Blepharisma musculus Penard, 1922

Most likely ID: n.a.

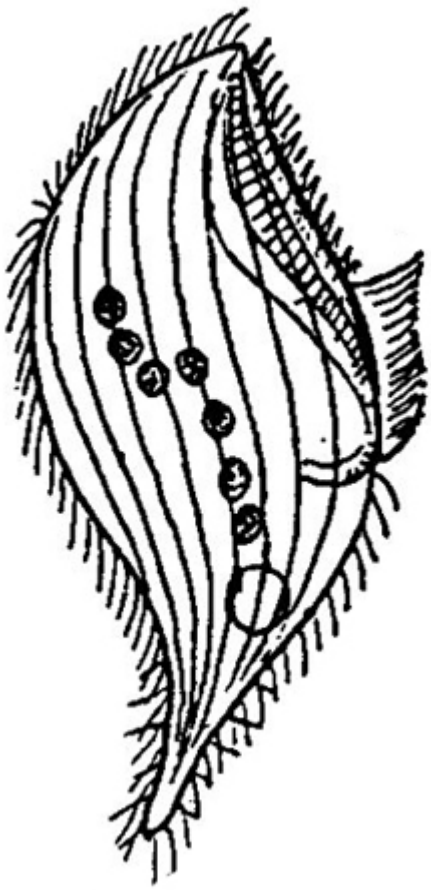
Synonym: n.a.

Sampling location: Purren pond, Simmelried

Phylogenetic tree: *Blepharisma musculus*

Diagnosis:

- body spindle-shaped, laterally flattened, with tail-shaped posterior end
- length 120–150 µm
- adoral zone on left side of oral groove, with long cilia
- undulating membrane inconspicuous, on right side of oral groove
- mouth opening approximately in the middle of the body
- reddish or pink colored due to colored granules under the pellicle
- moniliform macronucleus of 4–7 spherical nodules
- 4–10 spherical micronuclei, adjacent to macronucleus
- contractile vacuole ventrally, below mouth opening



Blepharisma musculus

So far I have only found *Blepharisma musculus* in the Simmelried and the Purren pond. There, however, I find the species only rarely and sporadically. Mostly the specimens were in the uppermost layer of mud or between decaying leaves.

Blepharisma musculus can easily be identified by the tail-shaped posterior end, the adoral zone which reaches approximately to mid-body and a reddish or pink colouring. The specimens are also quite large with a length of approximately 150 µm. The moniliform macronucleus with 4–7 nodules is also clearly recognizable in unsquashed specimens (s. fig. 1 a). In squashed specimens I could recognize 4–10 small, spherical micronuclei in the vicinity or between the nodules of the macronucleus (s. figs. 4 and 5). The oral groove begins apically and extends to the middle of the body where the mouth opening is located. On the left side of the oral groove is the adoral zone, while on the right side is the undulating membrane (s. fig. 3).

At 170–190 µm, the specimens in my population were somewhat longer than

Penard and Kahl state (120–150 µm). I also only found pink-colored specimens and never reddish-colored ones.

More images and information on *Blepharisma musculus*:

Michael Plewka-Freshwater life-*Blepharisma musculus*

and

Dr. Jeffrey Silverman-iNaturalist-*Blepharisma musculus*



Fig. 1 a-c: *Blepharisma musculus*. L = 190 µm. A freely swimming specimen from right. Note the moniliform macronucleus (Ma) and the tail-shaped posterior end.

AZM = adoral zone of membranelles, CV = contractile vacuole. Obj. 60 X.

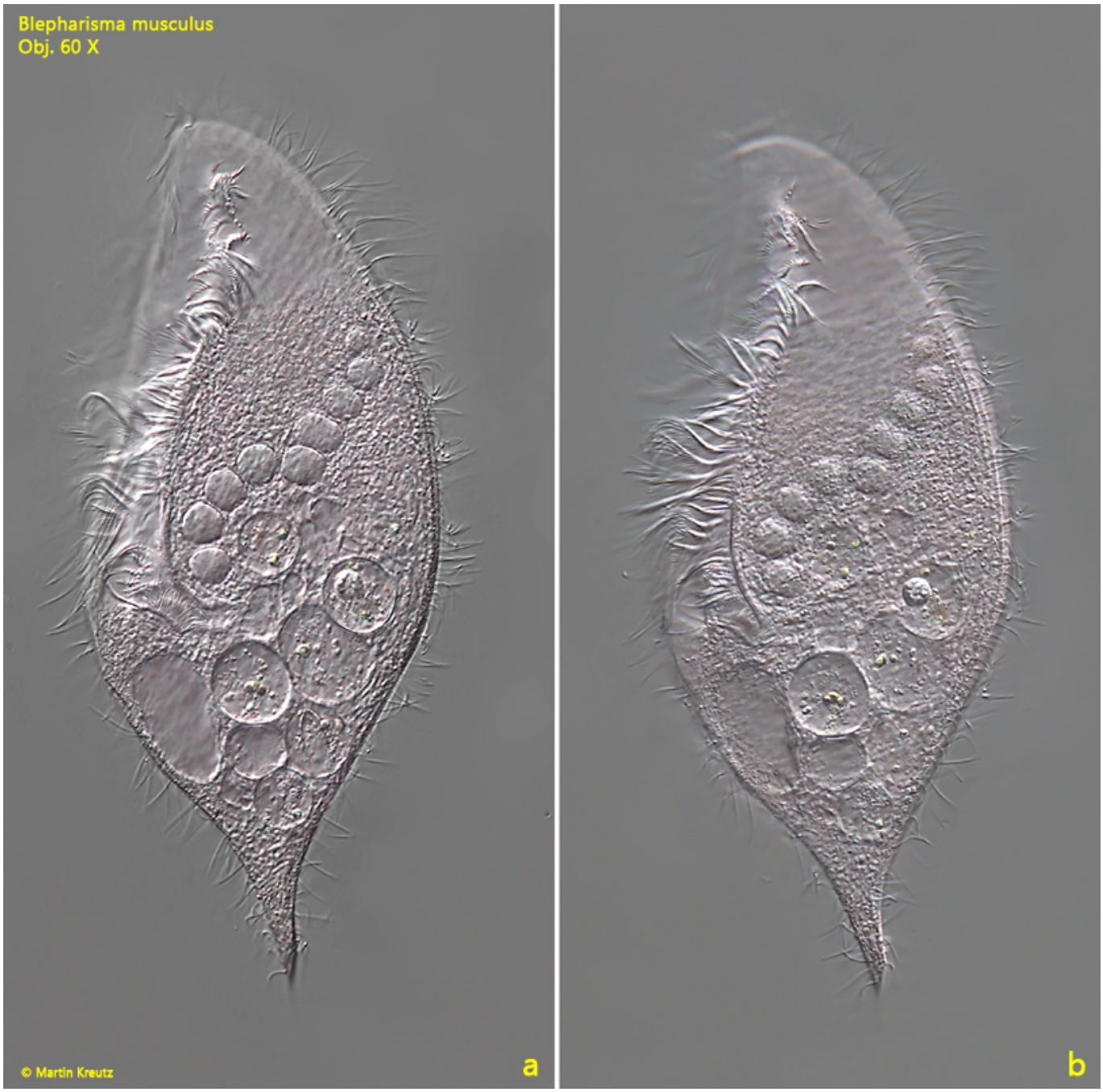


Fig. 2 a-b: *Blepharisma musculus*. L = 180 µm. A second freely swimming specimen from right. Obj. 60 X.

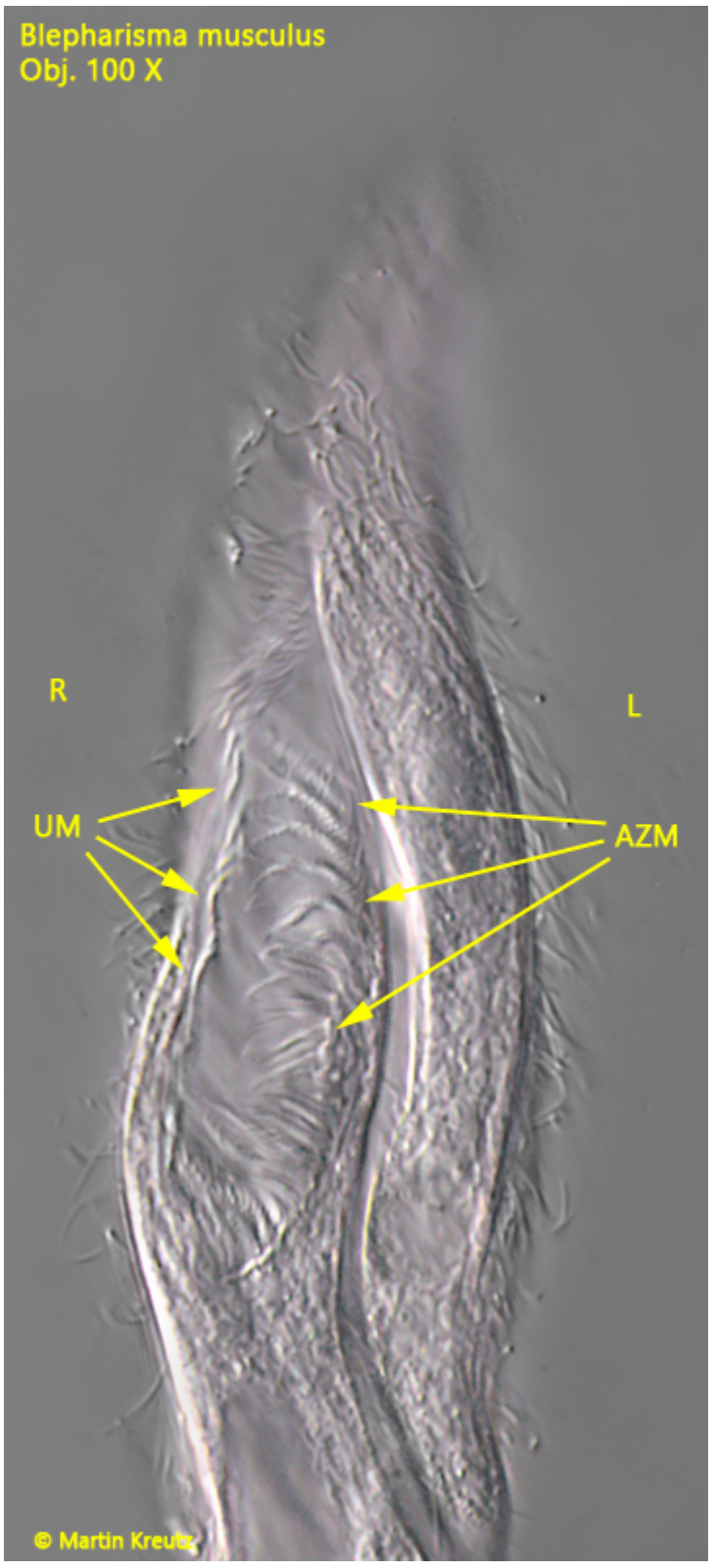


Fig. 3: *Blepharisma musculus*. Ventral view of the oral groove with the undulating mambrane (UM) on the right side and the adorale zone of membranelles (AZM) on the left side. Obj. 100 X.

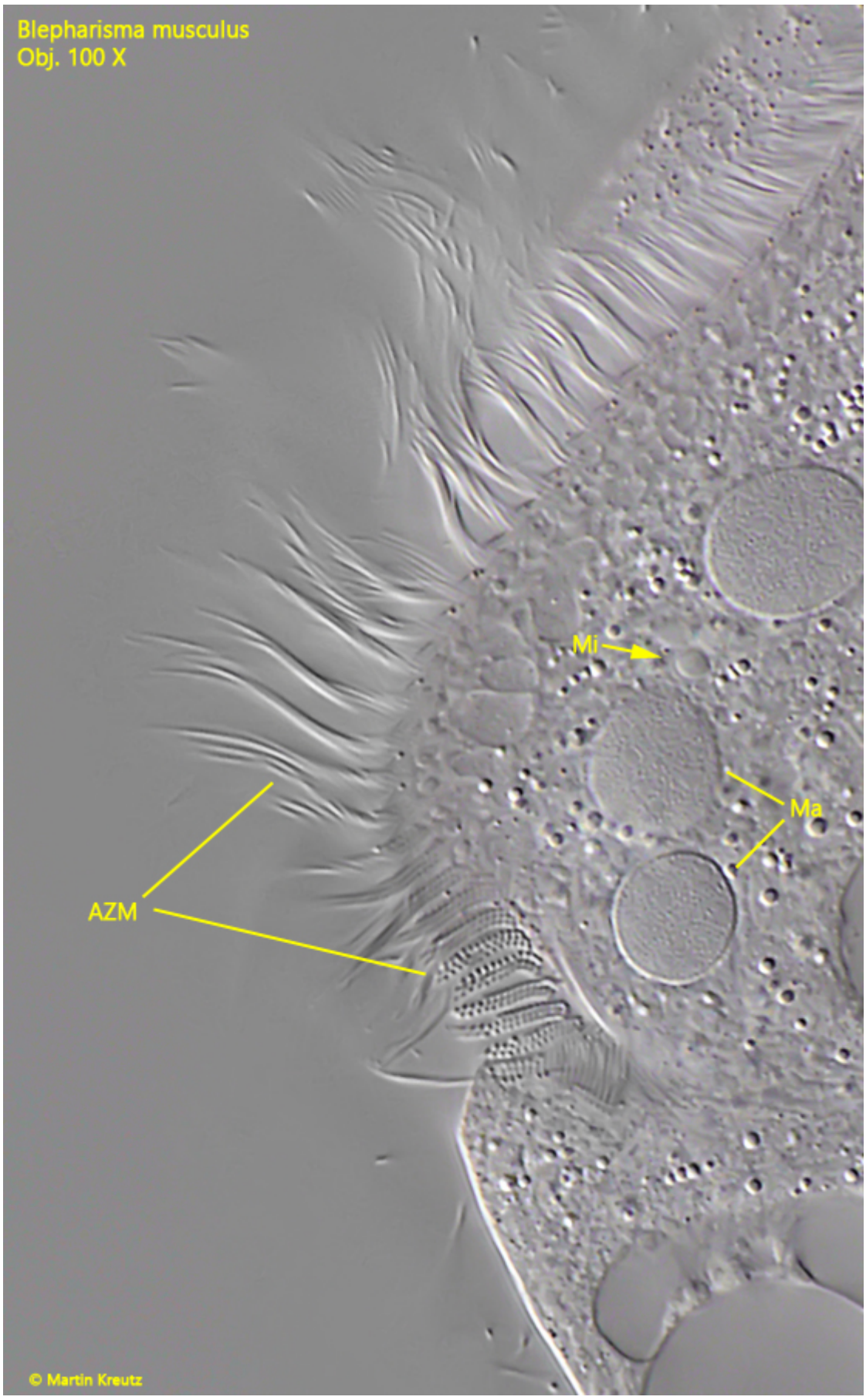


Fig. 4: *Blepharisma musculus*. The adoral zone of membranelles (AZM) in detail. Note the spherical mirconucleus (Mi) between the nodules of the moniliform

macronucleus (Ma). Obj. 100 X.



Fig. 5: *Blepharisma musculus*. A squashed specimen with a moniliform macronucleus consisting of 6 spherical nodules (Ma). Between the nodules 3 micronuclei (Mi) are visible. Obj. 100 X.