Closterium closterioides var. *intermedium*

(J.Roy & Bisset) Ruzicka, 1973

Most likely ID: n.a.

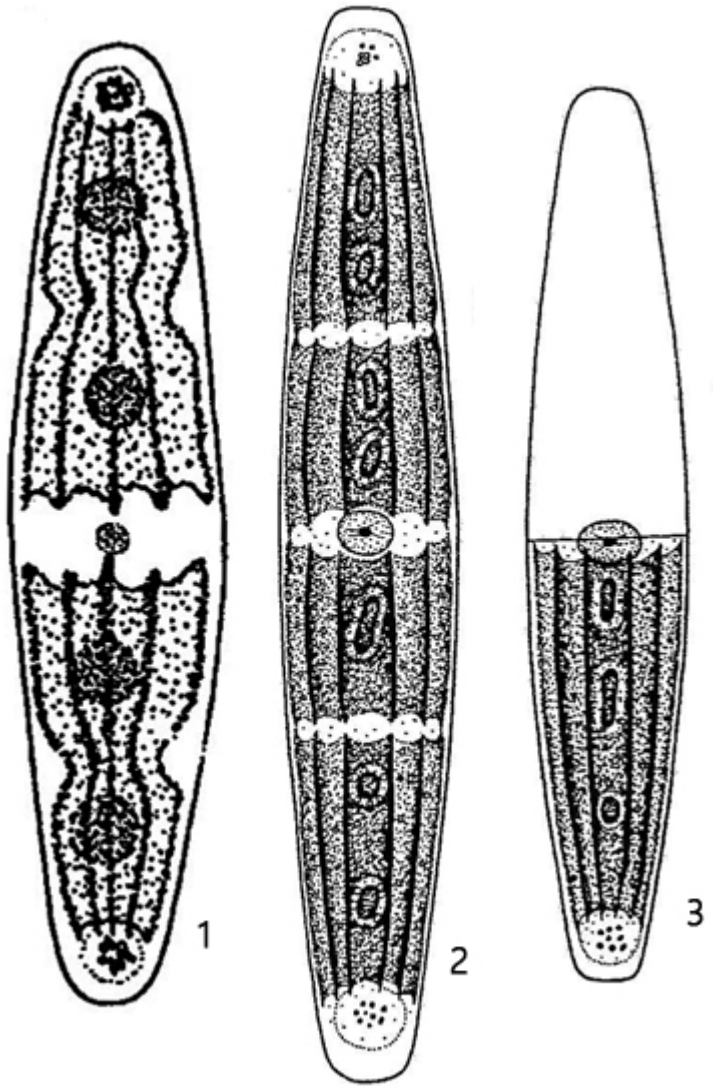
Synonym: n.a.

Sampling location: Schwemm Moor (Austria)

Phylogenetic tree: *Closterium closterioides* var. *intermedium*

Diagnosis:

- cells broadly spindle-shaped. apices broadly rounded
- length 90–140 µm, width 19–30 µm
- two chloroplasts, sometimes with a constriction or bibartite
- chloroplasts with 4 longitudinal ridges
- 2–5 pyrenoids per chloroplast
- pyrenoids spherically or elongated
- cell wall smooth and colorless
- girdle bands absent
- terminal vacuoles filled with 2–3 crystals



Closterium closterioides var. intermedium

So far I have only found *Closterium closterioides* var. *intermedium* in the Schwemm Moor in Austria. However, only isolated specimens were found in the samples.

Compared to the parent form *Closterium closterioides*, the variety *Closterium closterioides* var. *intermedium* is only half the size. The stem form can grow up to 450 µm long. The chloroplast of *Closterium closterioides* var. *intermedium* often has a constriction in the middle or can even be in two parts (s. fig. 1 a). In such specimens there are then 4 chloroplasts. The pyrenoids can be either round or elongated ellipsoid. In my population, the specimens of *Closterium closterioides* var. *intermedium* each had two round pyrenoids per chloroplast (s. fig. 1 a).

The similar species *Closterium navicula* has a more stocky shape and is only half the size of

Closterium closterioides var. *intermedium*, usually around 50 µm. *Closterium navicula* usually has only one pyrenoid per chloroplast and only rarely two.

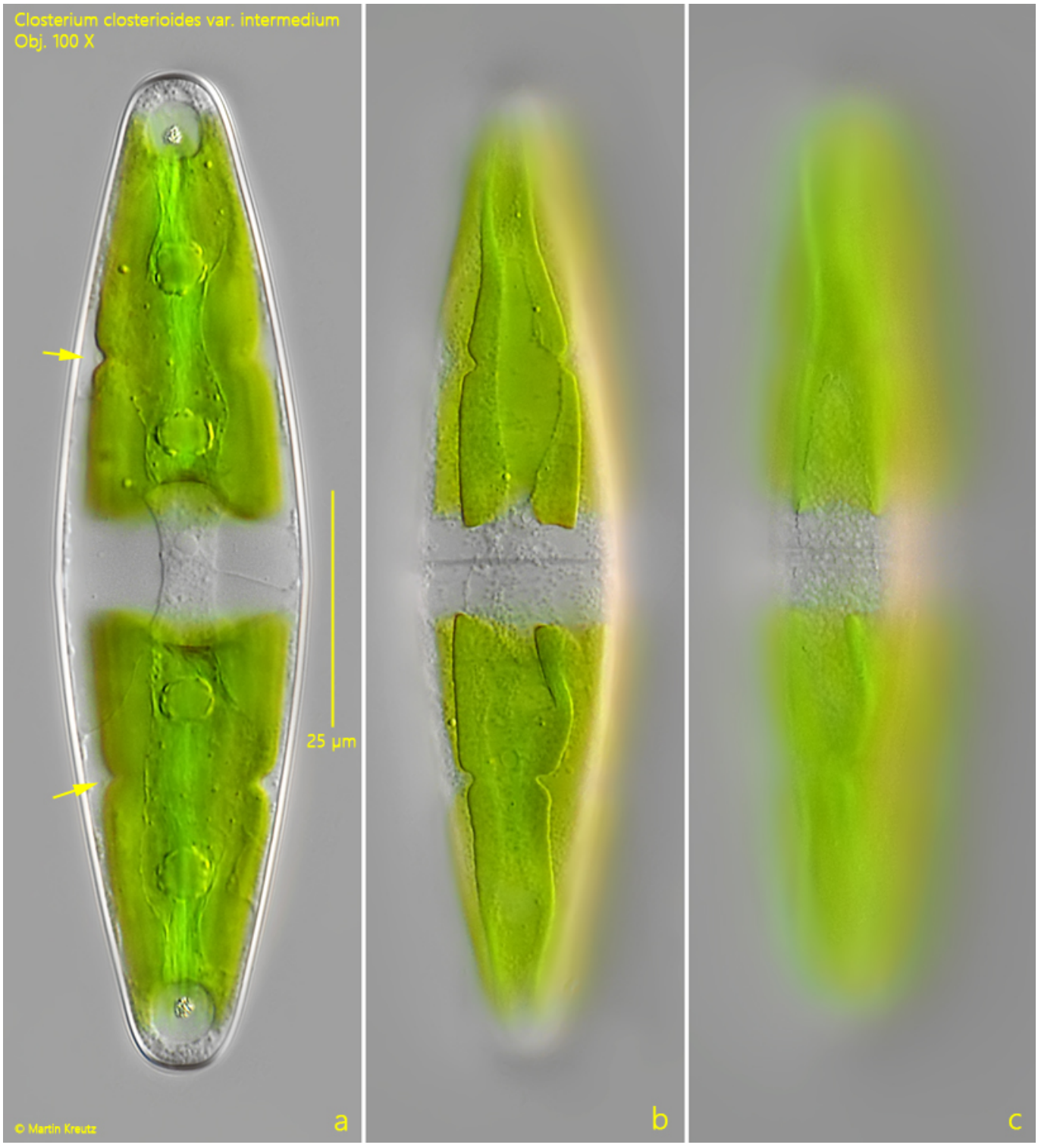


Fig. 1 a-c: *Closterium closterioides* var. *intermedium*. L = 106 µm. Three focal planes of a specimen with a slight constrictions of the chloroplasts (arrows). The cell wall is smooth and colorless (c). Obj. 100 X.