Pandorina morum

(Müller) Bory, 1824

Most likely ID: n.a.

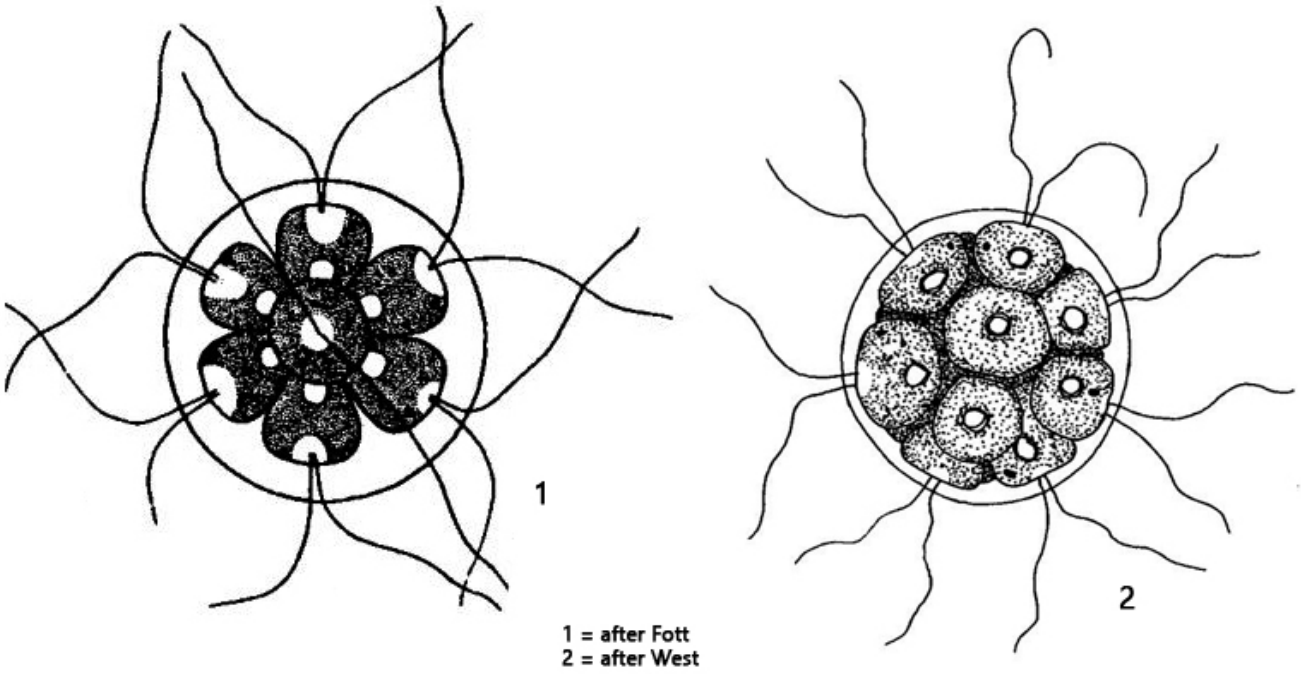
Synonym: n.a.

Sampling location: Mühlweiher Litzelstetten, Simmelried, Pond of the waste disposal company Constance, Mühlhalden pond, Pond of the convent Hegne, Purren pond

Phylogenetic tree: *Pandorina morum*

Diagnosis:

- colonies are ovoid or ellipsoidal of 8–16 cells
- colonies covered by a gelatinous sheath
- colonies 20–50 µm in diameter
- cells wedge-shaped, compactly arranged radially
- diameter of cells 8–17 µm
- each cell with two flagella of equal length
- 2 contractile vacuole at base of flagella
- eyespots present
- chloroplast cup-shaped, longitudinally striated
- one pyrenoid per cell (rarely more)



I find *Pandorina morum* very frequently, both in the plankton and among floating or decomposing aquatic plants. This volvococcal alga is particularly common in spring.

The colonies of *Pandorina morum* appear very compact because the cells are arranged without a gap in the gelatinous matrix. Their shape is therefore wedge-shaped and not round (s. fig. 2 b). Two flagella of equal length arise at the apical end and pierce the gelatinous envelope through two short canal (s. fig. 1 b). At their base are two contractile vacuoles and an orange-red eyespot (s. figs. 1 a and 2 a). The chloroplast shows a characteristic striation (s. fig. 2 a).

Pandorina morum is often confused with the equally common volvococcal alga *Eudorina elegans*. However, the colonies of *Eudorina elegans* are considerably larger (50-200 µm) and the round cells are clearly separated from each other.

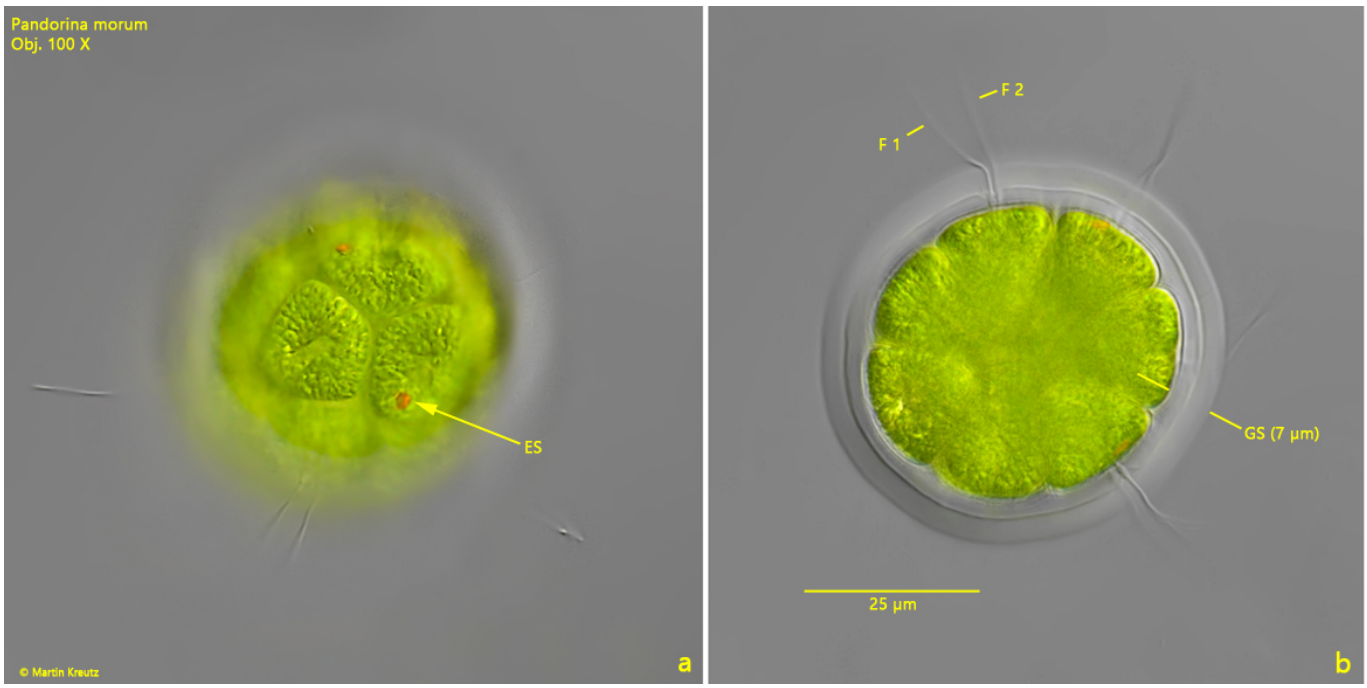


Fig. 1 a-b: *Pandorina morum*. D = 57 µm (of colony). Two focal planes of a freely swimming colony of 16 cells. Note the two flagella (F 1, F 2) of equal length and the sharply defined gelatinous sheath (GS) covering the colony. ES = eyespot. Obj. 100 X.

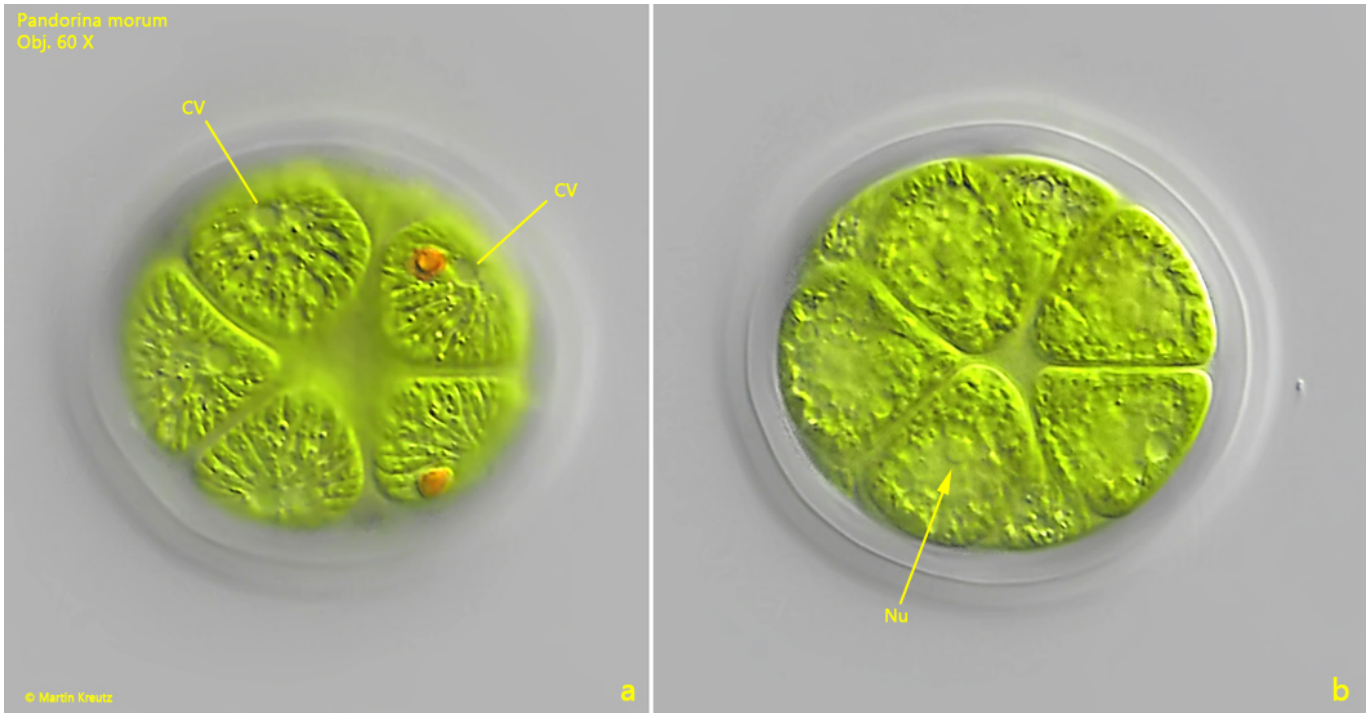


Fig. 2 a-b: *Pandorina morum*. D = 51 µm (of colony). A second colony of 8 cells. Note the densely arranged, wedge-shaped cells and the contractile vacuoles (CV) located near the surface of the colony. Nu = nucleus. Obj. 60 X.