Pseudanabaena amphigranulata

(Goor) Anagnostidis, 2001

Most likely ID: n.a.

Synonyms: *Oscillatoria amphigranulata*, *Limnothrix amphigranulata*

Sampling location: Pond of the convent Hegne

Phylogenetic tree: *Pseudanabaena amphigranulata*

Diagnosis:

- trichomes single, straight or slightly bent
- cells barrel-shaped
- cross walls distinctly constriced
- small gas vacuoles at both sides of cross walls
- gas vacuoles near apices of terminal cells
- length 2–6 µm, width 1.2–2.5 µm
- cell content divided in brighter centroplasm and darker chromatoplasm
- cytoplasm with small granules
- cells blueish green



after Goor

Pseudanabaena amphigranulata

I frequently and regularly find *Pseudanabaena amphigranulata* in samples from the pond of the convent Hegne. The species is easy to recognize by the barrel-shaped cells with distinct constrictions at the cross walls. On both sides of the cross walls, there are small gas vacuoles (usually 2), which appear as bright spots under bright-field illumination (s. fig. 1). These gas vacuoles are also present in the apices of the terminal cells (s. fig. 3 a). The cytoplasm of the cell is divided into a lighter centroplasm and a darker stained chromatoplasm, with the chromatoplasm adjacent to the cell wall (s. figs. 1 and 3 a-b). The filaments are motile and gather after a few days on the side facing the light in the sample vessel.

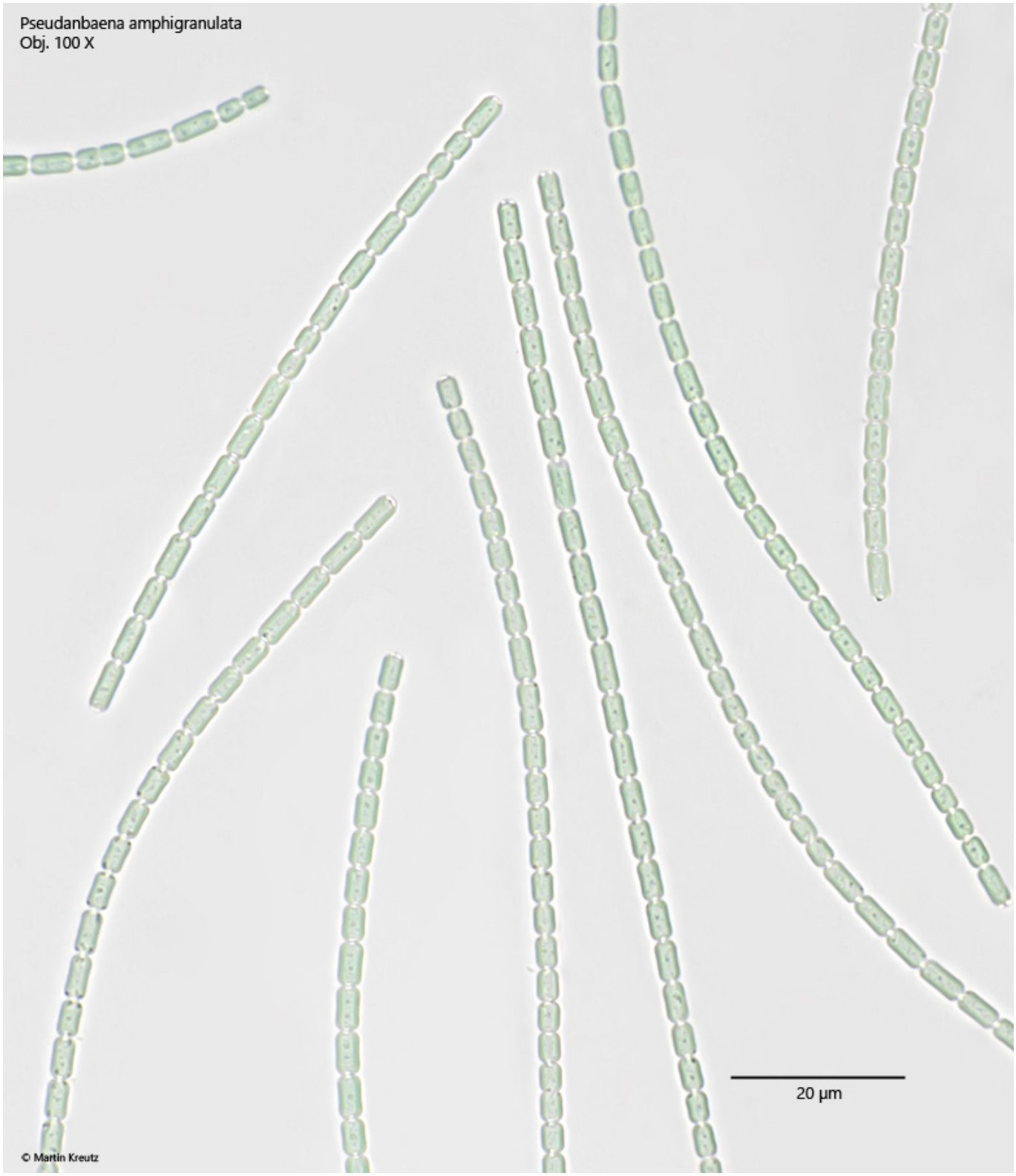


Fig. 1: *Pseudanabaena amphigranulata*. Several trichomes in brightfield illumination. Note the slightly brighter centroplasm in the cells and the darker chromatoplasm near the cell walls. Obj. 100 X.

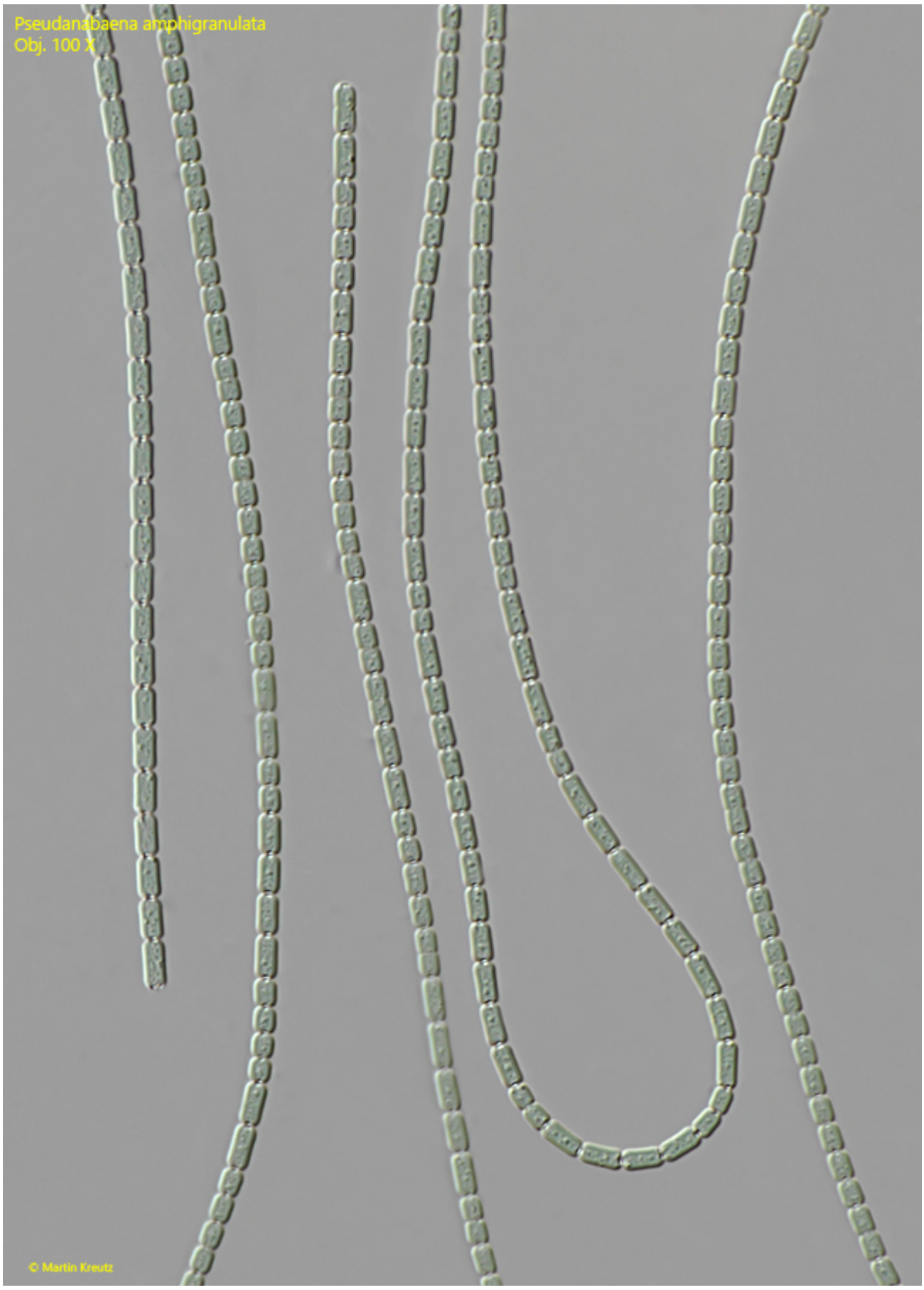


Fig. 2: *Pseudanabaena amphigranulata*. Several trichomes in DIC. Obj. 100 X.

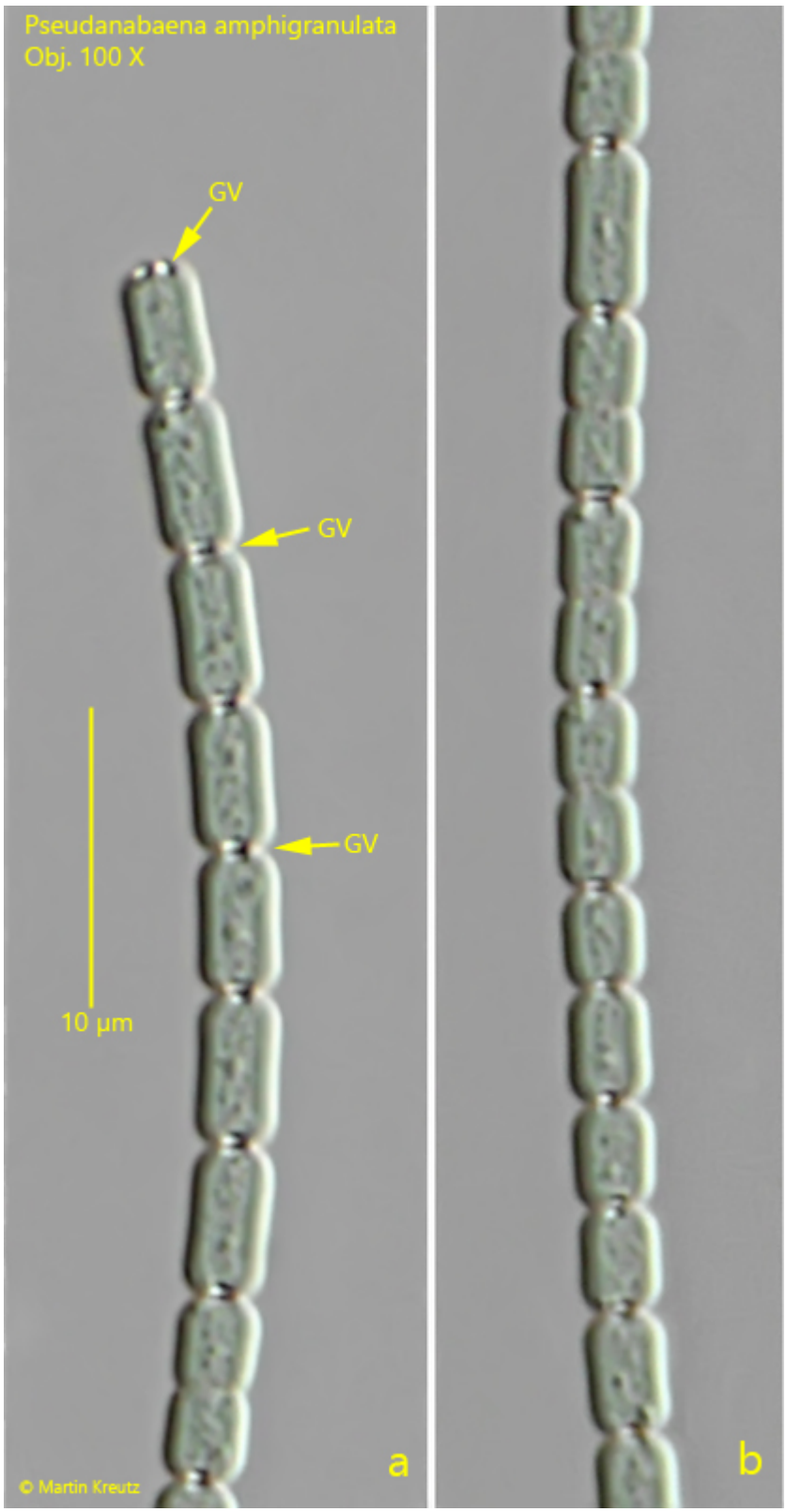


Fig. 3 a-b: *Pseudanabaena amphigranulata*. L = 3.1–5.1 µm. The terminal end and a section from the middle of a trichome in detail. On both sides of the constricted cross walls and in the apex of the terminal cell gas vacuoles (GV) are visible. The content of the cells is granulated. Obj. 100 X.