Epistylis anastatica

(Linnaeus, 1767) Ehrenberg, 1830

Most likely ID: n.a.

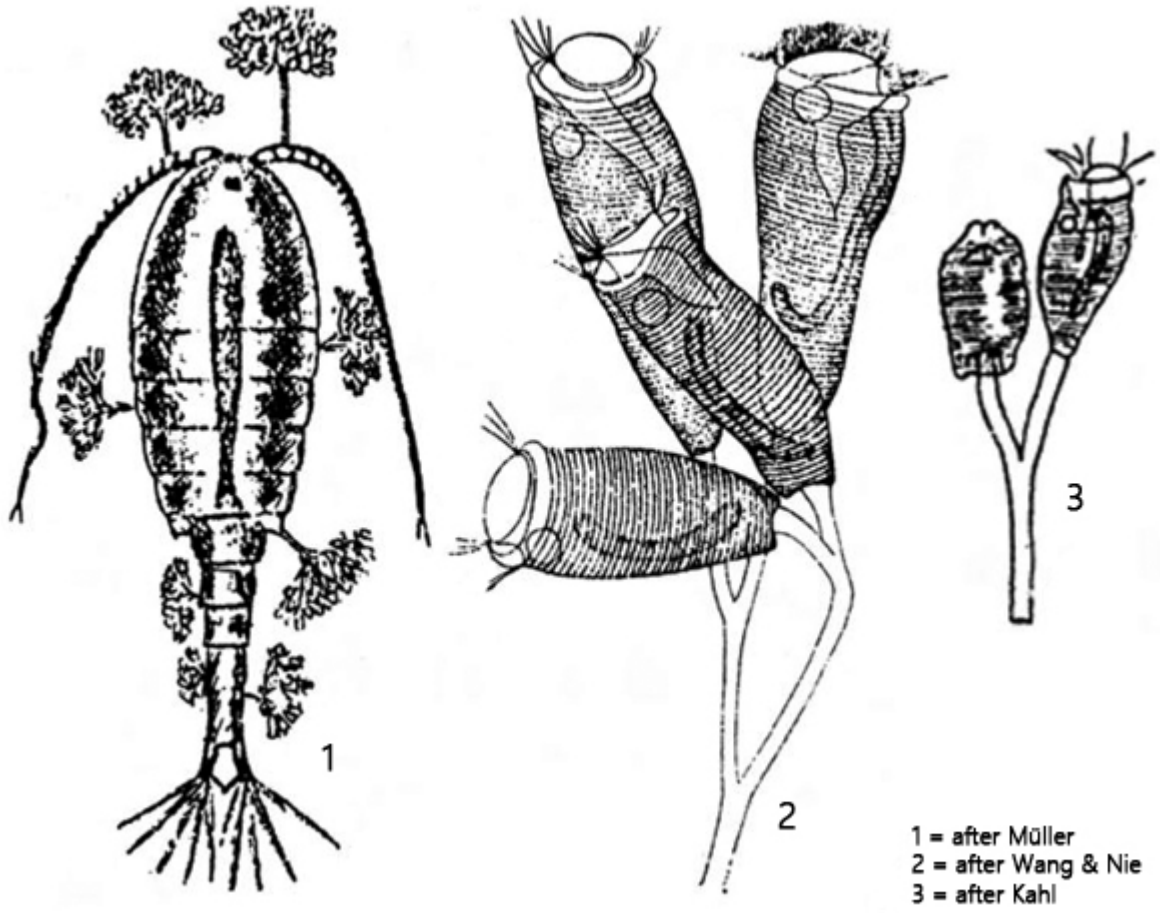
Synonym: *Epistylis lacustris*

Sampling location: Mühlweiher Litzelstetten, Simmelried

Phylogenetic tree: *Epistylis anastatica*

Diagnosis:

- colonies of umbellate shape
- zooids 60–100 µm long
- extended zooids conical
- contracted zooids ellipsoidal or pyriform
- macronucleus C-shaped, in longitudinal axis to cell
- one micronucleus at posterior end of macronucleus
- one contractile vacuole at ventral wall of vestibulum
- pellicle with about 75 transverse striae
- stalk non-contractile, dichotomously branched, striated longitudinally
- epizoic lifestyle on crustaceans



Epistylis anastatica

I regularly find *Epistylis anastatica* epizoic on various crustaceans in the Simmelried and also in plankton samples. Representatives of the genus *Cyclops* seem to me to be colonized most frequently. However, this may also be due to the fact that *Cyclops* is one of the most common crustaceans.

The umbel-shaped colonies of *Epistylis anastatica*, which sit epizoically on the crustaceans, are noticeable in the samples even at low magnifications (s. fig. 1). However, closer examination of the colonies and zooids is difficult. As soon as the host is fixed through the coverslip, the zooids begin to contract rapidly. The best method for examining the living zooids has proven to be a rapid method. Only a small amount of water is added so that a thin layer is formed immediately after the coverslip is placed. The colonies must then be found quickly and photographed as quickly as possible.

The extended zooids of *Epistylis anastatica* in my population were about 60–65 µm long, which is at the lower limit of the range of 60–100 µm given by Foissner, Berger

& Schaumburg (1999). The characteristics agree with the authors’ description of *Epistylis anastatica*. The zooids sit on a non-contractile, branched stalk with a diameter of 8–12 µm (s. figs. 4 a-b and 5 a-c). The stalk shows a delicate longitudinal striation, which only becomes visible at high magnification (s. fig. 5 b). One contractile vacuole is present (s. fig. 5 a). The C-shaped macronucleus lies in the longitudinal axis (s. fig. 5 b) and the micronucleus is located at the posterior end of the macronucleus (s. fig. 5 a). The striation of the pellicle is distinct (s. fig. 5 c). In contracted zooids, the posterior end is folded over the stalk (s. fig. 4 a) and the anterior end becomes snout-shaped (s. fig. 6).

Fig. 1: *Epistylis anastatica*. Some epizoic colonies settled on the carapace of *Cyclops* spec. (arrows). Obj. 10 X.

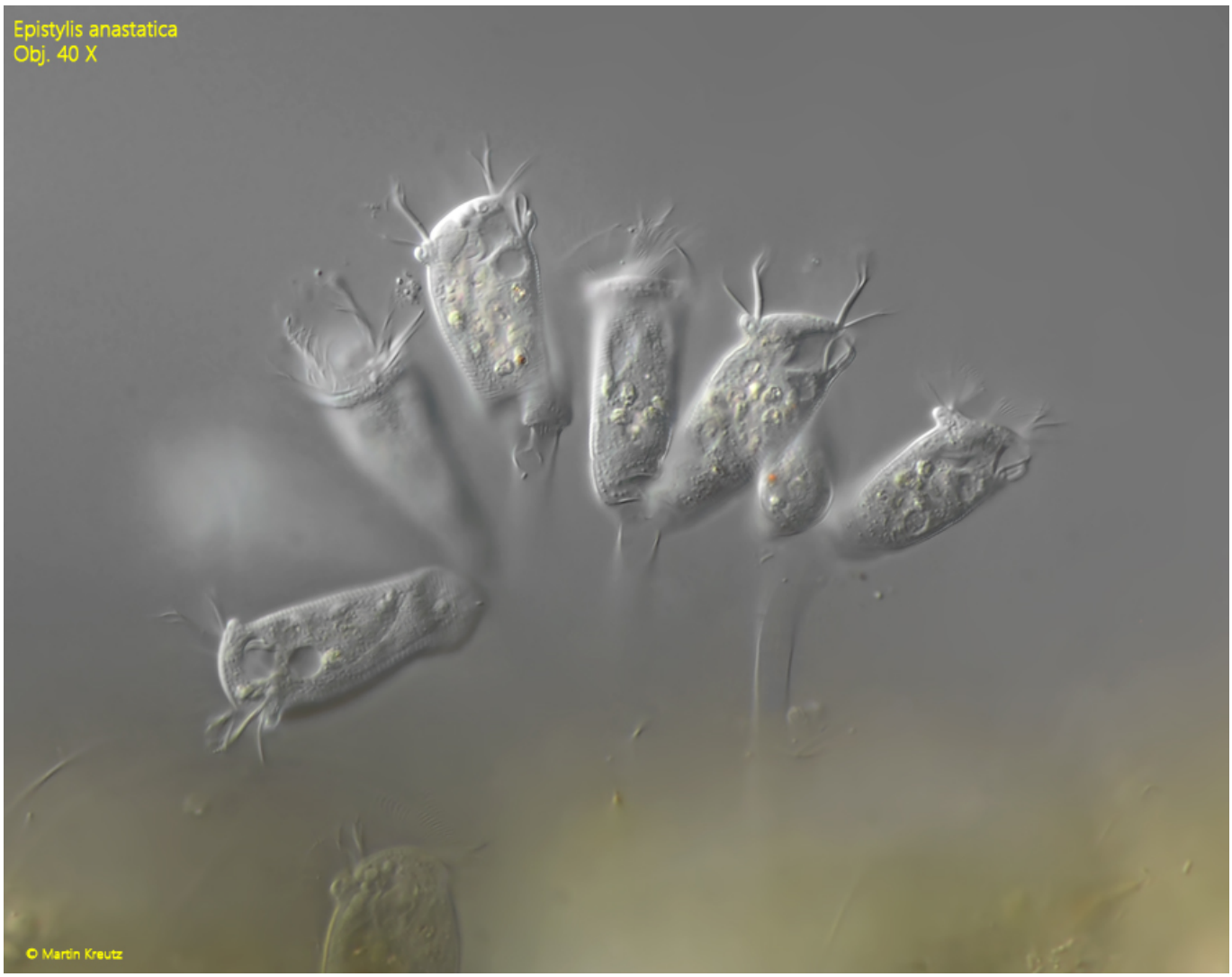


Fig. 2: *Epistylis anastatica*. L = 61–65 µm. The extended zooids in a colony. Obj. 40 X.

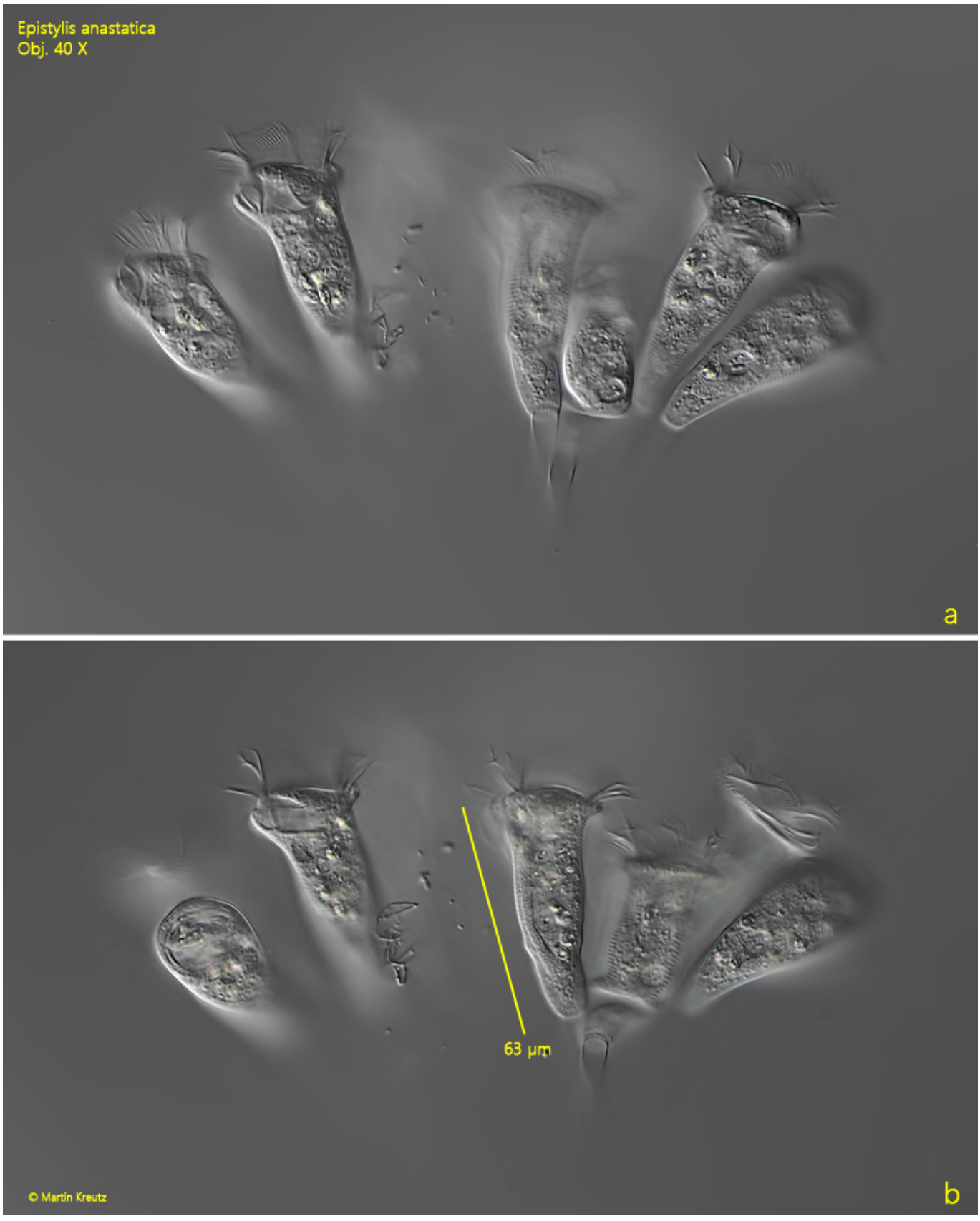


Fig. 3 a-b: *Epistylis anastatica*. L = 63 µm. Two focal planes of a second colony. Obj. 40 X.

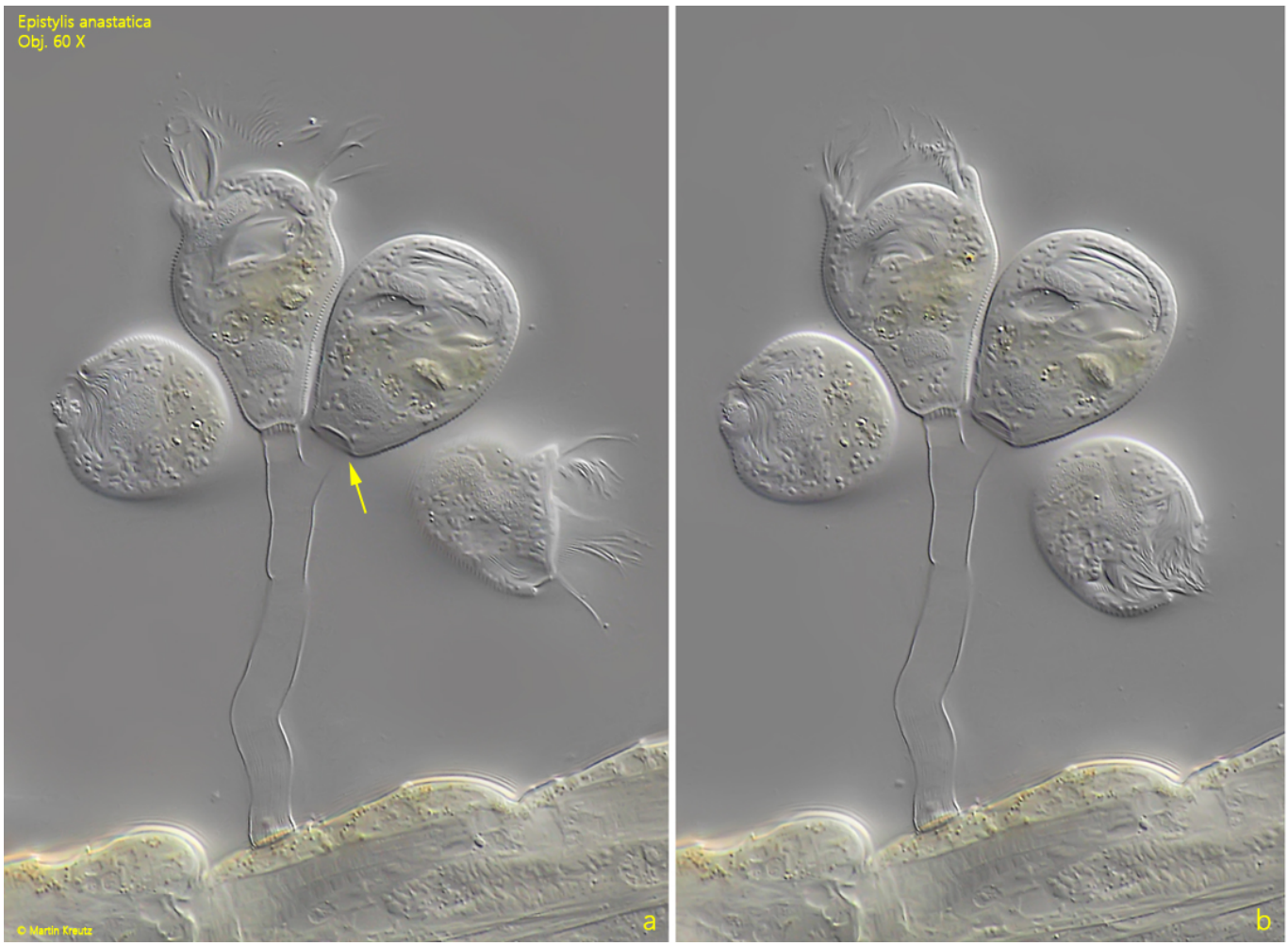


Fig. 4 a-b: *Epistylis anastatica*. The contracted and partly extended specimens in a slightly squashed colony on a branched stalk with a diameter of 8 µm. Note the posterior end of the contracted zooid (arrow) folded over the stalk. Obj. 60 X.

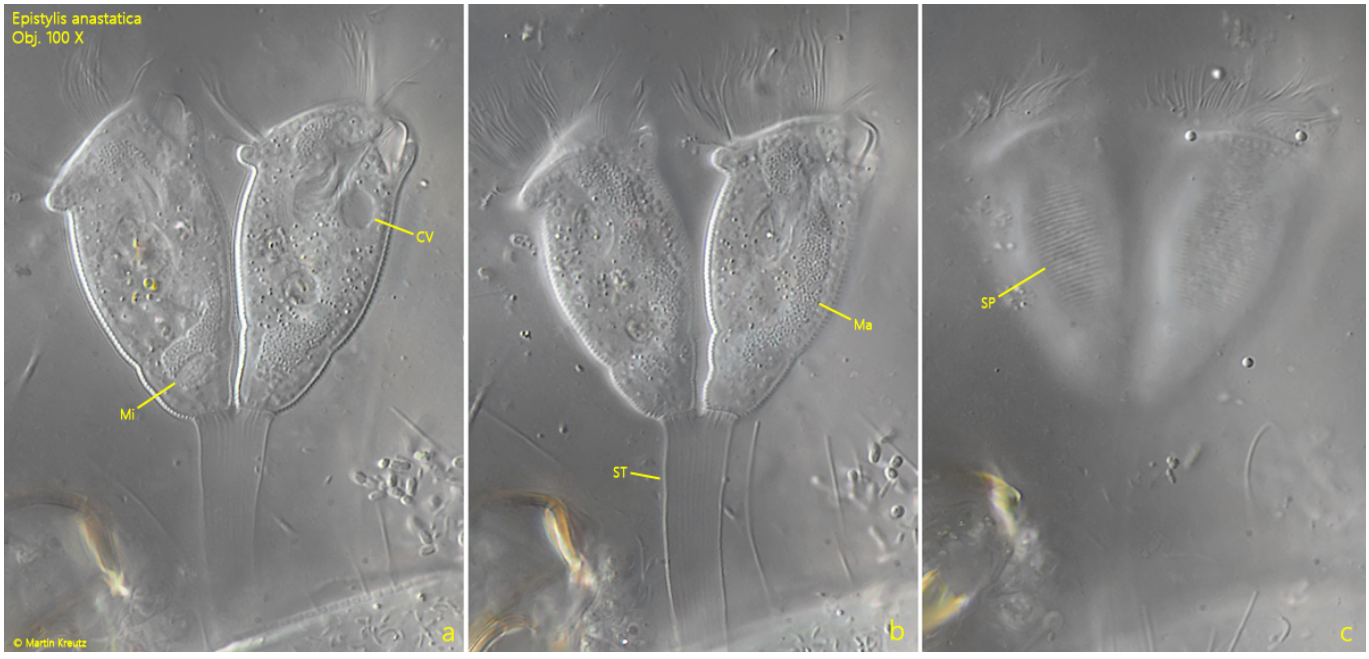


Fig. 5 a-c: *Epistylis anastatica*. Two partly extended zooids. Note the fine

longitudinal striation in the branched stalk (ST) and the miconucleus (Mi) at the posterior end of the macronucleus (Ma). CV = contractile vacuole. Obj. 100 X.

Fig. 6: *Epistylis anastatica*. Two contracted zooids with a snout-shaped anterior end (arrows). Obj. 100 X.