Cosmarium obsoletum

(Hantzsch) Reinsch, 1867

Most likely ID: n.a.

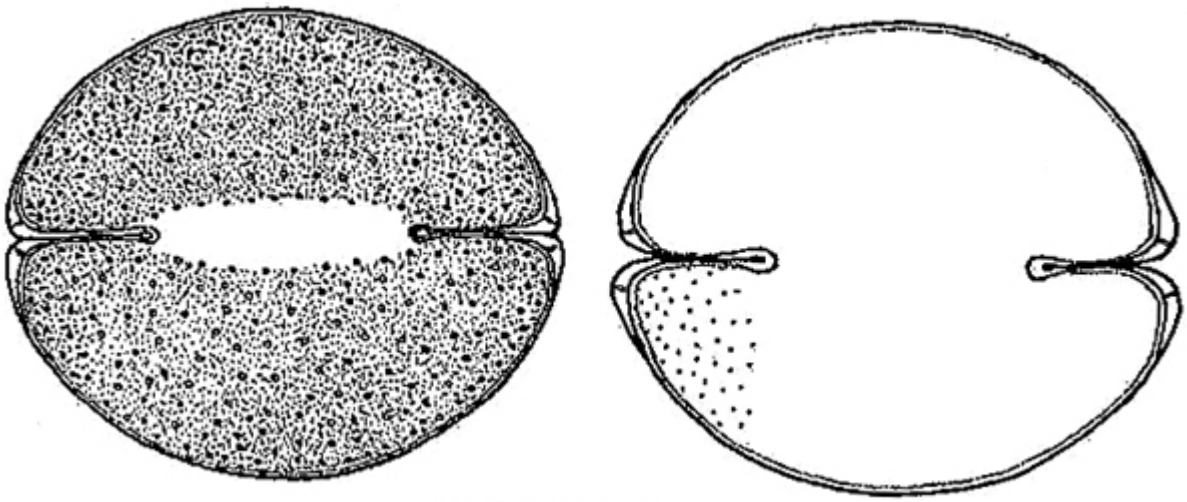
Synonyms: *Ursinella obsoleta*, *Arthrodesmus obsoletus*, *Staurodesmus obsoletus*, *Pachyphorium obsoletum*, *Xanthidium orbiculare*

Sampling location: Schwemm Moor (Austria)

Phylogenetic tree: *Cosmarium obsoletum*

Diagnosis:

- cells broadly oval
- semi-cells depressed semi-circular
- length 25–50 µm, width 40–55 µm
- isthmus 15–25 µm
- sinus deep, linear closed
- cell wall smooth with fine pores
- hyaline thickening of cell wall at basal corners of semi-cells
- hyaline thickenings with large pore
- two pyrenoids per semi-cell



Cosmarium obsoletum

I found only very few specimens of *Cosmarium obsoletum* in samples from the Schwemm Moor in Austria in June 2025. This species is characterized by hyaline thickenings at the basal corners of the semi-cells, making it easy to identify. An enlarged pore canal runs through the hyaline thickenings, but is not easy to discern (s. fig 1 a). The sinus of the specimen shown below is somewhat atypically open outwards due to the slight coverslip pressure I applied.

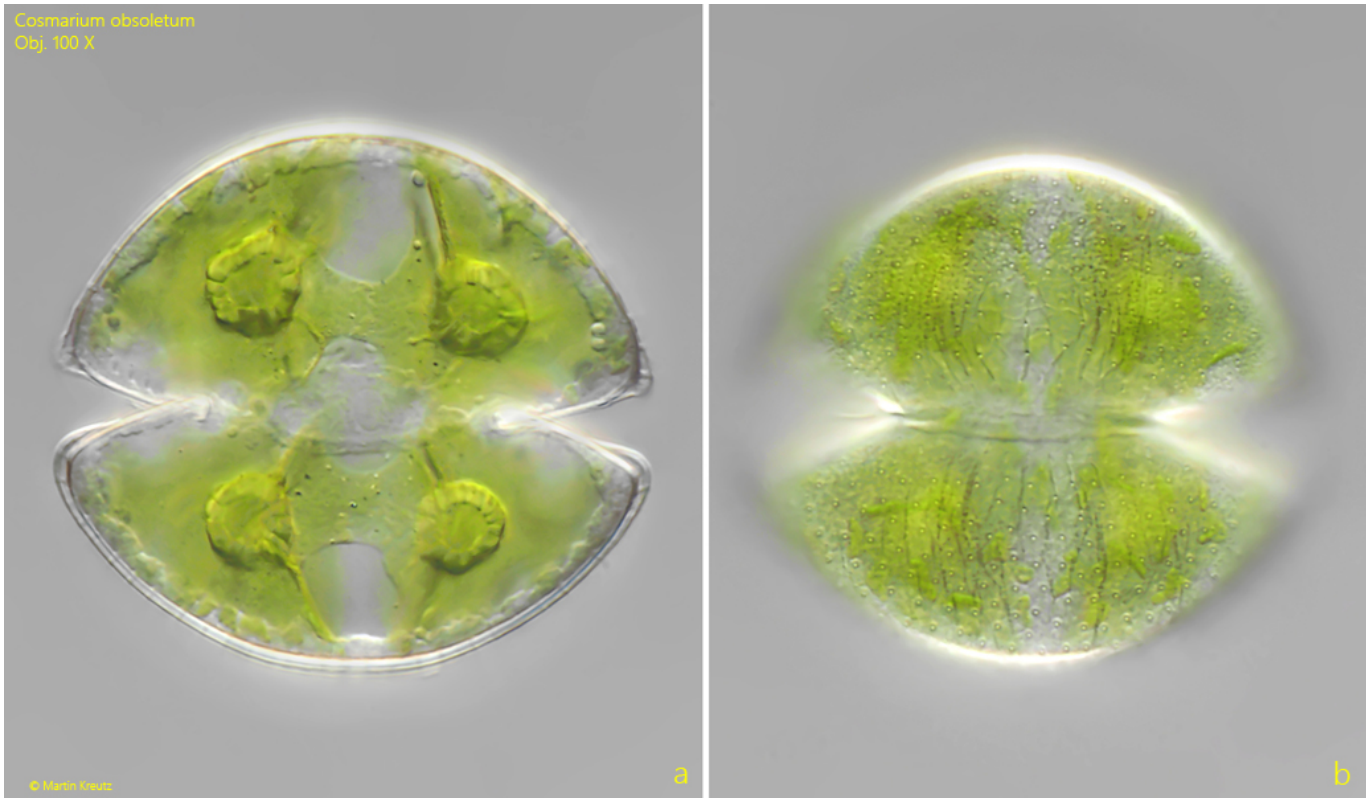


Fig. 1 a-b: *Cosmarium obsoletum*. L = 51 µm. Two focal planes of a slightly squashed specimen in DIC. Note the hyaline thickenings of the basal corners of the semi-cells. Obj. 100 X.

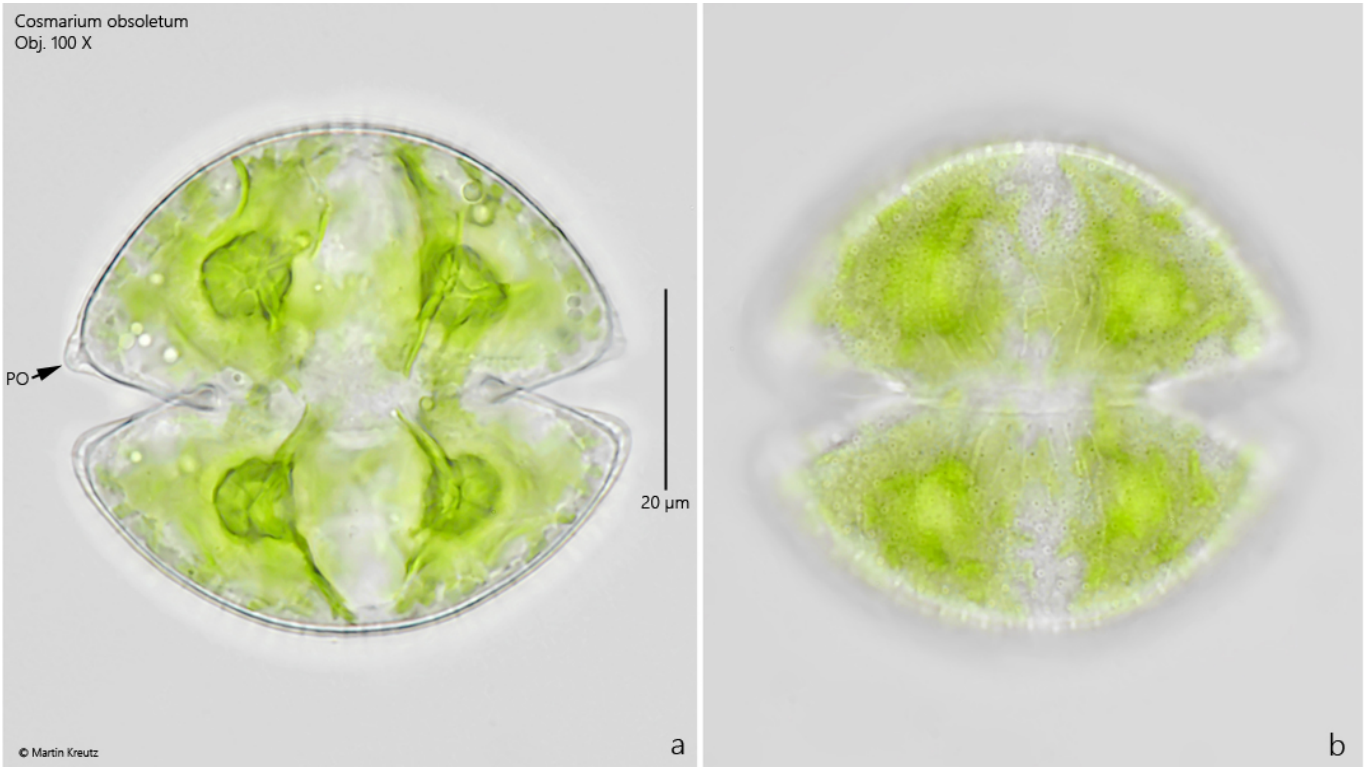


Fig. 2 a-b: *Cosmarium obsoletum*. L = 51 µm. The same specimen as shown in fig. 1 a-b in brightfield illumination. In the hyaline thickening of the upper semi-cell one of the large pores (PO) is visible. Obj. 100 X.