

***Closterium lineatum***

**Ehrenberg ex Ralfs, 1848**

**Most likely ID:** n.a.

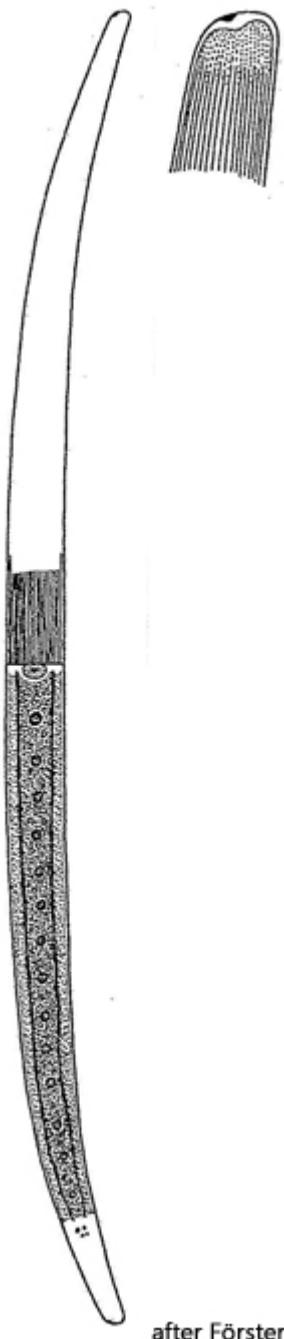
**Synonym:** n.a.

**Sampling location:** [Simmelried](#), Ibmer Moor (Austria), [Schwemm Moor \(Austria\)](#)

**Phylogenetic tree:** [\*Closterium lineatum\*](#)

**Diagnosis:**

- cell straight in middle part, ends attenuating and curved
- length 400–770 µm width 25–35 µm
- cell wall colorless or brownish
- cell wall smooth or with distinct striae
- puncta between striae
- striae at the cell ends resolved into puncta
- chloroplasts with 3–5 longitudinal ridges
- 9–22 pyrenoids in a row per semi-cell
- apices obliquely truncated with distinct apical pore
- terminal vacuoles with each 4–10 crystals
- girdle bands absent, sometimes pseudo girdle bands



after Förster

### *Closterium lineatum*

I found *Closterium lineatum* in the [Simmelried](#) until 1994, but not again after that. I found further specimens from the Ibmer Moor in Austria in 1995 and finally again from the [Schwemm Moor](#) (Austria) in 2025.

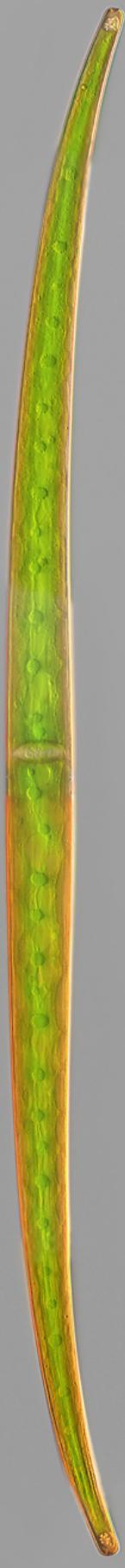
*Closterium lineatum* is one of the largest species in the genus *Closterium*. Most specimens are between 600 and 700 µm long. They are characterized by a straight middle section and then rapidly tapering and slightly curved ends. The apices are obliquely truncated and have a clearly visible, thickened pore (s. fig. 5 a-b). The striation of the cell wall was always very clear in my specimens (s. fig. 3). The cell

wall is also clearly punctured between the striations.



**Fig. 1 a-b:** *Closterium lineatum*. L = 765  $\mu\text{m}$ . Two focal planes of a specimen in brightfield illumination. Obj. 100 X.

*Closterium lineatum*  
Obj. 40 X



a



b

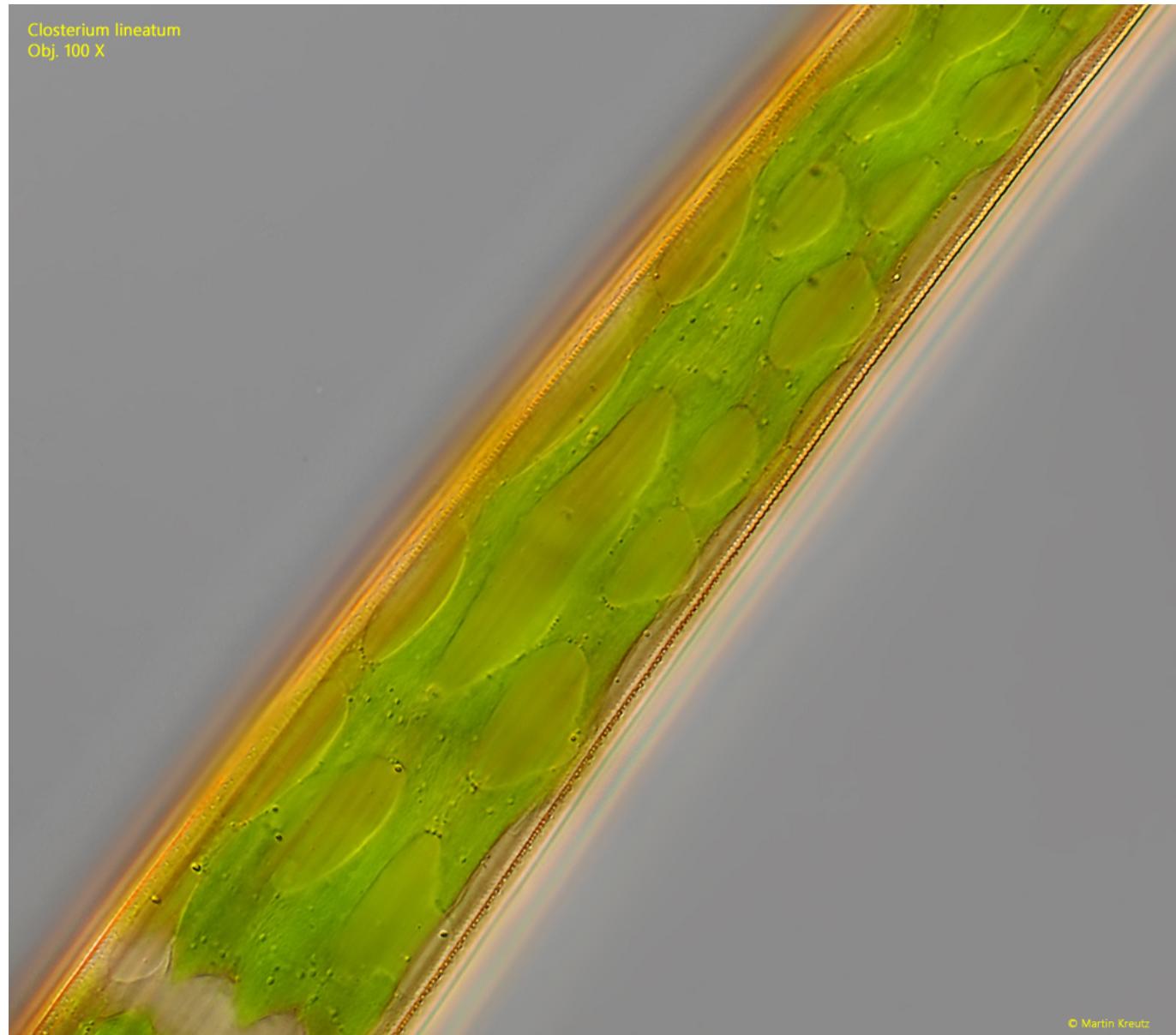
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**Fig. 2 a-b:** *Closterium lineatum*. L = 765  $\mu\text{m}$ . The same specimen as shown in fig. 1 a-b in DIC and at higher magnification. Obj. 100 X.

*Closterium lineatum*  
Obj. 100 X

10  $\mu$ m

**Fig. 3:** *Closterium lineatum*. The striation of the cell wall in detail. Between the striae the cell wall is punctured. Obj. 100 X.



**Fig. 4:** *Closterium lineatum*. The chloroplast appears reticulate. Obj. 100 X.

*Closterium lineatum*  
Obj. 100 X



**Fig. 5 a-b:** *Closterium lineatum*. The apex with a distinct, thickened pore (PO) in DIC (a) and in brightfield illumination (b). The terminal vacuole (TV) is filled with several gypsum crystals. Obj. 100 X.