Ctedoctema acanthocryptum Stokes, 1884

Most likely ID: n.a.

Synonym: Ctedoctema acanthocrypta

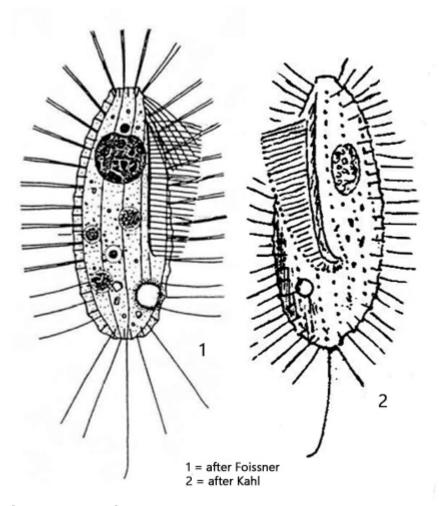
Sampling locations: Purren pond, Simmelried, Ulmisried, Bussenried, Sima Moor,

Ziegelhof pond

Phylogenetic tree: <u>Ctedoctema acanthocryptum</u>

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. $L = 25-33 \mu m$. An accumulation of specimens in a sample with decaying plants. Obj. 100 X.

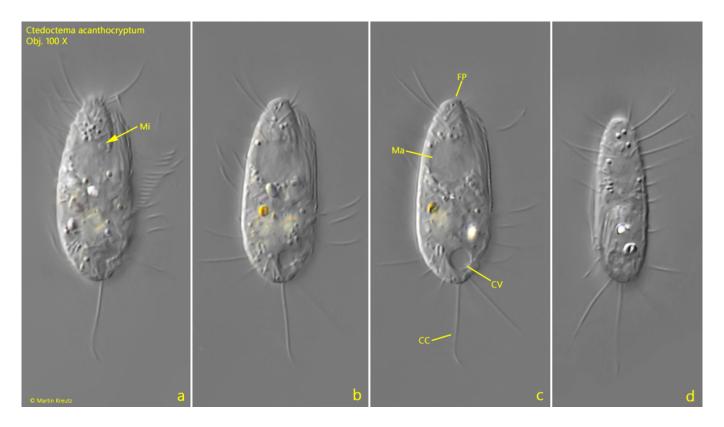


Fig. 2 a-d: Ctedoctema acanthocryptum. $L = 28 \mu m$. A freely swimming specimen from right (a-c) and from dorsal (d). CC = caudal cilium, CV = contractile vacuole, FP = frontal plate, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.

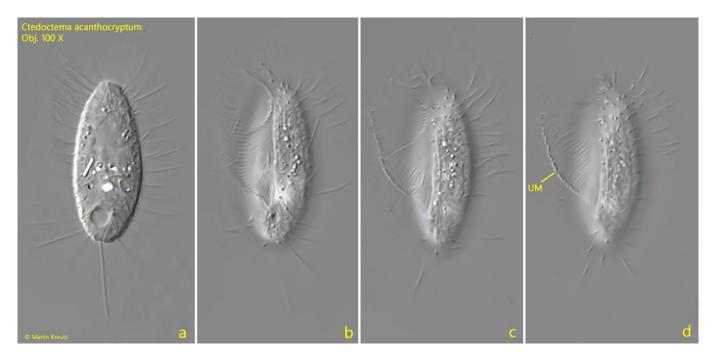


Fig. 3 a-d: Ctedoctema acanthocryptum. $L = 30 \mu m$. Different focal planes of a second freely swimming specimen from left with the undulating membrane (UM) slope from the anterior end toward the mouth opening. Obj. 100 X.

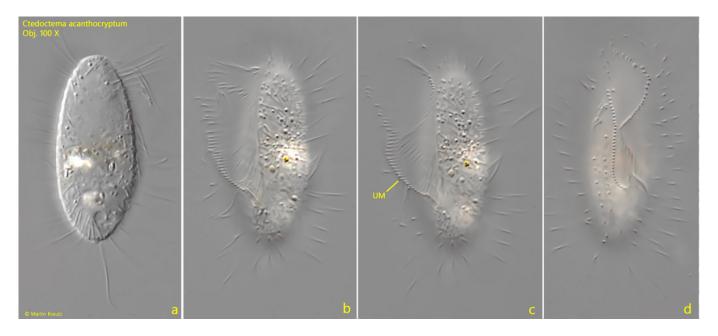


Fig. 4 a-d: Ctedoctema acanthocryptum. $L = 39 \mu m$. Different focal planes of a third specimen from left. UM = undulating membrane. Obj. 100 X.



Fig. 5 a-c: Ctedoctema acanthocryptum. $L = 38 \mu m$. 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.

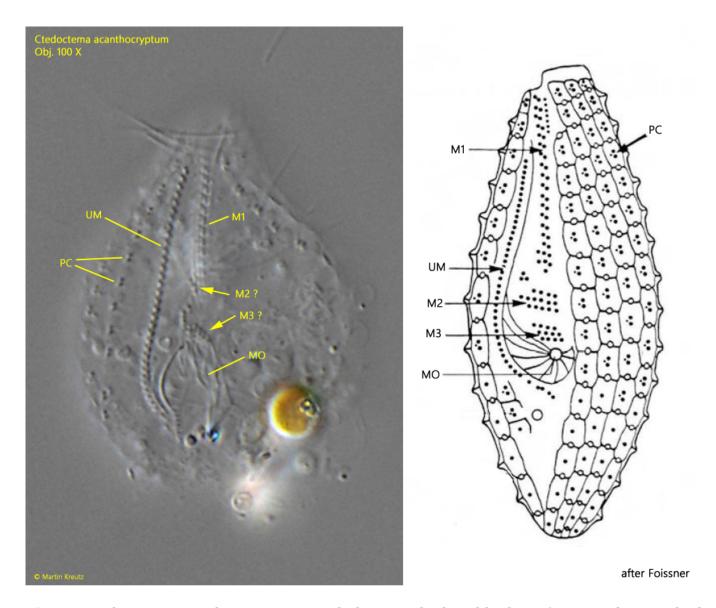


Fig. 6: Ctedoctema acanthocryptum. Focal plane on the basal bodies of a strongly squashed specimen from ventral (a) and comparison with a schematic drawing of the peristome (b). M 1-3 = adoral membranelles, MO = mouth opening, PC = paired cilia, UM = undulating membrane. Obj. 100 X.