# ***Enchelyodon* 1**

**Most likely ID:** *Enchelyodon* nov. spec.

**Synonym:** n.a.

**Sampling location:** Mühlweiher Litzelstetten

**Phylogenetic tree:** n.a.

**Diagnosis:**

- body elongate ellipsoid, almost parallel sides
- length about 138 µm, width about 20 µm
- oral bulge vonvex, flat dome
- oral bulge with bundle of 18–30 µm long, rod-shaped extrusomes
- pellicle covered with mucilaginous sheath
- macronucleus broadly ellipsoid
- one micronucleus adjacent to macronucleus
- contractile vacuole terminal

No drawings from previous authors available.

So far, I have only found one specimen of *Enchelyodon* 1 in January 2025 in the Mühlweiher Litzelstetten. The specimen was found among floating, dead aquatic plants. Since there were other objects under the coverslip, I was unfortunately unable to fix and squash the specimen for a more detailed examination.

Due to the oral bulge with the shape of a flat, convex dome, I believe that this ciliate belongs to the genus *Enchelyodon*. The other characteristics also support this. The oral bulge surrounded by a ring of elongated cilia (s. fig. 3). Additionally, the pharynx is equipped with a dense bundle of extrusomes (s. fig. 2). These are thin, rod-shaped, and according to my measurements, between 18–30 µm long. The extrusomes are somewhat flexible but not curved or thickened at the ends. The body is covered by a delicate mucilaginous layer 1.5-2.0 µm thick, which is not

unusual for the genus *Enchelyodon* (s. figs. 2 and 3). Probably, scales are also embedded in this mucilaginous layer, which cannot be resolved with a light microscope.

The body of *Enchelyodon* 1 is slender ellipsoid with nearly parallel sides. The macronucleus of my specimen was broadly ellipsoid with an attached micronucleus, the exact shape of which I could not discern (s. fig. 1 c). The contractile vacuole is terminal with a clearly visible excretory pore at the posterior pole (s. fig. 1 b). I could not detect the dorsal brush.

I could not find an *Enchelyodon* species with these characteristics in the literature available to me. The similar species *Enchelys vestita* is significantly larger at 200–220 µm in length and also has a distinctly kidney-shaped macronucleus. Another possibility to consider is *Cataphractes austriacus* (s. fig. 4). This species matches many features of my specimen, but not the shape and composition of the extrusomes. *Cataphractes austriacus* has two types of extrusomes (s. fig. 4). The larger type 1 are slightly curved with a length of 25–30 µm and a thickened end, while the type 2 extrusomes are only 2–3 µm long and rod-shaped. I could not recognize this form and composition of extrusomes in my specimen, which is why it might possibly be a previously undescribed, new species *Enchelyodon* nov. spec.

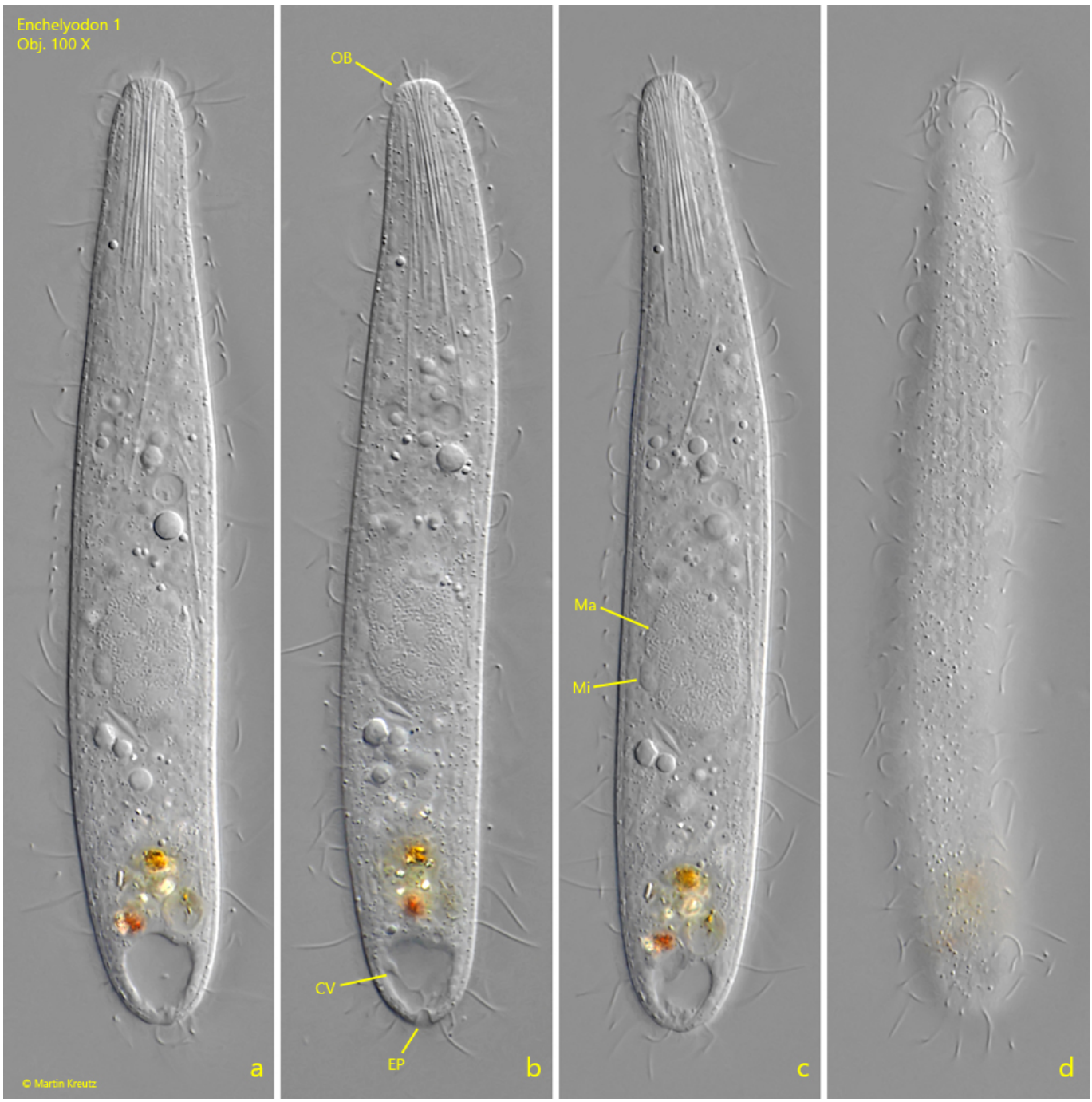



**Fig. 1 a-d:** *Enchelyodon* 1. L = 128 µm. A freely swimming specimen. CV = contractile vacuole, EP = excretion pore, Ma = macronucleus, Mi = micronucleus, OB = oral bulge. Obj. 100 X.

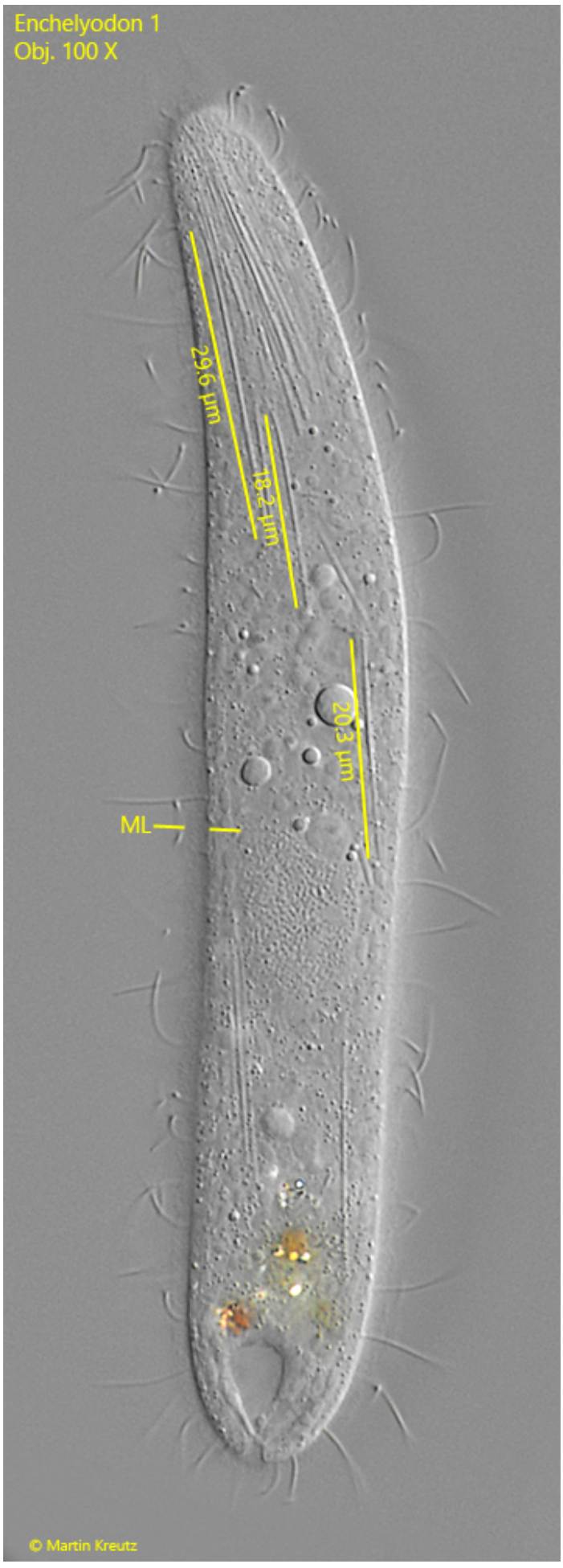

Enchelyodon 1
Obj. 100 X
29.6 µm
18.2 µm
20.3 µm
ML
© Martin Kreutz

**Fig. 2:** *Enchelyodon* 1. L = 128 µm. Focal plane on the thin, rod-shaped extrusomes with a length of 18–30 µm. The body is covered by a decilate mucilaginous layer (ML). Obj. 100 X.

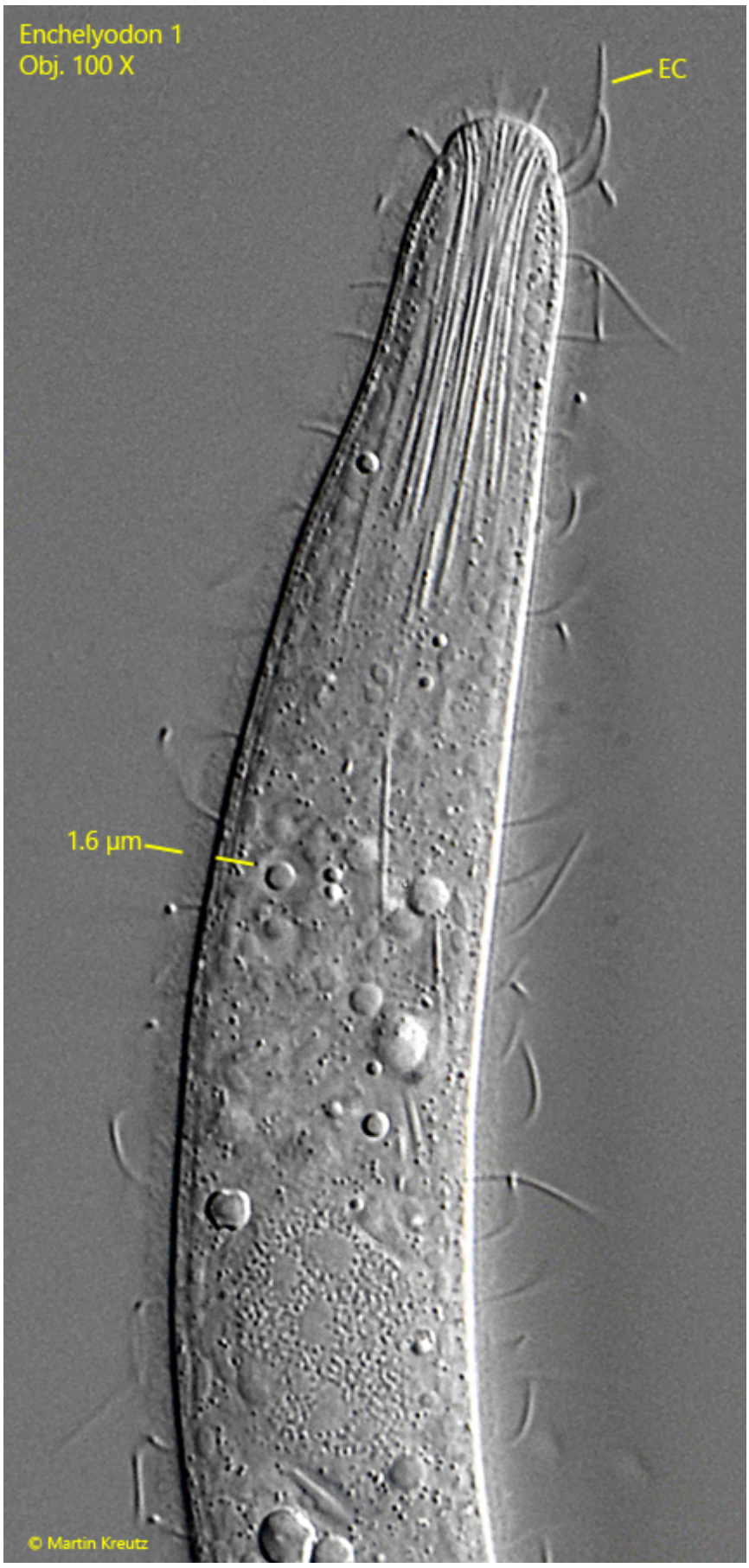



**Fig. 3:** *Enchelyodon* 1. A strongly contrasted image for visualization of the mucilaginous layer with a thickness of 1.6 µm. Obj. 100 X.

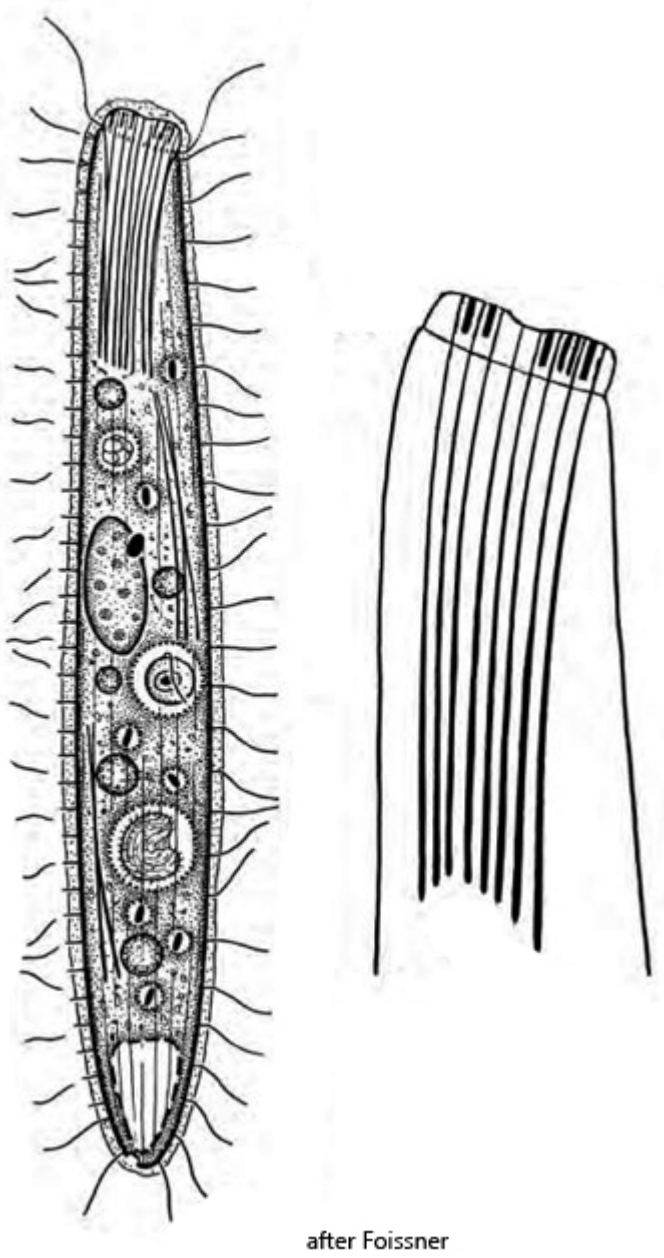



**Fig. 4:** The similar species *Cataphractes austriacus* after Foissner.