Drepanomonas dentata Fresenius, 1858

Most likely ID: n.a.

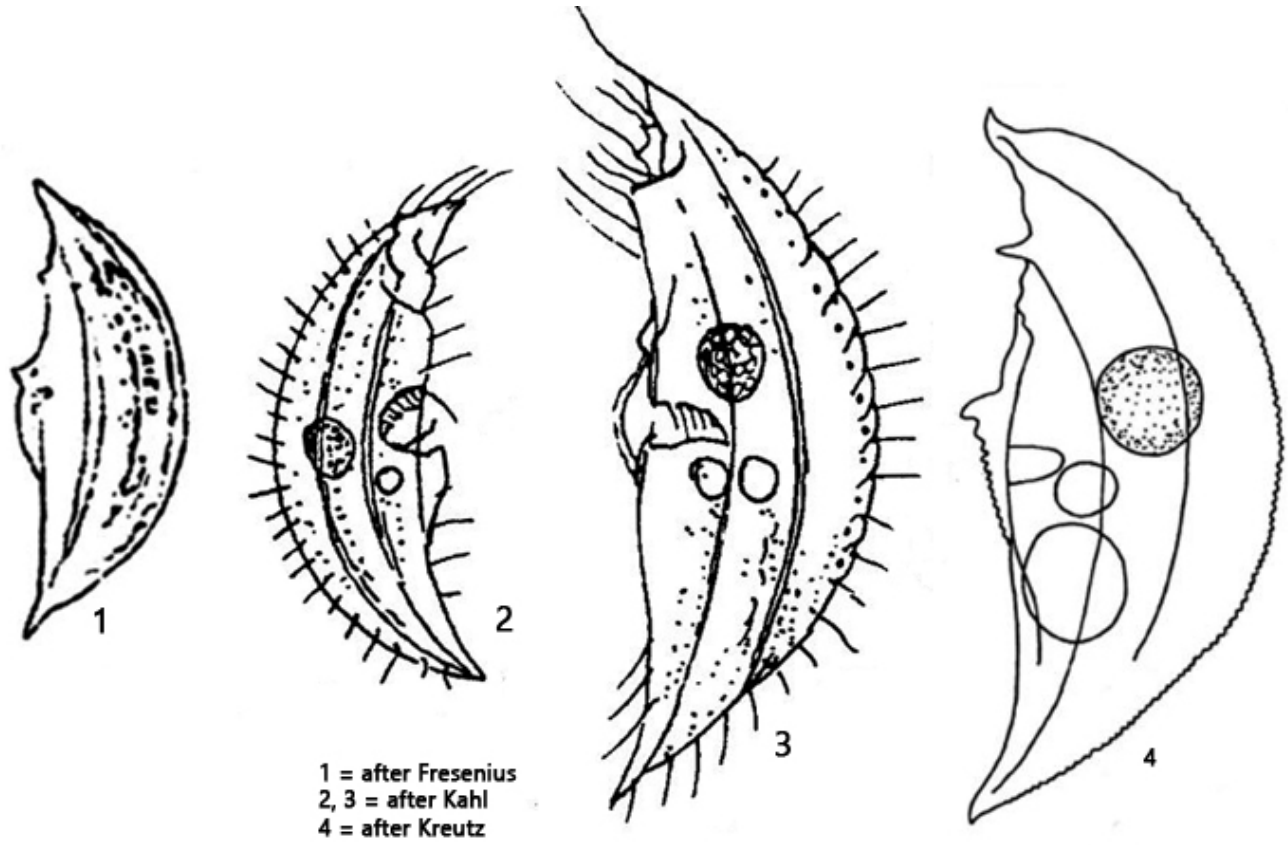
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Drepanomonas dentata*

Diagnosis:

- body crescentic with tapered ends
- laterally flattened with lateral ribs
- one lateral anterior spine and one ventro-lateral spine
- cortex with distinct pores with somatic cilia
- length 40–65 µm
- cytostome in a depression in mid-body
- 4 pre-oral kineties
- globular macronucleus near mid-body
- one spherical micronucleus, adjacent to macronucleus
- two contractile vacuoles near cytostome
- extrusomes present, hard to see
- exploded extrusomes 40-50 µm long, anchor-shaped
- margin of cortex finely dentated



Drepanomonas dentata

So far I have only found *Drepanomonas dentata* in the Simmelried. The species is not really common there, but I find it regularly. It is interesting to note that I find the specimens not only in the ponds, but also in tiny puddles that form in Sphagnum depressions, especially when some leaves have fallen there.

There are only a few records and descriptions of *Drepanomonas dentata* available, originating from Fresenius (1885), Penard (1922), Kahl (1935) and Kreutz (1998). Penard and Kahl state a length of 40–65 µm. In my population, however, the specimens were 70–95 µm long. The ciliate is crescent-shaped and swims slowly. It is already noticeable at low magnifications. The cortex is transparent with each two distinct ribs on the left and right side. The lateral margins are slightly protruding ventrally and form a spine in front on the left side and another one approximately in the middle of the body. There are no other spines. However, both the ribs and the dorsal edge of the body are finely dentated.

There are two vacuoles near the mouth opening. These are the contractile vacuole and a static vacuole. The static vacuole shows no pulsation. I was able to detect bacteria in this vacuole, which is why it could be a permanent digestive vacuole.

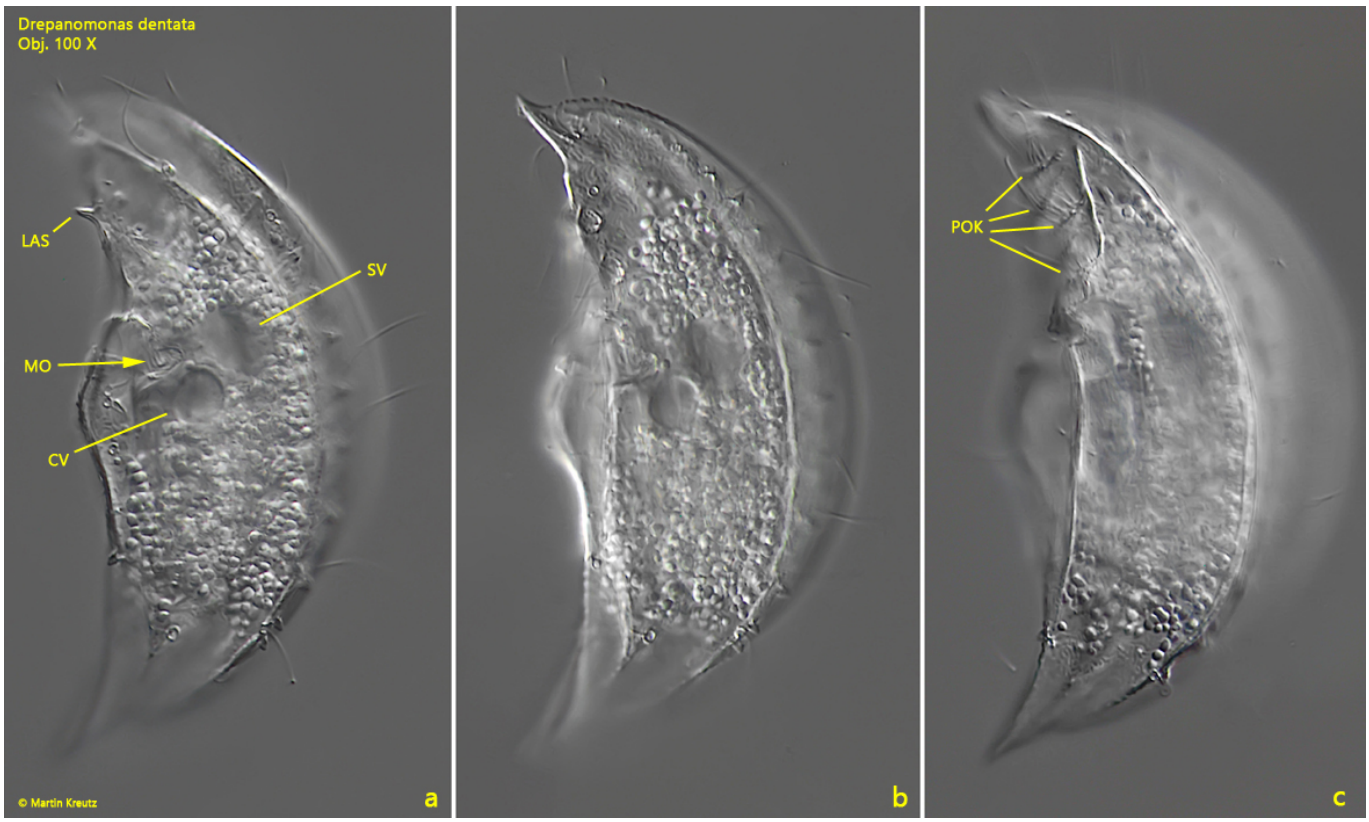


Fig. 1 a-c: *Drepanomonas dentata*. L = 94 µm. A freely swimming specimen from left. Note the lateral anterior spine (LAS) and the pre-oral kineties (POK). CV = contractile vacuole, MO = mouth opening, SV = static vacuole. Obj. 100 X.

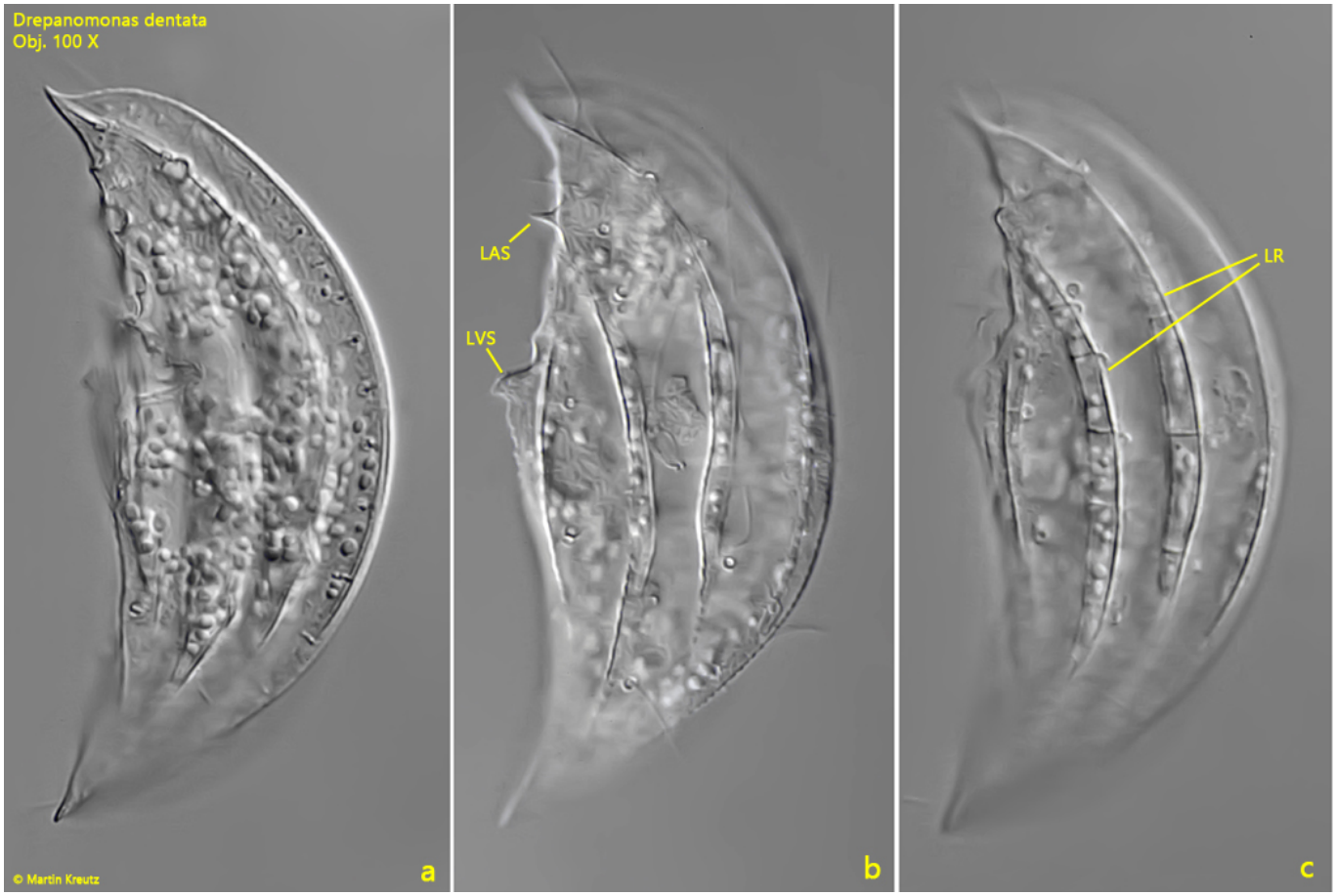


Fig. 2 a-c: *Drepanomonas dentata*. L = 79 µm. A second specimen from left found in April 1996 in the Simmelried. Note the left ventro-lateral spine (LVS) near mid-body. LAS = lateral anterior spine, LR = lateral ribs. Obj. 100 X.

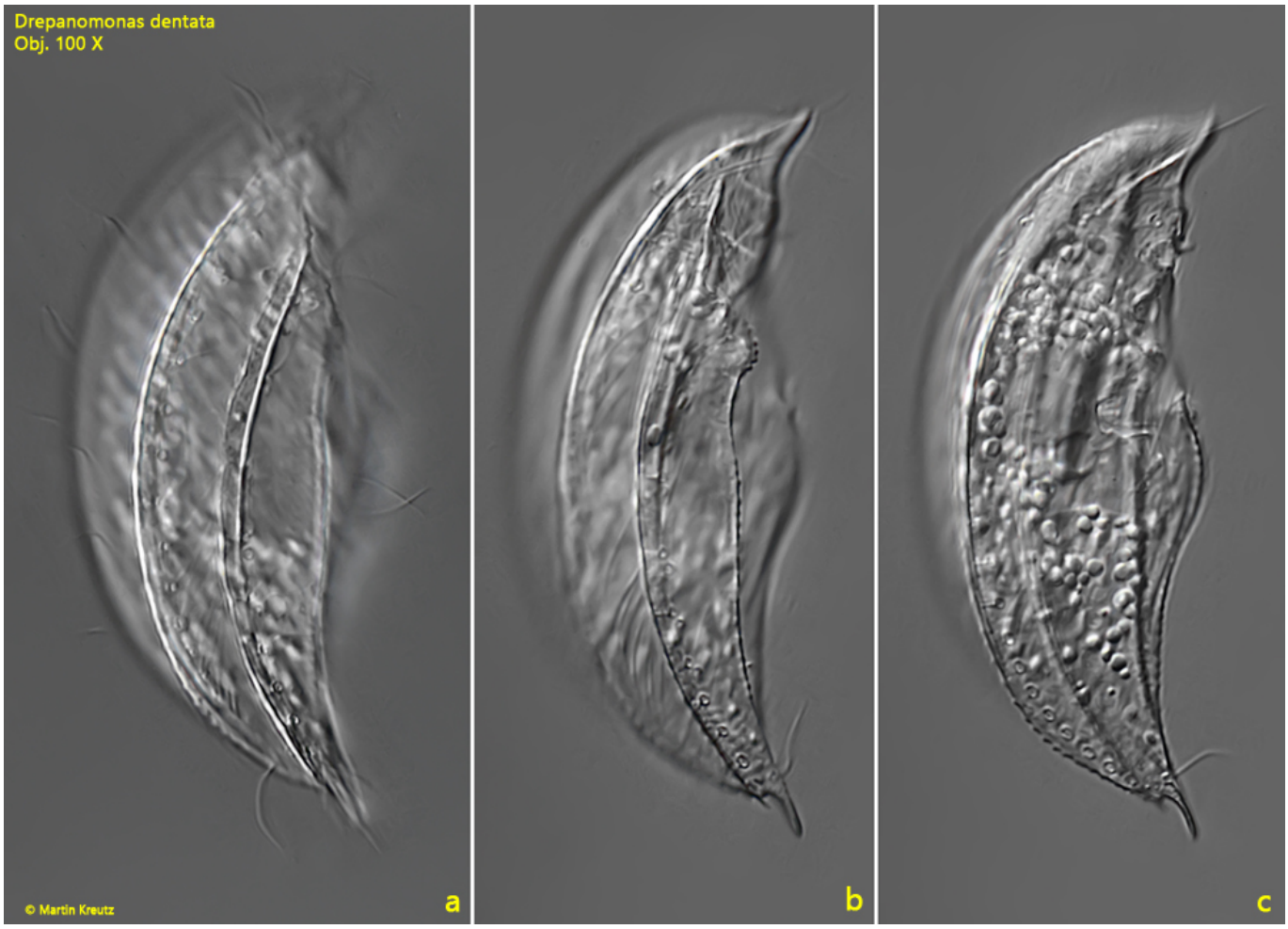


Fig. 3 a-c: *Drepanomonas dentata*. L = 77 µm. A freely swimming specimen from right. Obj. 100 X.

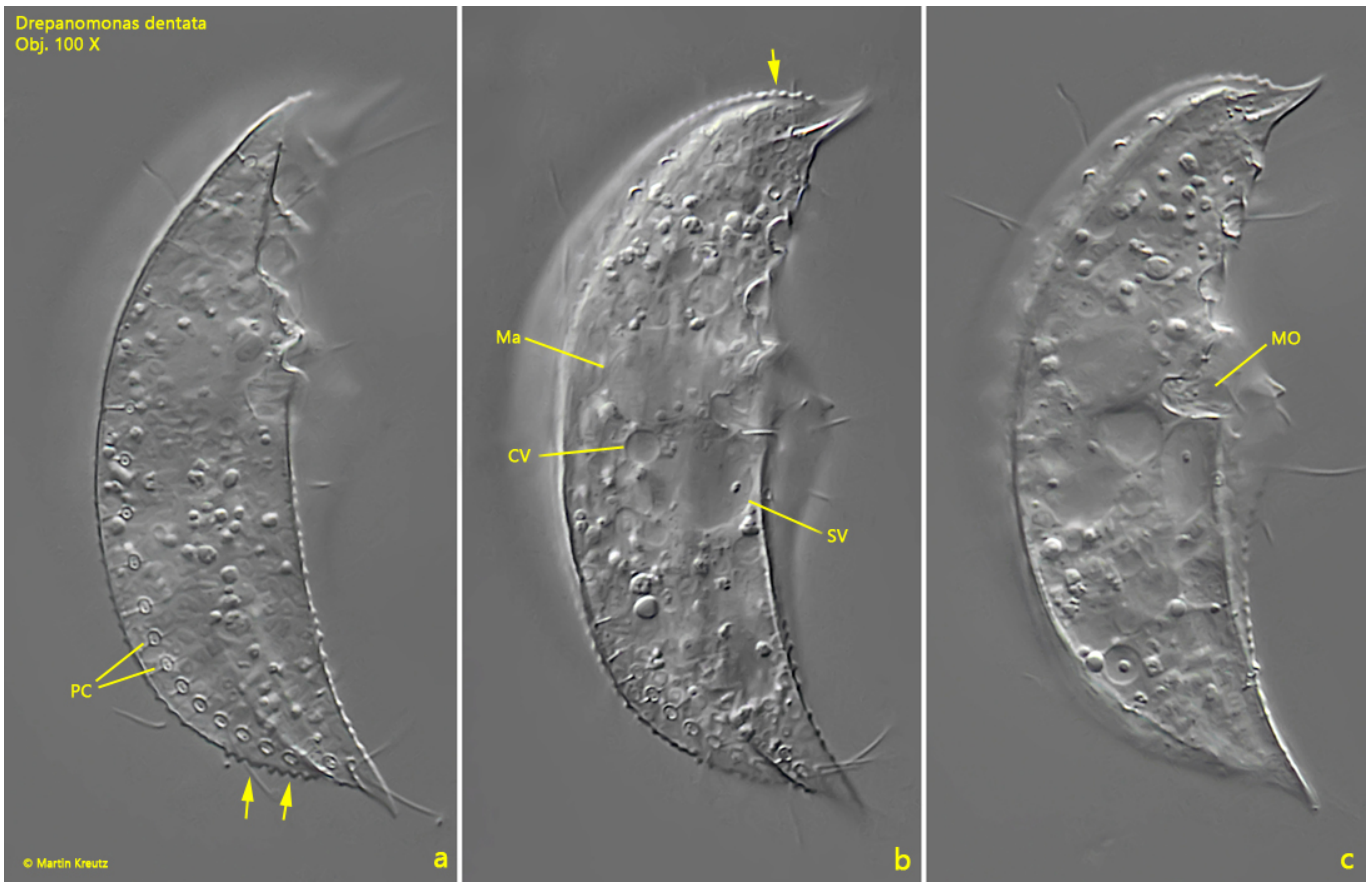


Fig. 4 a-c: *Drepanomonas dentata*. L = 68 µm. A second specimen from right. Note distinct pores of the cortex (PC) where the somatic cilia arise and the finely dentated margin of the cortex (arrows). CV = contractile vacuole, Ma = macronucleus, MO = mouth opening, SV = static vacuole. Obj. 100 X.

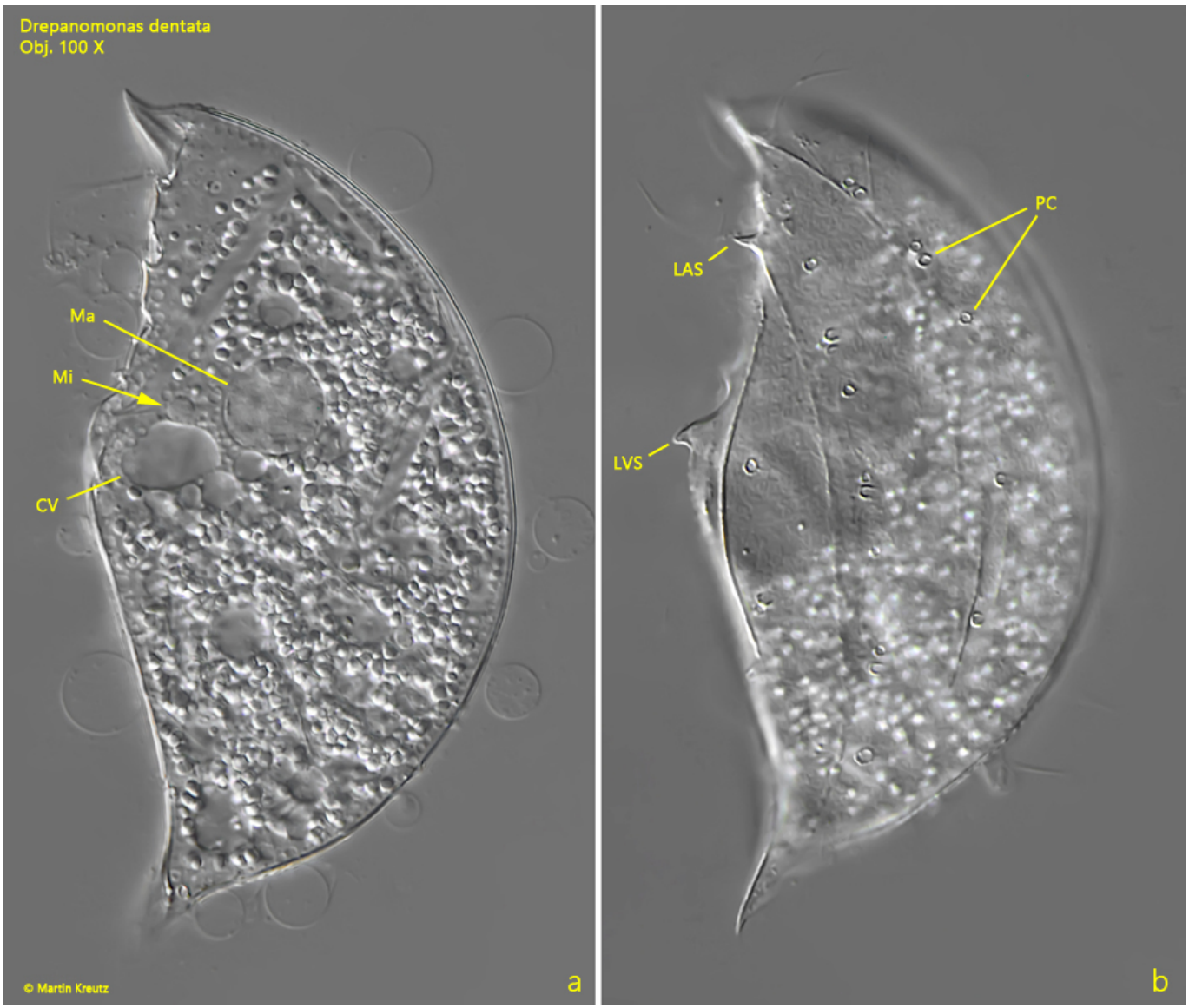


Fig. 5 a-b: *Drepanomonas dentata*. A squashed specimen from left. CV = contractile vacuole, LAS = left anterior spine, LVS = left ventro-lateral spine, Ma = macronucleus, Mi = micronucleus, PC = pores of the cortex. Obj. 100 X.

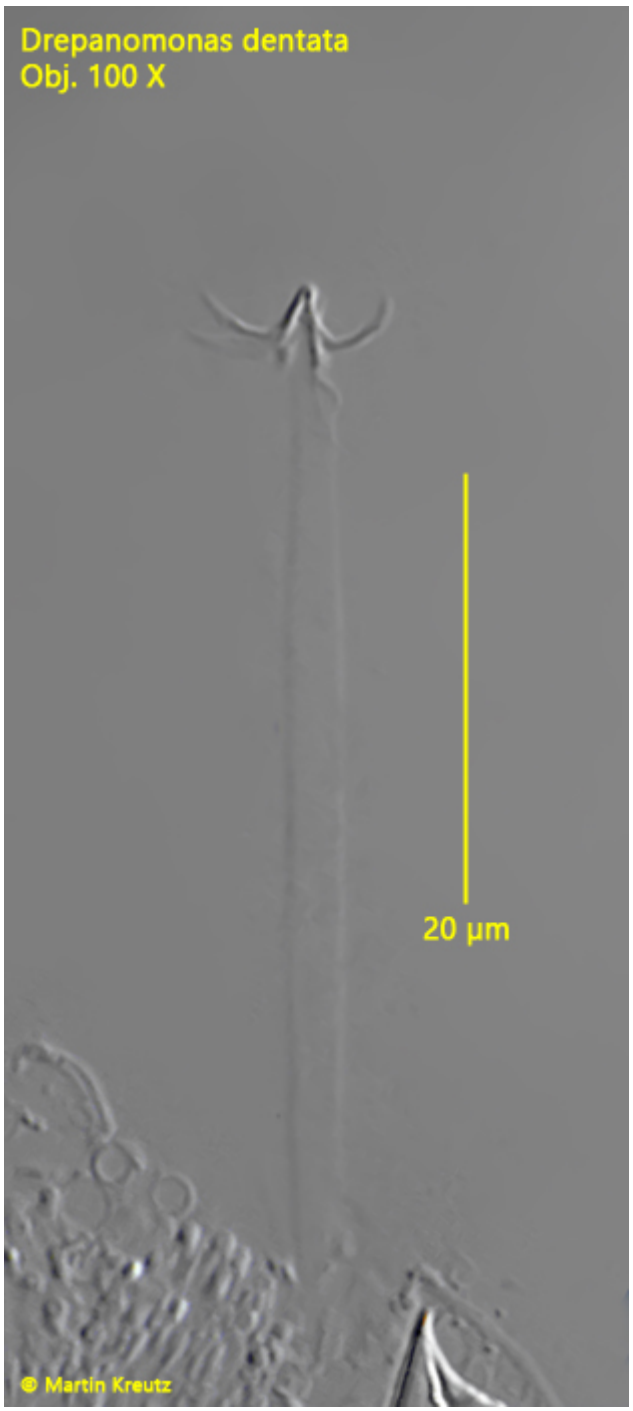


Fig. 6: *Drepanomonas dentata*. An ejected extrusome with a length of 48 µm. The distal end is anchor-shaped. Obj. 100 X.