Cosmarium granatum

Brébisson ex Ralfs, 1848

Most likely ID: n.a.

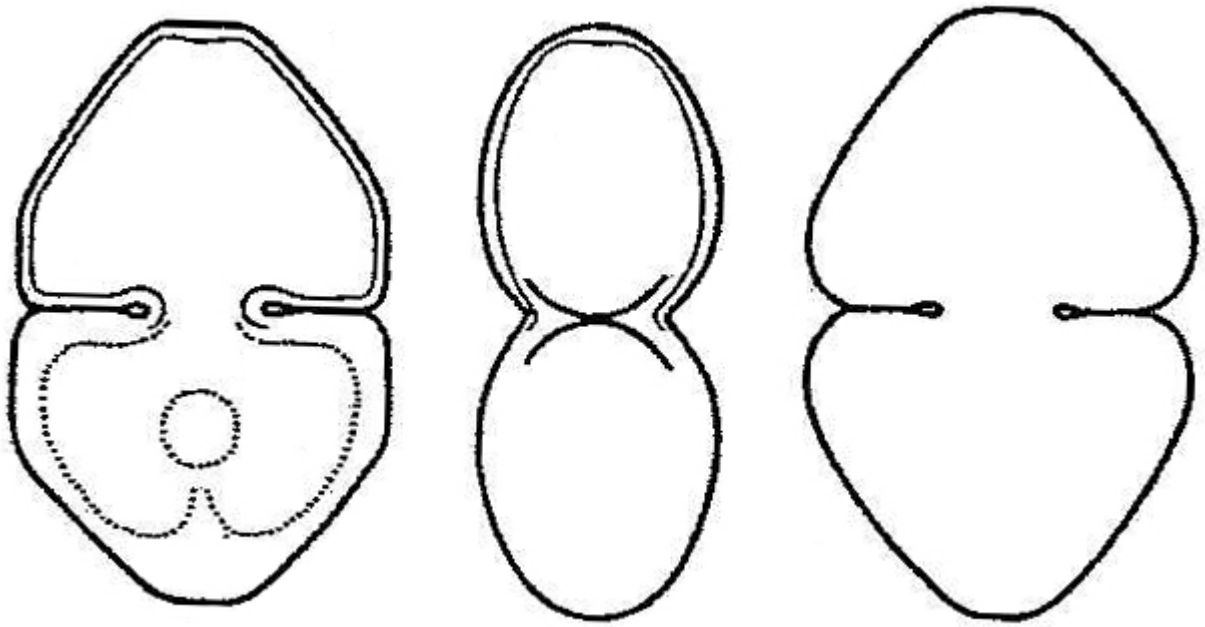
Synonym: *Ursinella granata*, *Euastrum granatum*, *Cosmarium granatum f. pentagonum*

Sampling location: Wollmatinger Ried, Tettermoor (Austria), Simmelried

Phylogenetic tree: *Cosmarium granatum*

Diagnosis:

- semi-cells trapezoidal or triangular with broadly rounded corners
- basal part of the half cells sometimes with parallel sides
- length 20–48 µm, width 13–31 µm
- sinus narrow, slightly dilated to the istmus
- cell wall finely granulated, thickened at apices
- one pyrenoid per semi-cell



after Homfeld

Cosmarium granatum

I first found *Cosmarium granatum* in December 1994 in a shallow pond in the Wollmatinger Ried. In May 1996 I found further specimens in samples from the Tettermoor (Austria) and in the Simmelried in May 2025.

I recognize *Cosmarium granatum* by the almost triangular shape of the half-cells, whereby the corners are always broadly rounded. Sometimes the sides are angled again just above the sinus (s. figs. 1 a-b and 3). The cell wall of *Cosmarium granatum* is quite thick in relation to the cell size. It is finely granulated, without warts or tubercles.

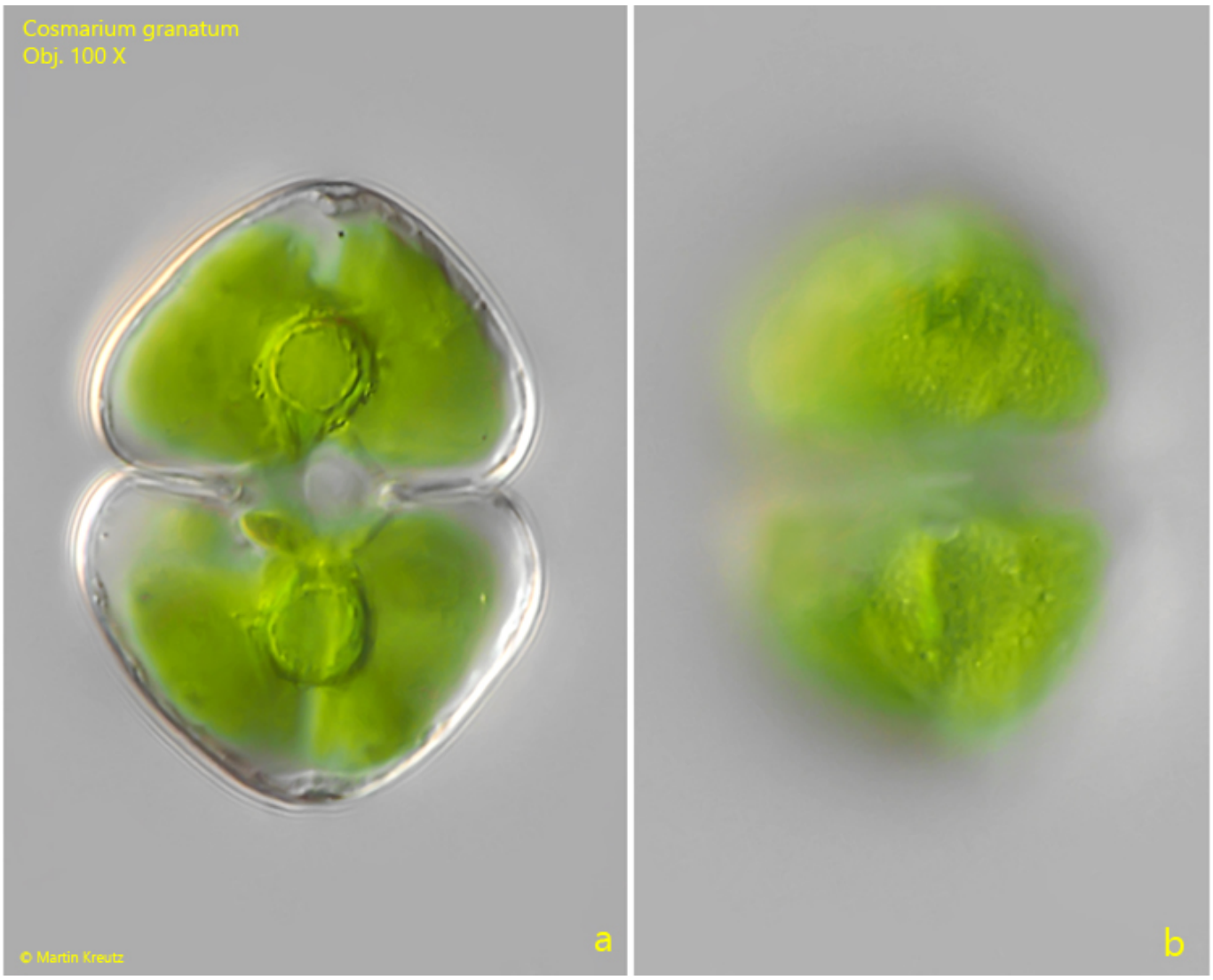


Fig. 1 a-b: *Cosmarium granatum*. L = 42 µm. Two focal planes of a specimen found in May 2025 in the Simmelried. Obj. 100 X.

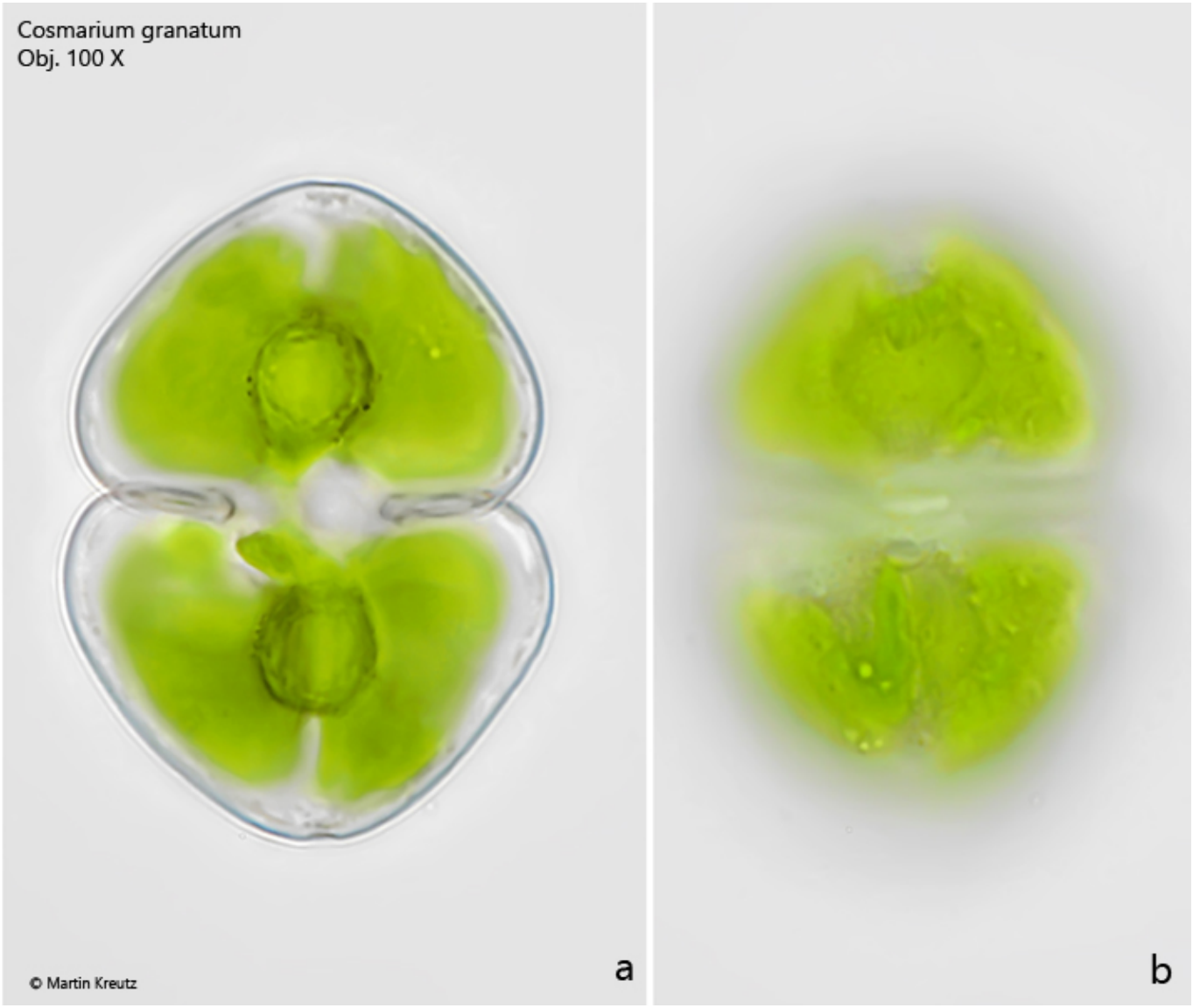


Fig. 2 a-b: *Cosmarium granatum*. L = 42 µm. The same specimen as shown in fig. 1 a-b in brightfield illumination. Obj. 100 X.

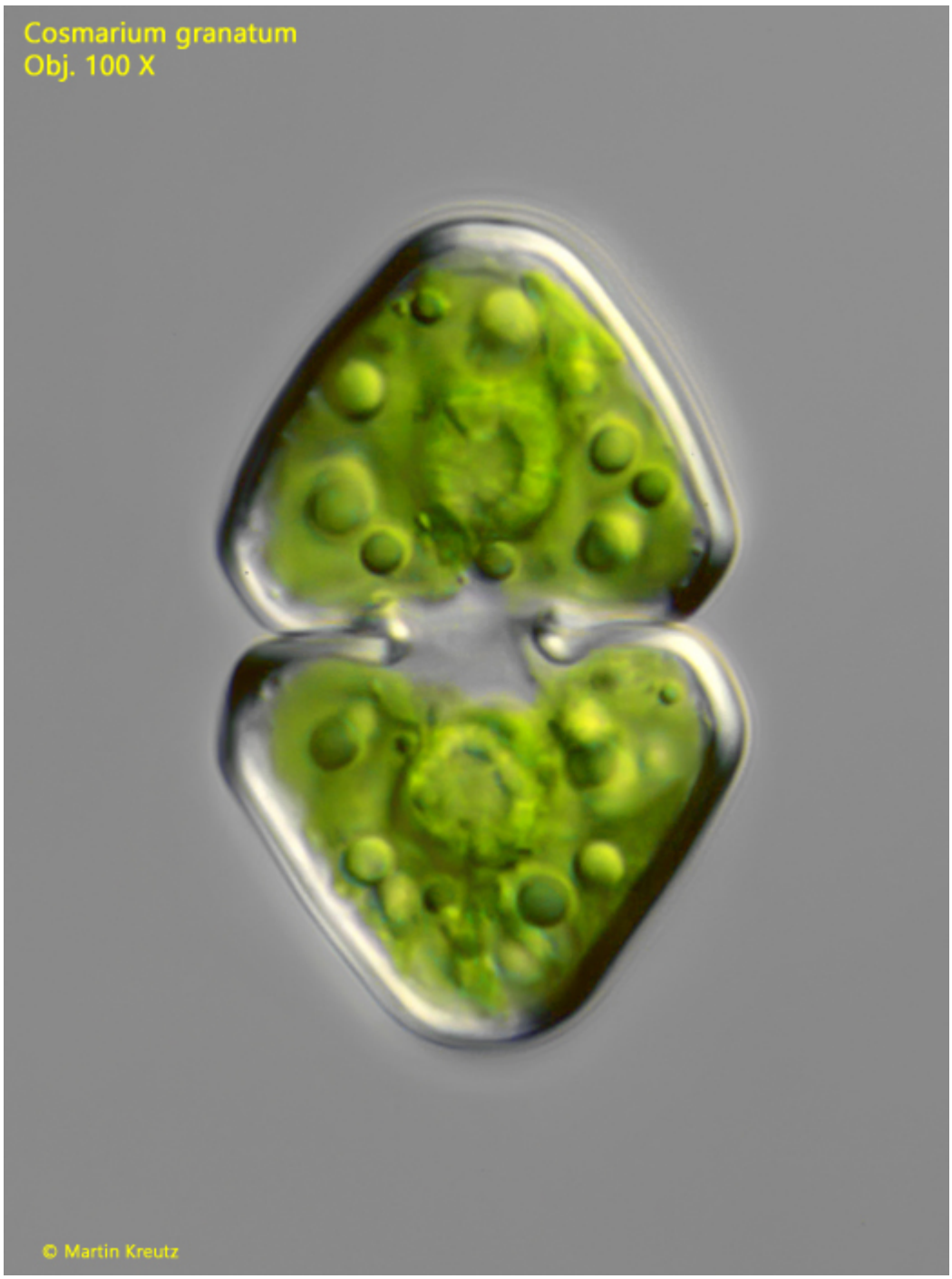


Fig. 3: *Cosmarium granatum*. L = 43 µm. A second specimen found in May 1996 in the Tettermoor (Austria). Obj. 100 X.