***Pseudopediastrum boryanum***

**(Turpin) Hegewald, 2005**

**Most likely ID:** n.a.

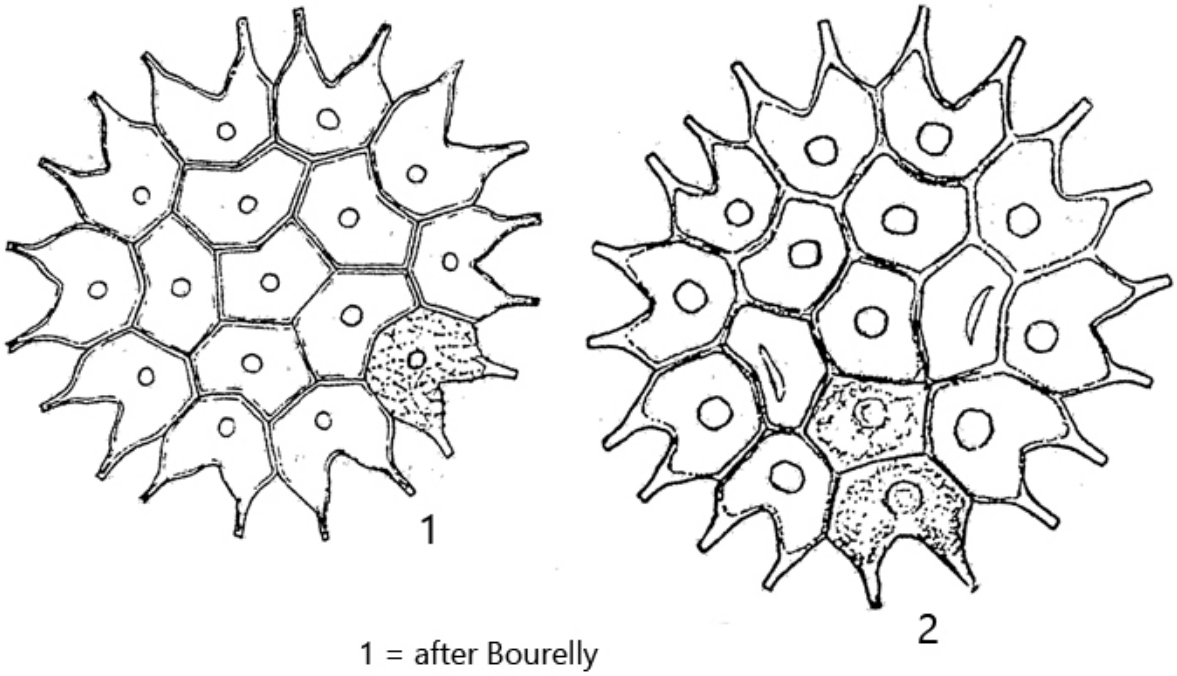
**Synonym:** *Pediastrum boryanum*

**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 notch between the lobes
- marginal cells occasionally bearing tufts of mucilaginous spines at tips of lobes
- chloroplast parietal
- single pyrenoid




1 = after Bourelly
2 = after Sulek

Pseudopediastrum boryanum

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 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 species *Pediastrum boryanum* was transferred to *Pseudopediastrum boryanum* by Hegewald in 2005.

The specimens of my population showed a hexagonal pattern on the cell surfaces, what is not described in the literature. The cell wall of *Pseudopediastrum boryanum* is described as smooth or finely granulated. Whether the structure of the cell wall depends on the living conditions is not known to me.

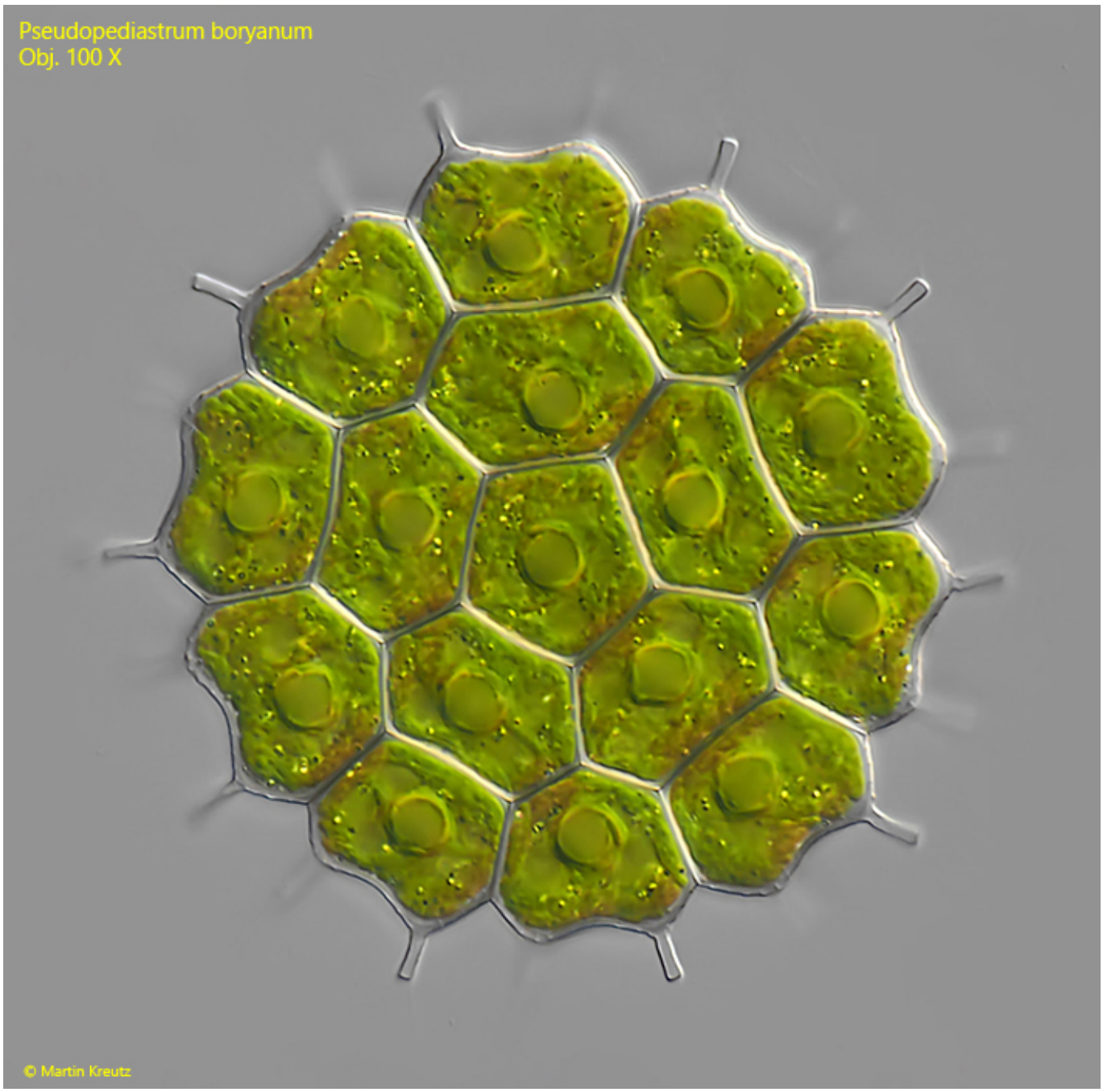



**Fig. 1:** *Pseudopediastrum boryanum*. D = 75 µm. A slightly squashed specimen. Obj. 100 X.

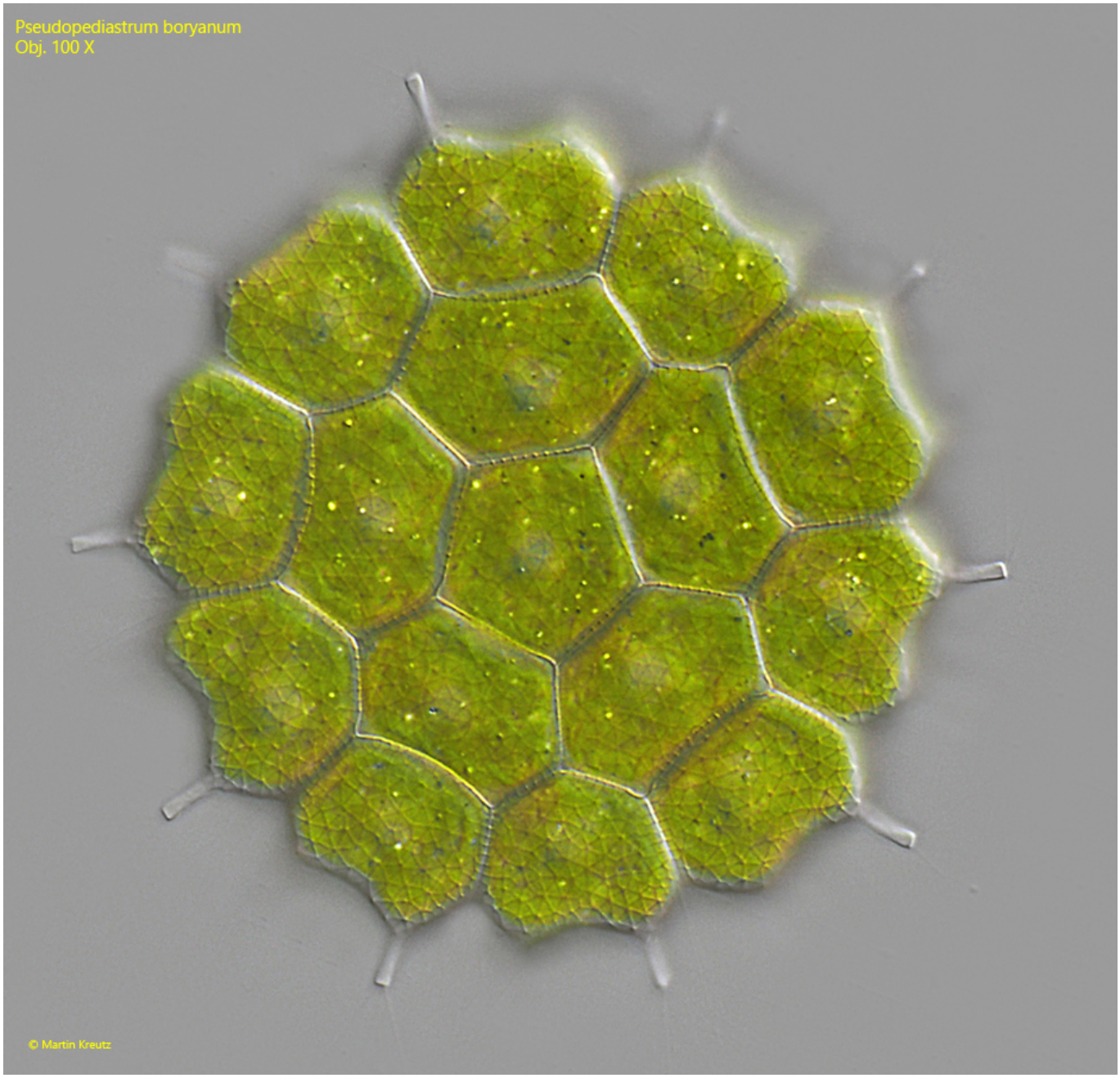



**Fig. 2:** *Pseudopediastrum boryanum*. D = 75 µm. A slightly squashed specimen. At the contact surfaces of the cells linearly arranged, small warts can be seen. Obj. 100 X.

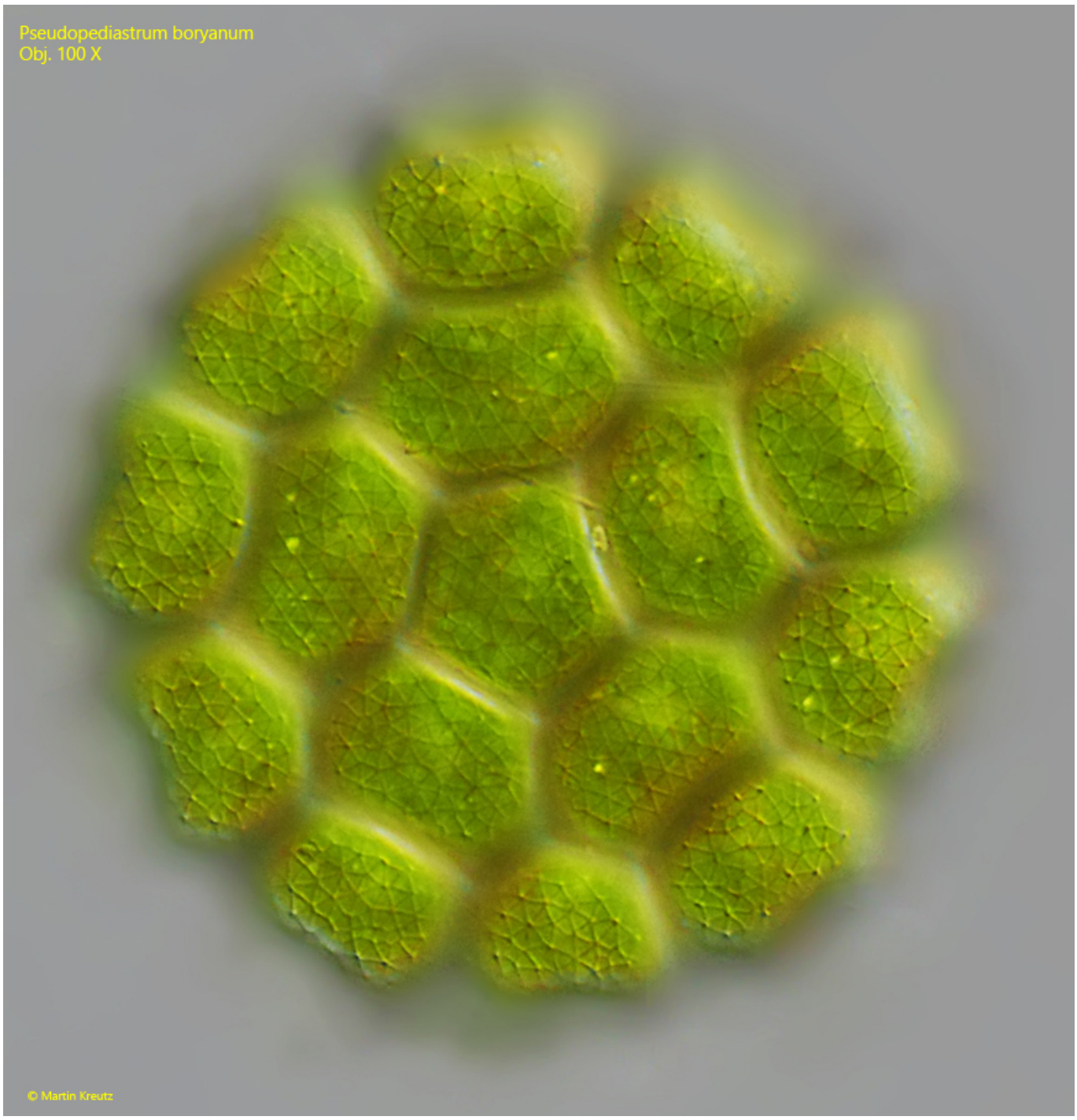



**Fig. 3:** *Pseudopediastrum boryanum*. D = 75 µm. A slightly squashed specimen. On the surface of the cells a delicate hexagonal pattern can the recognized. Obj. 100 X.