

***Penium spirostriolatum* Barker, 1869**

Most likely ID: n.a.

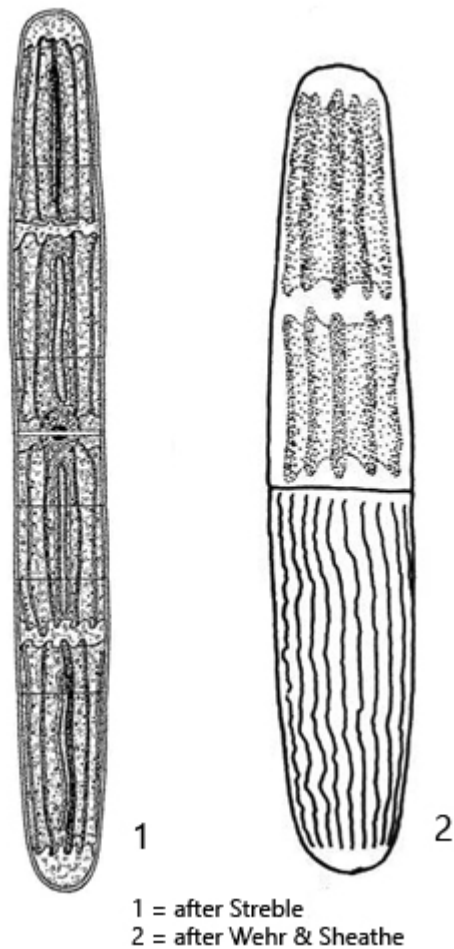
Synonym: n.a.

Sampling location: Ibmer Moor (Austria)

Phylogenetic tree: [Penium spirostriolatum](#)

Diagnosis:

- cells cylindrically, attenuating gradually to truncate or rounded apices
- length 80–400 µm
- cell wall with spiralized ridges
- 2–4 chloroplasts per cell
- chloroplasts with 6–7 longitudinal ridges and 1–3 pyrenoids
- pyrenoids sometimes elongated
- girdle bands present
- nucleus central
- terminal vacuoles in the apices absent



Penium spirostriolatum

I found *Penium spirostriolatum* in June 1995 in the Ibmer Moor (Austria) and in 2025 in the [Schwemm Moor](#) (Austria). The alga is not present in my local sites.

Penium spirostriolatum can easily be recognized by the 4 chloroplasts per cell, which are separated from each other by transverse gaps (s. fig. 1 b). The chloroplasts have 6-7 longitudinal ridges, making them appear star-shaped in cross-section. The pyrenoids in the chloroplasts can sometimes have an elongated, stretched shape.

The similar species *Closterium closteroides* var. *intermedium* can also have 4 chloroplasts, which are separated by transverse gaps. However, this species has clear terminal vacuoles at the apices, in which crystals are visible, as is typical for the genus *Closterium*.

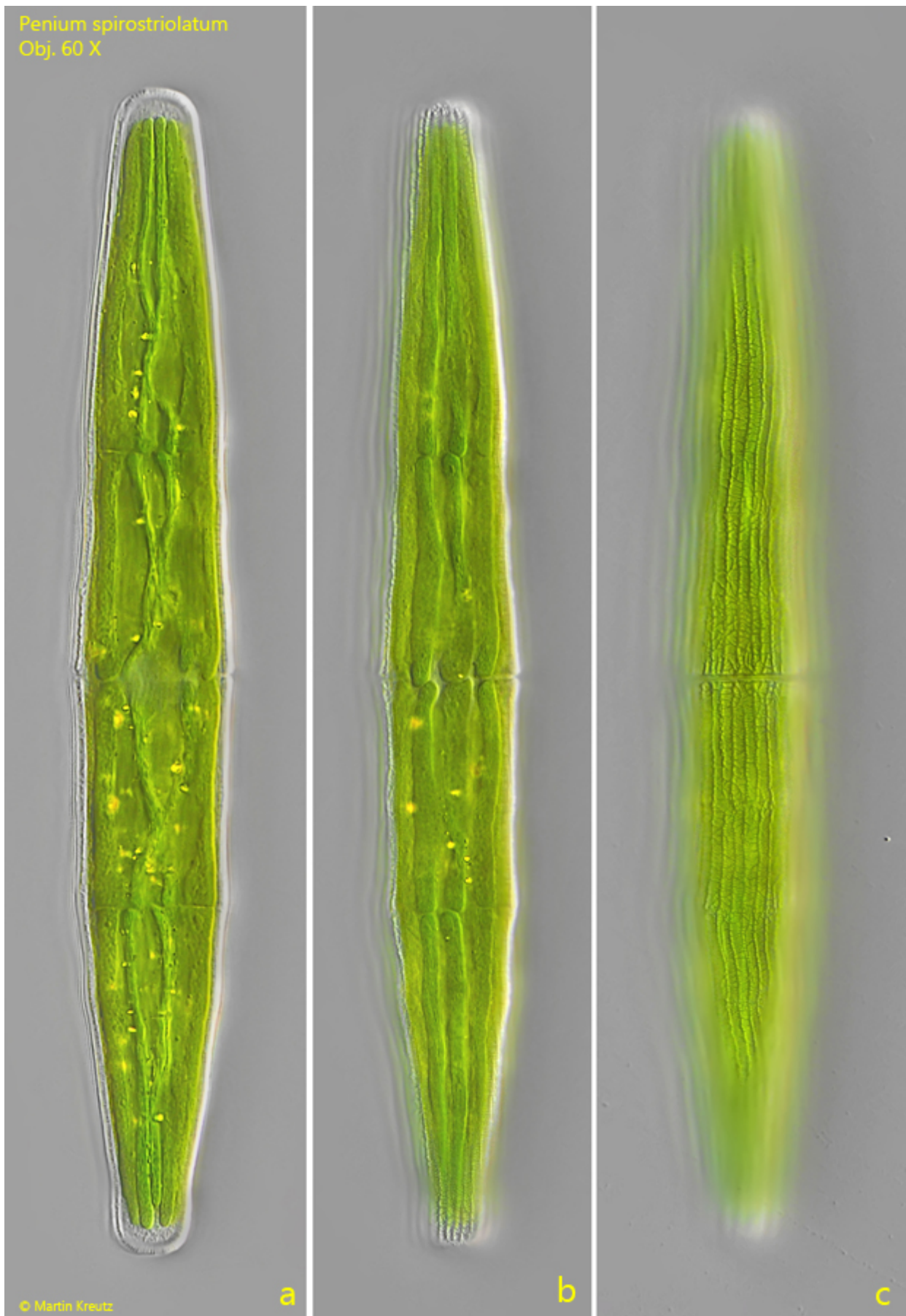


Fig. 1 a-b: *Penium spirostriolatum*. L = 210 μ m. Three focal planes of a specimen from the [Schwemm Moor](#) (Austria). Obj. 60 X.

Penium spirostriolatum
Obj. 100 X

20 μ m

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Fig. 2: *Penium spirostriolatum*. The network structure of the cell wall in detail. Obj. 60 X.