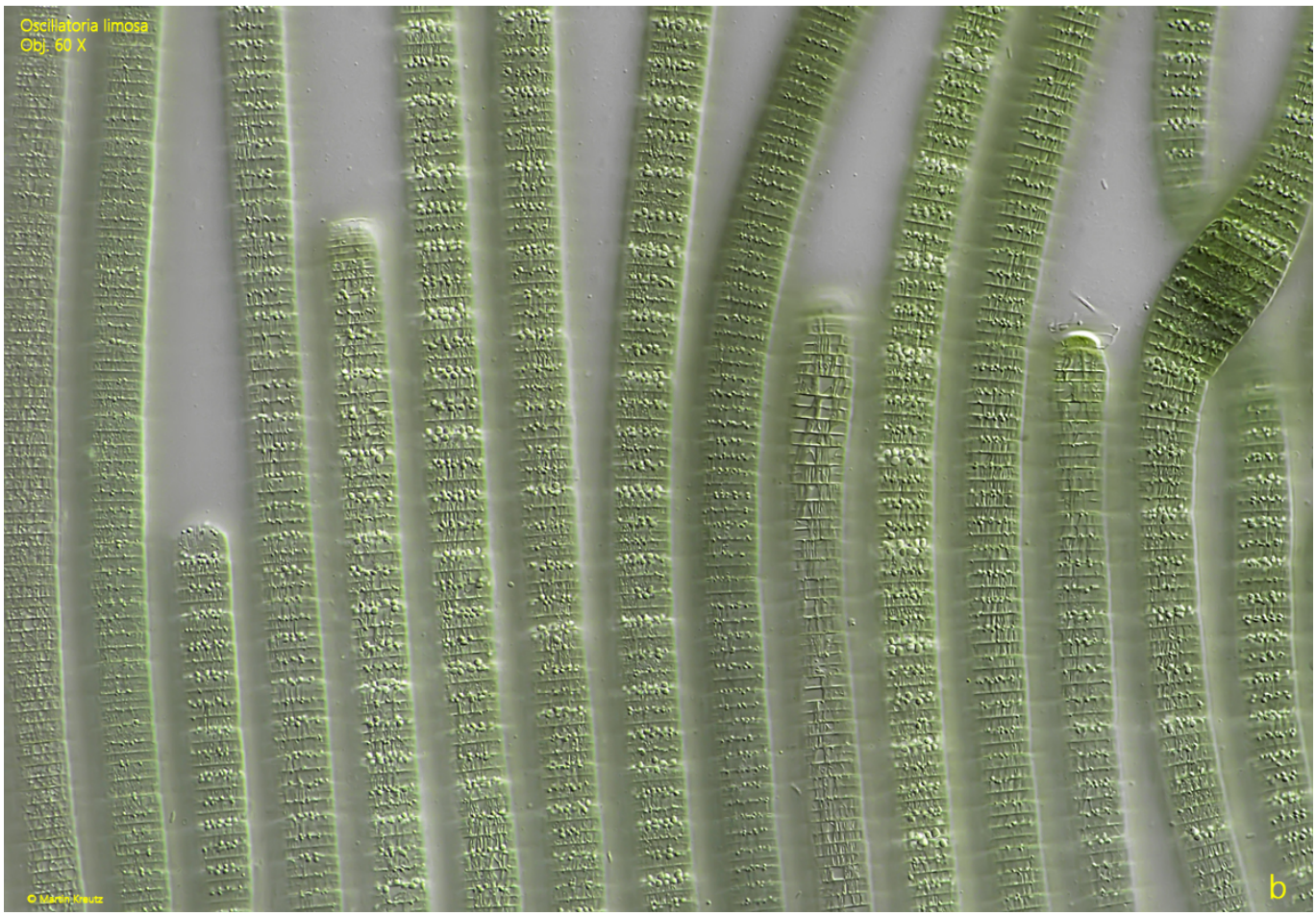


Fig. 3 a-b: *Oscillatoria limosa*. D = 16.7–18.2 µm (of filaments). Two focal planes of a bundle of filaments. Obj. 60 X.

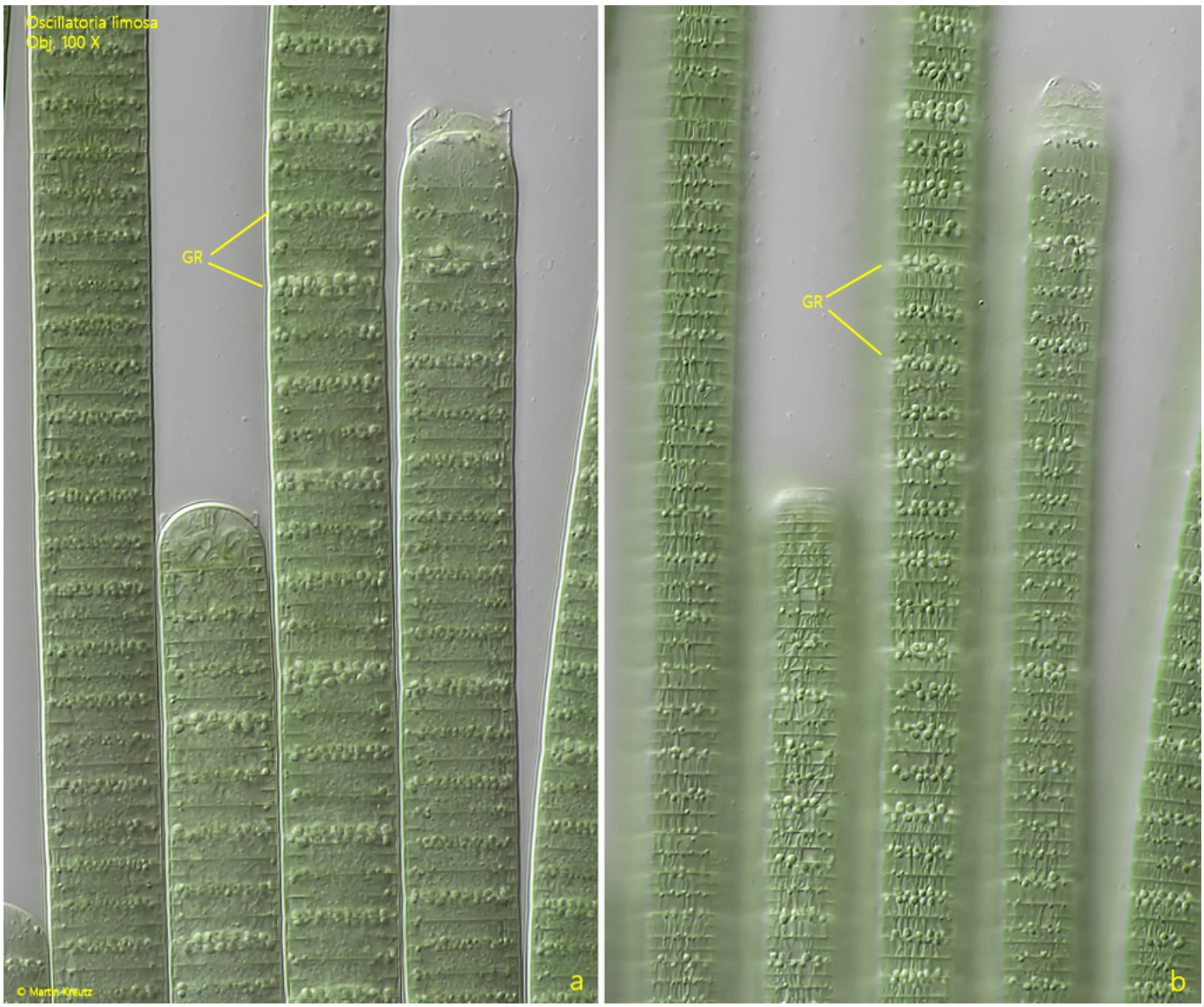


Fig. 4 a-b: *Oscillatoria limosa*. D = 14.4–17.9 µm (of filaments. Two focal planes of a bundle of filaments in detail. Note the accumulation of granules (GR) adjacent to the crosswalls. Obj. 100 X.



Fig. 5 a-b: *Oscillatoria limosa*. A bundle of filaments in DIC (a) and brightfield illumination (b). Obj. 100 X.

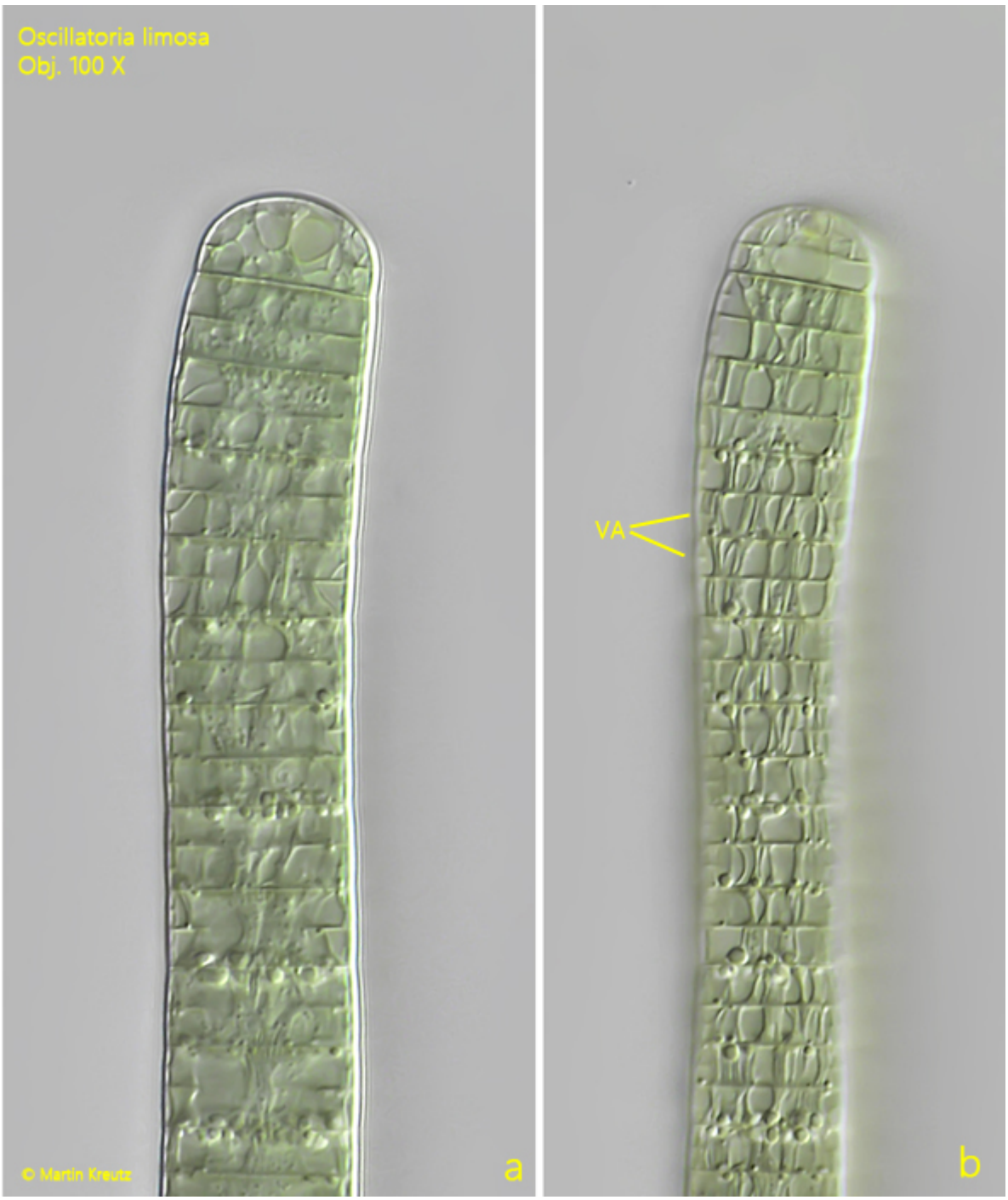


Fig. 6 a-b: *Oscillatoria limosa*. D = 17.7 µm (of filament). Two focal planes of the end of a filament. Note the vacuolized young cells (VA). Obj. 100 X.

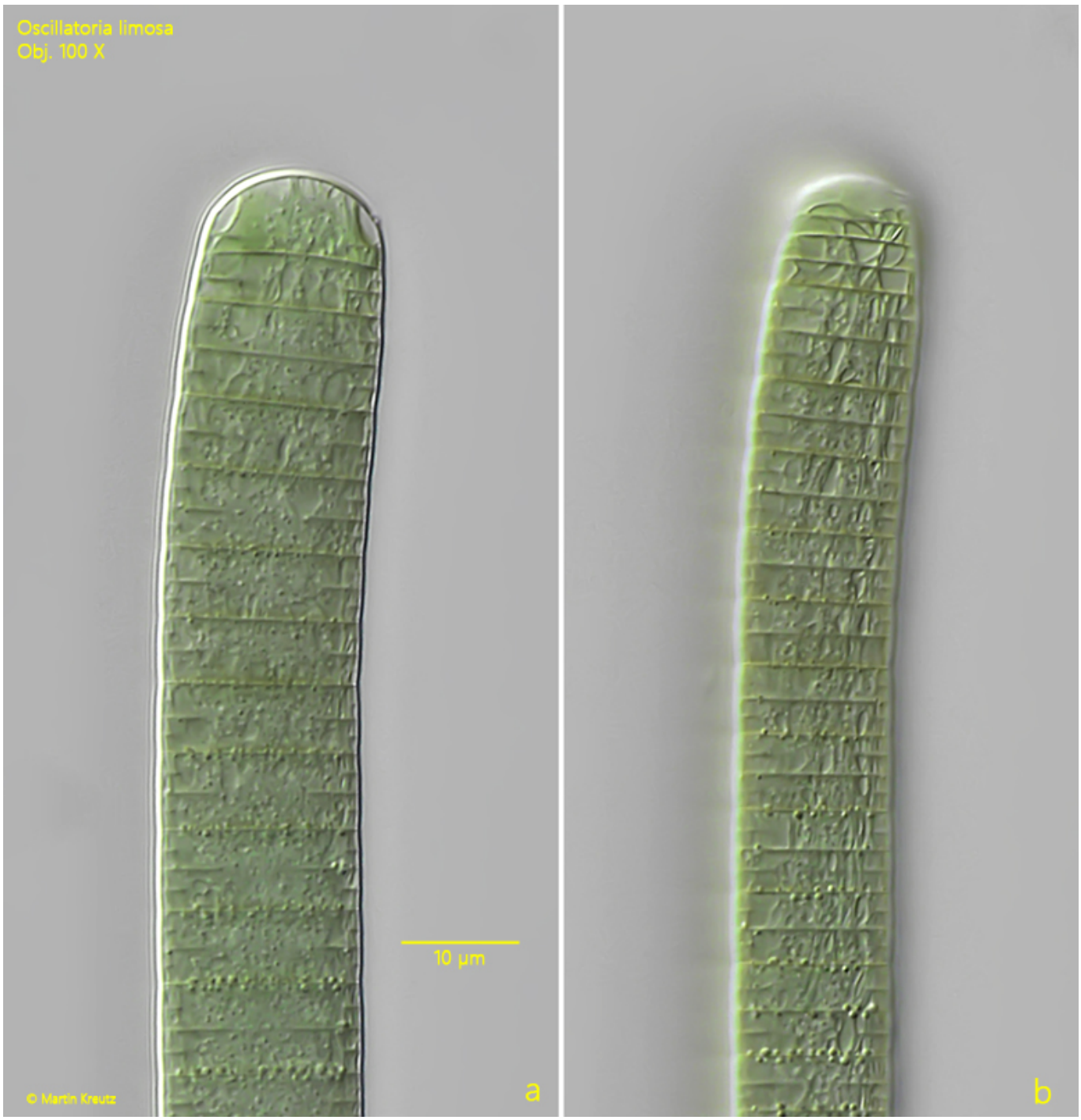


Fig. 7 a-b: *Oscillatoria limosa*. D = 17.7 µm (of filament). Two focal planes of the end of a second filament. Obj. 100 X.

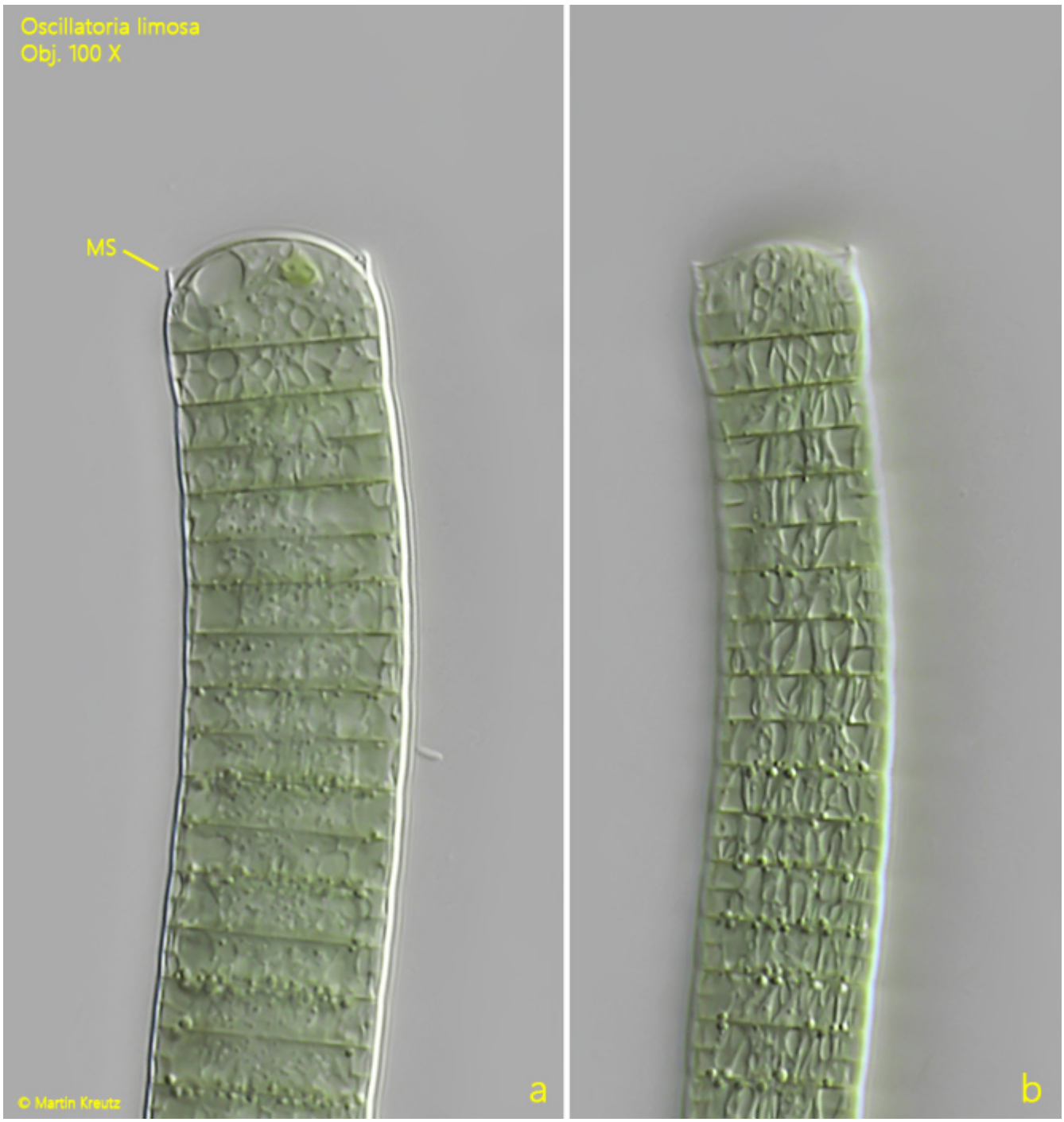


Fig. 8 a-b: *Oscillatoria limosa*. D = 17.2 µm (of filament). Two focal planes of the end of a third filament. Note the projections of the membranuos sheath (MS) of the filament. Obj. 100 X.