Pseudopediastrum boryanum

(Turpin) Hegewald, 2005

Most likely ID: n.a.

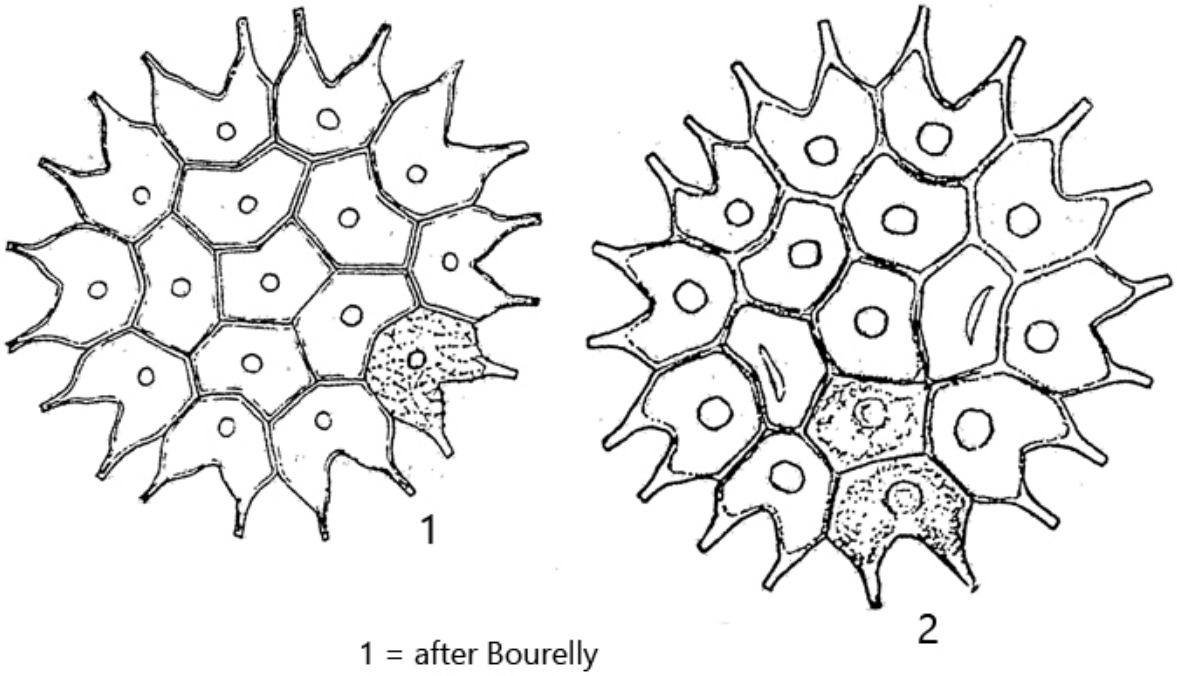
Synonym: *Pediastrum boryanum*

Sampling location: Pond of the waste disposal company Constance

Phylogenetic tree: *Pseudopediastrum boryanum*

Diagnosis:

- coenobium star-shaped, flat and single-layered
- diameter coenobium up to 250 µm
- coenobium of 4, 8, 16, 32 or 64 cells
- marginal cells 8–30 X 9–21 µm, cell wall smooth or finely granulated
- inner cells concentrically arranged without intercelluar spaces
- marginal cells bilobed with a V-shaped notch
- marginal cells occasionally bearing tufts of mucilaginous spines at tips of lobes
- chloroplast parietal
- single pyrenoid



1 = after Bourelly
2 = after Sulek

Pseudopediastrum boryanum

The species *Pediastrum boryanum* was transferred to *Pseudopediastrum boryanum* by Hegewald in 2005. I found *Pseudopediastrum boryanum* in the plankton of the strongly eutrophic pond of the waste disposal company Constance. This pond is fed by the purified water of the sewage plant, which is still very rich in nutrients.

Pseudopediastrum boryanum can be easily recognized by the lack of any intercellular spaces in the coenobium. The inner cells have a hexagonal shape and the marginal cells have a distinct V-shaped notch and two projections each. At the distal ends of the projections often tufts of thin fibers are visible, which I interpret as an adaptation to the planktonic habitat. The cell wall of *Pseudopediastrum boryanum* is finely granulated.

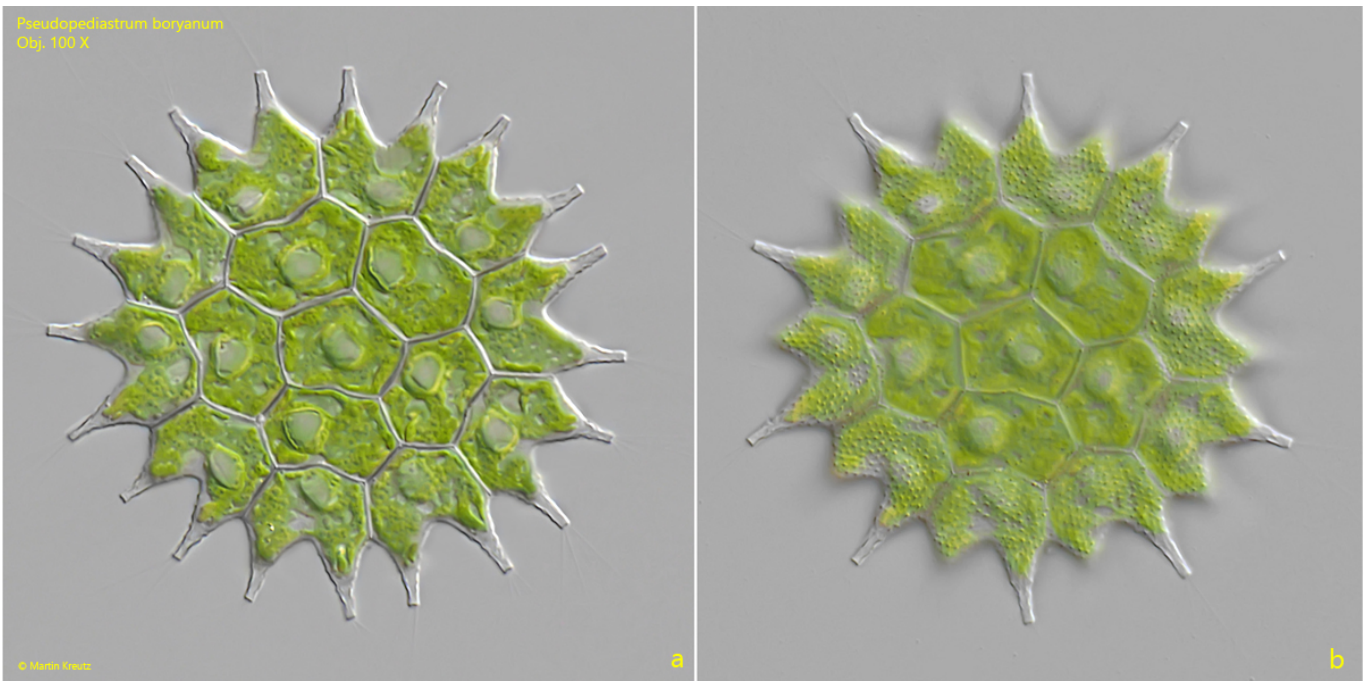


Fig. 1 a-b: *Pseudopediastrum boryanum.* D = 73 µm. Two focal planes of a slightly squashed 16 cell coenobium. The cell wall is finely granulated. Obj. 100 X.