Uroglena articulata

Korshikov 1941

Most likely ID: n.a.

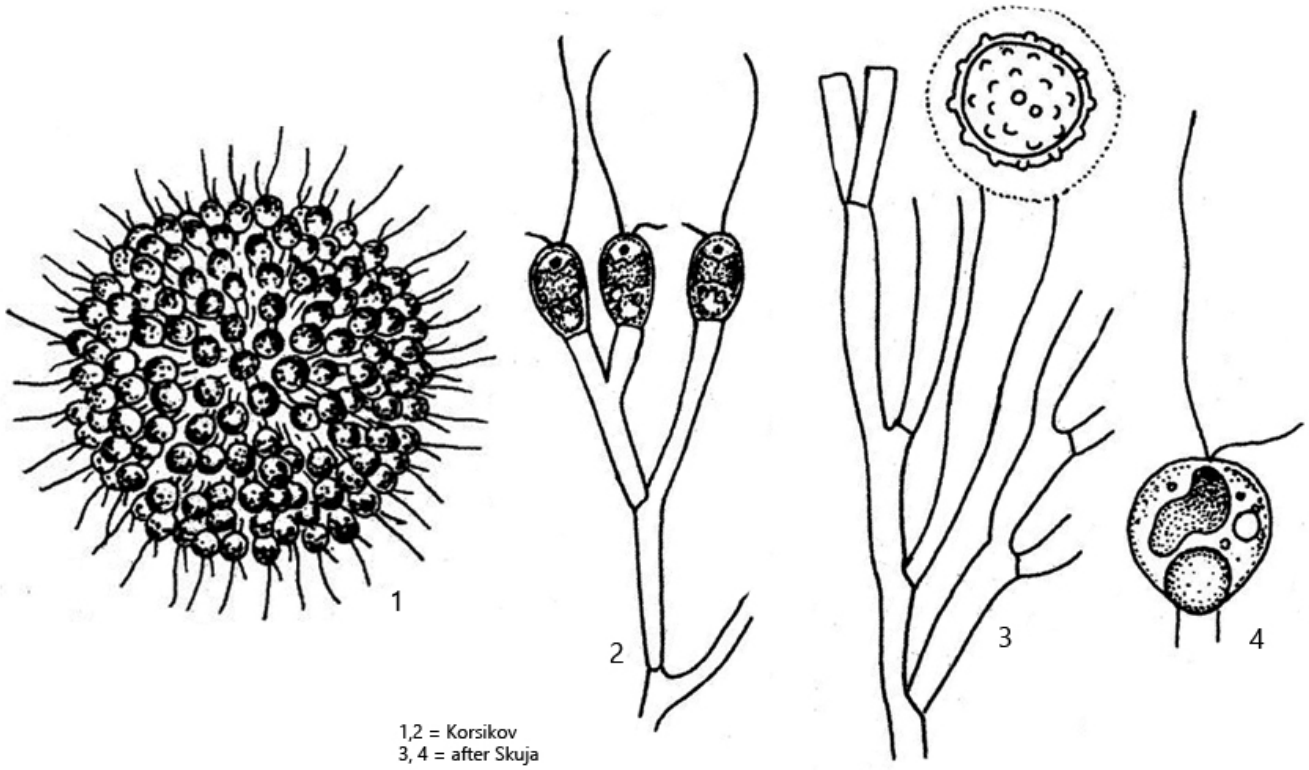
Synonym: *Uroglena eustylis*

Sampling location: Bussenried, Mühlhalden pond

Phylogenetic tree: *Uroglena articulata*

Diagnosis:

- colonies spherical or almost spherical
- diameter (of colonies) 120–300 µm
- cells spherical or oval, length 10–15 µm
- cells at distal end of dichotomously branched stalks
- stalks hollow, 2–3 µm in diameter, articulated
- 1–3 contractile vacuoles near cell equator
- 2 flagella of inequal length
- one ribbon-shaped, golden-brown chloroplast
- one eyespot
- cyst spherical (14–16 µm) with warts and short neck (3–4 µm)



Uroglena articulata

So far I have only found *Uroglena articulata* in the plankton of the Bussenried. At low magnification, the colonies can be mistaken for *Uroglena volvox* at first glance, but the cells are significantly smaller. The gelatinous stalks, at the ends of which the cells are located, provide a reliable classification. These are hollow, dichotomously branched and divided into segments by cross walls (s. figs. 2 and 3). The individual segments are sometimes somewhat bulbous in shape. The stalks are very delicate, but can be recognized in DIC.

Another important characteristic is the shape and appearance of the cysts. In *Uroglena articulata*, these have short warts (s. fig. 5 a-b). A short neck is also present.

The chloroplast is ribbon-shaped and very short (s. fig. 4). Almost the entire posterior half of the cells is filled with a leucosin body. In my population, the contractile vacuoles were located just above the cell equator. The cells were always oval and about 8–12 µm long. Even at low coverslip pressure, they deform and burst quickly.

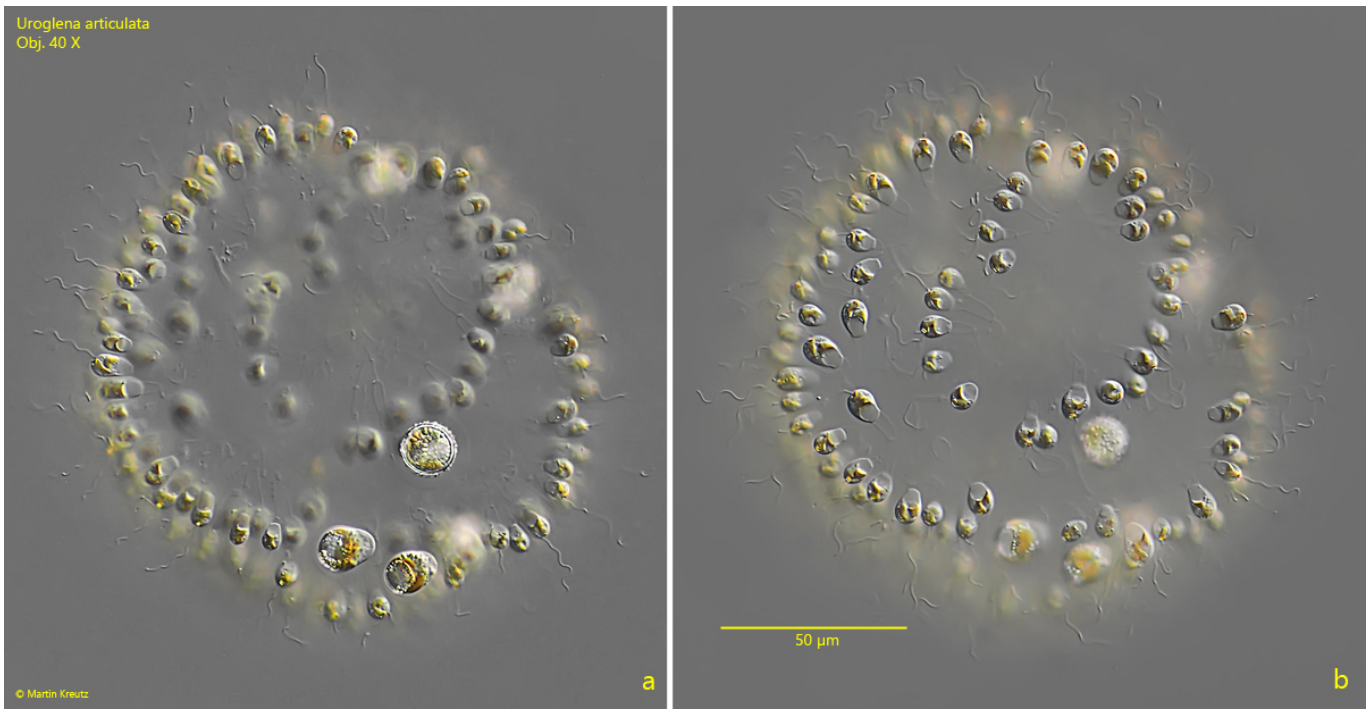


Fig. 1 a-b: *Uroglena articulata*. D = 147 µm (of colony). Two focal planes of a slightly squashed colony. Obj. 40 X.

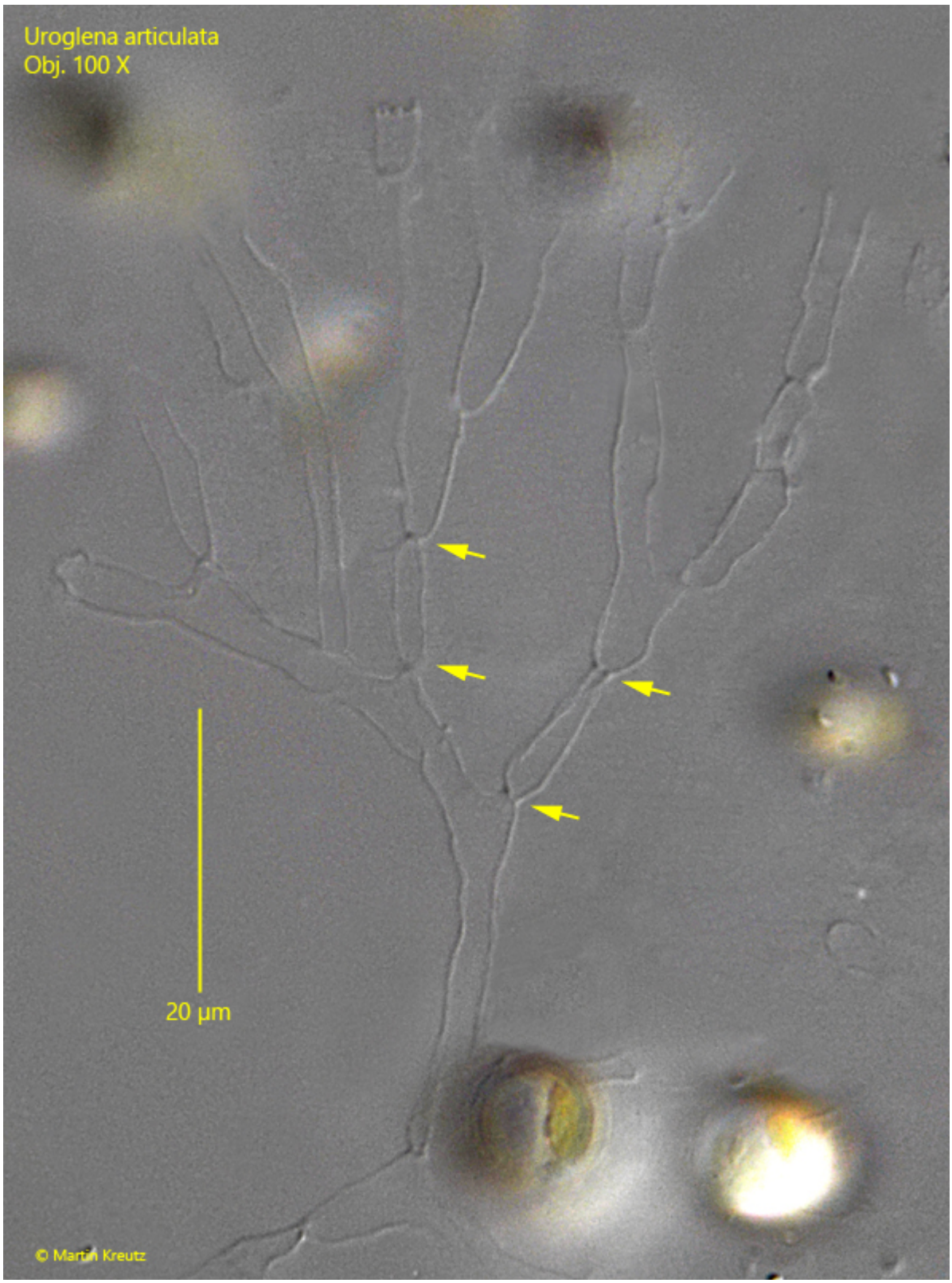


Fig. 2: *Uroglena articulata*. The dichotomously branched, hollow stalks in a squashed colony. The image was higly constast enhanced to visualize the delicate stalks. Note the crosswalls between the segments of the stalk. Obj. 100 X.

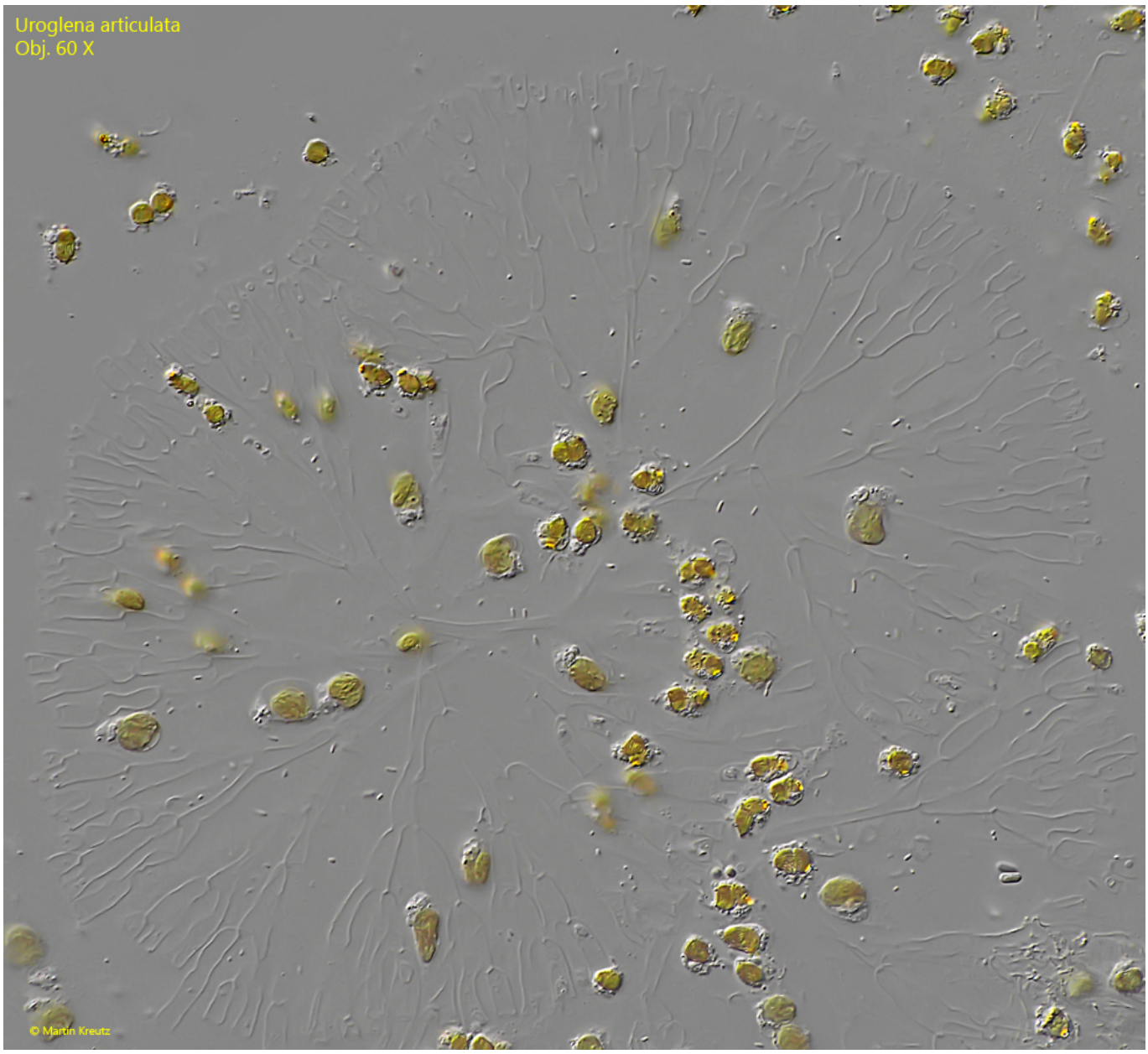


Fig. 3: *Uroglena articulata*. The branched stalks in a second strongly squashed colony. Obj. 60 X.

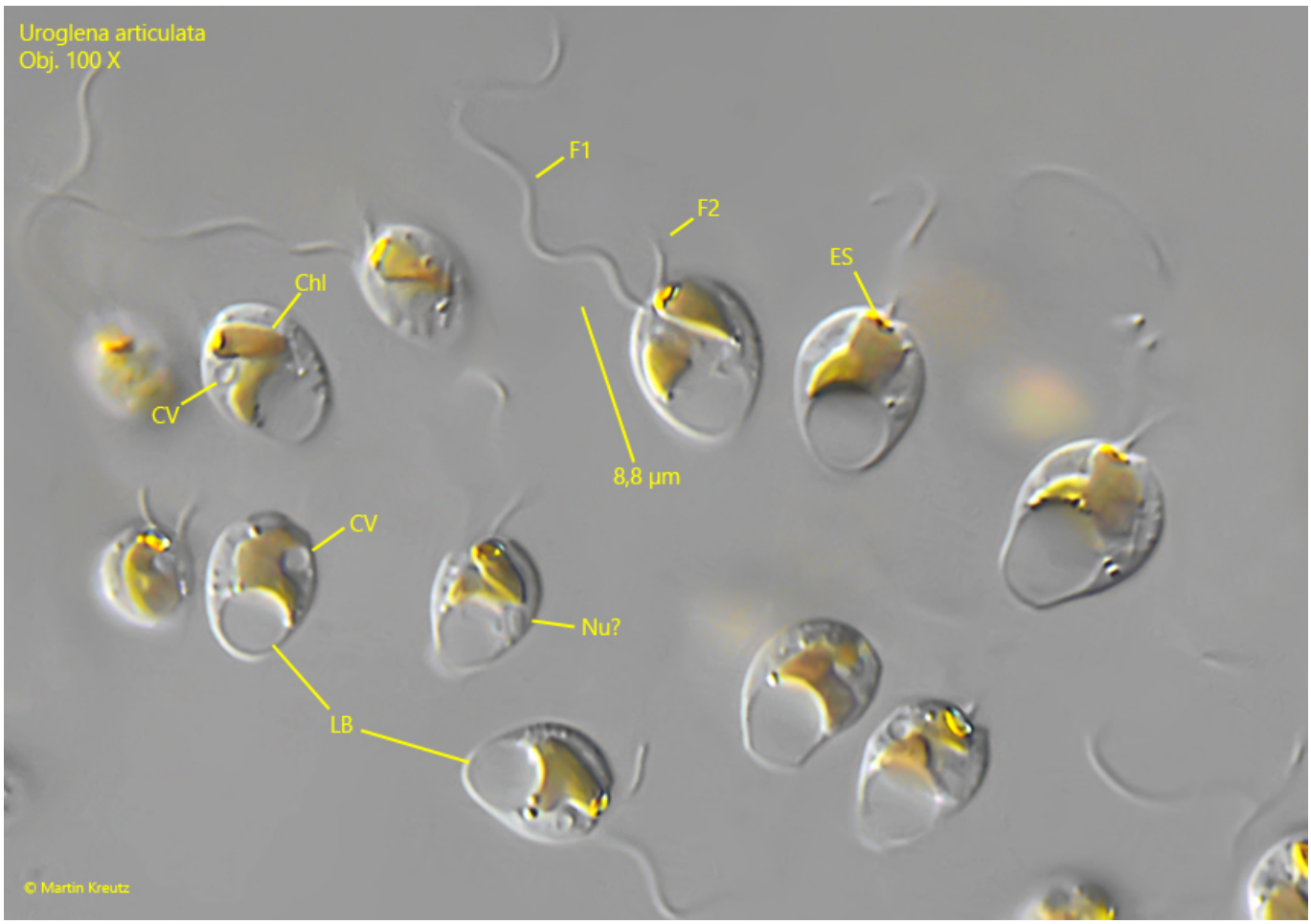


Fig. 4: *Uroglena articulata*. L = 8–11 µm. The cells in a squashed colony in detail. Chl = ribbon-shaped chloroplast, CV = contractile vacuole, ES = eyespot, F1 = primary flagellum, F2 = secondary flagellum, LB = leukosine body in posterior end, NU = probably the nucleus. Obj. 100 X.

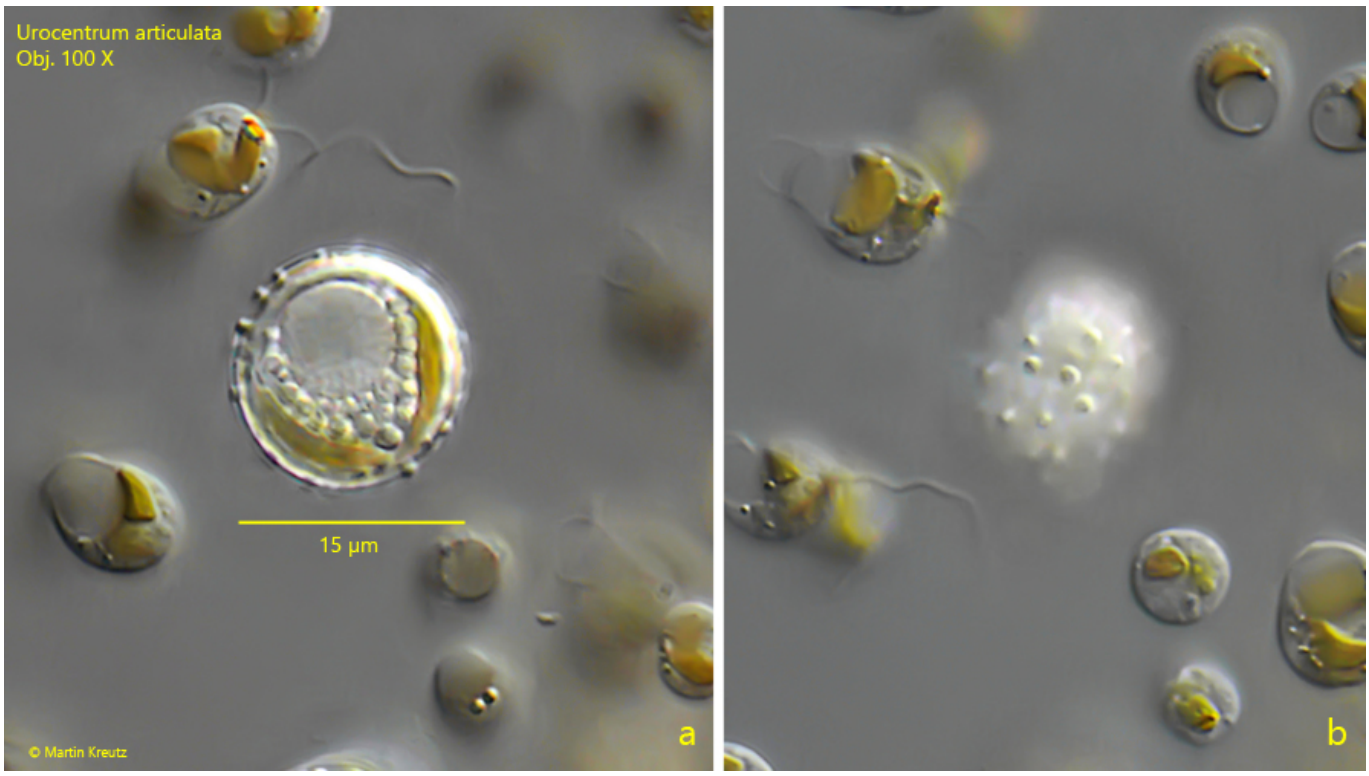


Fig. 5 a-b: *Uroglena articulata*. The spherical cyst is covered with short warts. The short neck is out of the focal plane. Obj. 100 X.