Bicosoeca petiolata

(Stein, 1878) Bourelly, 1951

Most likely ID: n.a.

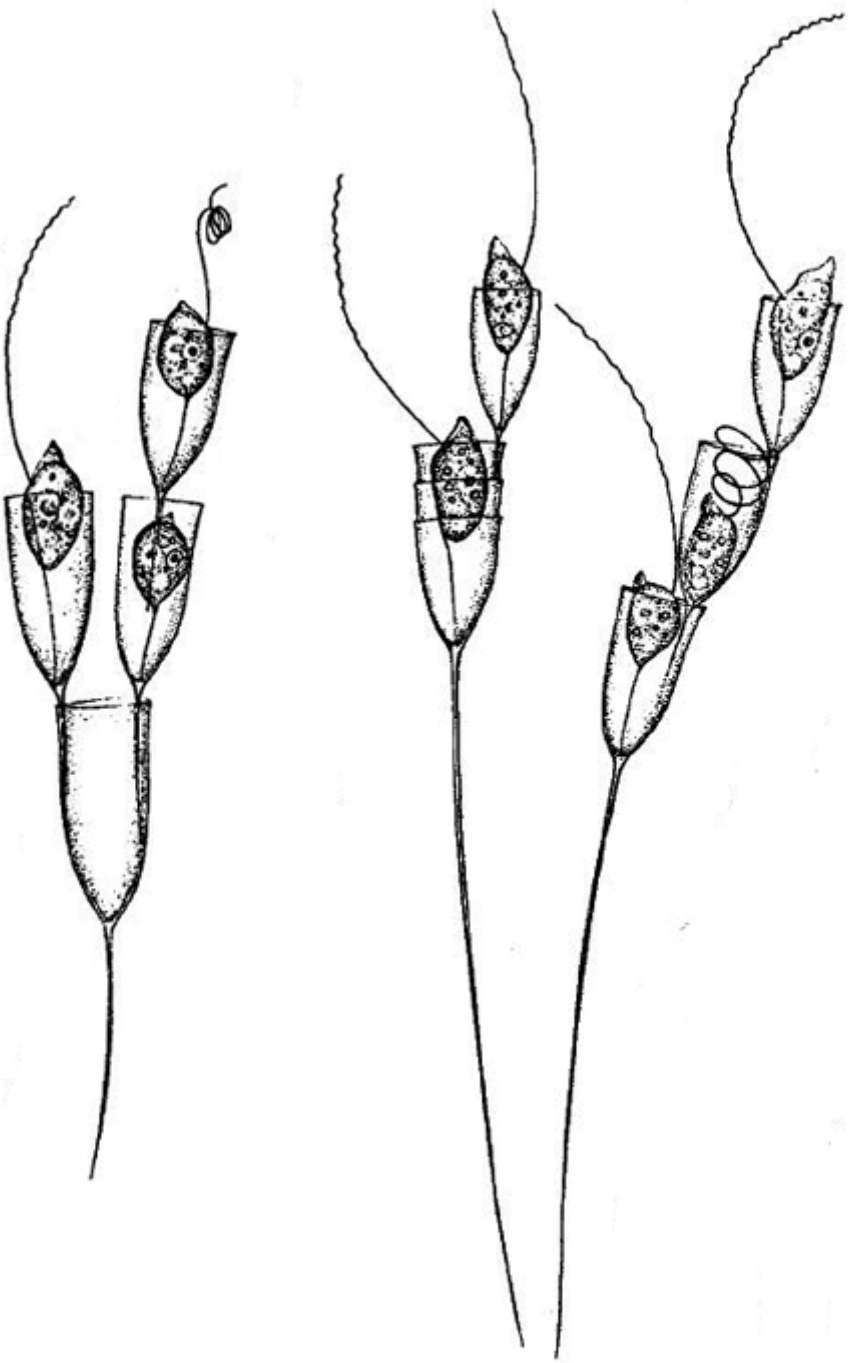
Synonym: n. a.

Sampling location: Ulmisried, Purren pond, Mainau pond, Simmelried

Phylogenetic tree: ***Bicosoeca petiolata***

Diagnosis:

- flagellates ovoid, with rudimentary collar, length 5-10 µm
- cells form tree-like colonies of vase-shaped loricas
- loricas 10–20 µm long, stem of colonies 10–100 µm long
- cells are attached to the bottom of lorica with the short, posterior flagellum
- anterior flagellum about 40 µm long
- nucleus spherical, in center of cell
- 1–2 contractile vacuoles in posterior third



Bicosoeca petiolata

Bicosoeca petiolata is a very common flagellate in my sampling sites. It is best observed on floating coverslips, where colonies like to settle. The cell are anchored in the lorica with the short, posterior flagellum. The longer, anterior flagellum is used for catching food (bacteria) and performs sinuous and wave-like movements (s. figs. 2 and 3b). When disturbed, the flagellate retracts and the long flagellum is retracted in a spiral pattern (s. fig. 3a). Unlike most other colorless flagellates that feed heterotrophically, the flagella do not originate at an apically located mouth opening, but in the “shoulder area” in the anterior third of the cell (s. fig. 3b).

Fig. 1: *Bicosoeca petiolata*. L = 120 µm (of colony). A tree-shaped colony of 5 specimens in separate loricae. Obj. 100 X.

Fig. 2: *Bicosoeca petiolata*. A slightly squashed colony with two fully extended specimens. Obj. 100 X.

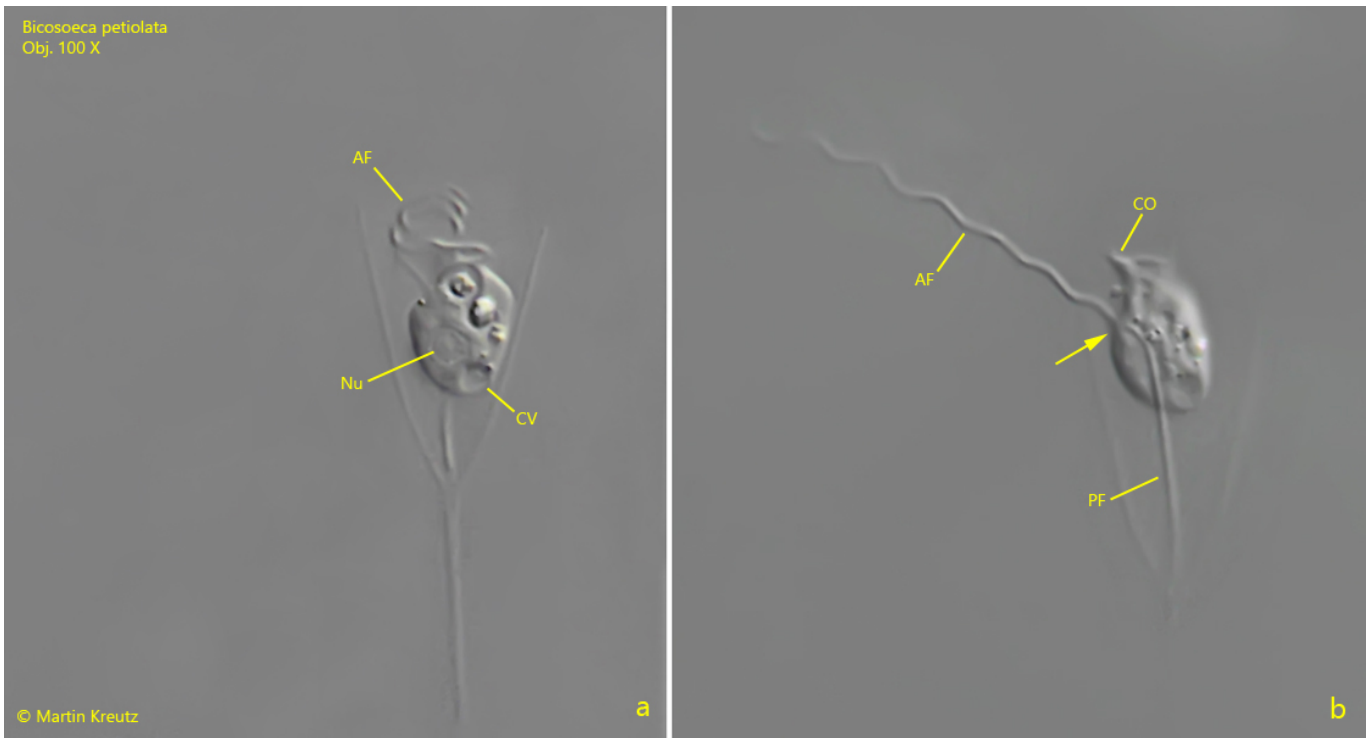


Fig. 3 a-b: *Bicosoeca petiolata*. A retracted (a) and a fully extended specimen (b). Note that the anterior flagellum (AF) as well as the posterior flagellum (PF) do not emerge at the apical end of the flagellate but in the anterior third (arrow). CO = rudimentary collar, CV = contractile vacuole, Nu = nucleus. Obj. 100 X.

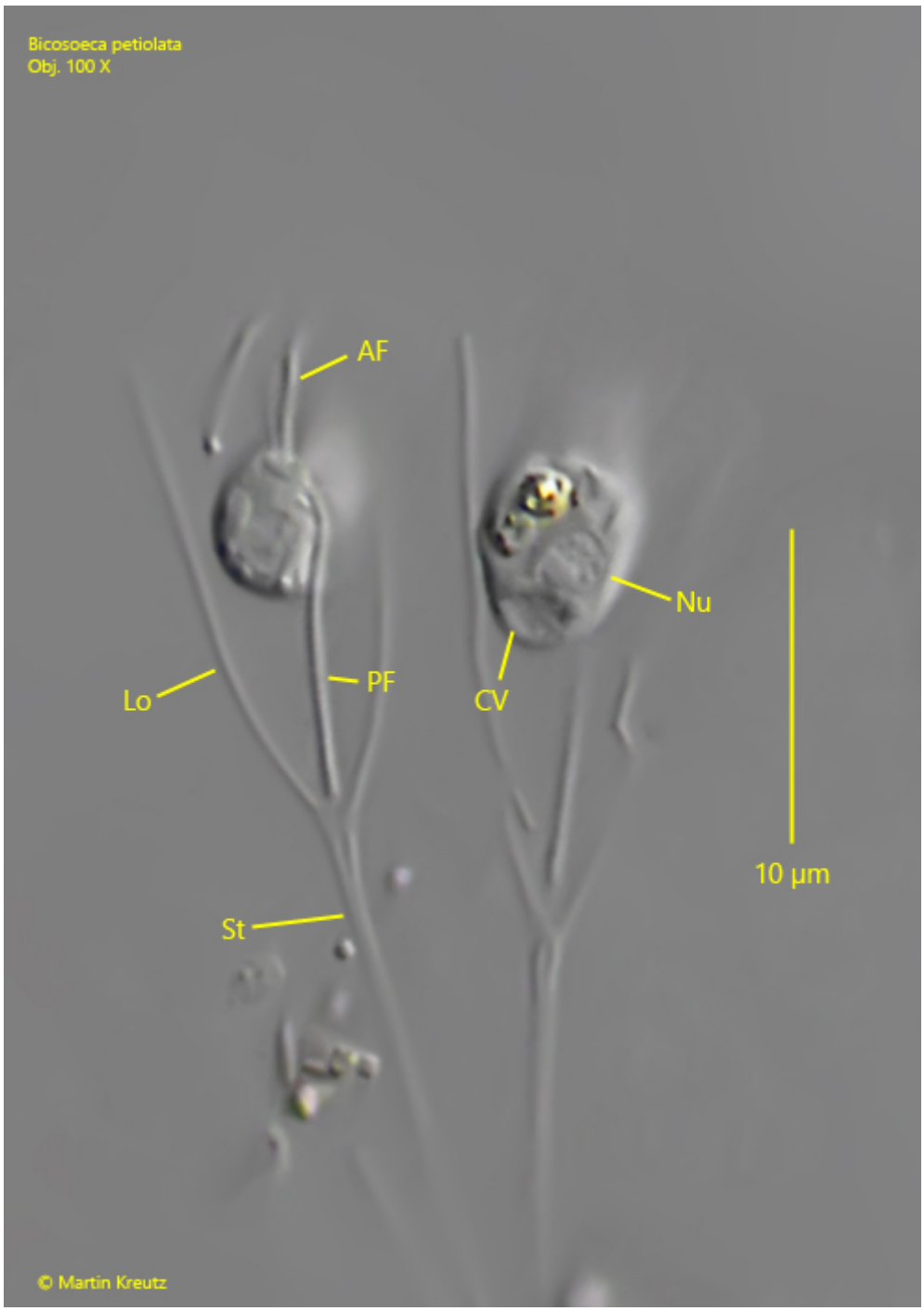


Fig. 4: *Bicosoeca petiolata*. Two retracted specimens. Note that the posterior flagellum (PF) is anchored to the base of the transparent lorica (LO). AF = anterior flagellum, CV = contractile vacuole, Nu = nucleus, ST = stem of the colony. Obj. 100 X.

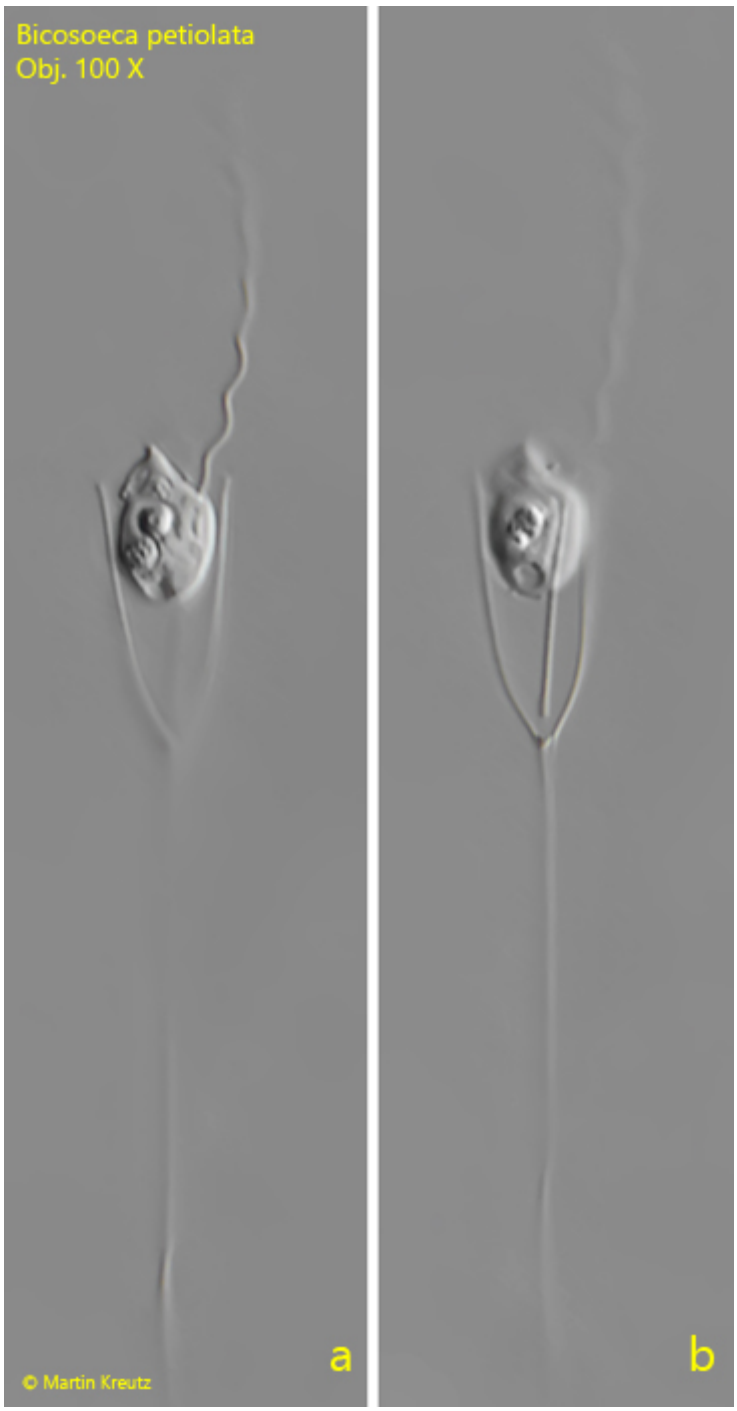


Fig. 5 a-b: *Bicosoeca petiolata*. L = 10.5 µm (of cell). Two focal planes of a solitary specimen. Obj. 100 X.