Metacystis tesselata Kahl, 1926

Most likely ID: n.a.

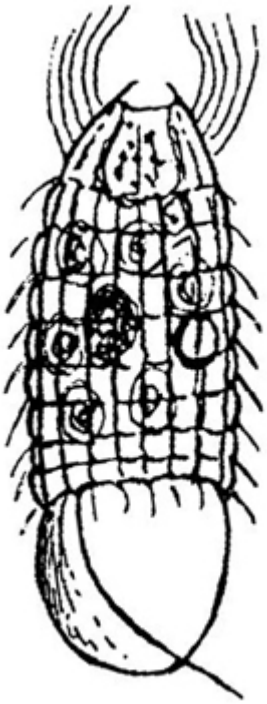
Synonym: n.a.

Sampling location: Pond of the convent Hegne

Phylogenetic tree: *Metacystis tesselata*

Diagnosis:

- body plump cylindrical or barrel-shaped
- length about 50 µm
- mouth apparatus apical with receptaculum
- contractile vacuole near mid-body
- spherical macronucleus central with one adjacent micronucleus
- pellicle with alveoles, cause a rectangular pattern
- 8–9 distinct transverse furrows
- about 20 longitudinal rows of cilia
- transparent posterior vacuole, about 20 % of body length
- one long caudal cilium



after Kahl

Metacystis tesselata

So far I have only found two specimens of *Metacystis tesselata*. The specimens had settled on floating coverslips on samples from the pond at convent Hegne.

Metacystis tesselata was first described by Kahl (1926), who found it “occasional frequently” in shallow ditches. All the specimens he found and described had no lorica and swam freely. The two specimens in my population were located in loricae which were attached to the coverslip (s. fig. 1 a). The loricae of the both specimens were 70-80 µm long, had an bulbuous extension in the middle and a tapered opening at both ends. The excretory products of the ciliate were released at one end (s. fig. 1 a).

The two specimens showed all the characteristics described by Kahl, but at 36 µm and 40 µm they were about 20 % smaller than those indicated by Kahl (about 50 µm). The specimens could only be observed in thick layers and were very sensitive to disturbances and coverslip pressure. The lorica was then immediately abandoned, which may explain why Kahl only found free-swimming specimens.

The similar species *Metacystis recurva* does not have a posterior vacuole and the species *Metacystis mucosa*, described by Foissner in 2016, builds a mucus envelope of about 300 µm thickness around the lorica. In my specimens, there was definitely

no mucus envelope around the loricae visible. It must therefore be *Metacystis tesselata*.

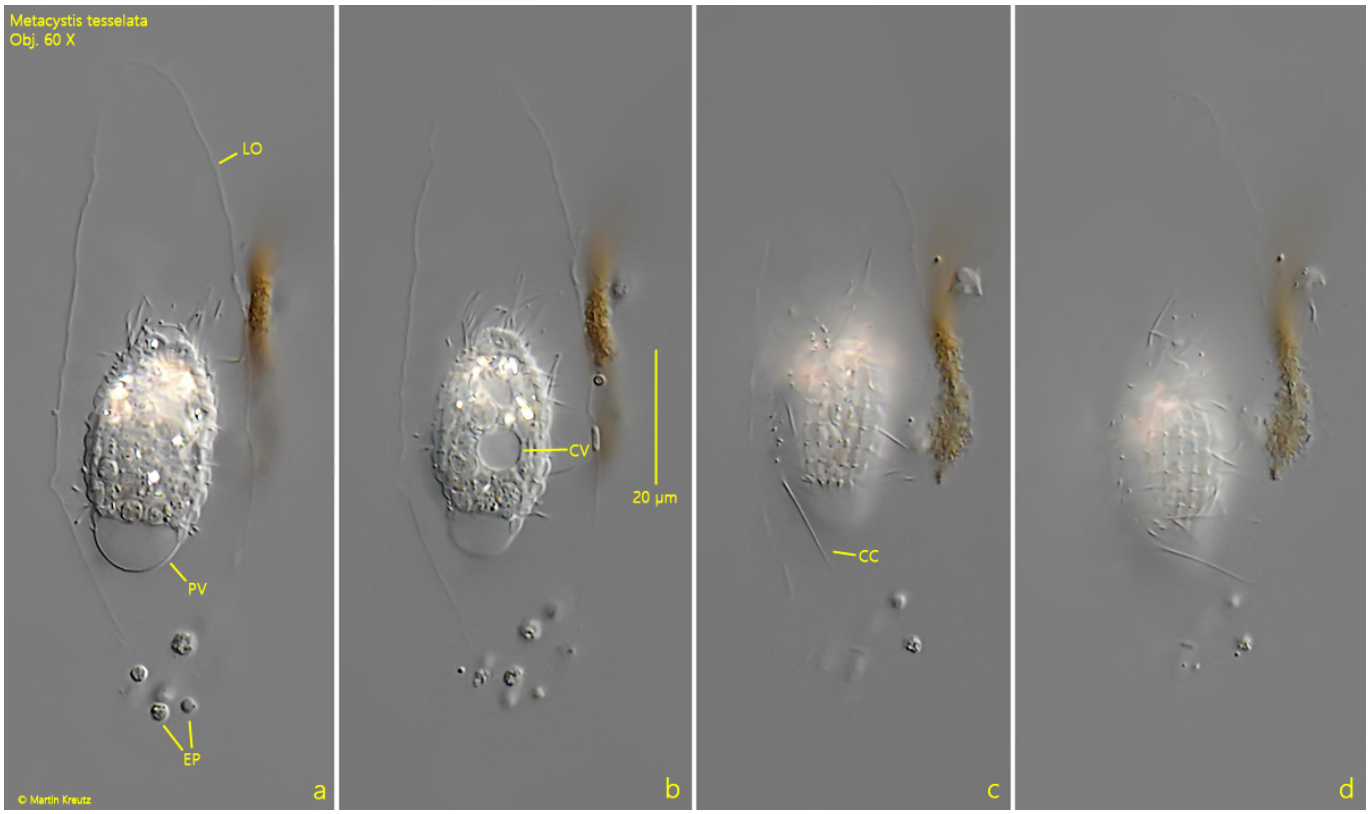


Fig. 1 a-d: *Metacystis tesselata*. L = 36 µm (with posterior vacuole). Different focal planes of a specimen in a lorica (LO). Note the contractile (CV) near mid-body and the distinct posterior vacuole (PV) of transparent cytoplasm. CC = caudal cilium, EP = excretory products. Obj. 60 X.

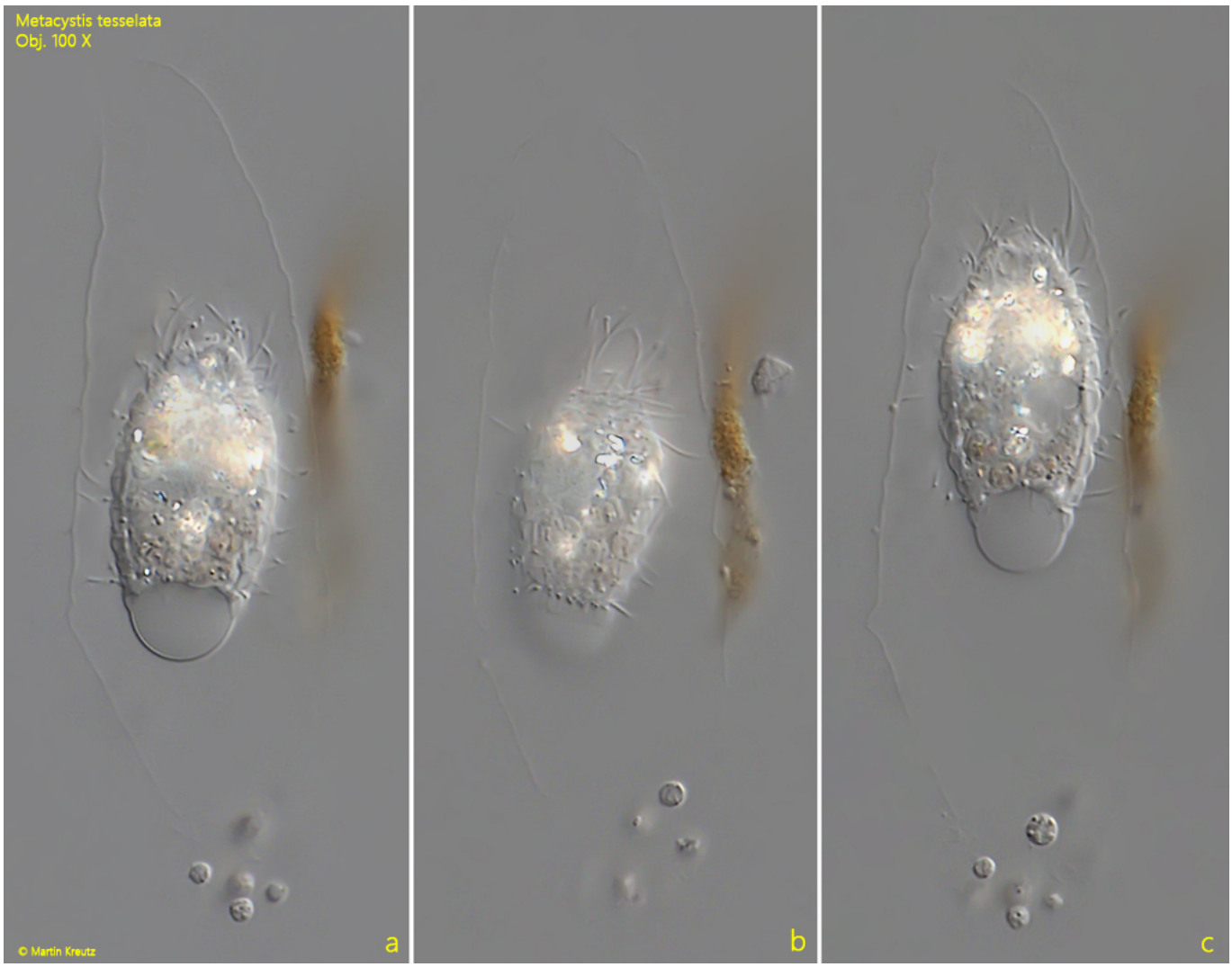


Fig. 2 a-c: *Metacystis tesselata*. L = 36 µm (with posterior vacuole). The same specimen as shown in fig. 1 a-d in detail. Obj. 100 X.