Aphanizomenon flos-aquae

Ralfs ex Bornet & Flahault, 1886

Most likely ID: n.a.

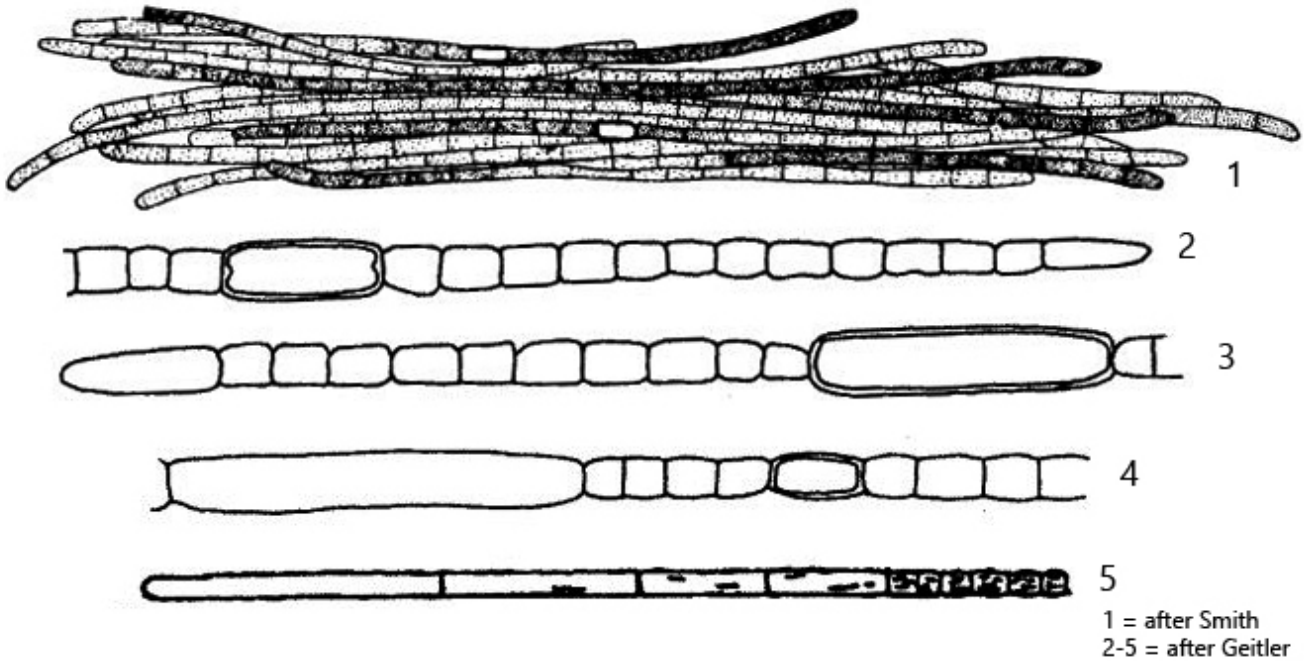
Synonym: n.a.

Sampling location: Mühlhalden pond, Lake Constance, Pond of the waste disposal company Constance

Phylogenetic tree: *Aphanizomenon flos-aquae*

Diagnosis:

- trichomes straight, aggregated in bundles or flakes
- end of trichomes slightly tapered and rounded
- cells 5–15 µm long, width 5–6 µm
- cells filled with gas vacuoles
- heterocysts almost cylindrical, 7–20 µm long, width 5–7 µm
- akinetes cylindrical, up to 80 µm long, width 6–8 µm
- planktonic lifestyle, often water blooms



Aphanizomenon flos-aquae

Aphanizomenon flos-aquae is the most common planktonic cyanobacterium in my plankton samples. It can be easily identified by the large aggregates of parallel arranged, straight trichomes (s. fig. 1). Within the trichomes the heterocysts as well as the larger akinetes are scattered (s. figs. 2 and 3). The heterocysts and the ackinetes can sometimes be absent, depending on the environmental conditions. The vegetative cells contain many small gas vacuoles, which provide buoyancy (s. fig. 4).

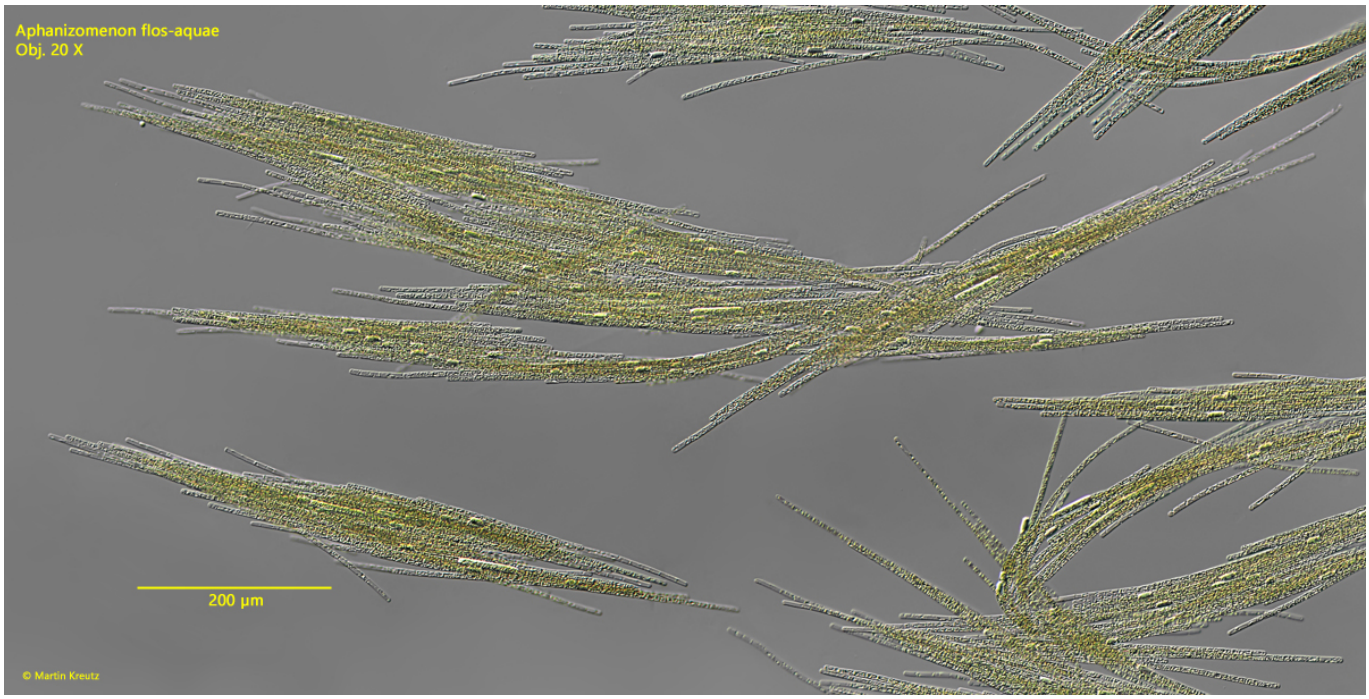


Fig. 1: *Aphanizomenon flos-aquae*. Some aggregates of trichomes. Obj. 20 X.

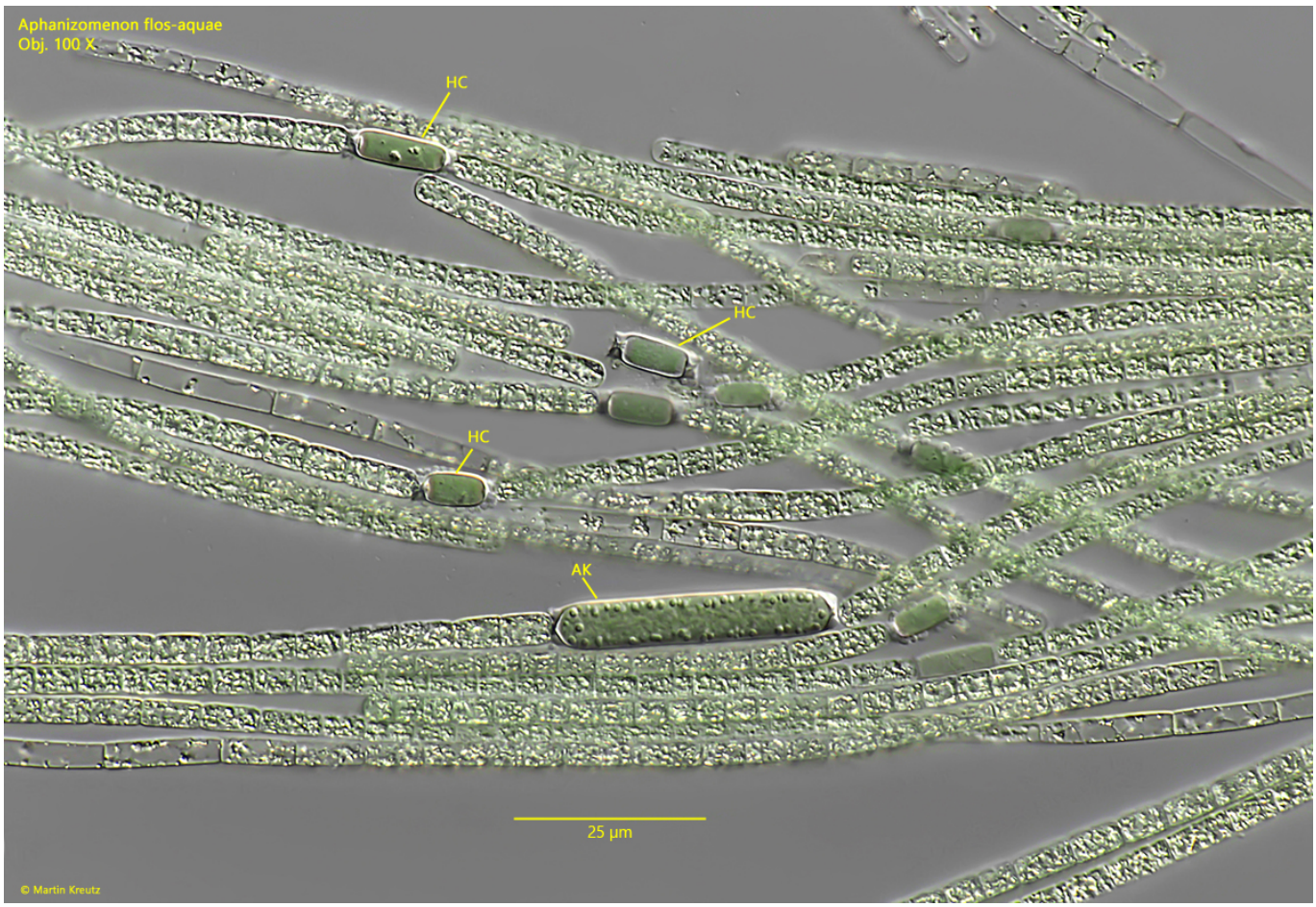


Fig. 2: *Aphanizomenon flos-aquae*. The trichomes in detail. Note the almost cylindrically shaped heterocysts (HC) and the larger akinetes (AK). Obj. 100 X.

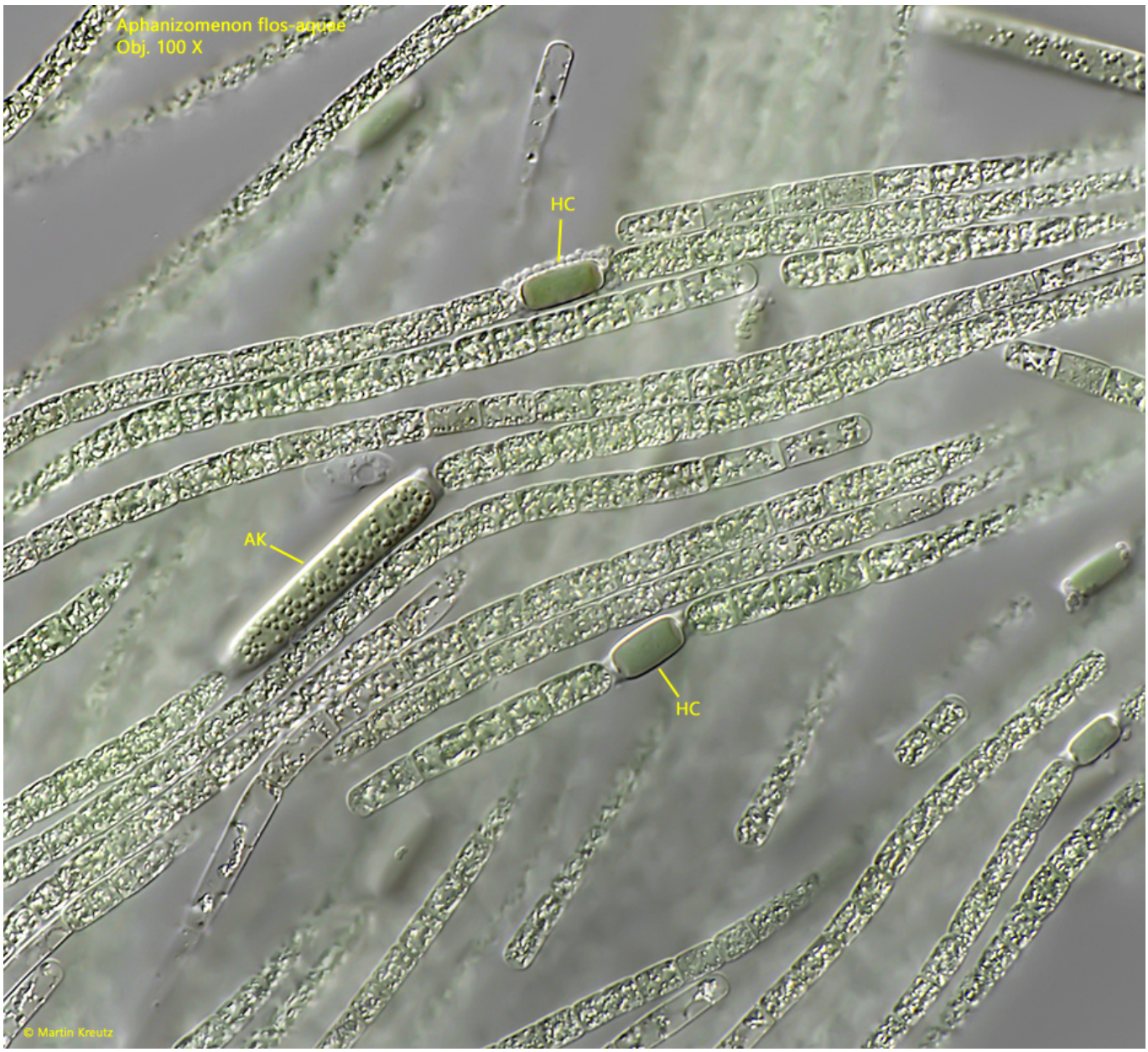


Fig. 3: *Aphanizomenon flos-aquae*. The heterocysts (HC) and akinetes (AK) in a second aggregate of trichomes. Obj. 100 X.

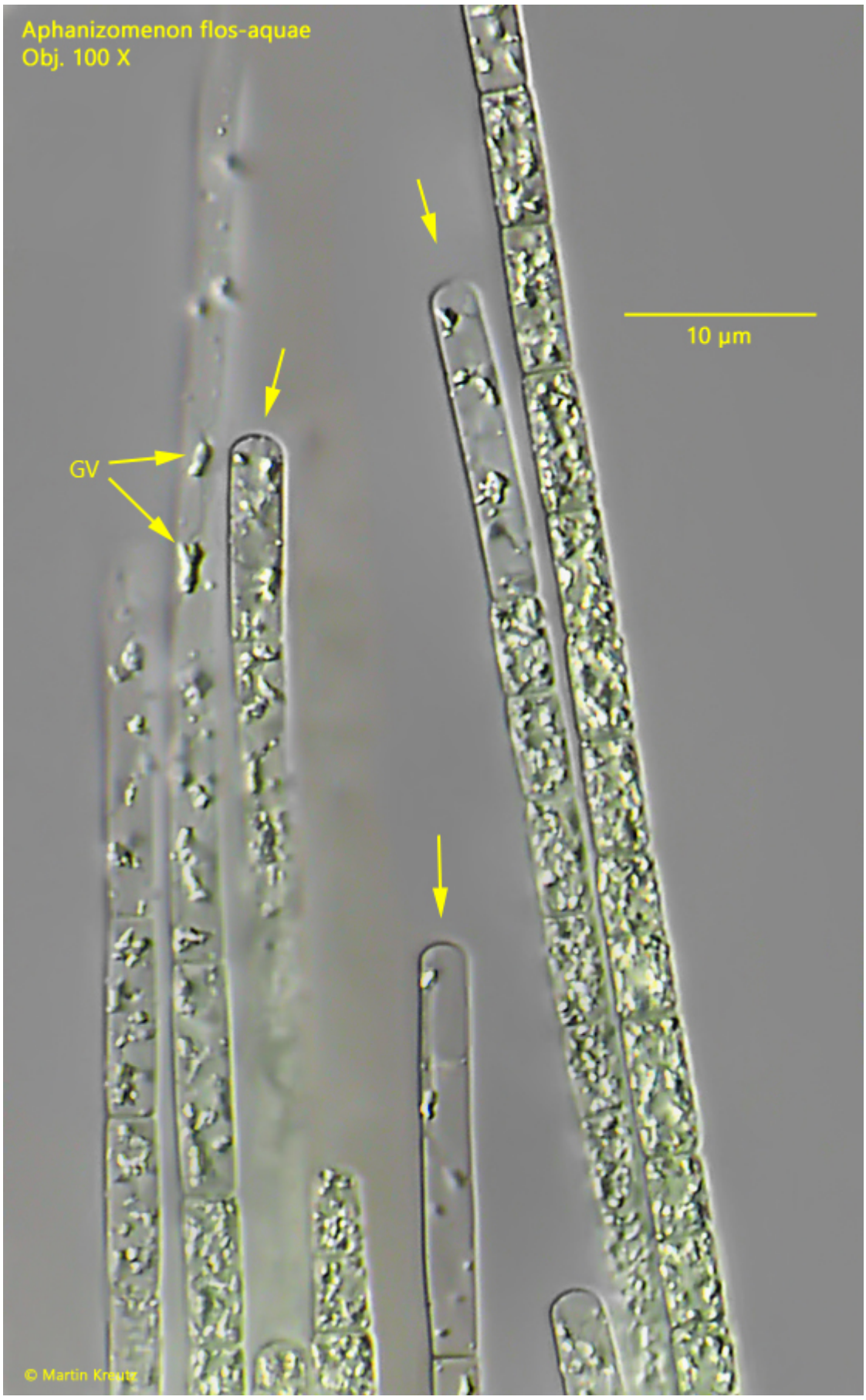


Fig. 4: *Aphanizomenon flos-aquae*. The rounded ends of the trichomes in detail (arrows). In the cells small gas vacuoles (GV) are visible. Obj. 100 X.