Cosmarium orthostichum Lundell, 1871

Most likely ID: n.a.

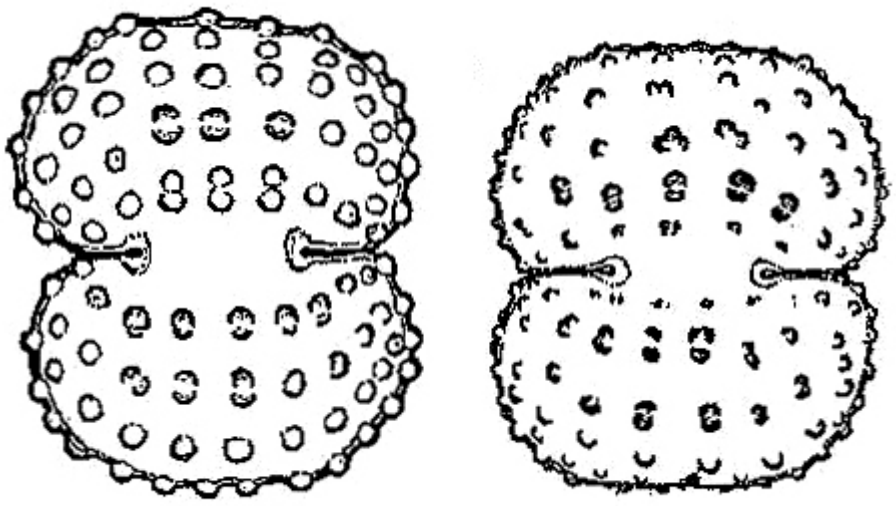
Synonym: n.a.

Sampling location: Schwemm Moor (Austria)

Phylogenetic tree: *Cosmarium orthostichum*

Diagnosis:

- semi-cells ellipsoid, apices flat, sides convex
- length 36–37 µm, width 31–33 µm
- sinus deep, laterally widened
- cell wall with transverse rows of warts
- paired warts near central field
- one chloroplast with one pyrenoid per semi-cell



after Lenzenweger

Cosmarium orthostichum

So far, I have only found a few specimens of *Cosmarium orthostichum* in the Schwemm Moor in Austria. Lenzenweger (1999) also reports that this alga occurs only sporadically.

The essential characteristic of *Cosmarium orthostichum* is the paired, sometimes even triple, warts in the central field of the semi-cells (s. fig. 1 c). However, this feature can only be recognized at high magnification. The size seems to lie within a very narrow range. Lenzenweger gives a length of 36–37 µm, while my specimens were mostly 38 µm long. This therefore also seems to be a fairly constant characteristic of *Cosmarium orthostichum.*

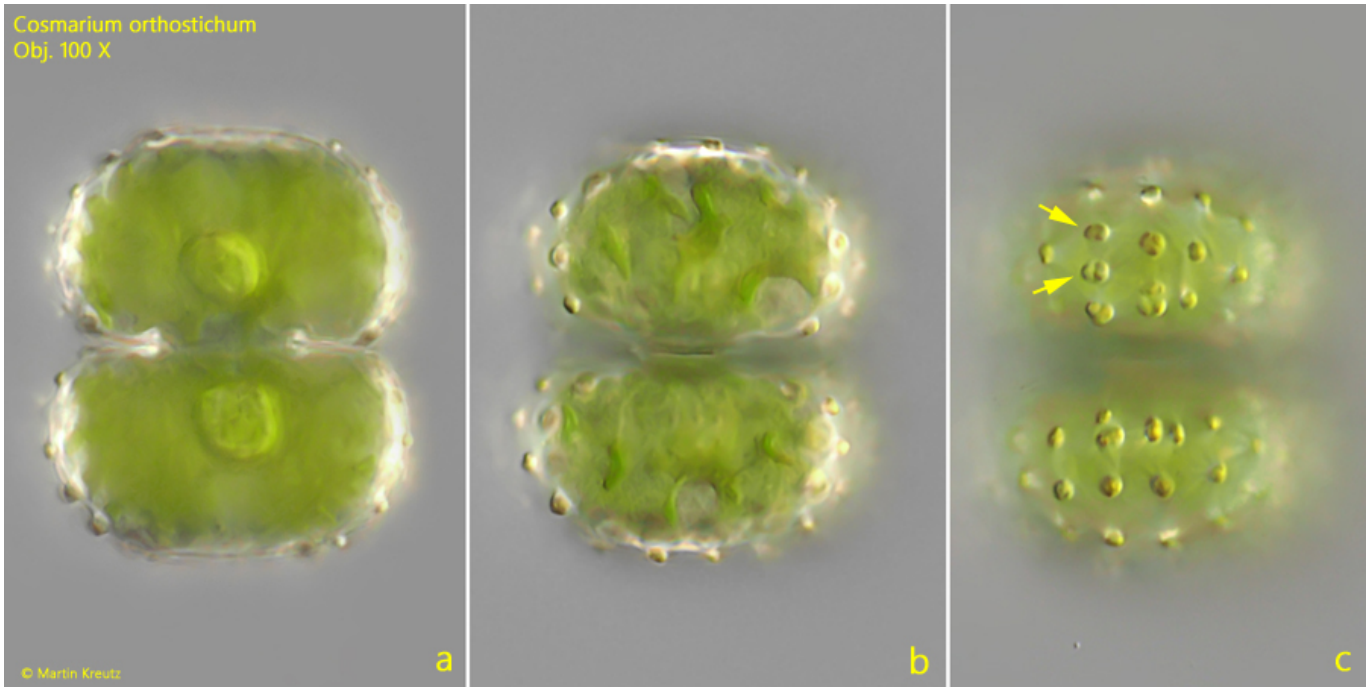


Fig. 1 a-c: *Cosmarium orthostichum*. L = 38 µm. Three focal planes of a slightly squashed specimen. Note the paired warts in the central field of the semi-cells (arrows). Obj. 100 X.

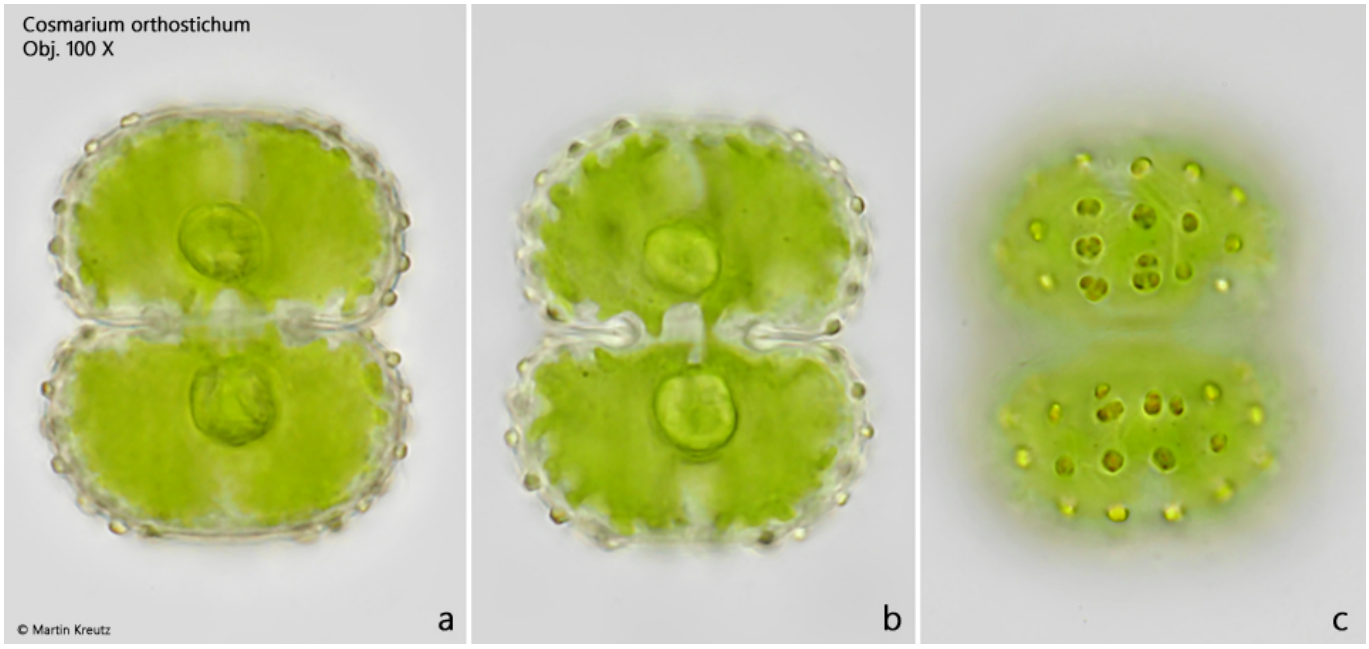


Fig. 2 a-c: *Cosmarium orthostichum*. L = 38 µm. The same specimen as shown in fig. 1 a-c in brightfield illumination. Obj. 100 X.