Vitreochlamys cylindrica

(Skuja) Maidana & Vigna 1988

Most likely ID: n.a.

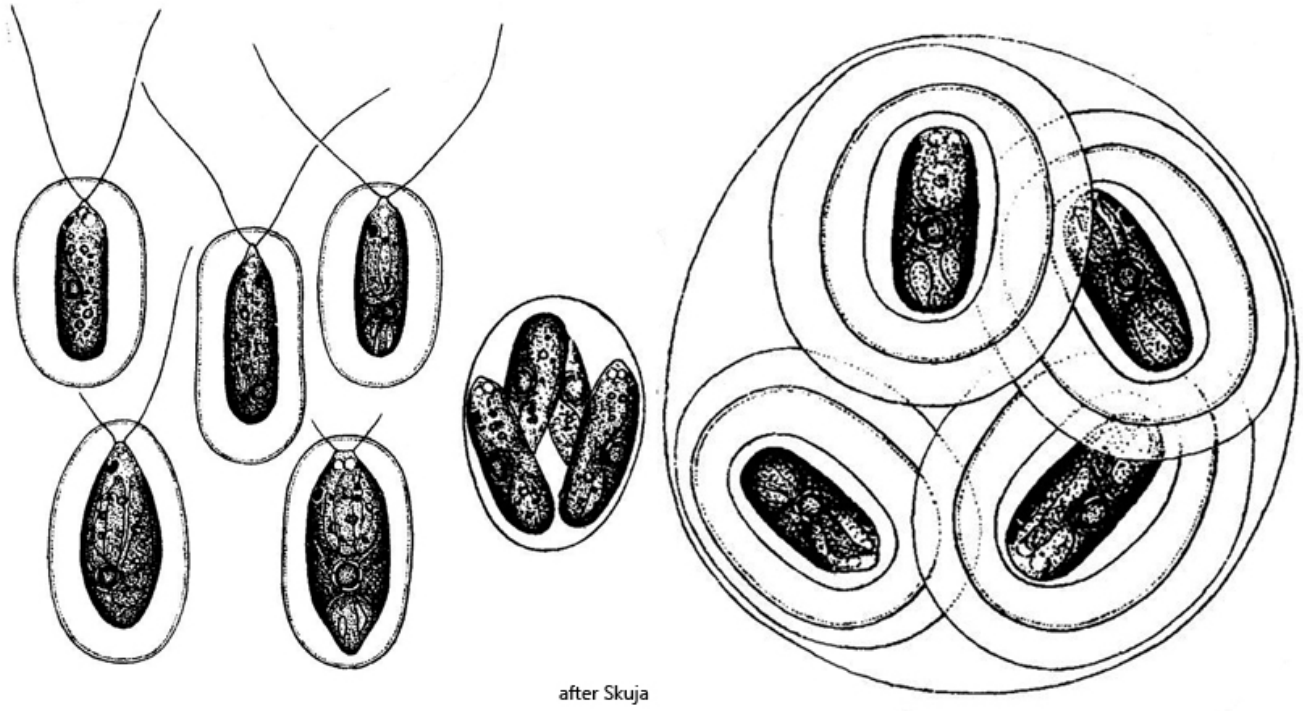
Synonym: *Sphaerellopsis cylindrica*

Sampling location: Pond of the convent Hegne

Phylogenetic tree: *Vitreochlamys cylindrica*

Diagnosis:

- cells cylindrical or ellipsoidal
- cells covered by wide gelatinous sheath
- length 16–30 µm, width 5–11 µm (without sheath)
- two polar flagella, three-quarters to four-fifths of body length
- chloroplast parietal, sac-shaped
- one central pyrenoid
- nucleus in anterior third
- two anterior contractile vacuoles
- one eyespot in anterior third
- form resting stages with distinctly layered sheath



Vitreochlamys cylindrica

So far, I have only found *Vitreochlamys cylindrica* in the pond of the convent Hegne. However, I did not find the flagellated stages, which have two flagella and are surrounded by a gelatinous envelope, but rather the resting stages, which are particularly characteristic of *Vitreochlamys cylindrica*. In the resting stages, 4–16 cells lie together in a clearly layered gelatinous envelope (s. fig. 1 a-b). The cells are not flagellated but immobile. Cell division also takes place in these resting stages, from which 4 to 8 daughter cells emerge.

In the resting stages of *Vitreochlamys cylindrica* that I found, all cells were filled with starch grains. As a result, I could neither see the eyespot nor the position of the nucleus. Of the two apically located contractile vacuoles, only one was always visible because they pulsate alternately. The adult cells were 25–27 µm long, which corresponds well to the data from Skuja (1948).

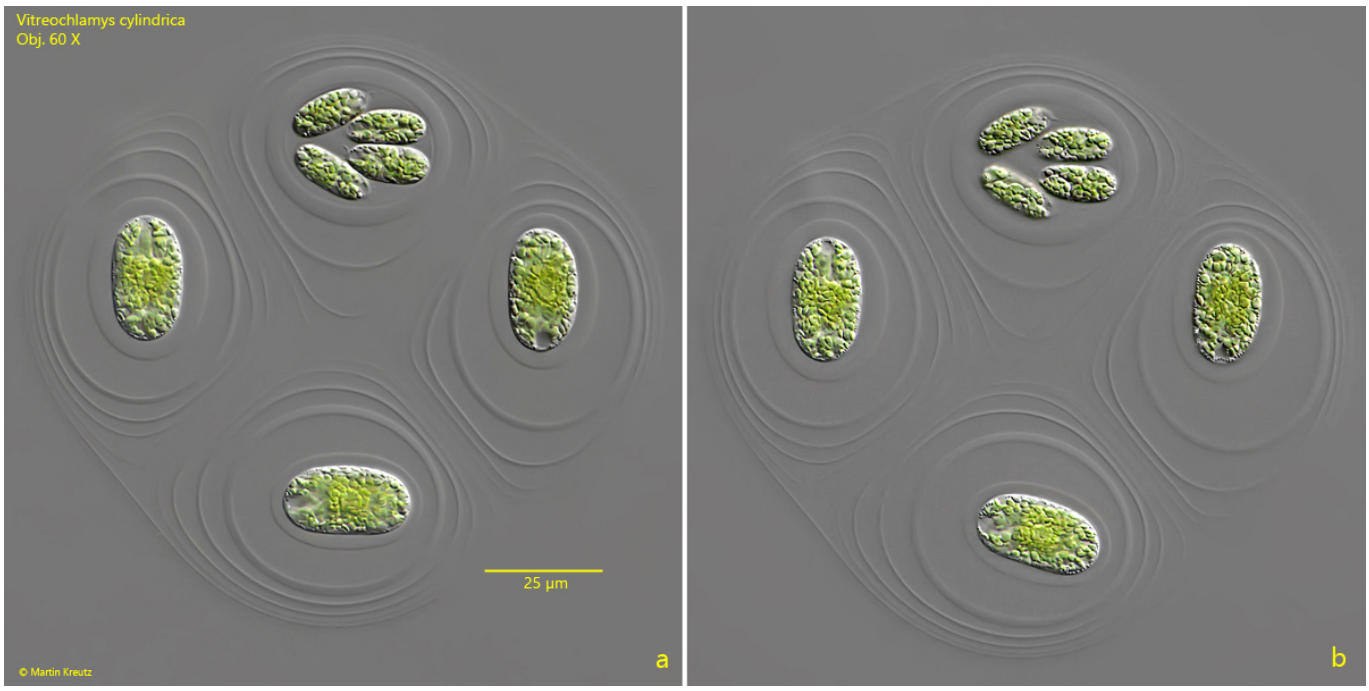


Fig. 1 a-b: *Vitreochlamys cylindrica*. L = 27 µm (of adult cells). Two slightly different focal planes of a resting stage with 3 adult cells and the formation of 4 daughter cells. Note the distinct layers of the gelationous sheath covering the cells. Obj. 60 X.

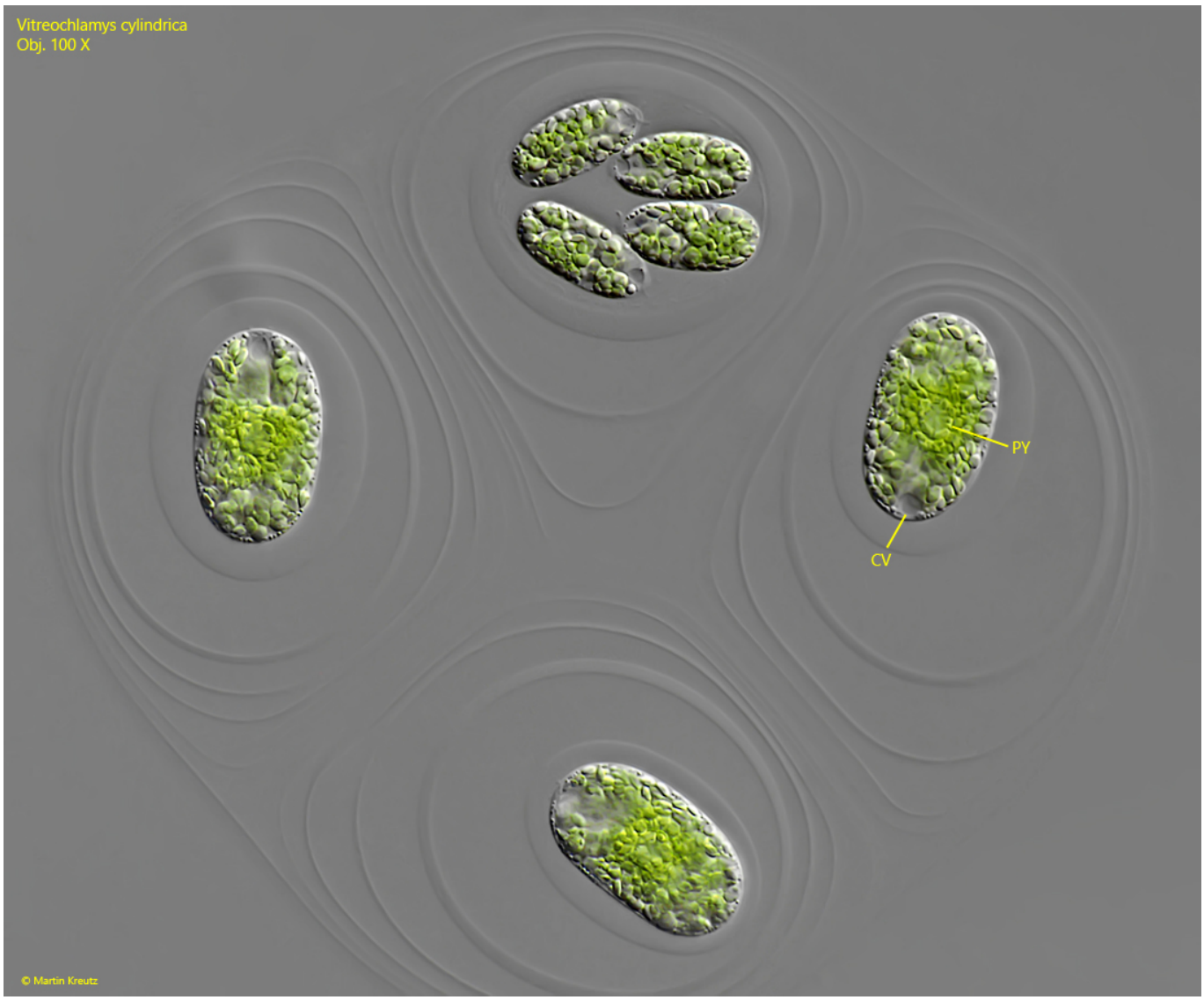


Fig. 2: *Vitreochlamys cylindrica*. L = 27 µm (of adult cells). The same resting stage as shown in fig. 1 a-b at higher magnification. CV = contractile vacuole, PY = pyrenoid. Obj. 100 X.