Coelastrum astroideum

De Notaris, 1867

Most likely ID: n.a.

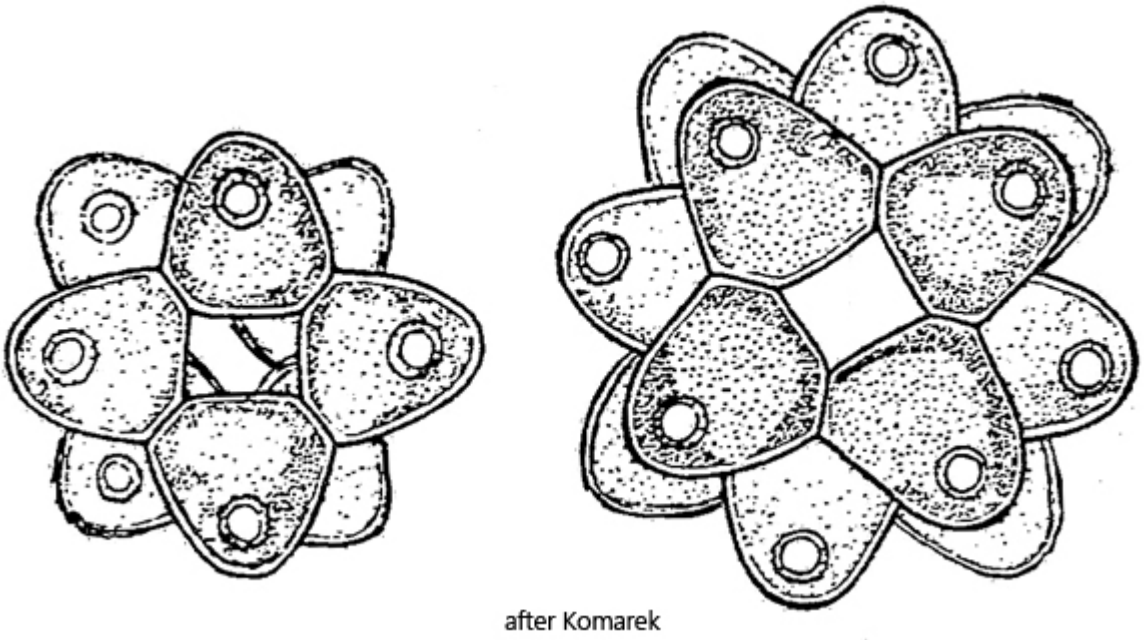
Synonym: n.a.

Sampling location: Pond of the waste disposal company Constance

Phylogenetic tree: *Coelastrum astroideum*

Diagnosis:

- coenobia spherical
- 4–32 cells
- coenobia up to 36 µm diameter
- cells ovoid or almost spherical
- cell wall smooth or slightly wrinkled
- diameter of cells 3.5–20 µm
- cells connected to lateral neighboring cells
- connecting surfaces to neighboring cells flattened
- one parietal chloroplast with one pyrenoid
- planktonic lifestyle



Coelastrum astroideum

I found many coenobia of *Coelastrum astroideum* in the plankton of the pond of the waste disposal company Constance. The coenobia had a diameter of 20–30 µm and thus corresponded to the data given by Komarek & Trebon (1983). I found most coenobia in autumn.

The cells in the coenobia were ovoid in shape as drawn by Komarek (s. drawing above). The tapered ends of the cells always points outward. The cell walls in my population were all slightly wrinkled (s. fig. 1 b).

Coelastrum astroideum differs from the similar species *Coelastrum pseudomicroporum* by the type of connection between the cells. In *Coelastrum astroideum*, there are only connections to the lateral neighboring cells, whereas in *Coelastrum pseudomicroporum* there are also connections at the basal surfaces of the cells to the inner cells.

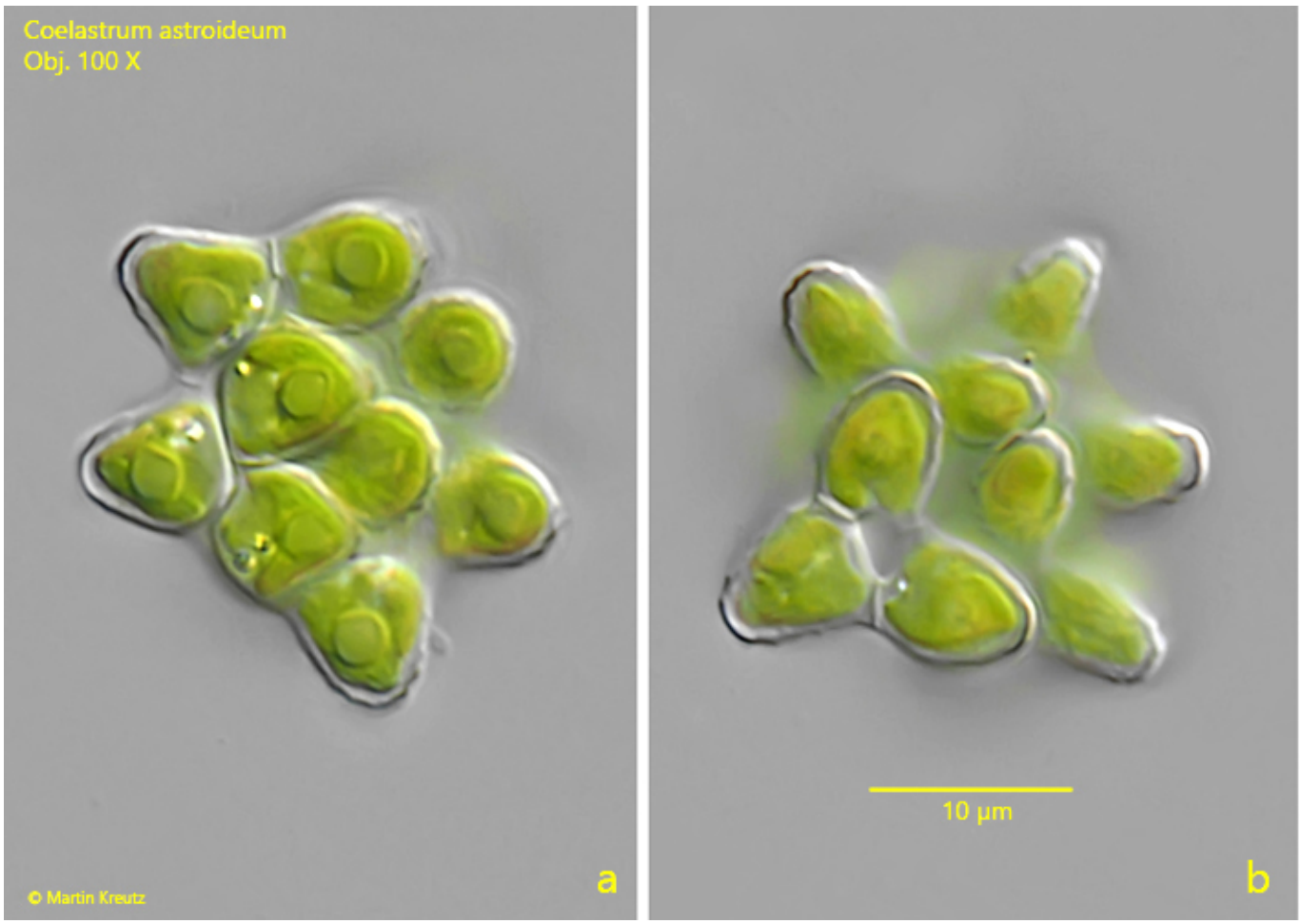


Fig. 1 a-b: *Coelastrum astroideum.* D = 25 µm (of coenobium). A coenobium of 16 ovoid cells. The cell wall of the cells is slightly wrinkled. Obj. 100 X.



Fig. 2: *Coelastrum astroideum.* D = 26 µm (of coenobium). A second coenobium of 16 cells. Obj. 100 X.