

Tetraedron triangulare

Korshikov, 1953

Most likely ID: n.a.

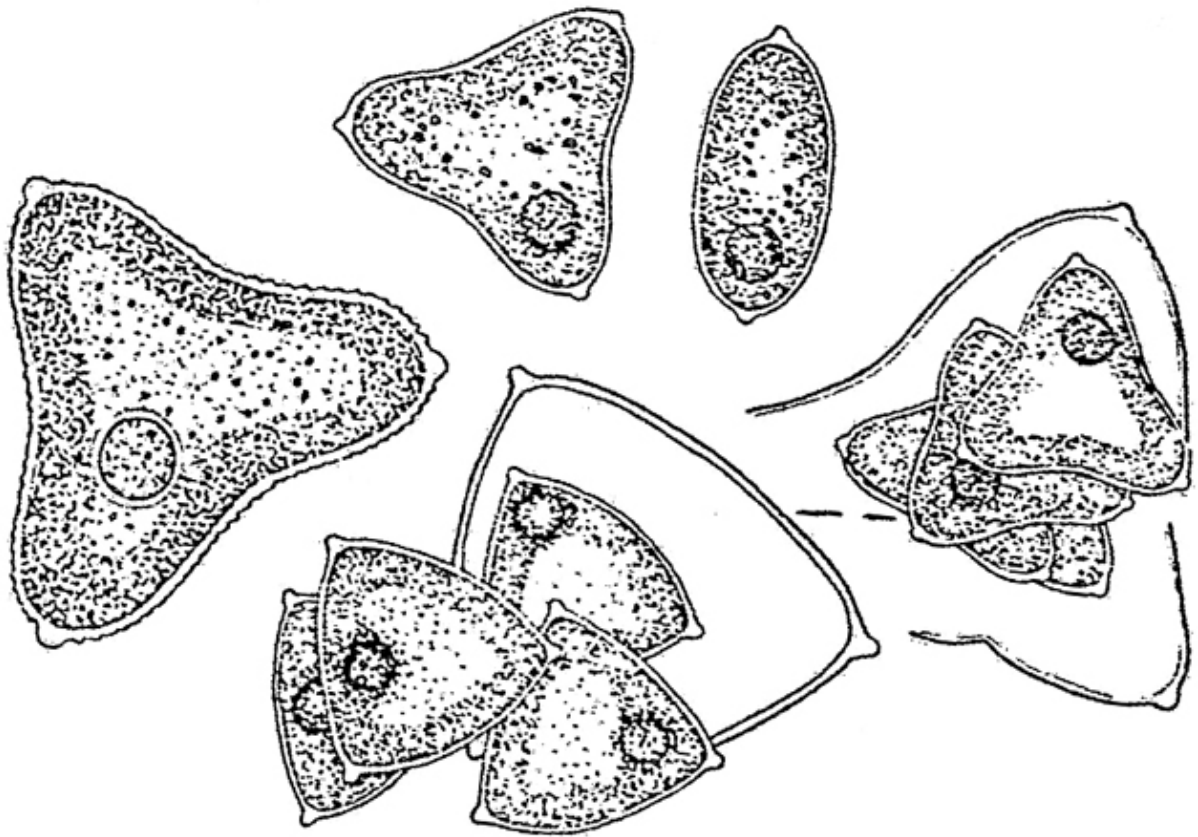
Synonym: n.a.

Sampling location: [Pond St. Ulrich \(Austria\)](#)

Phylogenetic tree: [Tetraedron triangulare](#)

Diagnosis:

- body triangular, cushion-shaped, corners with papillae
- sides concave, rarely convex
- cell wall warty or smooth
- diameter 6–14 µm
- one parietal chloroplast
- one pyrenoid
- asexual reproduction with 4 autospores
- planctonic lifestyle



after Kovacik

Tetraedron triangulare

So far I have only been able to find *Tetraedron triangulare* once, in September 2026 in the pond of St. Ulrich. There I did not find the specimens in the plankton, but in the detritus on the bottom of the pond. Presumably these were sunken specimens, since the alga is said to have a planktonic way of life.

The specimens of my population had a diameter of 11-14 μm . Despite the small size, the alga can be easily identified due to its characteristic shape. At the three corners the cell wall is thickened in a papilla-like manner. In my specimens the sides were consistently concave, although they can sometimes also be convex. In my specimens the cell wall was always finely granulated (s. figs. 1 a and 2 b). In one specimen I had the impression that slight dimples were present (s. fig. 3b), but this is at the resolution limit of the light microscope.

In one case I was able to observe reproduction by 4 autospores (s. fig. 4). In the mother cell, 4 daughter cells are formed through two successive cell divisions. Afterwards the cell wall of the mother cell tears open and the 4 daughter cells are released.

Due to its triangular shape and small size, *Tetraedron triangulare* can be confused with species of the genus *Goniochloris*, which belong to the Xanthophyceae. However, species of *Goniochloris* do not possess a pyrenoid and produce chrysolaminarin instead of starch. Moreover, they usually have several chloroplasts.

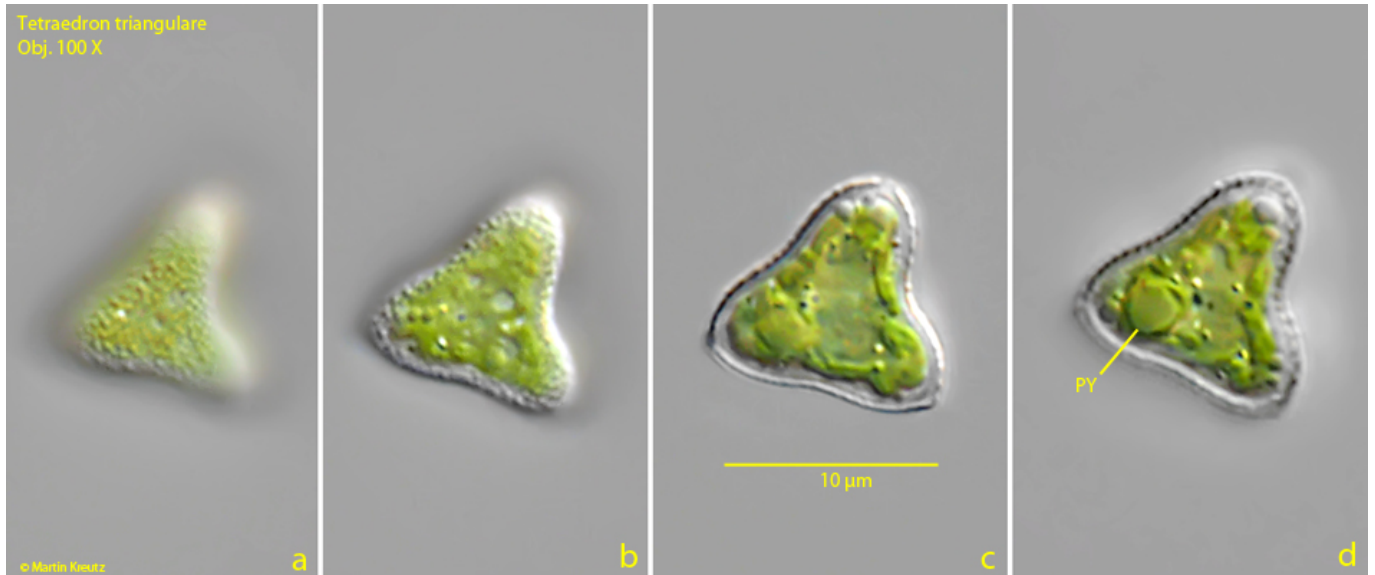


Fig. 1 a-d: *Tetraedron triangulare*. D = 12.4 µm. Different focal planes of a specimen found in September 2026 in the pond of St. Ultich. PY = pyrenoid. Obj. 100 X.

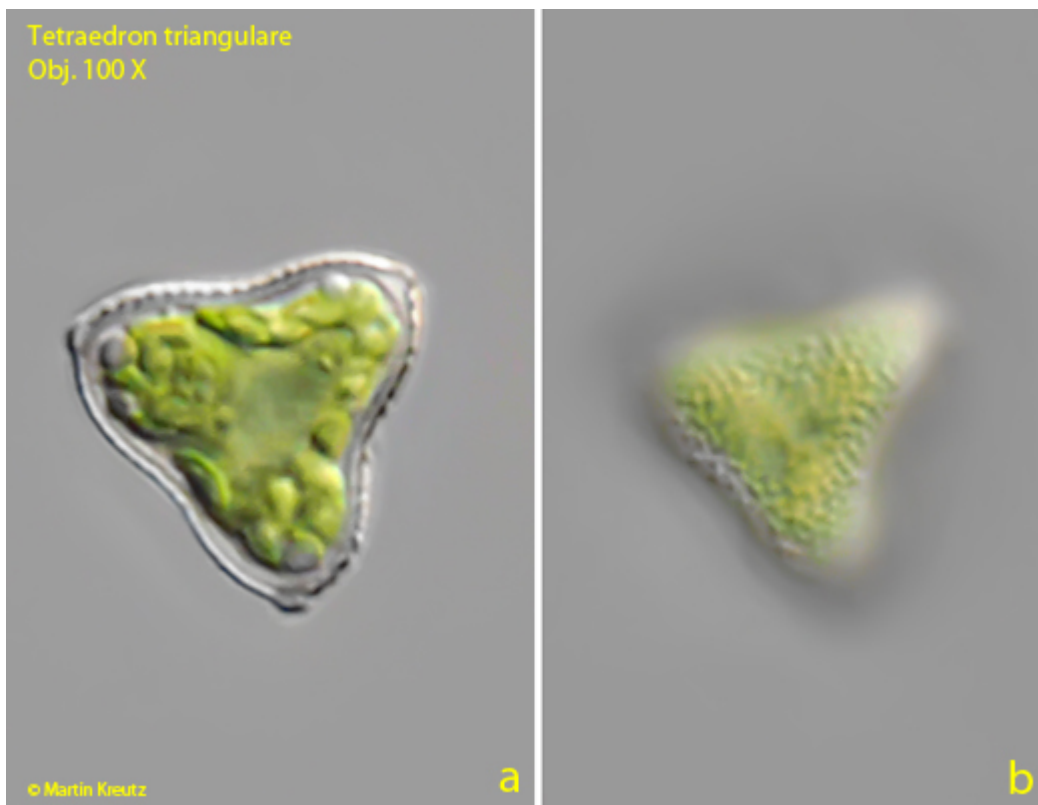


Fig. 2 a-b: *Tetraedron triangulare*. D = 13.4 µm. Two focal planes of a third

specimen. Obj. 100 X.

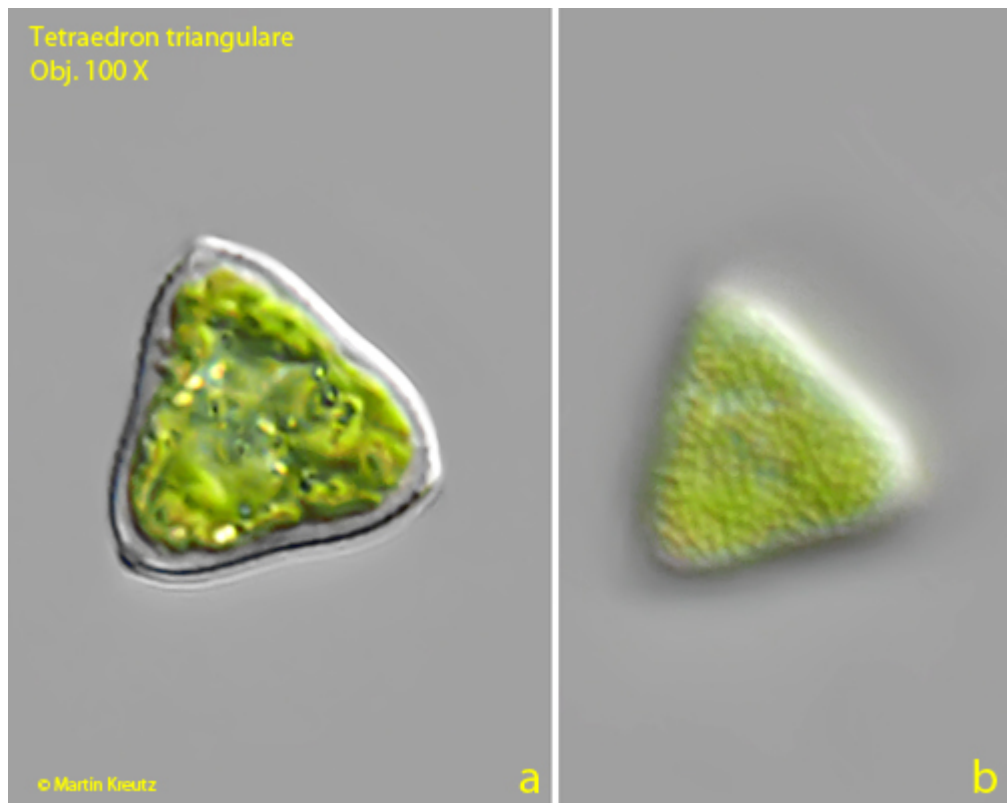


Fig. 3 a-b: *Tetraedron triangulare*. $D = 12.7 \mu\text{m}$. Two focal planes of a second specimen. Obj. 100 X.

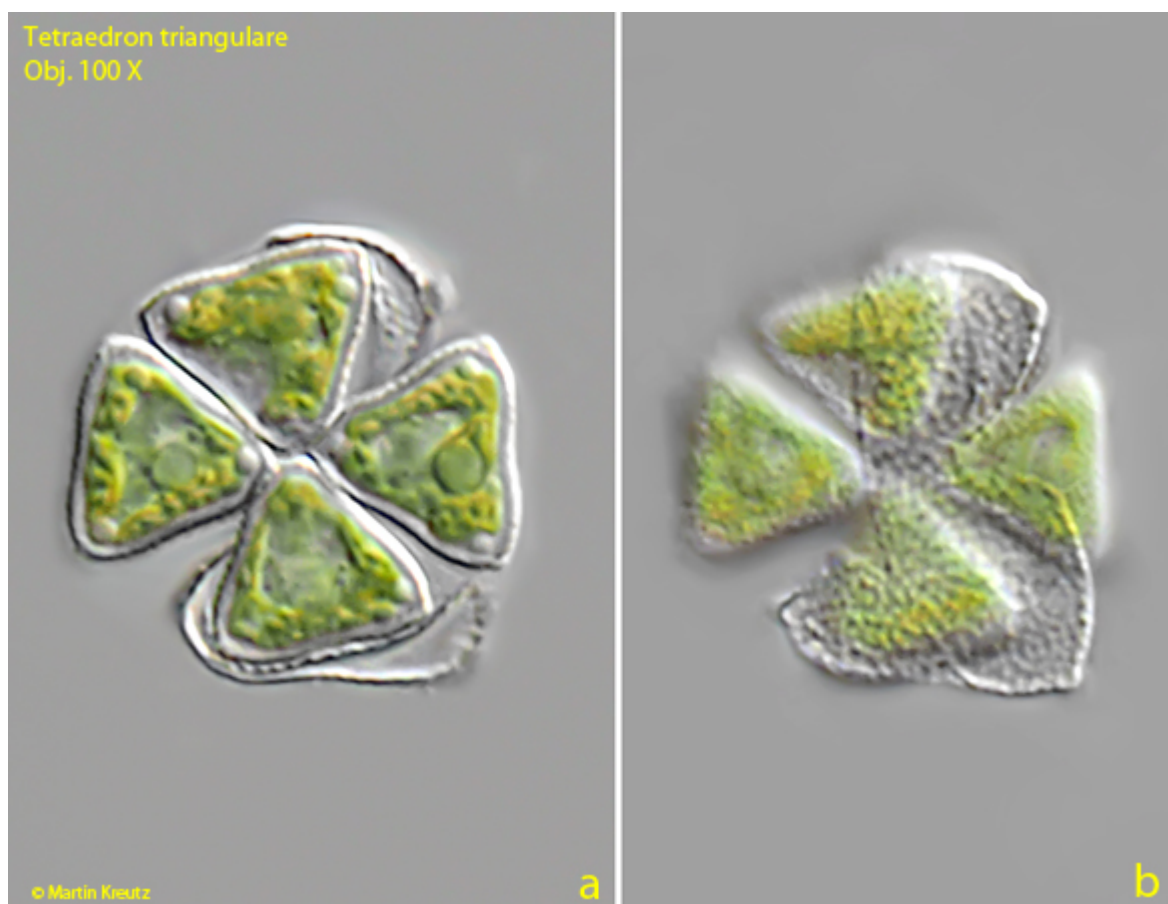


Fig. 4: *Tetraedron triangulare*. Four daughter cells are released from the mother cell. Obj. 100 X.