

Hastatella aesculacantha
Jarocki & Jacobowska, 1927

Most likely ID: n.a.

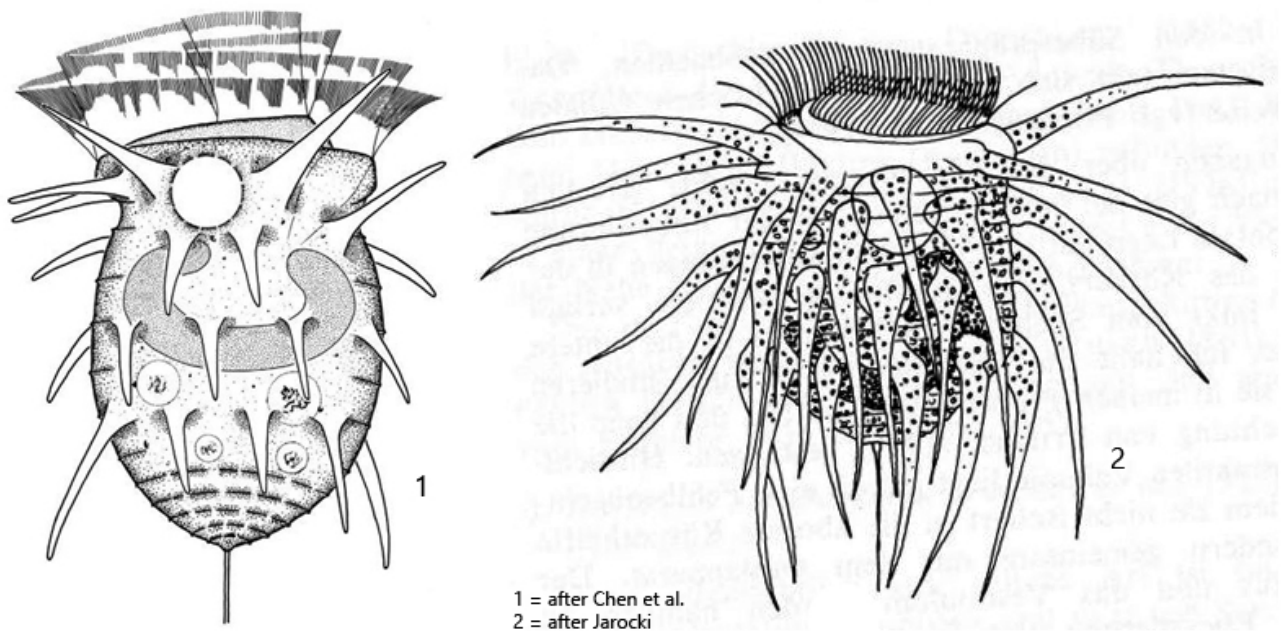
Synonym: n.a.

Sampling location: [Pond of the waste disposal company Constance](#)

Phylogenetic tree: [Hastatella aesculacantha](#)

Diagnosis:

- body oval or barrel-shaped
- length 25–52 µm, width 20–41 µm
- peristome with 10–15 µm long cilia
- four girdles of ectoplasmic spines
- macronucleus C-shaped
- contractile vacuole on dorsal wall of infundibulum
- about 15 transverse stripes of pellicle
- two rigid caudal bristles



Hastatella aesculacantha

I found *Hastatella aesculacantha* in August 2026 in the heavily eutrophic [pond of the waste disposal company Constance](#). The specimens were found only sporadically in the plankton samples. However, in the sample containers, the specimens accumulated at the water surface. There, the specimens move in slow circles.

Hastatella aesculacantha has so far been found only rarely. What all sites have in common is that they were heavily eutrophic. Jarocki (1927) reported the ciliates [Phascolodon vorticella](#) and *Actinobolina radians* as accompanying fauna. I was unable to detect *Phascolodon vorticella* in my samples, but I did find *Actinobolina radians*. In addition, specimens of [Linostomella vorticella](#) were present.

The most striking feature of *Hastatella aesculacantha* is the epiplasmic spines covering its body. Their length is evidently subject to considerable variation. Jarocki (1927) illustrated them as very long, whereas Chen et al. (2022), who studied a Chinese population, illustrated the spines as considerably shorter (s. drawings above). The specimens of my population more closely resembled the Chinese population.

In *Hastatella aesculacantha*, the spines are arranged in 4 transverse rows. This can best be recognized in squashed specimens (s. fig. 5 a). When the ciliate is disturbed, the peristome immediately retracts. As a result, the body becomes rounded and the spines spread apart. When the peristome is extended again, the

spines lie flat against the body. The pellicle has very broad striation, which is clearly visible in slightly squashed specimens (s. fig. 4). There are said to be about 15 striations, which become increasingly dense toward the posterior end. At the posterior end, two rigid bristles are described, which I was unable to detect, however.

The contractile vacuole lies directly at the anterior margin, on the dorsal side of the infundibulum (s. fig. 2 a). The macronucleus is C-shaped and lies in the anterior third (s. fig. 5 b). I was unable to detect a micronucleus. However, it was also not described by earlier authors.

Hastatella aesculacantha can be distinguished from the similar species *Hastatella radians* by its 4 rows of spines. *Hastatella radians* possesses only 2 rows of spines.

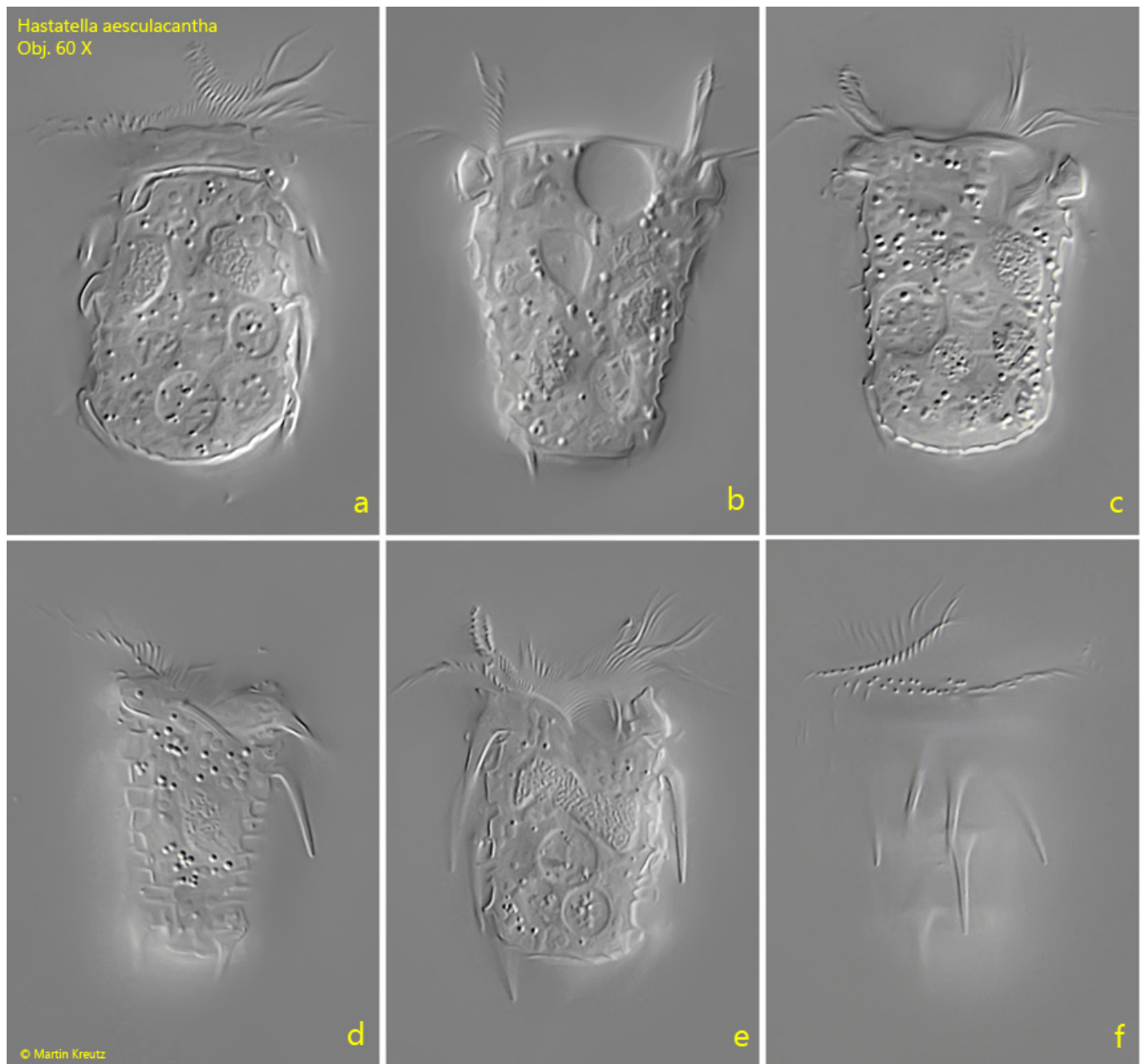


Fig. 1 a-f: *Hastatella aesculacantha*. L = 43 μ m. Different focal planes of a freely swimming specimen. Obj. 60 X.

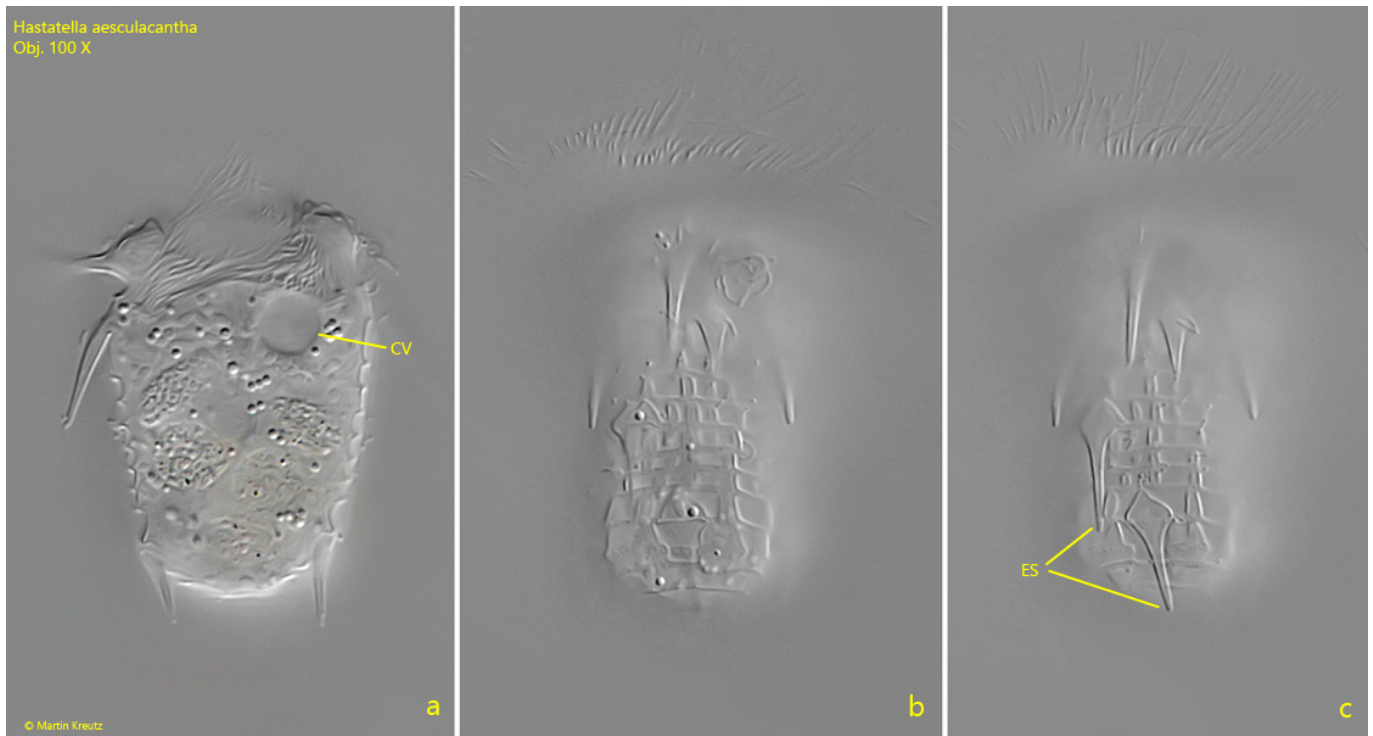


Fig. 2 a-c: *Hastatella aesculacantha*. L = 43 μ m. The same specimen as shown in fig. 1 a-f at higher magnification. CV = contractile vacuole, ES = ectoplasmic spines. Obj. 100 X.

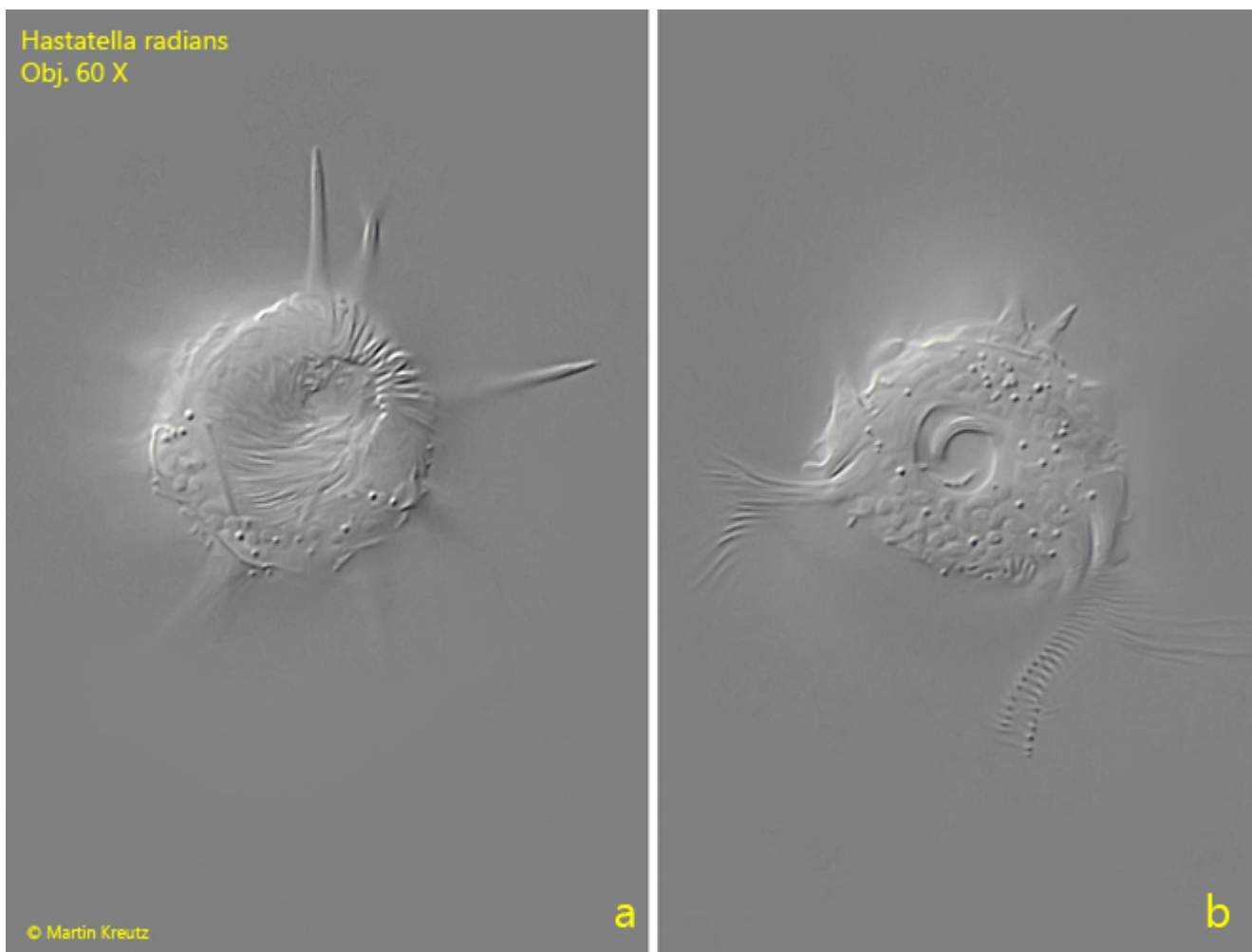


Fig. 3 a-c: *Hastatella aesculacantha*. Two focal planes in apical view on the persistome. Obj. 60 X.

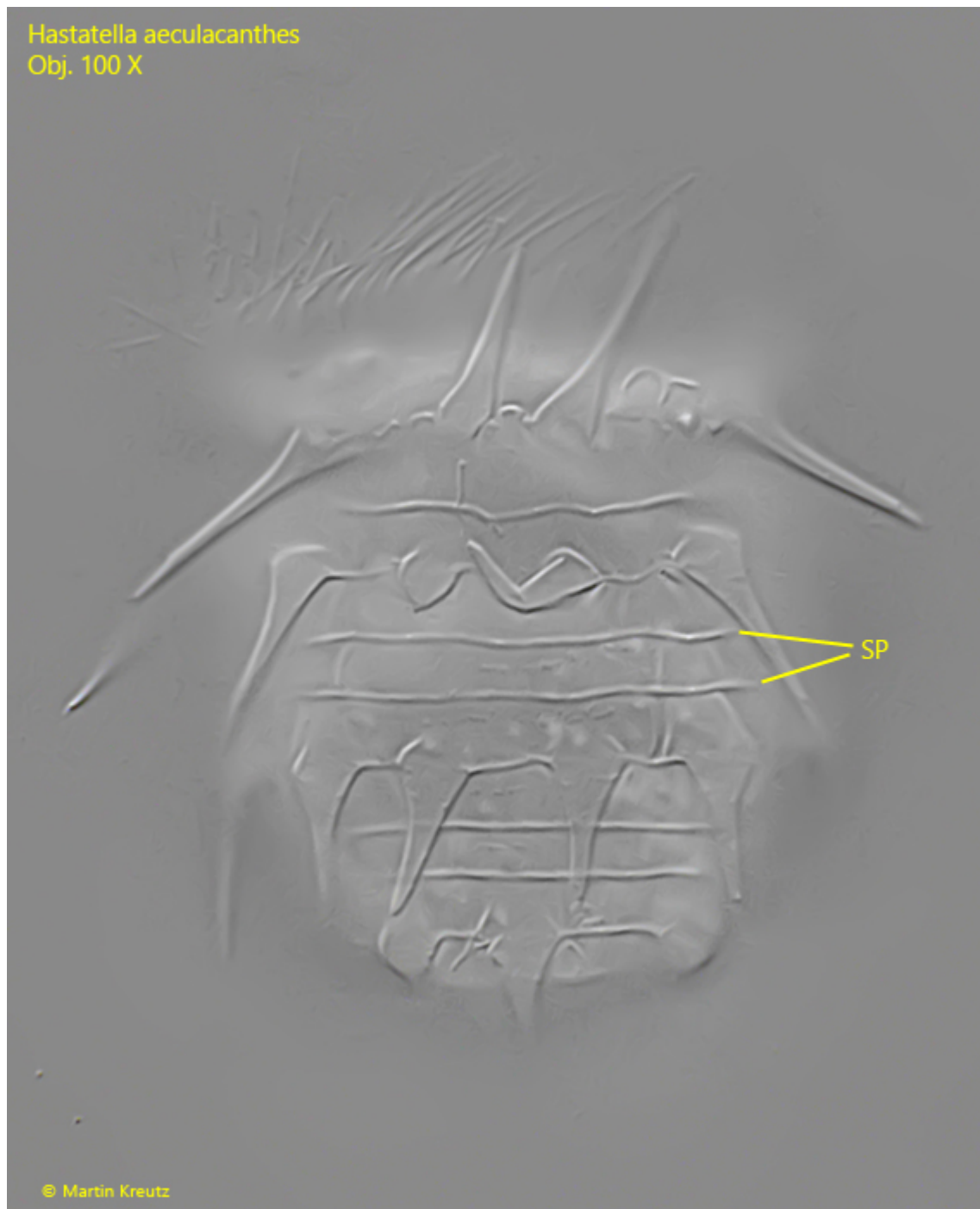


Fig. 4: *Hastatella aesculacantha*. Focal plane on the widely spaced striation of the pellicle (SP) in a slightly squashed specimen. Obj. 100 X.

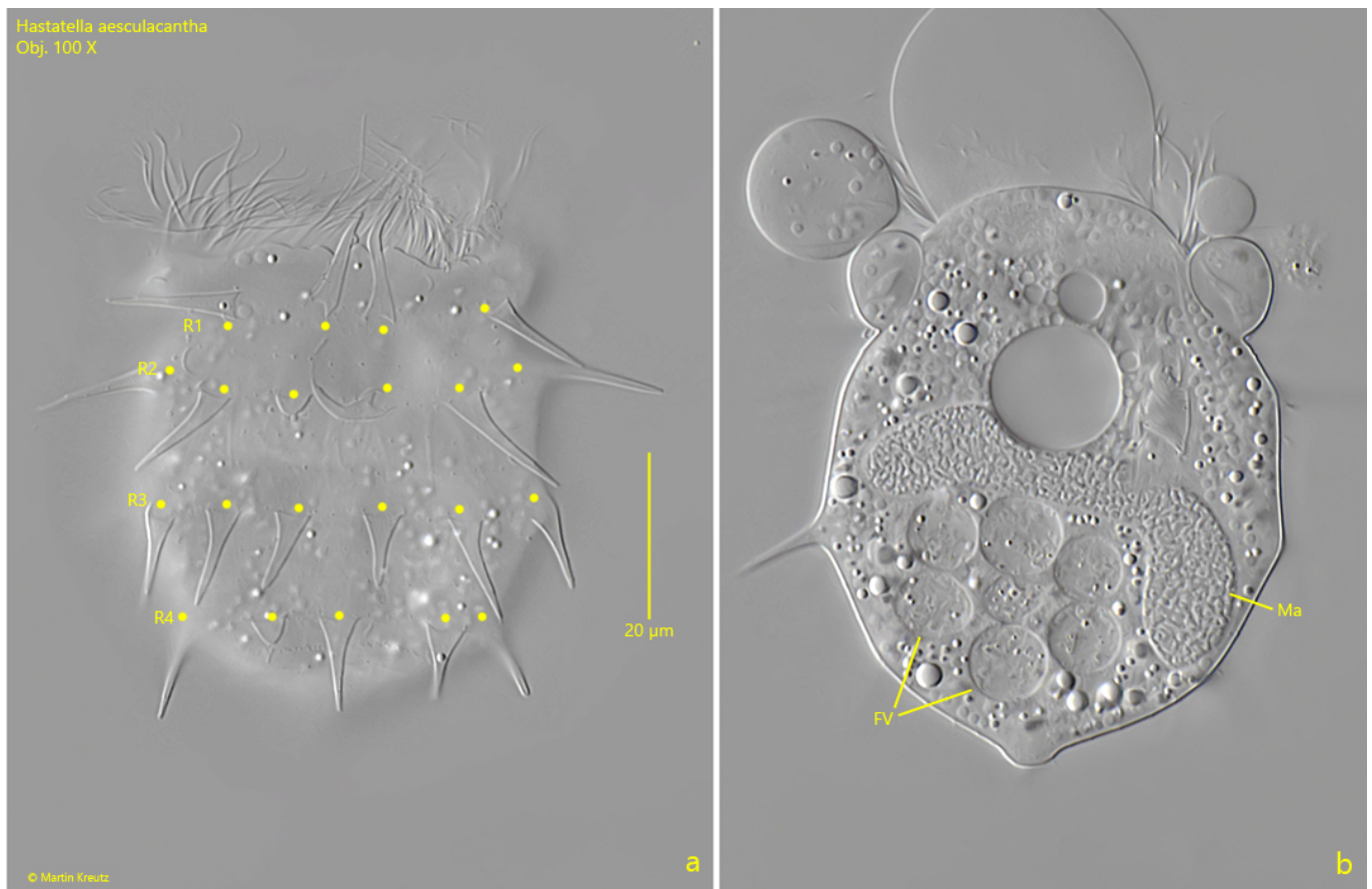


Fig. 5 a-b: *Hastatella aesculacantha*. Two focal planes of a squashed specimen. Note the 4 rows of ectoplasmic spines (R1-R4) and the C-shaped macronucleus (Ma). FV = food vacuoles. Obj. 100 X.