Loxophyllum uninucleatum Kahl, 1928

Most likely ID: n.a.

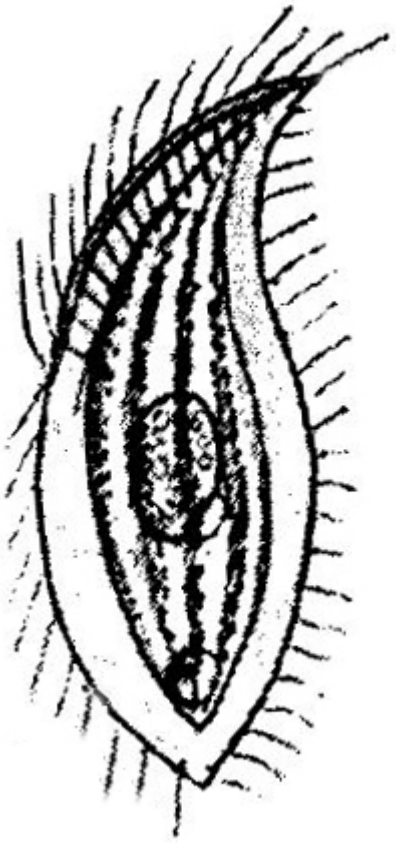
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Loxophyllum uninucleatum*

Diagnosis:

- body slenderly lanceolate and flattened
- posterior end slightly pointed
- right side flat with 6–8 rows of cilia
  left side convex with longitudinal ridges
- length 80–100 µm
- extrusomes rod-shaped, straight, about 3 µm long
- extrusomes arranged along oral cleft
- posterior end without extrusomes
  macronucleus round, disc-shaped
- one spherical micronucleus
  contractile subterminal



Loxophyllum uninucleatum

Loxophyllum uninucleatum was described by Kahl from a body of water with 2.0–2.5 % salinity. However, I was able to clearly detect this species in the Simmelried in December 2024. The species was very common in the samples from floating plants. However, I had never been able to detect *Loxophyllum uninucleatum* before.

Loxophyllum uninucleatum was described by Kahl in 1928. In 1978 Foissner described a *Litonotus* species with extrusomes in the posterior end as *Litonotus uninucleatus*. In 1989 *Loxophyllum uninucleatum* was then found and described by Weibo & Wilbert. Based on the characteristics, the authors decided to transfer the species to the genus *Litonotus* as *Litonotus uninucleatus*, but recognized that the name *Litonotus uninucleatus* had already been given by Foissner and recommended a new name without making a proposal. Finally, Foissner et al. (1992) identified the species found by Weibo & Wilbert as *Litonotus alpestris*. A new, valid name has therefore never been given to *Loxophyllum uninucleatum*, which means that the name first given by Kahl (*Loxophyllum uninucleatum*) remains valid.

The specimens of my population correspond exactly to the description of Kahl. The

specimens were 85-103 µm long. The rod-shaped extrusomes were exclusively localized in the oral cleft. The posterior end was slightly pointed in all specimens and the contractile vacuole was clearly subterminal. Kahl mentions that *Loxophyllum uninucleatum* feeds exclusively on *Euglena*. I can confirm this because I found large quantities of paramylon grains in the cytoplasm of all specimens (s. fig. 3 b).

Contrary to Kahl's description, I was able to detect a thin layer of mucilage about 1 µm thick in *Loxophyllum uninucleatum* (s. fig. 4). It was clearly recognizable in all specimens. At the highest magnification, the layer appears "rough", which indicates that small scales are embedded in the layer below the resolution of the light microscope.

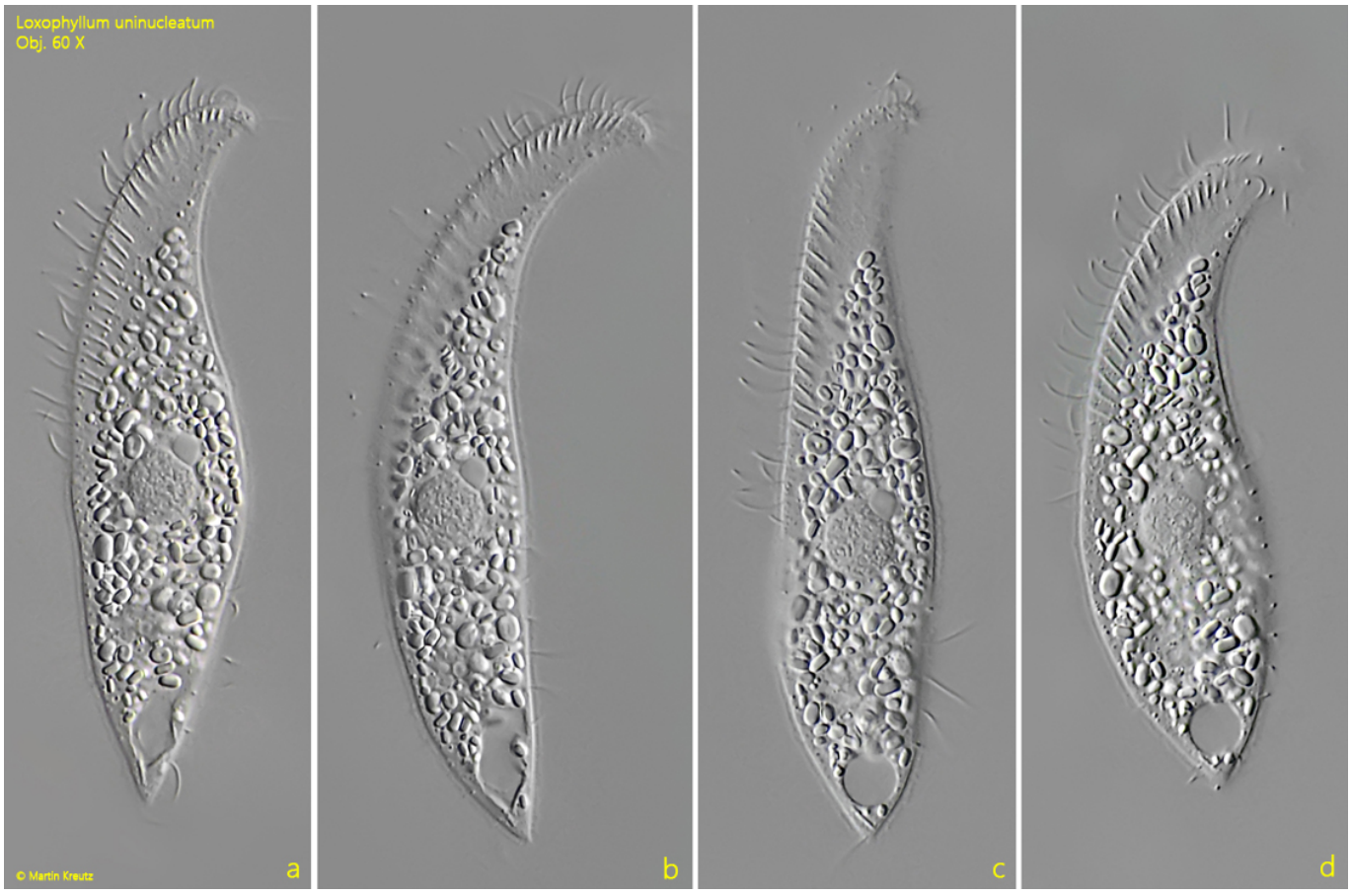


Fig. 1 a-d: *Loxophyllum uninucleatum*. L = 92 µm. A freely swimming specimen from left. Note the pointed posterior end. Obj. 60 X.

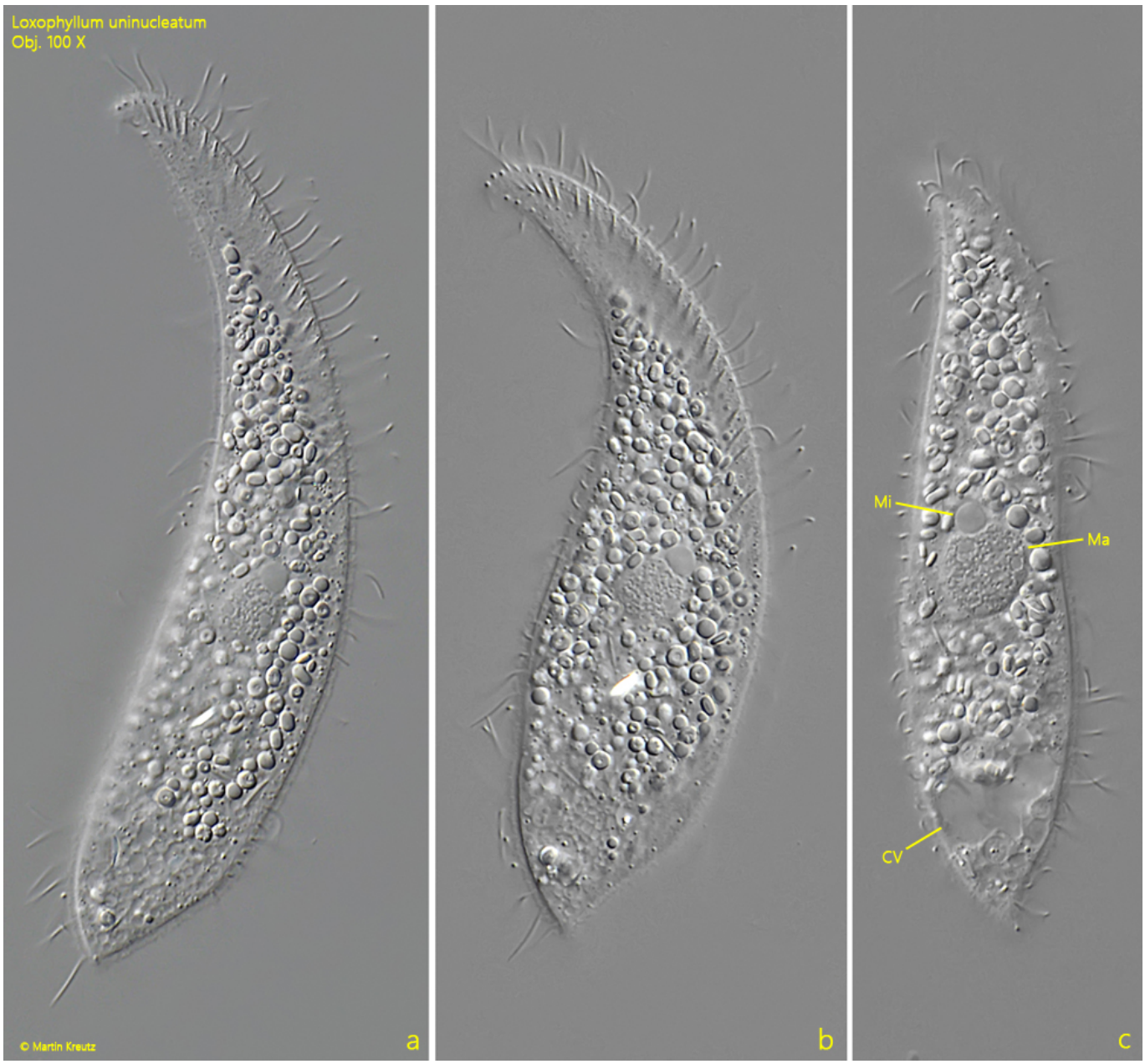


Fig. 2 a-c: *Loxophyllum uninucleatum*. L = 103 µm. A specimen from right in detail. CV = contractile vacuole, Ma = macronucleus, Mi = micronucleus. Obj. 100 X.

Fig. 3 a-c: *Loxophyllum uninucleatum*. L = 89 µm. A second specimen from right. Note thr longitudinal rows of cilia (RC) and the numerous paramylon grains (PG) from ingested eugenids. The straight, rod-shaped extrusomes (EX) are 2.9–3.0 µm long. Obj. 100 X.

Fig. 4: *Loxophyllum uninucleatum*. The specimens are covered with a mucus layer (ML) with a thickness of about 1 µm. Obj. 100 X.