***Woronichina naegeliana* (Unger) Elenkin, 1933**

Most likely ID: n.a.

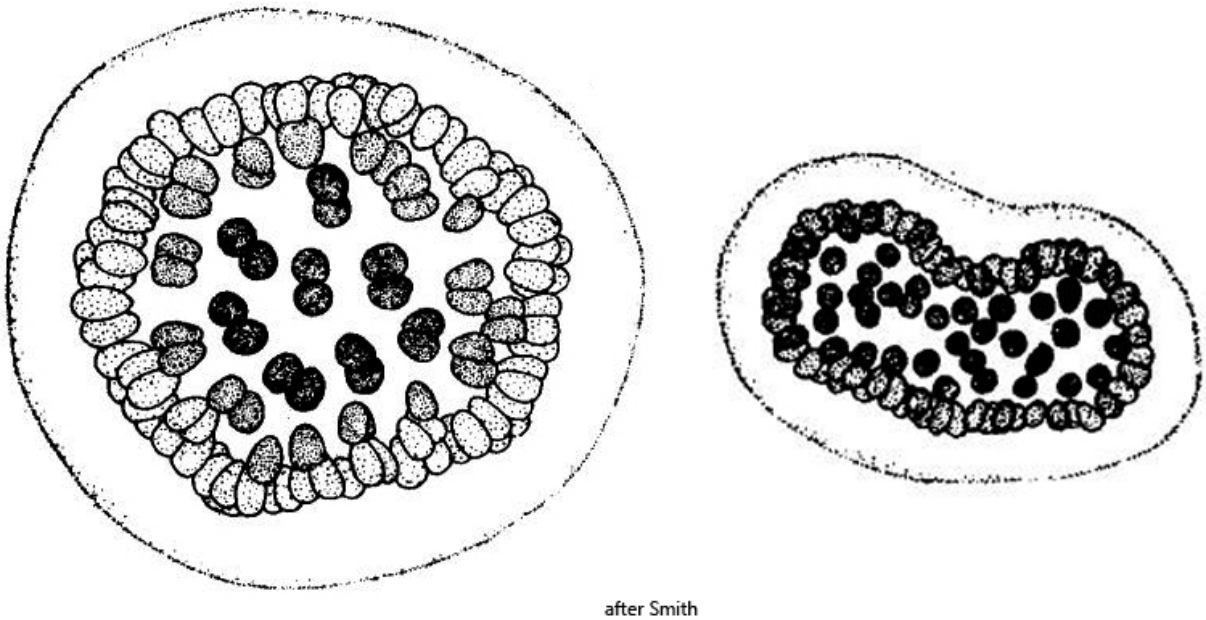
Synonym: *Coelosphaerium naegelianum*

Sampling location: Pond of the convent Hegne

Phylogenetic tree: *Woronichinia naegeliana*

Diagnosis:

- hollow colonies, single-cell layered
- colonies free-floating, outline ellipsoidal, globular or somewhat irregular
- diameter of colonies 50–180 µm
- colonies in a distinct gelatinous envelope
- cells obvoid or ellipsoidal, 3.5–5 µm x 7–11 µm
- cyptoplasm with scattered, small gas vacuoles
- cells on distal end of gelatinous stalks, connected in the center (hard to see)
- planktonic lifestyle



Woronichinia naegeliana

The cyanobacterium *Wolonichinia naegelinana* was first described as *Coelosphaerium naegelianum*. After Woronichin was able to detect gelatinous stalks in the colonies after staining with methylene blue, the species was transferred to the genus *Wolonichinia*. However, the gelatinous stalks are difficult to recognize. I was also unable to detect them in the DIC (s. fig. 2 a-b). The cells of *Wolonichinia naegelinana* are very large with finely distributed gas vacuoles. In my population, the cells were 4–5 µm x 5–9 µm in size, which clearly distinguishes them from the similar species *Coelosphaerium kuetzingianum*, whose almost spherical cells are only 2–4 µm in size. Colonies of *Wolonichinia* and *Coelosphaerium* can also be confused with *Microcystis*. In *Microcystis*, however, the cells are scattered in the gelatinous mass and do not form a hollow sphere.

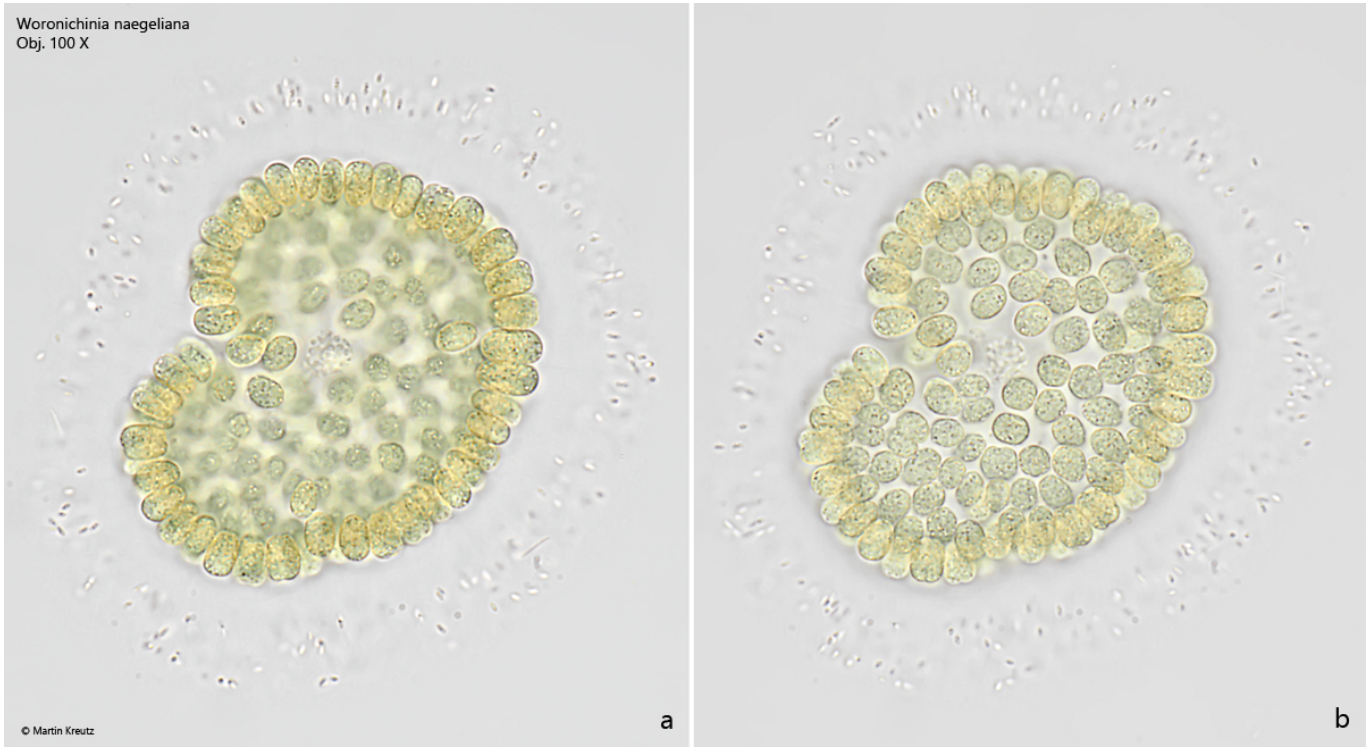


Fig. 1 a-b: *Woronichinia naegeliana*. D = 54 µm (of colony). Two focal planes of colony in brightfield illumination. The cells arranged in a single layer have a length of 7.1–8.4 µm and a width of 4.0–5.3 µm. Obj. 100 X.

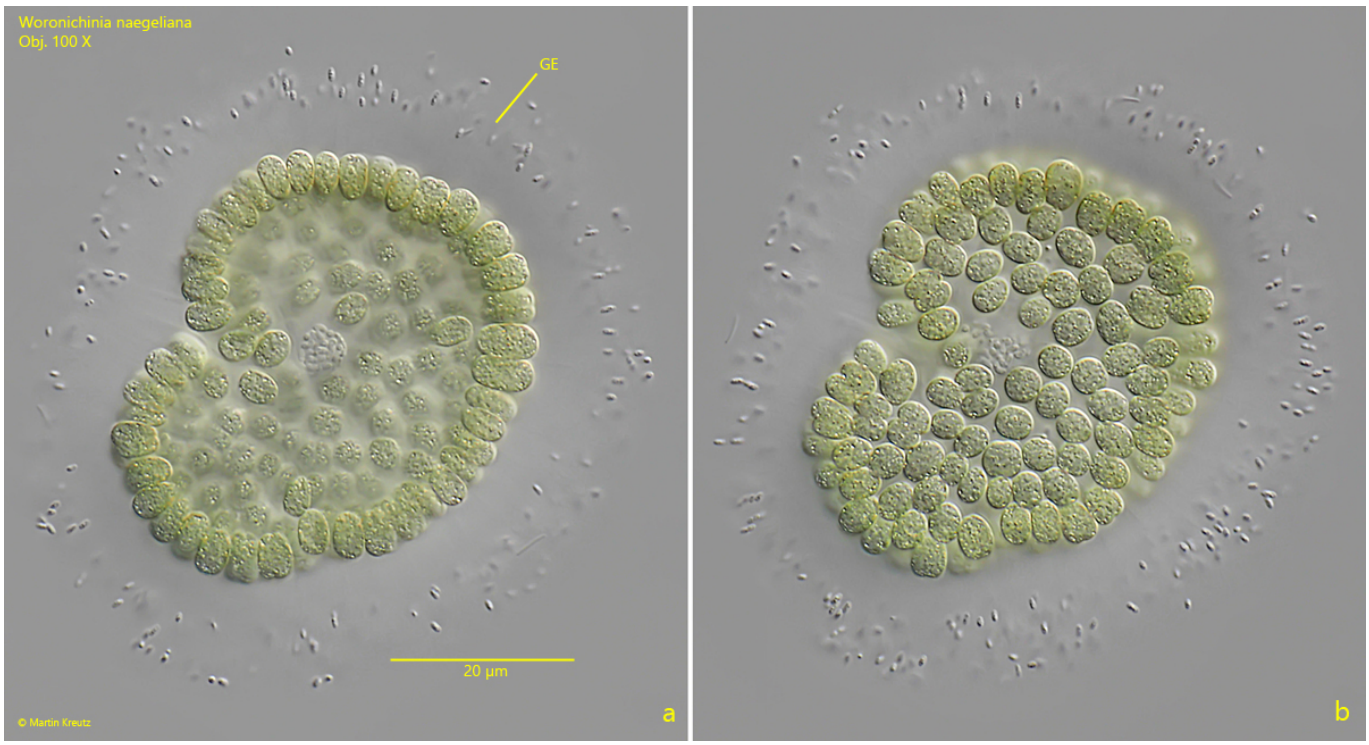


Fig. 2 a-b: *Woronichinia naegeliana*. D = 54 µm (of colony). The colony as shown in fig. 1 a-b in DIC. Note the distinct gelatinous layer of the colony. The stalks conecting the cells can only be seen after staining. Obj. 100 X.