

## ***Paramecium aurelia* Ehrenberg, 1838**

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

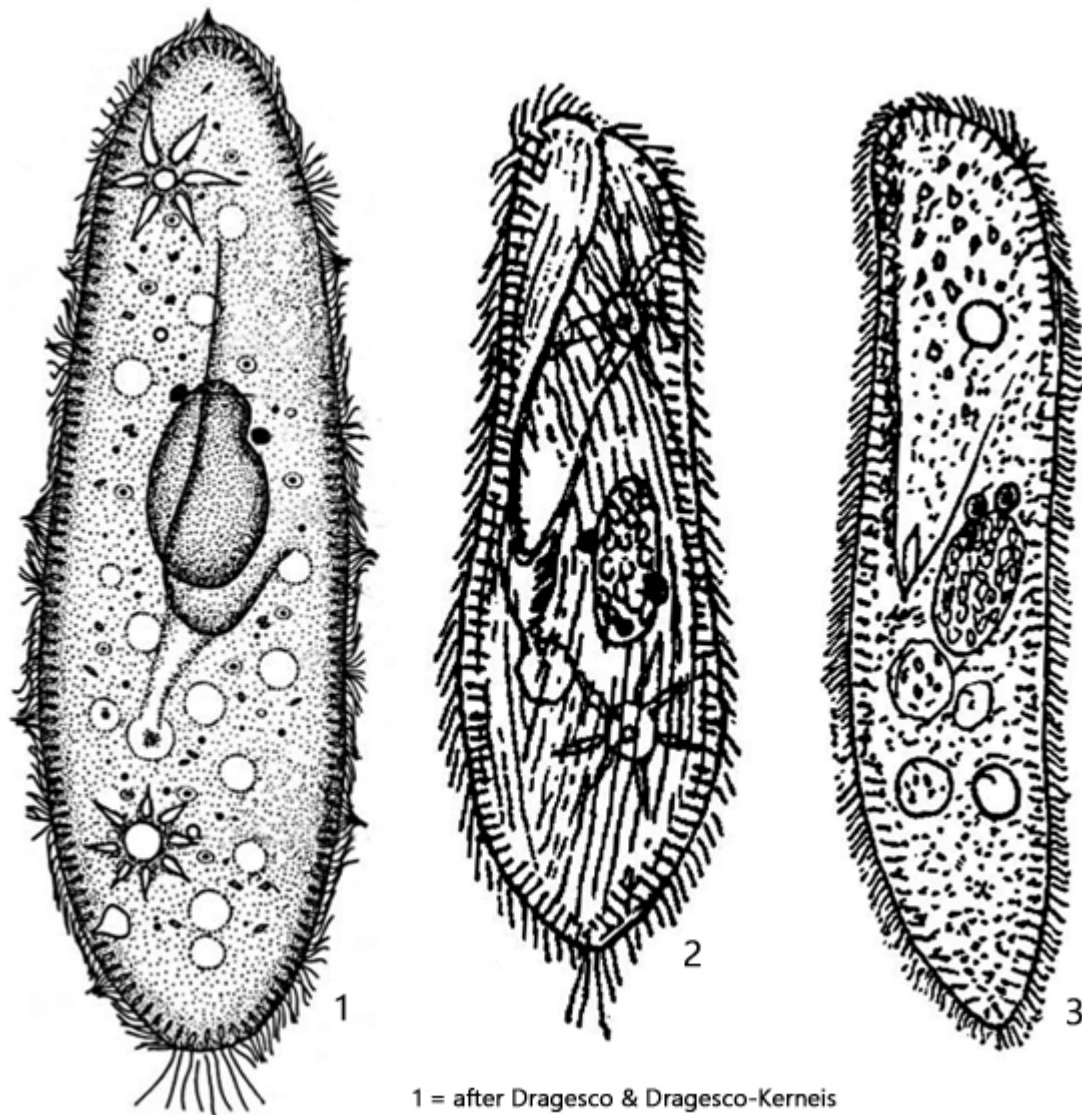
**Synonym:** n.a.

**Sampling location:** [Pond of the waste disposal company Constance](#)

**Phylogenetic tree:** [Paramecium aurelia](#)

### **Diagnosis:**

- body slipper-shaped, anteriorly rounded, posteriorly conical or narrowly rounded
- length 100-180 µm, width 35-55 µm
- ventral surface with a distinct groove of the oral apparatus
- mouth opening below cell equator
- macronucleus ellipsoid in mid-body
- two spherical micronuclei in separate vacuoles
- two contractile vacuoles in anterior third and posterior third on dorsal side
- each contractile vacuole with one excretion porus
- contractile vacuoles with about 7-9 radial collecting ducts each
- spindle-shaped extrusomes 3-4 µm long, forming fringe beneath pellicle
- pellicle quadrangularly fielded
- ciliation uniform, 80-120 ciliary rows of paired cilia
- a tuft of caudal cilia



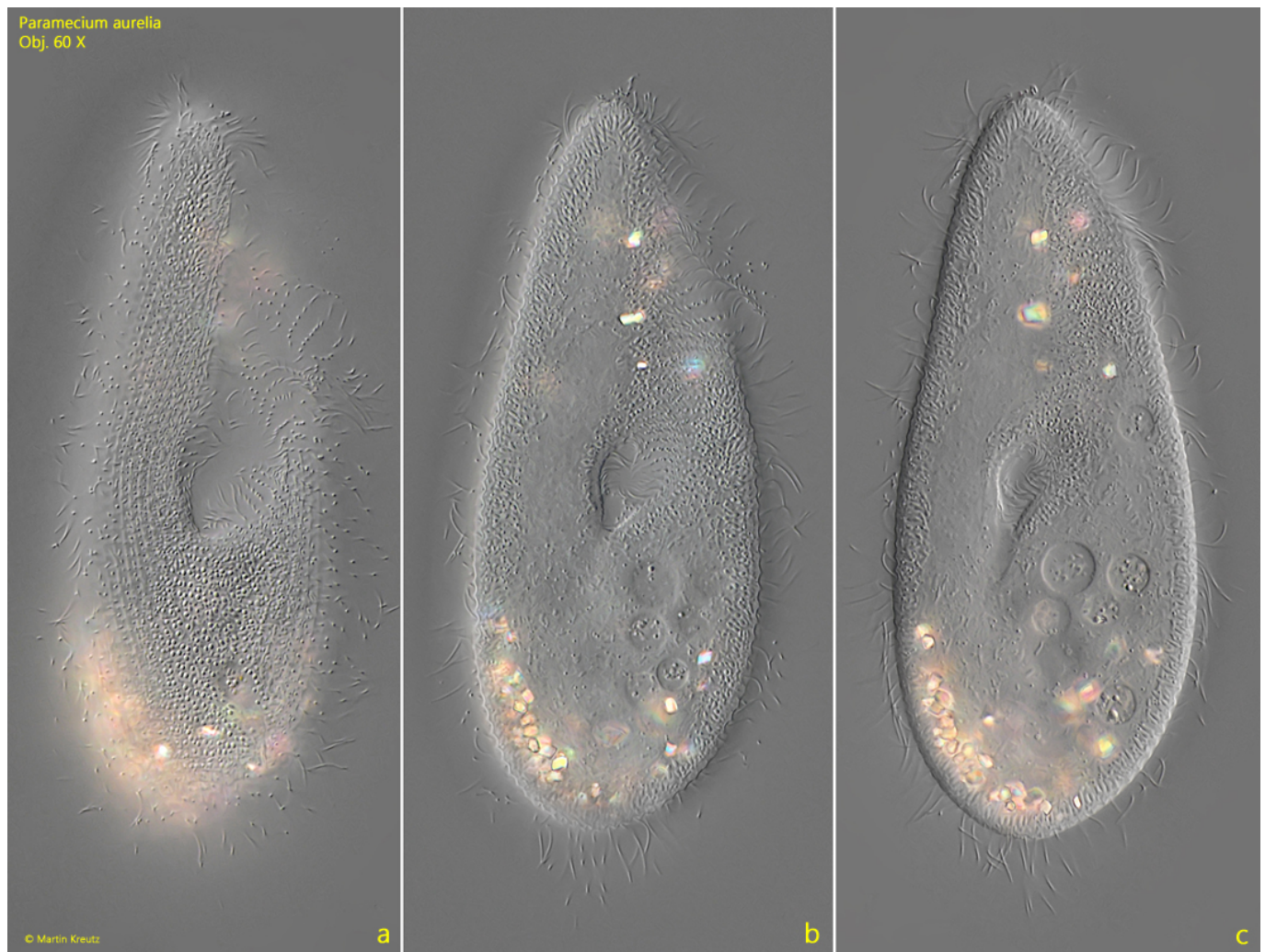
## Paramecium aurelia

I found *Paramecium aurelia* in an old sample containing decomposing water lily leaves. This finding corresponds with Kahl's (1935) description that *Paramecium aurelia* often occurs in samples containing decaying plants.

*Paramecium aurelia* is slightly smaller than [Paramecium caudatum](#) and is a fast, restless swimmer. Its characteristics are essentially the same as those of [Paramecium caudatum](#), which is why the species has certainly been overlooked frequently. The only reliable identifying feature is characteristic of the nuclear apparatus. There are a large, ellipsoid macronucleus and two micronuclei, each are located in separate vacuoles. However, this can only be seen in squashed specimens (s. figs. 3 and 4).

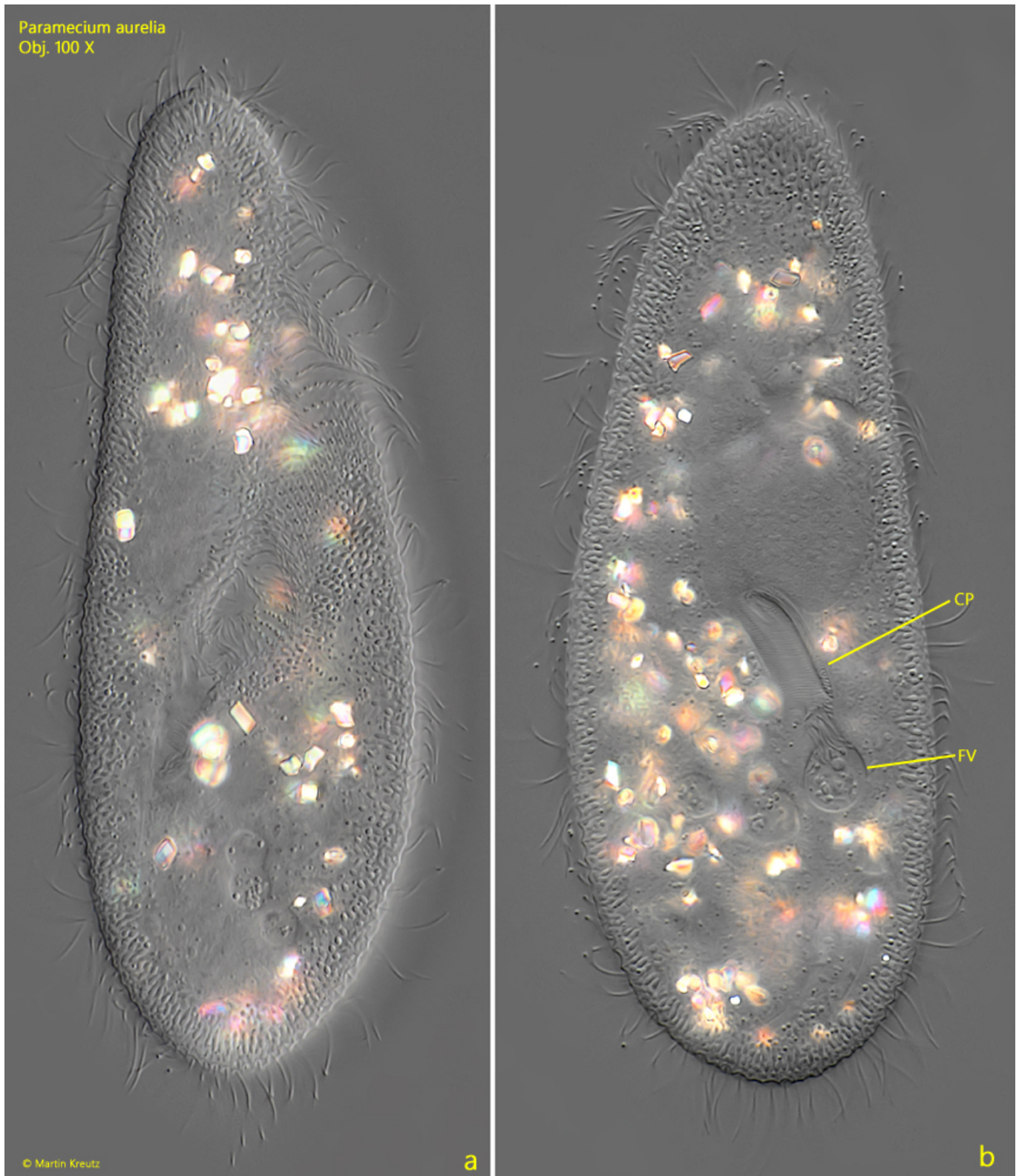
The specimens in my population were on average 150 µm long. At 5.3-5.5 µm, the

extrusomes were slightly longer than those described by Foissner, Berger & Kohmann (1994), who give a length of 3–4  $\mu\text{m}$  (s. fig. 7). Otherwise, all other characteristics were consistent.



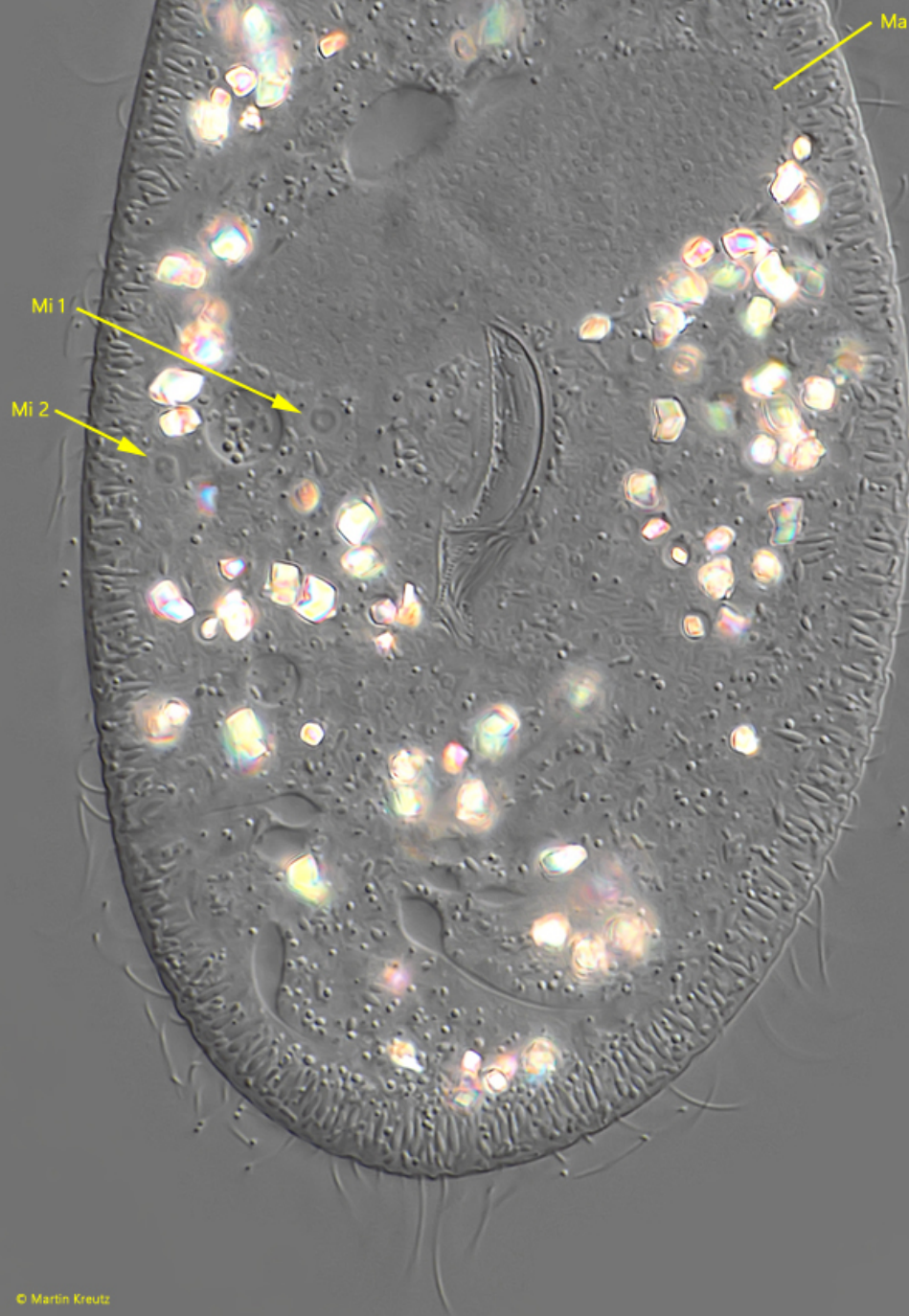
**Fig. 1 a-c:** *Paramecium aurelia*. L = 155  $\mu\text{m}$ . Three focal planes of a freely swimming specimen from ventral. Obj. 60 X.





**Fig. 2 a-b:** *Paramecium aurelia*. L = 156  $\mu$ m. A second freely swimming specimen from ventral (a) and from dorsal (b). The cytopharynx (CP) fills a food vacuole (FV) with collected bacteria. Obj. 100 X.

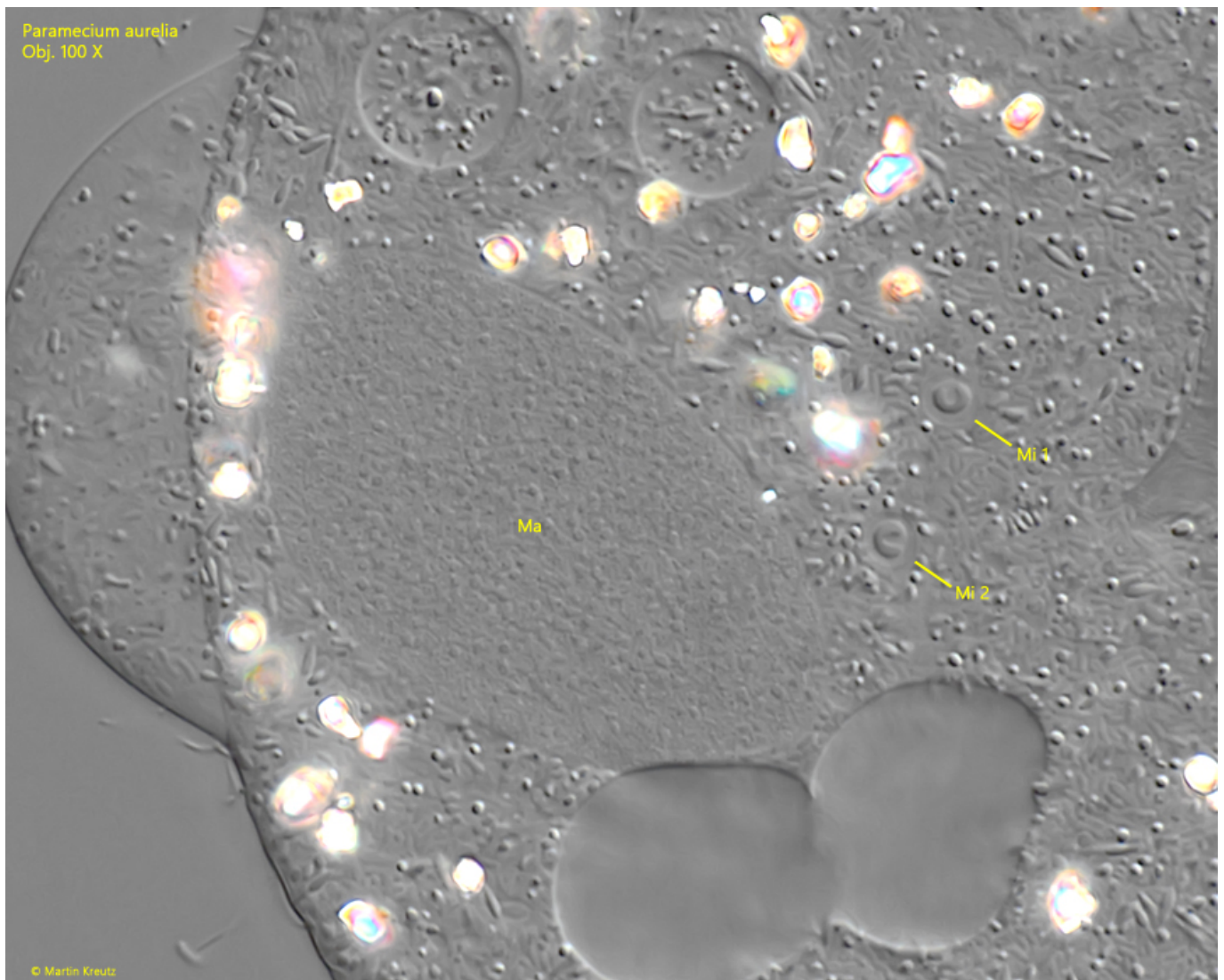
Paramecium aurelia  
Obj. 100 X



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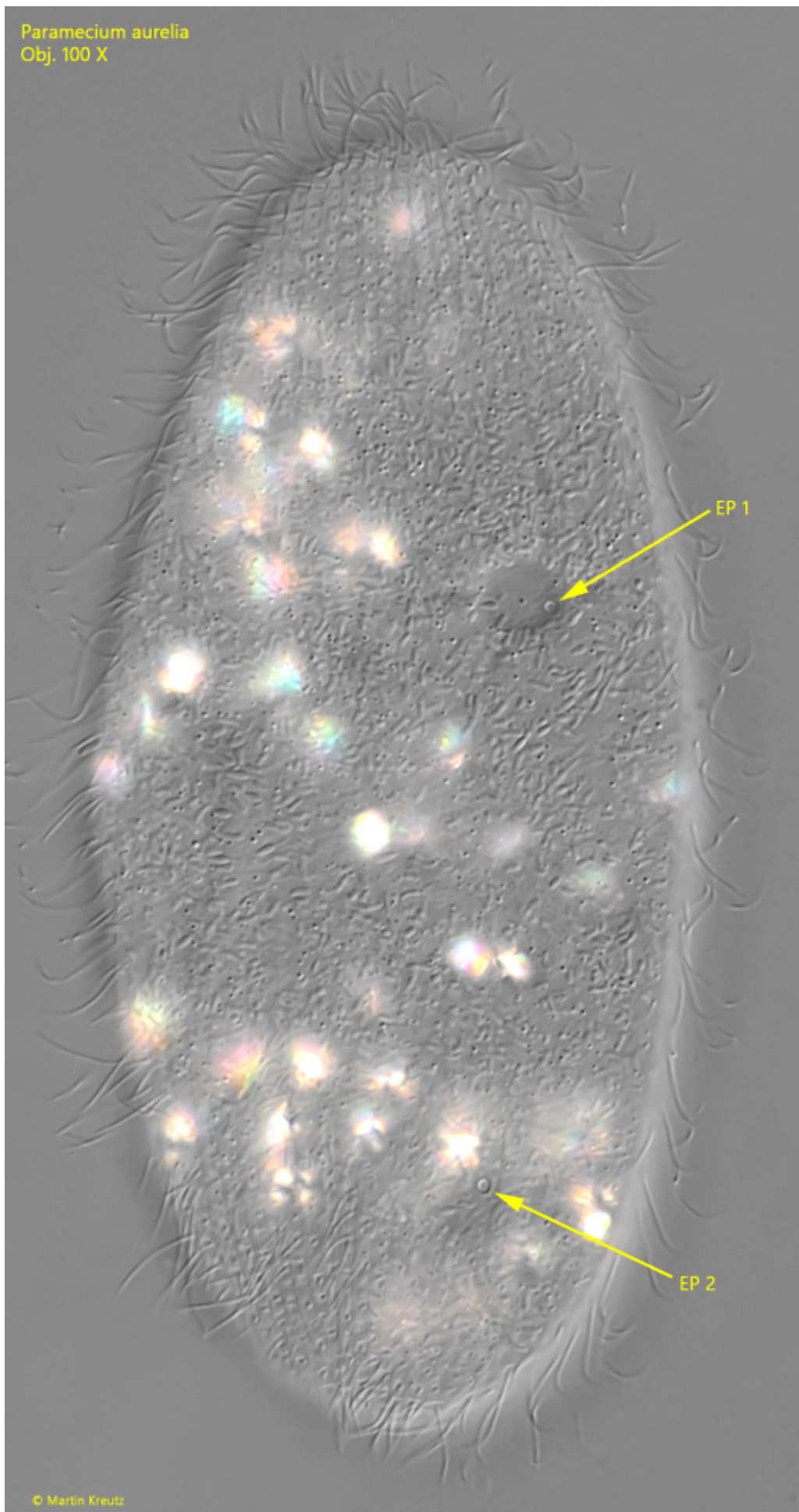


**Fig. 3:** *Paramecium aurelia*. The ellipsoid macronucleus (Ma) and the two micronuclei (Mi 1, Mi 2) in a second squashed specimen. Obj. 100 X.



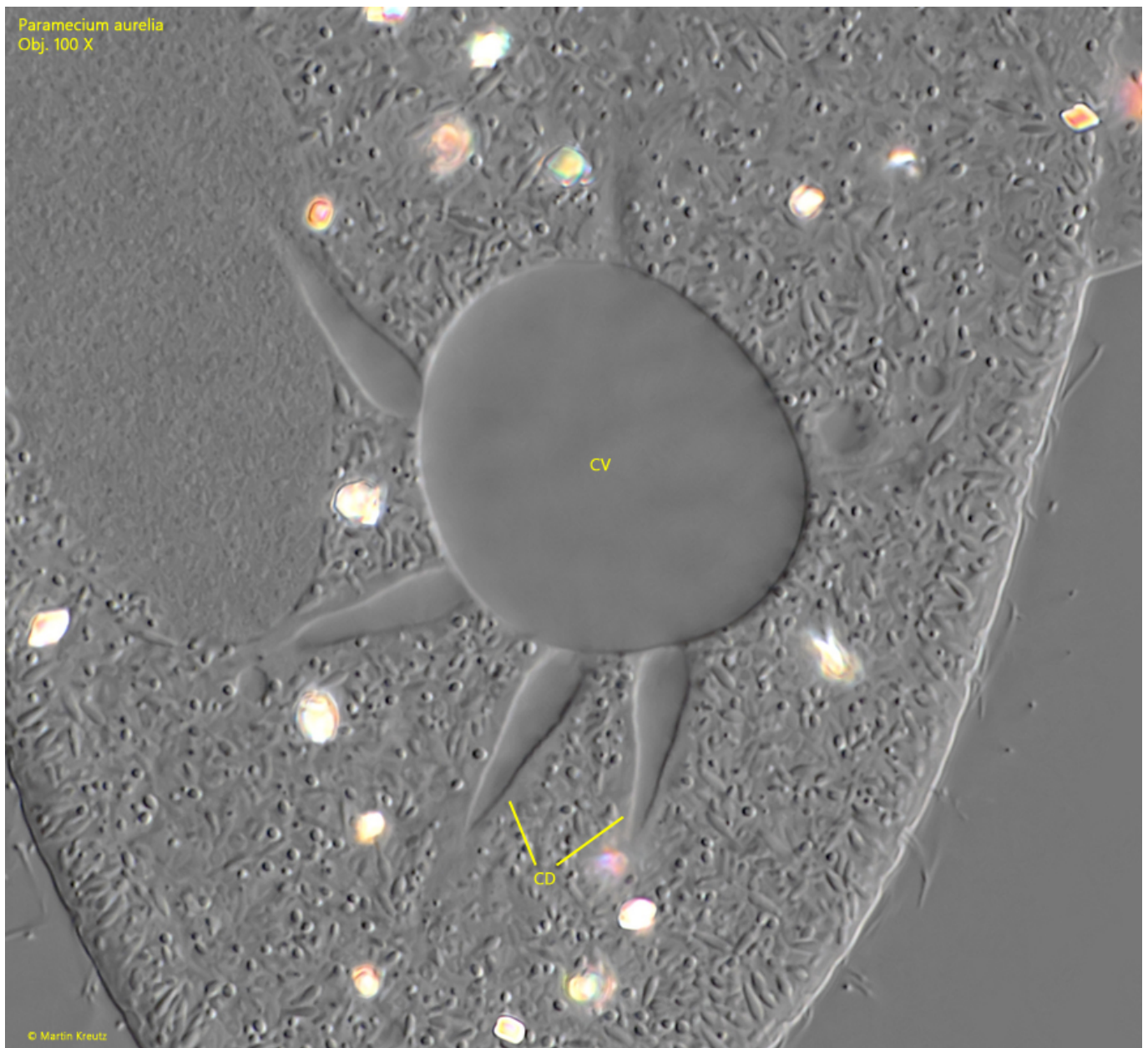
**Fig. 4:** *Paramecium aurelia*. The ellipsoid macronucleus (Ma) and the two micronuclei (Mi 1, Mi 2) in a squashed specimen. The micronuclei are enclosed in separate vacuoles. Obj. 100 X.

Paramecium aurelia  
Obj. 100 X



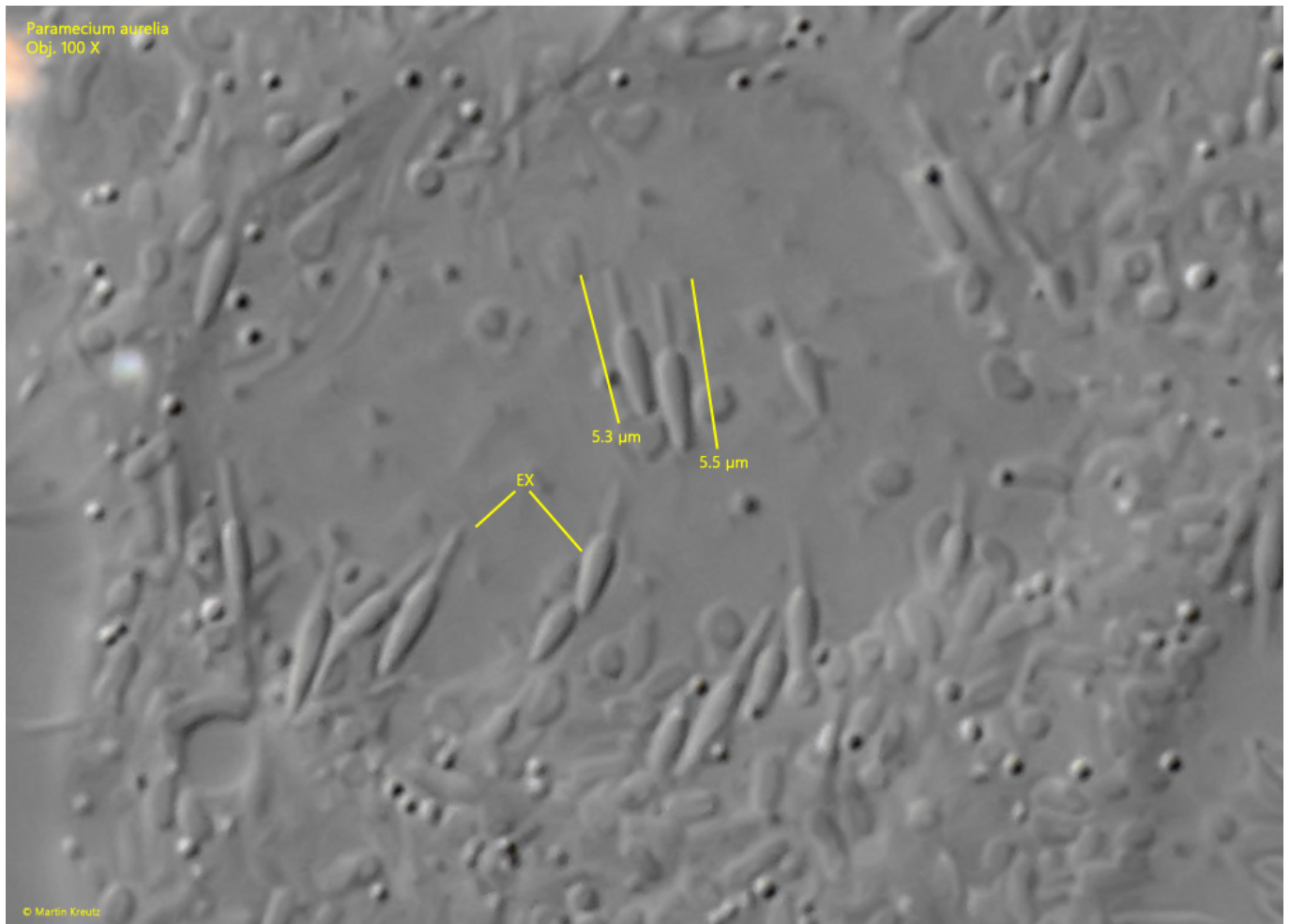
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**Fig. 5:** *Paramecium aurelia*. The two excretion pores (EP 1, EP 2) of the two contractile vacuoles are located dorsally. Obj. 100 X.

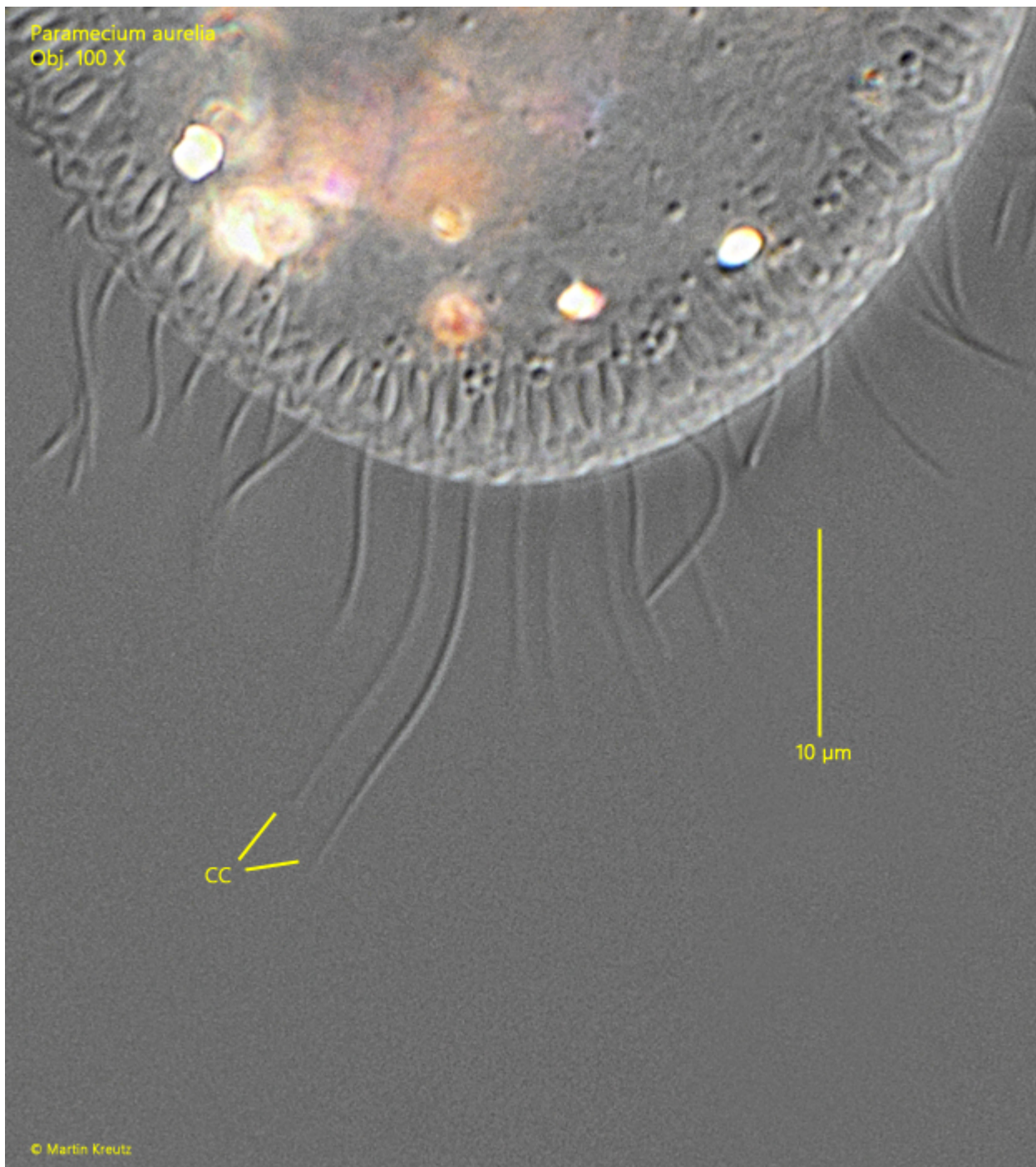


**Fig. 6:** *Paramecium aurelia*. The posterior contractile vacuole (CV) in a squashed specimen with several collection ducts (CD). Obj. 100 X.



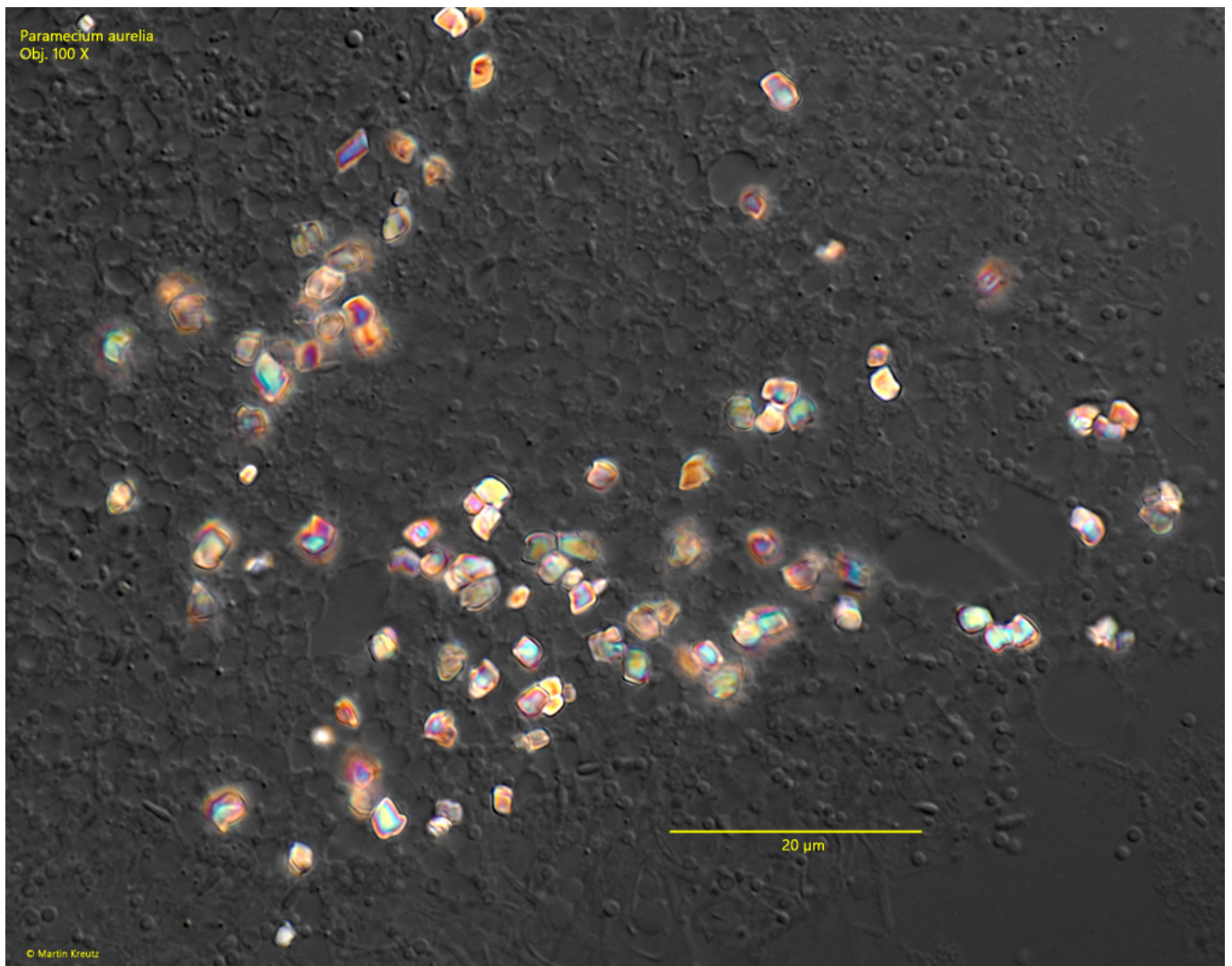


**Fig. 7:** *Paramecium aurelia*. The extrusomes (EX) in a squashed specimen are 5.3–5.5  $\mu\text{m}$  long. Obj. 100 X.



**Fig. 8:** *Paramecium aurelia*. The caudal cilia with a length of 15-17 µm. Obj. 100 X.





**Fig. 9:** *Paramecium aurelia*. The crystals scattered in the cytoplasm have a diameter of about 2–4 μm and a more or less rectangular shape. Obj. 100 X.