Lacunastrum gracillimum

(West & G. S. West, 1895) H. A. McManus, 2011

Most likely ID: n.a.

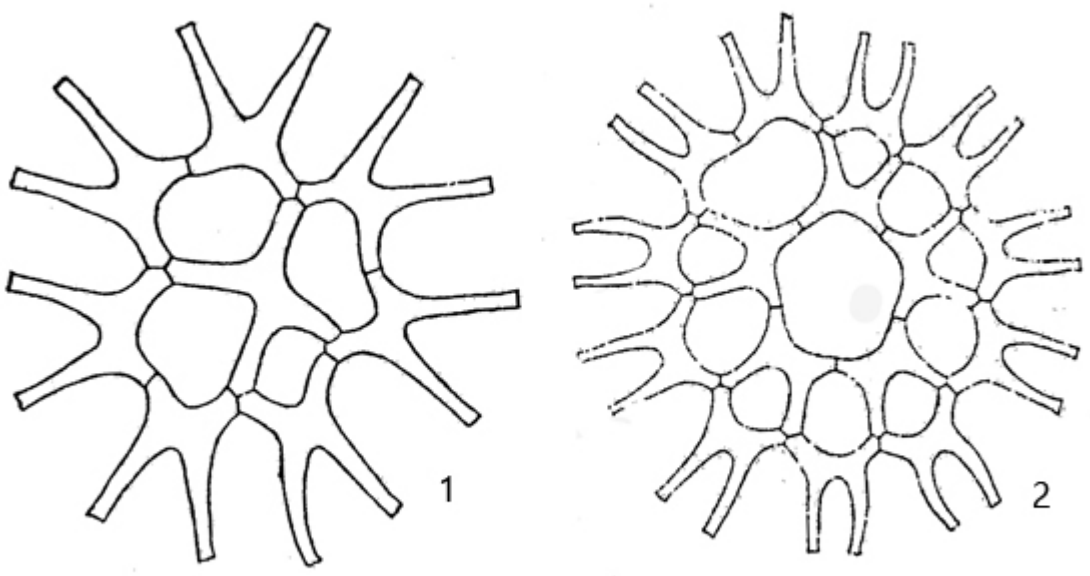
Synonyms: *Pediastrum duplex var. gracillimum*, *Pediastrum gracile*, *Pediastrum gracillimum*

Sampling location: Pond of the waste disposal company Constance

Phylogenetic tree: ***Lacunastrum gracillimum***

Diagnosis:

- coenobium star-shaped, flat and single-layered
- diameter coenobium 60–125 µm
- coenobium of 8–64 cells, sometimes 128 cells
- marginal cells 9–17 µm long, H-shaped
- inner cells 24 µm long
- cell wall smooth
- inner cells concentrically arranged
- marginal cells bilobed with long projections
- marginal cells occasionally bearing tufts of fine fibers at tips of lobes
- the intercellular gaps are large and occupy as much space as the cells
- one parietal chloroplast
- single pyrenoid



1 = after Philipose
2 = after Smith

Lacunastrum gracillimum

I found *Lacunastrum gracillimum* 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. *Lacunastrum gracillimum* can be easily recognized by the delicate, H-shaped cells and the large gaps between the cells, which occupy as much space as the cells. The cells on the outer margin each bear two long projections. At the distal ends of the projections tufts of thin fibers are visible, which I interpret as an adaptation to the planktonic habitat.

The species *Pediastrum duplex var. gracillimum* was transferred to *Lacunastrum gracillimum* by McManus in 2011.

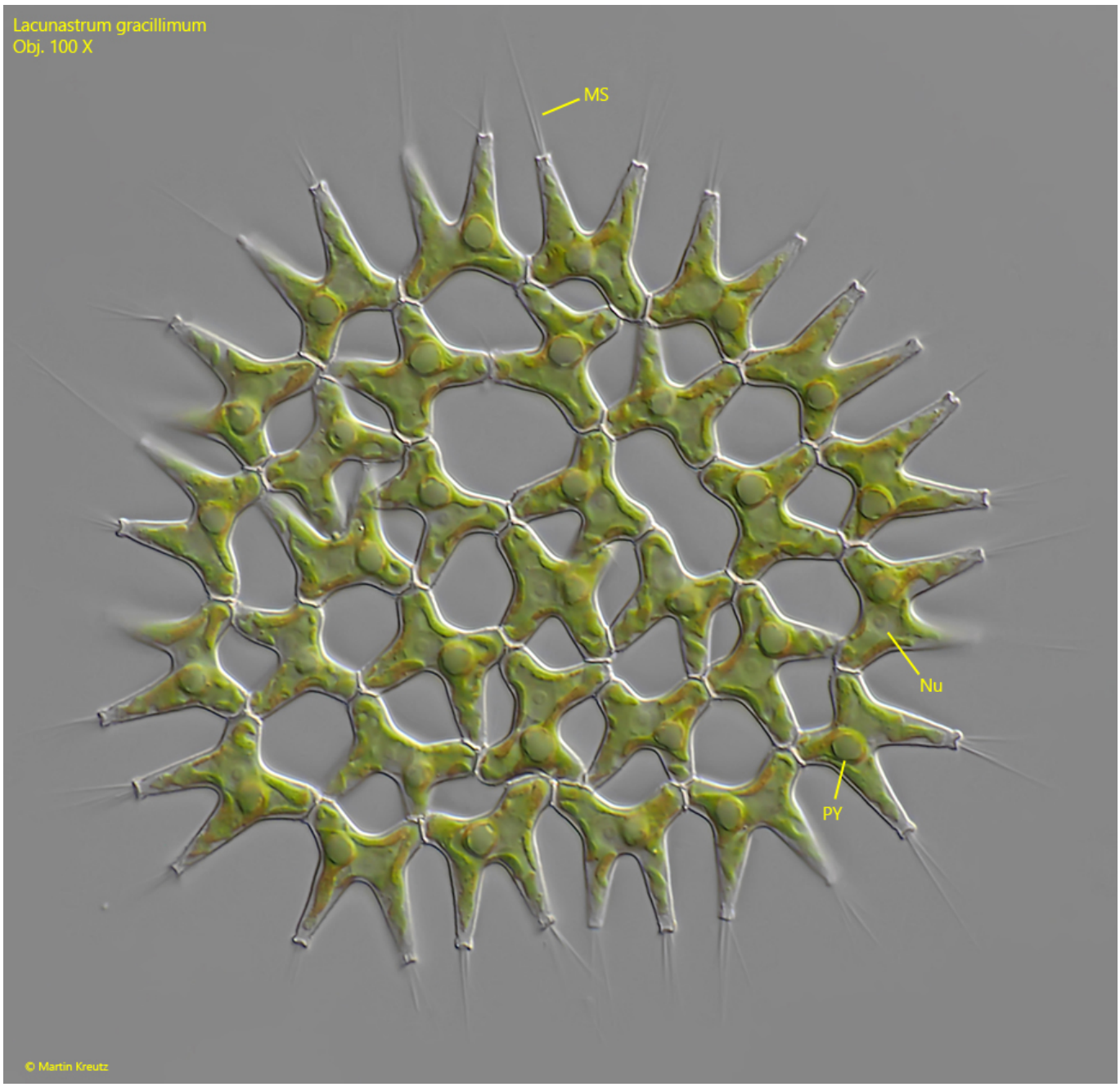


Fig. 1: *Lacunastrum gracillimum.* D = 92 µm. A slightly squashed specimen. MS = mucilaginous spines, Nu = nucleus, PY = pyrenoid. Obj. 100 X.

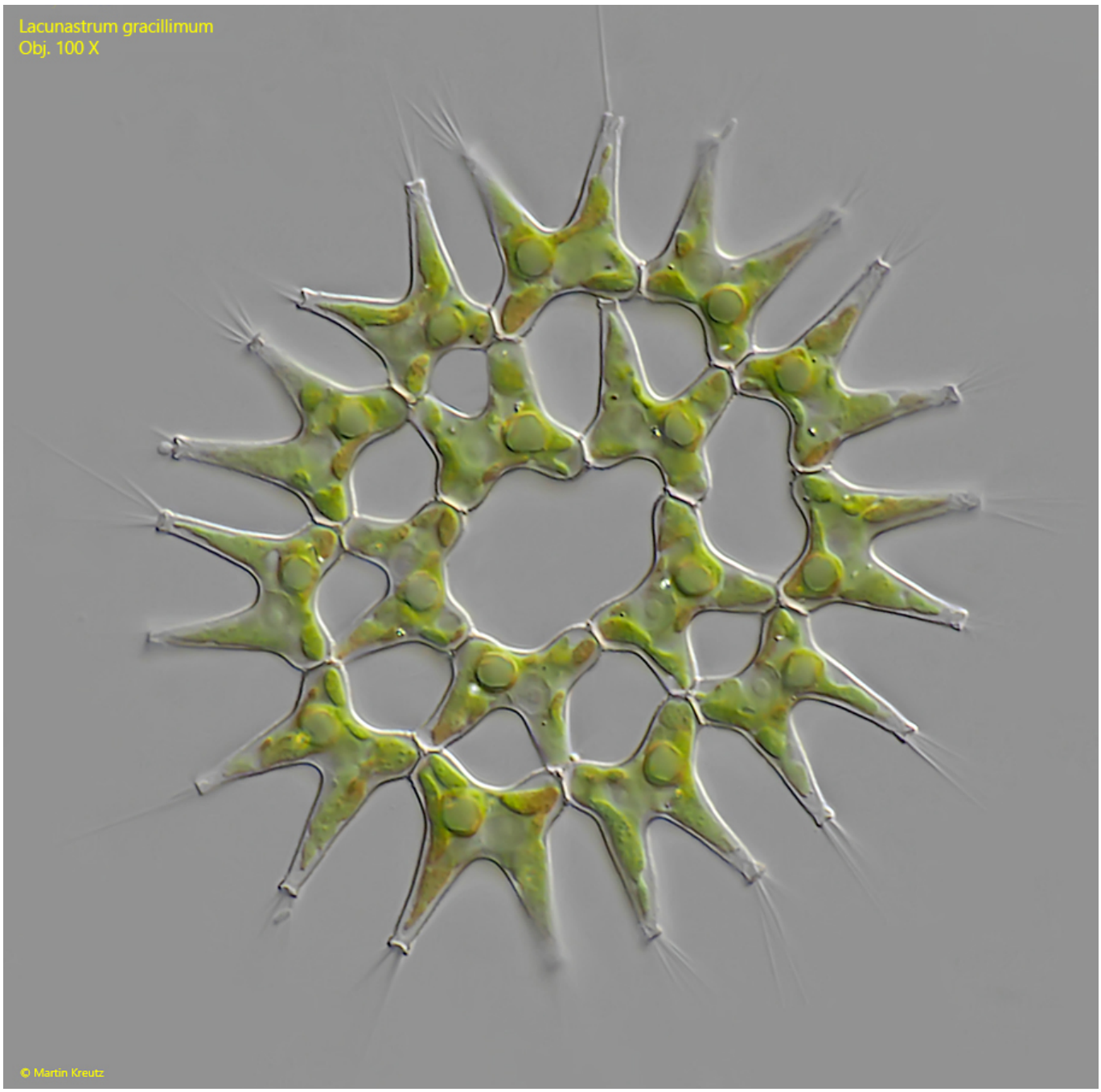


Fig. 2: *Lacunastrum gracillimum.* D = 65 µm. A slightly squashed second specimen. Obj. 100 X.