Plagiopyla nasuta Stein, 1860

Most likely ID: n.a.

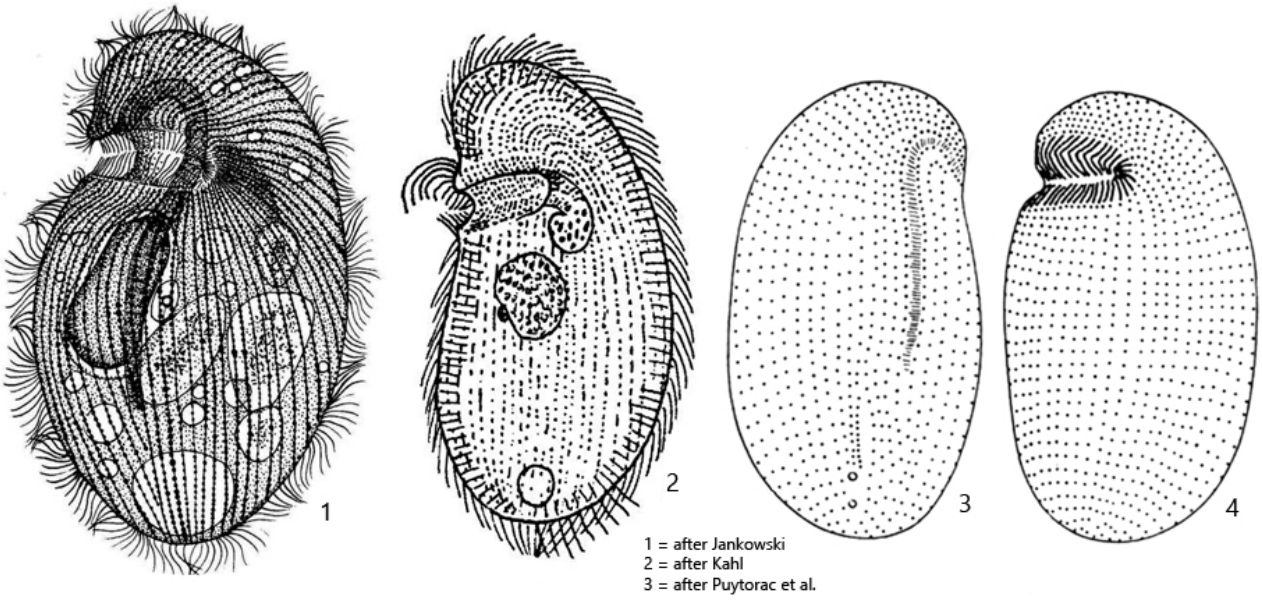
Synonym: n.a.

Sampling location: Ulmisried, Simmelried, Purren pond

Phylogenetic tree: *Plagiopyla nasuta*

Diagnosis:

- body oval or slightly kidney shaped, laterally flattened
- length 80–180 µm
- mouth opening a transversely furrow in anterior third
- upper margin of mouth opening protrude nose-shaped
- walking-stick shaped stripe band on right side
- contractile vacuole terminal
- two excretion pores of contractile vacuole on right side
- macronucleus ellipsoid with one adjacent micronucleus
- extrusomes rod-shaped, about 7 µm long



Plagiopyla nasuta

I find *Plagiopyla nasuta* frequently and regularly, especially in my sampling sites where fallen leaves are present. Several times I could also observe mass developments.

On the right side of the body *Plagiopyla nasuta* has a stripe band with a length of 40-50 µm (s. figs. 1 b, 4 and 5). The stripes are about 4 µm wide and the distance between the stripes is 0.85 µm according to my measurements (s. fig. 5). The function of the stripe band is unknown. Kahl (1935) assumed a tactile function.

Conjugation is occasionally found in old samples, which I was able to observe several times. With a little luck, the meiotic maturation division of the micronuclei can be recognized in the conjugants (s. figs. 8 a-b and 9). However, I have not been able to follow the entire process up to the exchange of the haploid micronuclei beween the conjugants.

Fig. 1 a-b: *Plagiopyla nasuta*. L = 117 µm. Two focal planes of a specimen from right. Note the stripe band (SB) with a length of about 40 µm and the two excretion pores (EP) of the contractile vacuole (CV). Ma = macronucleus. Obj. 60 X.

Fig. 2 a-b: *Plagiopyla nasuta*. L = 115 µm. Two focal planes of a second specimen from left. Obj. 60 X.

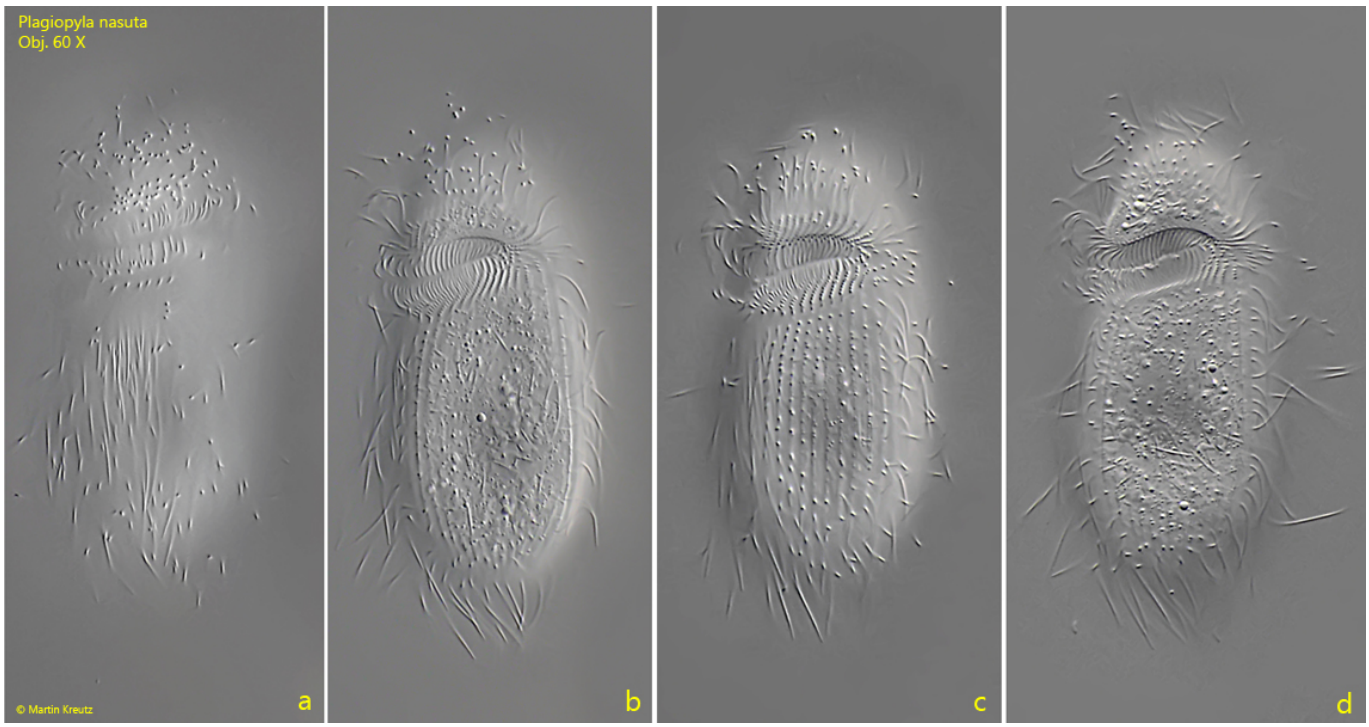


Fig. 3 a-d: *Plagiopyla nasuta*. L = 72 µm. Different focal planes of a specimen from ventral. Obj. 60 X.

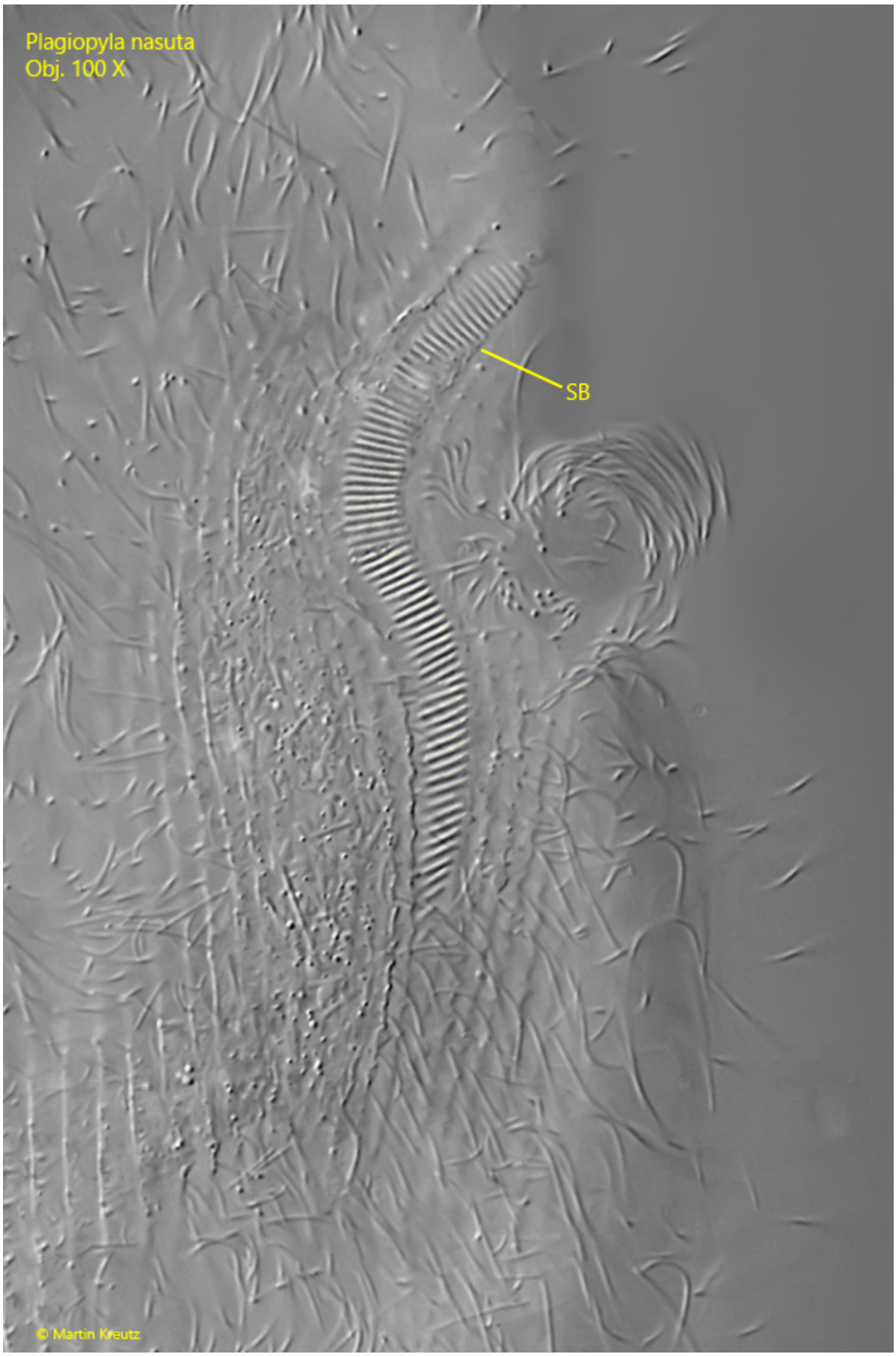


Fig. 4: *Plagiopyla nasuta*. The stripe band (SB) in a slightly squashed specimen. Obj. 100 X.

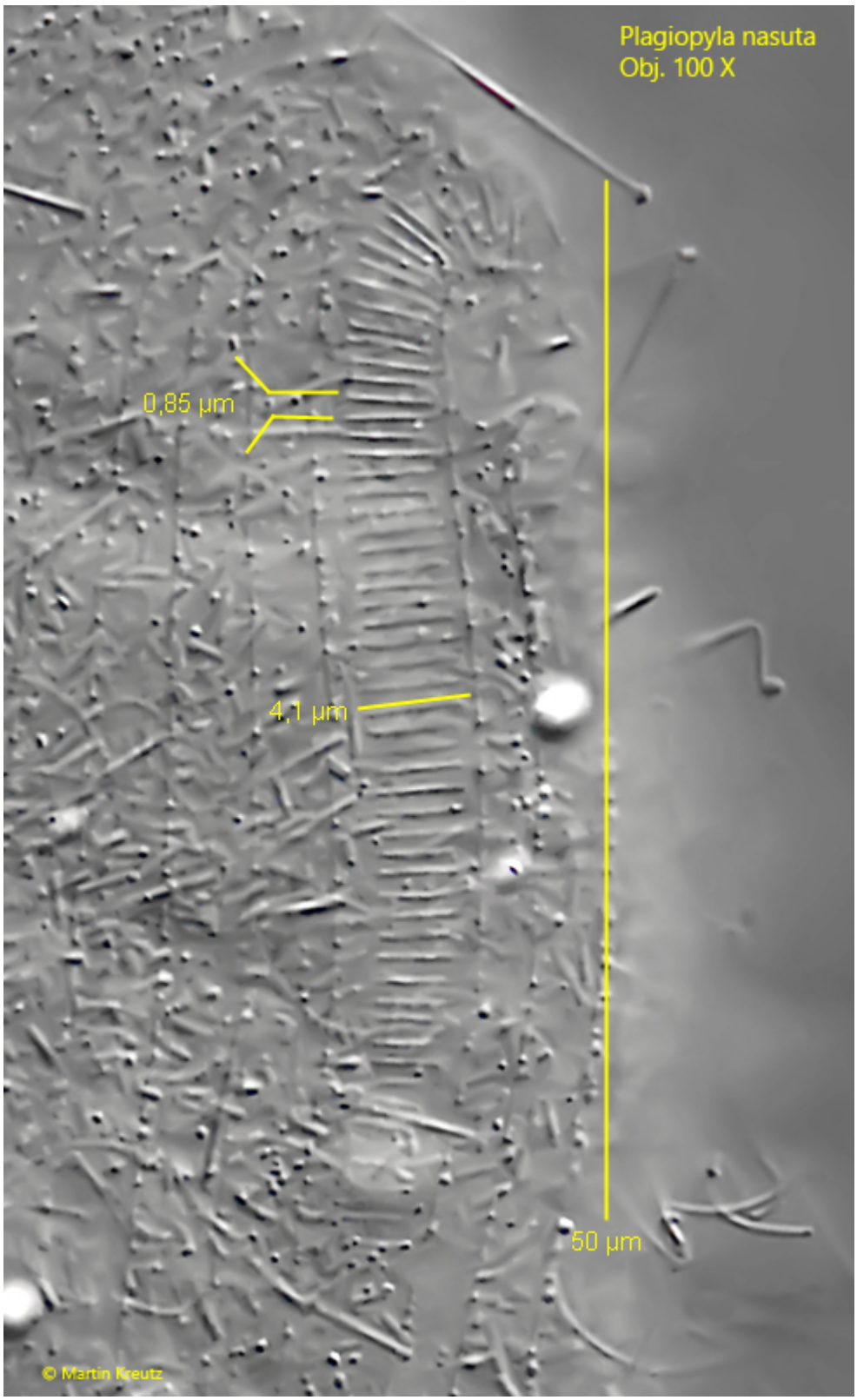


Fig. 5: *Plagiopyla nasuta*. The stripe band in a strongly squashed specien. It has a length of about 50 µm. The stripes have a constant distance of 0,85 µm and the width is 4.1 µm. Obj. 100 X.

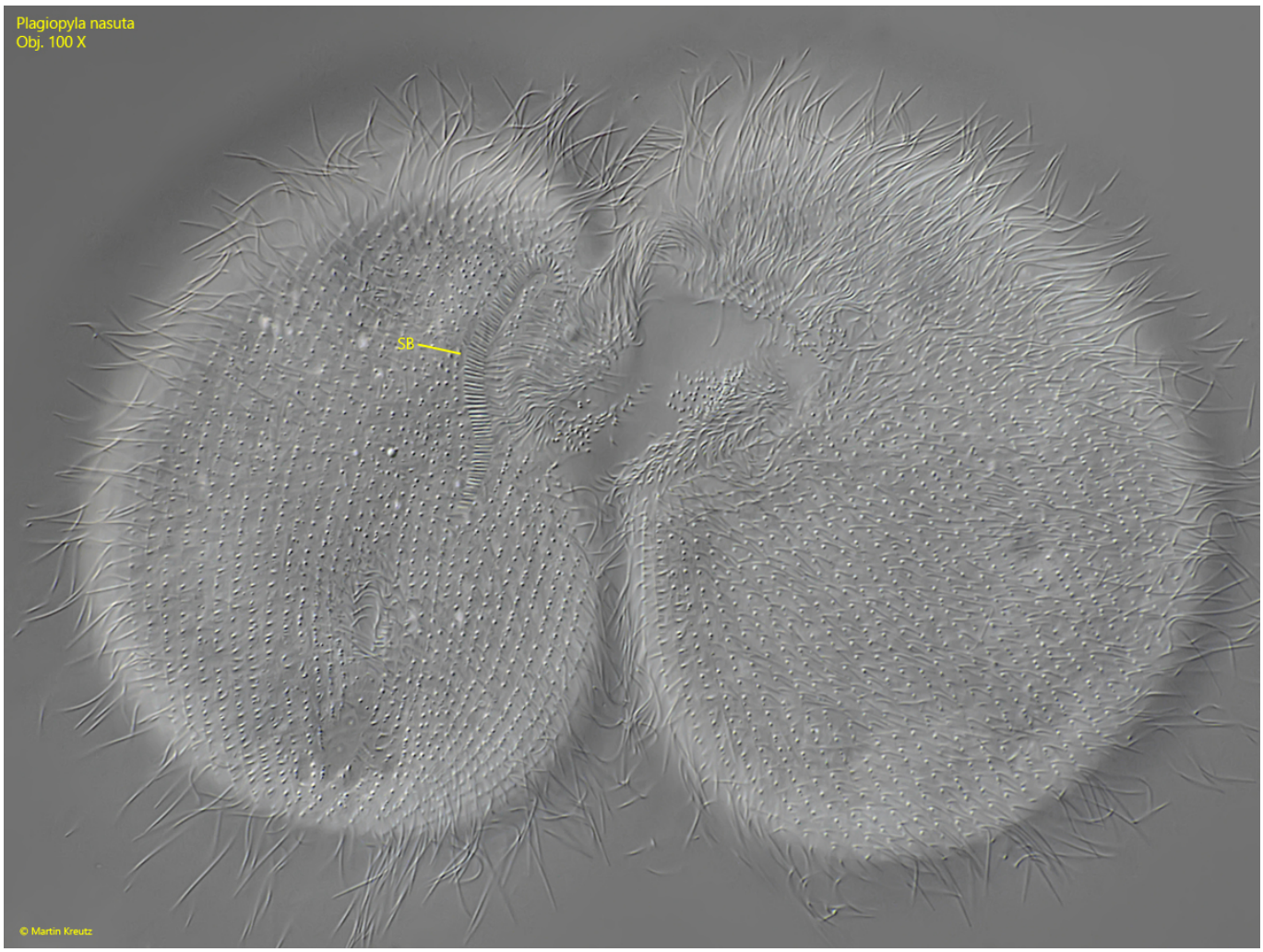


Fig. 6 a-b: *Plagiopyla nasuta*. L = 94–98 µm. Two specimens during conjugation. The left specimen is seen from right with the stribe band (SB) and the right specimen is seen from left. Obj. 100 X.

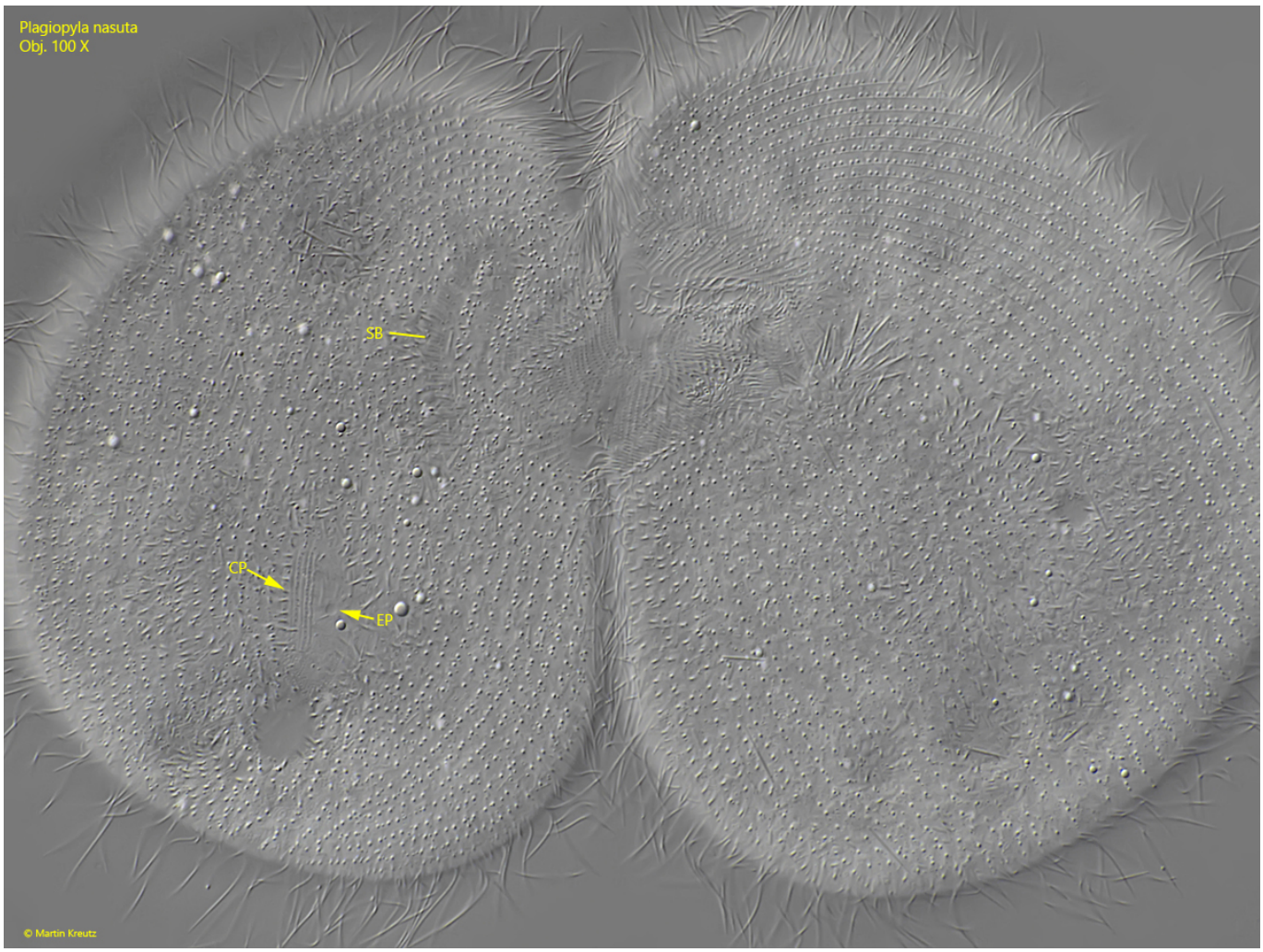


Fig. 7 a-b: *Plagiopyla nasuta*. L = 94–98 µm. The same specimens as shown in fig. 4 a-b with focal plane on the cytopyge (CP) and the excretion porus (EP) of the contractile vacuole. Obj. 100 X.

Fig. 8 a-b: *Plagiopyla nasuta*. L = 94–98 µm. The same specimens as shown in fig. 4 a-b with focal plane on the macronuclei (Ma 1, Ma 2) and on the micronuclei (Mi 1a, Mi 1b, Mi 2a, Mi 2b) in the process of meiotic maturation division. Note the micronucleus Mi 2a where the spindle apparatus starts to separate the chromosomes. Obj. 100 X.

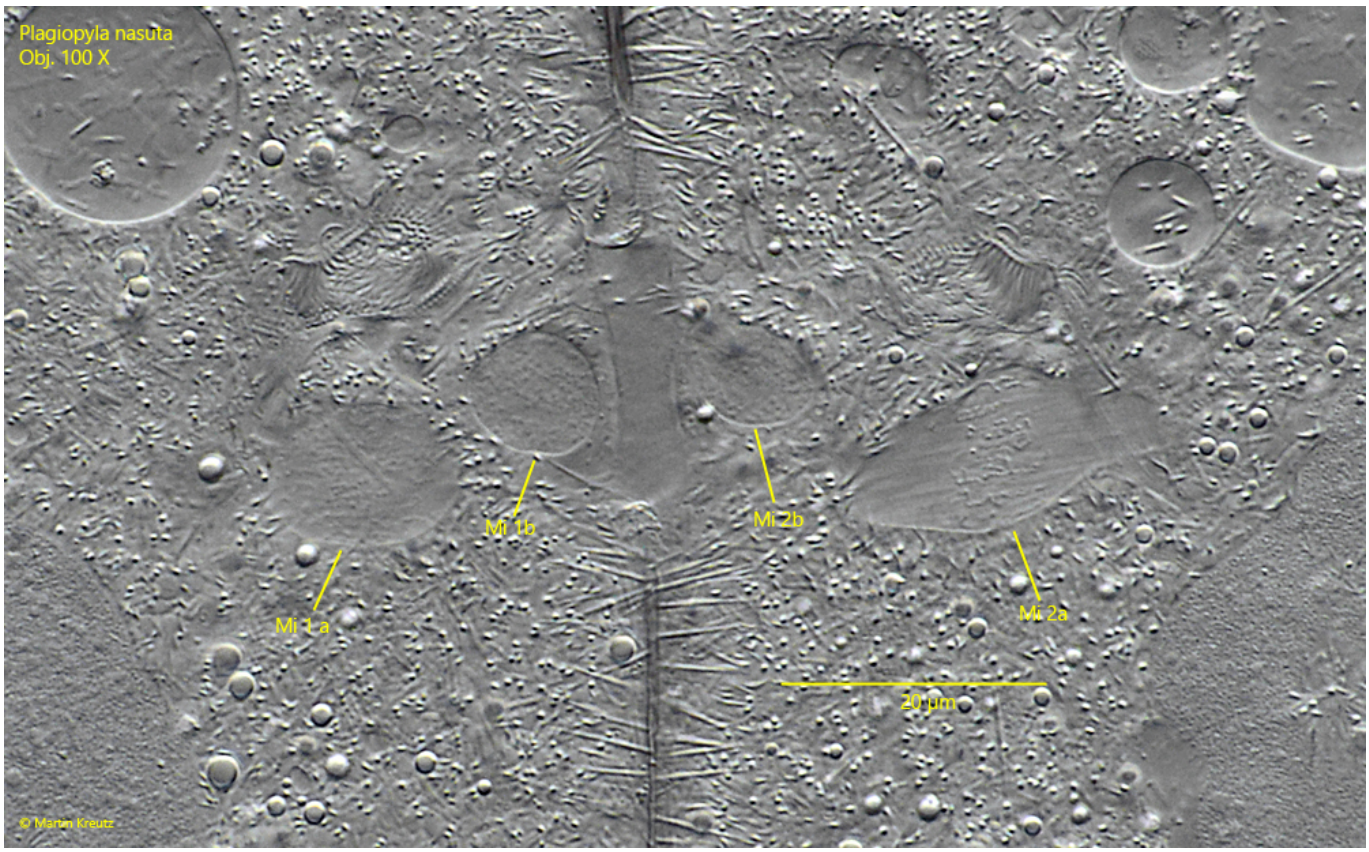


Fig. 9: *Plagiopyla nasuta*. An image detail of fig. 6 a-b. In the micronucleus Mi 2a the separation of the chromosomes has started. The granular structure in the other visible micronuclei is condensated chromatin. Obj. 100 X.

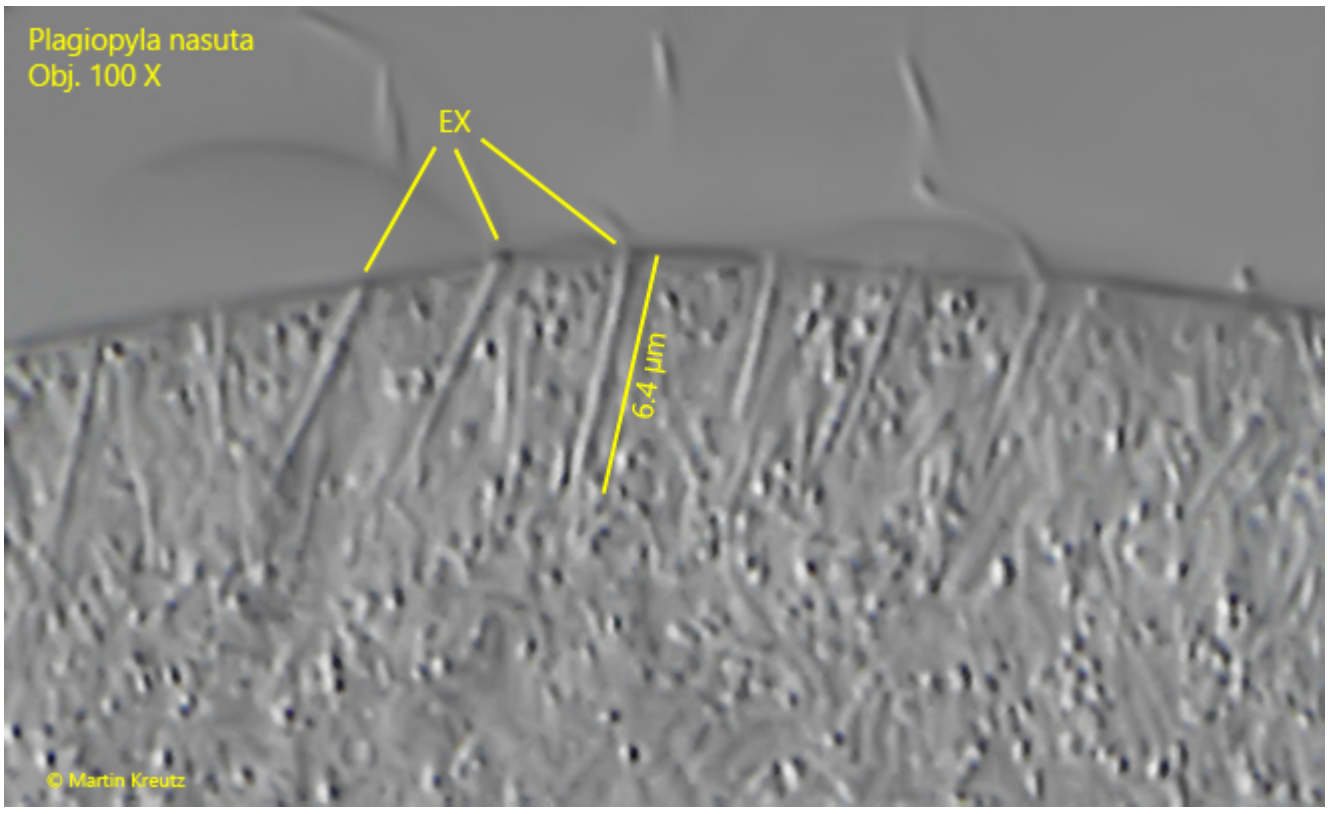


Fig. 10: *Plagiopyla nasuta*. The extrusomes (EX) beneath the pellicle are rod-

shaped with a length of about 6.5 µm. Obj. 100 X.

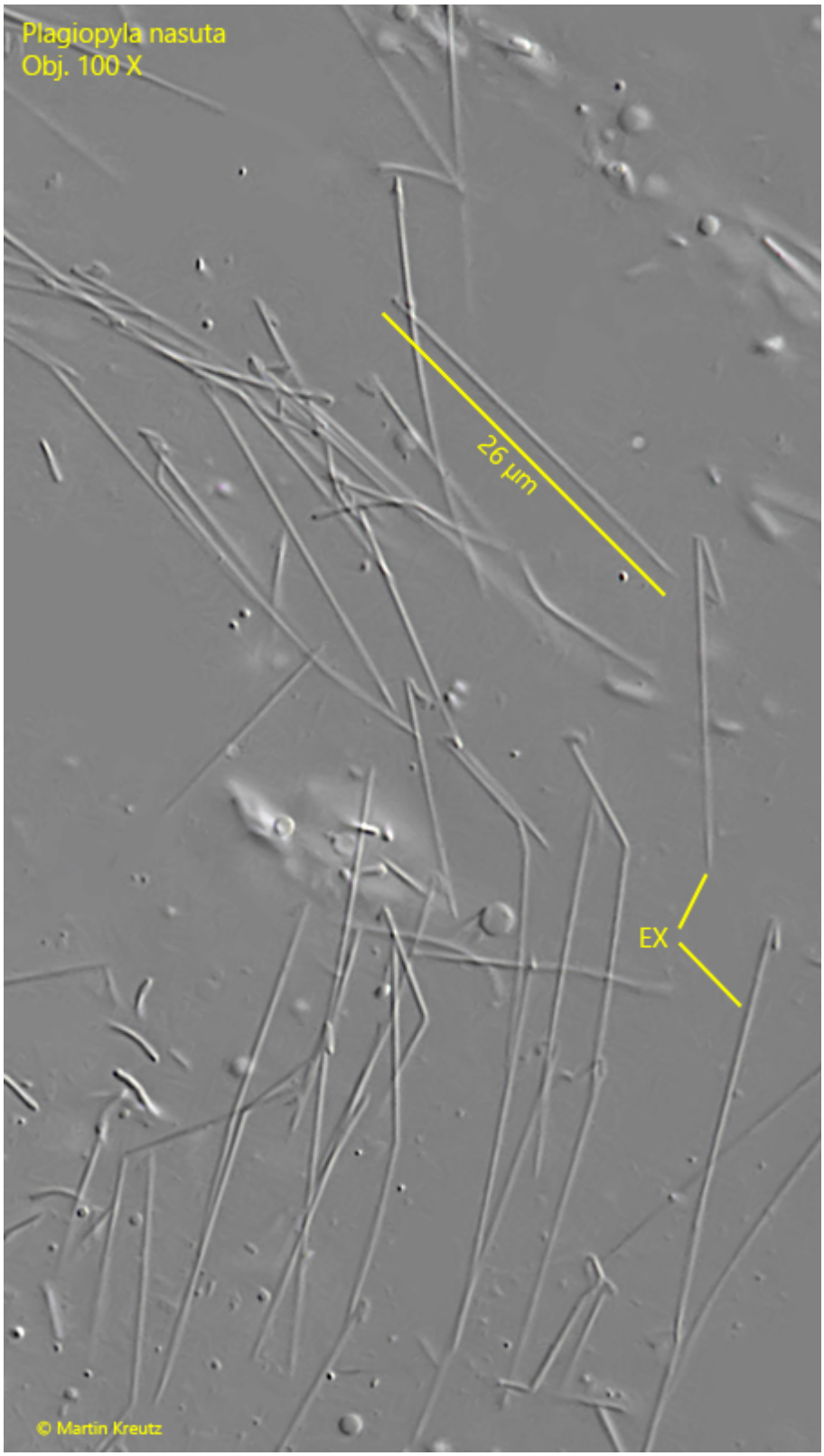


Fig. 11: *Plagiopyla nasuta*. The ejected extrusomes (EX) have a length of about 26 µm. Obj. 100 X.