

## ***Mayorella viridis* Leidy, 1874**

**Most likely ID:** n.a.

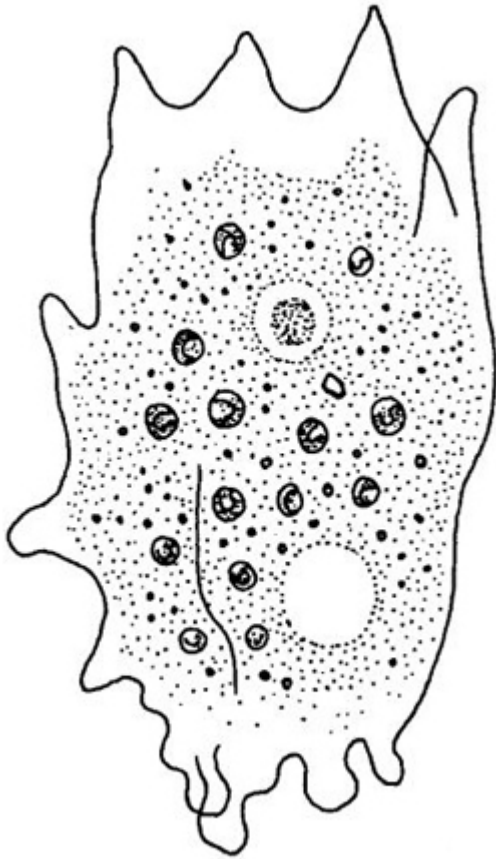
**Synonym:** n.a.

**Sampling location:** [Simmelried](#)

**Phylogenetic tree:** [Mayorella viridis](#)

### **Diagnosis:**

- locomotive form elongated
- pseudopodia mammilliform or conical
- length 90–160 µm
- spherical nucleus (9–15 µm) with a central nucleolus
- surface of nucleolus porous
- numerous symbiotic algae scattered in cytoplasm
- no crystals in cytoplasm
- several contractile vacuoles
- uroid rounded or bulbous
- cell covered by inconspicuous coat



after Siemensma

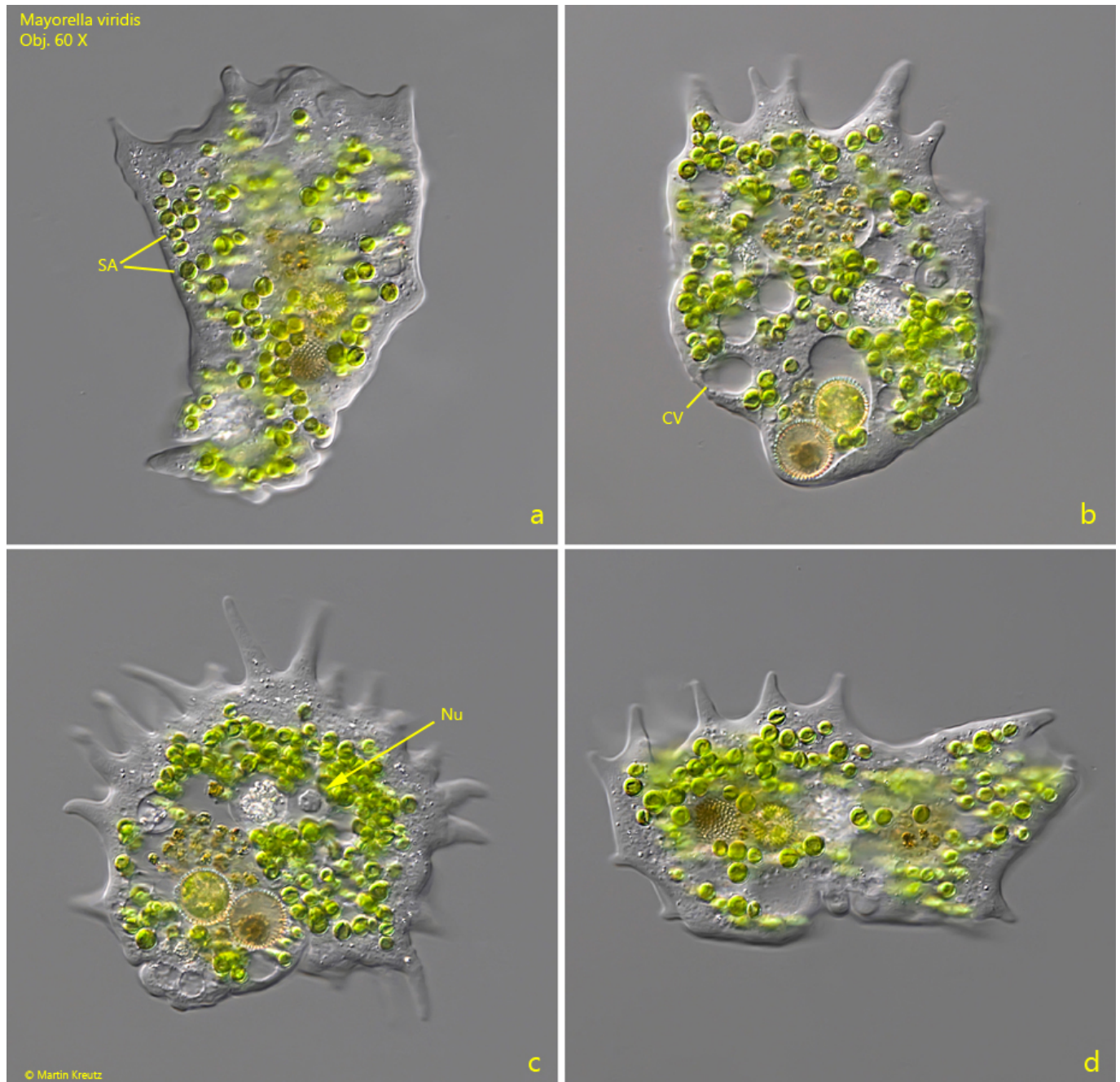
### Mayorella viridis

*Mayorella viridis* is a very common naked amoeba in the [Simmelried](#), which is easily recognized by its numerous symbiotic algae and the mammilliform pseudopodia. The nucleus is spherical with a central nucleolus. In my population the surface of the nucleolus was always porous (s. figs. 3 a and 4 b). The symbiotic algae are of the *Chlorella* type, have their own nucleus and a diameter of 4–6.5  $\mu\text{m}$  (s. fig. 5). The cell is covered by a very thin cell coat, which can only be seen at high magnification (s. figs. 5 and 6). According to my measurements, it is 1.0–1.1  $\mu\text{m}$  thick. The electron microscopical fine structure of the cell coat was investigated by Cann (1981). It is composed of fibrils that are arranged parallel and perpendicular to the cell surface.

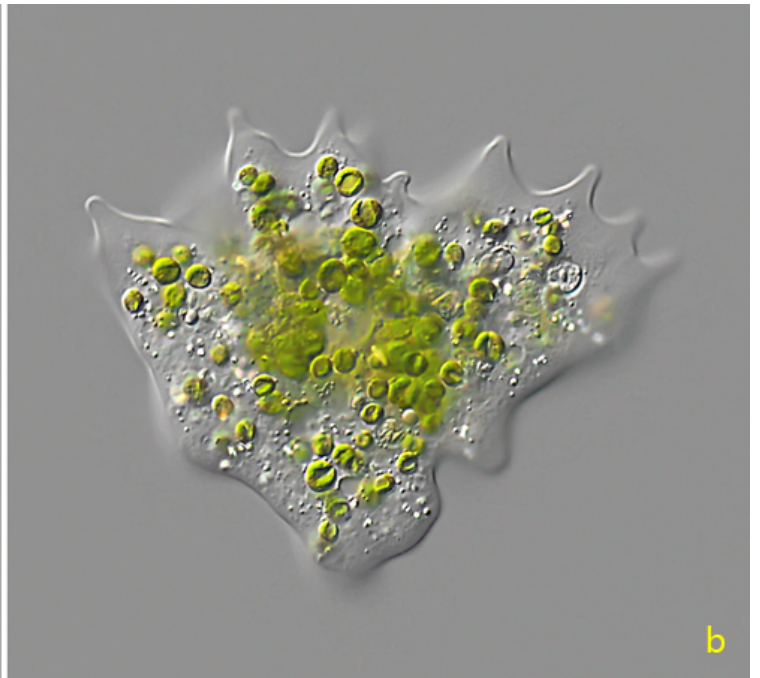
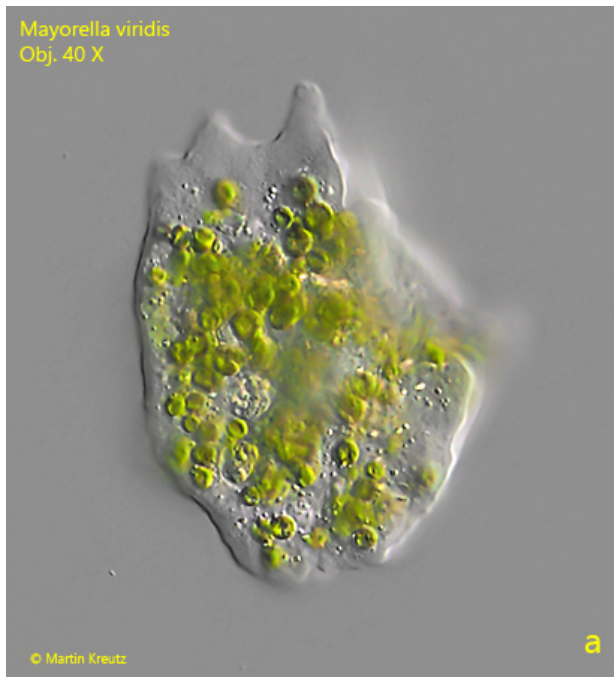
In the food vacuoles of *Mayorella viridis* I mostly found colony-forming bacteria, small algae, diatoms but also euglenids (e.g. *Trachelomonas*). In one case I was even able to observe an attack on *Paramecium caudatum*, but this was unsuccessful (s. fig. 7 a-f).

In February 2010, I found a specimen with an enormously enlarged nucleus (s. fig. 8 a-b). The nucleus contained clumpy structures. This could be an enlarged nucleolus or a parasite has infested the nucleus.

More images and information on *Mayorella viridis*: [Ferry Siemensma-Microworld-Mayorella viridis](#)



**Fig. 1 a-d:** *Mayorella viridis*. L = 164  $\mu$ m. A free-flowing specimen. CV = contractile vacuole, Nu = nucleus, SA = symbiotic algae. Obj. 60 X.



**Fig. 2 a-b:** *Mayorella viridis*. L = 135  $\mu$ m. A second free-flowing specimen. Obj. 40 X.



Mayorella vindis  
Obj. 60 X

CV

Nu

UR

a

UR

b

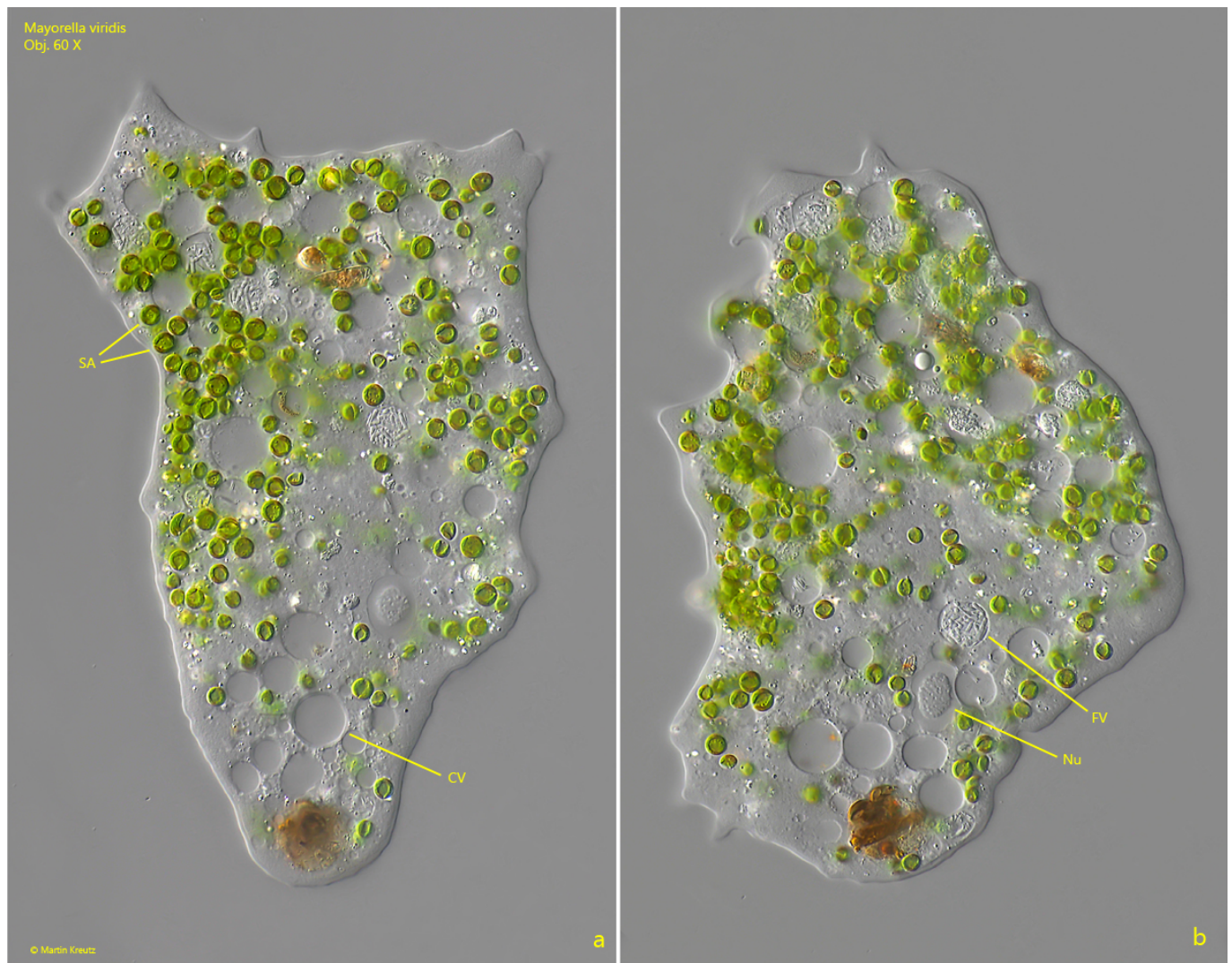
c

d

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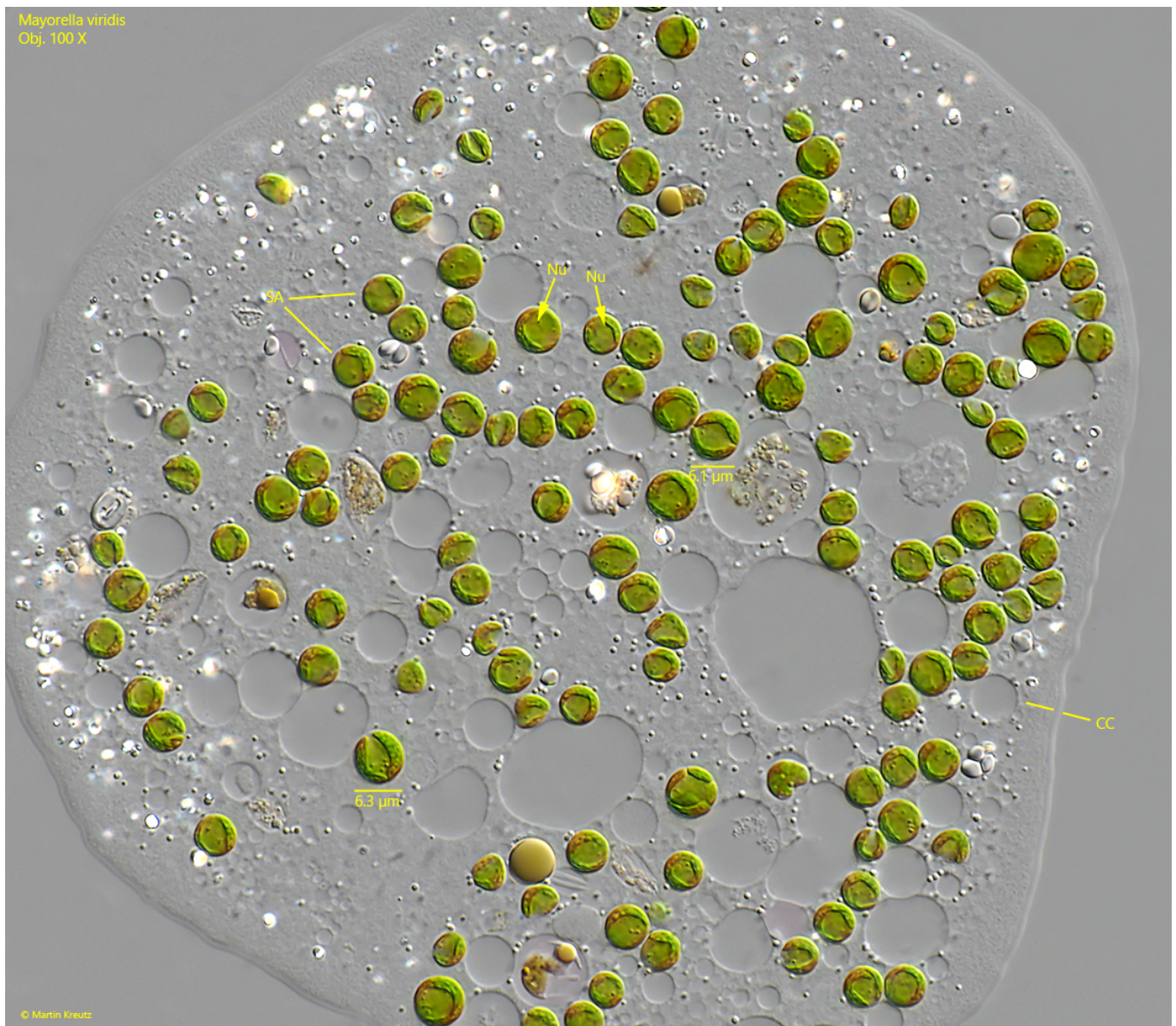


**Fig. 3 a-d:** *Mayorella viridis*. L = 135  $\mu$ m. The same specimen as shown in fig. 2 a-b. CV = contractile vacuole, NU = nucleus, UR = uroid. Obj. 60 X.

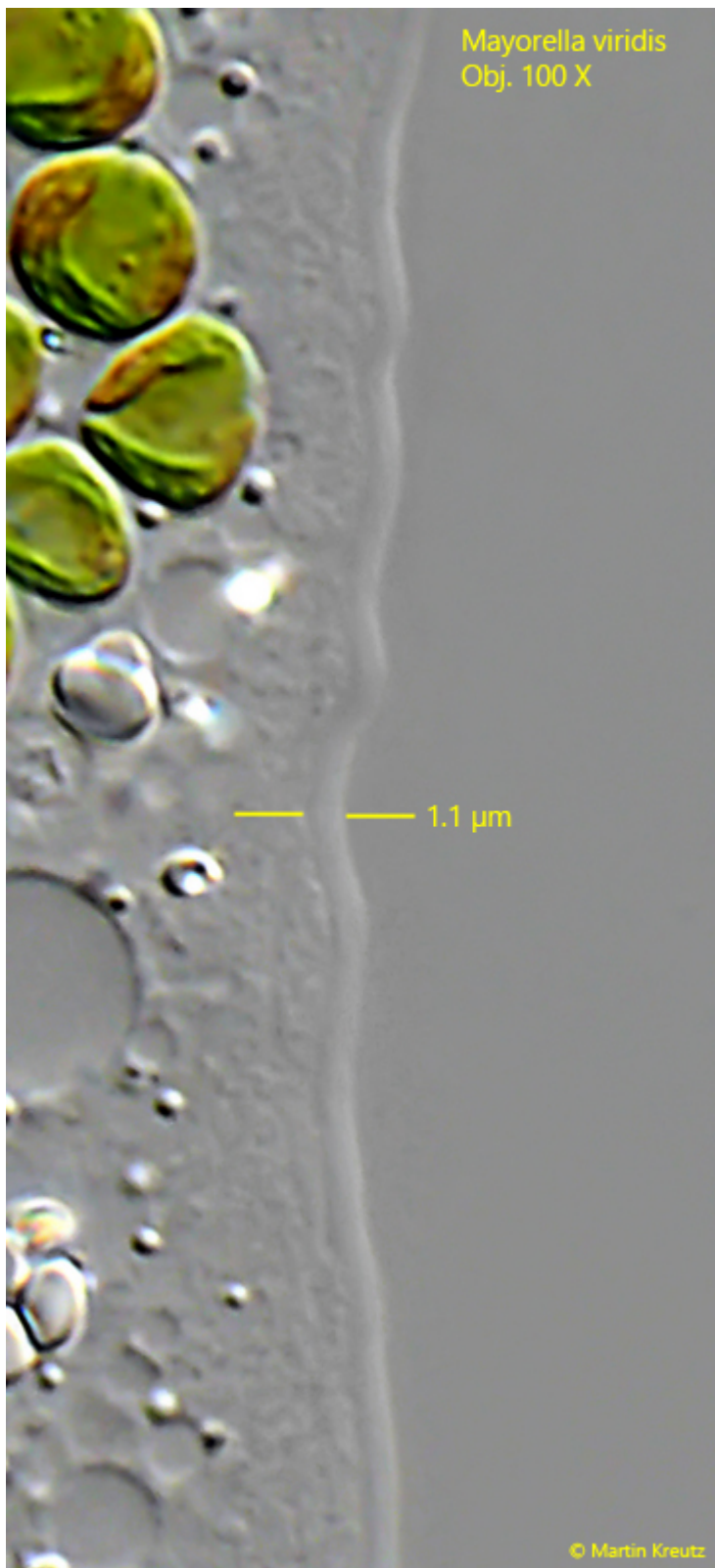


**Fig. 4 a-b:** *Mayorella viridis*. L = 135  $\mu$ m. The slightly squashed specimen as shown in fig. 2 a-b. CV = contractile vacuole, FV = food vacuole, NU = nucleus, SA = sympiotic algae. Obj. 60 X.





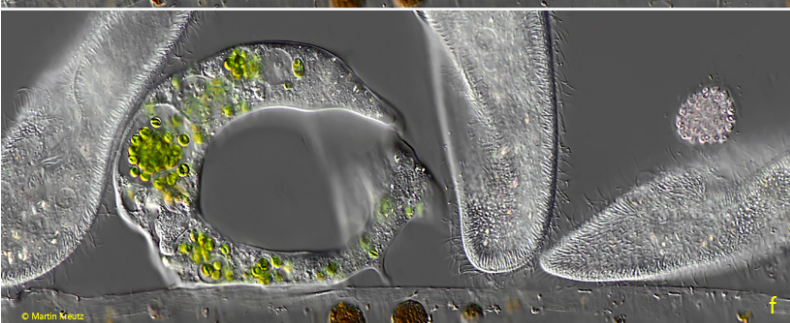
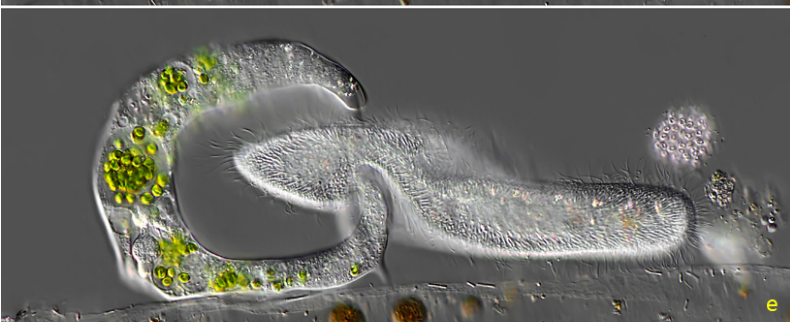
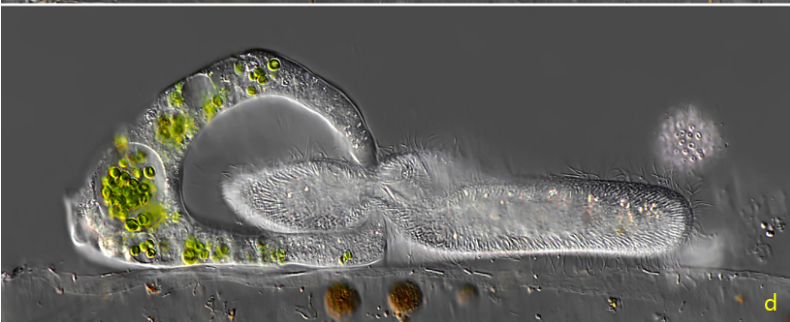
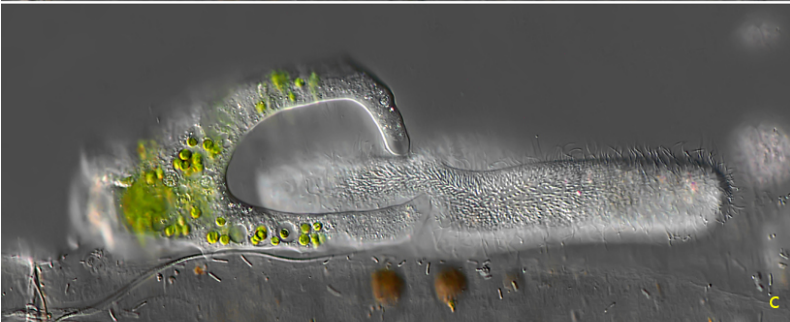
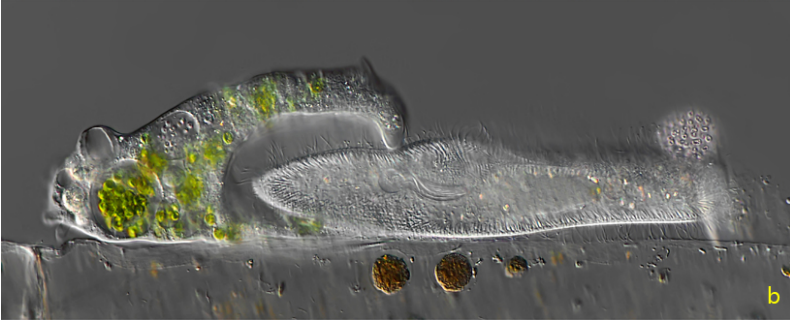
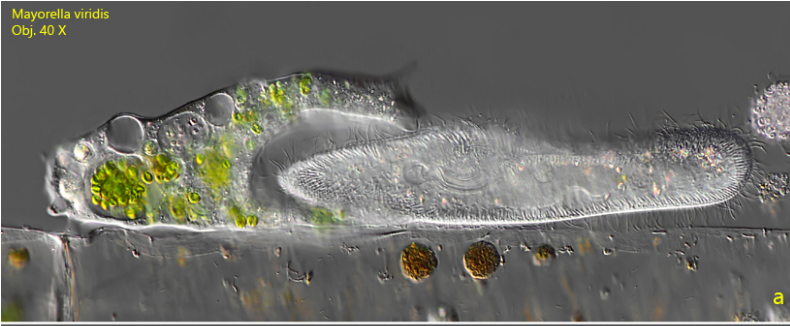
**Fig. 5:** *Mayorella viridis*. The symbiotic algae (SA) in a strongly squashed specimen. The algae are from the *Chlorella* type with a nucleus (Nu) and a diameter of 4–6.5  $\mu\text{m}$ . Note the thin cell coat (CC). Obj. 100 X.



**Fig. 6:** *Mayorella viridis*. The inconspicuous cell coat with a thickness of 1.1  $\mu\text{m}$ . Obj. 100 X.



Mayorella viridis  
Obj. 40 X



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**Fig. 7 a-f:** *Mayorella viridis*. A specimen tries to attack *Paramecium caudatum*. Obj. 40 X.



*Mayorella viridis*  
Obj. 100 X



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**Fig. 8 a-b:** *Mayorella viridis*. In this specimen the nucleus (Nu) seems to be enormously enlarged and filled with a clumpy nucleolus (Nuc?) or the nucleus is infested by an unidentified parasite. FV = food vacuole. Obj. 100 X.