Mayorella augusta Schaeffer, 1926

Most likely ID: n.a.

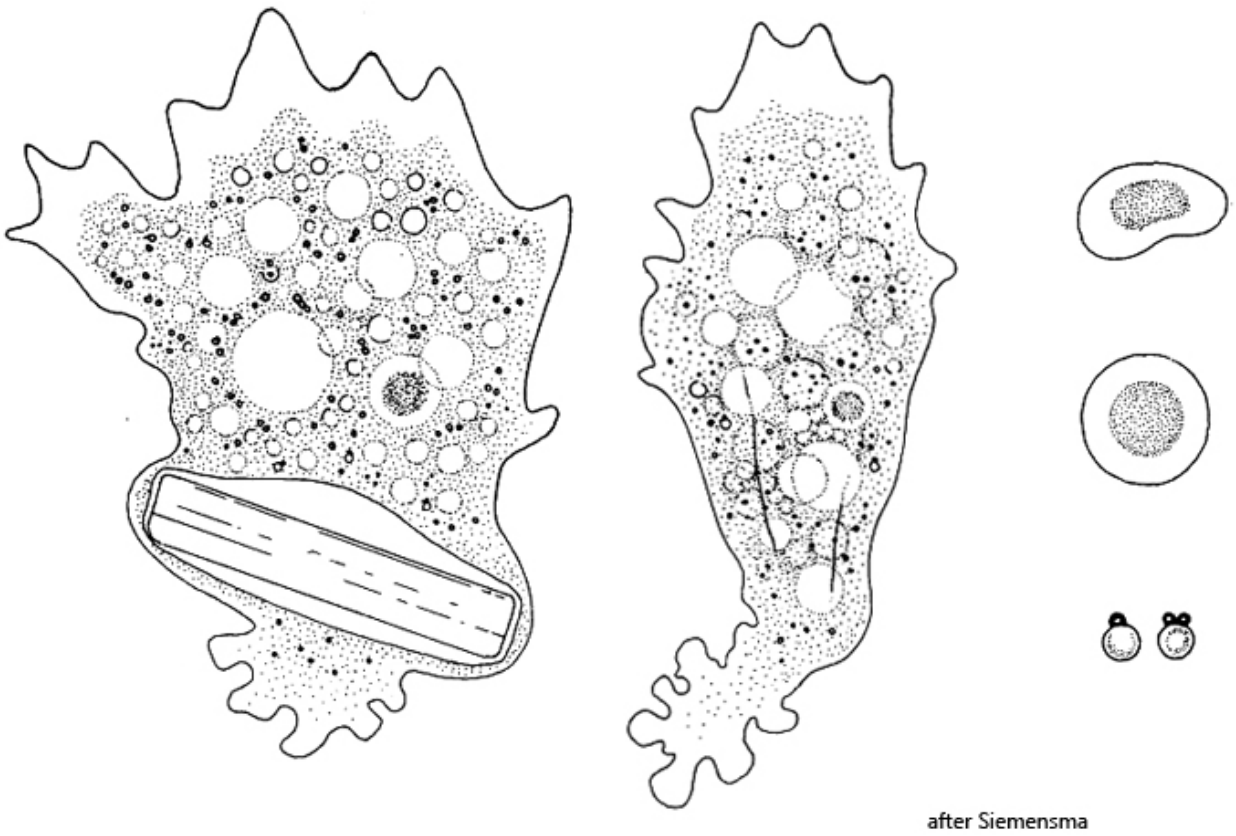
Synonym: n.a.

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
- one spherical nucleus (16–27 µm) 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 Simmelried. 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*

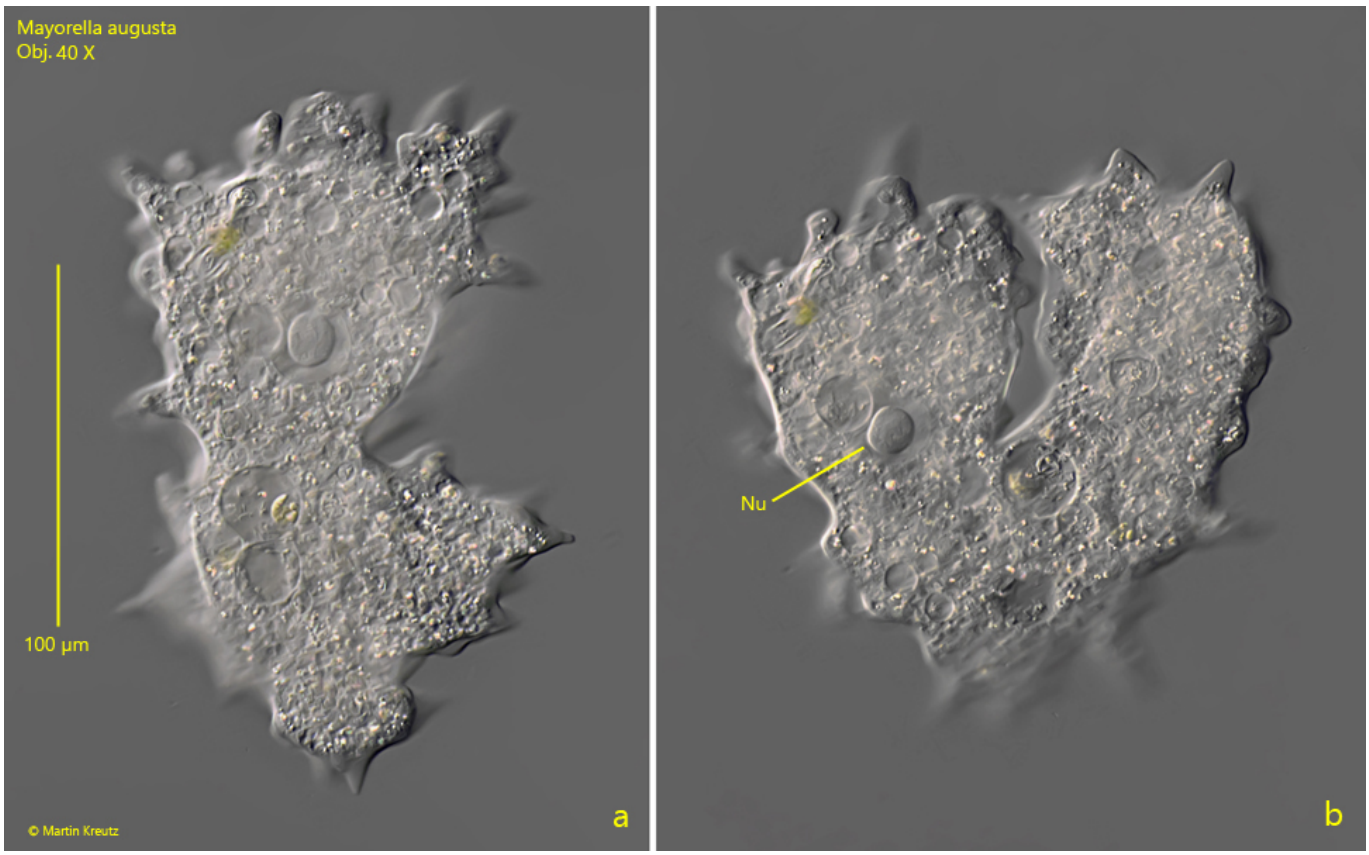


Fig. 1 a-b: *Mayorella augusta*. L = 220 µm. A free-flowing specimen. Note the Y-shaped state branched in two pseudopodia (b). Obj. 40 X.

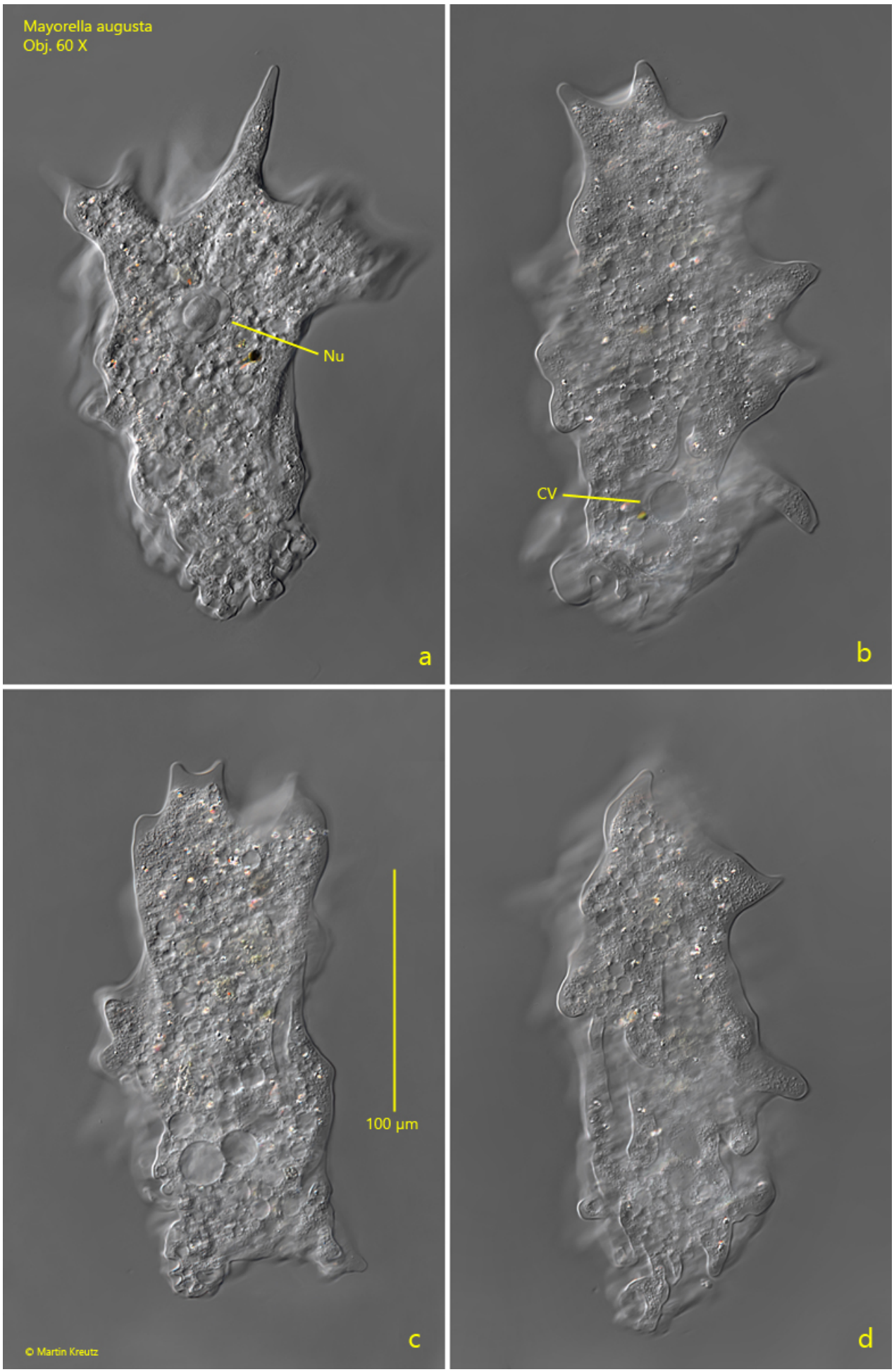
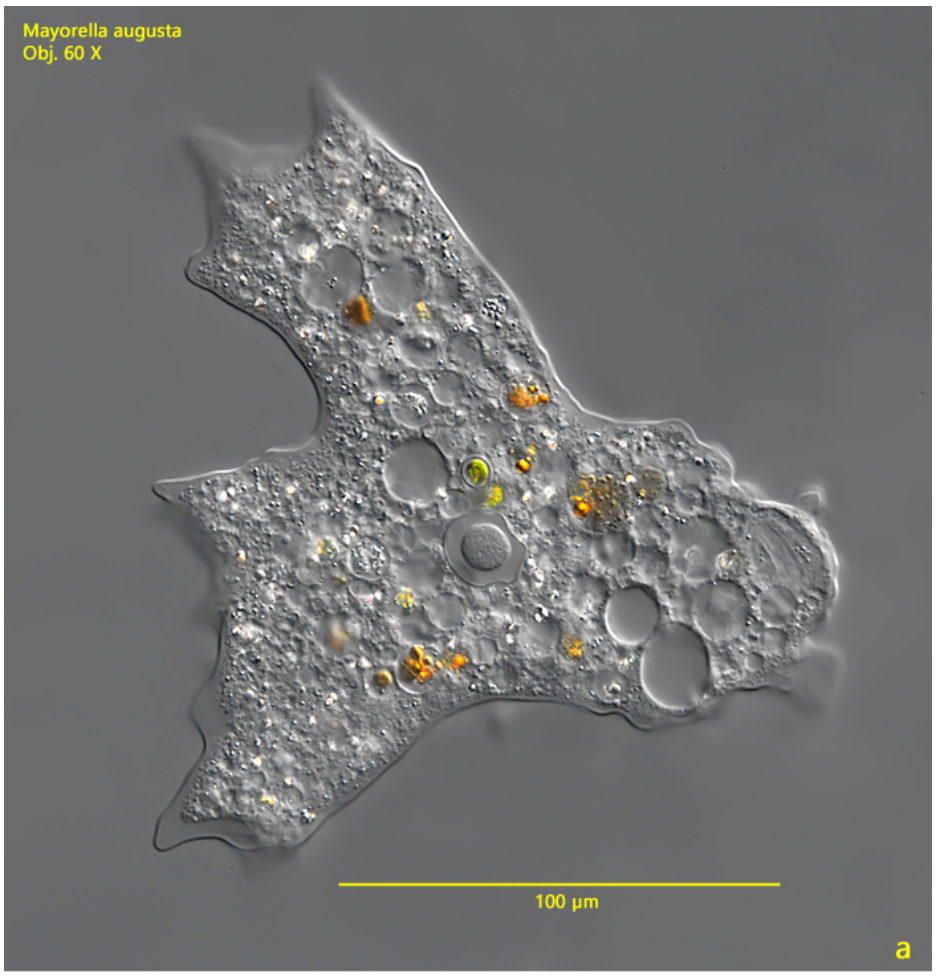
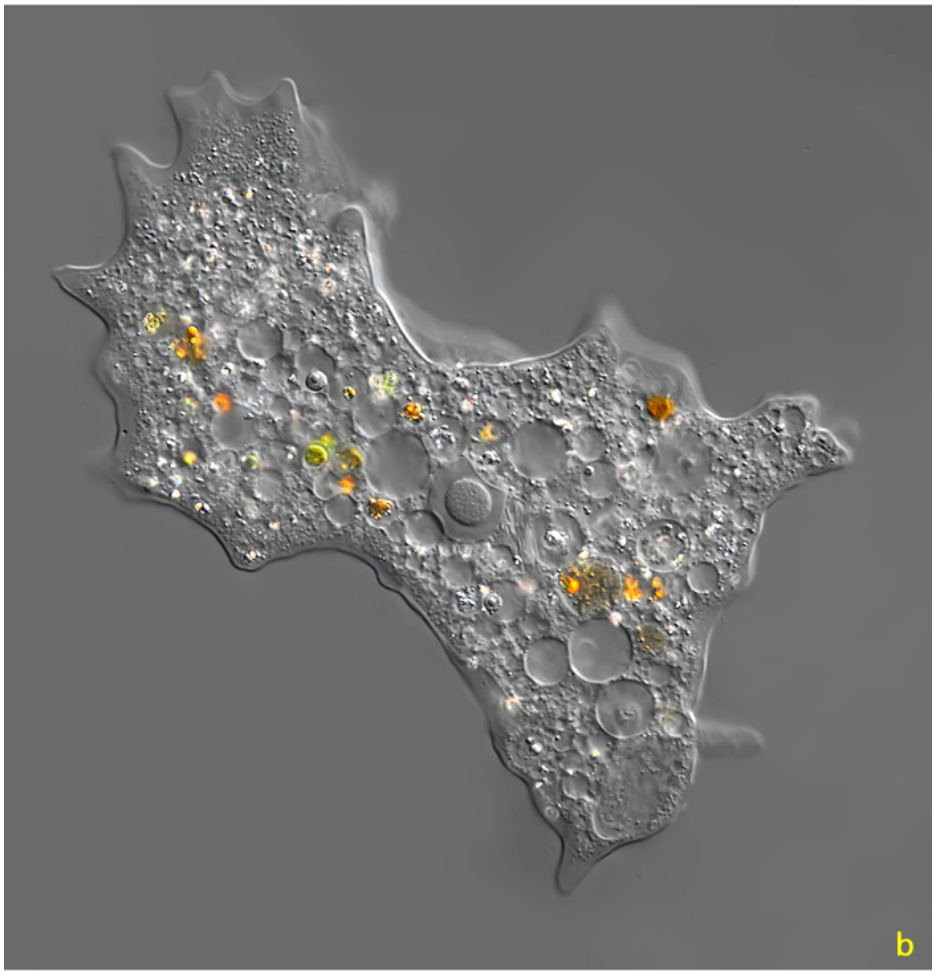
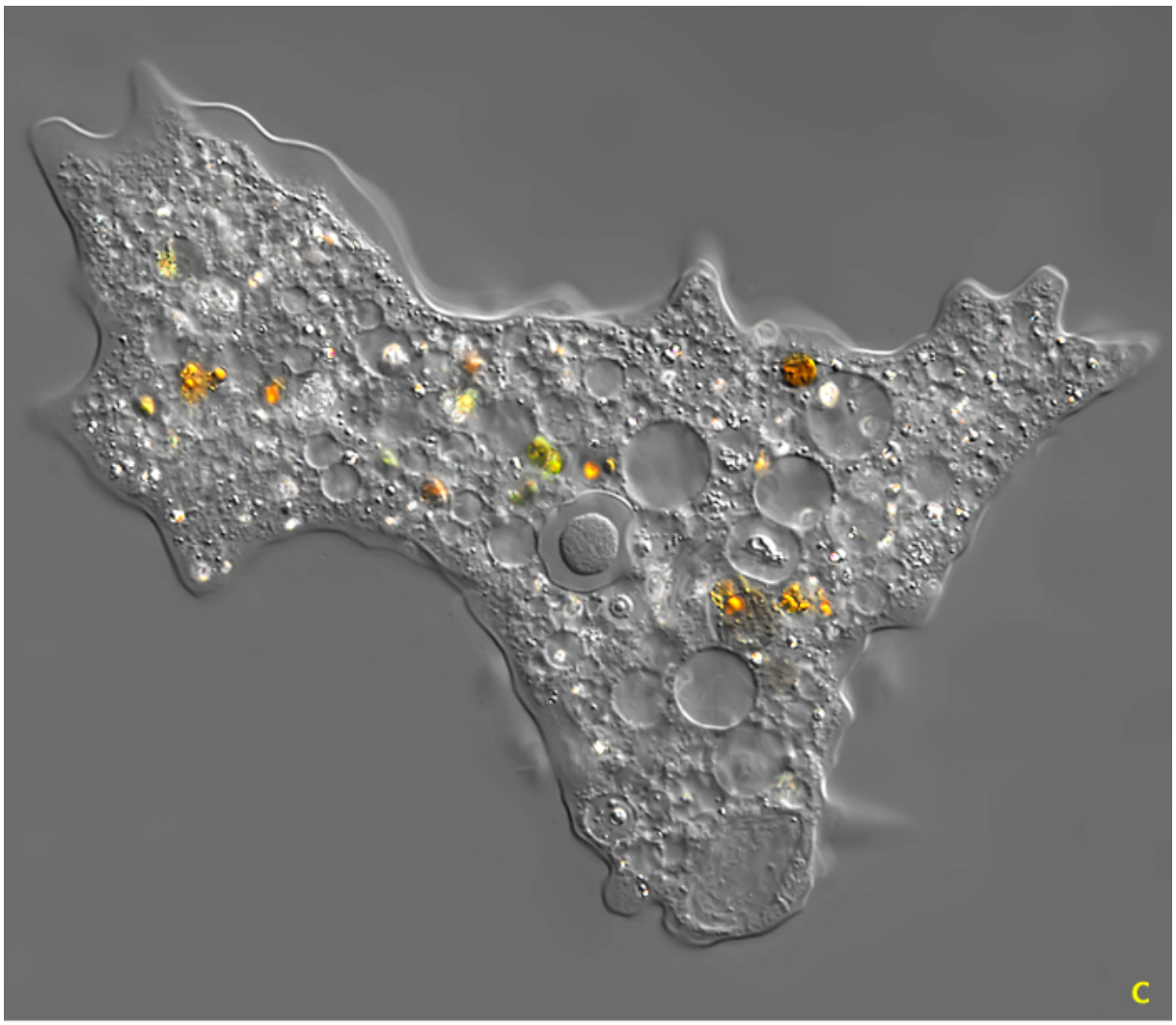

Mayorella augusta
Obj. 60 X
Nu
a
CV
b
100 µm
c
© Martin Kreutz
d

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


Mayorella augusta
Obj. 60 X
100 µm
a


b


c

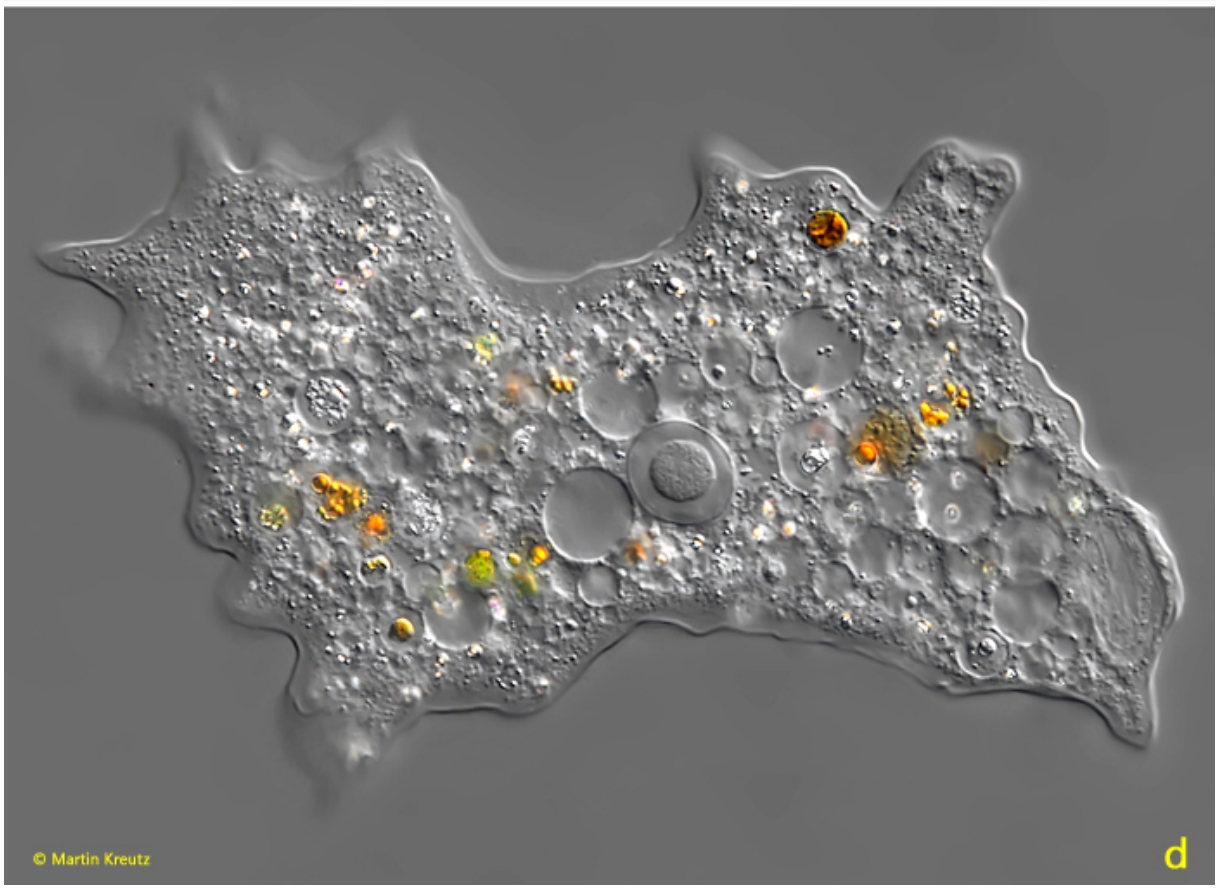

© Martin Kreutz
d

Fig. 3 a-d: *Mayorella augusta*. L = 205 µm. A third, free-flowing specimen. Obj. 60 X.

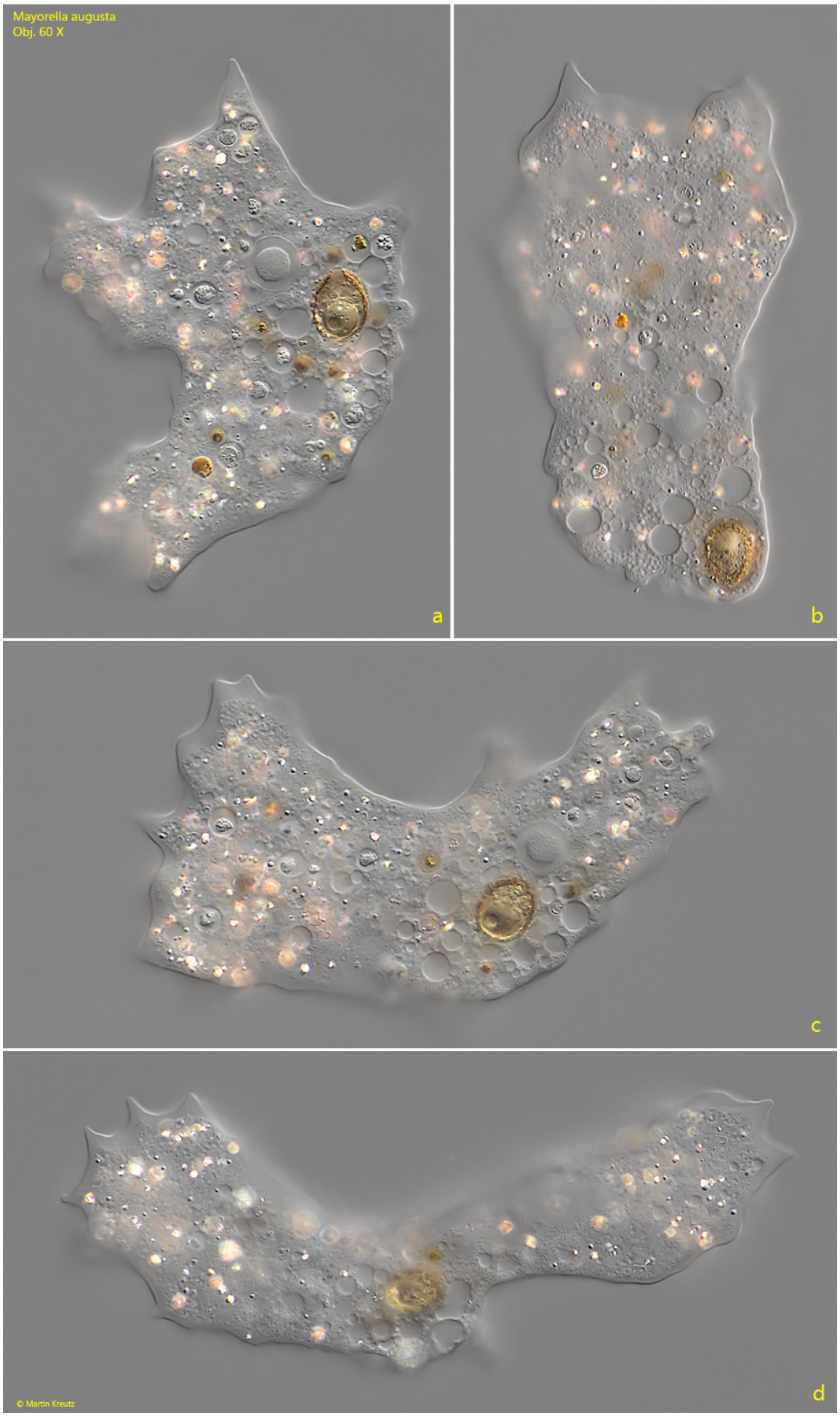

Mayorella augusta
Obj. 60 X
a
b
c
d
© Martin Kreutz

Fig. 4 a-d: *Mayorella augusta*. L = 220 µm. A fourth, free-flowing specimen. Obj. 60 X.

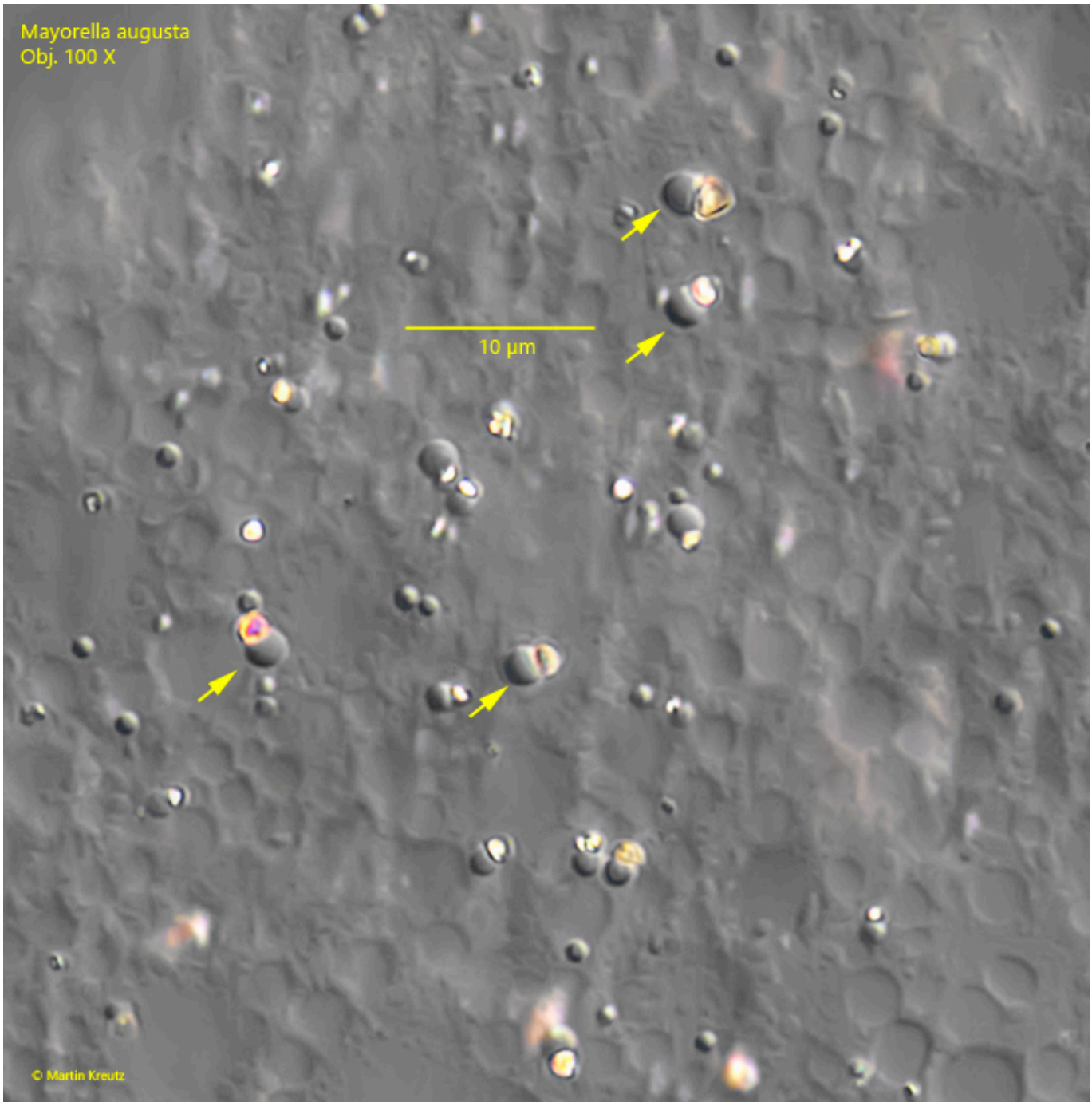


Fig. 5: *Mayorella augusta*. The birefringend crystals in the cytoplasm are attached to spherical bodies (arrows). Obj. 100 X.

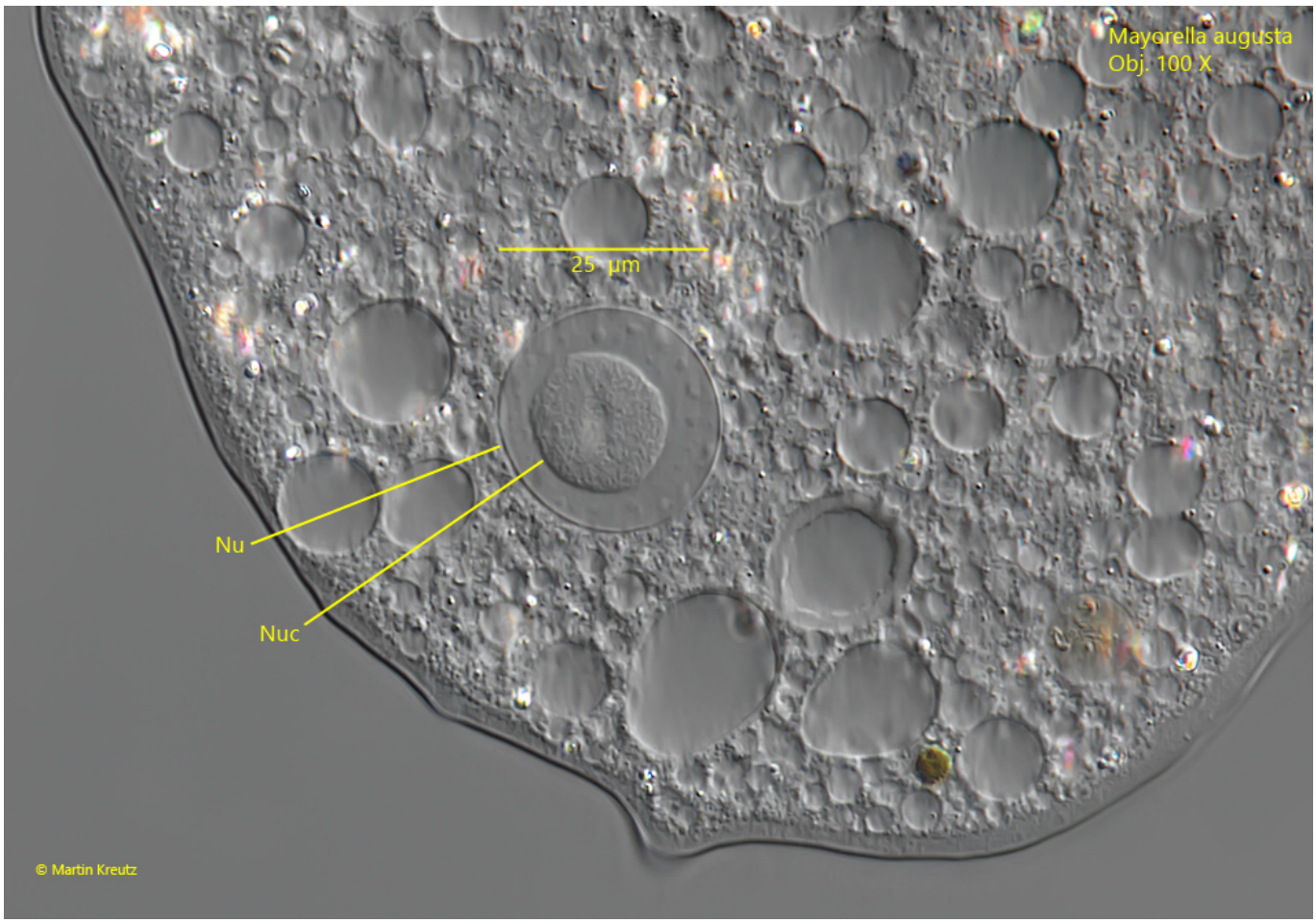


Fig. 6: *Mayorella augusta*. The nucleus (Nu) with a central nucleolus (Nuc) in detail. The diameter of the nucleus in this specimen is 26 µm. Obj. 100 X.