Cosmarium circulare

(Hassall ex Ralfs) Kützing, 1849

Most likely ID: n.a.

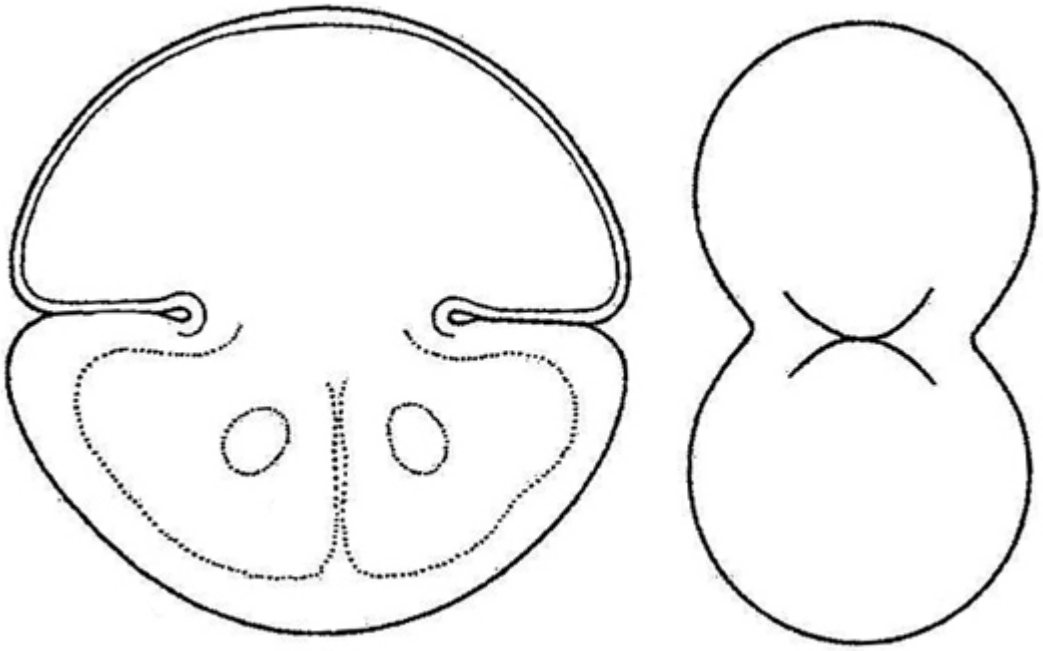
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Cosmarium circulare*

Diagnosis:

- semi-cells almost hemi-spherical, apex sometimes slightly flattened
- length 34–120 µm, width 35–105 µm
- sinus deep, narrow, dilated internally
- isthmus 14–25 µm wide
- cell wall covered with fine pores
- two pyrenoids per semi-cell



after Reinsch

Cosmarium circulare

I only find *Cosmarium circulare* in the Simmelried. However, I have only been able to detect it there since 2023. I have no earlier records from the Simmelried.

I recognize *Cosmarium circulare* mainly by the cell shape (circular or broadly oval), the smooth, only finely dotted cell wall and the two pyrenoids per half cell. The similar species *Cosmarium ralfsii* has more than 2 pyrenoids per half cell.

Fig. 1: *Cosmarium circulare*. L = 49–52 µm. An accumulation of 4 specimens. Obj. 40 X.

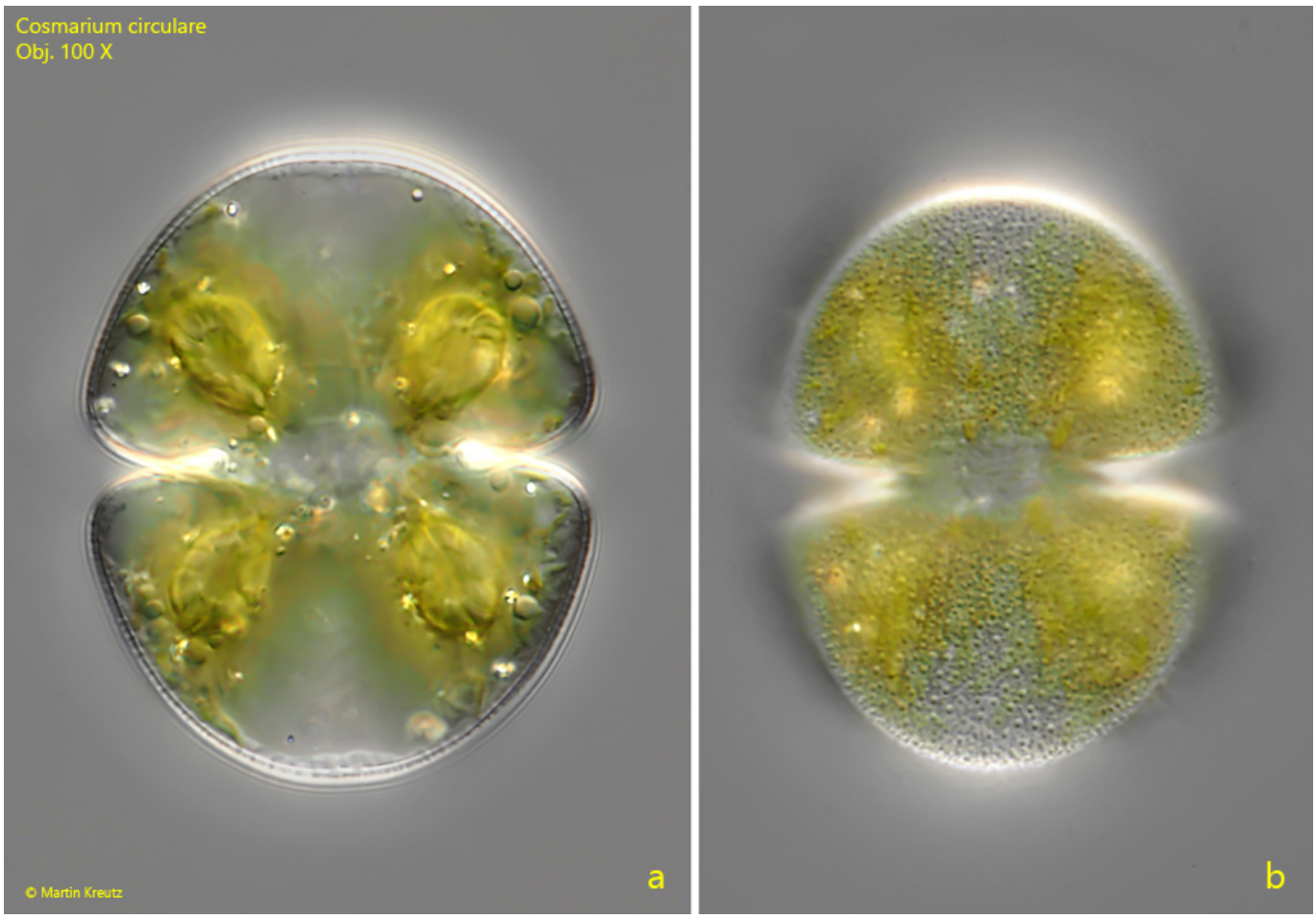


Fig. 2 a-b: *Cosmarium circulare*. L = 55 µm. Two focal planes of a slightly squashed specimen. Note the fine pores covering the cell wall (b). Obj. 100 X.

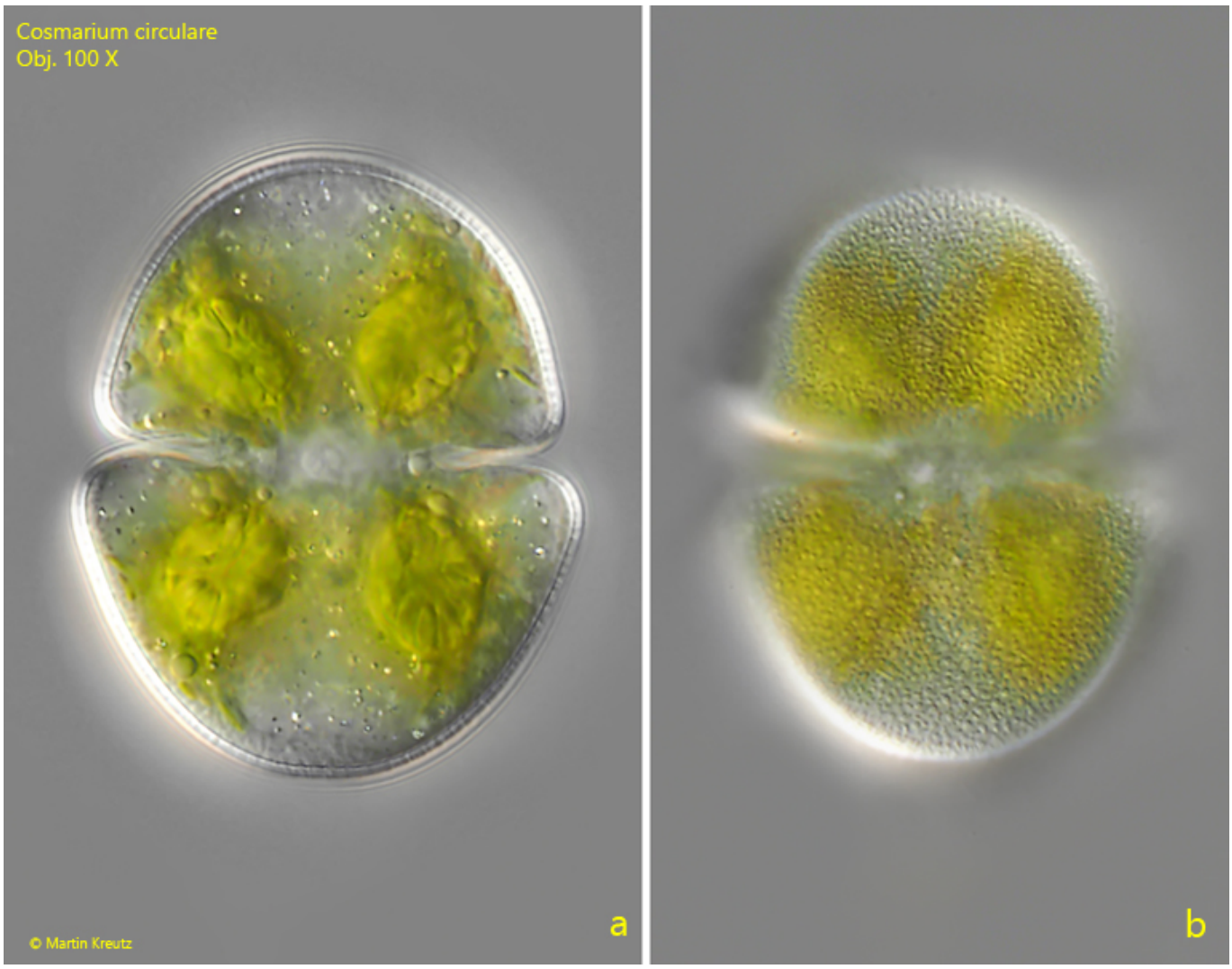


Fig. 3 a-b: *Cosmarium circulare*. L = 53 µm. Two focal planes of a second specimen. Obj. 100 X.

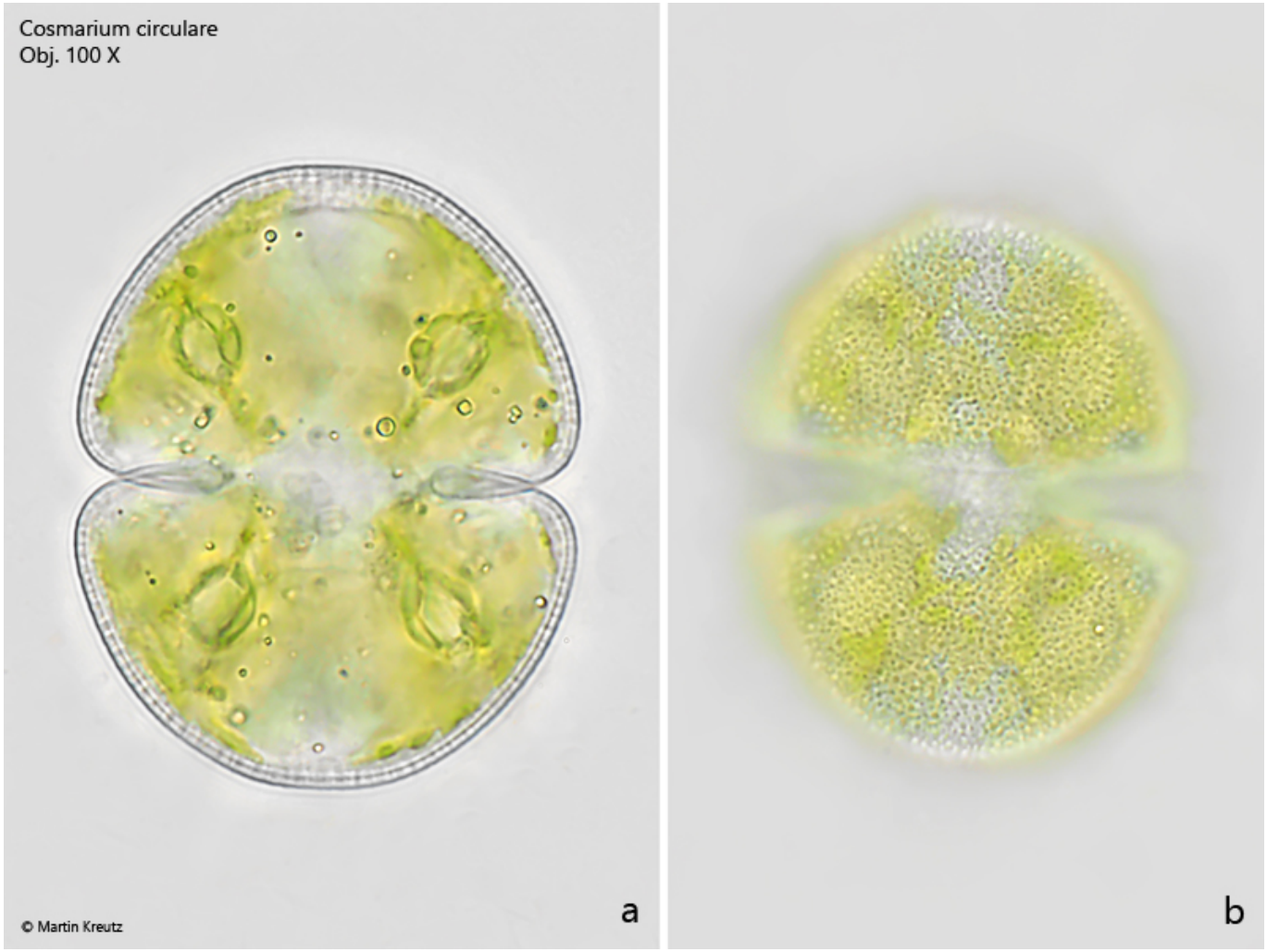


Fig. 4 a-b: *Cosmarium circulare*. L = 51 µm. Two focal planes of a third specimen in brightfield illumination. Obj. 100 X.