Linostomella vorticella

(Ehrenberg, 1834) Aescht ex Foissner, Berger & Schaumburg, 1999

Most likely ID: n.a.

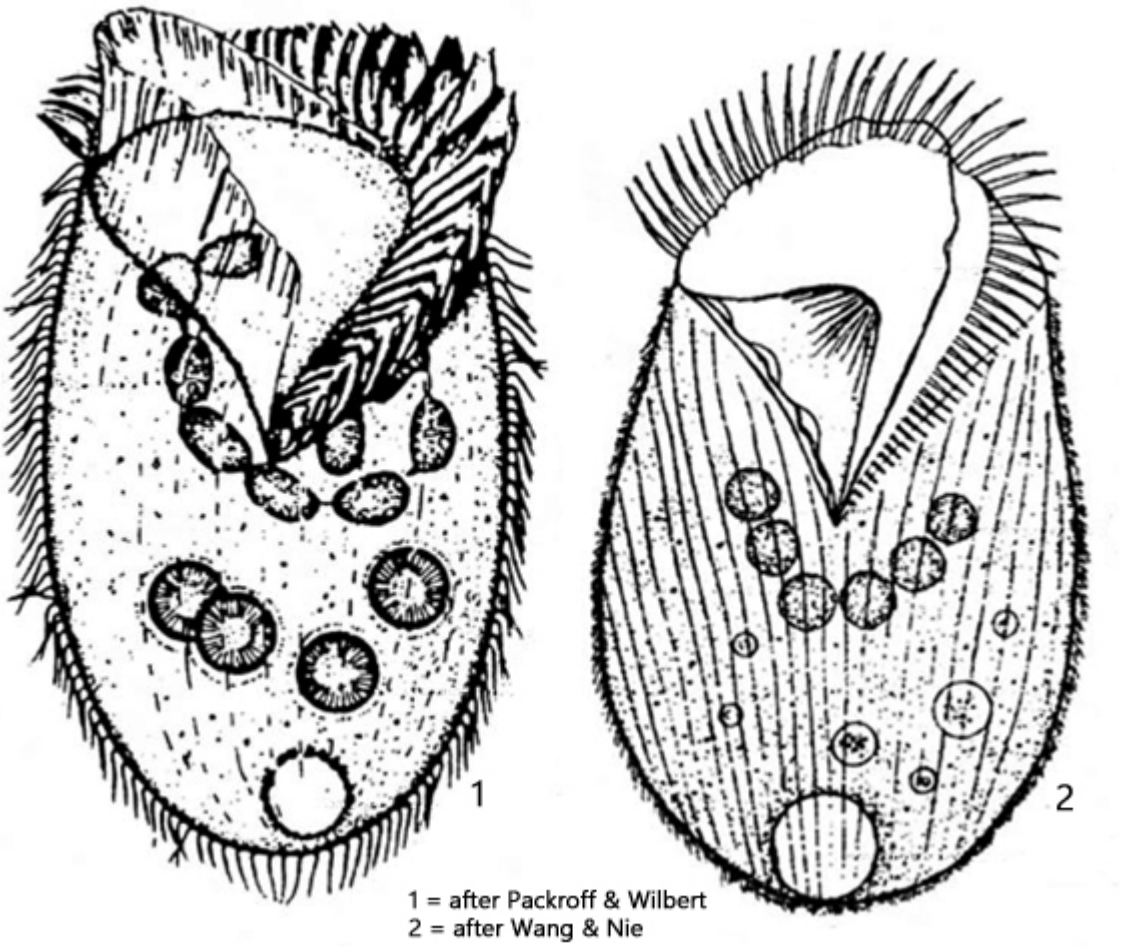
Synonyms: *Bursaria vorticella*, *Condylostoma vorticella*, *Linostoma vorticella*

Sampling location: Mühlweiher Litzelstetten, Pond of the waste disposal company Constance

Phylogenetic tree: *Linostomella vorticella*

Diagnosis:

- body saccular or ellipsoid, anterior end obliquely truncated
- length 100–210 µm
- oral apparatus large, funnel-shaped
- adoral zone of membranelles on left side
- undulating membrane on right side
- 30–34 longitudinal rows of cilia, slightly spirally
- pellicle with stripes of colorlesss cortical granules
- macronucleus moniliform, 6–10 nodules
- contractile vacuole terminal
- planktonic lifestyle



Linostomella vorticella

Although *Linostomella vorticella* is described as a common species, I have only observed this species a few times in the plankton from the Mühlweiher Litzelstetten and in the pond of the waste disposal company Constance.

In the samples, *Linostomella vorticella* is easy to recognize by its sack-shaped body with an obliquely truncated front end. The specimens swim quickly and often appear opaque due to the many food vacuoles filling the body. Their preferred food includes *Euglena*, *Chlamydomonas*, *Chilomonas*, *Eudorina,* and *Pandorina.*

The mouth opening occupies the entire front half of the body. It is funnel-shaped with a V-shaped, ventral notch. The adoral zone of membranelles is located on the left side and has the shape of a question mark, while the large undulating membrane occupies the right margin of the mouth opening. The terminal contractile vacuole is often difficult to detect due to the mass of food vacuoles in the cytoplasm. The macronucleus is moniliform and consists of 6–10 nodules. In my specimens, there were mostly 6–8 nodules. Even in strongly squashed specimens, I

could not detect any micronuclei. Earlier authors also do not mention or describe any. They are either very small or scattered in the cytoplasm and thus difficult to identify there.

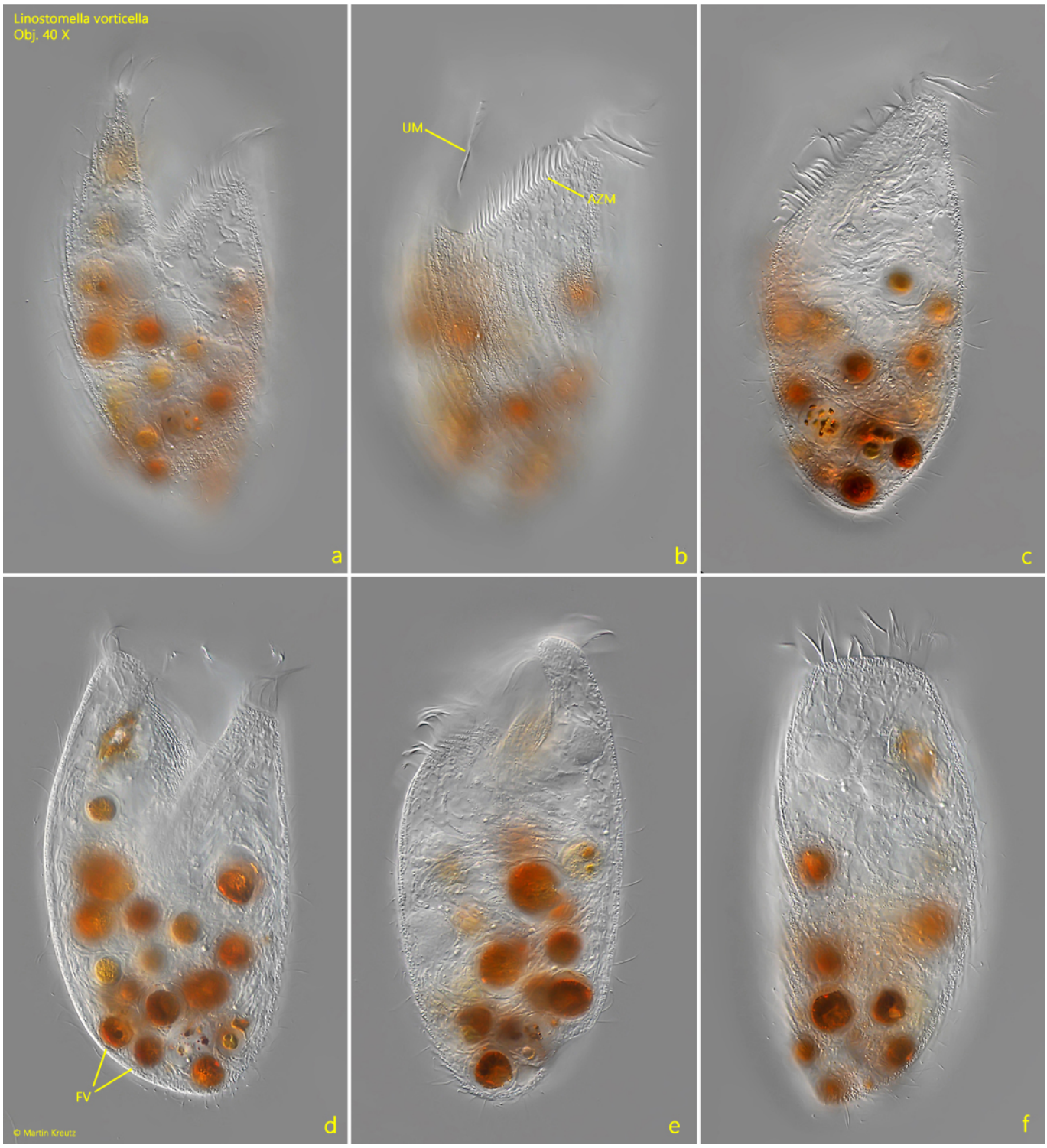


Fig. 1 a-f: *Linostomella vorticella*. L = 212 µm. A freely swimming specimen from ventral (a, b, d), from left (c, e) and from dorsal (f). Note the adoral zone of membranelles (AZM) on the left side of the oral apparatus and the undulating membrane (UM) on the right side. FV = food vacuoles. Obj. 40 X.

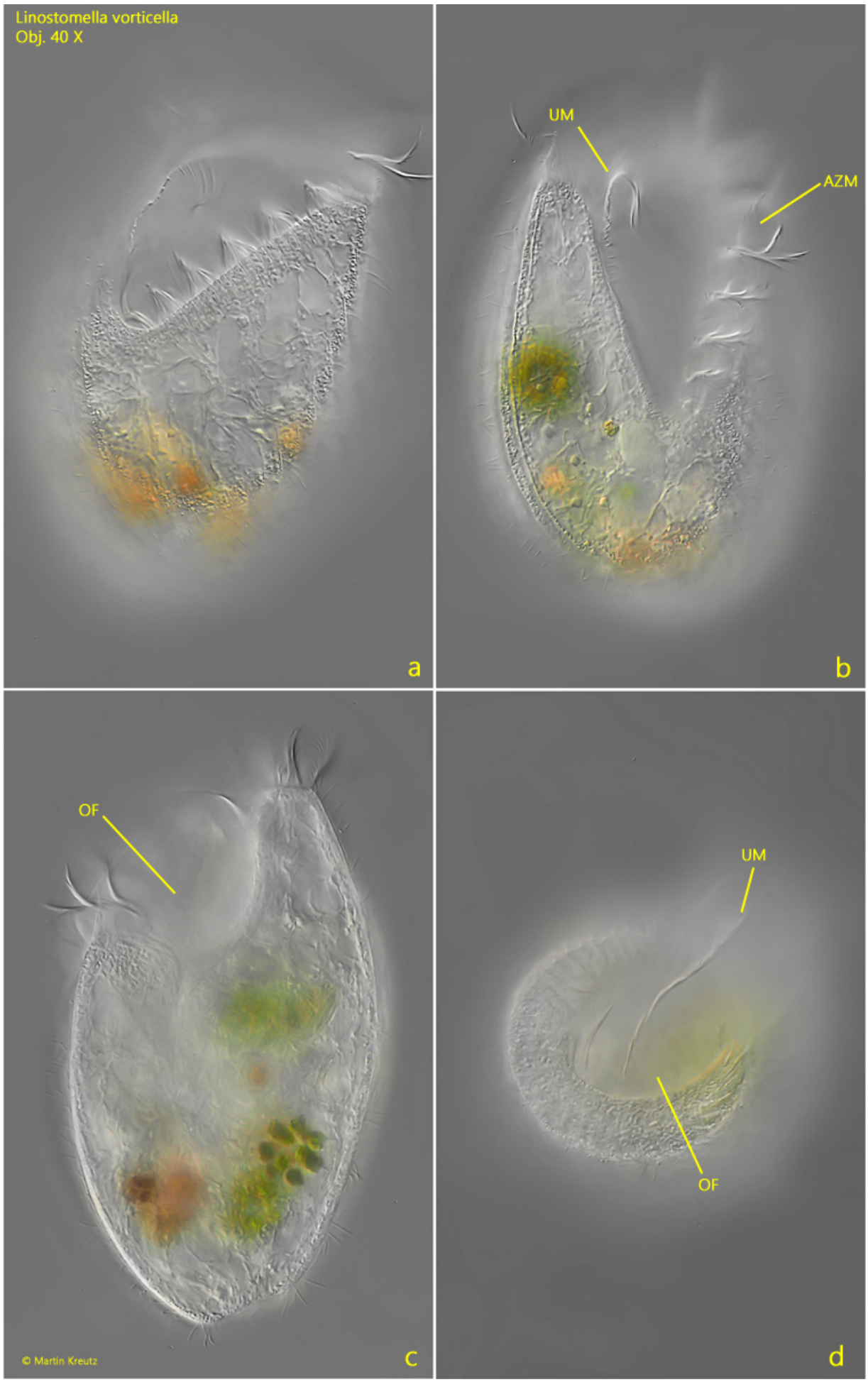

Linostomella vorticella
Obj. 40 X
a
UM
AZM
b
OF
© Martin Kreutz
c
UM
OF
d

Fig. 2 a-d: *Linostomella vorticella*. L = 196 µm. A second freely swimming specimen from ventral (a, b, c) and in apical view (d). AZM = adoral zone of membrabelles, OF = oral funnel, UM = undulating membrane. Obj. 40 X.

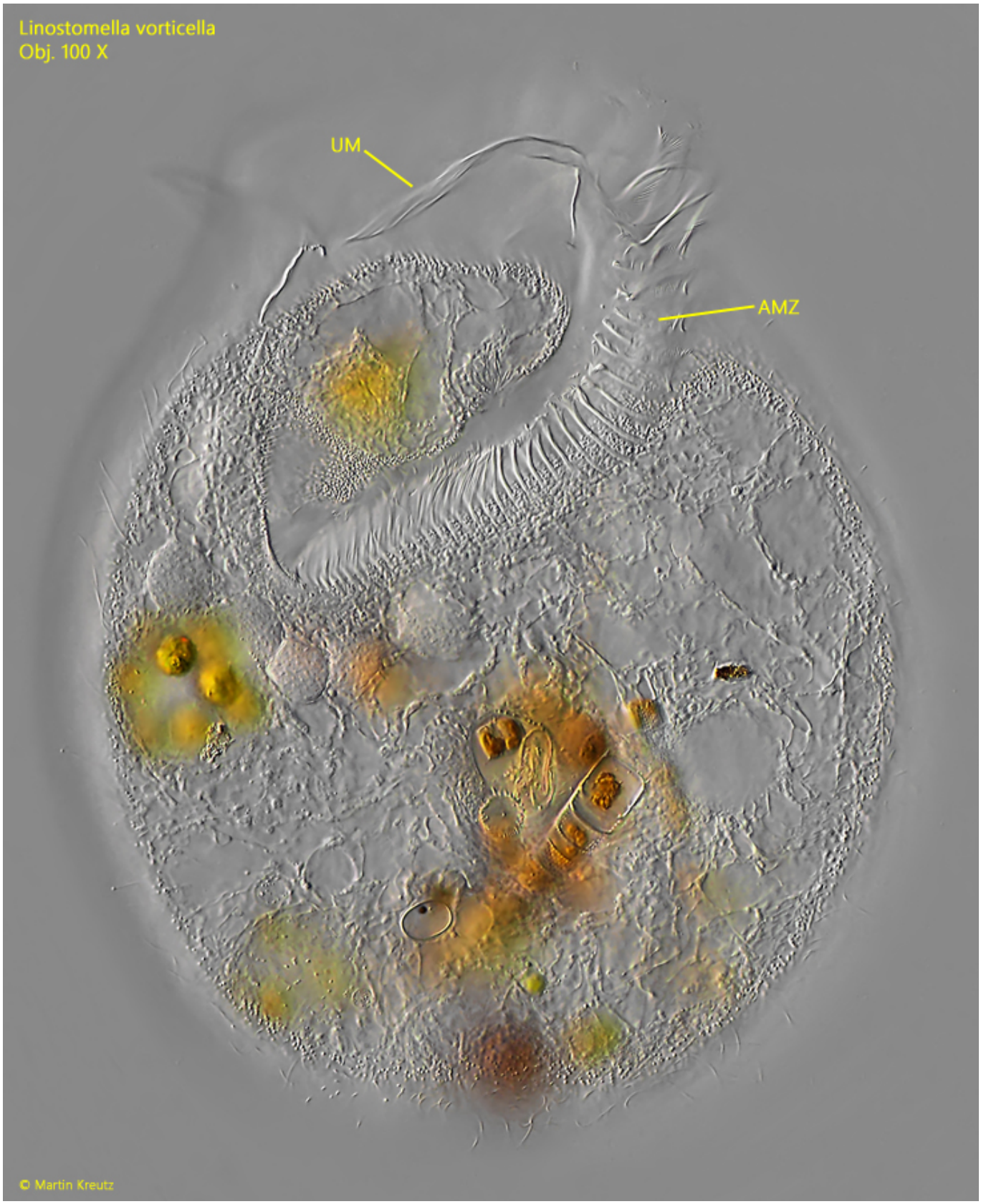


Fig. 3: *Linostomella vorticella*. A slightly squashed specimen with focal plane on the

adoral zone of membranelles (AZM) and the undilating membrane (UM). Obj. 100 X.

Fig. 4: *Linostomella vorticella*. The moniliform macronucleus (Ma) of 8 nodules in a squashed specimen. Obj. 60 X.