

## ***Oocystis lacustris* Chodat, 1897**

**Most likely ID:** n.a.

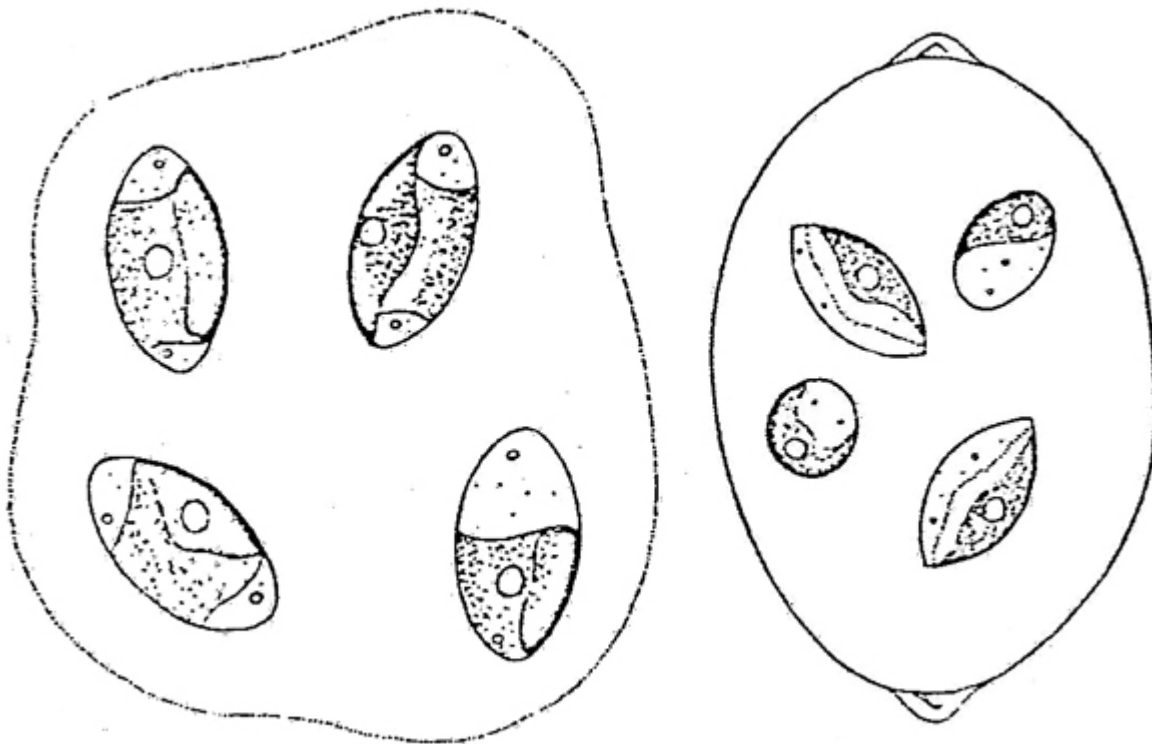
**Synonym:** n.a.

**Sampling location:** [Pond the waste disposal company Constance, Mühlhalden pond](#)

**Phylogenetic tree:** [Oocystis lacustris](#)

### **Diagnosis:**

- colonies of 2–8 cells, rarely up to 24 cells
- cells ellipsoidal to spindle-shaped, sometimes with thickened apices
- cell in gelatinized and expanded mother cell wall
- length 6–14 µm, width 3–10 µm.
- one parietal chloroplast with one pyrenoid
- older cells with 4 chloroplasts (before cell division)
- planktonic lifestyle



after Rehakova

## Oocystis lacustris

I find *Oocystis lacustris* in plankton samples, especially in late spring. This species is particularly common in the heavily eutrophic [pond of the waste disposal company Constance](#).

Most of the colonies I find in the plankton samples consist of 4 cells, which are located in the gelatinized and expanded cell wall of the mother cell. In the mother cell, 4 daughter cells are formed by cell division. The cell wall of the mother cell then begins to swell and continues to expand. The daughter cells usually remain in the periphery and thus become increasingly separated. Later, the mother cell wall ruptures and the daughter cells are released. If the daughter cells divide before this, colonies with 8 or 16 cells can develop.

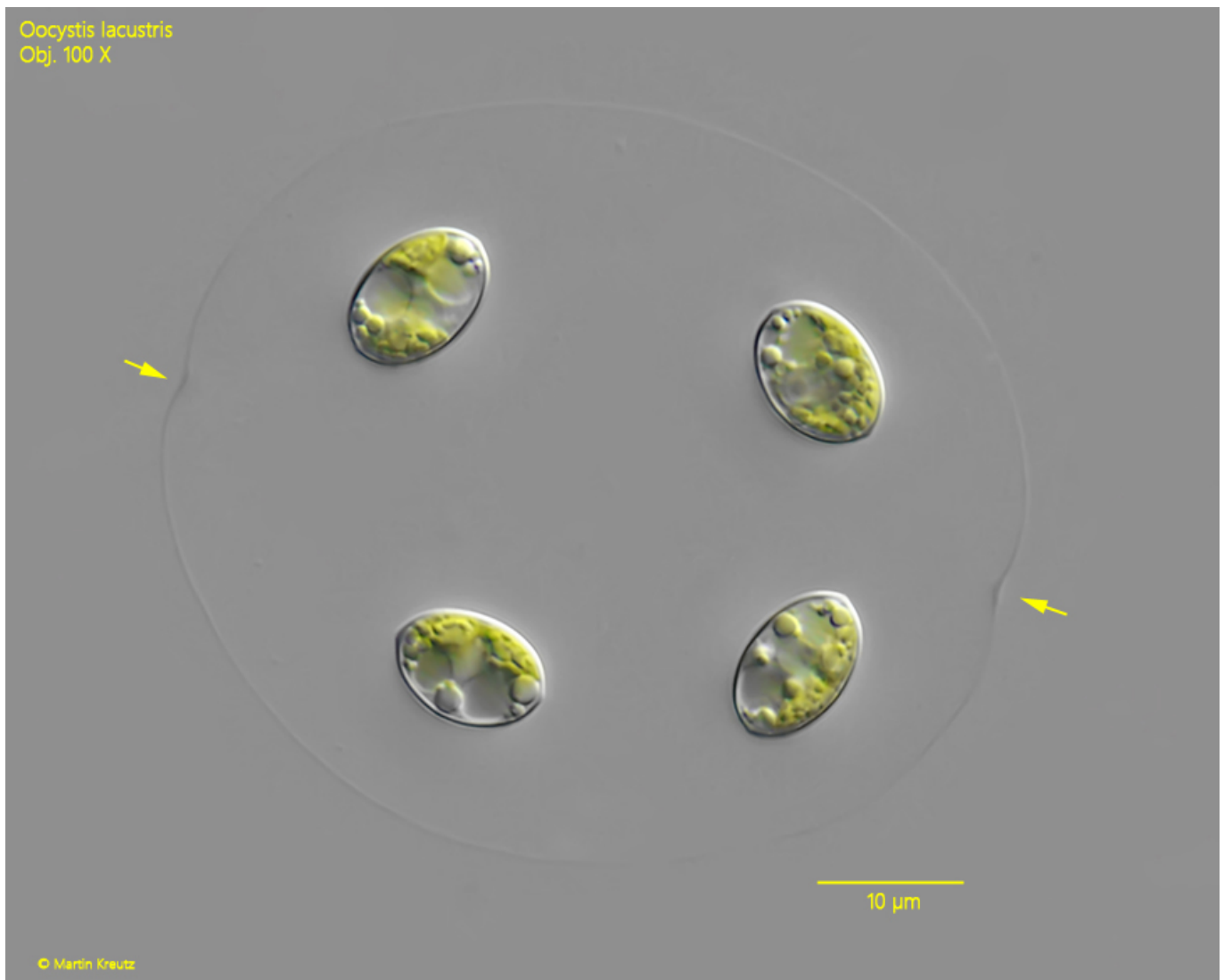
The cells of my population were all ellipsoidal and had a length of about 10–12  $\mu\text{m}$ . The apices of the cells are often thickened. The thickening can also appear warty. When the cell wall gelatinizes later, these thickenings can still be seen (s. fig. 2).

*Oocystis lacustris*  
Obj. 100 X

MCW

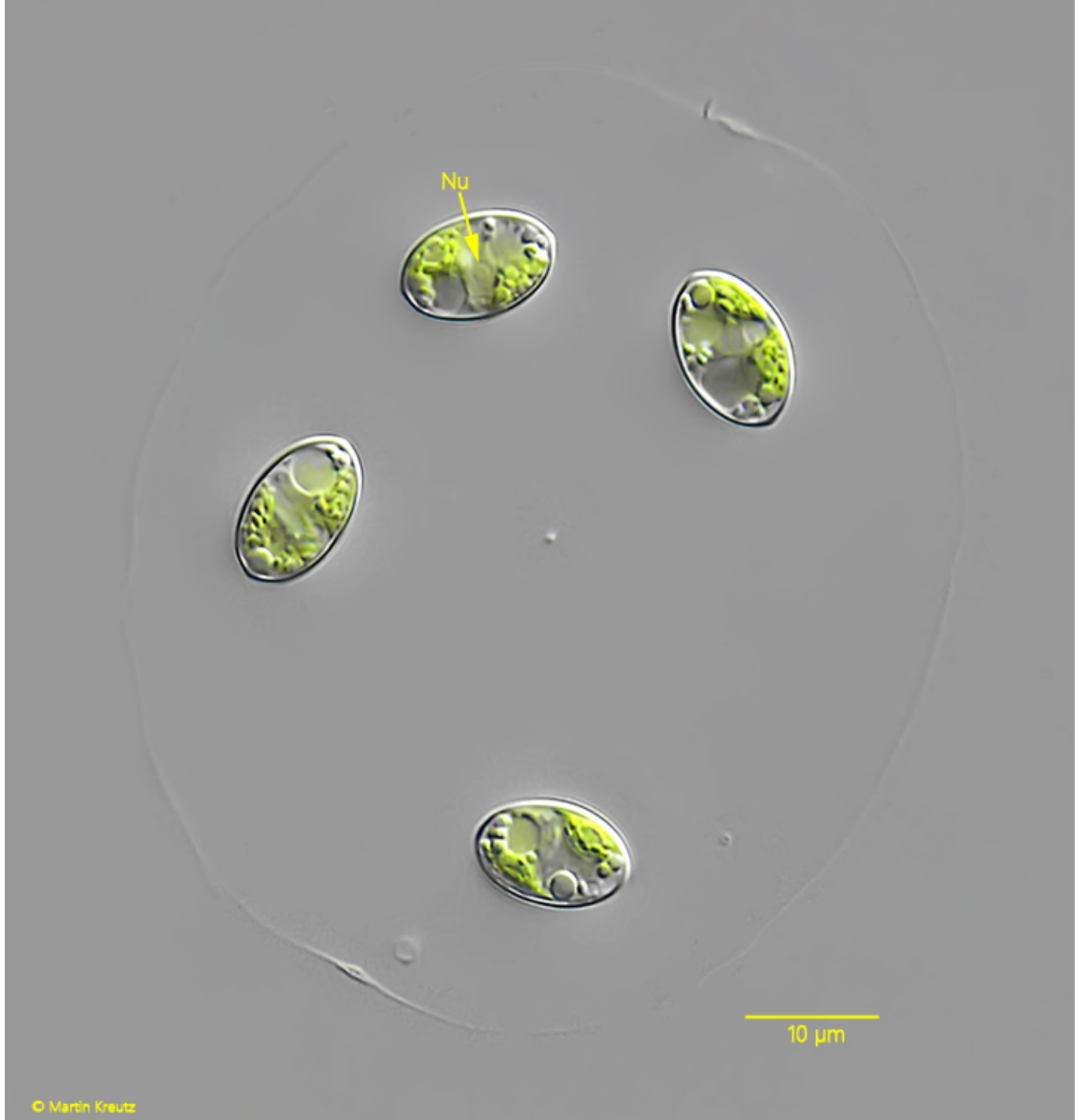
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**Fig. 1:** *Oocystis lacustris*. D = 25  $\mu\text{m}$  (of colony). A young colony of 4 cells in a slightly expanded and gelatinized mother cell (MCW). Obj. 100 X.

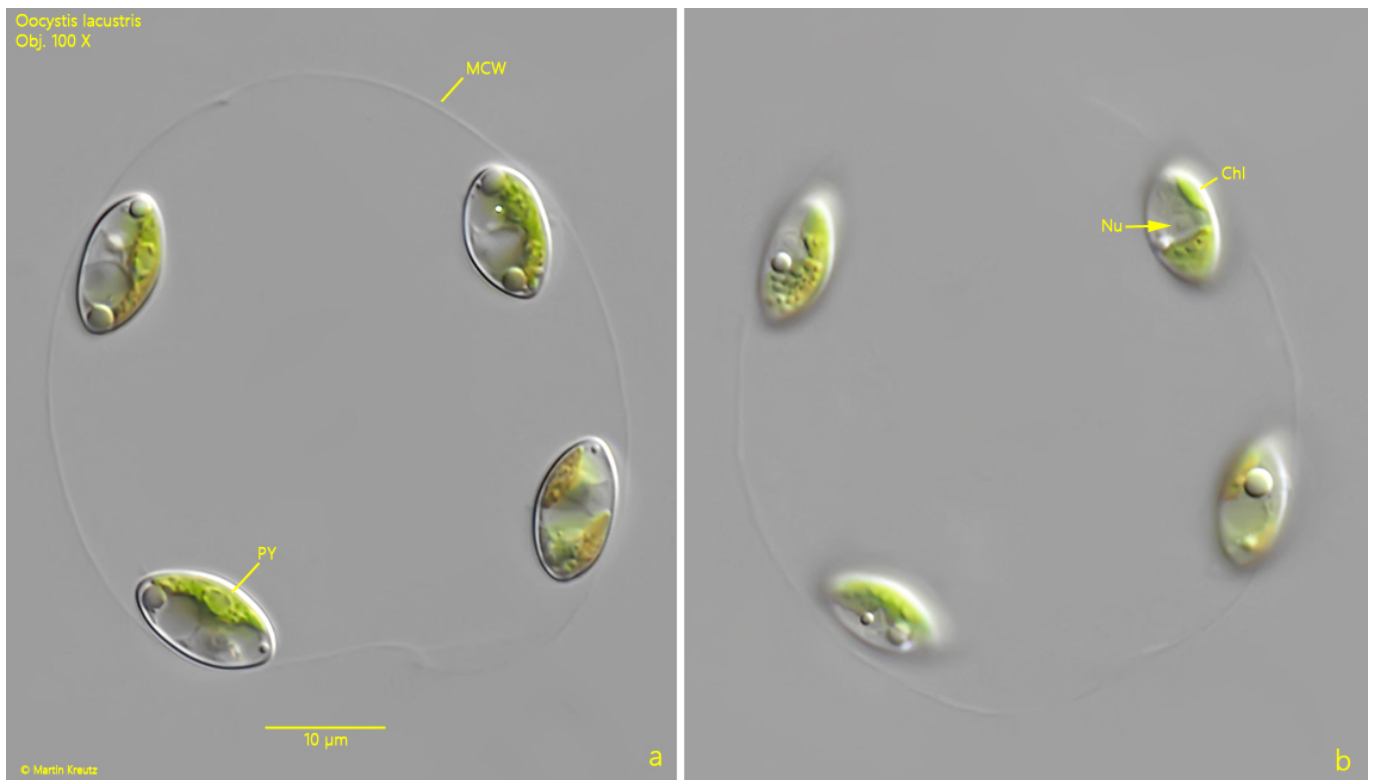


**Fig. 2:** *Oocystis lacustris*. L = 11-12 µm (of cells). A squashed colony of 4 cells. Note the thickened apices of the expanded of the mother cell wall (arrows). Obj. 100 X.

*Oocystis lacustris*  
Obj. 100 X



**Fig. 3:** *Oocystis lacustris*. L = 12 µm (of cells). A second squashed colony of 4 cells. Note the central nucleus (Nu). Obj. 100 X.



**Fig. 4 a-b:** *Oocystis lacustris*. L = 11-12 µm (of cells). Two focal planes of a third colony. Chl = chloroplast, MCW = gelatinized and expanded mother cell wall, Nu = nucleus, PY = pyrenoid. Obj. 100 X.