Ophryoglena utriculariae Kahl, 1931

Most likely ID: n.a.

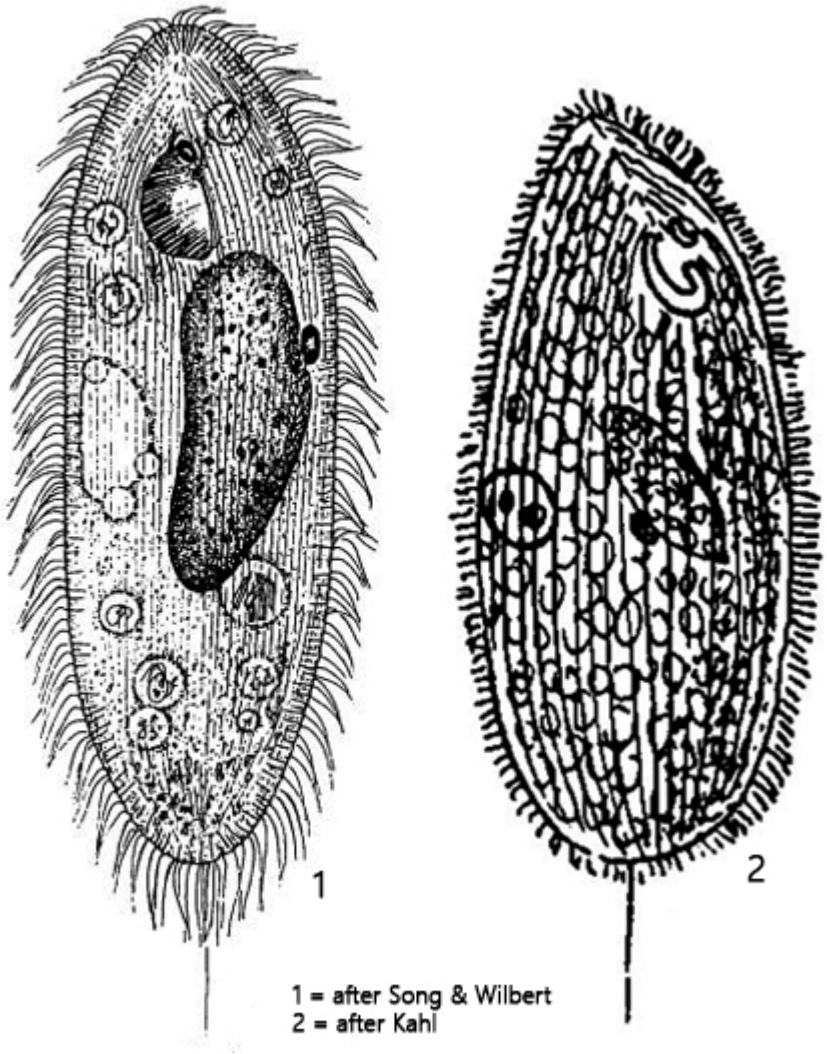
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Ophryoglena utriculariae*

Diagnosis:

- body slender, cylindrical, apically slightly pointed
- length 120–220 µm (sometimes 60–90 µm)
- oral apparatus with shape of a “6”
- oral apparatus with distinct watch-glass body
- distinct fringe of extrusomes forms a cortical layer
- macronucleus elongated ellipsoid
- one micronucleus adjacent to macronucleus
- contractile vacuole dorsal, near mid-body
- one caudal cilium (15–20 µm)



Ophryoglena utriculariae

So far I have only found a single specimen of *Ophryoglena utriculariae* in floating plants in the Simmelried. However, both Song & Wilbert (1989) and Kahl (1931) describe the species as common and widespread. Kahl mentions that he found *Ophryoglena utriculariae* exclusively among *Utricularia*.

The specimen I found was only 85 µm long, much smaller than the average length of 120–220 µm. However, both Kahl and Song & Wilbert mention that dwarf forms do occur.

The characteristics of my specimen match the descriptions for *Ophryoglena utriculariae*. I could not yet recognize the caudal cilia in the freely swimming specimen, but only in the slightly squashed specimen (s. fig. 3 a). The body is somewhat pointed apically, as described by Kahl (s. fig. 2 c). There is only one

contractile vacuole, which is located dorsally and approximately in the middle of the body. I could recognize 4 excretory pores of the contractile vacuole (s. fig. 4).

The macronucleus is elongated ellipsoid with a rather large, attached micronucleus (s. fig. 5). A clear fringe of rod-shaped extrusomes can be seen under the pellicle, all of which are directed posteriorly (s. figs. 5 and 6). According to my measurements they are about 3.3 µm long (s. fig. 6). This agrees well with the data of Song & Wilbert (3.8 µm). As in all *Ophryoglena* species, the oral apparatus is shaped like a 6. On the left wall of the vestibule is the watch-glass body located, which is also called Lieberkuehn's organelle (s. figs. 3 b and 7). This organelle is well developed and clearly recognizable in *Ophryoglena utriculariae*. Its function is unclear, but it is assumed that it is connected with the widening of the mouth opening when swallowing large prey.

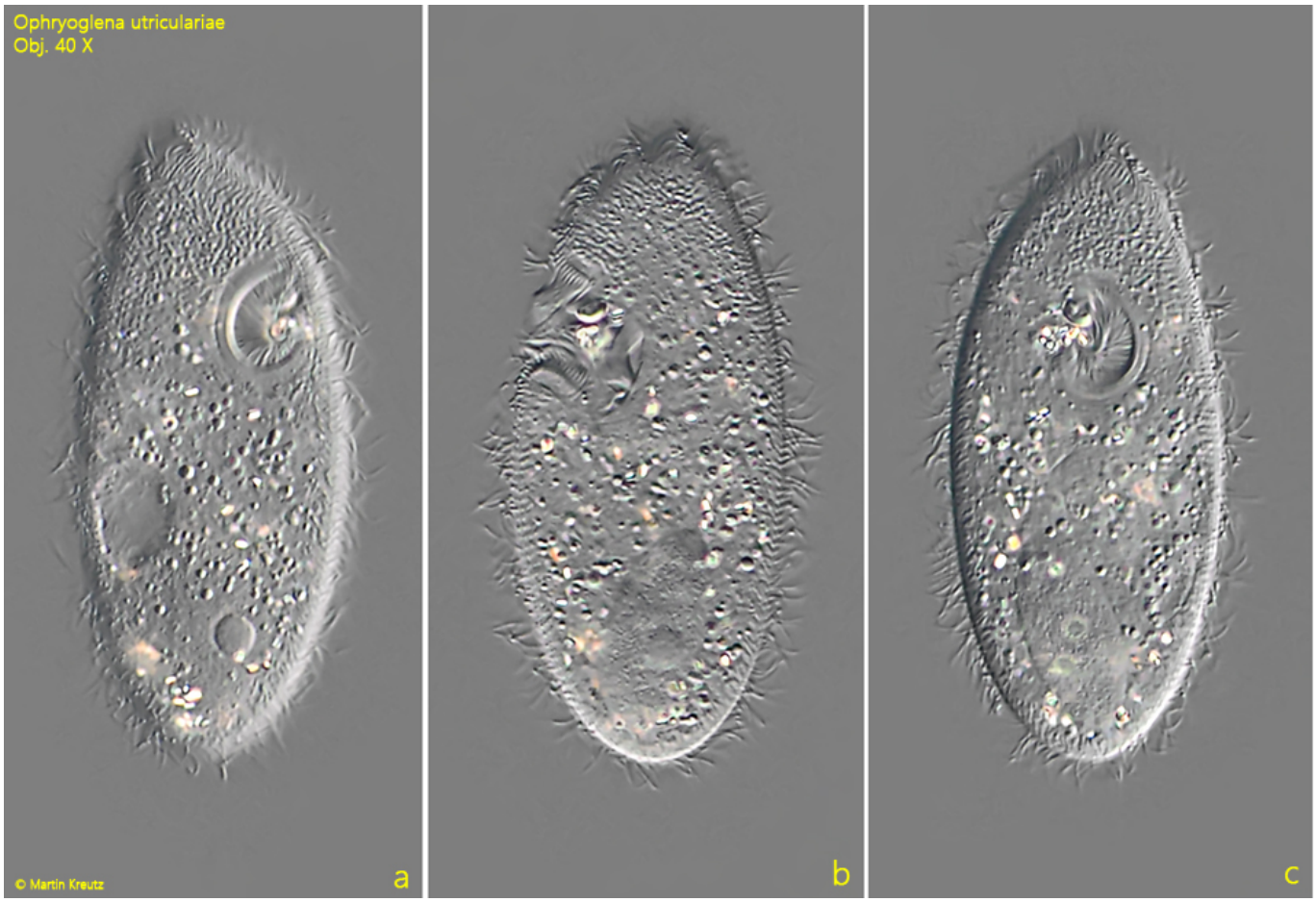


Fig. 1 a-c: *Ophryoglena utriculariae*. L = 85 µm. A freely swimming specimen from ventral (a, c) and from left (b). Obj. 40 X.

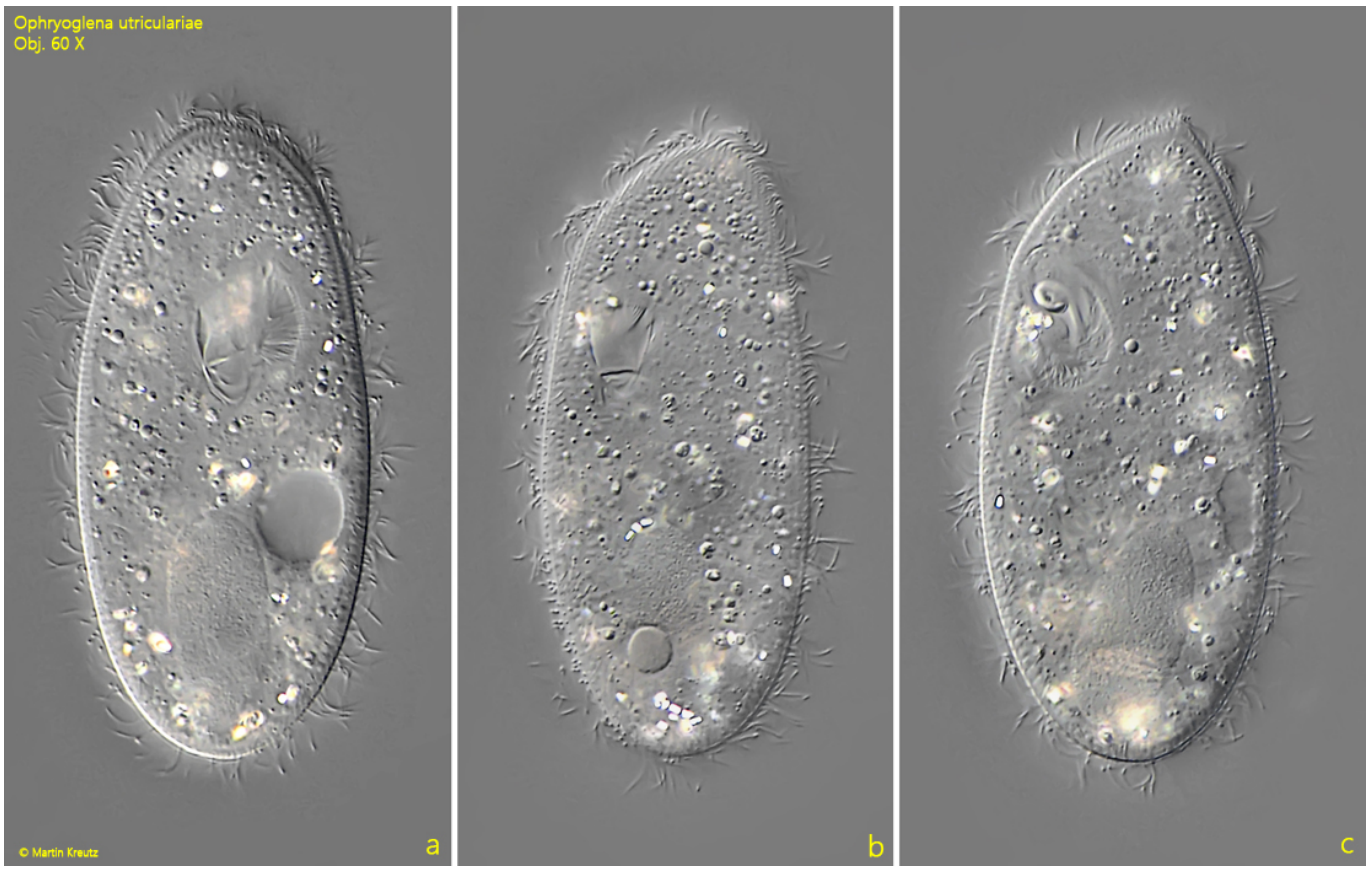


Fig. 2 a-c: *Ophryoglena utriculariae*. L = 85 µm. The freel swimming specimen as shown in fig. 1 a-c at higher magnification. Obj. 60 X.

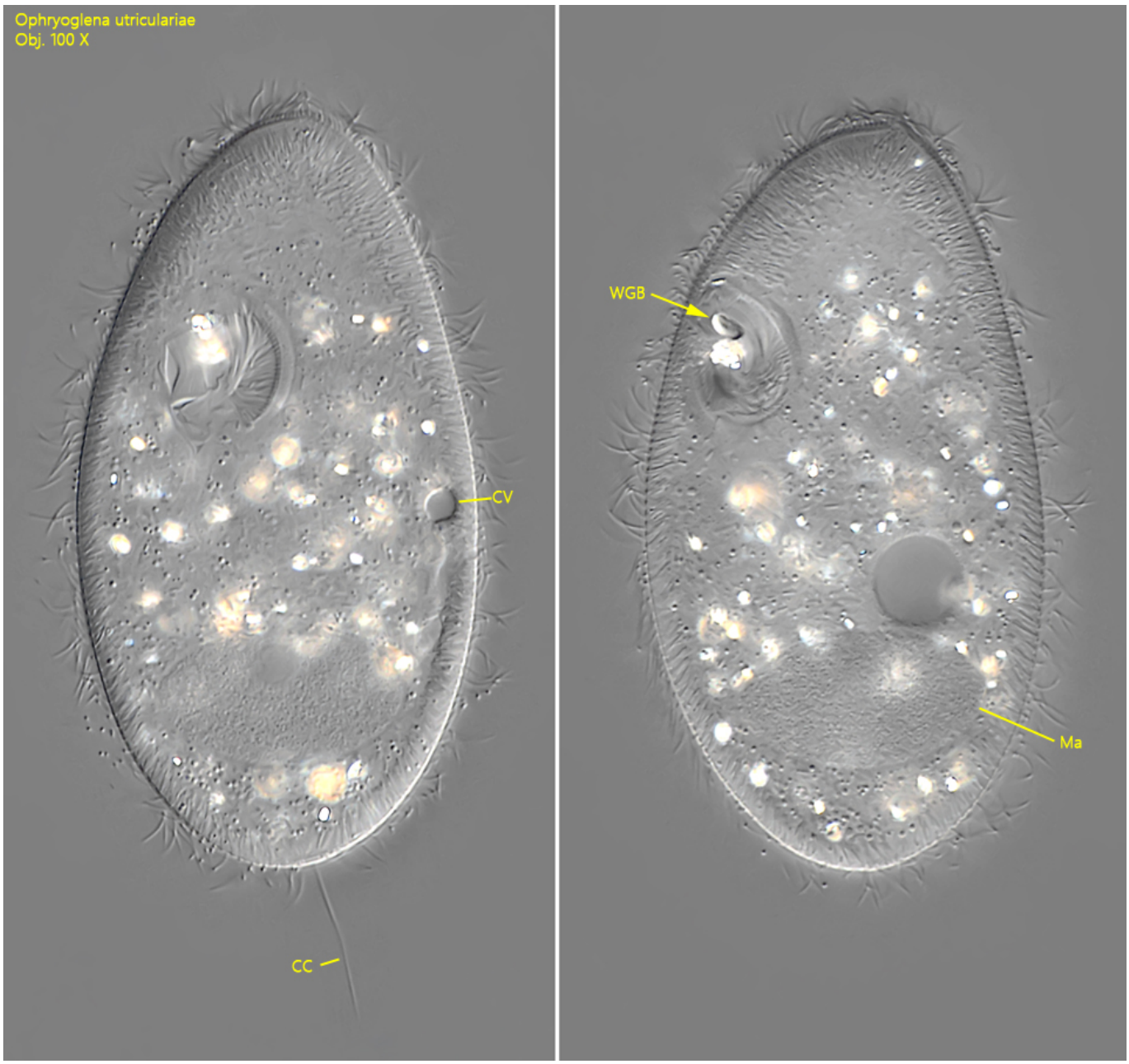


Fig. 3 a-b: *Ophryoglena utriculariae*. L = 85 µm. The slightly squashed specimen as shown in fiig. 1 a-c. Note the caudal cilium (CC) and the contractile vacuole near mid-body at the dorsal side. In the 6-shaped oral apparatus the watch-glass body (WGB) is visible. Ma = macronucleus. Obj. 100 X.

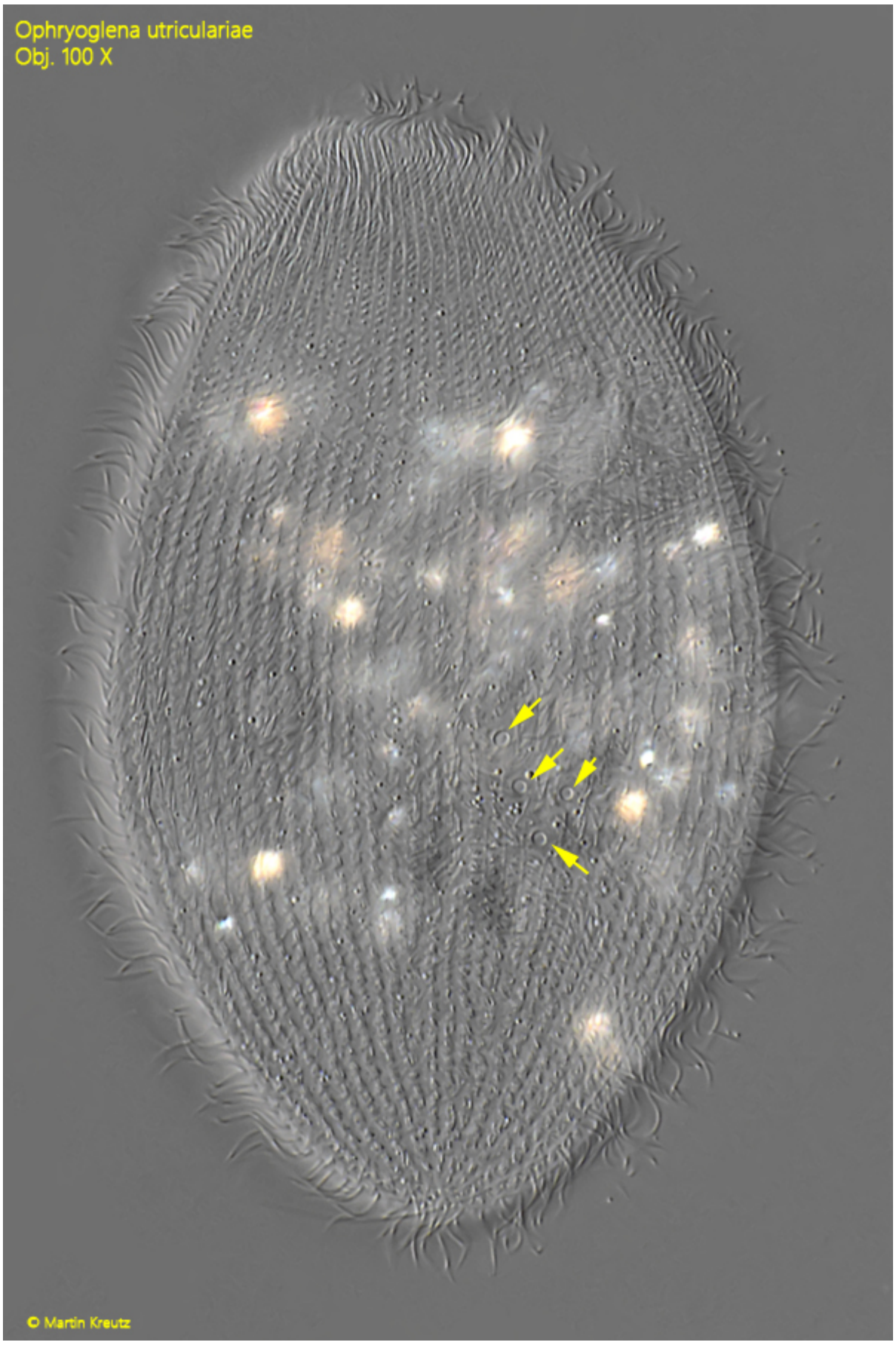


Fig. 4: *Ophryoglena utriculariae*. L = 85 µm. Dorsal view of a squashed specimen with 4 excretion pores (arrows) of the contractile vacuole. Obj. 100 X.

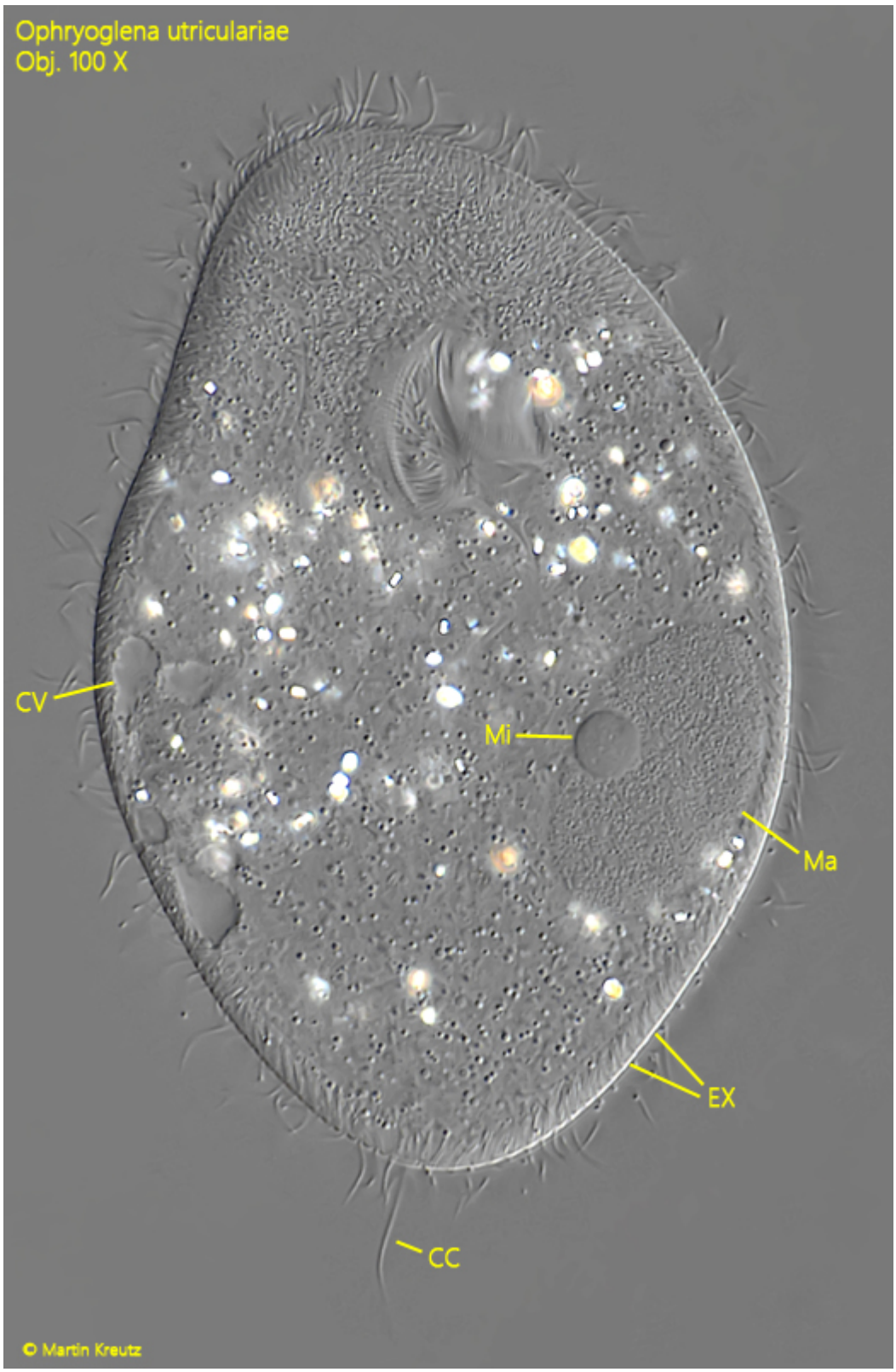


Fig. 5: *Ophryoglena utriculariae*. The ellipsoidal macronucleus (Ma) and the micronucleus (Mi) in a squashed specimen. CC = caudal cilium, CV = contractile vacuole, EX = fringe of extrusomes. Obj. 100 X.

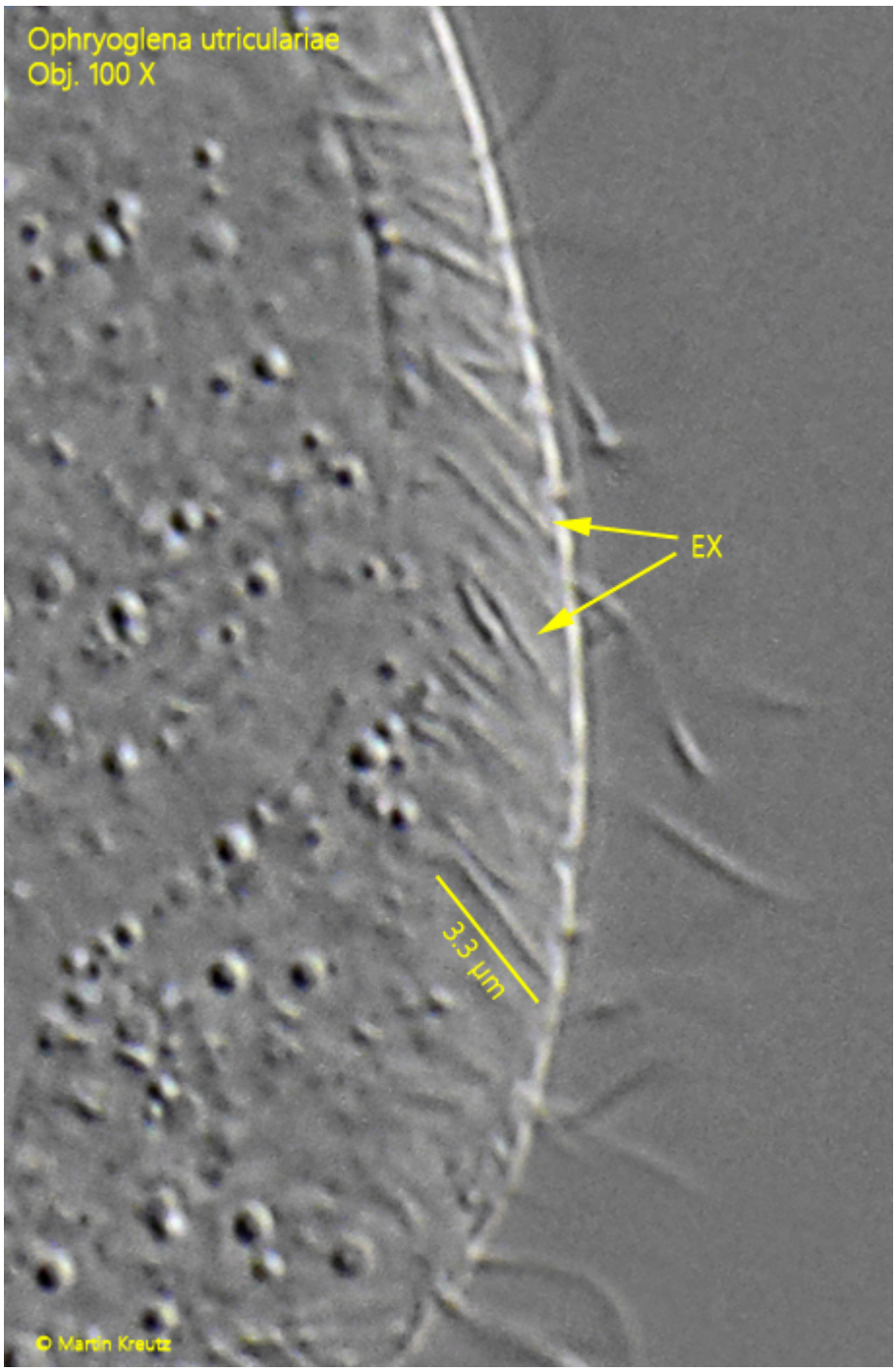


Fig. 6: *Ophryoglena utriculariae*. The rod-shaped extrusomes (EX) have a length of about 3.3 µm. Obj. 100 X.

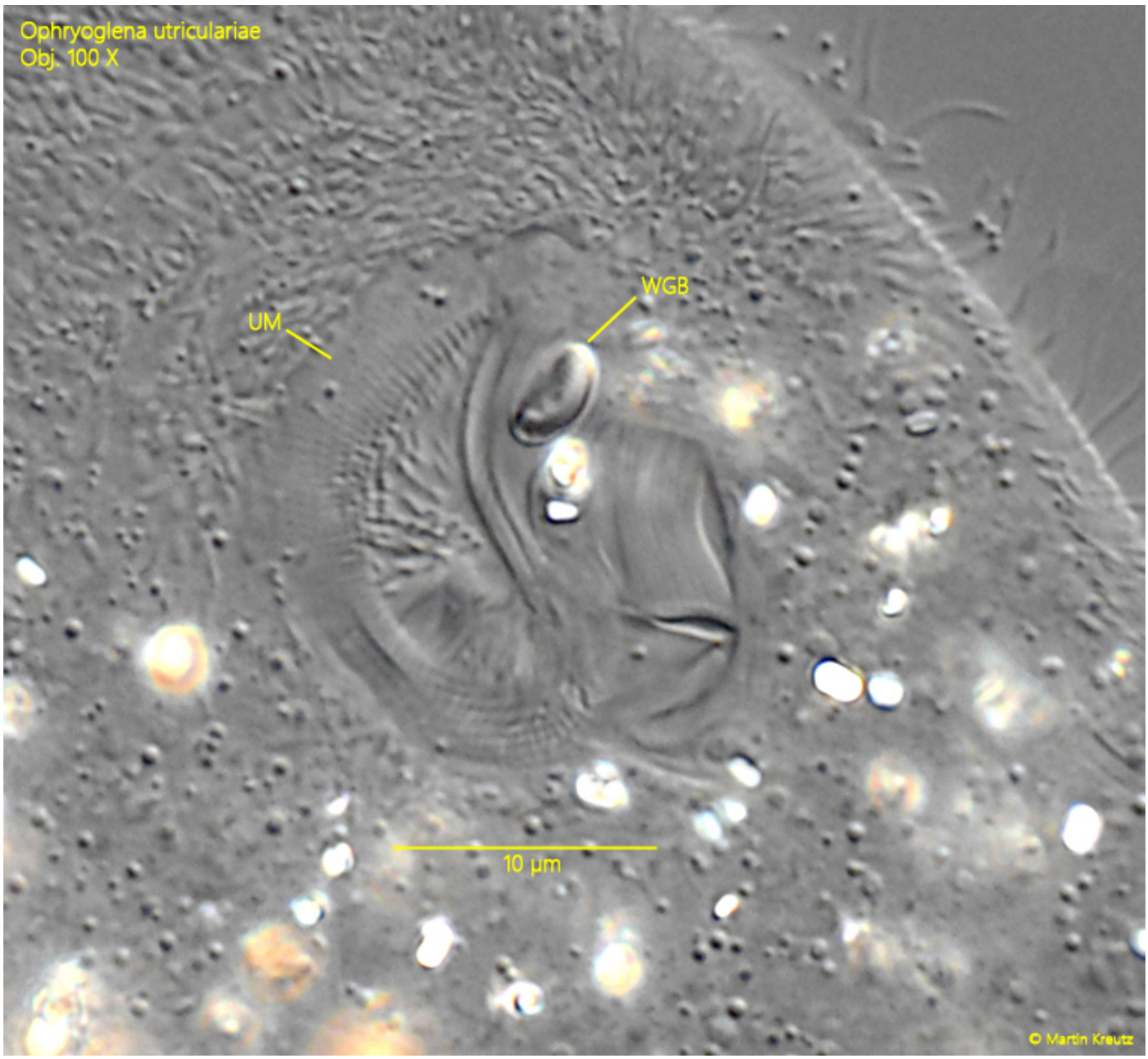


Fig. 7: *Ophryoglena utriculariae*. The oral apparatus with the watch-glass body (WGB) in detail. UM = undulating membrane. Obj. 100 X.