Lagynus elegans

(Engelmann, 1862) Quennerstedt, 1867

Most likely ID: n.a.

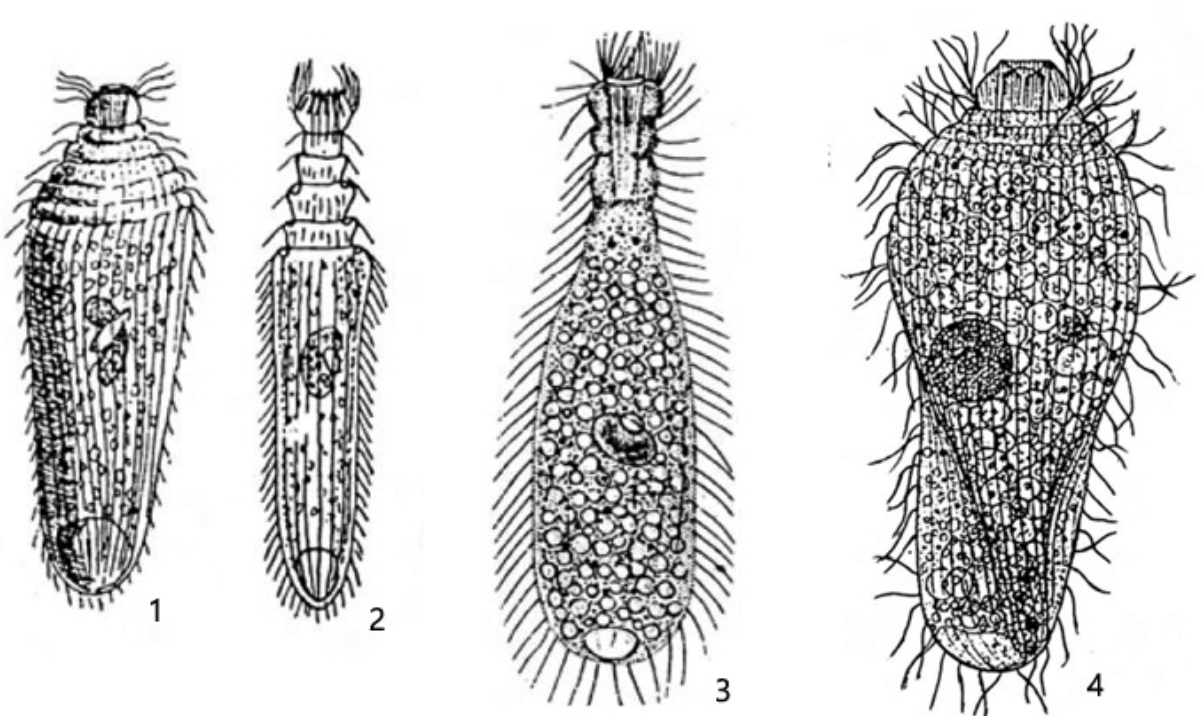
Synonym: n.a.

Sampling location: Purren pond, Simmelried

Phylogenetic tree: ***Lagynus elegans***

Diagnosis:

- body flask-shaped, at anterior end (“neck”) with 3–5 annular furrows
- anterior neck can be retracted
- cell surface with longitudinal furrows
- length 130–200 µm, width 40–60 µm
- macronucleus ellipsoid or bean-shaped, one ellipsoid micronucleus
- contractile vacuole at posterior end
- 37–50 longitudinal rows of cilia
- in the cytoplasm rod-shaped, thin extrusomes, about 15 µm long
- oral bulge with about 30 chevron-shaped rods



1, 2 = after Kahl
3 = after Engelmann
4 = after Wetzel

Lagynus elegans

I find *Lagynus elegans* rarely, but regularly. In some years the species appeared with 5–10 specimens per milliliter. The species is easy to recognize by the stepped neck, which is caused by ring-shaped furrows. There should be 3–5 furrows. However, at high magnification I had the impression that there are 7 furrows, although the furrows become less pronounced towards the posterior end (s. fig. 7). The longitudinal furrows of the pellicle (s. figs. 1 e, 1 f and 7) are not mentioned by either Kahl or Foissner, although I was able to detect them in all specimens in my population. The extrusomes scattered in the cytoplasm should be about 15 µm long according to Foissner. In my specimens I could measure lengths between 9–11 µm.

According to Foissner the species *Lagynus elegans* should be synonymous with *Lacrymaria sapropelica*. After I having found a *Lacrymaria* which has the characteristics of *Lacrymaria sapropelica* described by Kahl (e.g. head broader than the neck), I am convinced that *Lacrymaria sapropelica* is a distinct species which is not synonymous with *Lagynus elegans*. Since I was able to detect both species in my sites, I was able to make a direct comparison. *Lacrymaria sapropelica* not only has a differently shaped head and neck, but is also smaller than *Lagynus elegans* with about 90 µm, does not have the conspicuous longitudinal furrows on the pellicle and has fewer ciliary rows.

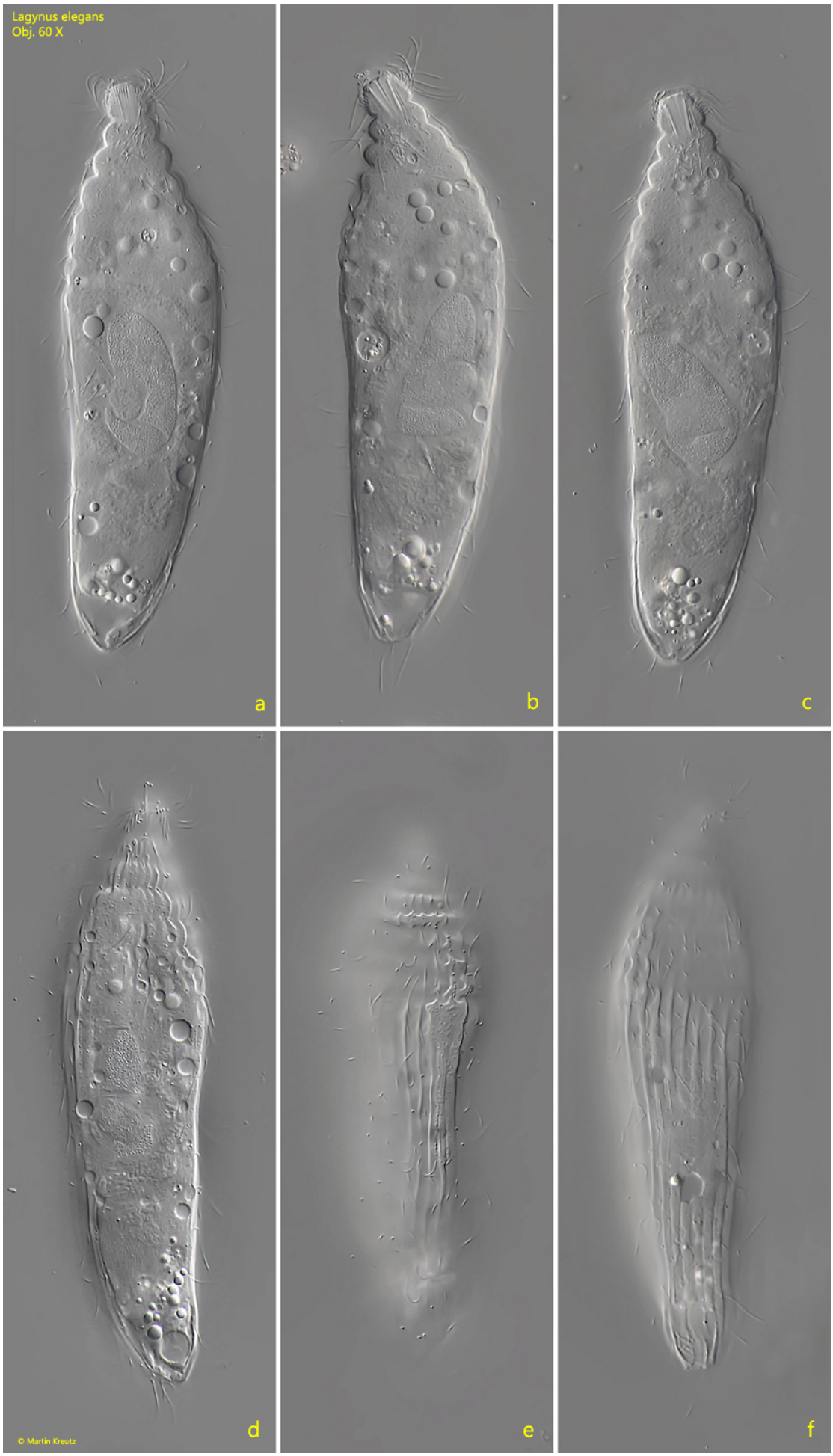

Lagynus elegans
Obj. 60 X
a
b
c
d
e
f
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Fig. 1 a-f: *Lagynus elegans*. L = 142 µm. Different focal planes of a freely swimming specimen. Obj. 60 X.



Fig. 2: *Lagynus elegans*. L = 142 µm. The specimen shown in fig. 1 a-f burrowing in a detritus flake. Obj. 60 X.



Fig. 3 a-b: *Lagynus elegans*. L = 135 µm. A specimen with elongated (a) and retracted neck (b). Obj. 60 X.

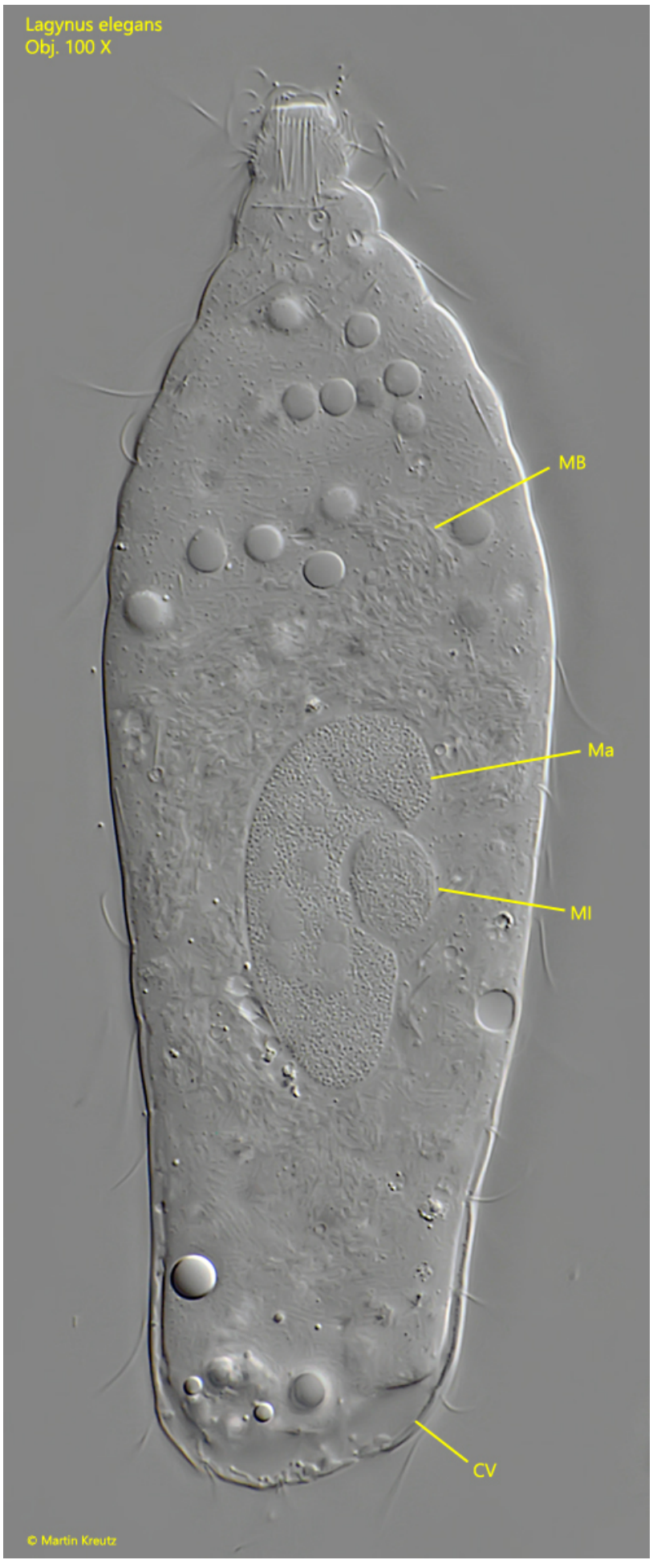

Lagynus elegans
Obj. 100 X
MB
Ma
MI
CV
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Fig. 4: *Lagynus elegans*. L = 148 µm. Total view of a squashed specimen. CV = contractile vacuole, Ma = macronucleus, MB = intracellular mass of bacteria?, Mi = micronucleus. Obj. 100 X.

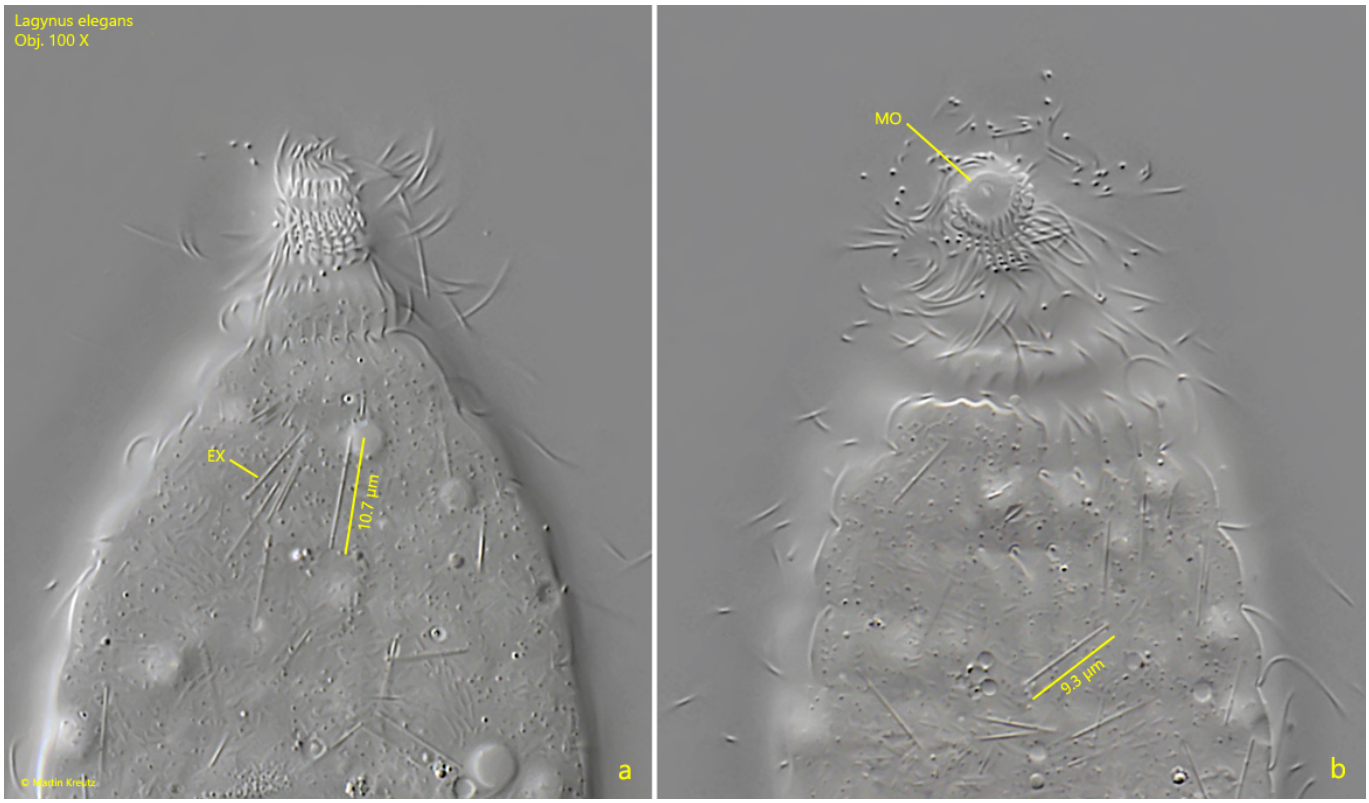


Fig. 5 a-b: *Lagynus elegans*. Lateral (a) and apical view (b) of the head. Note the thin, rod-shaped extrusomes (EX) scattered in the cytoplasm. MO = mouth opening. Obj. 100 X.

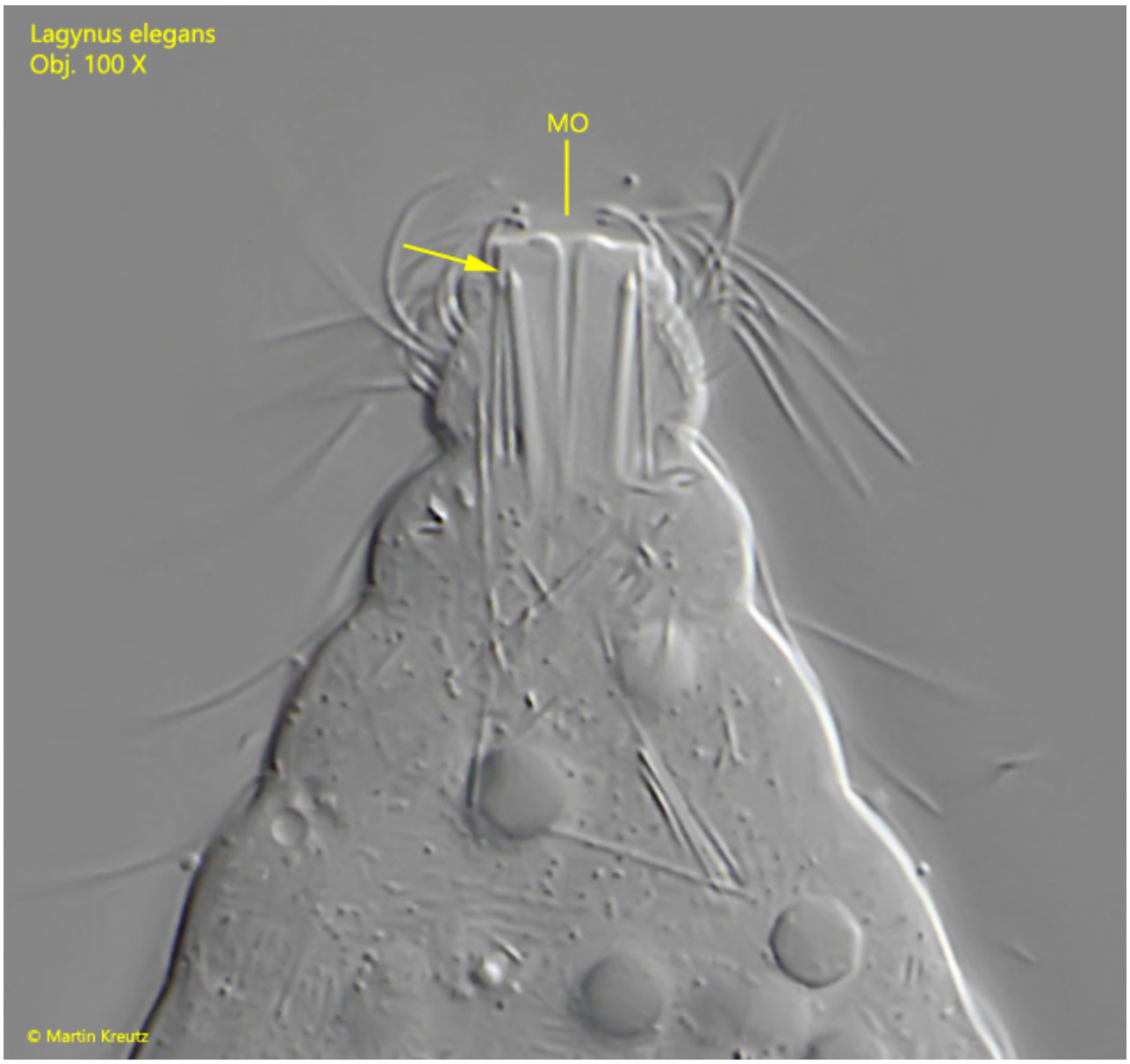


Fig. 6: *Lagynus elegans*. The oral bulge in detail. It seems that the pharyngeal extrusomes (arrow) have tapered ends with a tip. MO = mouth opening. Obj. 100 X.

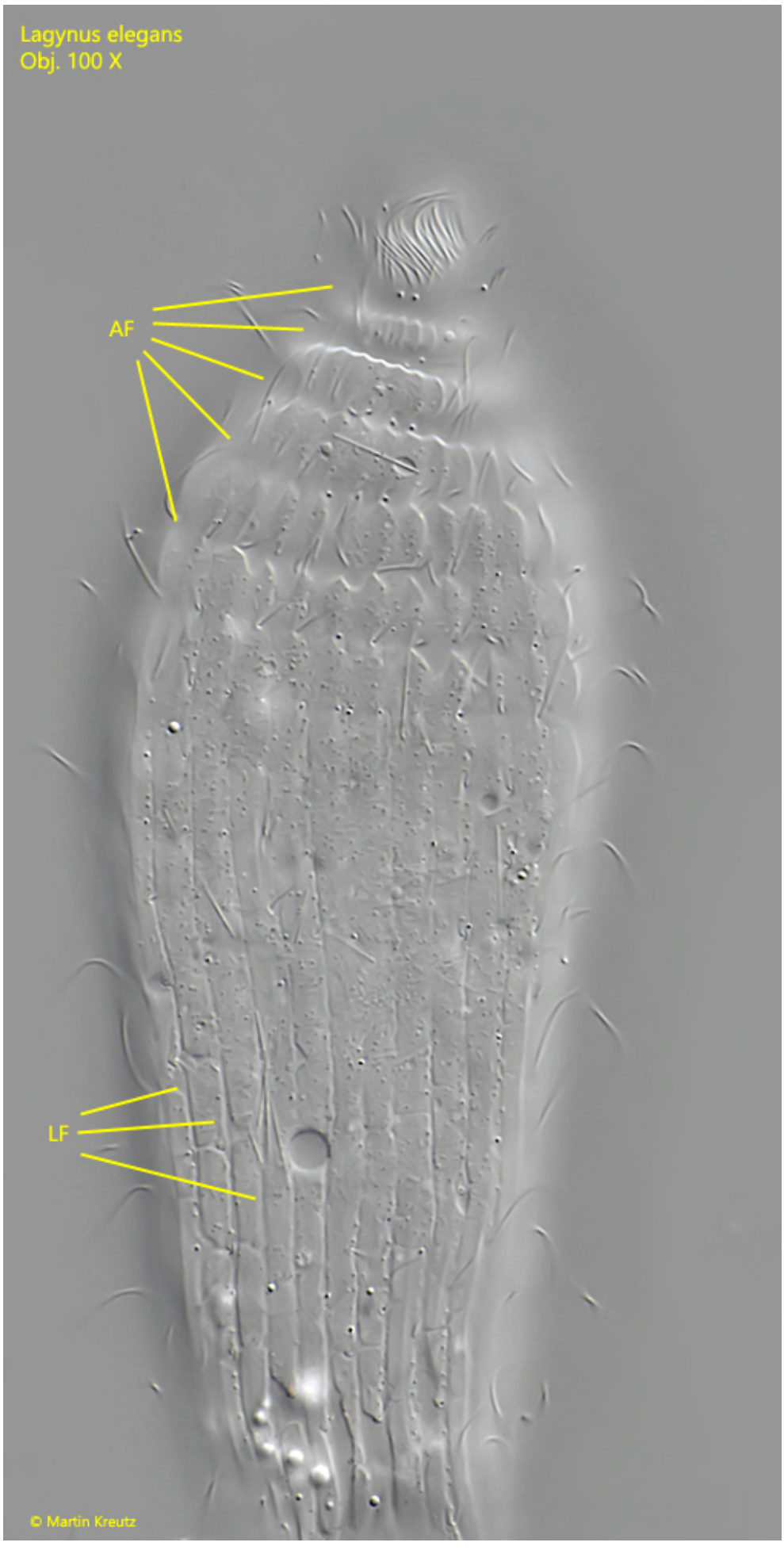

Lagynus elegans
Obj. 100 X
AF
LF
© Martin Kreutz

Fig. 7: *Lagynus elegans*. Anteriorly the end tapers to the distal end by annular furrows (AF). Caudal to these furrows, longitudinal furrows (LF) run in parallel to the posterior end. Obj. 100 X.

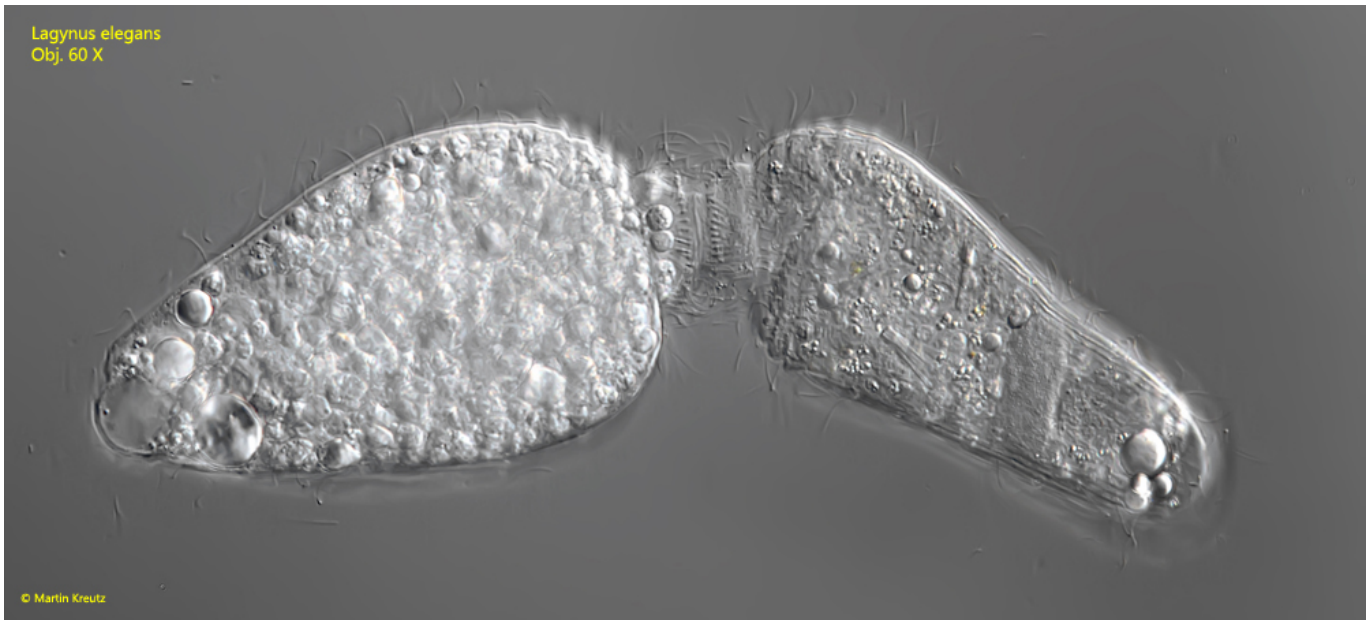


Fig. 8: *Lagynus elegans*. L = 128 µm + 118 µm. Two specimens in conjugation. Obj. 60 X.