Colacium mucronatum

Bourrelly & Chadefaud, 1948

Most likely ID: n.a.

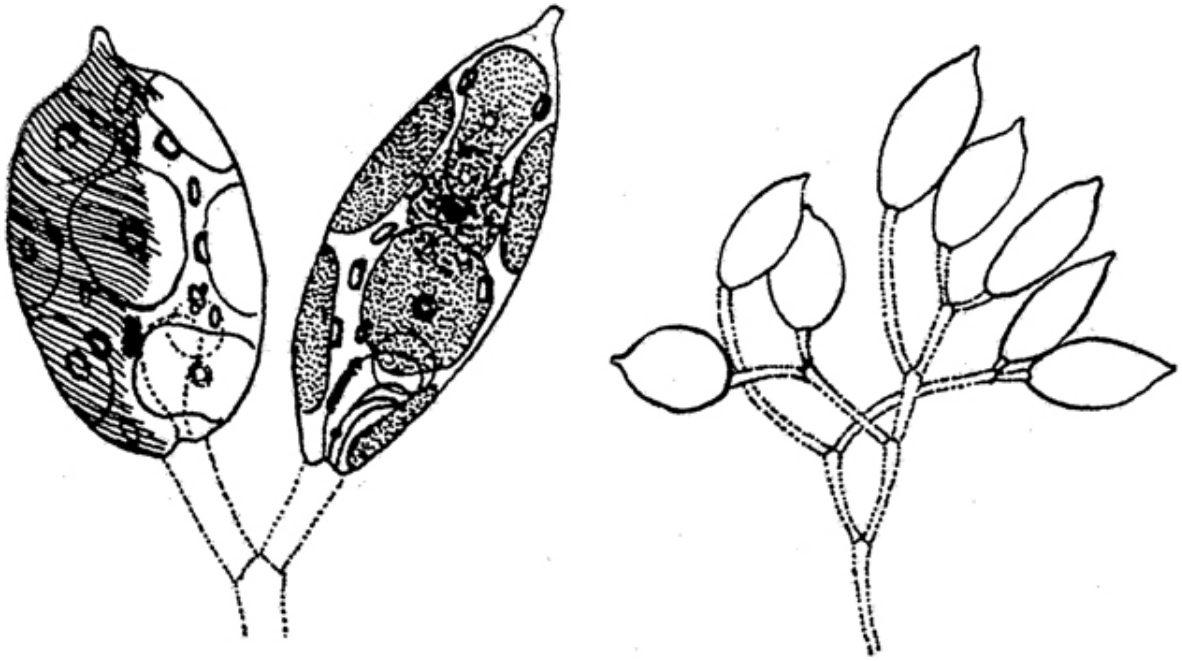
Synonym: n. a.

Sampling location: Pond of the waste disposal company Constance

Phylogenetic tree: *Colacium mucronatum*

Diagnosis:

- cells obvoid, rounded at anterior end, papilla at posterior end
- length 28–25 µm, width 12–16 µm
- 6–8 disc-shaped chloroplasts, irregularly shaped
- each chloroplast with a small pyrenoid
- eyespot near anterior end
- nucleus central with nucleolus
- sessile cells slightly metobolic
- sessile cells on dichotomously branched, mucilaginous stalks
- width of hollow stalks 2–2.5 µm
- motile cells with one flagellum
- pellicle with delicate striation



after Bourrelly

Colacium mucronatum

Colacium mucronatum belongs to the euglenophytes, which show a sessile and a motile mode of life in their life cycle. In the sessile life phase, the cells sit with their anterior end (that is, where the flagellum arises) on gelatinous stalks. The flagellum is resorbed in this phase. On the stalks, the cells divide and thus form branched colonies.

The species *Colacium mucronatum* can be recognized by the dichotomous branching of the stalks as well as by the characteristic papilla at the posterior end. They are usually oval or slenderly elliptical in shape. *Colacium mucronatum* has its greatest width in the middle of the cell.

The similar species *Colacium epiphyticum*, on the other hand, is slenderly egg-shaped and the posterior end (i.e. the end away from the stalk base) tapers evenly to a point, which can often be hyaline. *Colacium epiphyticum* has its greatest width in the anterior third (at the stalk base).

The specimens of *Colacium mucronatum* in my population, at 29–35 µm in length, were about 20% larger than stated in the literature. However, this could still lie within the variability of this species.


Colacium mucronatum
Obj. 60 X
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a

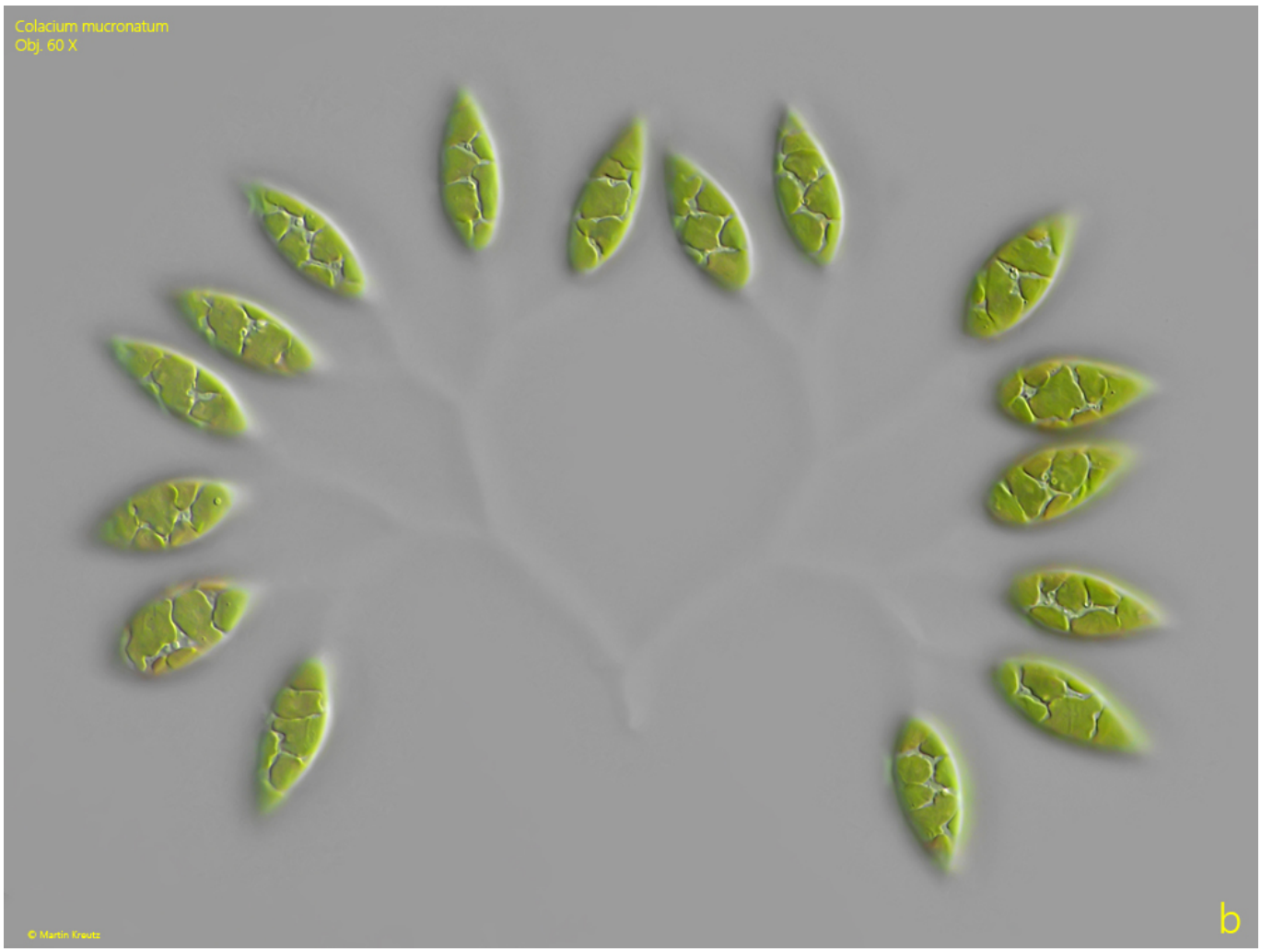


Fig. 1 a-b: *Colacium mucronatum*. L = 33–35 µm. Two focal planes of a colony on branched mucilaginous stalks. Obj. 100 X.

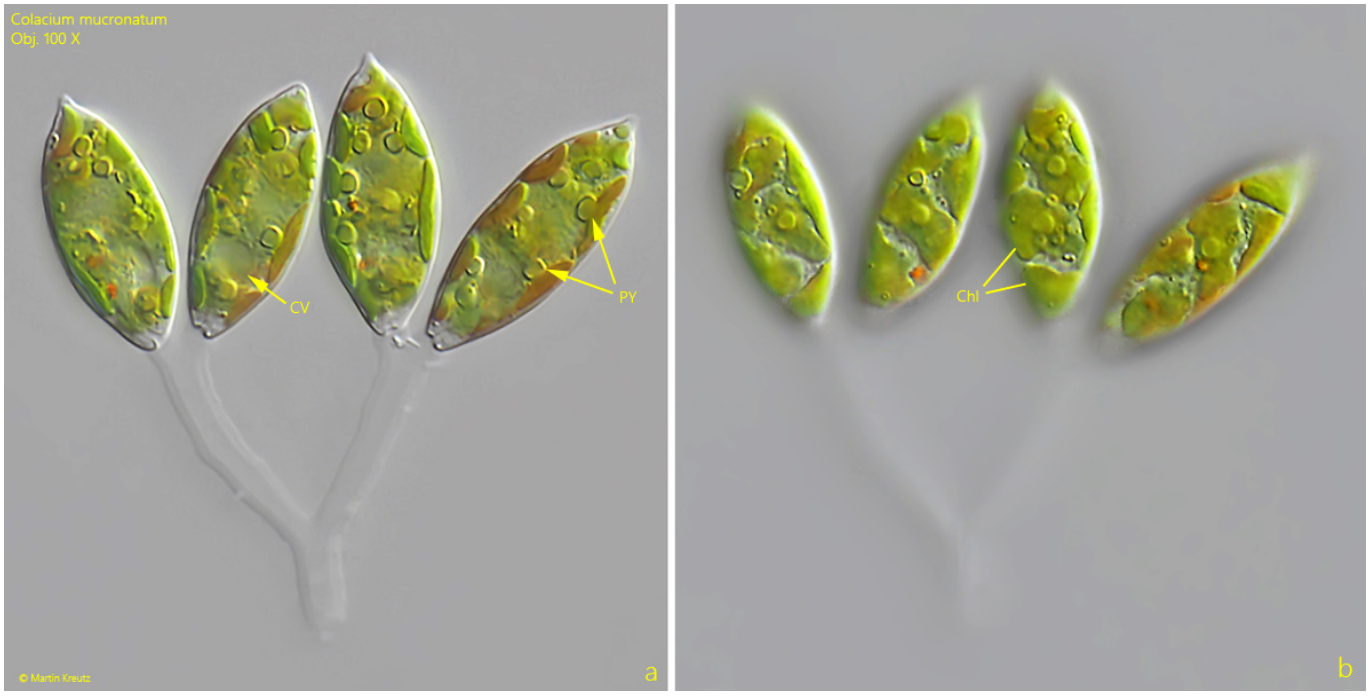


Fig. 2 a-b: *Colacium mucronatum*. L = 25–28 µm. Two focal planes of a small colony of 4 cells. Note the characteristic papilla at the posterior end of the cell (arrow) and the pyrenoids (PY) attached to the chloroplasts (Chl) from inside. CV = contractile vacuole. Obj. 100 X.

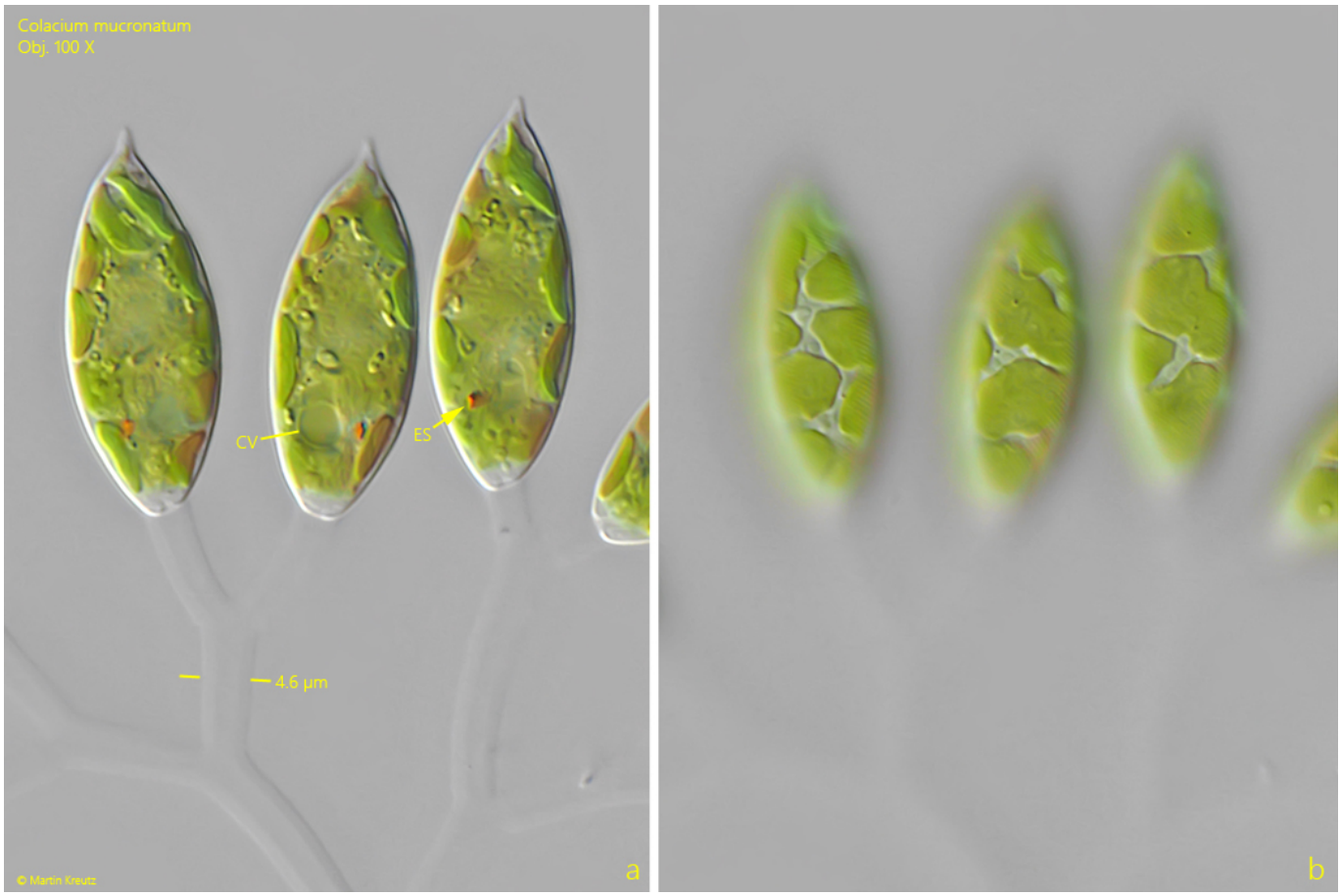


Fig. 3 a-b: *Colacium mucronatum*. L = 23–35 µm. Three cells from the colony as shown in fig. 1 a-b in detail. The gelatinous stalk is 4.6 µm wide. CV = contractile vacuole, ES = eyespot. Obj. 100 X.

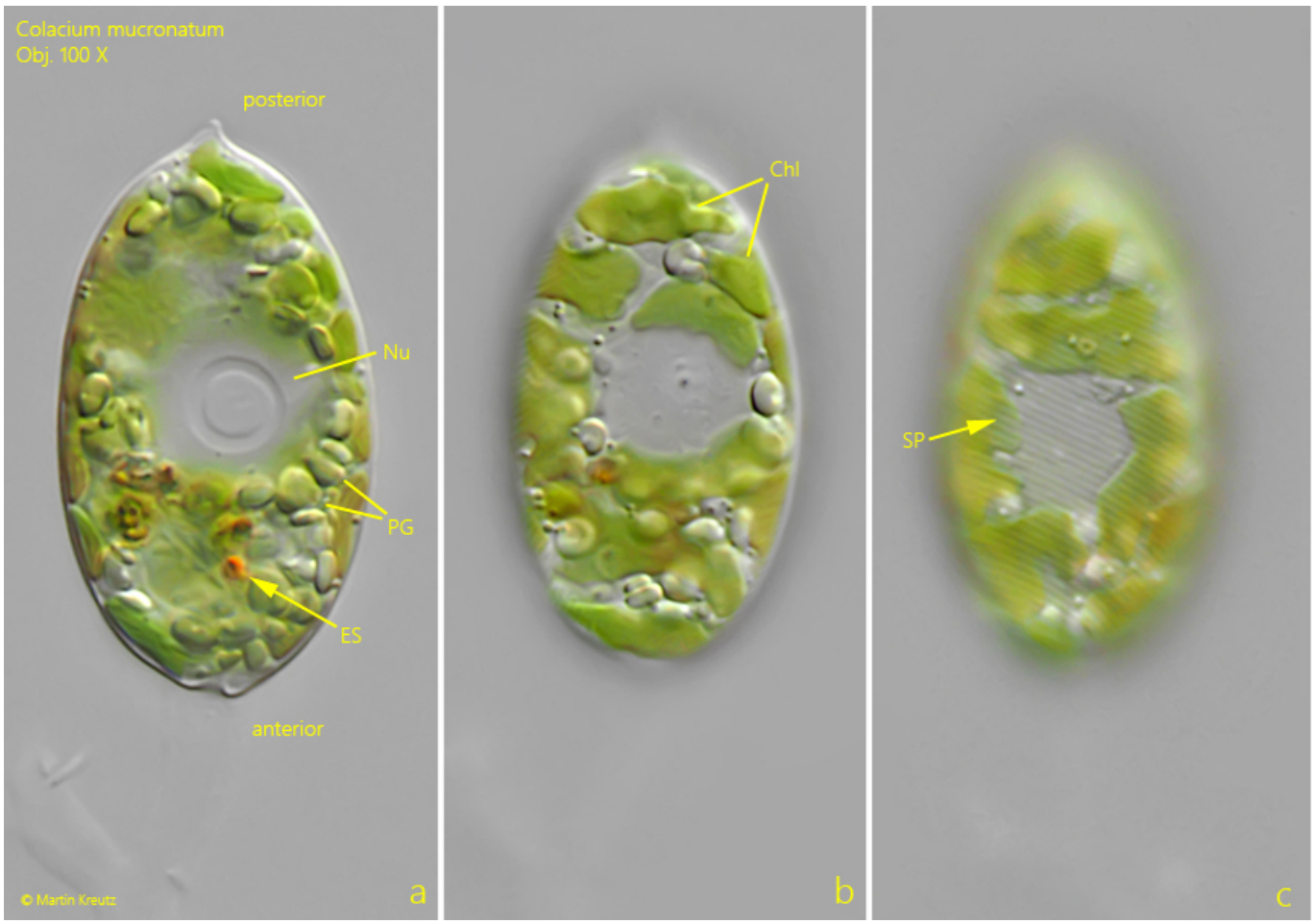


Fig. 4 a-c: *Colacium mucronatum*. Three focal planes of a squashed cell. Note the nucleus (Nu) with a central nucleolus und the striation of the pellicle (SP) running counterclockwise to the posterior end. ES = eyespot, PG = paramylon grains. Obj. 100 X.