Closterium aciculare West, 1860

Most likely ID: n.a.

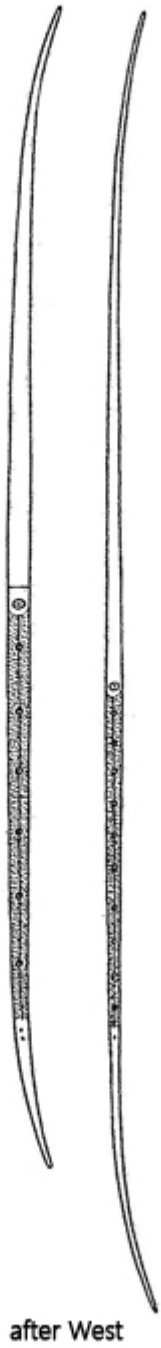
Synonym: n.a.

Sampling location: Ulmisried, Pond St. Ulrich (Austria), Simmelried

Phylogenetic tree: *Closterium aciculare*

Diagnosis:

- cell very long, slender, slightly curved apices
- length 300–716 µm, width 4–8 µm
- two chloroplasts, each with 3 longitudinal ridges
- 6–20 pyrenoids per chloroplast
- girdle bands absent
- cell wall smooth, colorless
- apices very narrowly rounded, porus sometimes present
- shape of terminal vacuole poorly defined with few crystals



Closterium aciculare

Closterium aciculare stands out due to its length of around 500 µm and its very slender shape. The diameter of the cells is usually less than 8 µm. The specimen shown below has a diameter of 7.3 µm. The ends of the cell are slightly curved ventrally and almost pointed. There may be a porus at the end, but this is hard to see even at high magnification (s. fig. 3). The shape of the terminal vacuole is not clearly recognizable in this species. Its possible shape can only be recognized by the few crystals it contains (s. fig. 3). The cell wall is completely smooth, without striations and usually colorless. The similar species *Closterium gracile* is smaller (90–400 µµ), has fewer pyrenoids (4–8 per chloroplast) and a distinct terminal pore. In addition, girdle bands are often present.

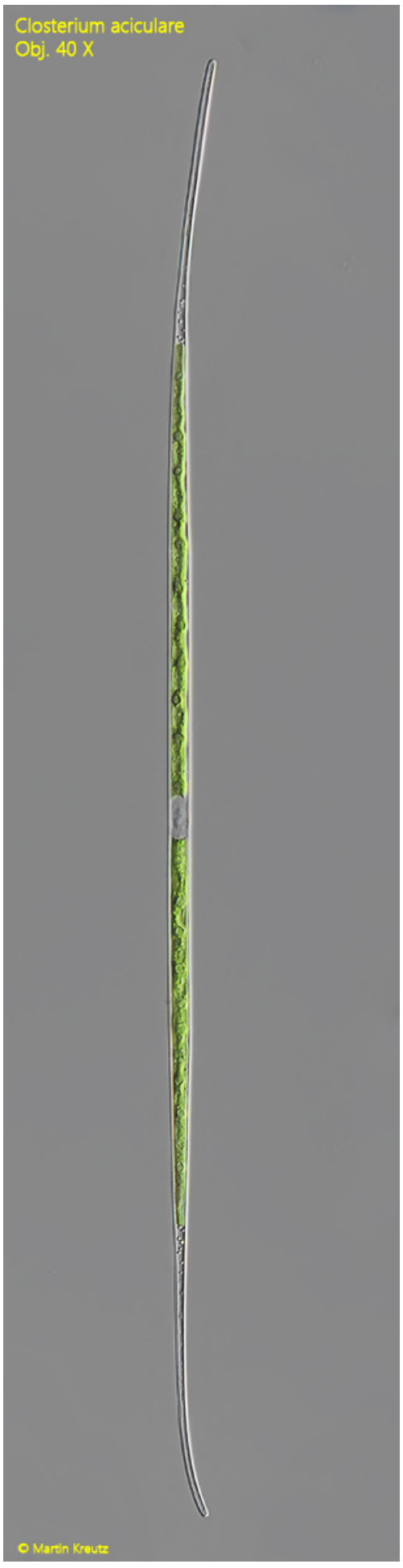

Closterium aciculare
Obj. 40 X
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Fig. 1: *Closterium aciculare*. L = 450 µm. Total view of a slightly squashed specimen. Obj. 40 X.

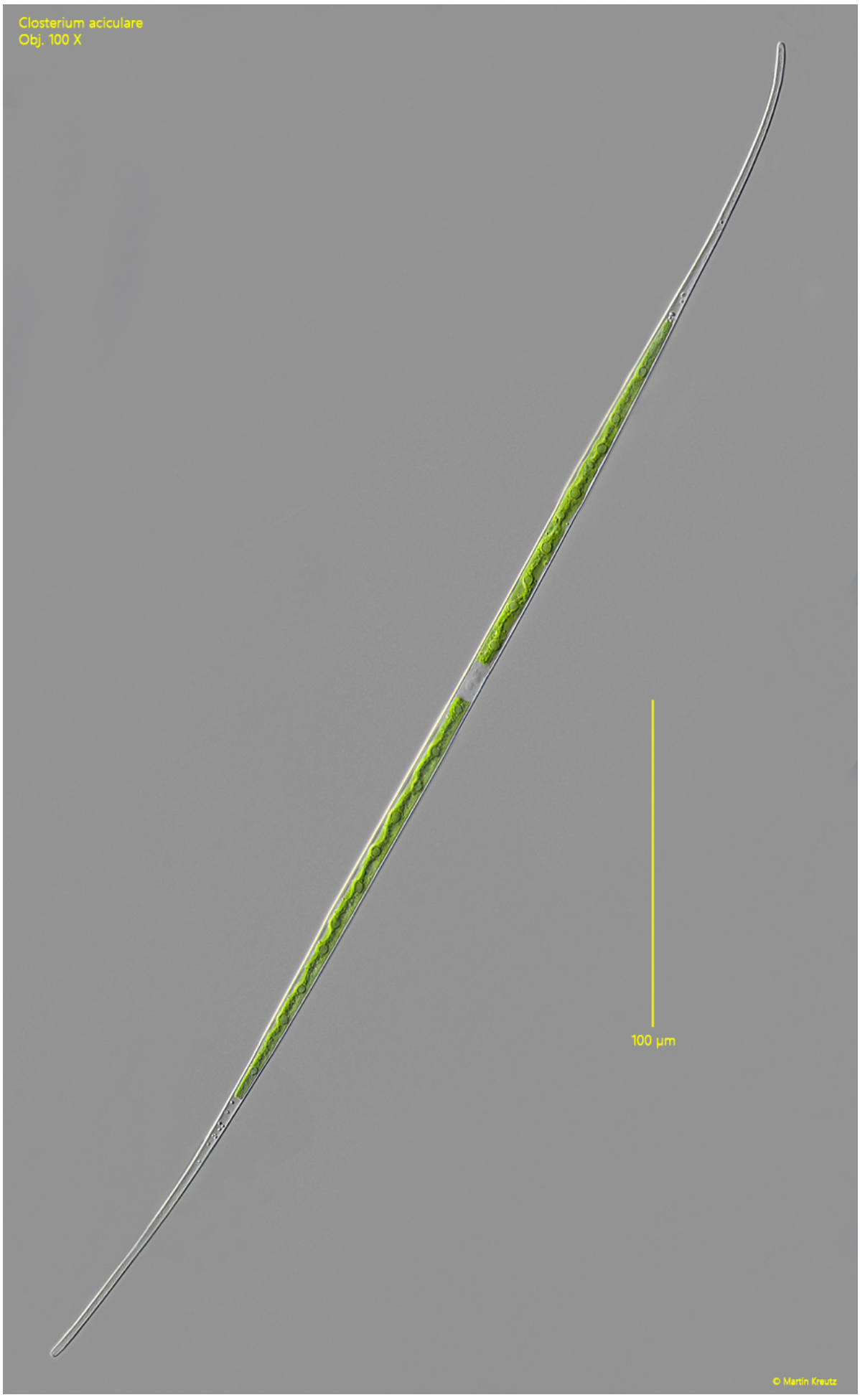

Closterium aciculare
Obj. 100 X
100 µm
© Martin Kreutz

Fig. 2: *Closterium aciculare*. L = 450 µm. The same specimen as shown in fig. 1 with higher resolution. Obj. 100 X.

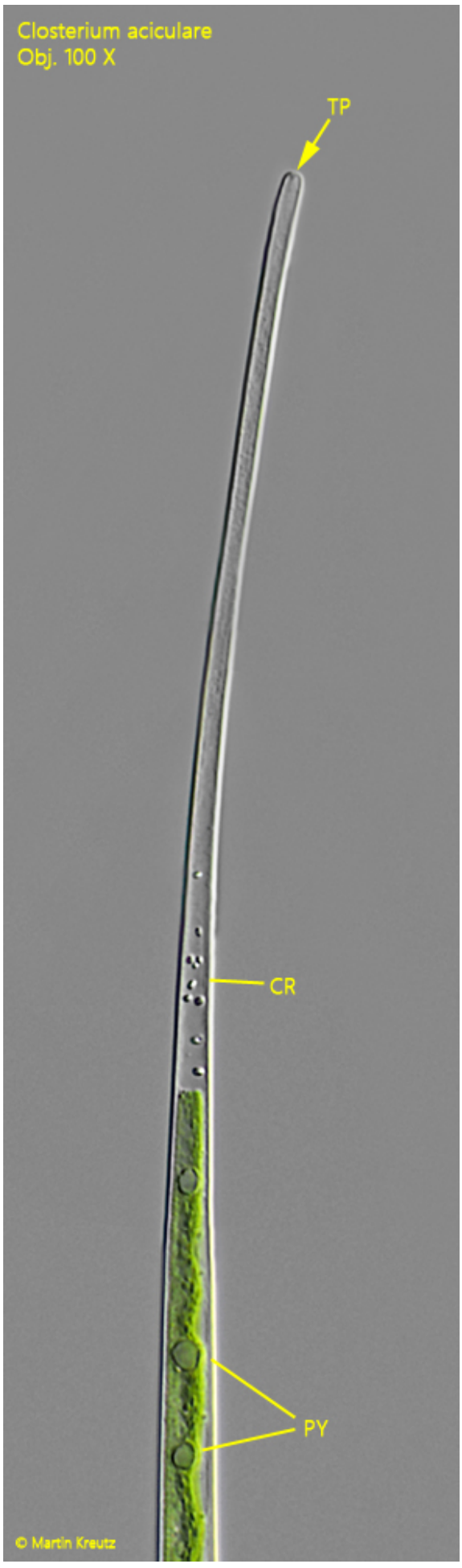

Closterium aciculare
Obj. 100 X
TP
CR
PY
© Martin Kreutz

Fig. 3: *Closterium aciculare*. The apex in detail. The terminal porus (TP) is very small and hard to see. The terminal vacuole with an indistinct shape is filled with few crystals. PY = pyrenoids. Obj. 100 X.