

Stentor polymorphus

(Müller, 1773) Ehrenberg, 1830

Most likely ID: n.a.

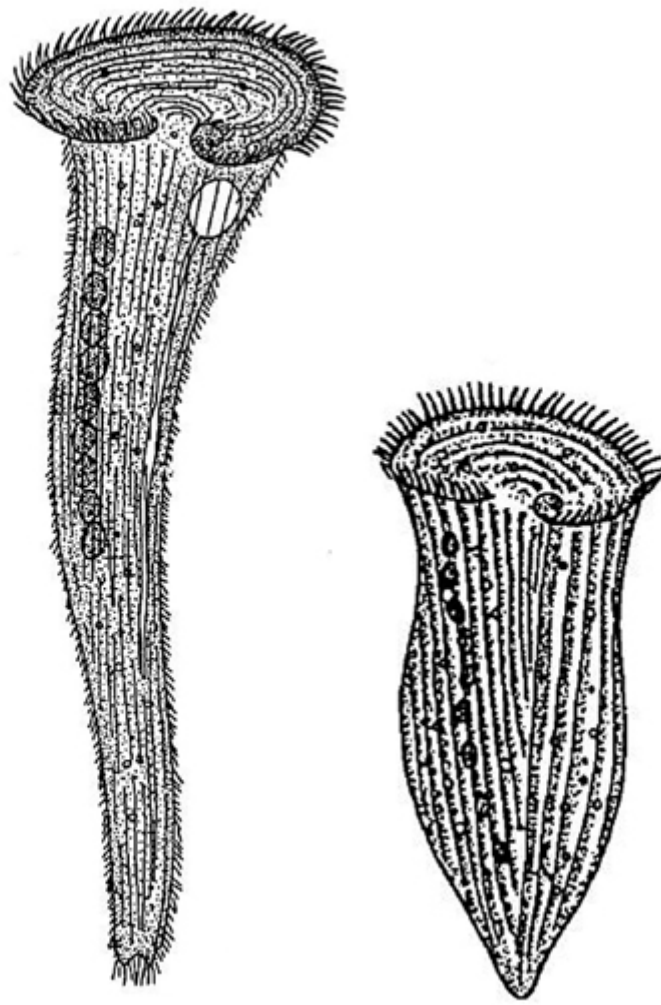
Synonym: n.a.

Sampling location: [Simmelried](#), [Purren pond](#), [Bussenried](#), [Ulmisried](#), [Mühlhalden pond](#)

Phylogenetic tree: [Stentor polymorphus](#)

Diagnosis:

- body elongated trumpet-shaped, contracted obovoid to club-shaped
- length up to 2000 µm (of elongated specimens)
- cytoplasm green due to symbiotic algae (*Chlorella*)
- adoral membranelle running in clockwise to oral funnel
- attached with thigmotactic cilia to the substrate
- macronucleus moniliform, 5-20 nodules
- contractile vacuole on left wall of oral funnel



after Kahl

Stentor polymorphus

Stentor polymorphus is a very common ciliate that I find regularly in most of my sampling location. In July 2023, I even observed a mass development of *Stentor polymorphus* in the [Purren pond](#). Billions of specimens covered the top layer of leaves on the mud, turning them an intense green.

Due to its size and green coloration caused by thousands of symbiotic *Chlorella* algae, *Stentor polymorphus* is unmistakable. The macronucleus is monoliform and consists of 5 - 20 nodules. I was able to identify several micronuclei adjacent to the nodules, which was not previously described by Kahl (1932) or Foissner (1992).

Tactile bristles were observed in *Stentor polymorphus* by Penard (1922). However, this observation has not been confirmed so far. Also I could not recognize any in my population.

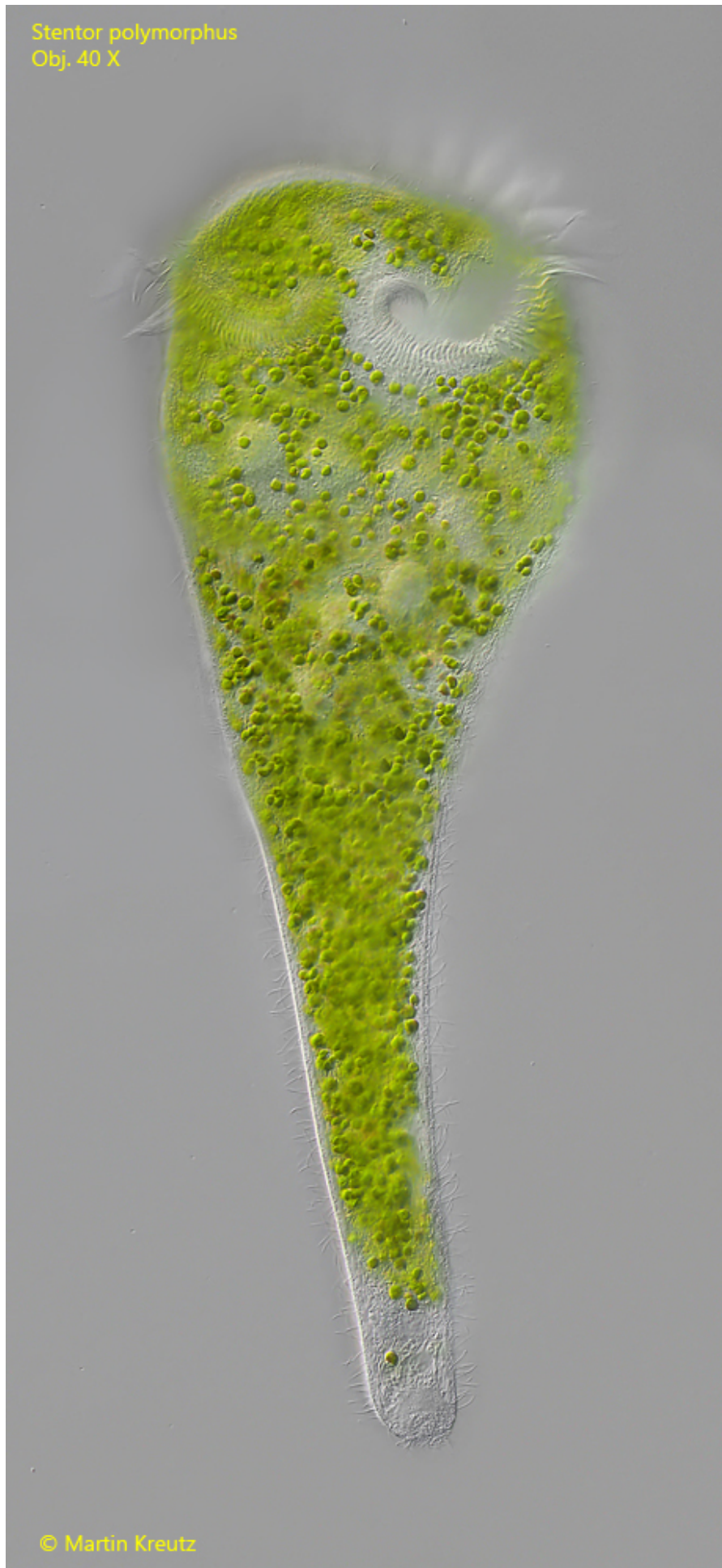
Stentor polymorphus
Obj. 20 X



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Fig. 1: *Stentor polymorphus*. L = 550 - 710 μ m. A group of four fully extended specimens in darkfield illumination. Obj. 20 X.

Stentor polymorphus
Obj. 40 X



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Fig. 2: *Stentor polymorphus*. L = 510 μm . A partly extended specimen. Obj. 40 X.

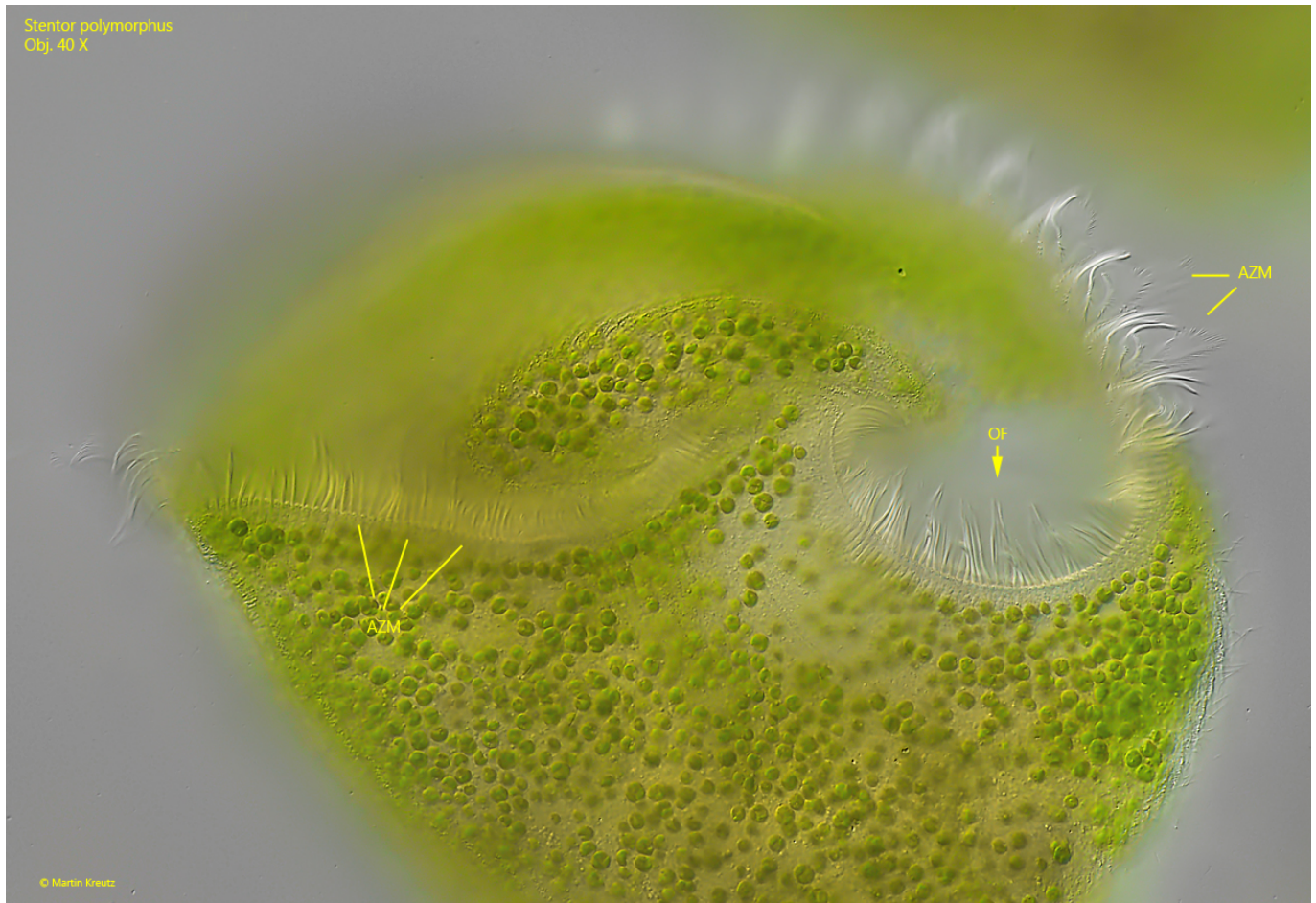


Fig. 3: *Stentor polymorphus*. The adoral zone of membranelles (AZM) in detail. In apical view the adoral zone is almost bretzel-shaped and running in clockwise direction into the oral funnel (OF). Obj. 40 X.

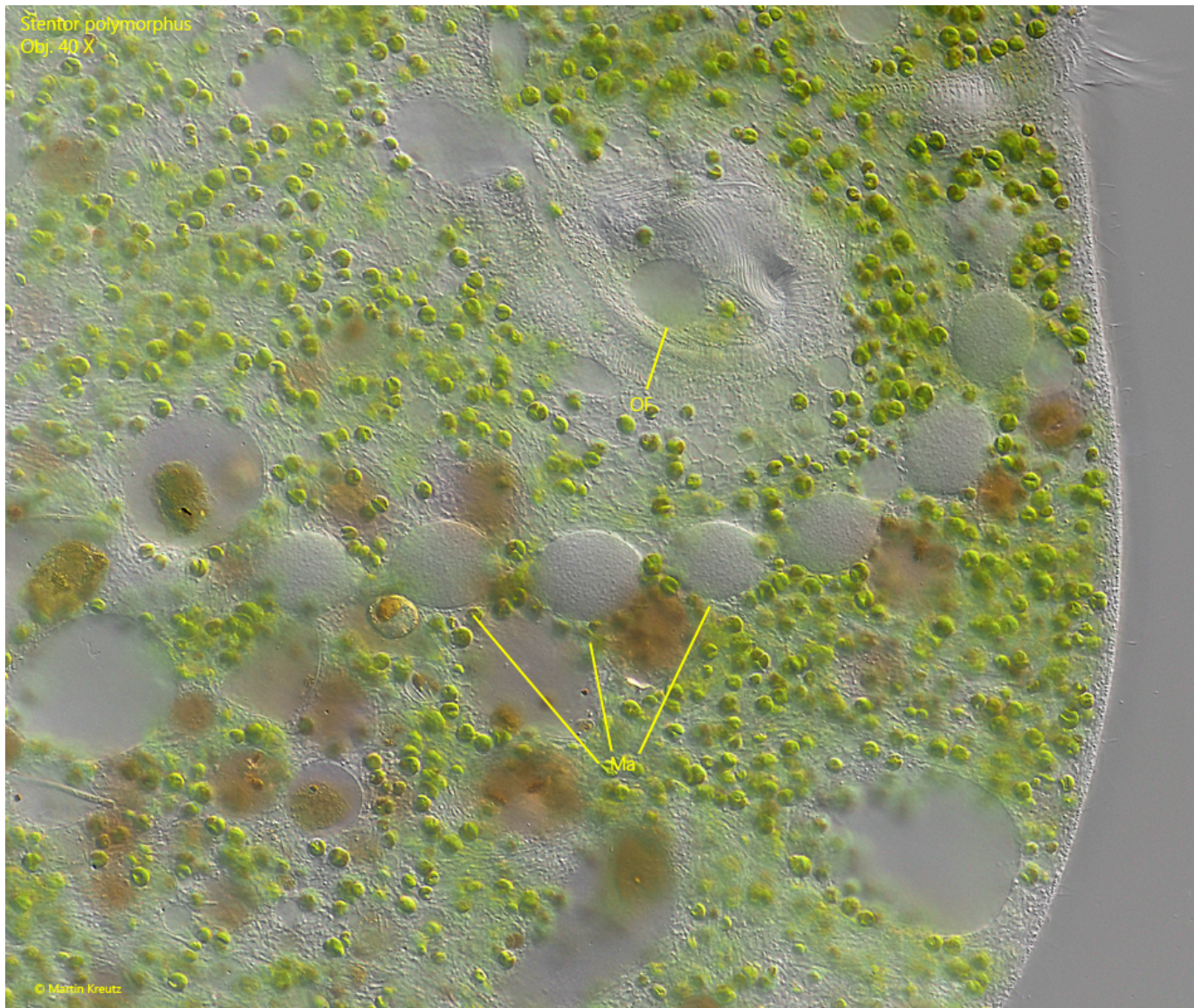


Fig. 4: *Stentor polymorphus*. Focal plane on the nodules of the moniliform macronucleus (Ma) in a slightly squashed specimen. OF = oral funnel. Obj. 40 X.

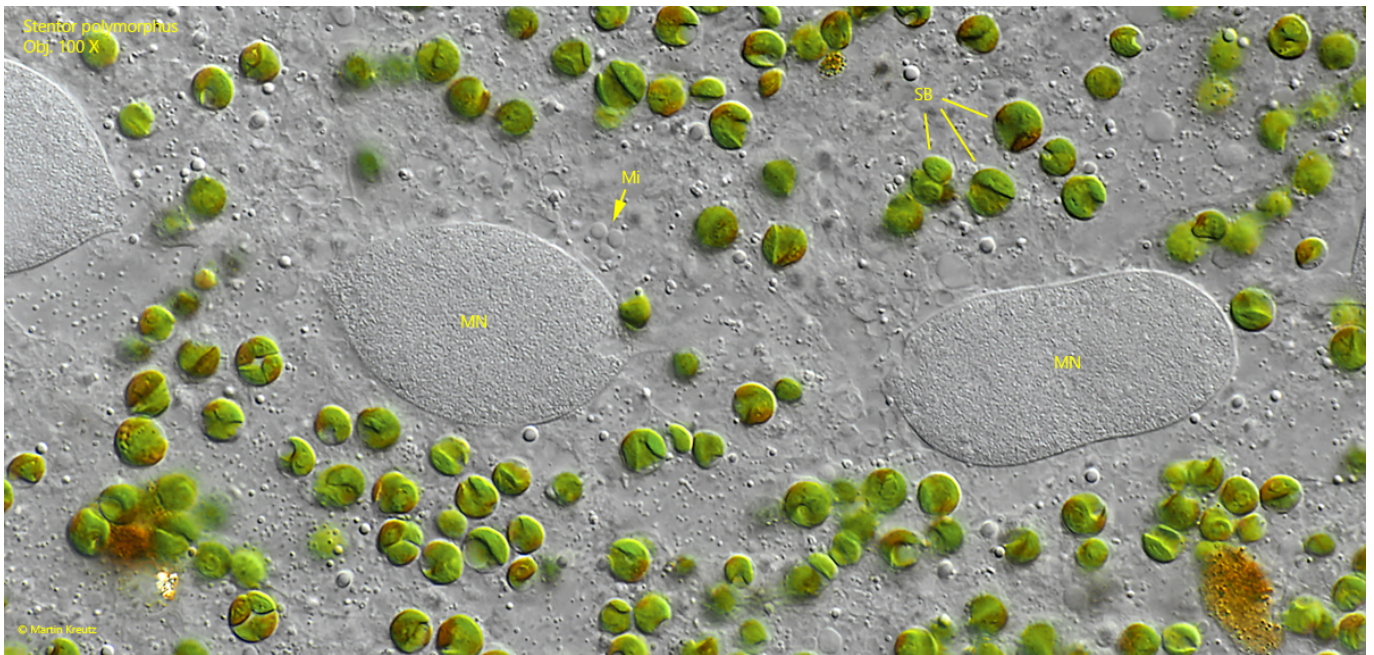


Fig. 5: *Stentor polymorphus*. The nodules of the macronucleus (MN) in detail. Note the group of 3 micronuclei (Mi) adjacent to the nodule. SB = symbiotic algae. Obj. 100 X.

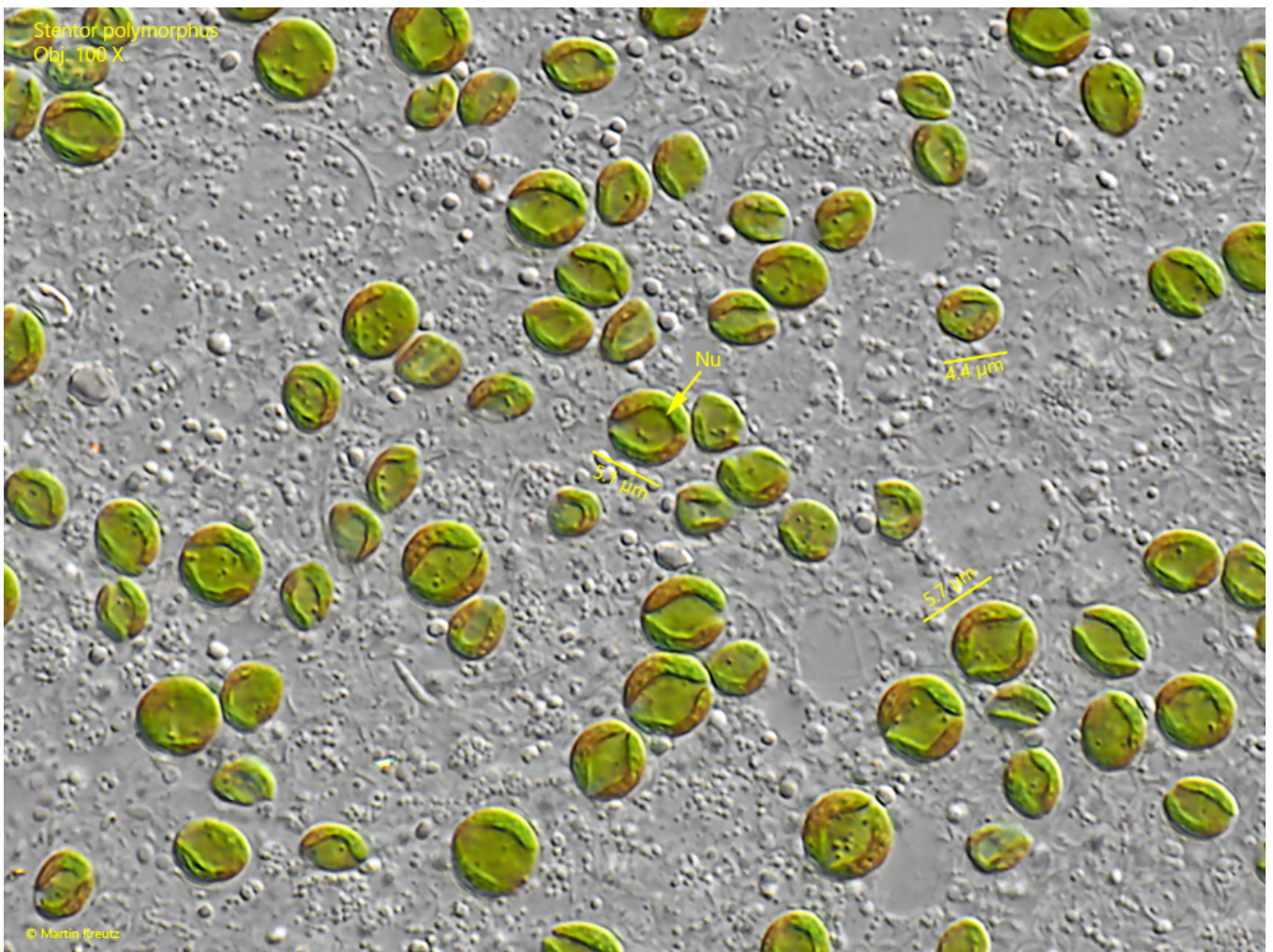


Fig. 6: *Stentor polymorphus*. The symbiotic algae have a diameter of 4–6 µm and are

member of the genus *Chlorella*. Each *Chlorella* cell has an own nucleus (Nu) which is hard to recognize. Obj. 100 X.