Cosmarium porteanum Archer, 1860

Most likely ID: n.a.

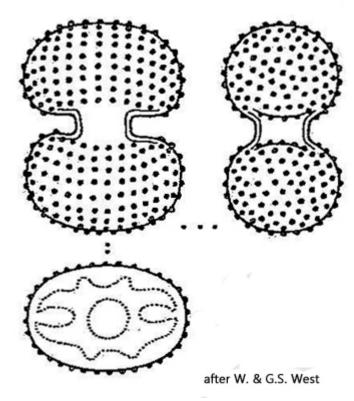
Synonym: Cosmarium portianum

Sampling location: Sima Moor (Austria)

Phylogenetic tree: Cosmarium porteanum

Diagnosis:

- semi-cell transversely elliptica
- cell ellipsoid in apical view
- length 25-42 μm, width 20-30
- cell wall covered with vertical rows of granules
- one pyrenoid per semi-cell
- one furcoid chloroplast per semi-cell
- sinus deep and wide
- isthmus elongated, neck-shaped



Cosmarium porteanum

I have only ever found *Cosmarium porteanum* in the <u>Sima Moor</u> in Austria. The alga was only found sporadically in the samples. The most striking feature of *Cosmarium porteanum* is the neck-like elongated isthmus. This makes the semi-cells appear clearly separated from each other. The cell wall is evenly covered with granules.

The name *Cosmarium portianum* is often found in the literature and on the Internet. However, the species was named after George Porte, which is why Cosmarium porteanum is the correct name.

The similar species *Cosmarium reniforme* var. *apertum* also has a slightly elongated isthmus and the cell wall is also granulated. However, there are two pyrenoids in each of the semicells of *Cosmarium reniforme* var. *apertum* and the species is considerably larger than Cosmarium porteanum with a length of 44-46 µm.

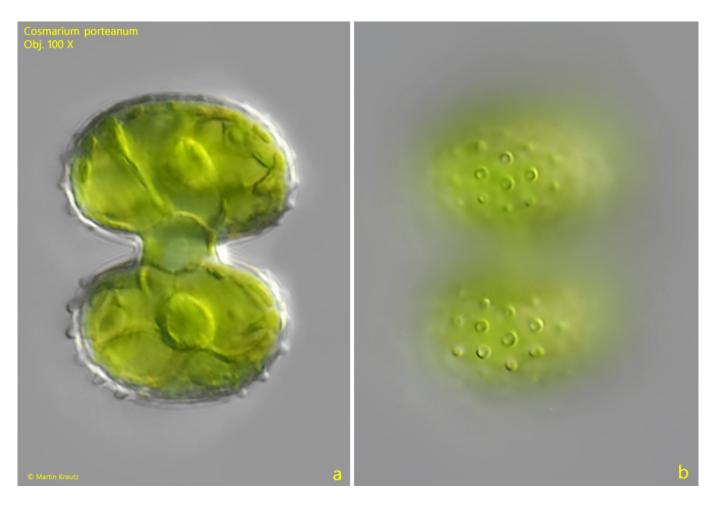


Fig. 1 a-b: Cosmarium porteanum. $L=35~\mu m$. Two focal planes of a slightly squashed specimen. Obj. 100 X.

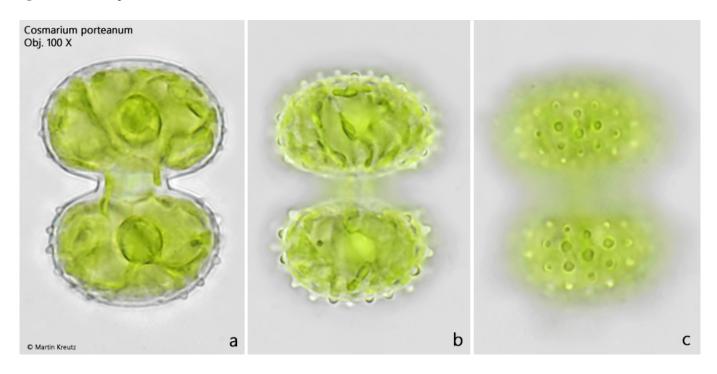


Fig. 2 a-c: Cosmarium porteanum. L = 35 μm . Three focal planes of the same specimen as shown in fig. 1 a-b in brightfield illumination. Obj. $100~\mathrm{X}$.