## Mayorella augusta Schaeffer, 1926

Most likely ID: n.a.

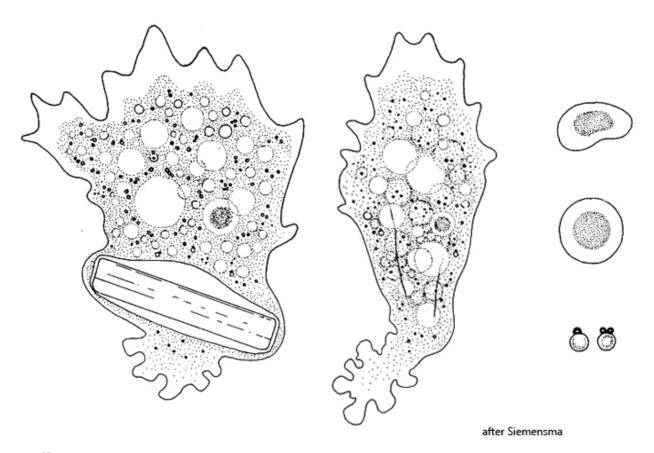
Synonym: n.a.

**Sampling location:** Simmelried

Phylogenetic tree: Mayorella augusta

## **Diagnosis:**

- floating form triangular, sometimes divided in two branches (Y-shaped)
- pseudopodia mammilliform or conical
- length 200-350 μm
- one contractile vacuole
- $\bullet$  one spherical nucleus (16-27  $\mu m$ ) with a large, central nucleolus
- nucleolus sometimes with granular structure
- crystals in the cytoplasm attached to spherical bodies



## Mayorella augusta

I find Mayorella augusta comparatively frequently in the <u>Simmelried</u>. The specimens in my population were on average 220 µm long. This is larger than the smaller species Mayorella penardi (50-125 µm). The species Mayorella bigemma, which is about the same size, differs from Mayorella augusta by so-called sub-pseudopodia, which are conical pseudopodia that are protrude laterally to the direction of flow. During locomotion, Mayorella augusta often forms Y-shaped stages in which the pseudopodia temporarily flow in two different directions (s. figs. 1 b, 2 a and 4 d). Another important characteristic of Mayorella augusta is the size of the nucleus, which is 16-27 µm in diameter and has a large, spherical nucleolus (s. fig. 6). The cytoplasm also contains birefringent crystals, which are always connected to a spherical body (s. drawing above and fig. 5). These pairs were found in all the specimens I observed. The composition of these paired bodies and what function they have is not known.

More images and information on Mayorella augusta: Ferry Siemensma-Microworld-Mayorella augusta

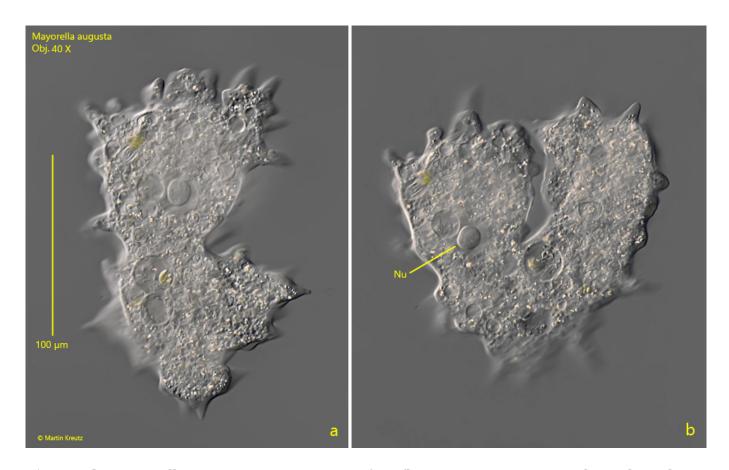
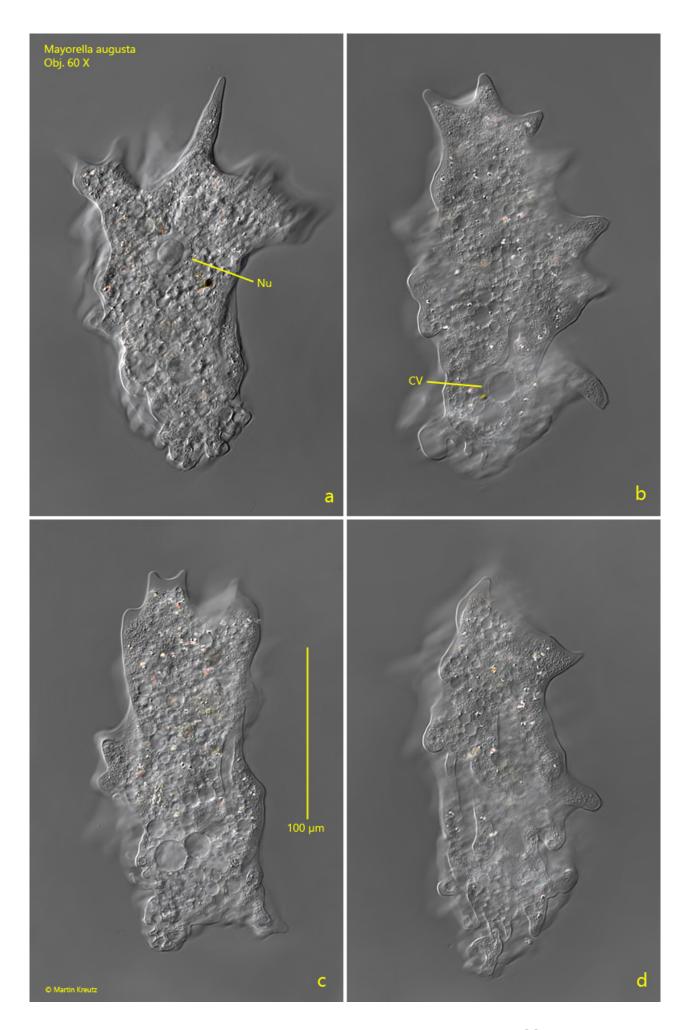
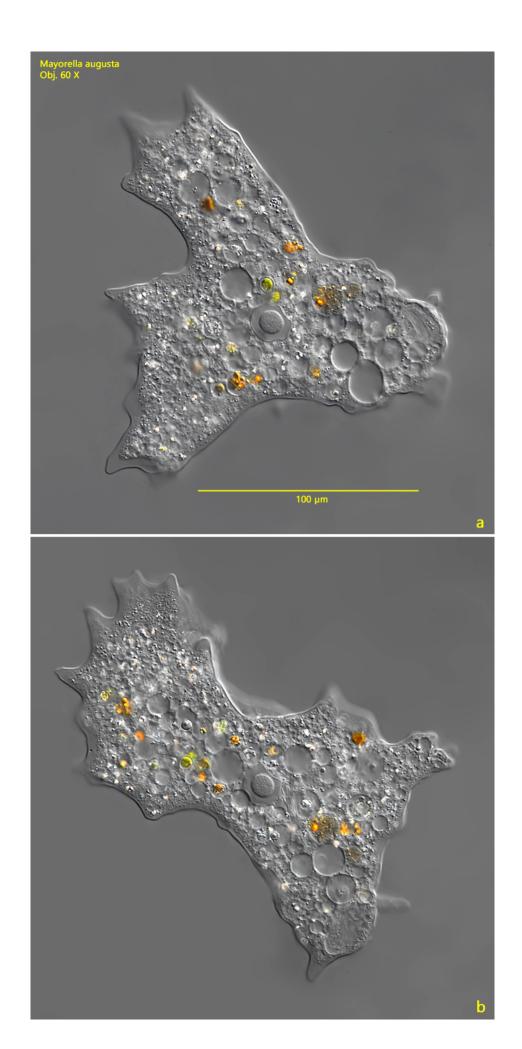
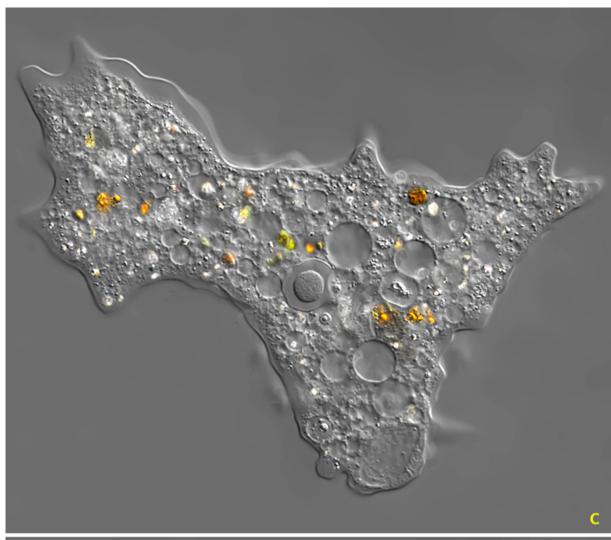


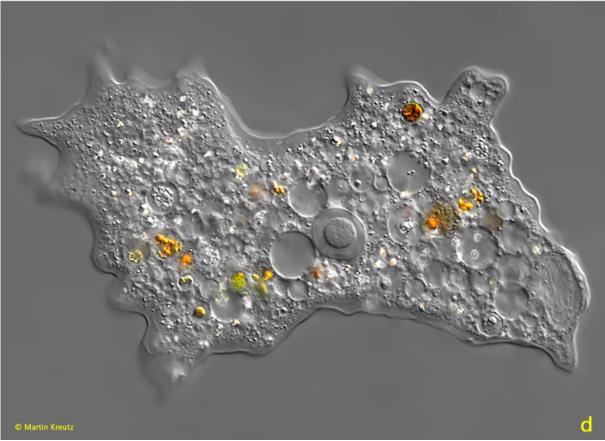
Fig. 1 a-b: Mayorella augusta. L = 220  $\mu m$ . A free-flowing specimen. Note the Y-shaped state branched in two pseudopodia (b). Obj. 40 X.



**Fig. 2 a-d:** Mayorella augusta.  $L=205~\mu m$ . A second, free-flowing specimen. CV= contractile vacuole, Nu= nucleus. Obj. 60 X.









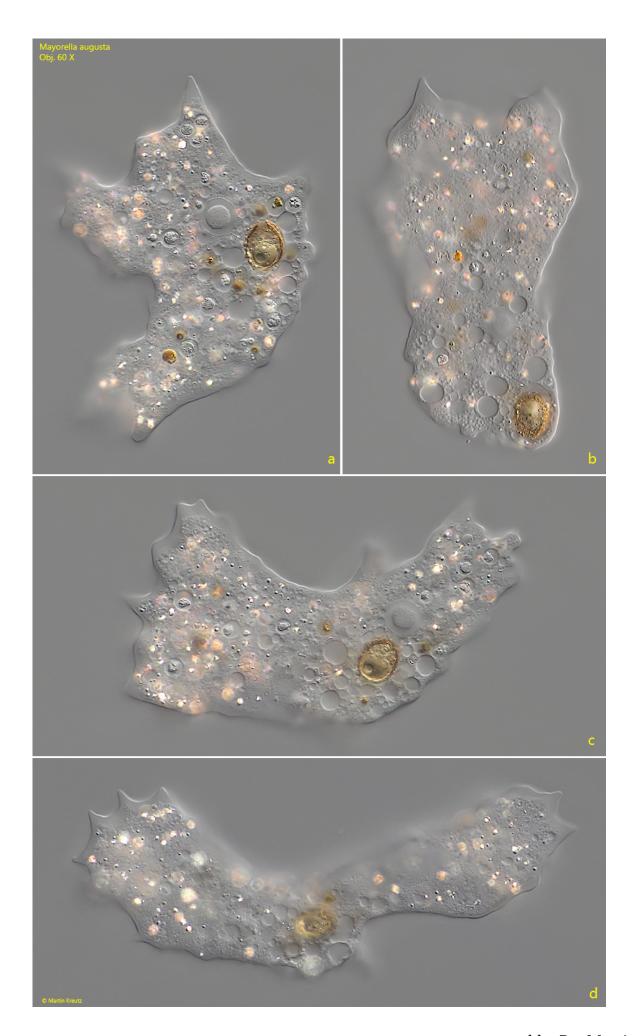


Fig. 4 a-d: Mayorella augusta.  $L = 220 \mu m$ . A fourth, free-flowing specimen. Obj. 60 X.

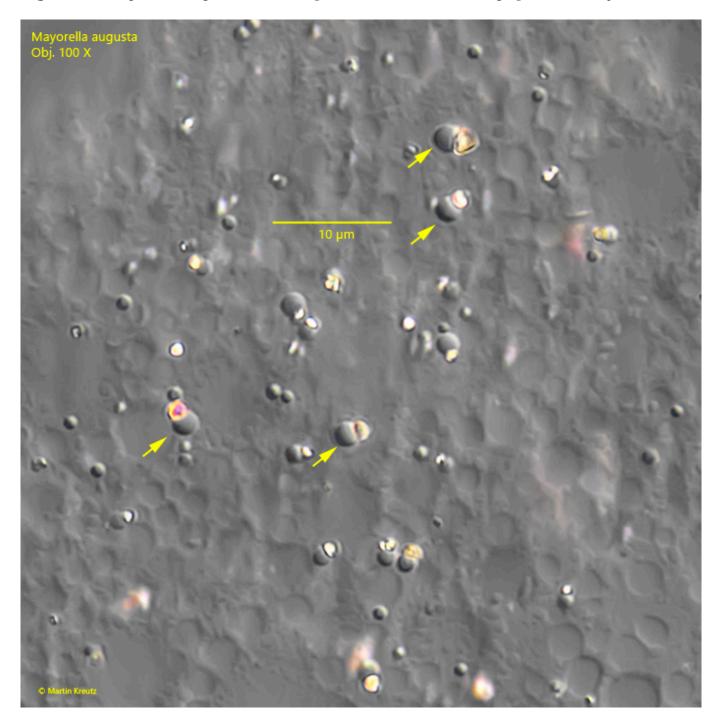


Fig. 5: Mayorella augusta. The birefringend crystals in the cytoplasm are attached to spherical bodies (arrows). Obj. 100 X.

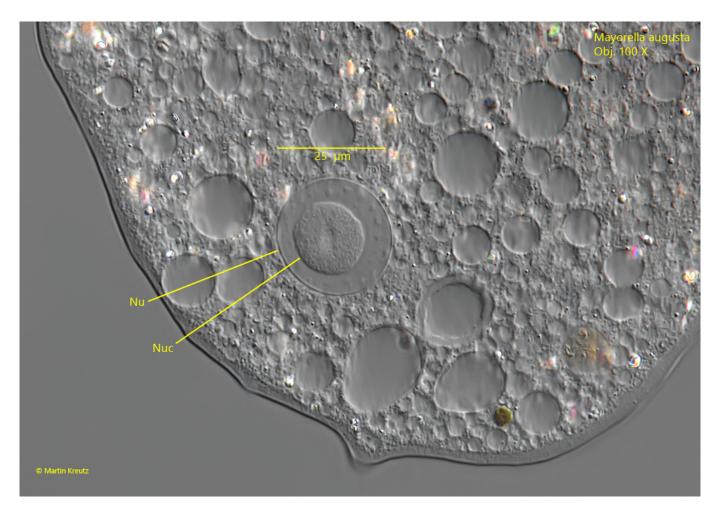


Fig. 6: Mayorella augusta. The nucleus (Nu) with a central nucleolus (Nuc) in detail. The diameter of the nucleus in this specimen is 26  $\mu m$ . Obj. 100 X.