Mallomonas akrokomos Ruttner, 1913

Most likely ID: n.a.

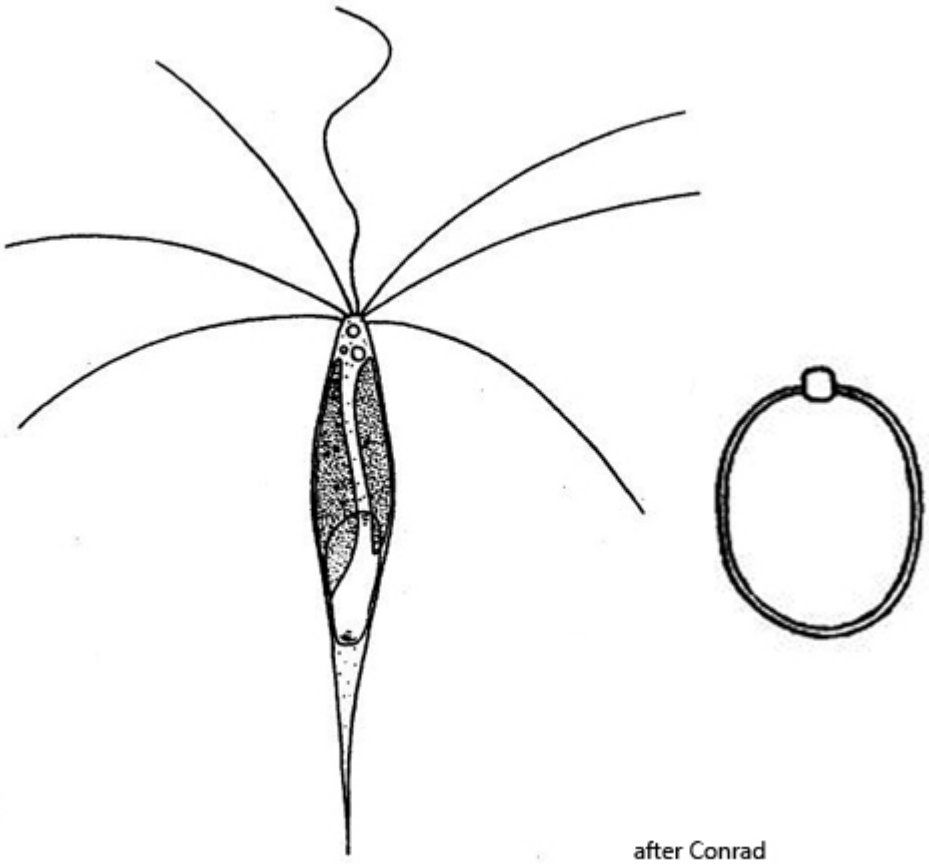
Synonym: n.a.

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 Mühlhalden pond 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).

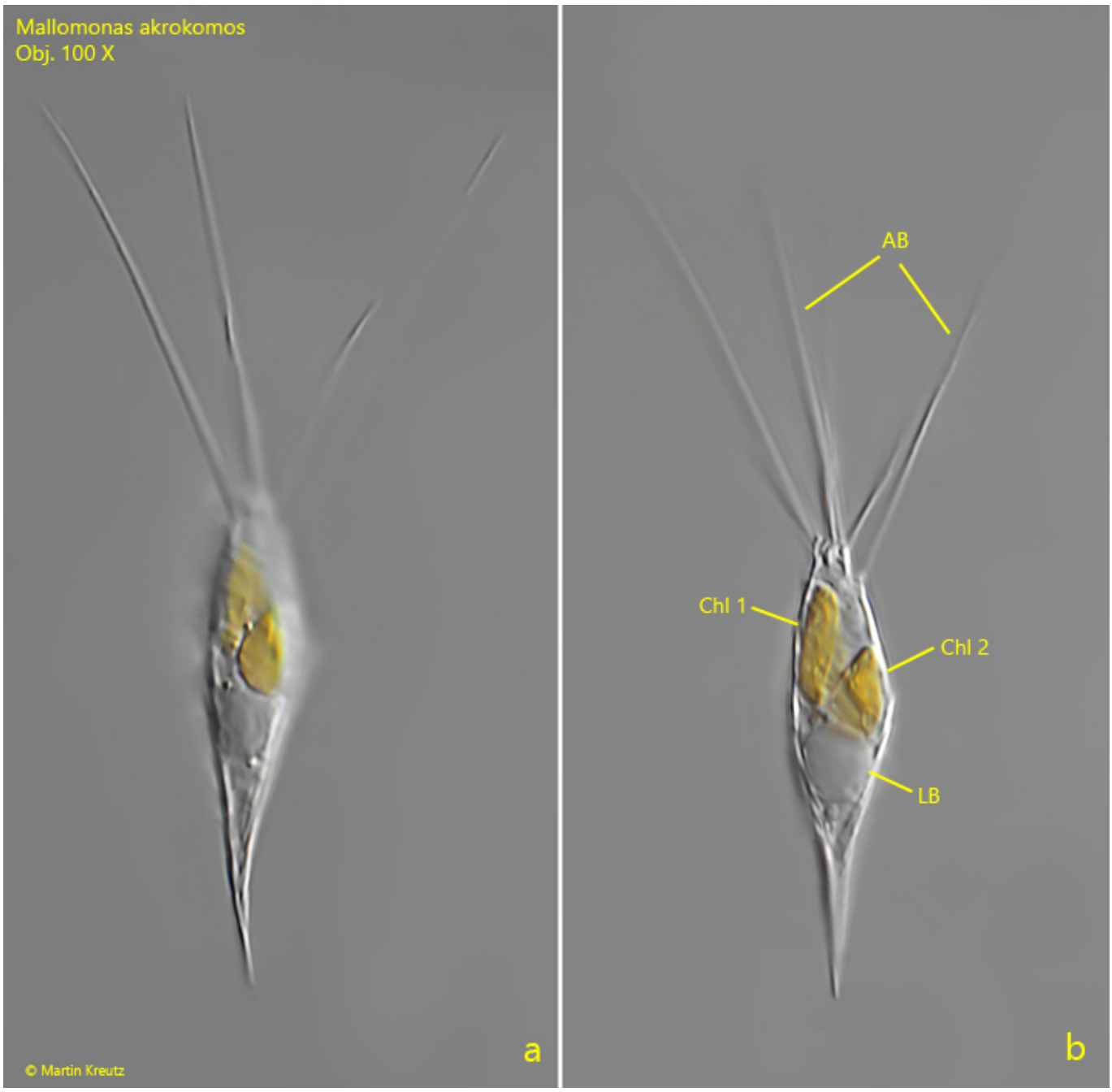


Fig. 1 a-b: *Mallomonas akrokomos*. L = 38 µm. Two focal planes of a freely swimming specimen. Note the tuft of long, apical brisles (AB) and the two chloroplasts (Chl 1, Chl 2). LB = leukosine body. Obj. 100 X.

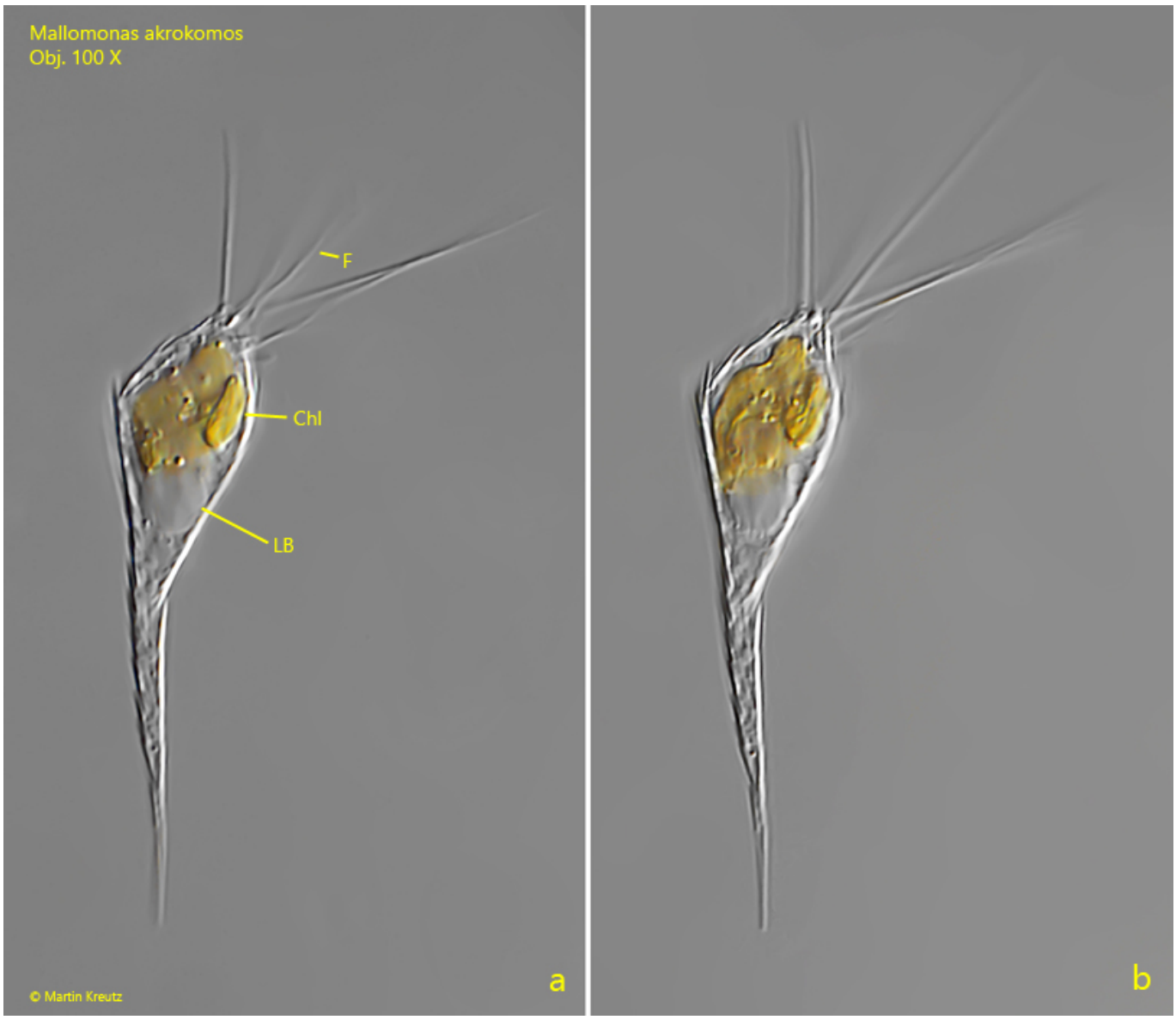


Fig. 2 a-b: *Mallomonas akrokomos*. L = 58 µm. A second freely swimming specimen. Chl = chloroplasts, F = flagellum, LB = leukosine body. Obj. 100 X.

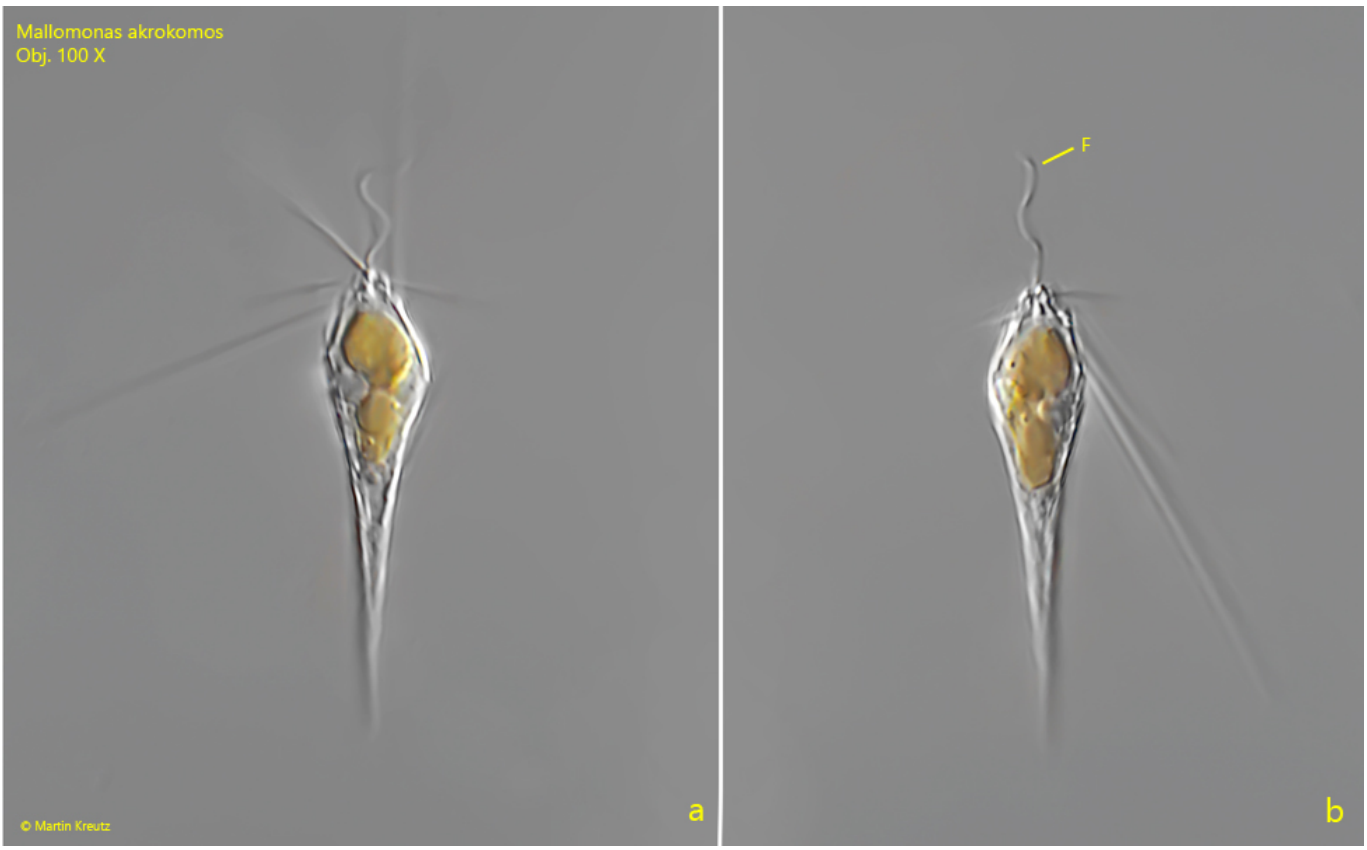


Fig. 3 a-b: *Mallomonas akrokomos*. L = 37 µm. A third freely swimming specimen. F = flagellum. Obj. 100 X.

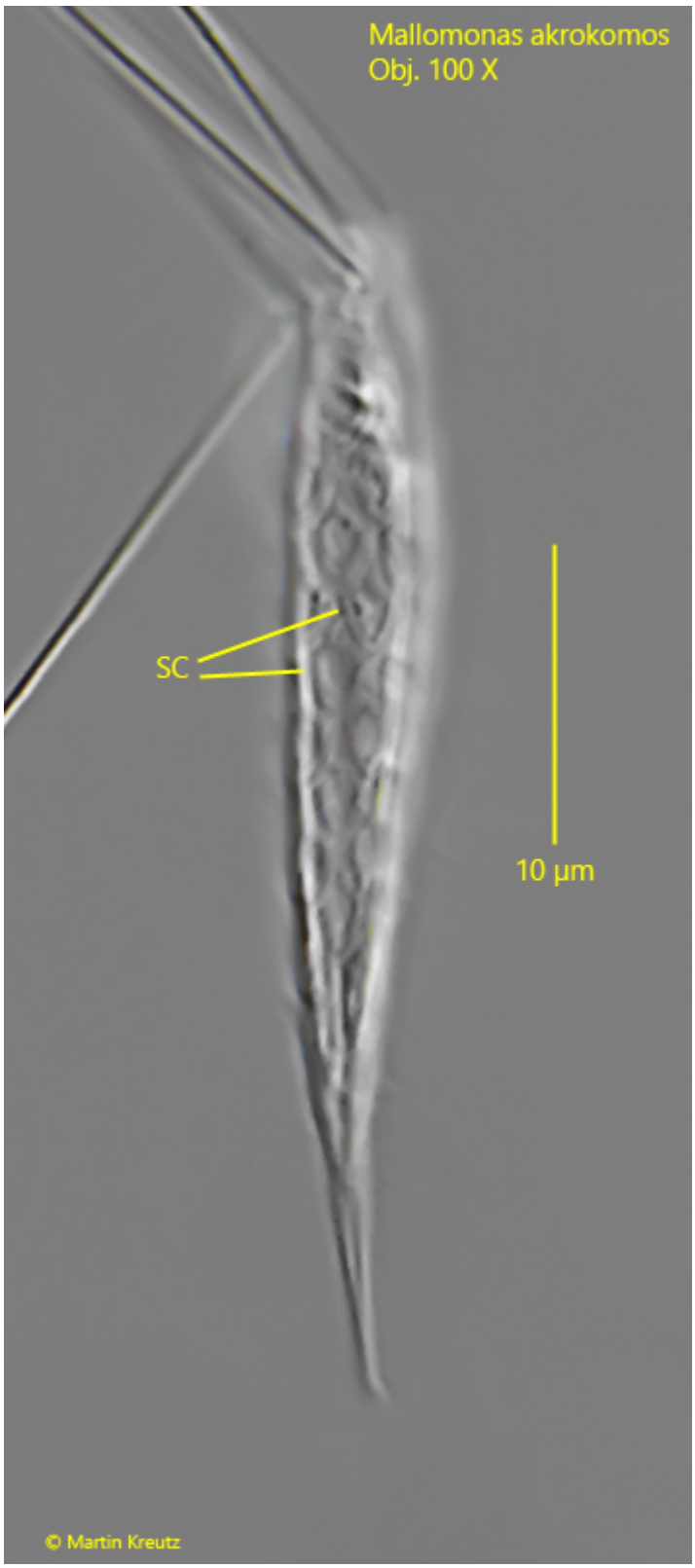


Fig. 4: *Mallomonas akrokomos*. L = 41 µm. The delicate scales become visible in dead specimens. Obj. 100 X.

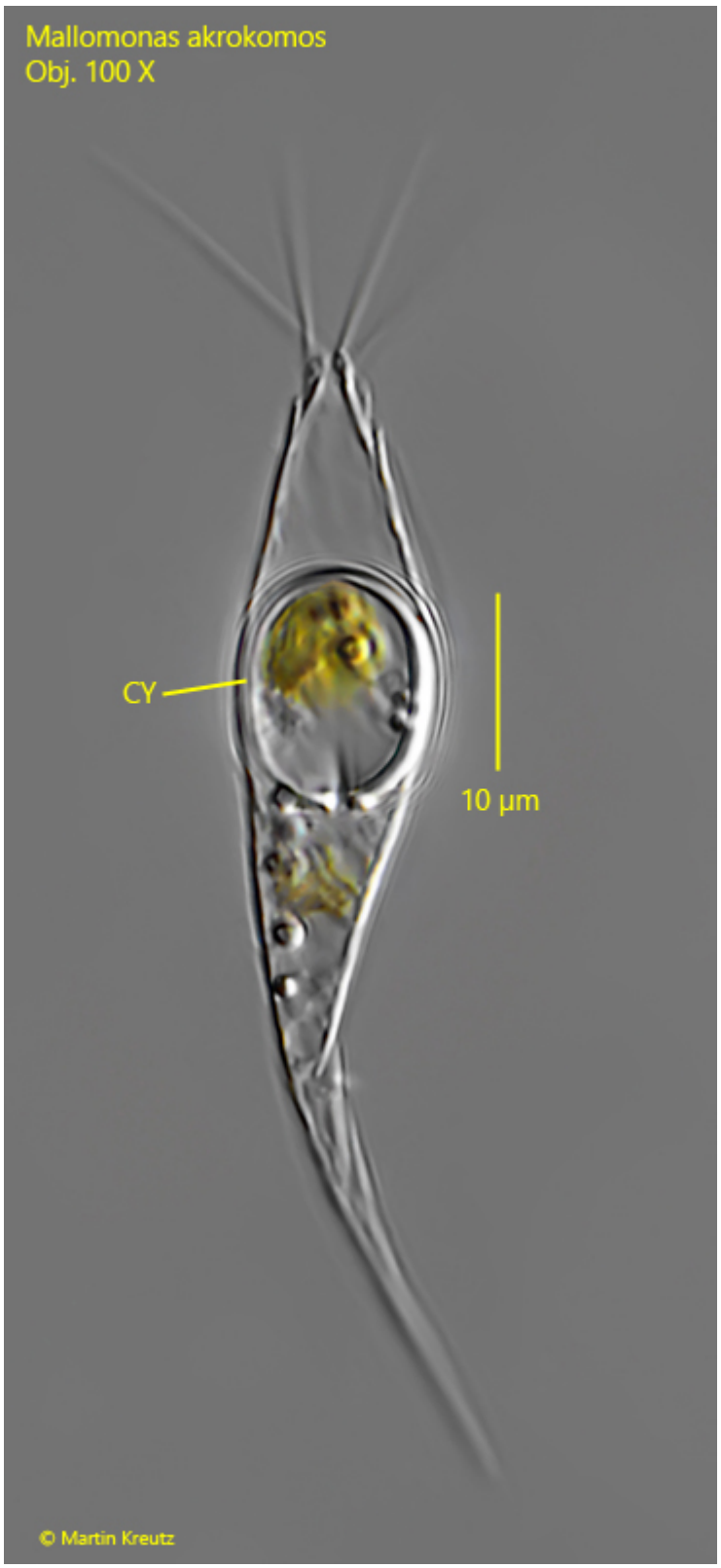


Fig. 5: *Mallomonas akrokomos*. A dead specimen that has previously formed a cyst (CY), which has also died. The cyst has a length of 14 µm. Obj. 100 X.