Mallomonas akrokomos Ruttner, 1913

Most likely ID: n.a.

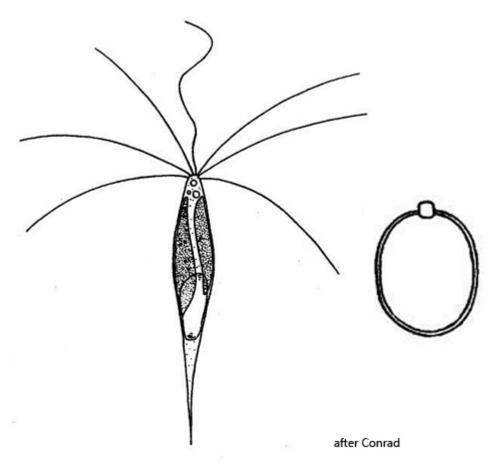
Synonym: n.a.

Sampling location: Mühlhalden pond

Phylogenetic tree: Mallomonas akrokomos

Diagnosis:

- cell spindle-shaped, apical end rounded, posterior pointed
- length 23-62 µm
- apical tuft of 6-8 long bristles, about 20-40 µm long
- body covered with trigonal scales (hard to see)
- two chloroplasts
- contractile vacuoles apically located
- one flagellum, about body length
- cysts 6-17 µm long, oblong or broadly oval



Mallomonas akrokomos

I have only found *Mallomonas akokomos* once in the plankton of the <u>Mühlhalden pond</u> in March 2017. With a length of approx. 40 µm and a spindle-shaped body, the cells are easy to overlook. The tuft of long bristles at the apical end is characteristic. This makes the species difficult to confuse with other Mallomonas species.

The scales are described as triangular, which should not overlap. According to my observations, they appear to be more diamond-shaped. They appear triangular due to a slight overlap (s. fig. 4). I could make out the contractile vacuoles in the middle of the body and not at the front end.

I was able to clearly identify the cyst as I found it in a dead specimen (s. fig. 5). Its shape and size correspond exactly to the description by Ruttner and the drawing by Conrad (s. drawing above).

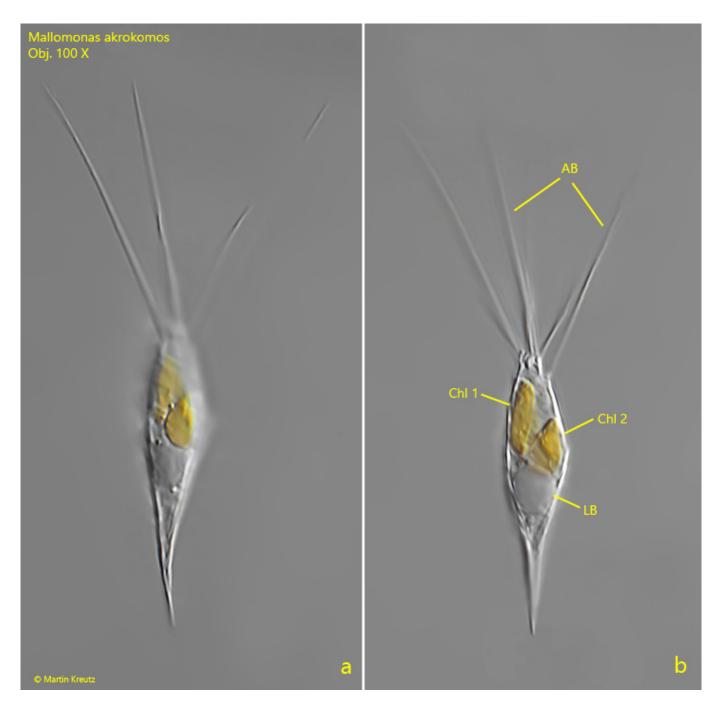


Fig. 1 a-b: $Mallomonas\ akrokomos$. L = 38 μm . Two focal planes of a freely swimming specimen. Note the tuft of long, apical brisles (AB) and the two chloroplasts (Chl 1, Chl 2). LB = leukosine body. Obj. 100 X.

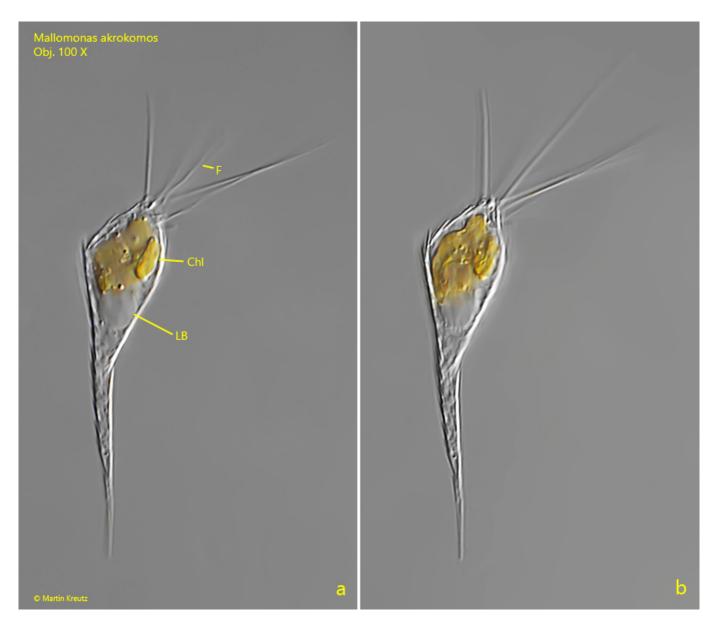


Fig. 2 a-b: Mallomonas akrokomos. $L = 58 \mu m$. A second freely swimming specimen. Chl = chloroplasts, F = flagellum, LB = leukosine body. Obj. 100 X.

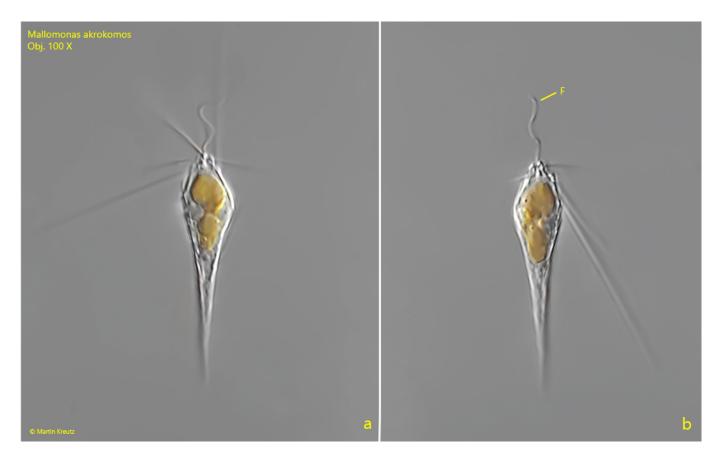


Fig. 3 a-b: Mallomonas akrokomos. L = 37 μm . A third freely swimming specimen. F = flagellum. Obj. 100 X.

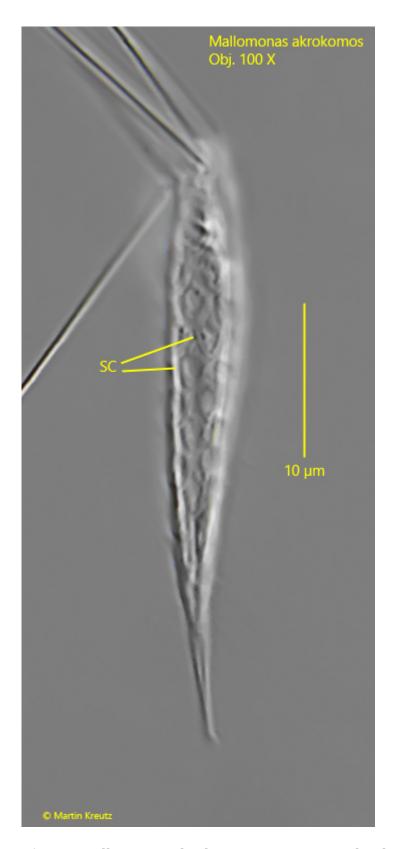


Fig. 4: Mallomonas akrokomos. L = 41 μm . The delicate scales become visible in dead specimens. Obj. 100 X.

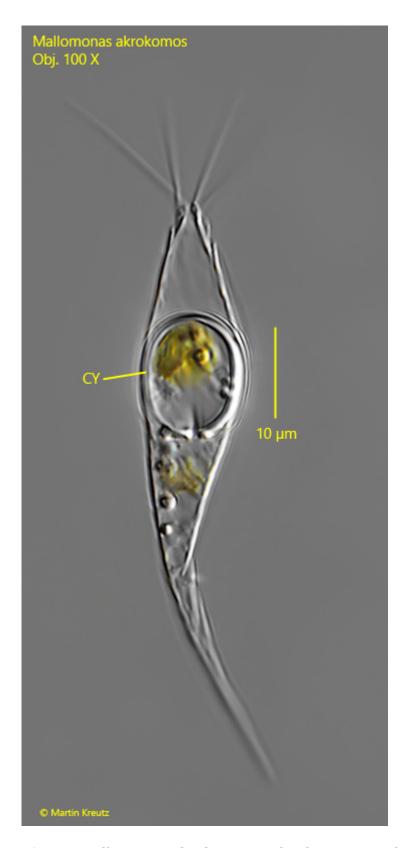


Fig. 5: Mallomonas akrokomos. A dead specimen that has previously formed a cyst (CY), which has also died. The cyst has a length of 14 μm . Obj. 100 X.