Pelagovorticella natans

(Fauré-Fremiet, 1924) Jankowski, 1985

Most likely ID: n.a.

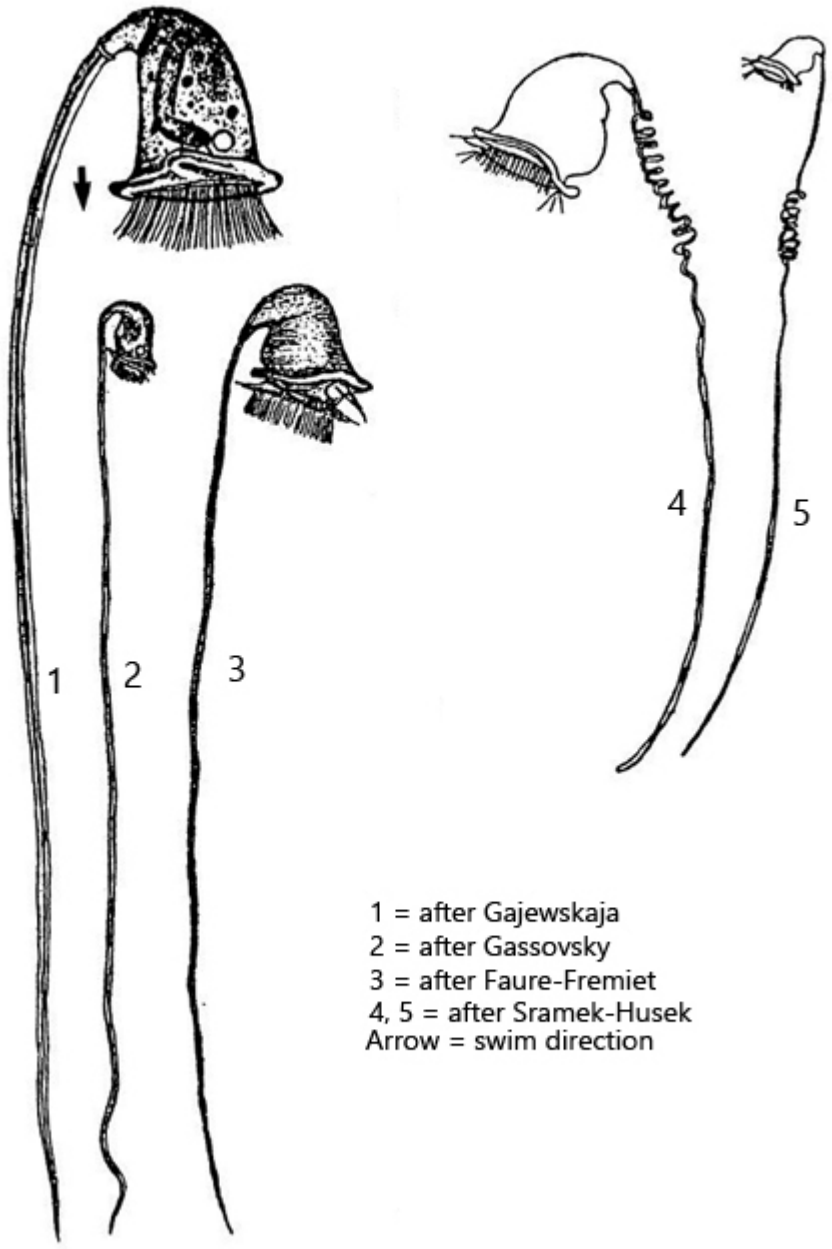
Synonyms: *Vorticella convallaria var. natans*, *Vorticella natans*

Sampling location: Hagstaffel pond, Pond of the waste disposal company Constance

Phylogenetic tree: *Pelagovorticella natans*

Diagnosis:

- length 70–100 µm, width 50 µm
- cells bell-shaped, posterior end curved in swimming direction
- contracted cells oviform
- plasm colorless
- one contracile vacuole
- macronucleus J-shaped
- pellicle finely striated
- stalk contracts in spirals
- solitary, planktonic, swims with the stalk in front



Pelagovorticella natans

I found the planktonic *Pelagovorticella natans* in the Hagstaffel pond in 1998 and in the pond of the waste disposal company Constance in 2023. The stalk is not attached to a solid substrate, but tapers at the distal end. When swimming, the stalk is elongated and points in the swimming direction. The cell body is also bent in the swimming direction and provides propulsion with the cilia of the peristome. Upon contact with an obstacle, the anterior part of the stalk contracts in spirals, while the distal end does not spiral. Moreover, the stalk cannot perform any other movements, which is a simple feature safely distinguishing *Pelagovorticella natans* from *Pelagovorticella mayeri*, the second planktonic *Pelagovorticella* species. In *Pelagovorticella mayeri*, the stalk can whip to achieve faster propulsion.

Vorticella natans was transferred to *Pelagovorticella* by Jankowski in 1985.

Fig. 1: *Pelagovorticella natans.* L = 77 µm (without stalk). A freely swimming specimen. Obj. 10 X.

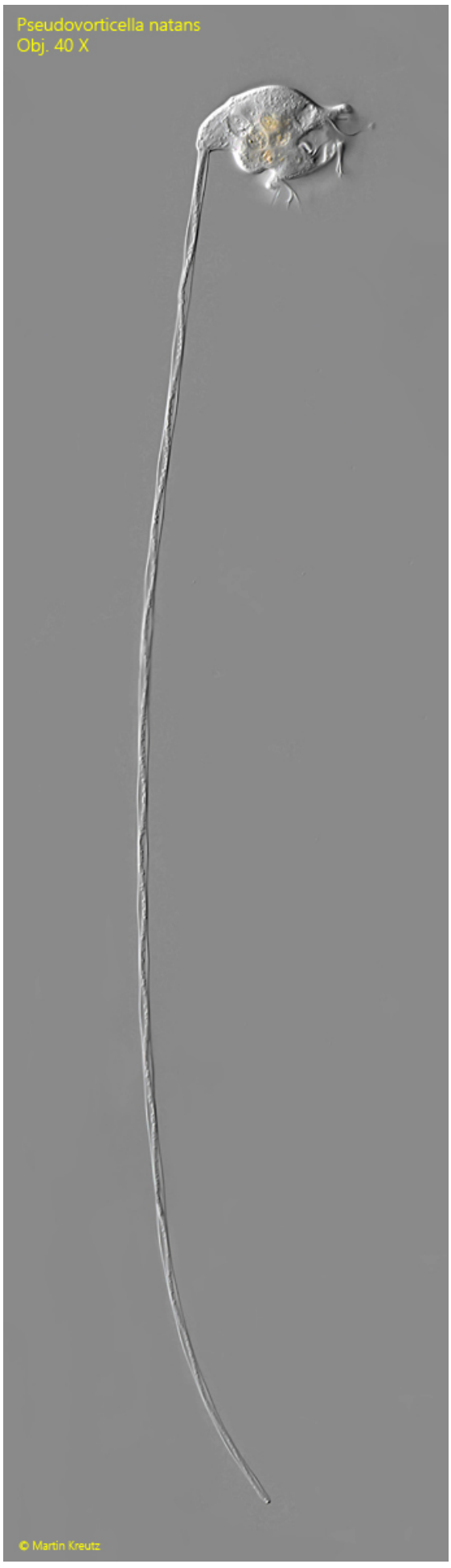

Pseudovorticella natans
Obj. 40 X
© Martin Kreutz

Fig. 2: *Pelagovorticella natans.* L = 73 µm (without stalk). A second freely swimming specimen at higher magnification. With stalk the specimen gas a length of 740 µm. Obj. 40 X.

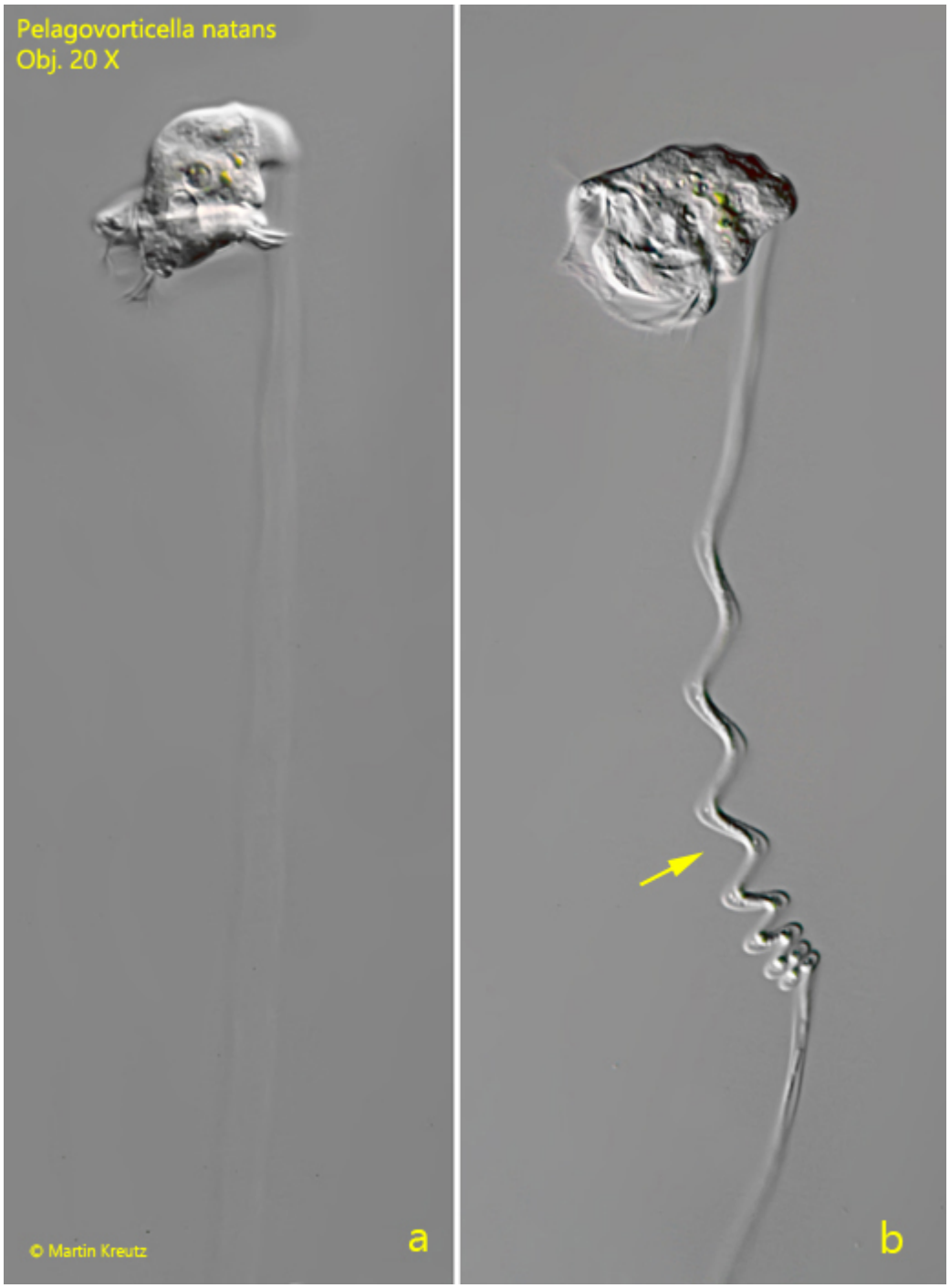


Fig. 3 a-b: *Pelagovorticella natans.* L = 77 µm (without stalk). An extended, freely swimming specimen (a) and a the same specimen contracted (b). Note that only the first half of the stalk is spiralized (arrow). The distal half of the stalk will not be spiralized. Obj. 20 X.

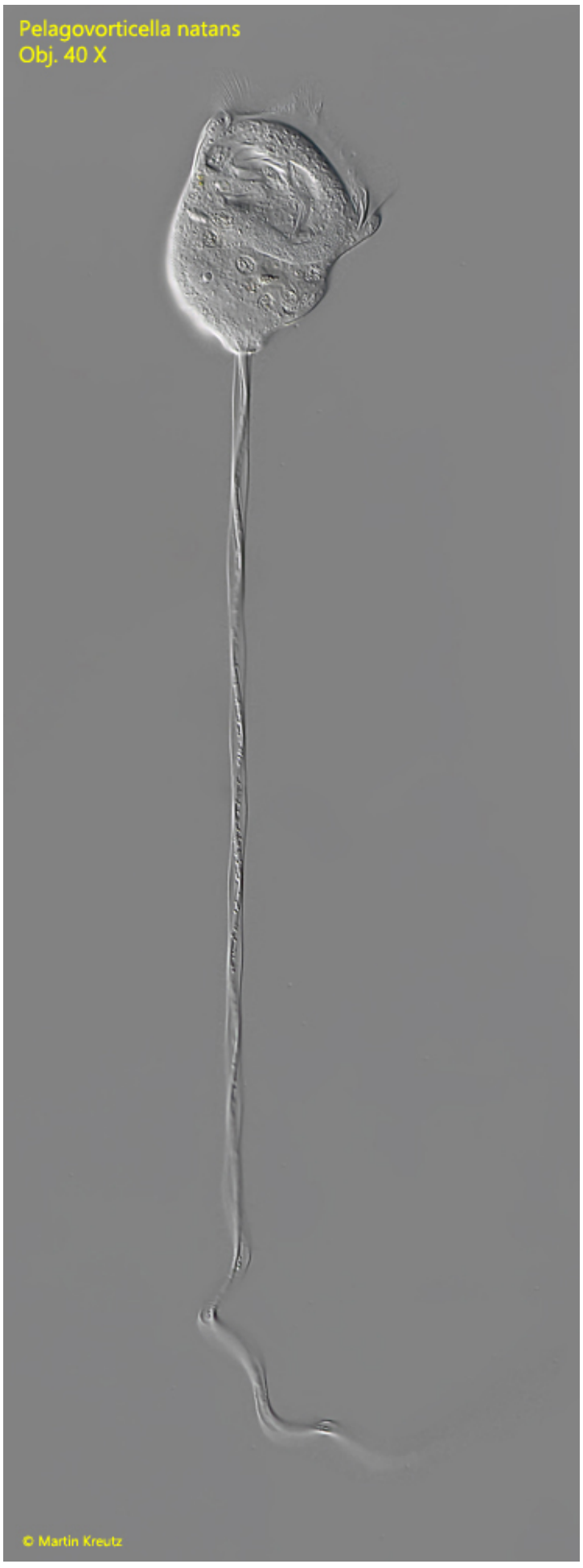

Pelagovorticella natans
Obj. 40 X
© Martin Kreutz

Fig. 4: *Pelagovorticella natans.* L = 78 µm (without stalk). Total view of an extended, slightly squashed specimen. The length with stalk is 440 µm. Obj. 40 X.

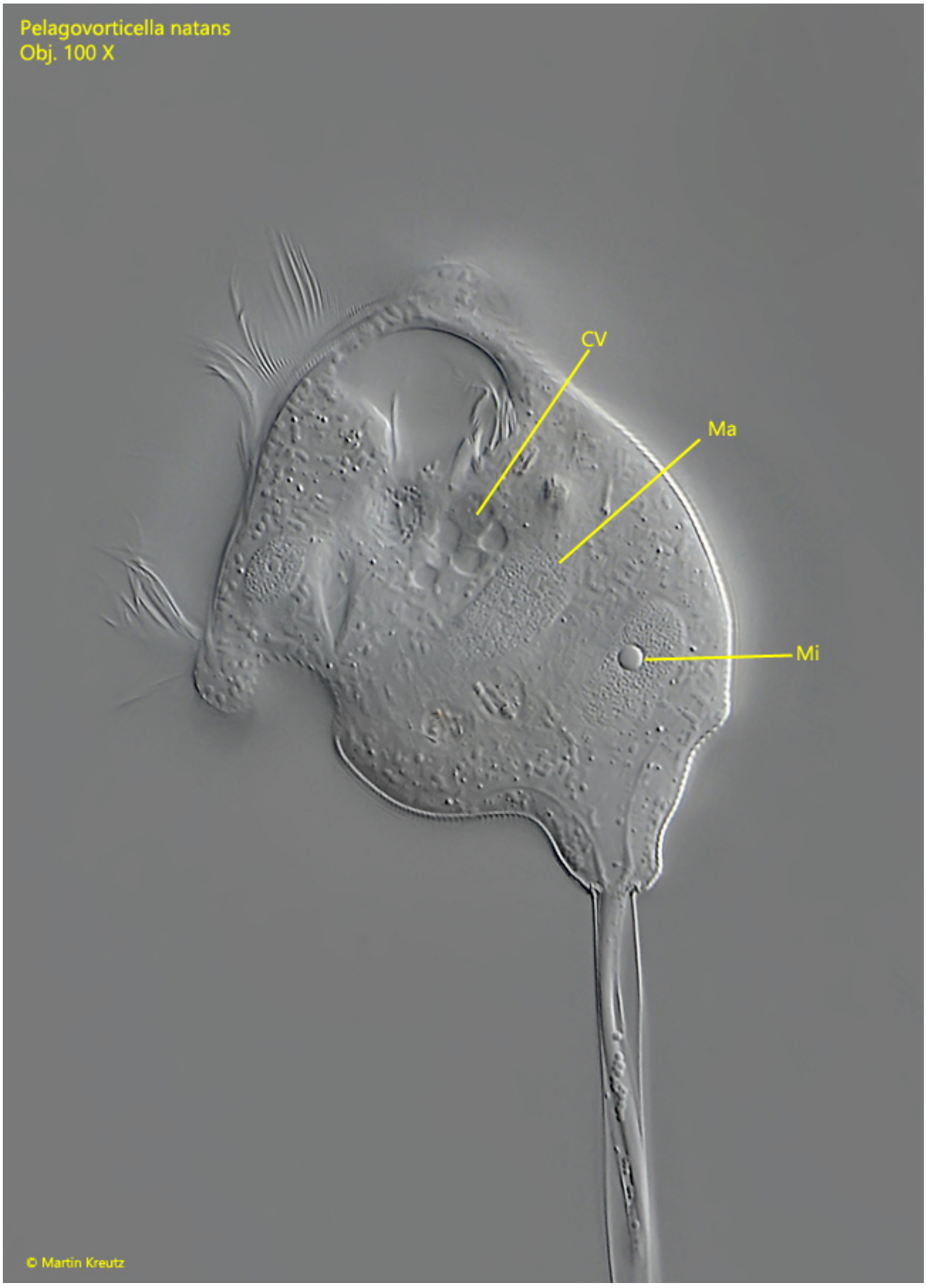


Fig. 5: *Pelagovorticella natans.* L = 76 µm (without stalk). An extended specimen in detail. CV = contractile vacuole, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.

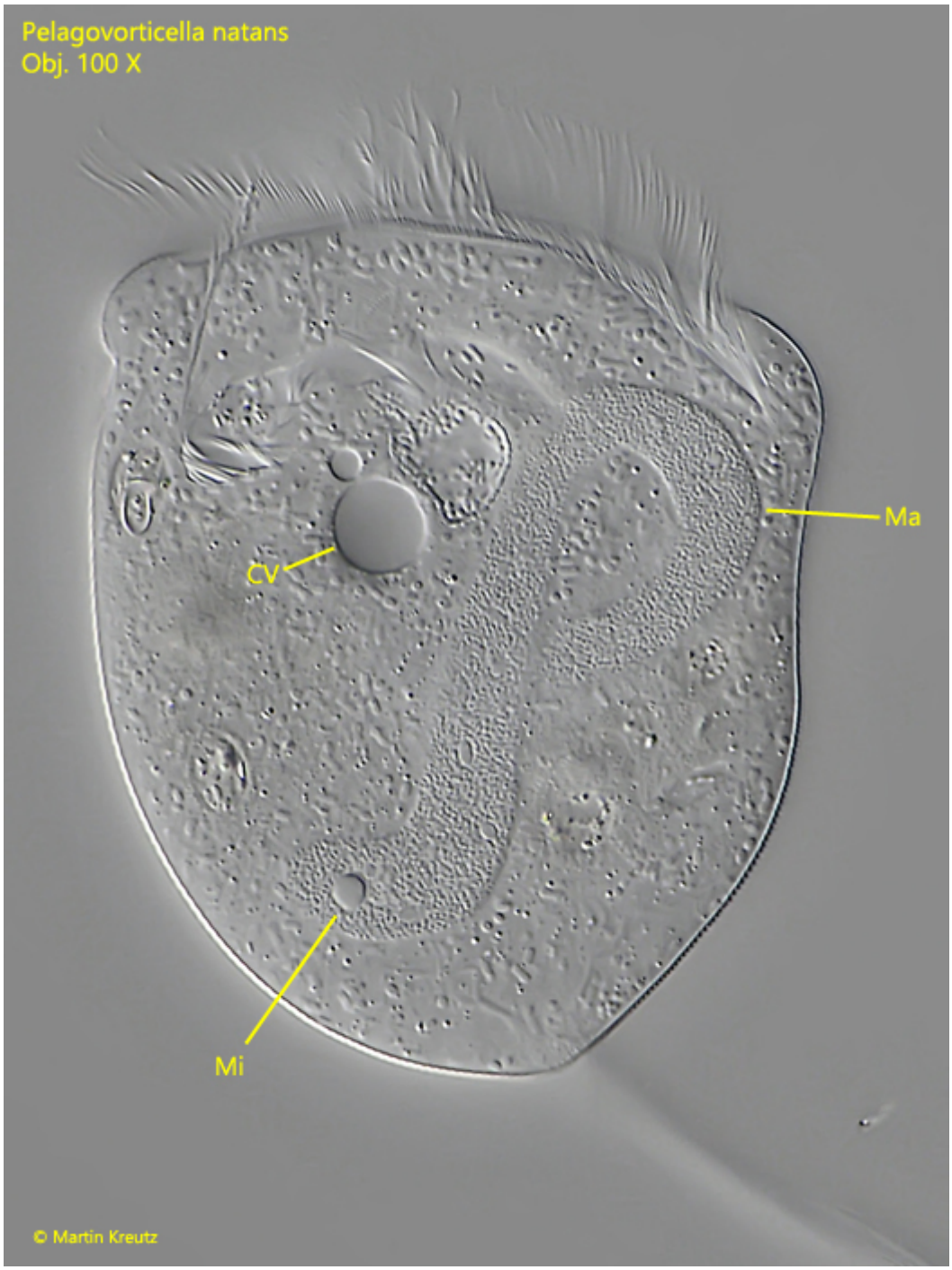


Fig. 6: *Pelagovorticella natans.* A squashed specimen. CV = contractile vacuole, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.