Quadrigula closterioides

(Bohlin) Printz, 1916

Most likely ID: n.a.

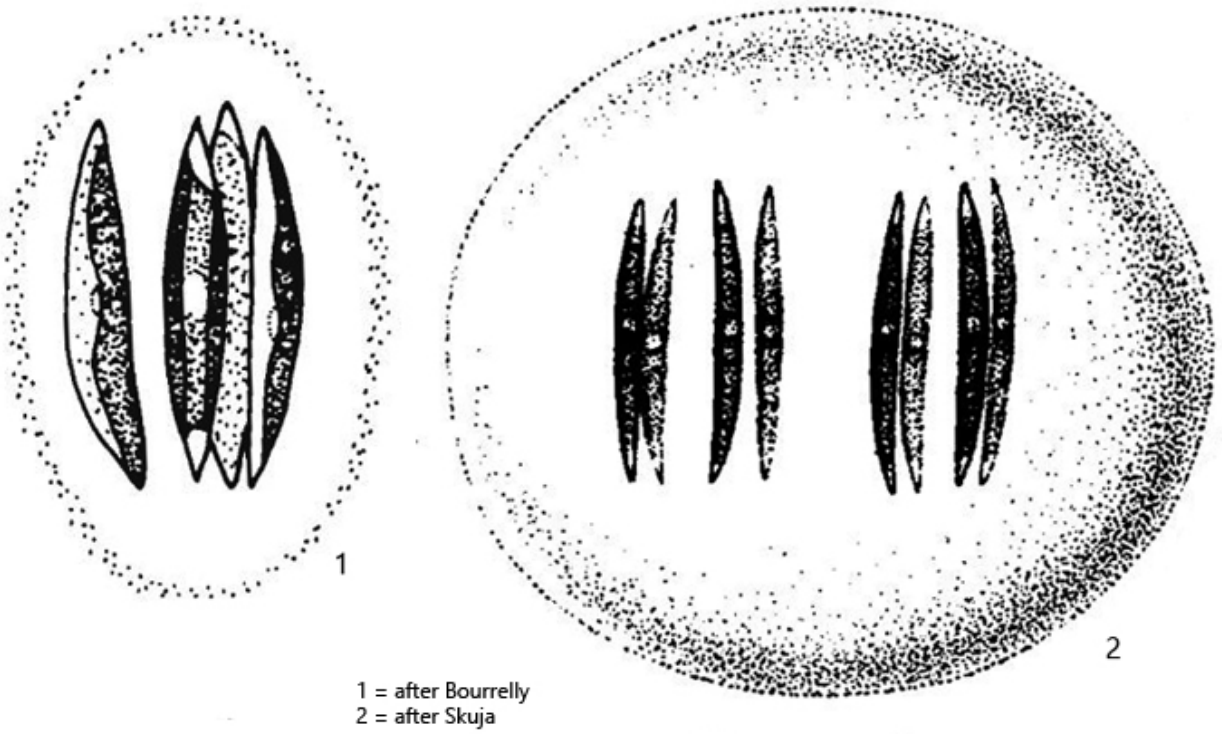
Synonym: *Ankistrodesmus closterioides*

Sampling location: Simmelried

Phylogenetic tree: *Quadrigula closterioides*

Diagnosis:

- cells long, spindle-shaped, straight or slightly curved
- cells narrowing gradually to pointed apices
- length 20–30 µm, width 2-6 µm
- colonies 2–16 cells
- one parietal chloroplast with one inconspicuous pyrenoid
- nucleus central



Quadrigula closterioides

I find *Quadrigula closterioides* only rarely and so far exclusively in the Simmelried. The genus *Quadrigula* can be distinguished from the genera *Ankistrodesmus* and *Selenastrum* by the parallel arrangement of the cells in a colony. In *Ankistrodesmus* and *Selenastrum* the cells touch approximately in the middle of the cell and are not parallel.

The pyrenoid in the chloroplast of *Quadrigula closterioides* is very difficult to recognize, especially when the cells are filled with starch grains (s. fig. 2). I was not able to identify the pyrenoid. The nucleus, on the other hand, lies in a recess in the middle of the cell and is not covered by the chloroplast (s. fig. 2).

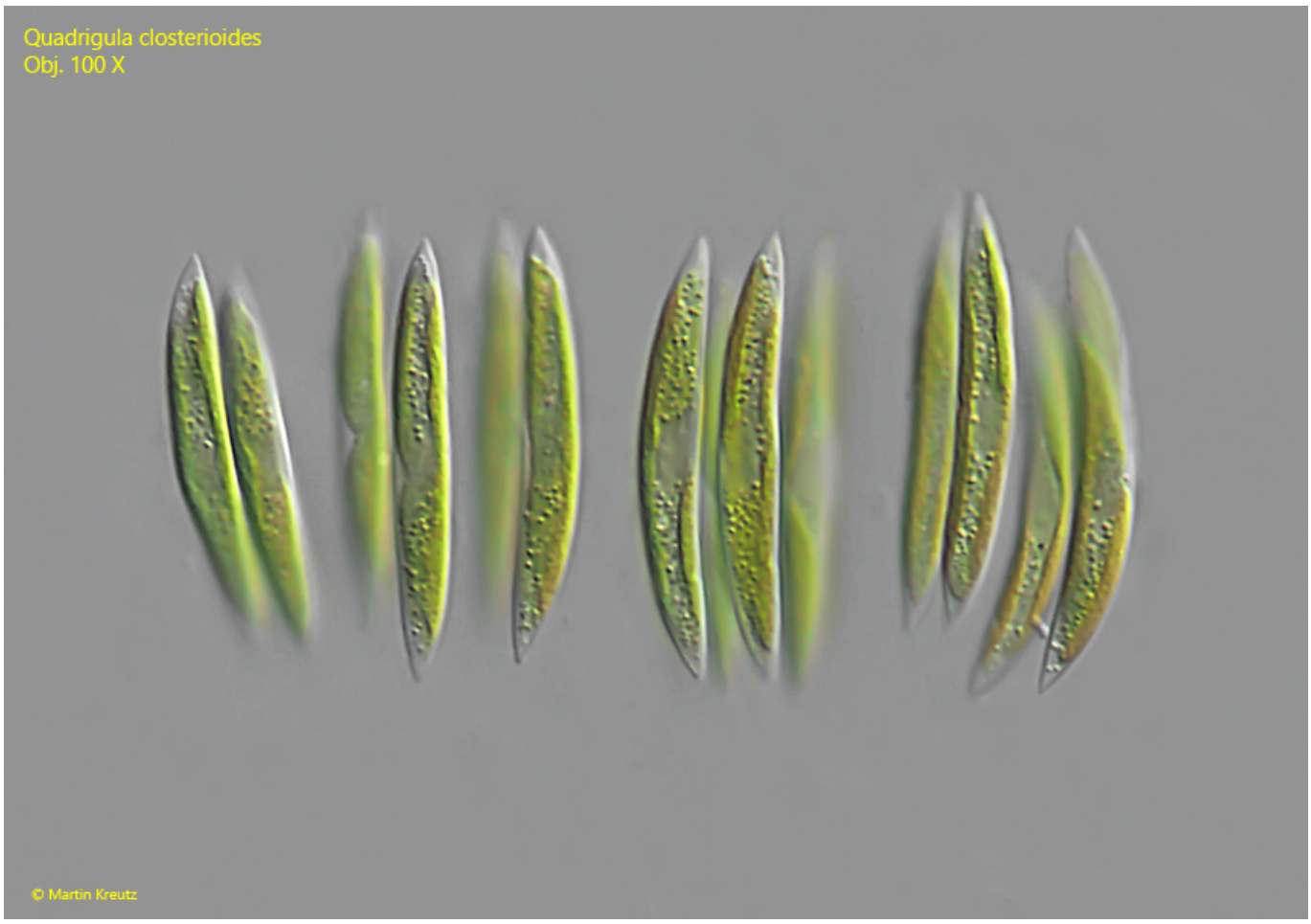


Fig. 1: *Quadrigula closterioides.* L = 22–28 µm. A colony of 14 cells. Of the 4 mother cells, three have divided twice and one (left) only once. Obj. 100 X.

Fig. 2: *Quadrigula closterioides.* L = 28–29 µm. A colony of 4 cells. All cells are filled with spherical starch grains. Nu = nucleus. Obj. 100 X.

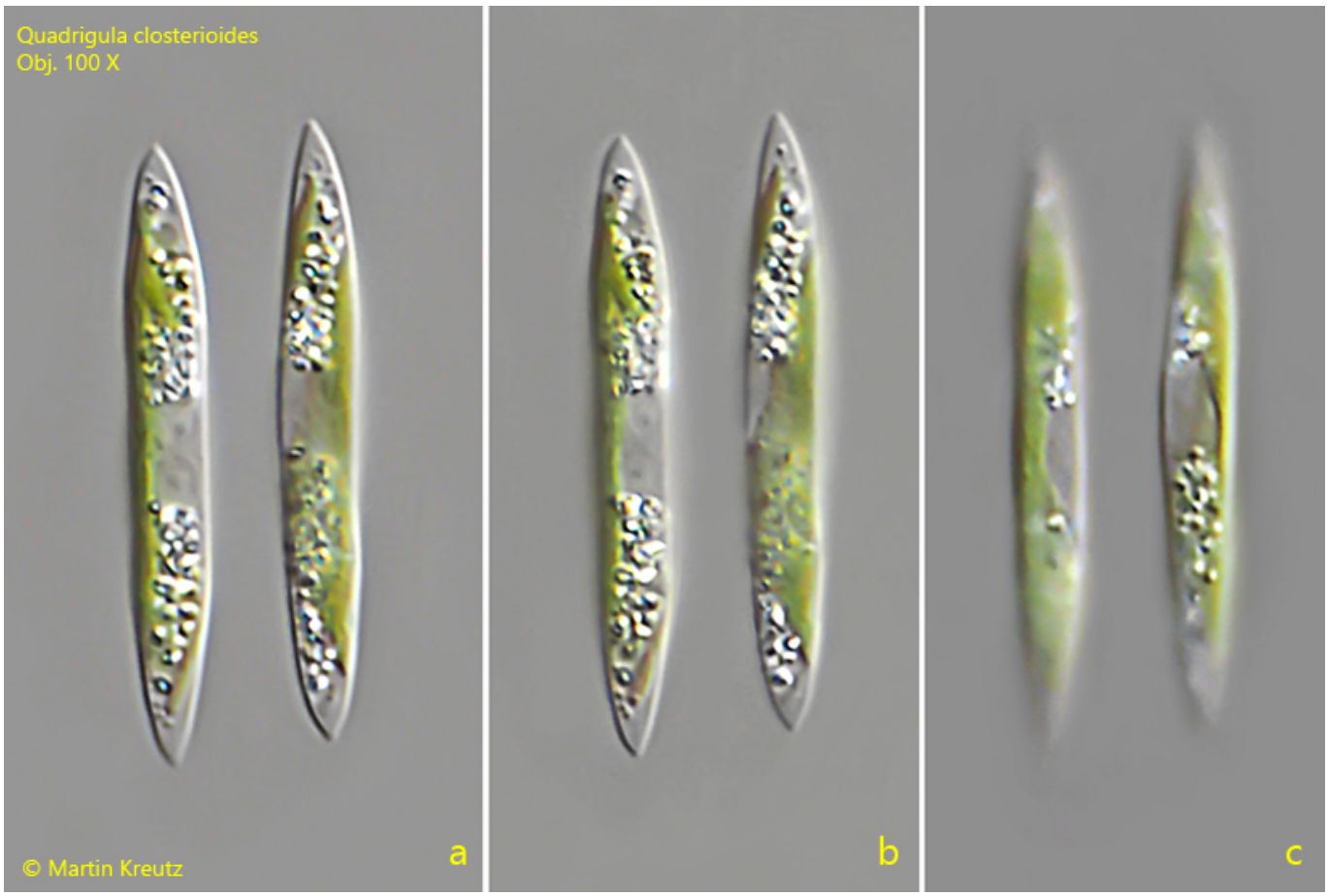


Fig. 3 a-c: *Quadrigula closterioides.* L = 25–26 µm. The focal planes of a colony of 2 cells. Obj. 100 X.