Cosmarium bicuneatum

(F.Gay) Nordstedt, 1889

Most likely ID: n.a.

Synonym: *Euastrum bicuneatum*, *Ursinella bicuneata*, *Cosmarium arctoum* var. *tatricum*

Sampling location: Sima Moor (Austria)

Phylogenetic tree: *Cosmarium bicuneatum*

Diagnosis:

- cells small, as long as wide
- length 10–14 µm, width 8–13 µm
- sinus blunt-winged, widely open
- isthmus broad
- apices slightly convex
- cell wall smooth
- elliptical to spindle-shaped in apical view

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I have so far only found *Cosmarium bicuneatum* in samples from the Sima Moor in Austria. The cells stand out due to their very small size. In my population, the cells were only 9–10 µm long. This placed them at the lower end of the range of 10–14 µm given by Lenzenweger (1999). Another striking feature is the widely open sinus

and the broad isthmus. Lenzenweger describes the apices as slightly convex. However, in my population, there were also cells with a very slight, concave indentation.

The similar species *Cosmarium bioculatum* and *Cosmarium asphaerosporum* var. *corribense* have a similar cell shape to *Cosmarium bicuneatum*, but are twice as large, measuring 18–25 µm and 16–24 µm respectively.

More images and information on *Cosmarium bicuneatum*: Wolfgang Bettighofer-Protiststen.de-*Cosmarium bicuneatum*

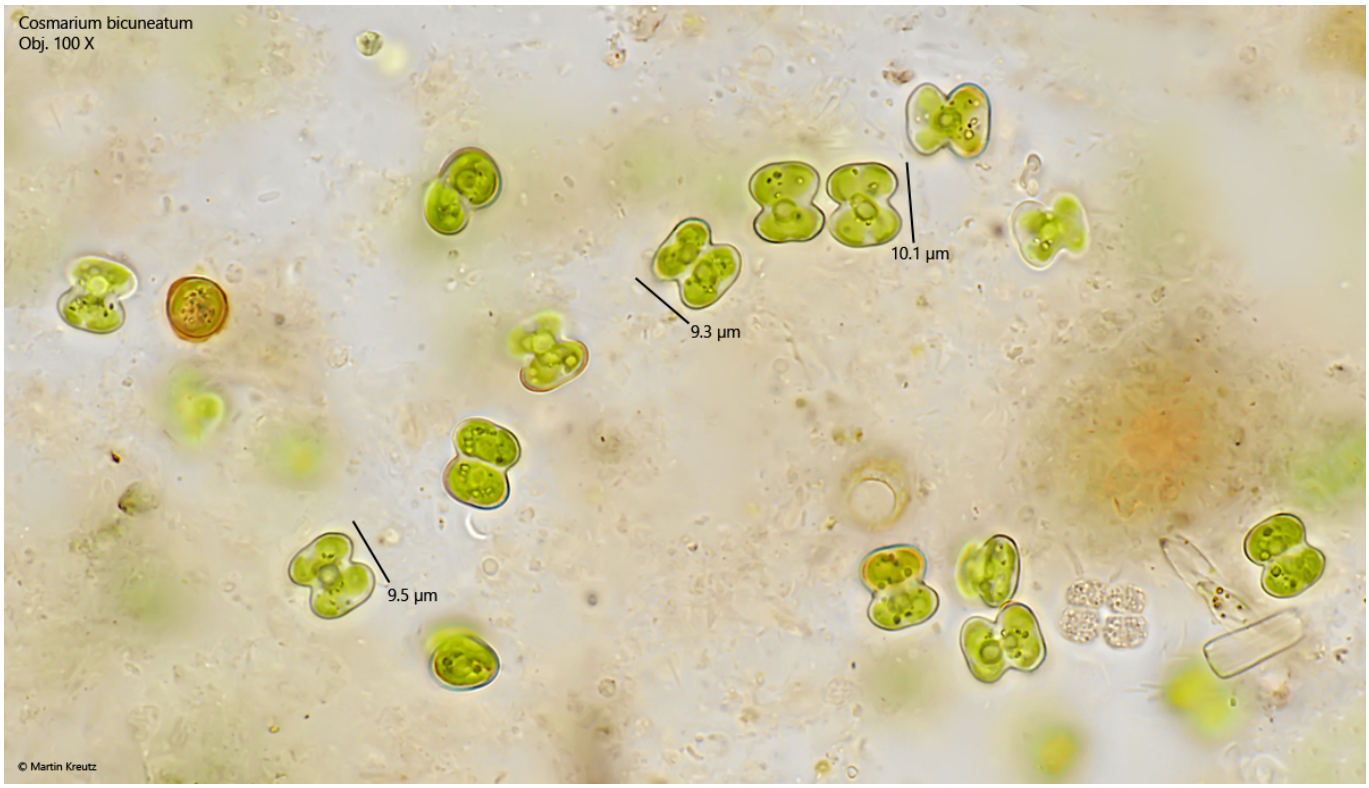

Fig. 1: *Cosmarium bicuneatum*. L = 9–10 µm. A cluster of some cells in brightfield illumination. Obj. 100 X.

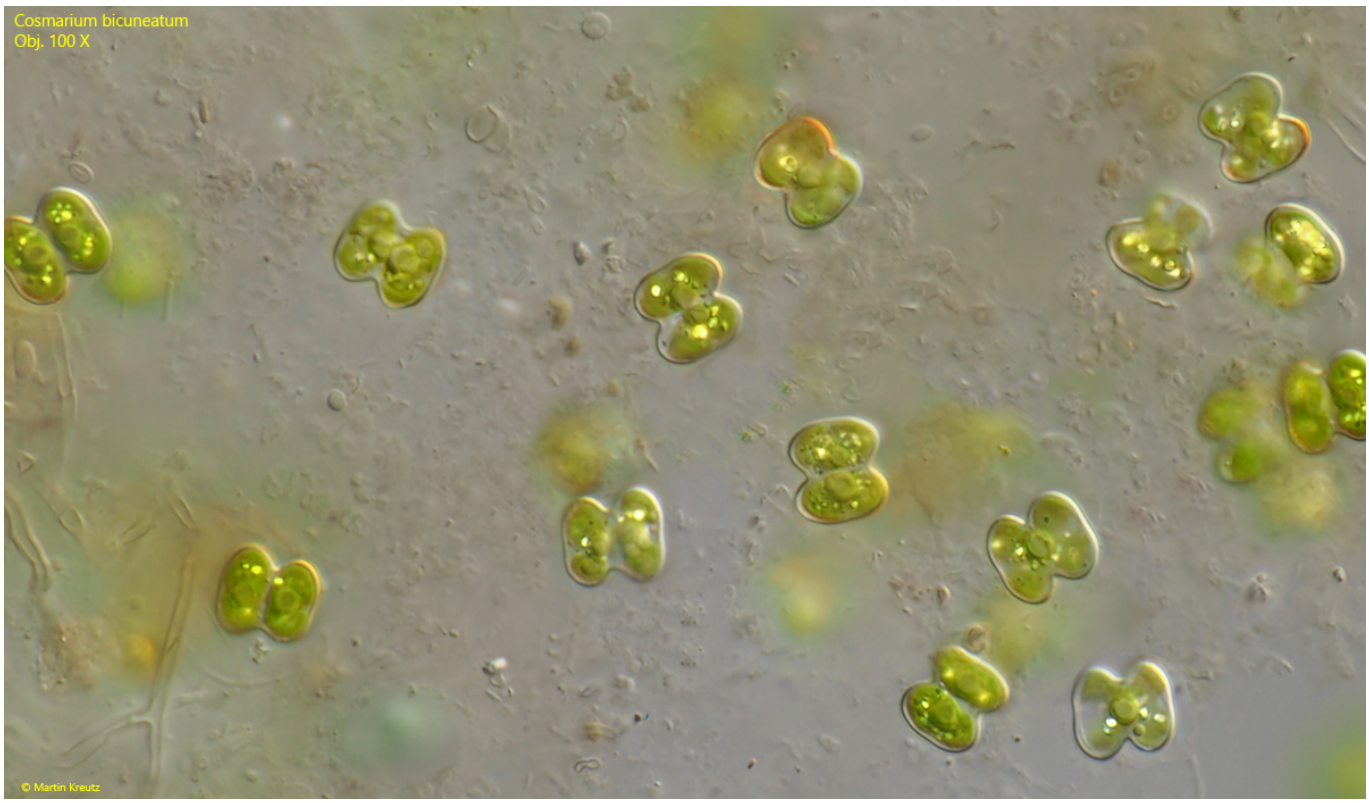

Fig. 2: *Cosmarium bicuneatum*. L = 9–10 µm. A second cluster in DIC. Obj. 100 X.