Sphaeroeca volvox Lauterborn, 1894

Most likely ID: n.a.

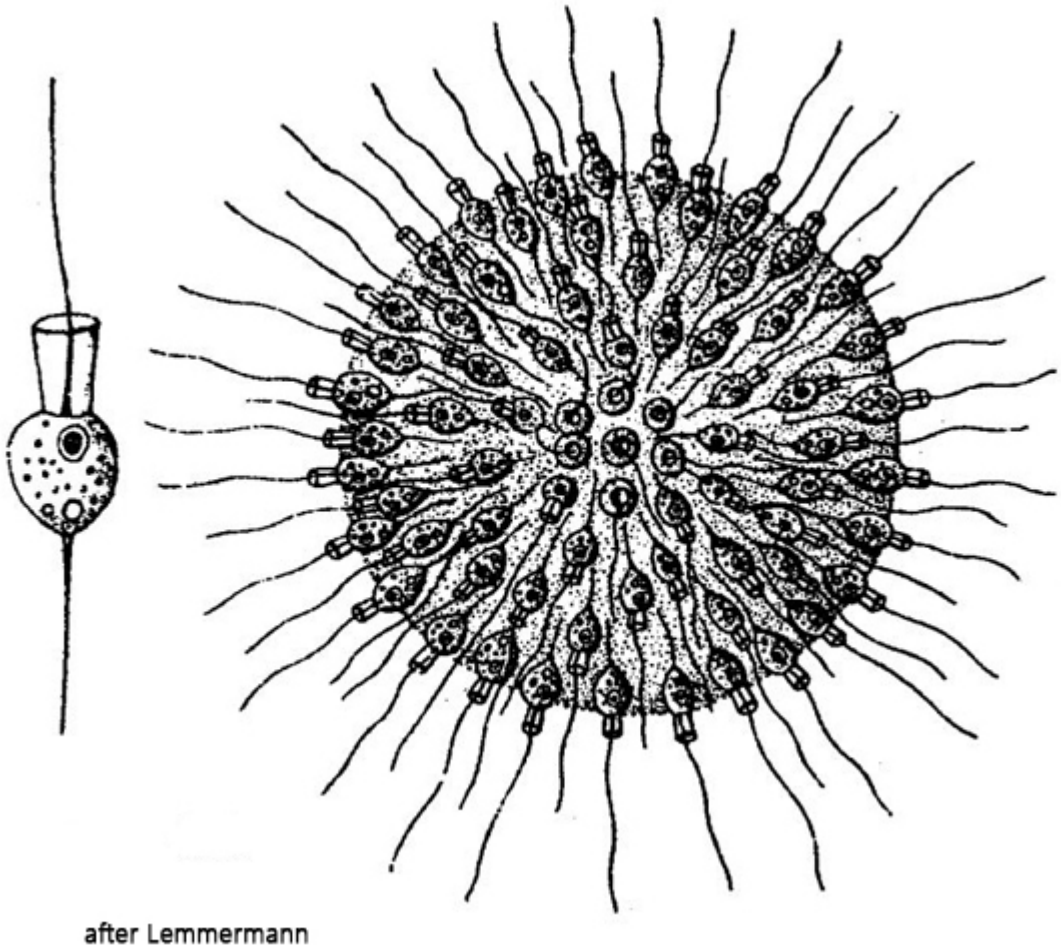
Synonym: n.a.

Sampling location: Ulmisried, Purren pond, Bussenried, Pond of the convent Hegne, Simmelried

Phylogenetic tree: *Sphaeroeca volvox*

Diagnosis:

- colonies spherical
- diameter of colonies 80–200 µm
- cells arranges in a monolayer
- cells obovate, 8–12 µm long
- stalk twice of body length
- one flagellum about 5 times body length
- base of flagellum surrounded by collar of microvilli
- one contractile vacuole
- nucleus in anterior third



Sphaeroeca volvox

I find colonies of *Sphaeroeca volvox* in almost all of my sampling sites. They can be found in the plankton but also between floating plants. In spring I was also able to observe various mass developments.

Sphaeroeca volvox belongs to the Choanoflagellates which form spherical colonies. The cells are arranged in an unicellular layer on the periphery of the colony. Each cell has a long flagellum, which is surrounded at the base by a collar of microvilli. Bacteria and small algae serve as food, which are transported by the flagellum to the collar, where they are collected in the collar and then phagocytized. In the center of the colonies there are often accumulations of bacteria, small algae and sometimes also small amoebae.

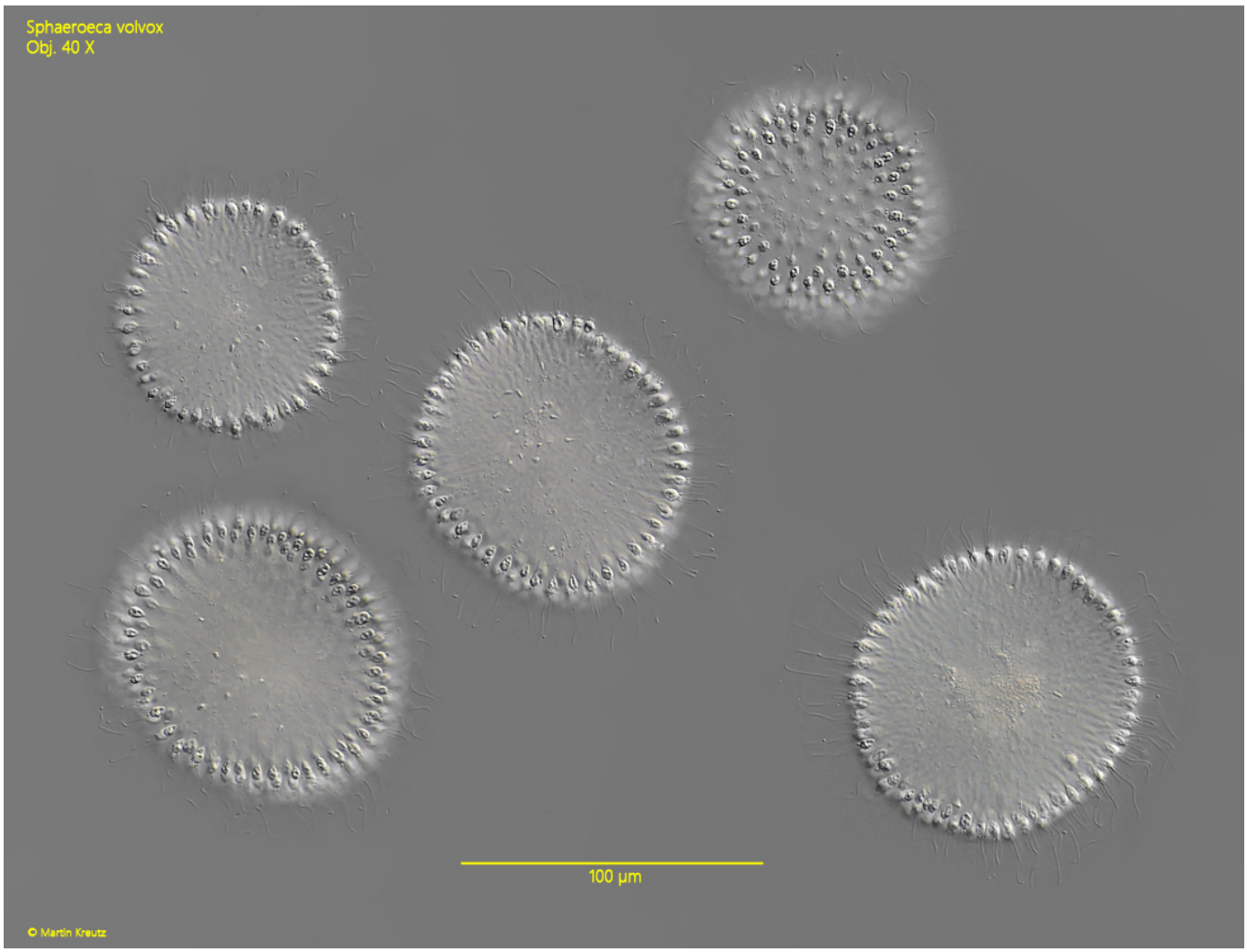


Fig. 1: *Sphaeroeca volvox*. D = 73–95 µm (of colonies). Some freely floating colonies. Obj. 40 X.

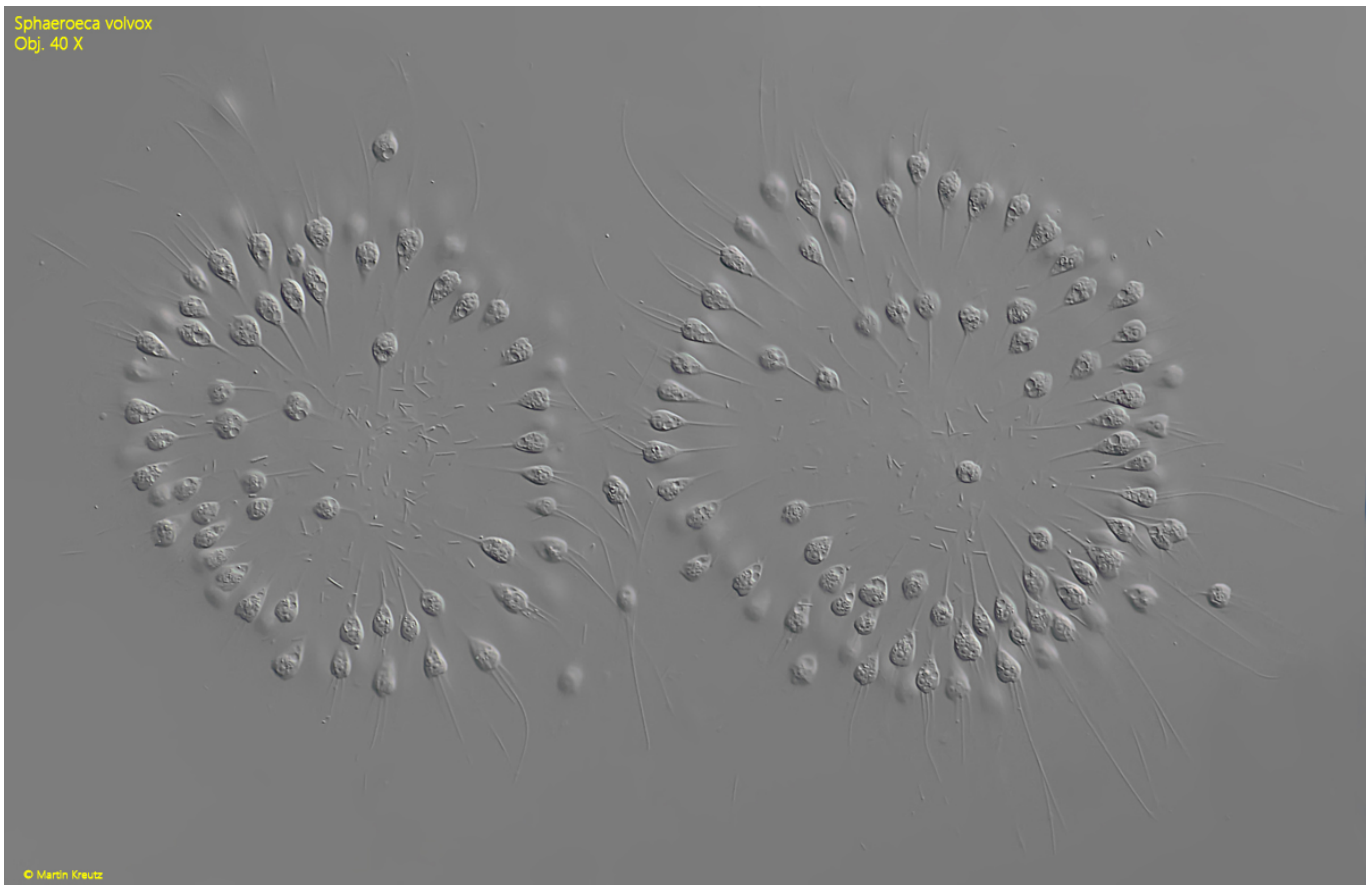


Fig. 2: *Sphaeroeca volvox*. Two squashed colonies. Note the monolayer of cells in the periphery and the stalks directed to the center of the colonie. Obj. 40 X.

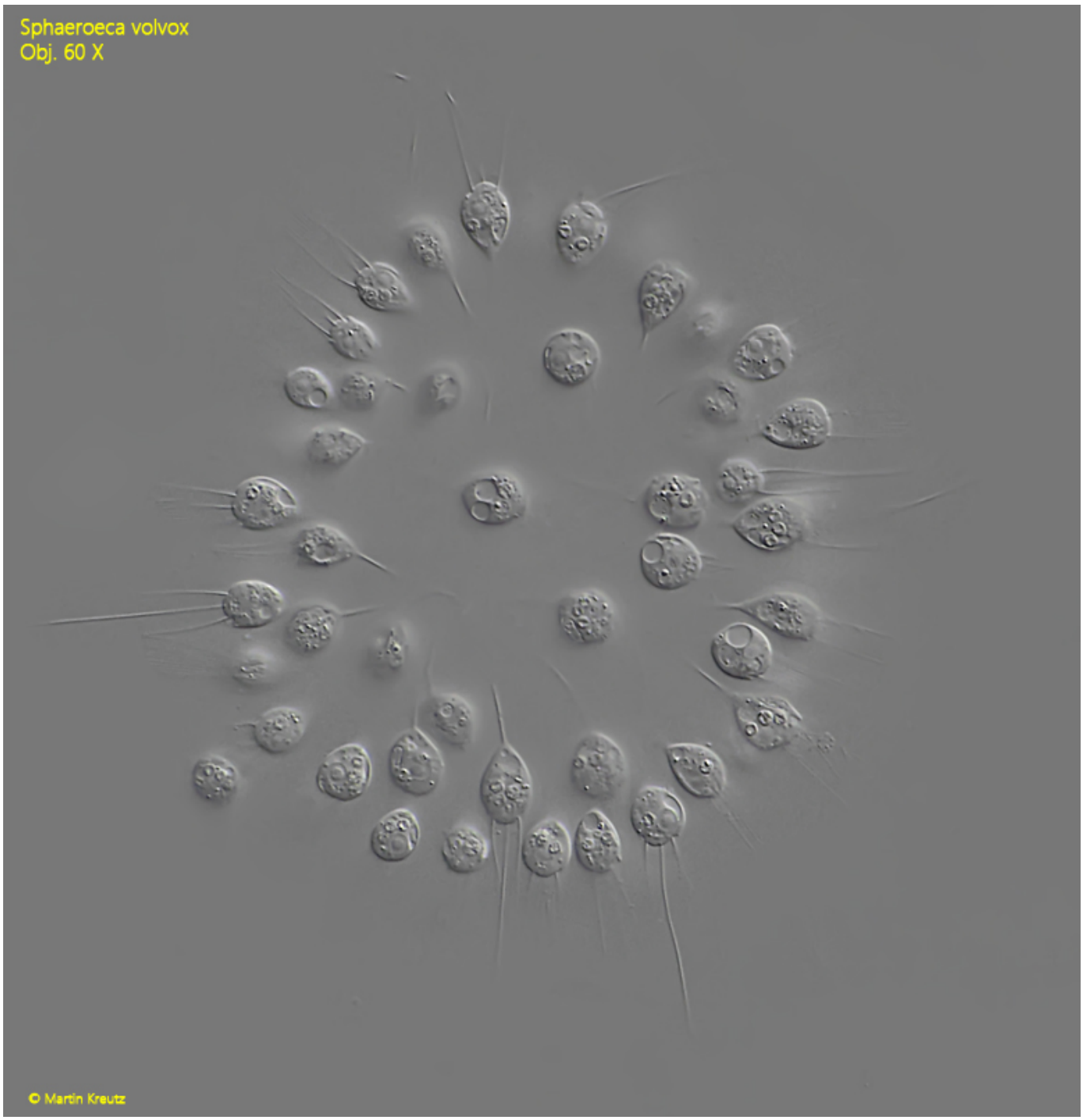


Fig. 3: *Sphaeroeca volvox*. A second squashed colony. Obj. 60 X.

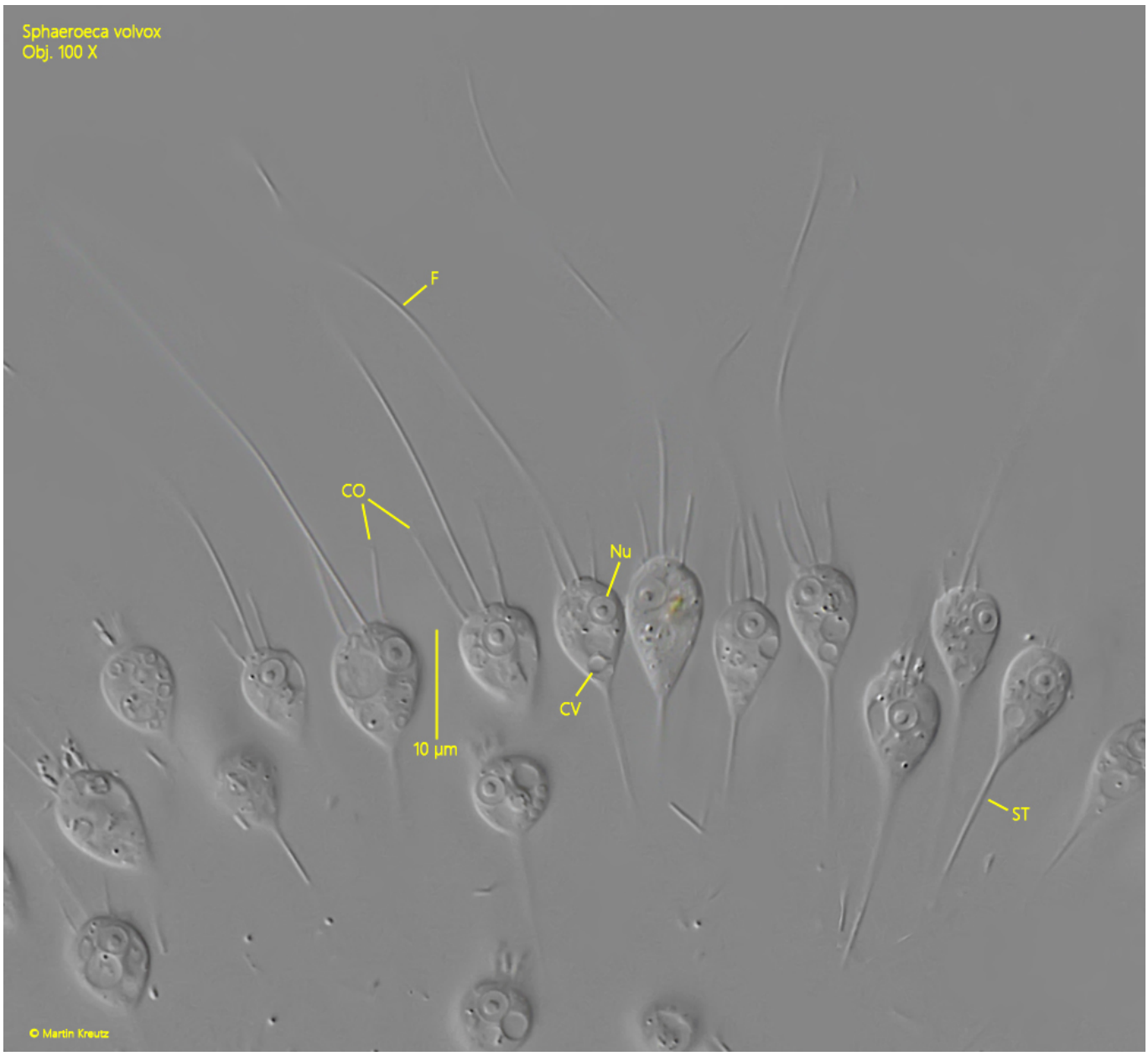


Fig. 4: *Sphaeroeca volvox*. The cells in a squashed colony. The long flagellum (F) is surrounded by a collar (CO) of microvilli. In the anterior third of the cells the nucleus (Nu) is located and one contractile vacuole (CV) is present. Each cell has as stalk directed to the center of the colony. Obj. 100 X.