Ctedoctema acanthocryptum Stokes, 1884

Most likely ID: n.a.

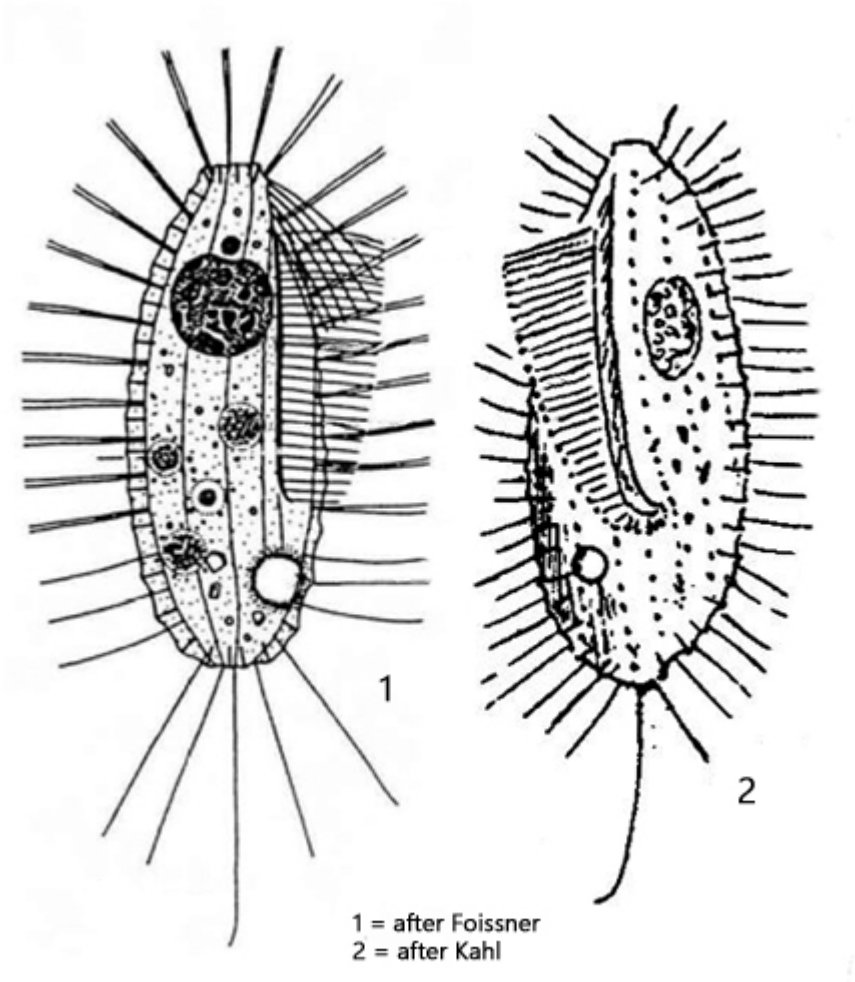
Synonym: *Ctedoctema acanthocrypta*

Sampling locations: Purren pond, Simmelried, Ulmisried, Bussenried, Sima Moor, Ziegelhof pond

Phylogenetic tree: *Ctedoctema acanthocryptum*

Diagnosis:

- body slender ellipsoid to ovoid
- laterally slightly flattened, frontal plate present
- length 20–40 µm, width 8–15 µm
- oral apparatus two-third of body length
- undulating membran triangular, sloping towards the mouth opening
- macronucleus spherical, anterior half
- cilia stiff, spread apart from body
- extrusomes thin rods, 12 µm long
- 10–12 longitudinal rows of cilia
- cilia paired in anterior two-thirds
- contractile vacuole subterminal
- one long caudal cilia



Ctedoctema acanthocryptum

This ciliate was described by Stokes as *Ctendoctema acanthocrypta*. Kahl (1935) adopted this name. However, Foissner et al. (1994) described the species as *Ctedoctema acanthocryptum*, arguing that the genus name *Ctedoctema* has a neuter gender and therefore the species name must end in “um”. Until a final decision has been made, I agree with the argumentation of Foissner et al.

Ctedoctema acanthocryptum is one of the most common ciliates. It is particularly common in waters with decomposing plant masses. Very often *Ctedoctema acanthocryptum* is confused with *Cyclidium glaucoma* because the jumping type of movement is similar. However, *Cyclidium glaucoma* has a plumper body and the contractile vacuole is terminal, whereas in *Ctedoctema acanthocryptum* it is clearly subterminal (s. fig. 2 c).

At higher magnification one can recognize further differences to the genera *Cyclidium* and *Cristigera*. The cilia in the anterior two-thirds of the body are arranged in pairs and are only single in the posterior third (s. fig. 5 c). When at rest, the cilia appear stiff like bristles and are spread out from the body. The long

peristome, which also takes up two-thirds of the body, is striking. On the left side of the peristome is a triangular-shaped, undulating membrane. It slopes downwards towards the mouth opening (s. figs. 3 a-d and 4 a-d). The margin of the body appears slightly wavy. Damaged specimens form a transparent blister of cytoplasm, which always develops in the posterior third below the mouth opening. This could also be an important distinguishing feature from the genera *Cyclidium* and *Uronema*, which do not form this blister.

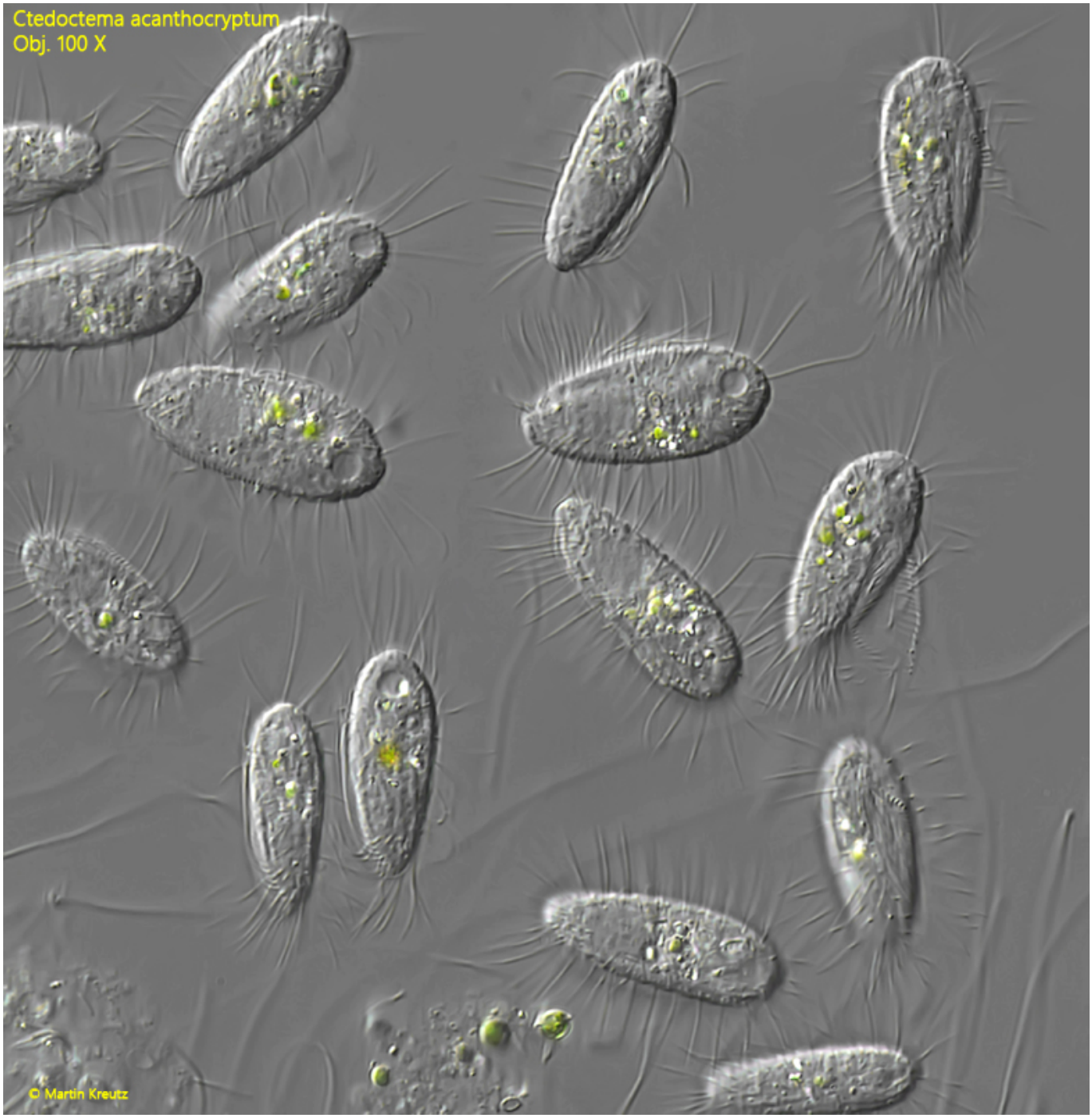


Fig. 1: *Ctedoctema acanthocryptum*. L = 25–33 µm. An accumulation of specimens in a sample with decaying plants. Obj. 100 X.

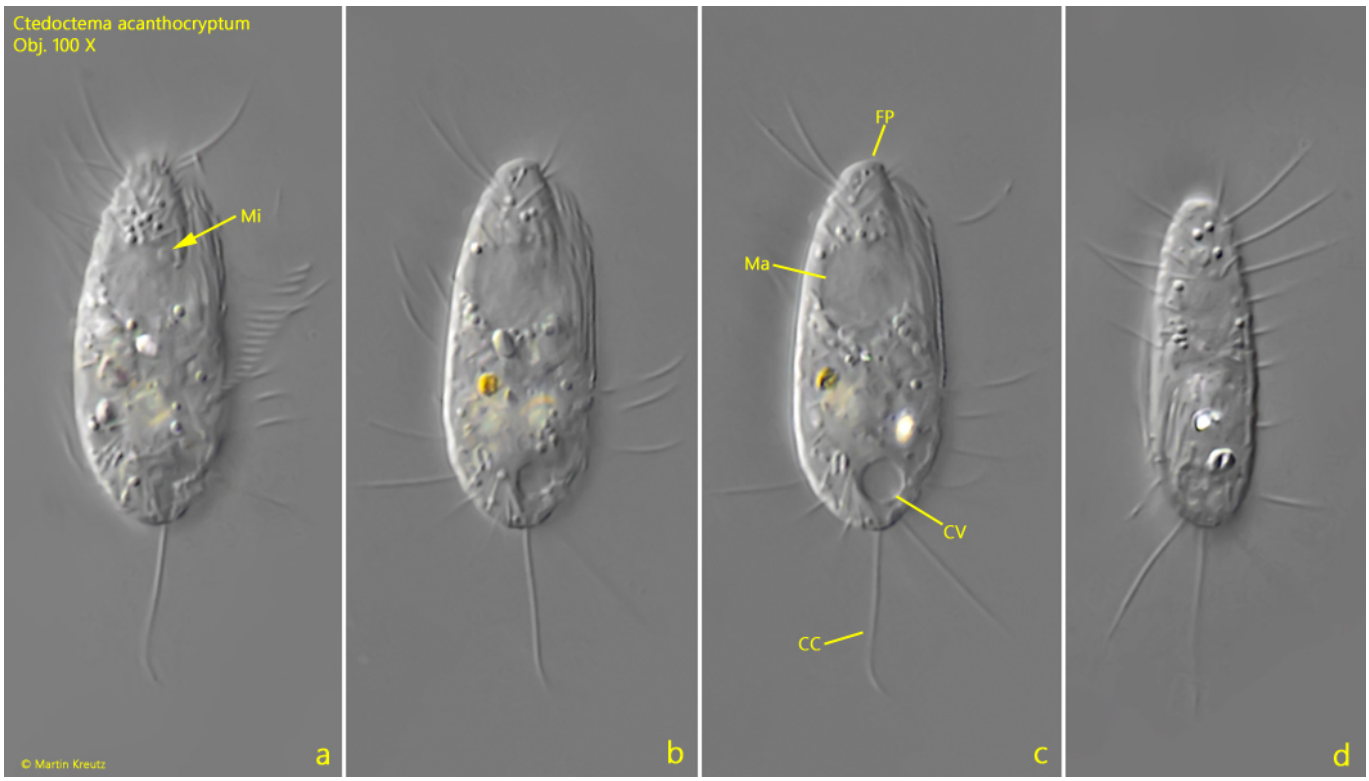


Fig. 2 a-d: *Ctedoctema acanthocryptum*. L = 28 µm. A freely swimming specimen from right (a-c) and from dorsal (d). CC = caudal cilium, CV = contractile vacuole, FP = frontal plate, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.

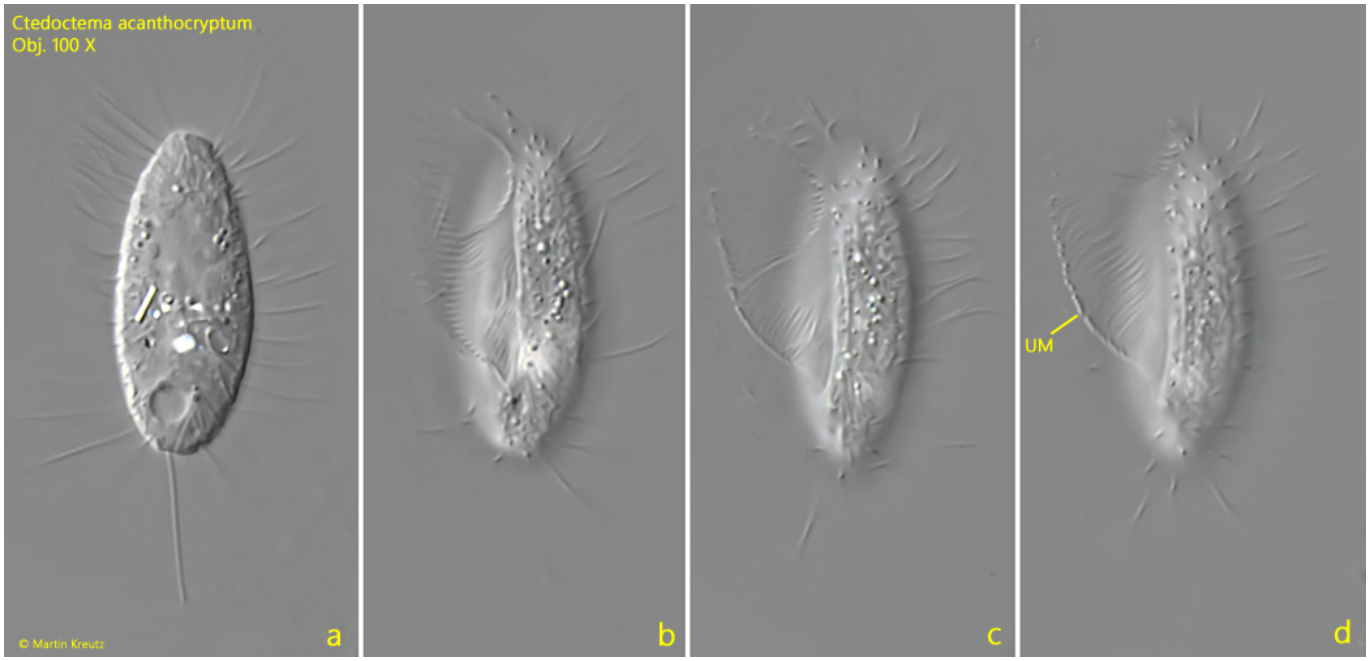


Fig. 3 a-d: *Ctedoctema acanthocryptum*. L = 30 µm. Different focal planes of a second freely swimming specimen from left with the undulating membrane (UM) slope from the anterior end toward the mouth opening. Obj. 100 X.

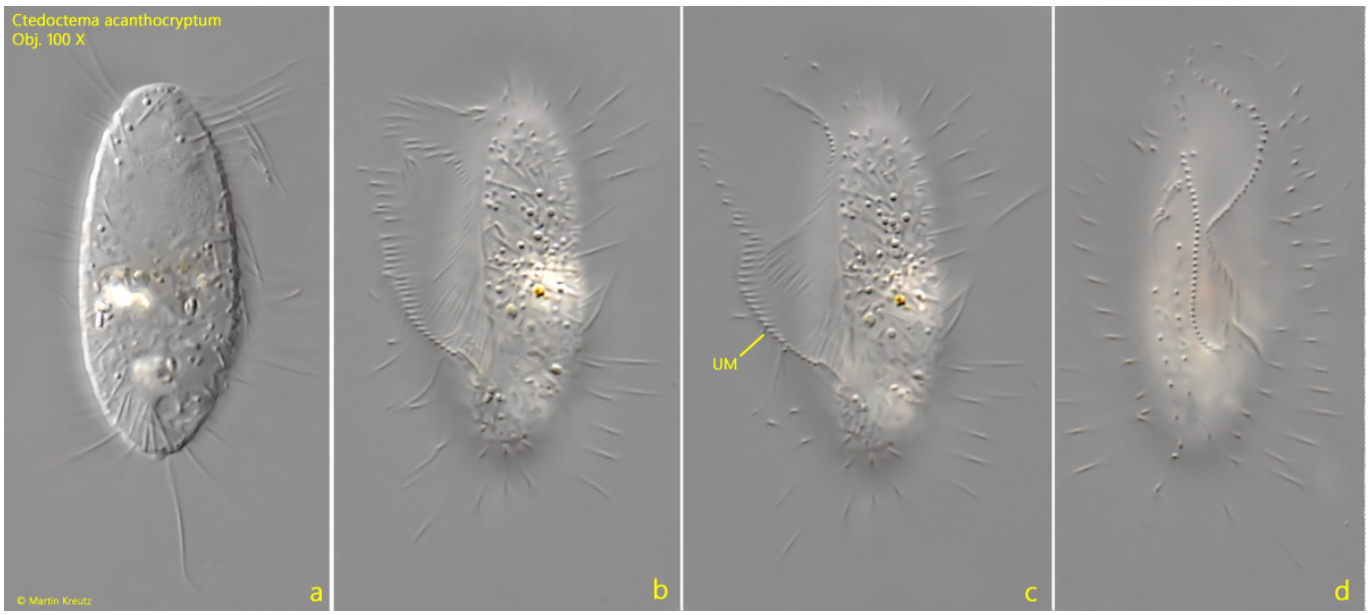


Fig. 4 a-d: *Ctedoctema acanthocryptum*. L = 39 µm. Different focal planes of a third specimen from left. UM = undulating membrane. Obj. 100 X.

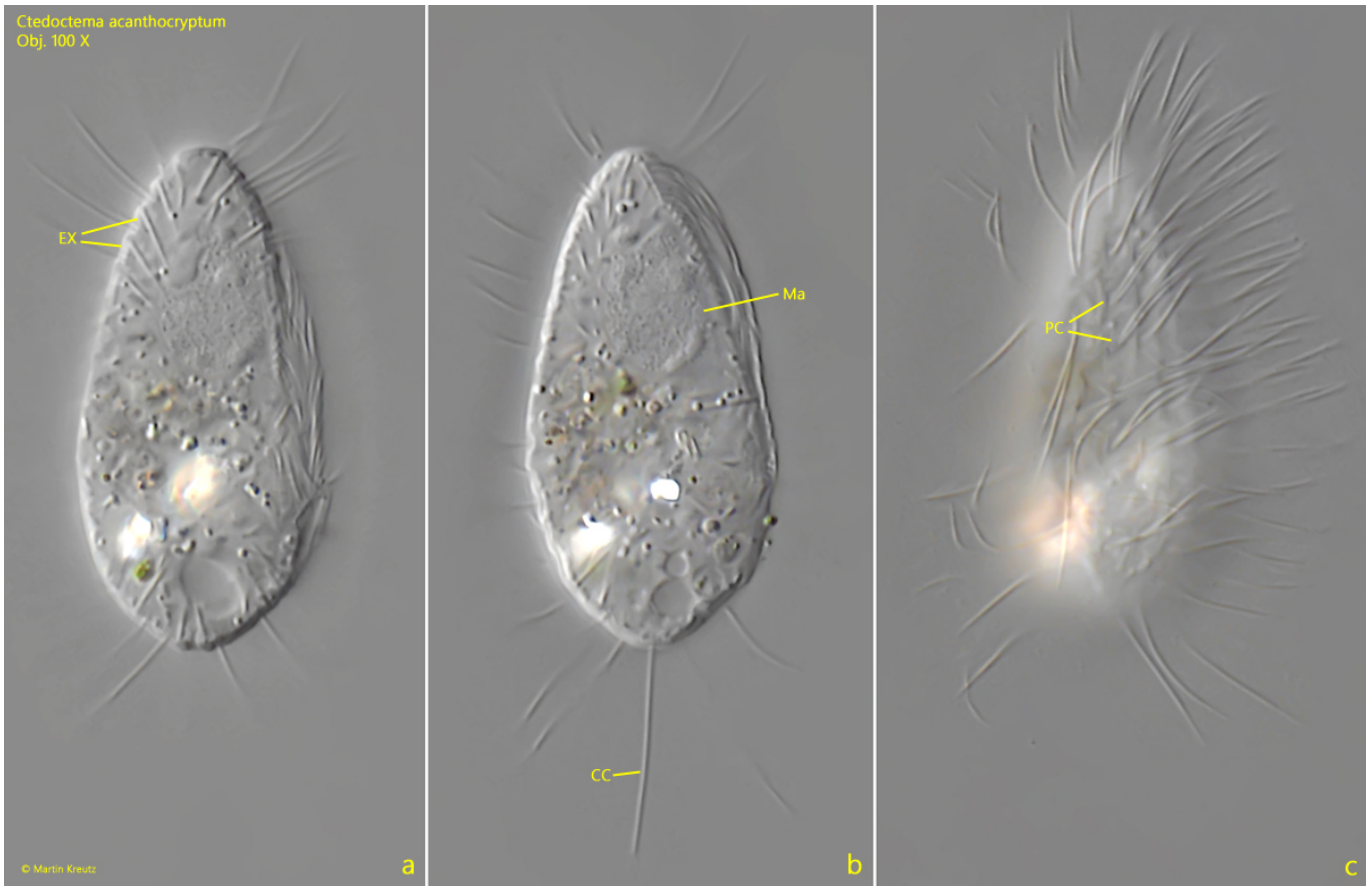


Fig. 5 a-c: *Ctedoctema acanthocryptum*. L = 38 µm. Different focal planes of a slightly squashed specimen. Note the paired cilia (PC) in the anterior half of the body. CC = caudal cilium, EX = extrusomes, Ma = macronucleus. Obj. 100 X.

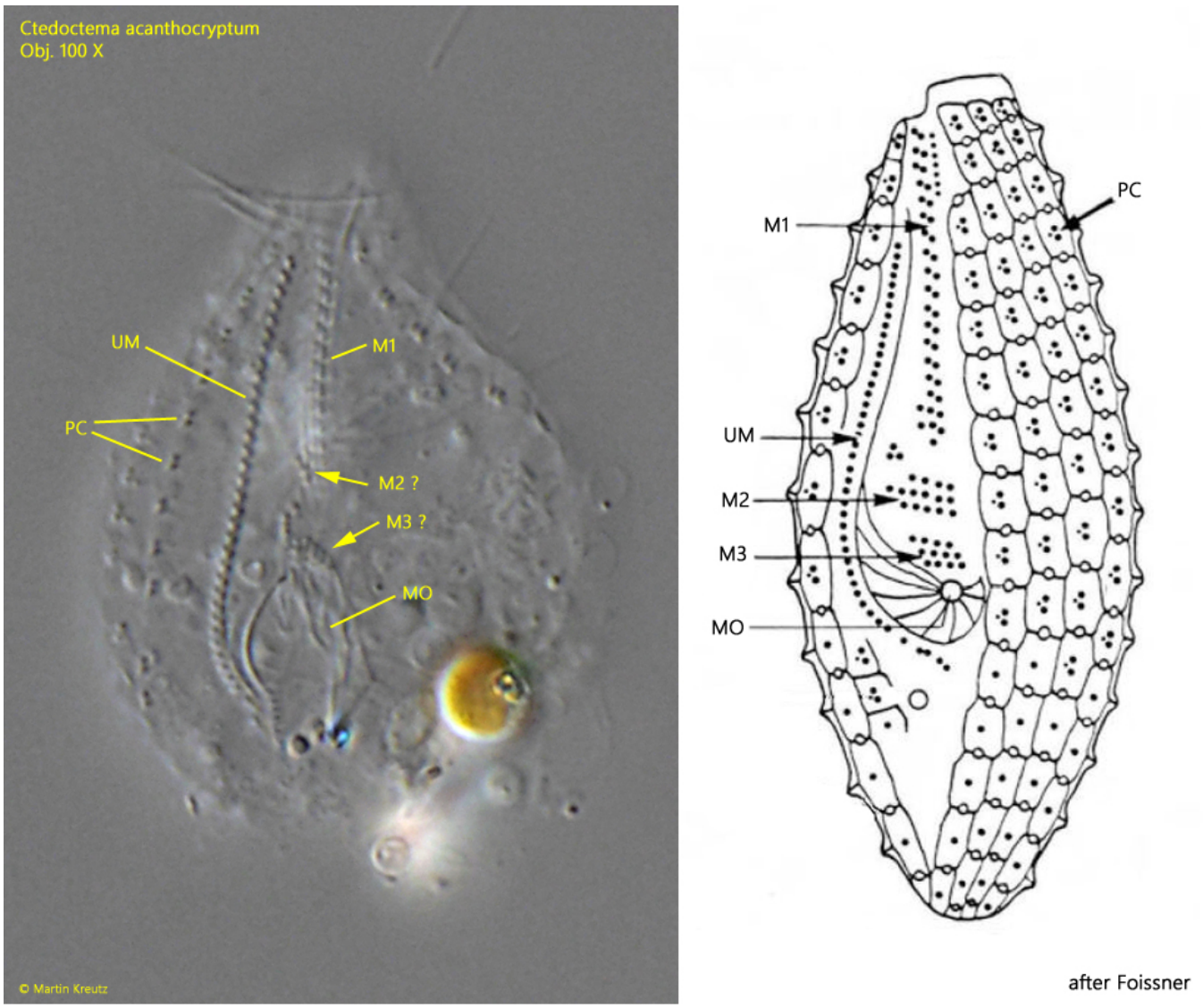


Fig. 6: *Ctedoctema acanthocryptum*. Focal plane on the basal bodies of a strongly squashed specimen from ventral (a) and comparison with a schematic drawing of the peristome (b). M 1–3 = adoral membranelles, MO = mouth opening, PC = paired cilia, UM = undulating membrane. Obj. 100 X.