Closterium striolatum

Ehrenberg ex Ralfs, 1848

Most likely ID: n.a.

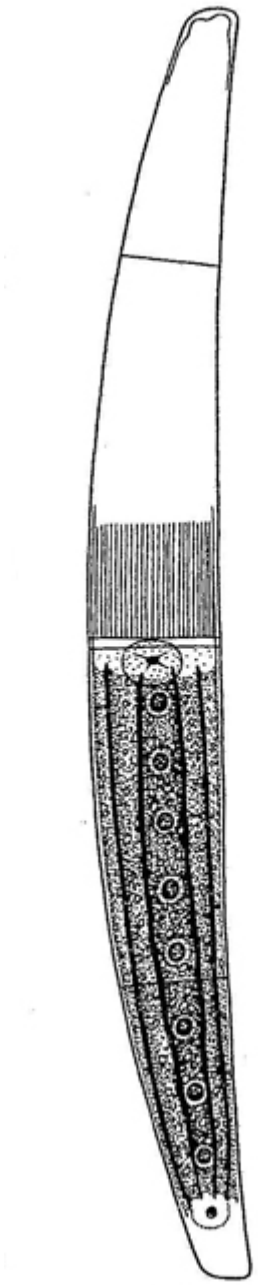
Synonym: n.a.

Sampling location: Simmelried, bog pond Warnsdorfer spring

Phylogenetic tree: *Closterium striolatum*

Diagnosis:

- cell crescent-shape, slightly curved, tapering evenly
- apices broad, obliquely truncated, terminal pore absent
- inner margin sometimes straight
- length 200–400 µm, width 25–40
- cell wall often brownish with 4–10 ridges per 10 µm
- two chloroplasts, each with 6–9 longitudinal ridges
- 4–15 pyrenoids per chloroplast
- girdle bands present
- apices with each one vacuole filled with a single aggregate of crystals or several crystals
- nucleus central



Closterium striolatum

I rarely find *Closterium striolatum* in the Simmelried. A sample from a bog pond near the Warnsdorfer spring (Tharandter Wald, Dresden) contained masses of the species in April 2024.

Closterium striolatum is usually longer than 300 µm and therefore stands out in the samples. The cell wall is often strongly brown in color with iron and manganese deposits. The shape of the chloroplast is striking, with longitudinal ribs (stellate type). These ribs can be connected to each other like a net (s. figs. 4 and 5). In the terminal vacuoles I found clusters of crystals partly arranged in layers (s. fig. 8 a-b).

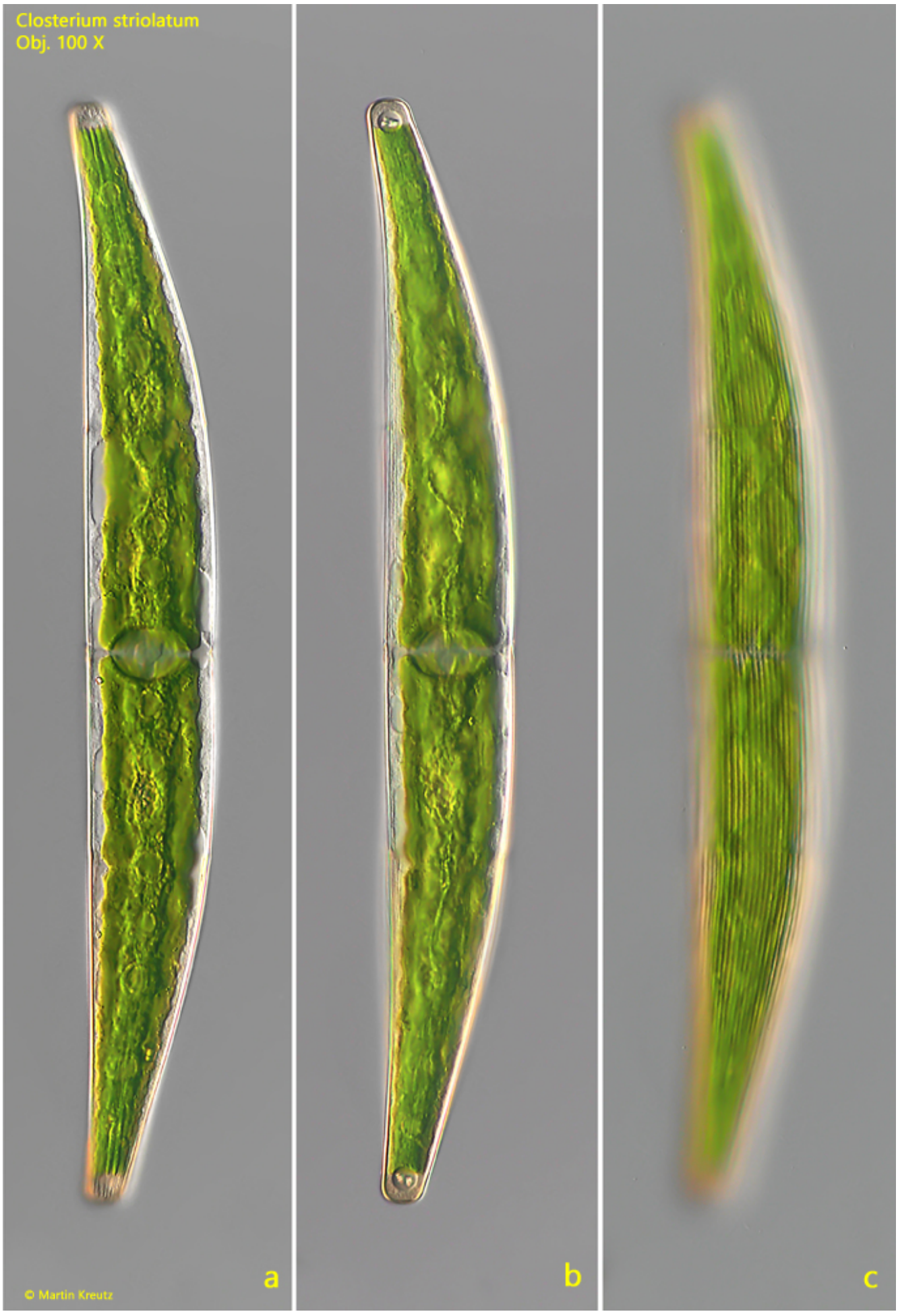
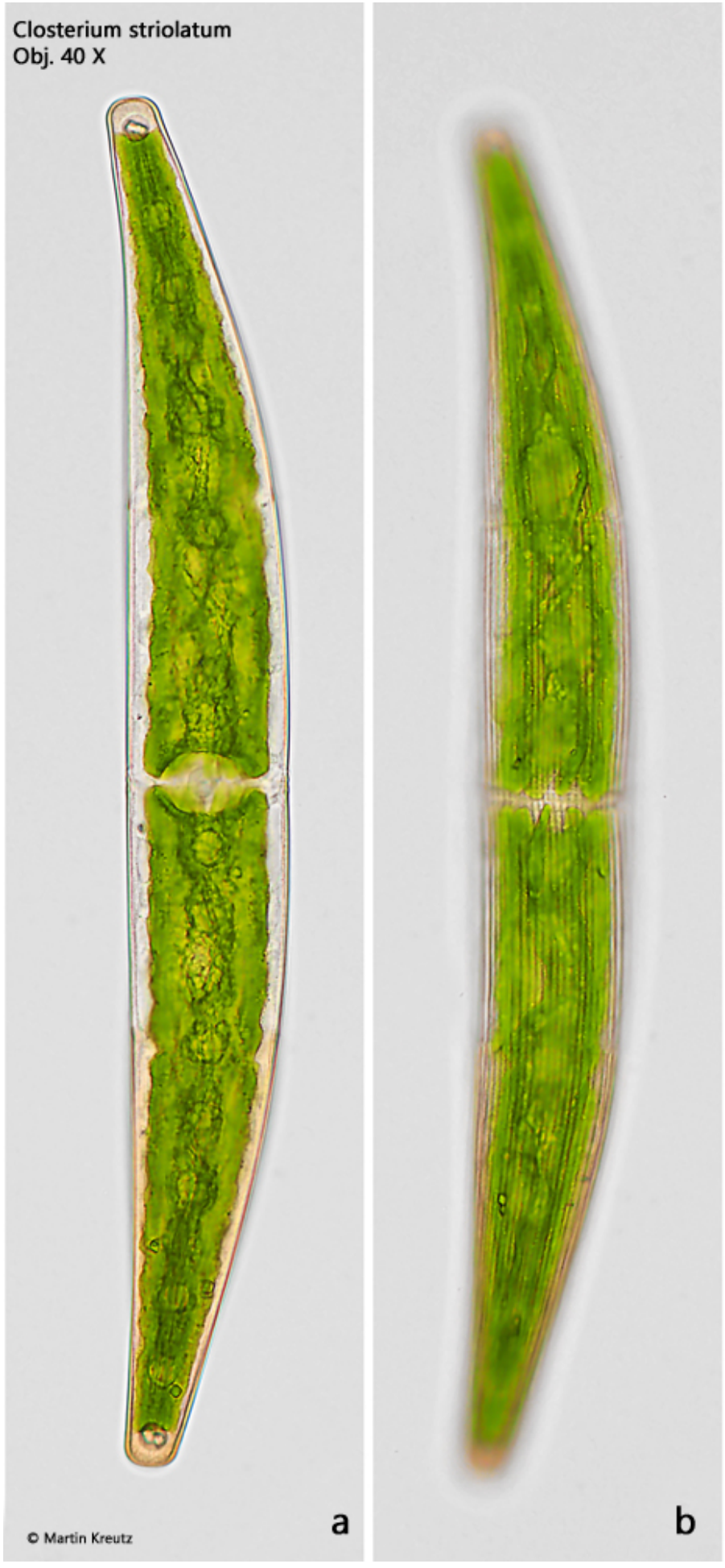

Closterium striolatum
Obj. 100 X
© Martin Kreutz
a
b
c

Fig. 1 a-c: *Closterium striolatum*. L = 328 µm. Three focal planes of a slightly squashed specimen. Obj. 40 X.


Closterium striolatum
Obj. 40 X
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a
b

Fig. 2 a-b: *Closterium striolatum*. L = 328 µm. The same specimen as shown in fig. 1 a-c in brightfield illumination. Obj. 40 X.

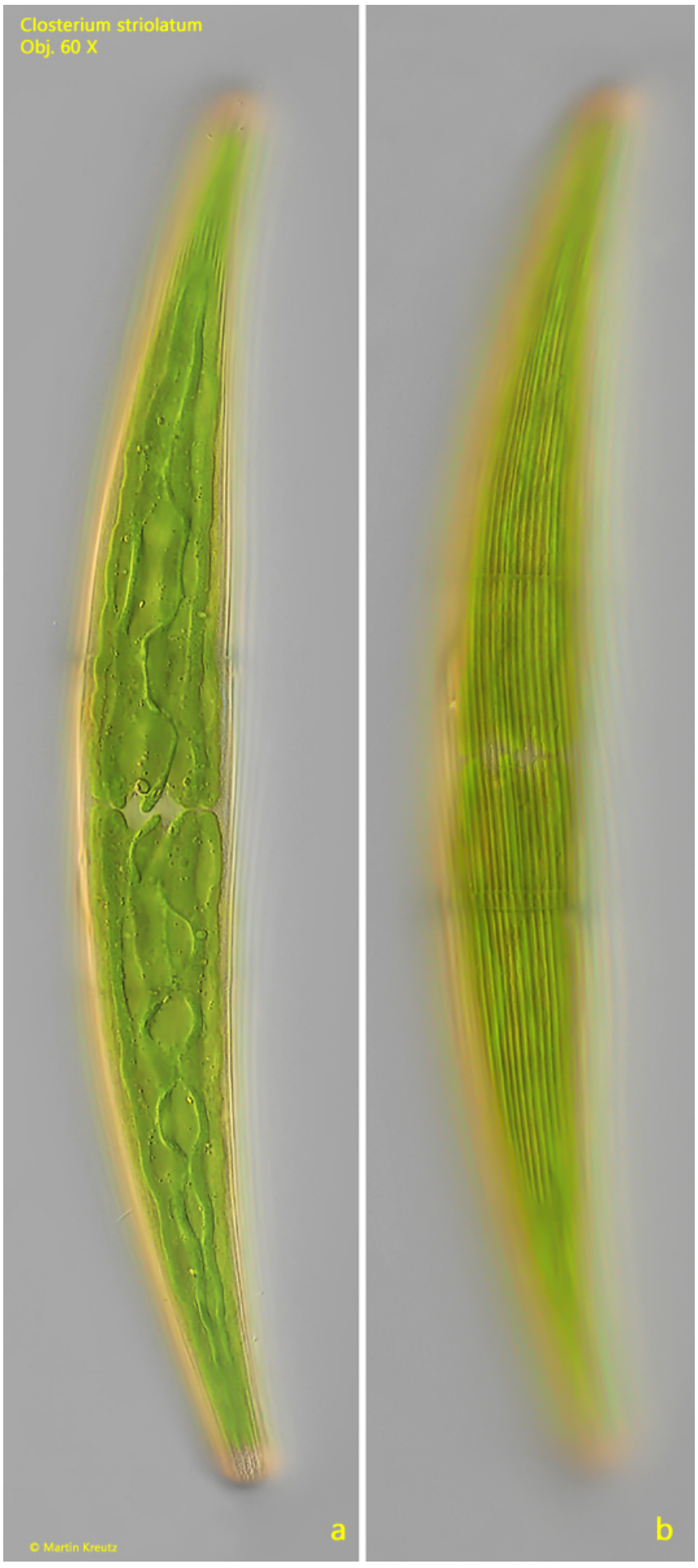
Closterium striolatum
Obj. 60 X
© Martin Kreutz
a
b

Fig. 3 a-b: *Closterium striolatum*. L = 305 µm. Focal plane on the ridges of the chloroplasts (a) and the striation of the cell wall (b) of a second specimen. Obj. 60 X.

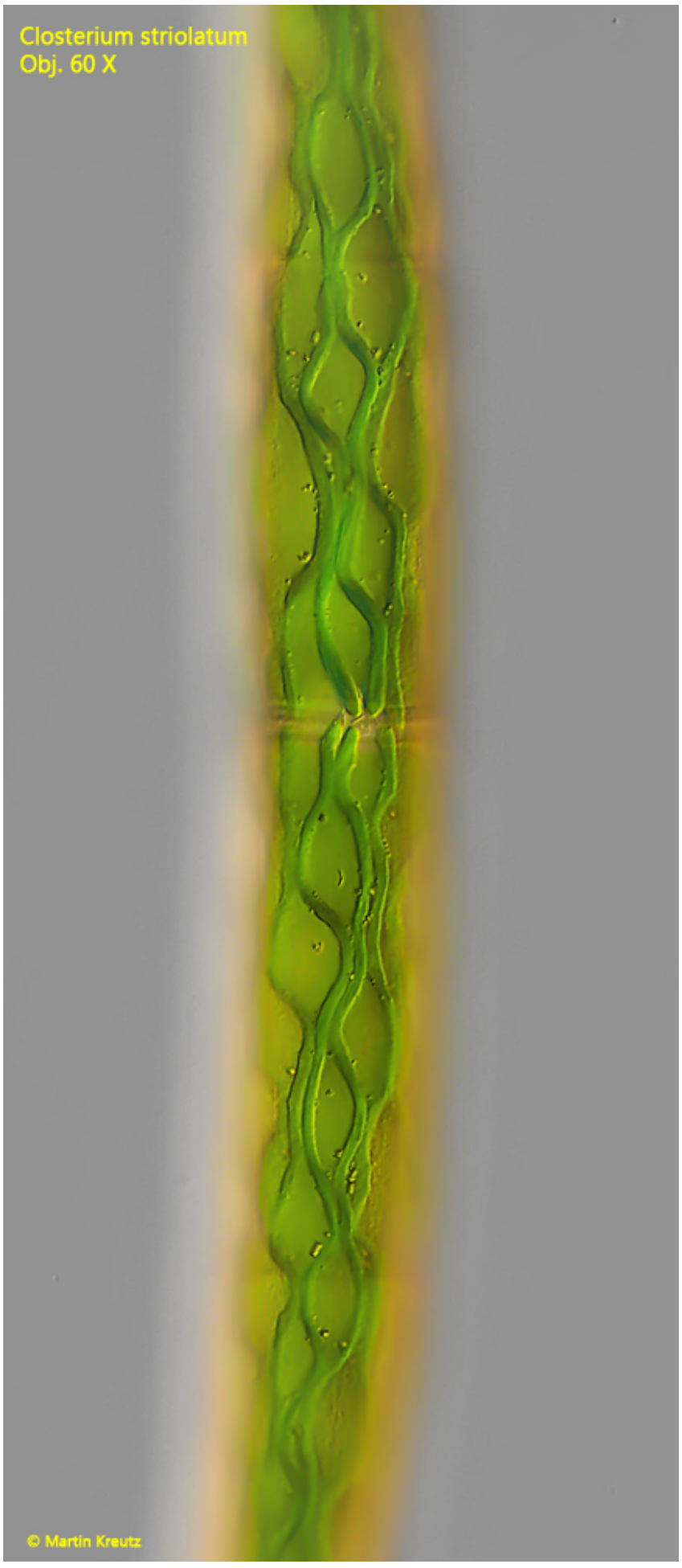
Closterium striolatum
Obj. 60 X
© Martin Kreutz

Fig. 4: *Closterium striolatum*. The wavy longitudinal ridges of the chloroplasts. Obj. 100 X.

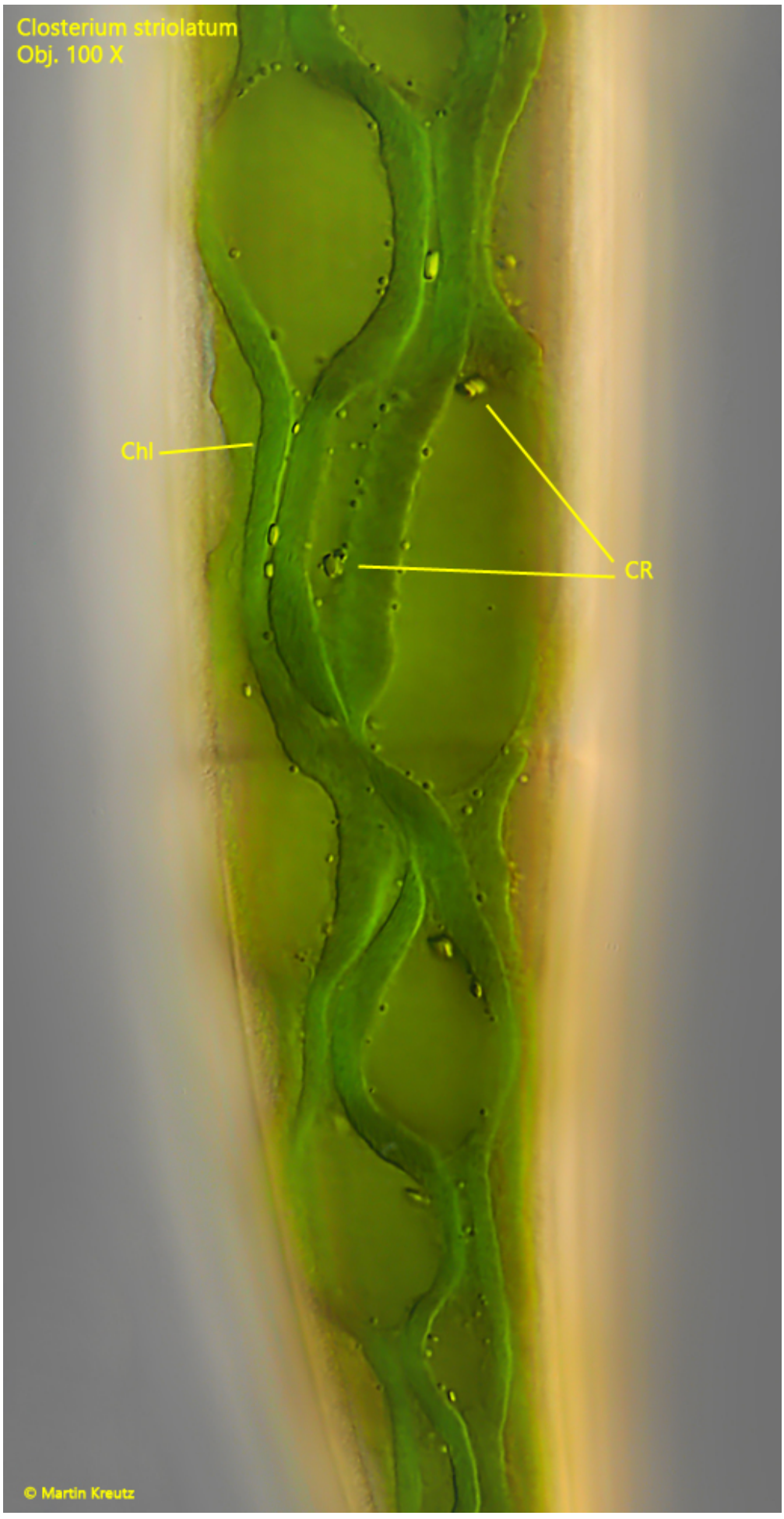
Closterium striolatum
Obj. 100 X
Chl
CR
© Martin Kreutz

Fig. 5: *Closterium striolatum*. The longitudinal ridges of the chloroplasts (Chl) in detail with small crystals (CR) scattered between. Obj. 100 X.

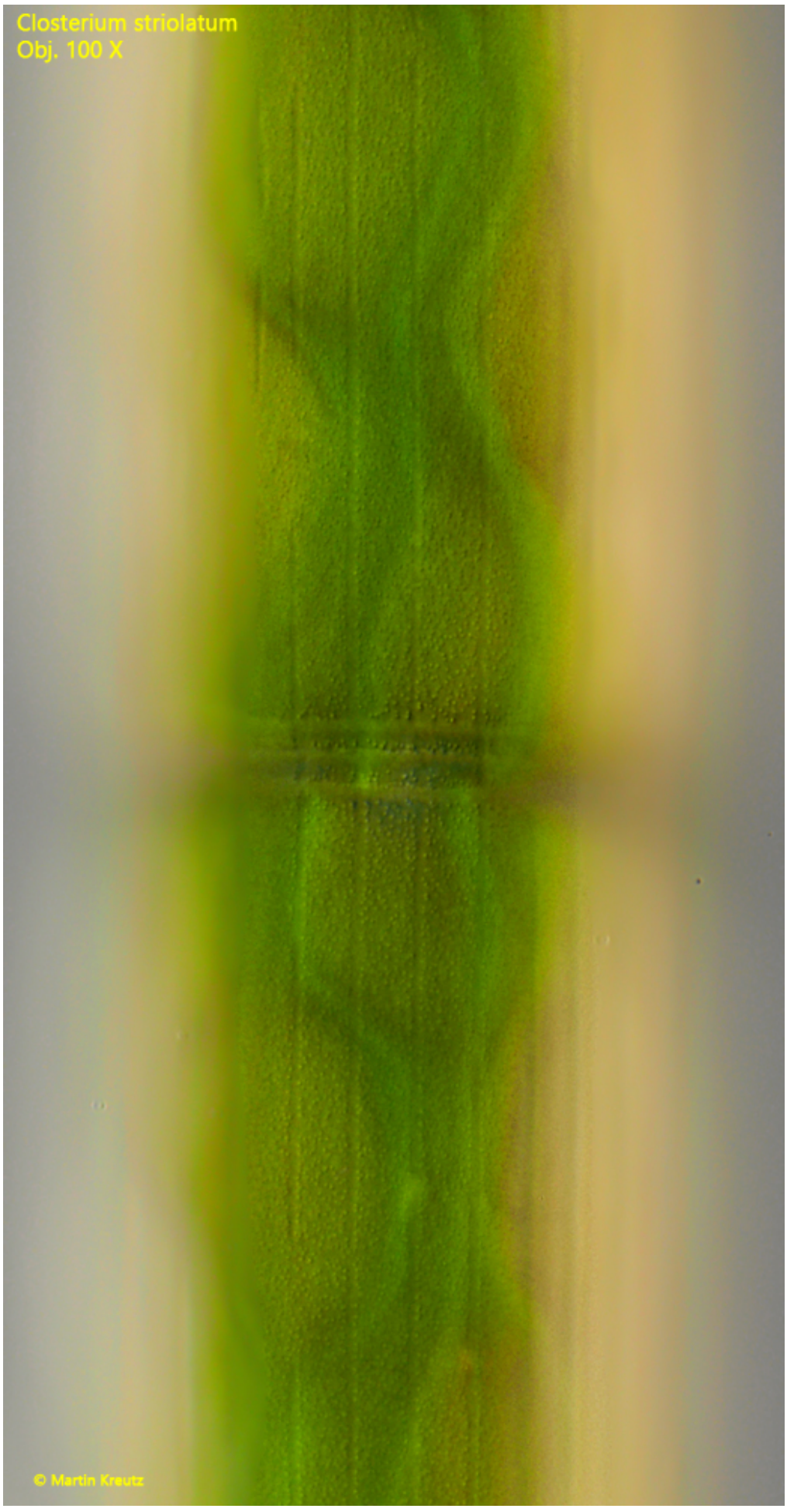
Closterium striolatum
Obj. 100 X
© Martin Kreutz

Fig. 6: *Closterium striolatum*. The delicate striation of the punctate cell wall in detail. Obj. 100 X.


Closterium striolatum
Obj. 100 X
SB
GB
© Martin Kreutz

Fig. 7: *Closterium striolatum*. Details of the cell wall of a second specimen with suture bands (SB) and girdle bands (GB). Obj. 100 X.

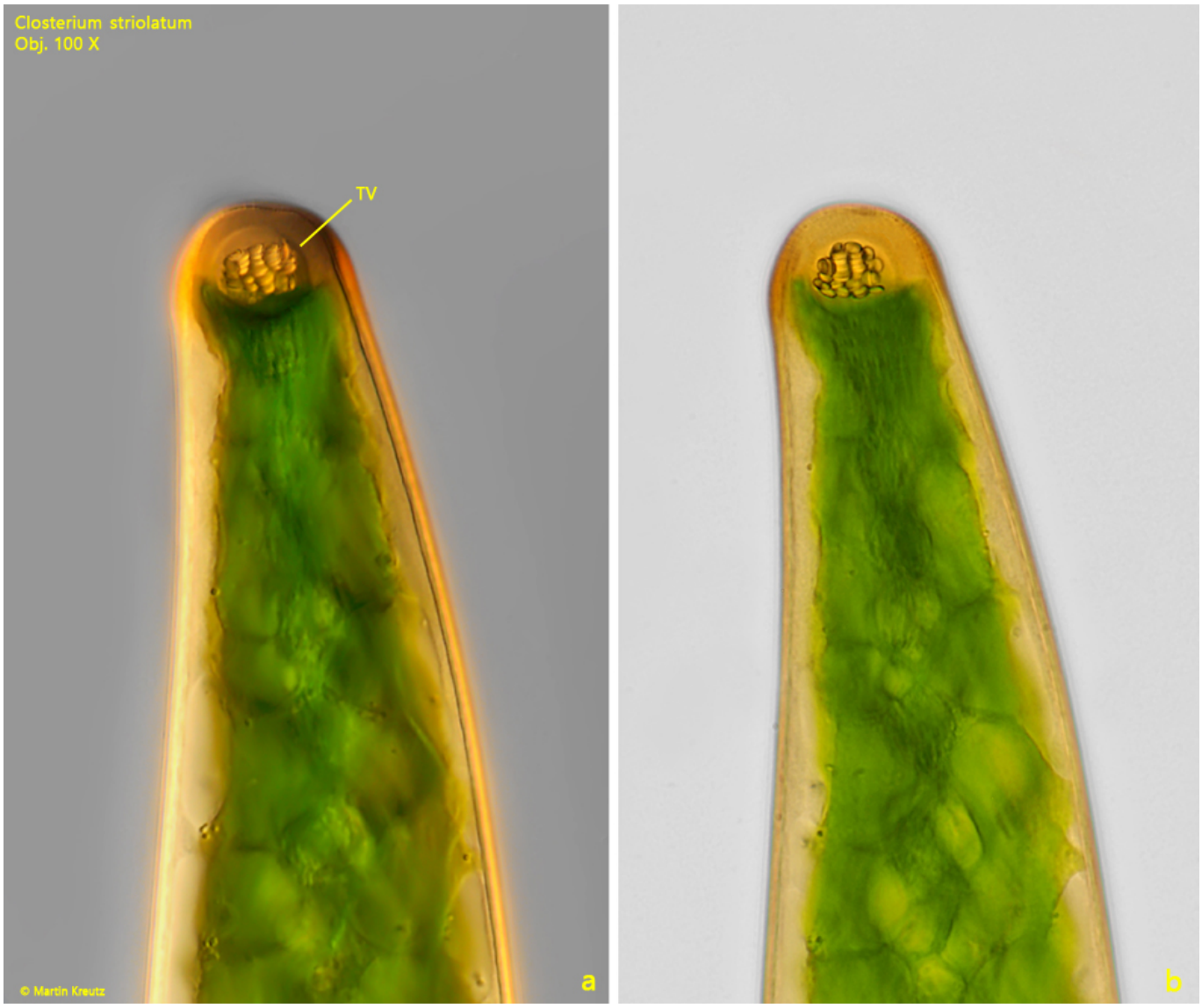

Fig. 8 a-b: *Closterium striolatum*. The terminal vacuole (TV) with a cluster of crystals in DIC (a) and in brightfield illumination. Obj. 100 X.