Dictyochlorella globosa

(Korshikov) Silva, 1959

Most likely ID: n.a.

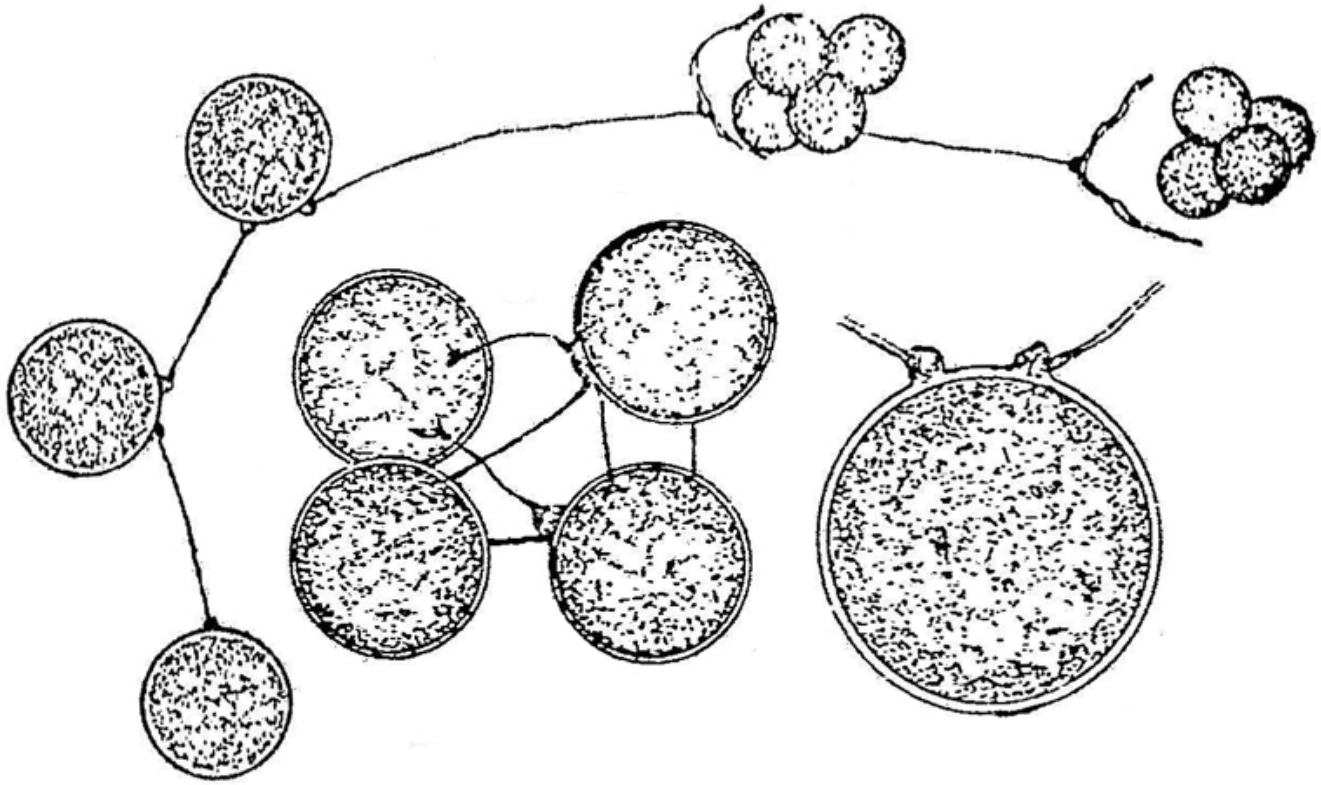
Synonym: *Dictyochloris globosa*

Sampling location: Simmelried

Phylogenetic tree: *Dictyochlorella globosa*

Diagnosis:

- colonies of 4–16 cells in amorphous mucilage envelope
- cells spherical, diameter 8–13 µm
- cells connected by gelatinous threads of cell wall material
- parietal chloroplast, net-shaped
- pyrenoid absent



Dictyochlorella globosa

I only find *Dictyochlorella globosa* very rarely and so far only in the Simmelried. In 30 years I have only had 4 records of this alga. The last find was in October 2022. In the literature (Huber-Pestalozzi, 1983), *Dictyochlorella globosa* is also described as a rare alga.

Dictyochlorella globosa can be easily recognized at medium magnification by the typical gelatinous threads between the cells. Each of the spherical cells is connected to 2 neighboring cells. The colonies usually consist of 4 cells in a tetrahedral arrangement (s. fig. 1). With each cell division, the daughter cells remain connected to each other by a gelatinous thread. The daughter cells begin to form their own mucilage envelope, which increases the distance between daughter cells. The thread is stretched and eventually breaks (s. fig. 2). The cells in my population had a diameter of 9–16 µm, which corresponds well with Huber-Pestalozzi's data (8–13 µm). It should be noted that only the cells that were about to divide reached a diameter of 15–16 µm. All cells in my population were opaque due to many starch granules in the cytoplasm. As a result, I could not recognize the shape of the chloroplast.

Fig. 1: *Dictyochlorella globosa*. D = 12–16 µm (of cells). Some tetrahedral colonies of each 4 cells connected via gelatinous threads (GT). Obj. 40 X.

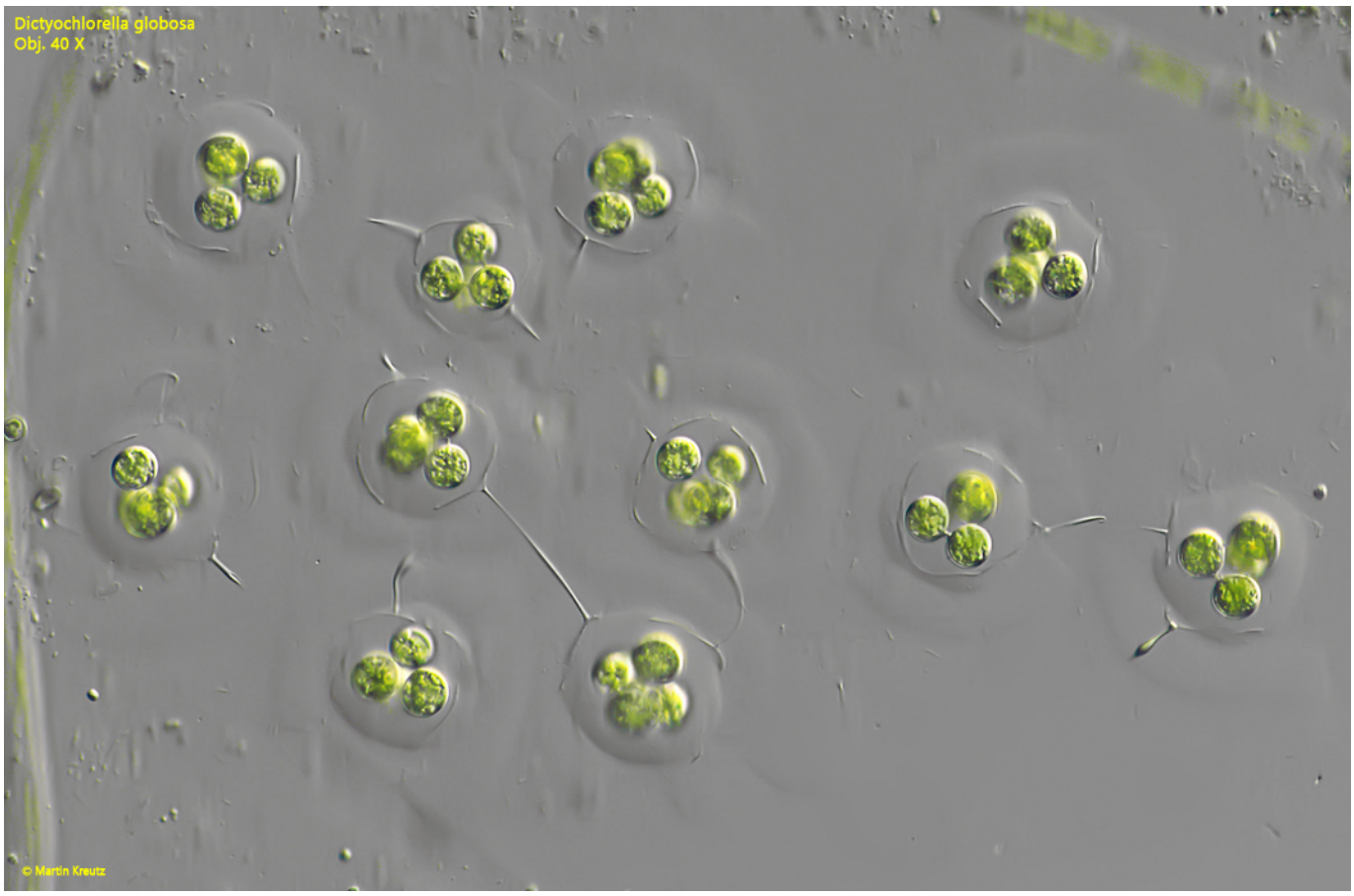


Fig. 2: *Dictyochlorella globosa*. D = 9–11 µm (of cells). Some tetrahedral colonies during the formation of an own geltinous sheat. During this process, the threads are stretched and finally break. Obj. 40 X.

Fig. 3: *Dictyochlorella globosa*. D = 10–11 µm (of cells). A tetrahedral colony in the 8-cell stage after each cell has divided once. Obj. 100 X.

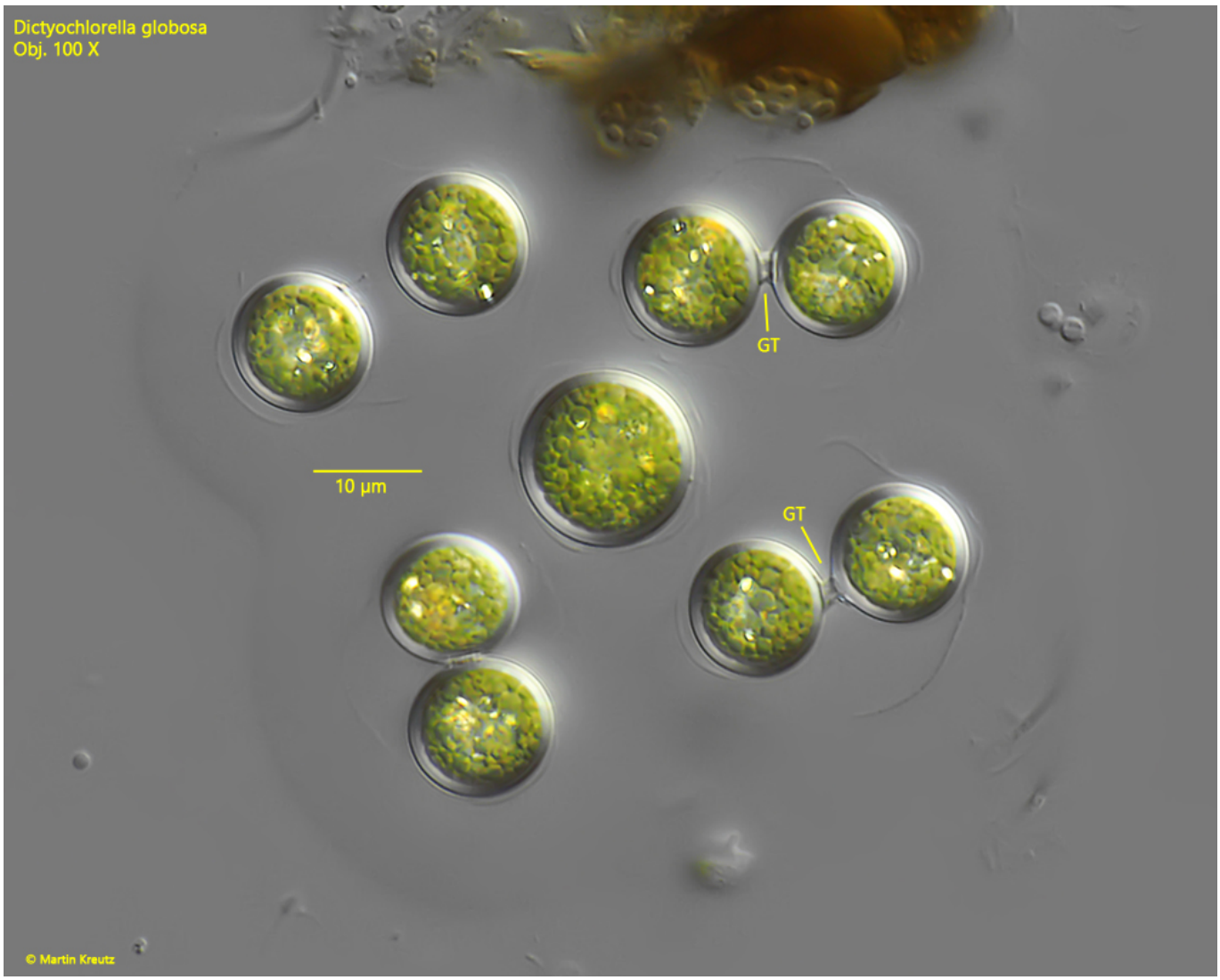


Fig. 4: *Dictyochlorella globosa*. D = 11–15 µm (of cells). A squashed colony with some 2-cell stages shortly after cell division with a short gelatinous thread (GT) between the daughter cells. Obj. 100 X.