

***Stentor coeruleus***  
**(Pallas, 1766) Ehrenberg, 1831**

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

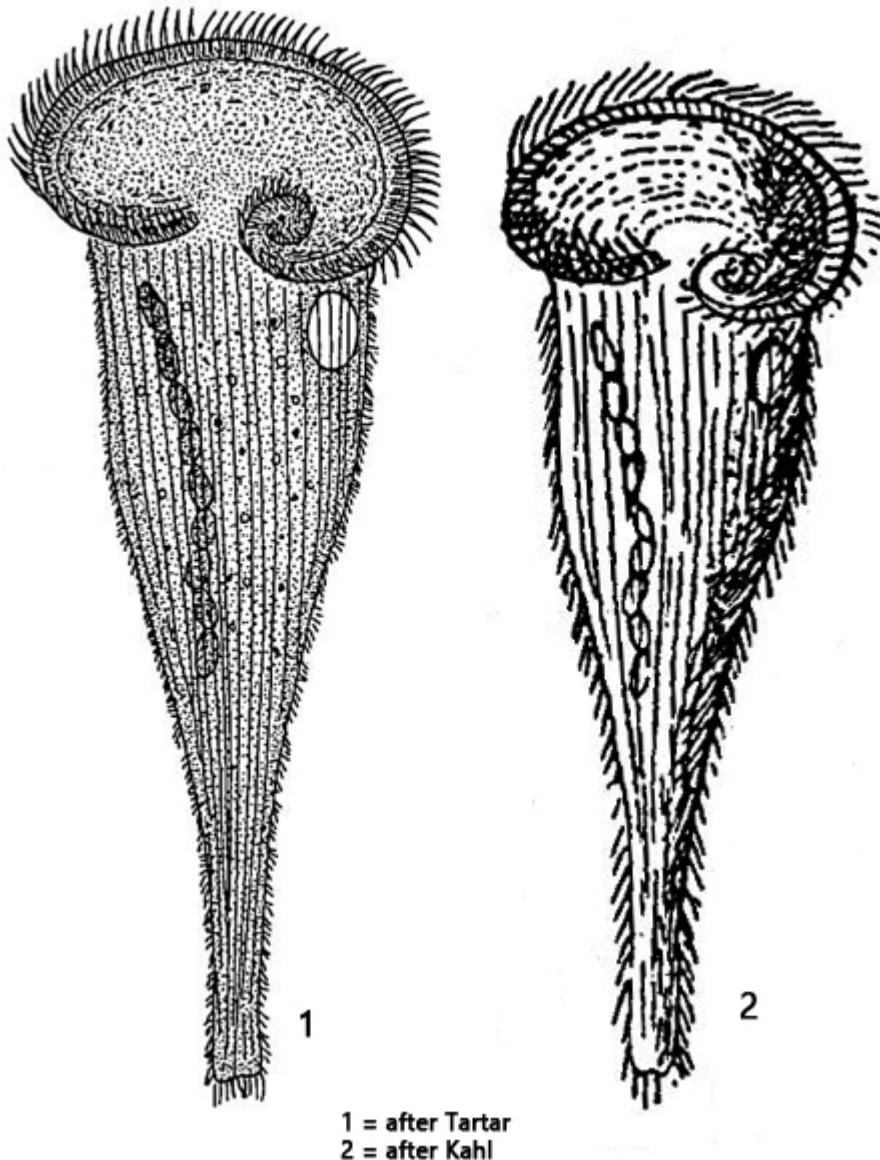
**Synonym:** n.a.

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

**Phylogenetic tree:** [Stentor coeruleus](#)

**Diagnosis:**

- body elongated trumpet-shaped, contracted obovoid to club-shaped
- appears blue-green, no symbiotic algae
- blue-green color due to granules arranged in stripes beneath pellicle
- length up to 4 mm (of elongated specimens)
- adoral membranelle running in clockwise to oral funnel
- attached with thigmotactic cilia to the substrate
- macronucleus moniliform of about 6-20 spherical parts
- 12-42 micronuclei scattered near to the nodules of the macronucleus
- contractile vacuole on left wall of oral funnel



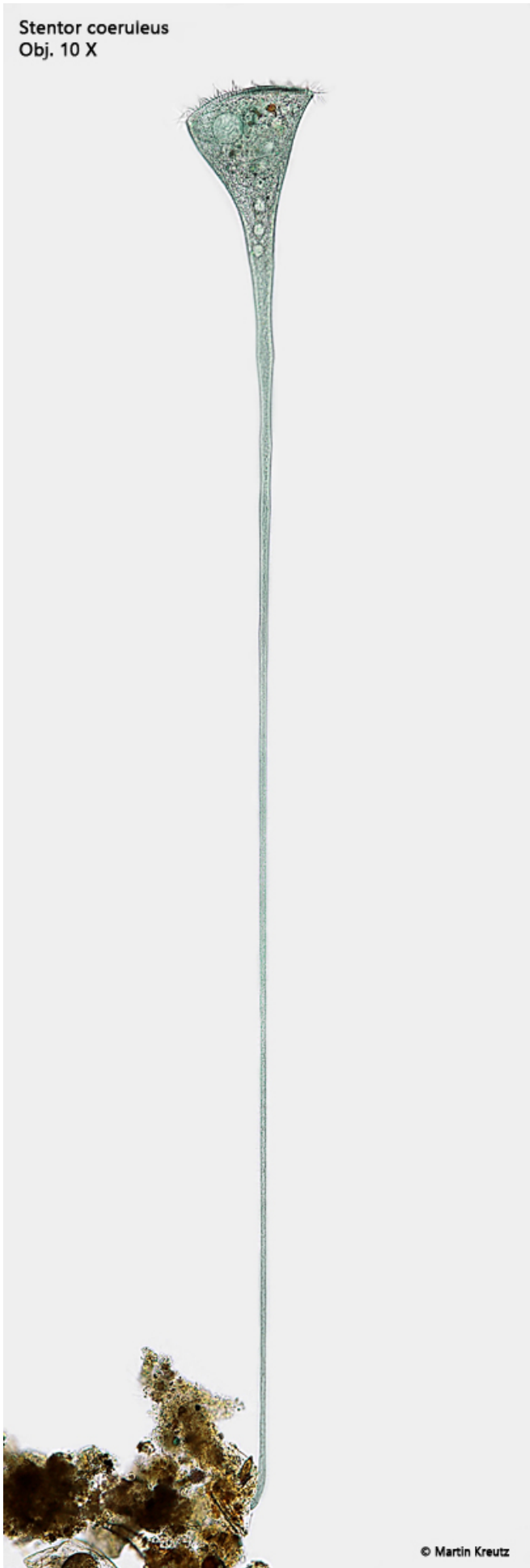
## Stentor coeruleus

I find *Stentor coeruleus* frequently and regularly, especially in the [Simmelried](#) and [Ulmisried](#). The specimens are easy to recognize due to their size and striking blue-green colouring. In fresh samples, the specimens usually swim around in a contracted form. In a micro-aquarium with a high layer thickness, however, they quickly begin to attach themselves to detritus particles and stretch out. *Stentor coeruleus* shows an amazing ability to stretch. When fully elongated, most of the body is almost tapered like a thread, except for the trumpet-shaped “head” (s. figs. 1 and 2). The elongated body bends back and forth as food is swirled towards it. Single-celled algae, dinoflagellates and bacteria serve as food.

The macronucleus is moniliform and consists of 10-20 spherical nodules (s. figs. 3 a and 5). This makes it easy to distinguish *Stentor coeruleus* from [Stentor multiformis](#),

which is also blue-green in color. The micronuclei of *Stentor coeruleus* are attached to the moniliform macronucleus, but also in the adjacent cytoplasm (s. fig. 6). According to my observations, the micronuclei are elliptical in shape and about 5–6  $\mu\text{m}$  long (s. fig. 6).

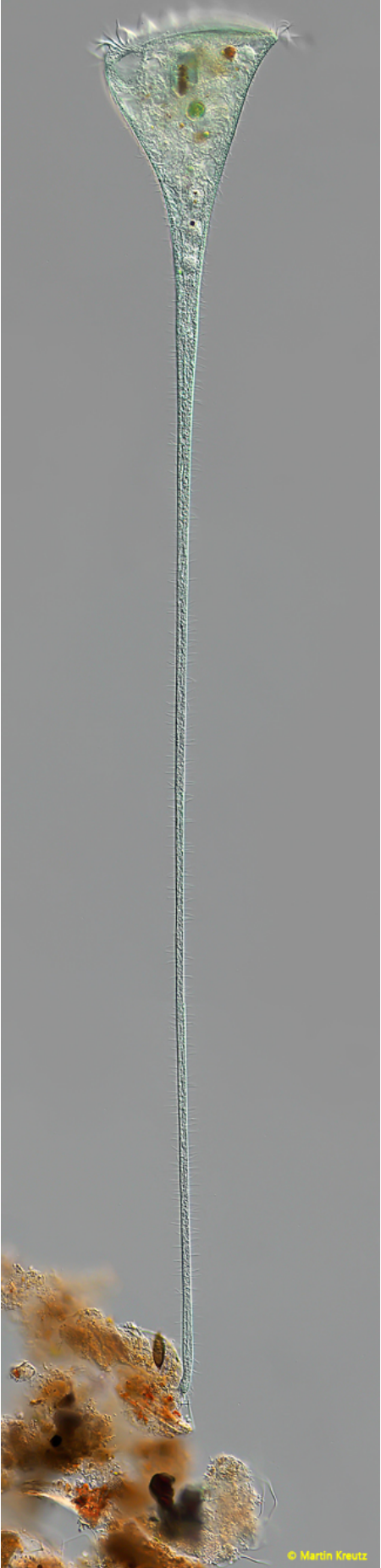
Stentor coeruleus  
Obj. 10 X



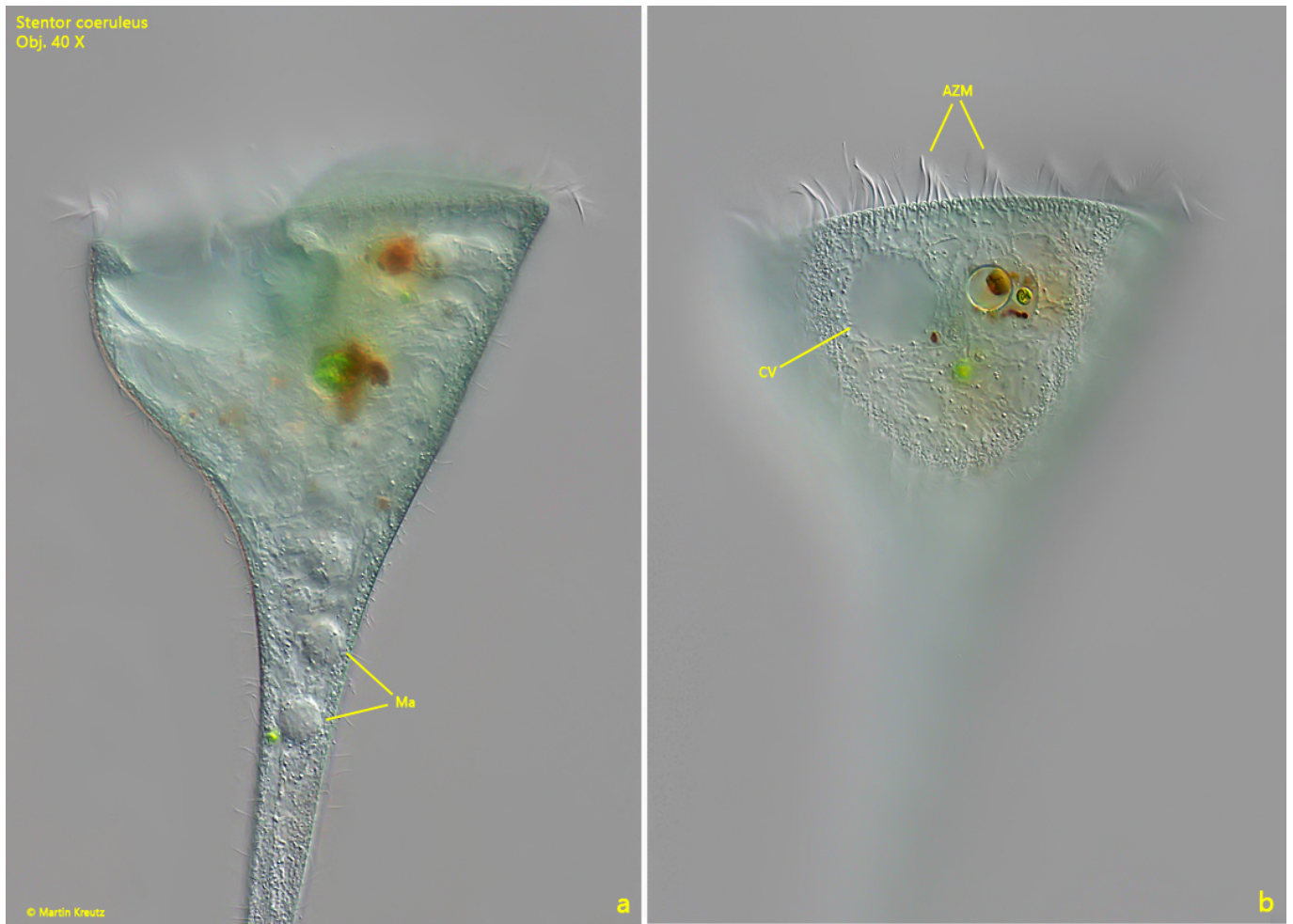
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**Fig. 1:** *Stentor coeruleus*. L = 1890  $\mu\text{m}$ . A fully elongated specimen in brightfield illumination. Obj. 10 X.

Stentor coeruleus  
Obj. 20 X



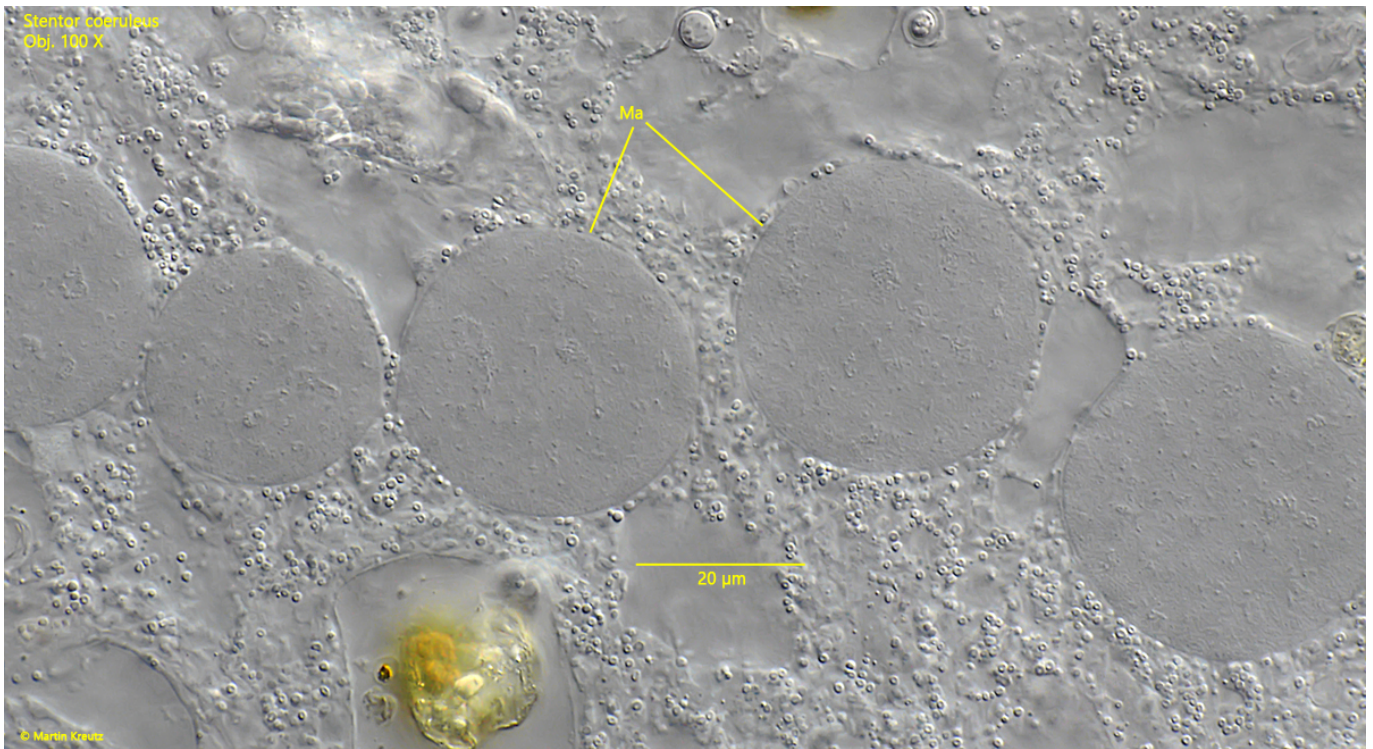
**Fig. 2:** *Stentor coeruleus*. L = 1890  $\mu\text{m}$ . The same specimen as shown in fig. 1 at higher magnification and with DIC. Obj. 20 X.



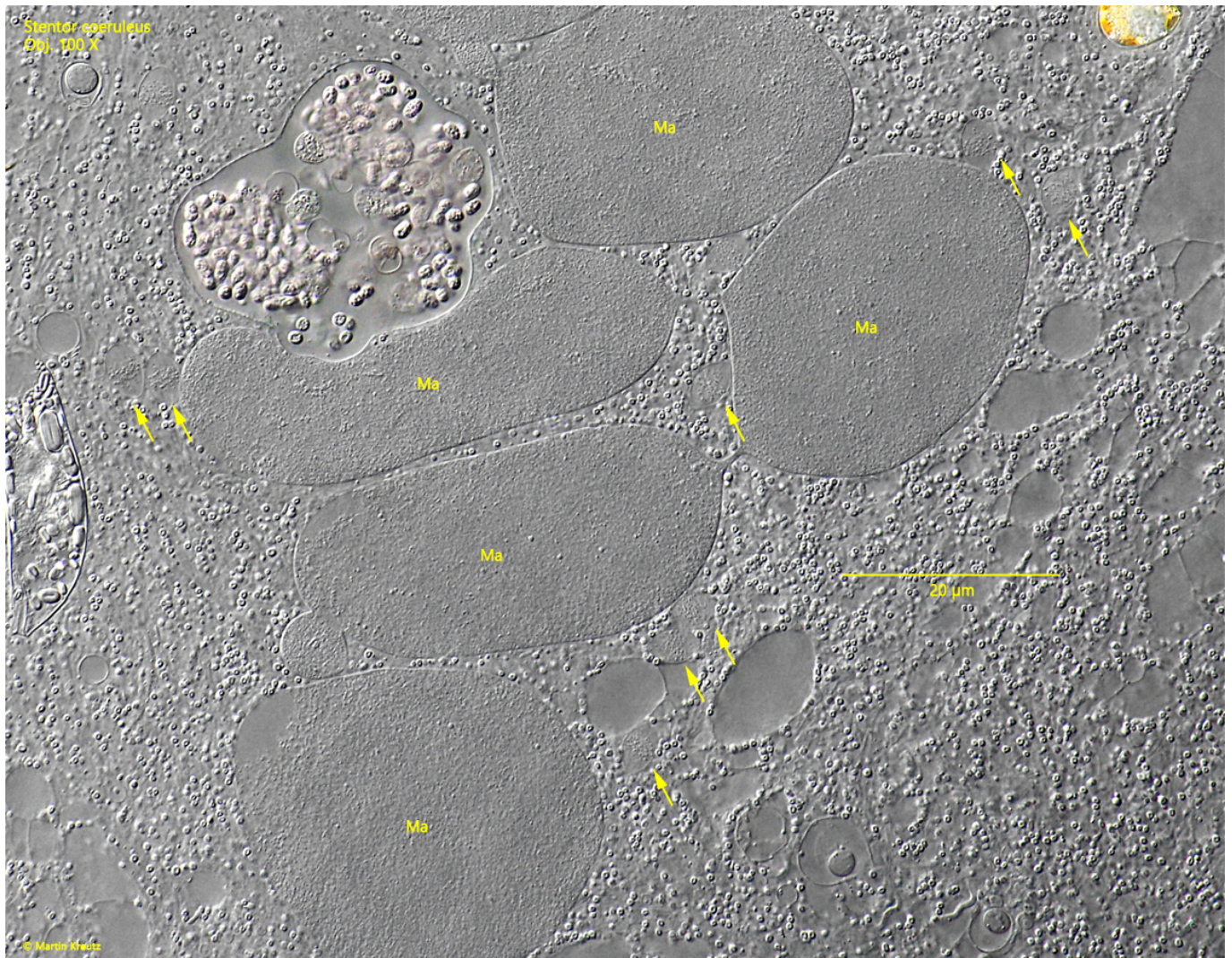
**Fig. 3:** *Stentor coeruleus*. Two focal planes of the trumpet-shaped anterior end. Note the adoral zone of membranelles (AZM) and the contractile vacuole (CV). Ma = nodules of the moniliform macronucleus. Obj. 40 X.



**Fig. 4:** *Stentor coeruleus*. Stripes of blue-green granules are arranged between the longitudinal rows of cilia. Obj. 100 X.



**Fig. 5:** *Stentor coeruleus*. The spherical nodules of the moniliform macronucleus (Ma) in a squashed specimen. Obj. 100 X.



**Fig. 6:** *Stentor coeruleus*. The small, elliptically shaped micronuclei (arrows) are scattered in the cytoplasm near the nodules of the macronucleus (Ma). Obj. 100 X.