***Siroloxophyllum utricullariae***

**(Penard, 1922) Foissner & Leipe, 1995**

**Most likely ID:** n.a.

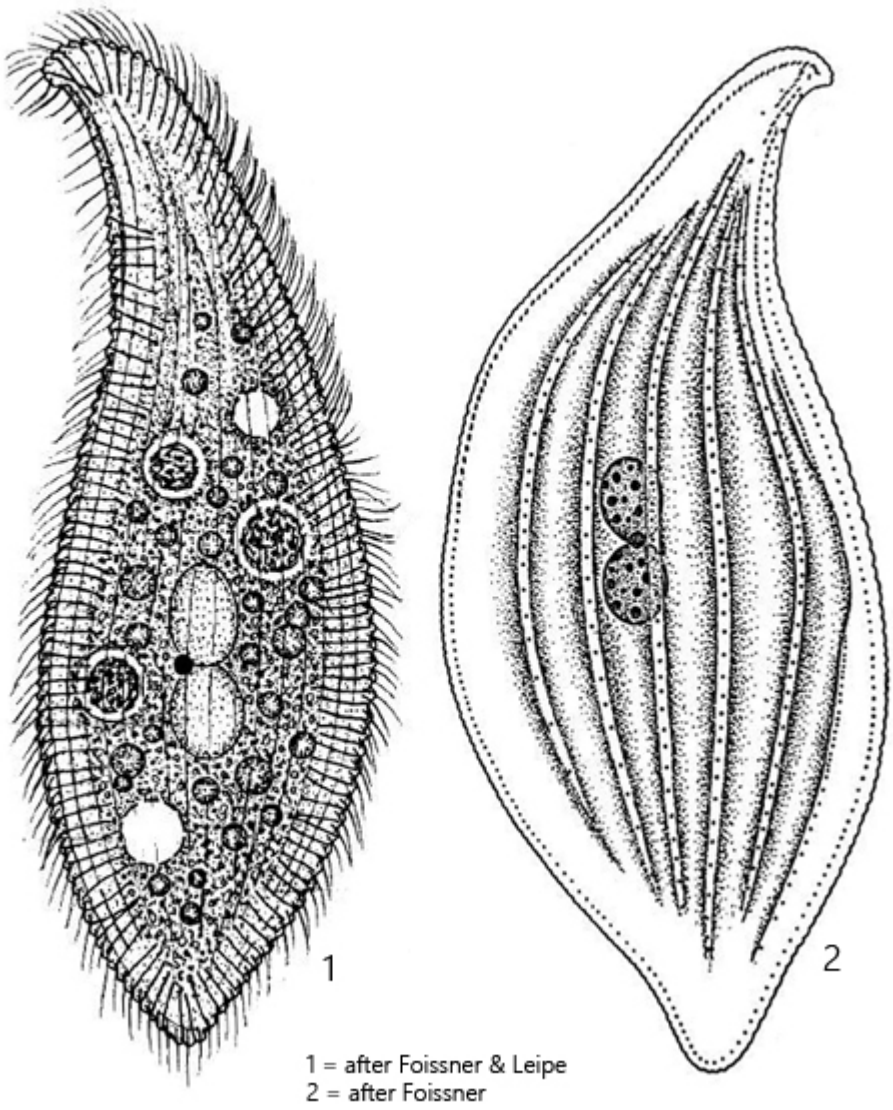
**Synonym:** *Loxophyllum utricullariae*

**Sampling location:** Mühlweiher Litzelstetten, Monastery of Inzighofen

**Phylogenetic tree:** *Siroloxophyllum utricullariae*

**Diagnosis:**

- body lanceolate, laterally flattened, hyaline
- length 100–280 µm
- ventrally and dorsally broad seam of extrusomes
- right side flat and ciliated
- left side with 3–8 longitudinal ridges
- two macronuclear nodules and a spherical micronucleus between them
- two contractile vacuoles in anterior and posterior third
- extrusomes 6–8 µm long, slightly curved




Siroloxophyllum utricullariae

*Siroloxophyllum utricullariae* was first described by Penard (1922) as *Amphileptus utricullariae* and was later transferred by Kahl (1926) to the genus *Loxophyllum*, because he saw the naked left side and the fringe of extrusomes, which runs along both the ventral and dorsal margins. Finally, in 1995 the species was transferred by Foissner & Leipe to *Spiroloxophyllum* on the basis of the shape of the dorsal brush and a winding structure of the ventral and dorsal margins.

I find *Siroloxophyllum utricullariae* only very rarely. In August 2003, in the Mühlweiher Litzelstetten, I found only a single specimen among floating plants. Only 23 years later, in September 2026, I found a large population of *Siroloxophyllum utricullariae* in a water-filled stone basin in the garden of the Inzighofen monastery. The photos shown below depict specimens from this population.

*Siroloxophyllum utricullariae* is strongly flattened laterally and leaf-shaped. The ciliate is also very hyaline. The right side is flat and has 14–15 rows of cilia. The left side is convex in the middle with 3–8 distinct ridges (s. fig. 1 c). Between the ridges there are 4 rows of short bristles (s. fig. 5). The entire margin of the ciliate has the twisted pattern of a rope, which is a characteristic feature of this genus (s. fig. 6). In the middle of the body there are two round macronuclei, with the micronucleus positioned between them (s. fig. 7). As a characteristic feature, *Siroloxophyllum utricullariae* has two contractile vacuoles, which lie in the middle section of the body and are usually slightly offset diagonally (s. figs. 1 a and 2 a). Since they empty alternately, sometimes only one contractile vacuole is visible.

*Siroloxophyllum utriculatriae* can be distinguished from *Loxophyllum meleagris* and *Loxophyllum helus* because these species possess only one contractile vacuole and because the dorsal margin is occupied by wart-like bundles of extrusomes. *Siroloxophyllum utricullariae* differs from *Litonotus* species by the fringe of extrusomes on the ventral and dorsal margin (in *Litonotus* only ventral) and by the number of contractile vacuoles (in *Litonotus* only one terminal).

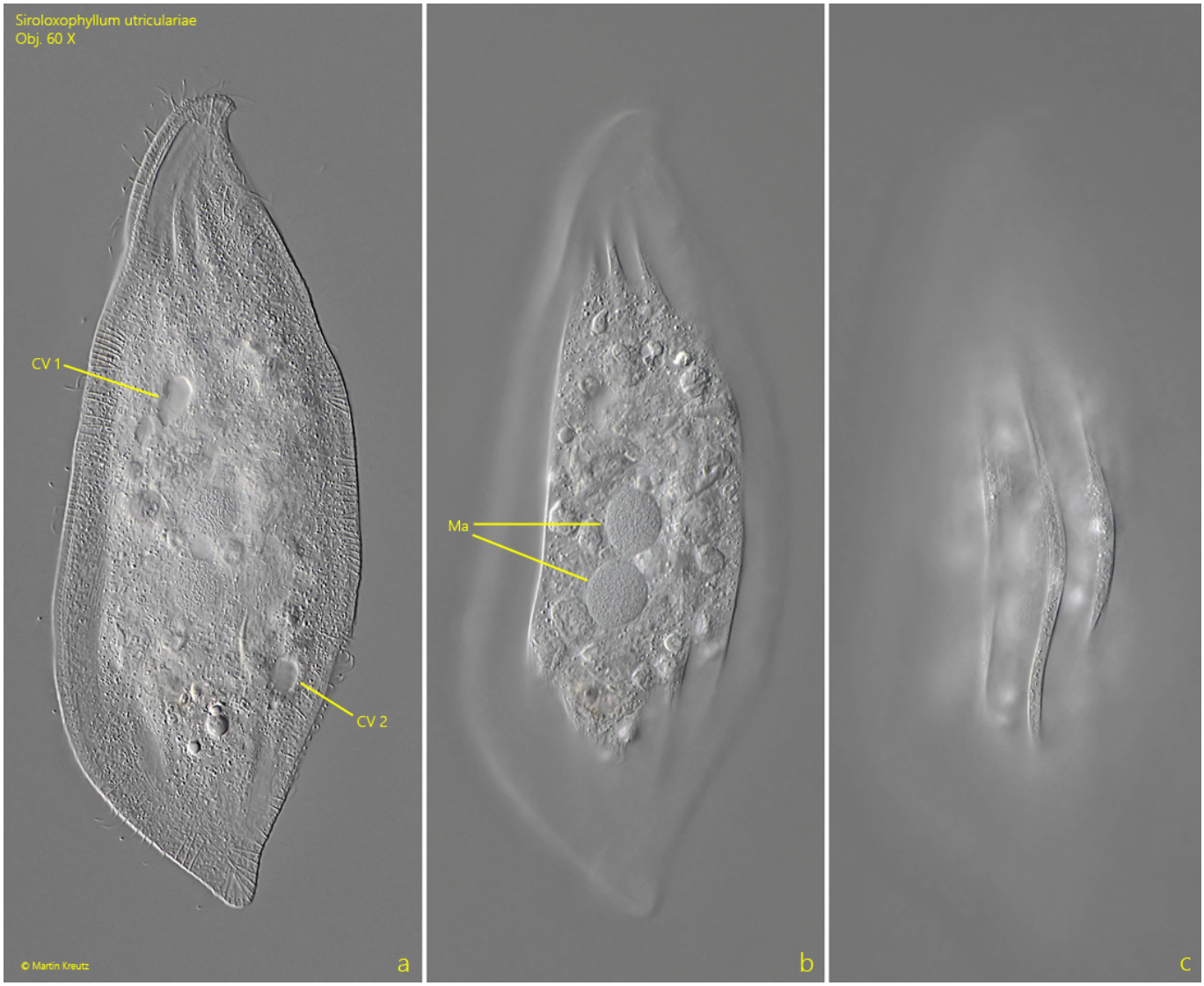


**Fig. 1 a-c:** *Siroloxophyllum utricullariae.* L = 217 µm. A freely swimming specimen from left. Note the two diagonally offset contractile vacuoles (Cv 1, CV 2) and the two globular macronuclei (Ma) in the center. Obj. 60 X.

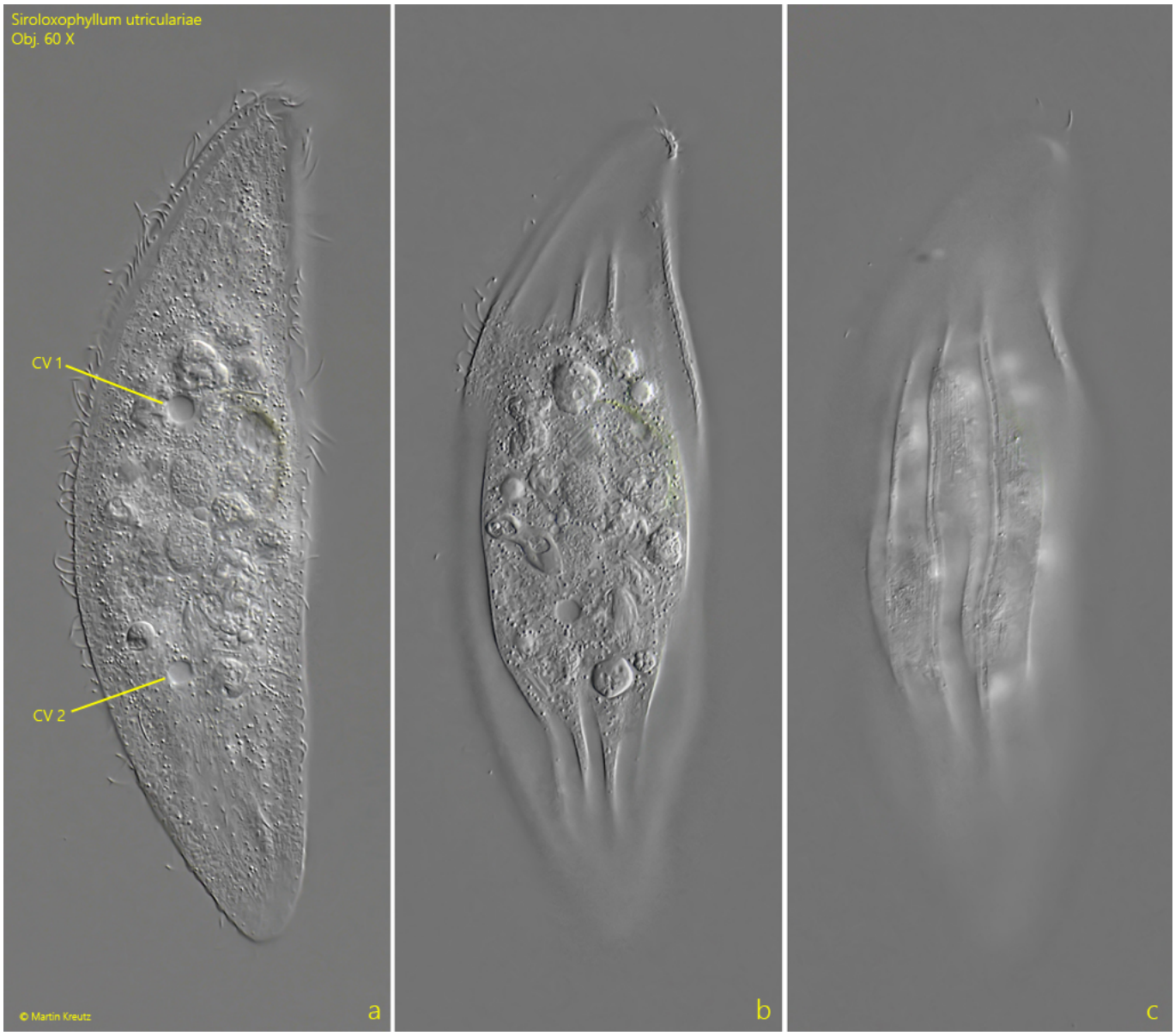



**Fig. 2 a-c:** *Siroloxophyllum utricullariae.* L = 182 µm. A second freely swimming specimen from left. CV 1, CV 2 = contractile vacuoles. Obj. 60 X.




**Fig. 3 a-b:** *Siroloxophyllum utricullariae.* L = 230 µm. A third freely swimming specimen from right. Obj. 60 X.

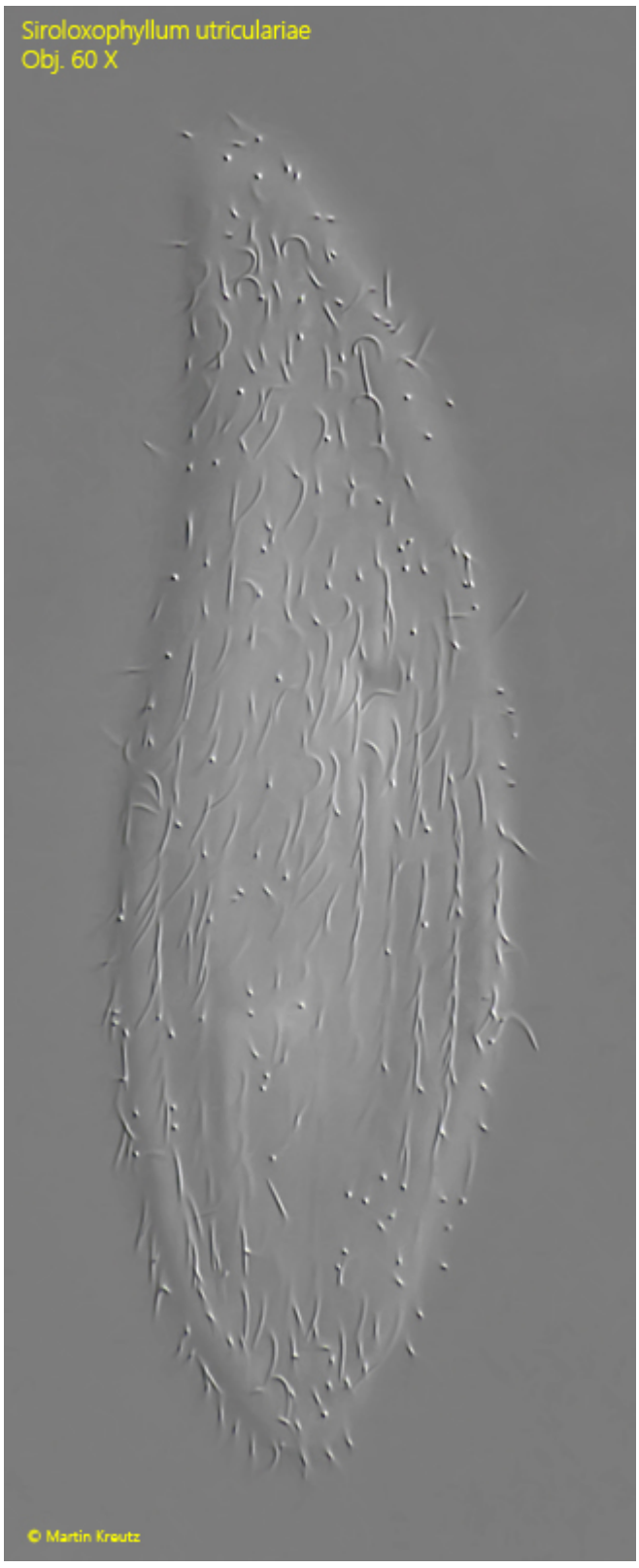



**Fig. 4:** *Siroloxophyllum utriculariae.* L = 180 µm. Focal plane on the longitudinal rows on cilia of the right side. Obj. 40 X.




**Fig. 5:** *Siroloxophyllum utriculariae.* The left side of a squashed specimen. The flattened ribs show a fine longitudinal striation of granules. Between them lie 4 longitudinal rows of short bristles (1–4, LRB). DB = dorsal brush. Obj. 100 X.




**Fig. 6:** *Siroloxophyllum utricullariae.* The string-like pattern (SLP) of the oral bulge. Obj. 60 X.

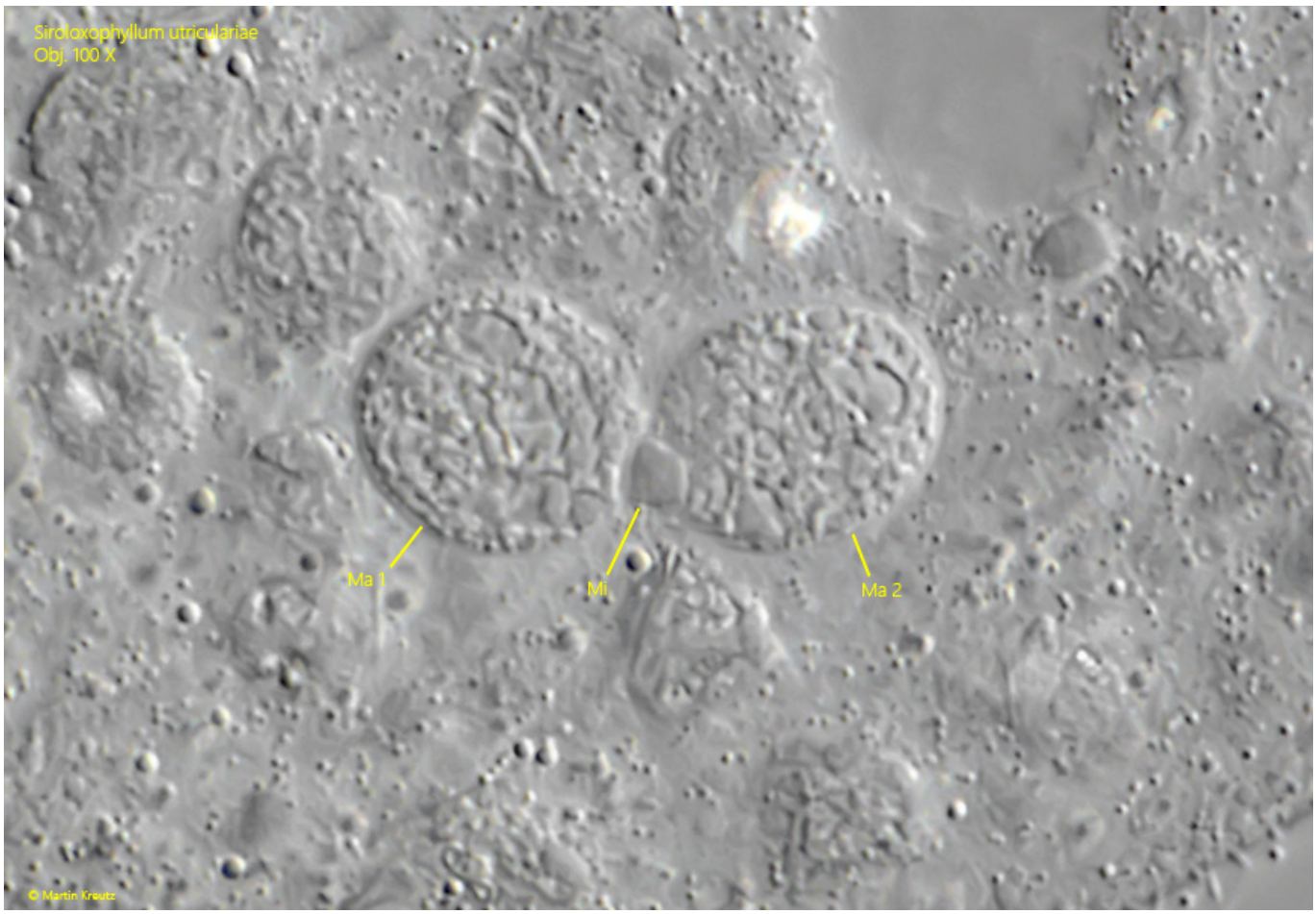



**Fig. 7:** *Siroloxophyllum utricullariae.* The two globular macronuclei (Ma 1, Ma 2) with the micronucleus (Mi) in between. Obj. 100 X.




**Fig. 8:** *Siroloxophyllum utriculariae.* The extrusomes (EX) are slightly curved with a length of 7–9 µm.