Staurastrum chaetoceras

(Schröder) G.M. Smith, 1924

Most likely ID: n.a.

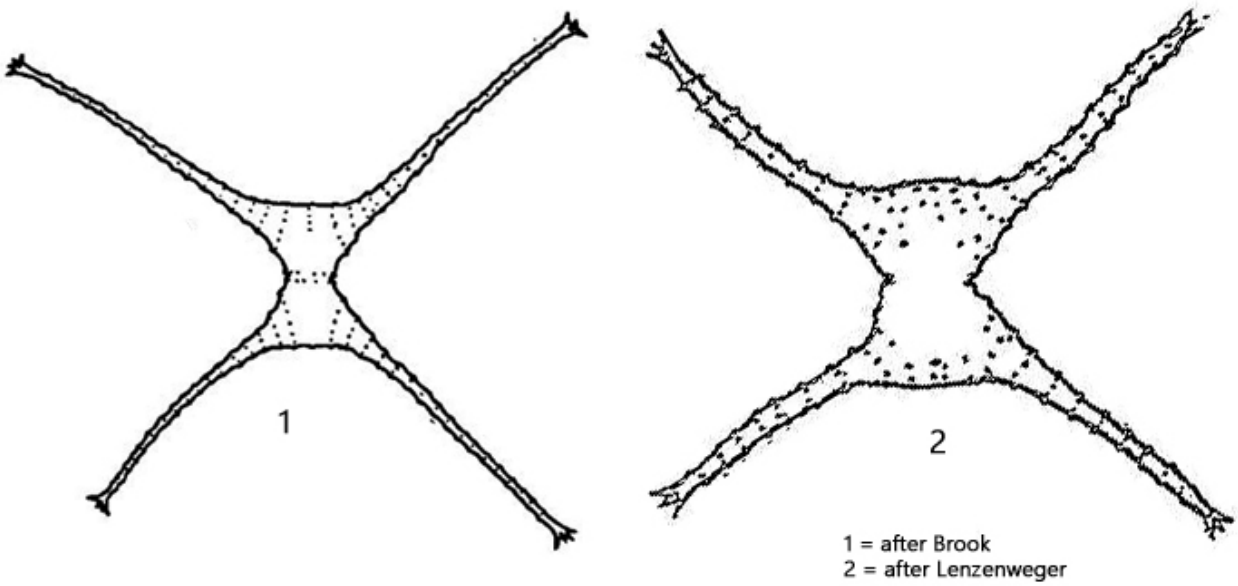
Synonym: *Staurastrum polymorphum* var. *chaetoceras*

Sampling location: Pond of the convent Hegne, Pond of the waste disposal company Constance

Phylogenetic tree: *Staurastrum chaetoceras*

Diagnosis:

- cells 2- or 3-radiate
- semi-cell triangular
- apices flat or slightly convex
- length 14–28 µm with processes
- sinus U-shaped
- isthmus 7–10 µm wide
- cell wall smooth or with rings of tiny granules
- length of processes very variable, depending on habitat



Staurastrum chaetoceras

I found *Staurastrum chaetoceras* both in the plankton of the pond of the waste disposal company Constance and in the sediment of the pond of the convent Hegne. Most specimens were biradiate, and only a few were triradiate. The arm lengths varied considerably. The plankton specimens (s. fig. 1 a-b) were 60–70 µm long (including processes), whereas the sediment specimens were only 22–28 µm long including processes (s. figs. 2a–b, 3a–b, and 4a–c). This variation is consistent with the data provided by Lenzenweger (1997), according to which the length of the processes depends on the flow velocity in the water body. In stagnant waters, the processes are reportedly shortest.

The specimens of *Staurastrum chaetoceras* from the plankton largely corresponded to the data given by John et al. (2002), who report a length of 46–94 µm including processes and a width of 50–77 µm. Bettighofer (2014) also found Staurastrum chaetoceras on the island of Fehmarn, with dimensions very similar to those of my population, which I found in the sediment at the bottom of the pond of the convent Hegne.

More images and information on *Staurastrum chaetoceras*: Wolfgang Bettighofer-Protiststen.de-*Staurastrum chaetoceras*

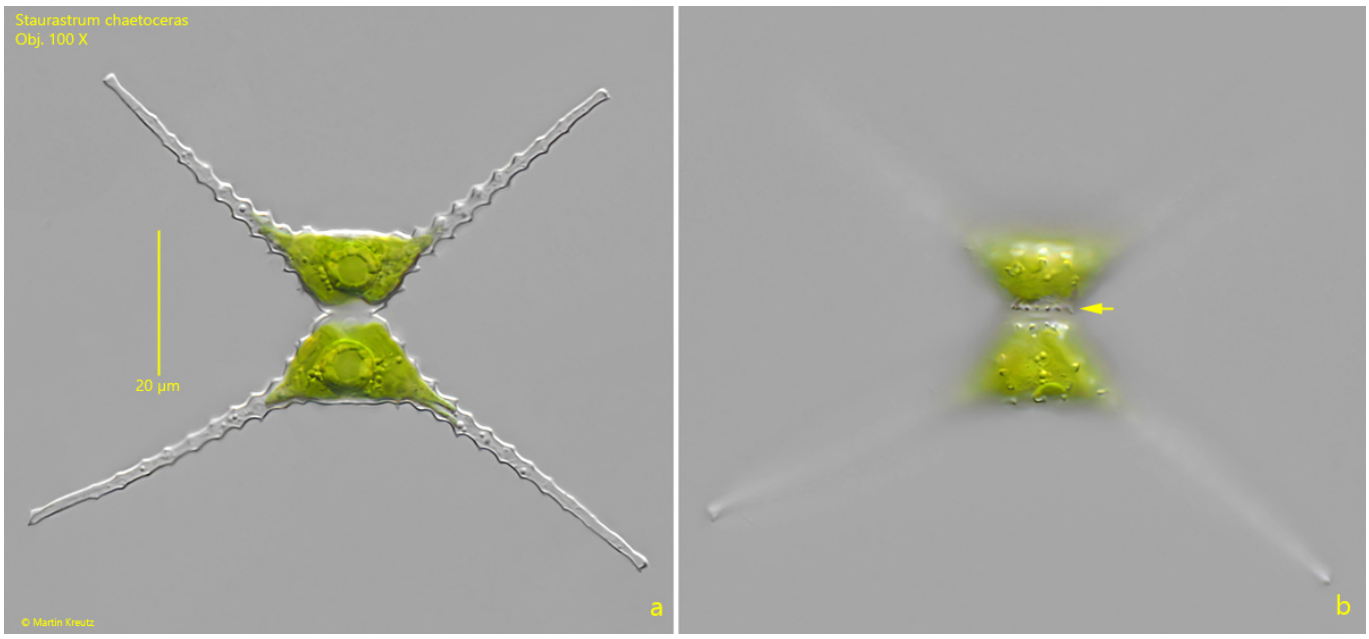


Fig. 1 a-b: *Staurastrum chaetoceras*. L = 67 (with processes). Two focal planes of a biradiate specimen found in Aug. 2026 in the plankton of the [pond of the waste disposal company Constance]. Note the ring of warts near the isthmus (arrow). Obj. 100 X.

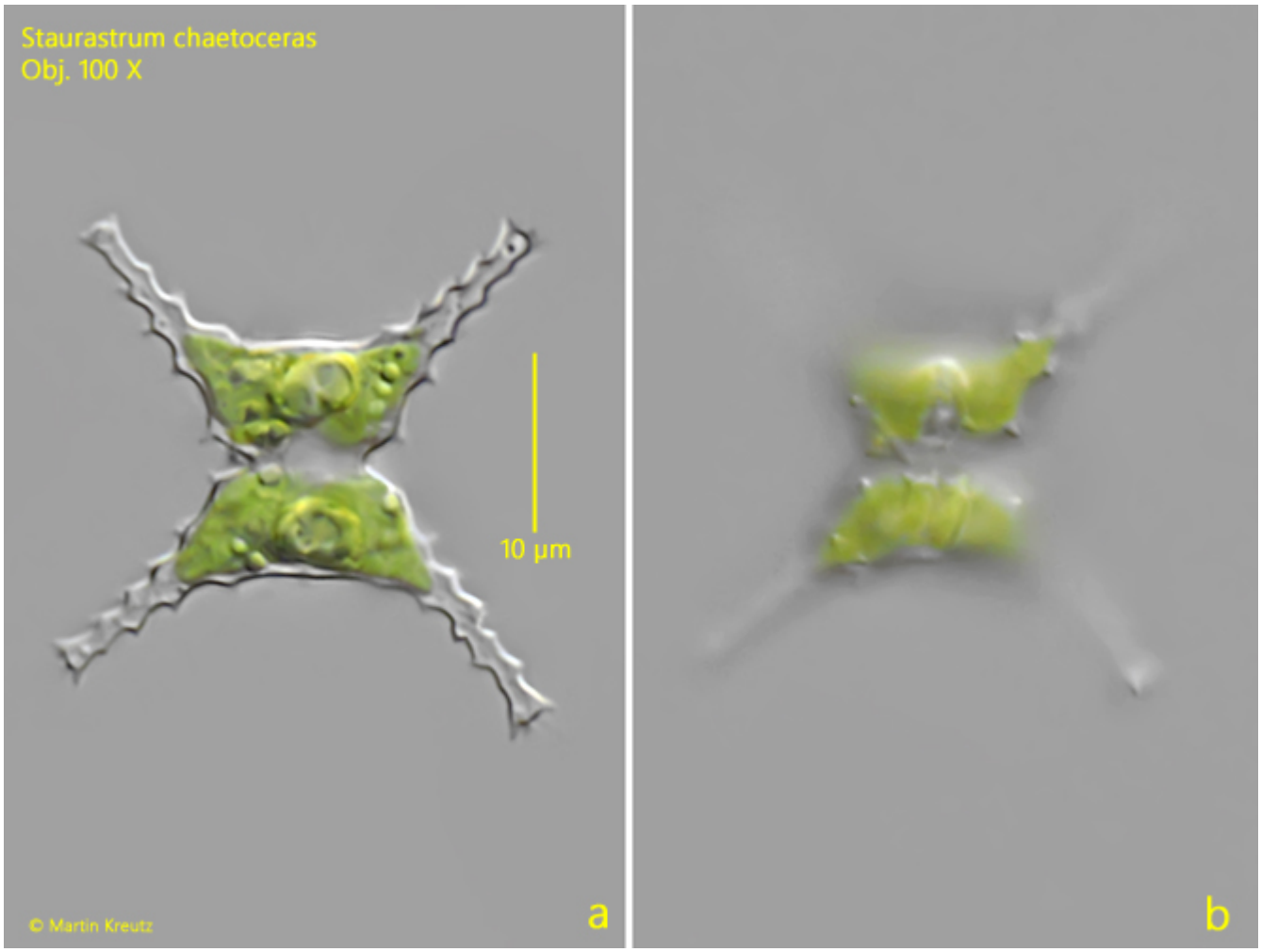


Fig. 2 a-b: *Staurastrum chaetoceras*. L = 28 (with processes). Two focal planes of a biradiate specimen found in Sep. 2025 in the mud of the pond of the convent Hegne. Obj. 100 X.

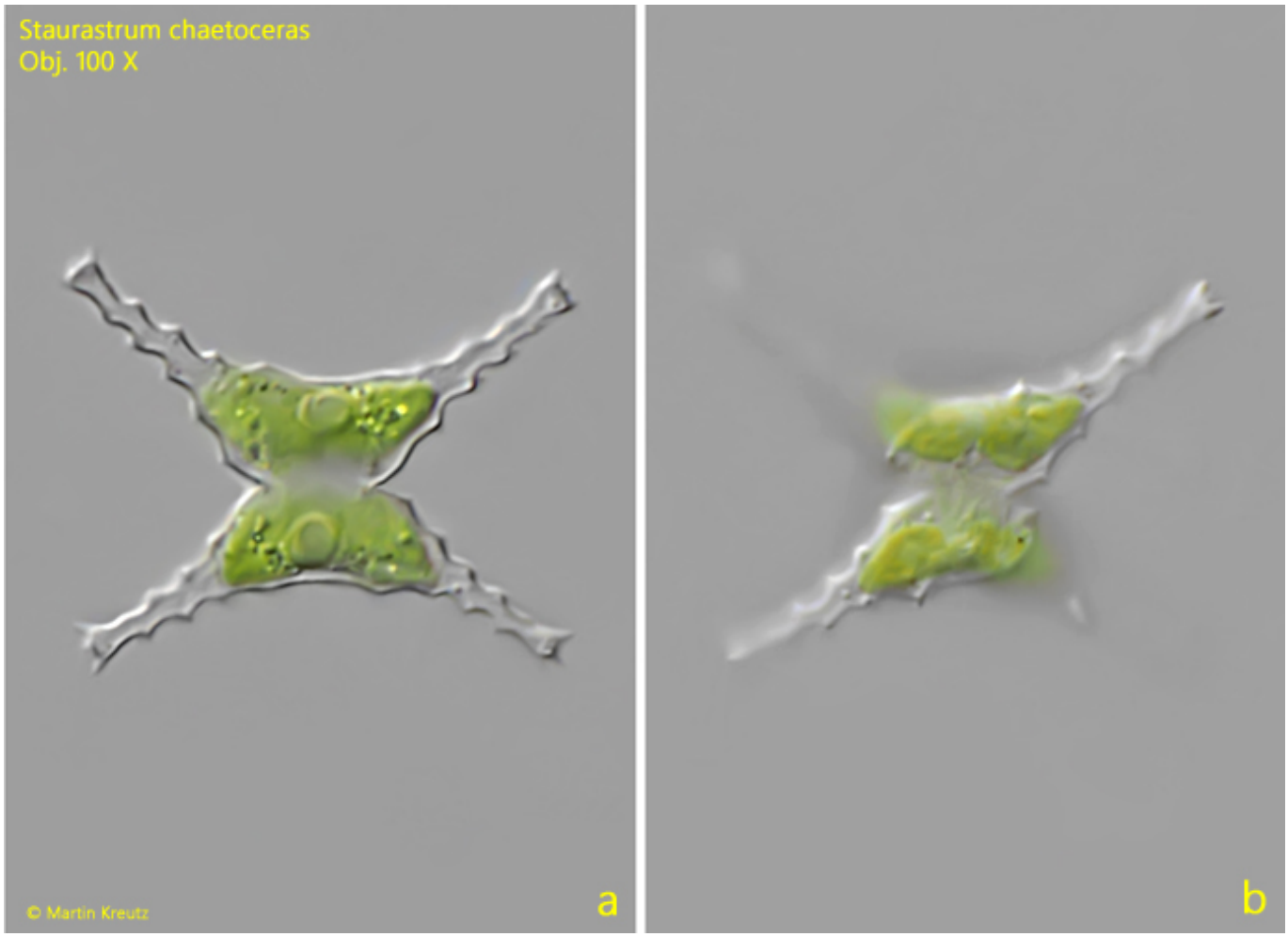


Fig. 3 a-b: *Staurastrum chaetoceras*. L = 23 (with processes). Two focal planes of a second, biradiate specimen. Obj. 100 X.

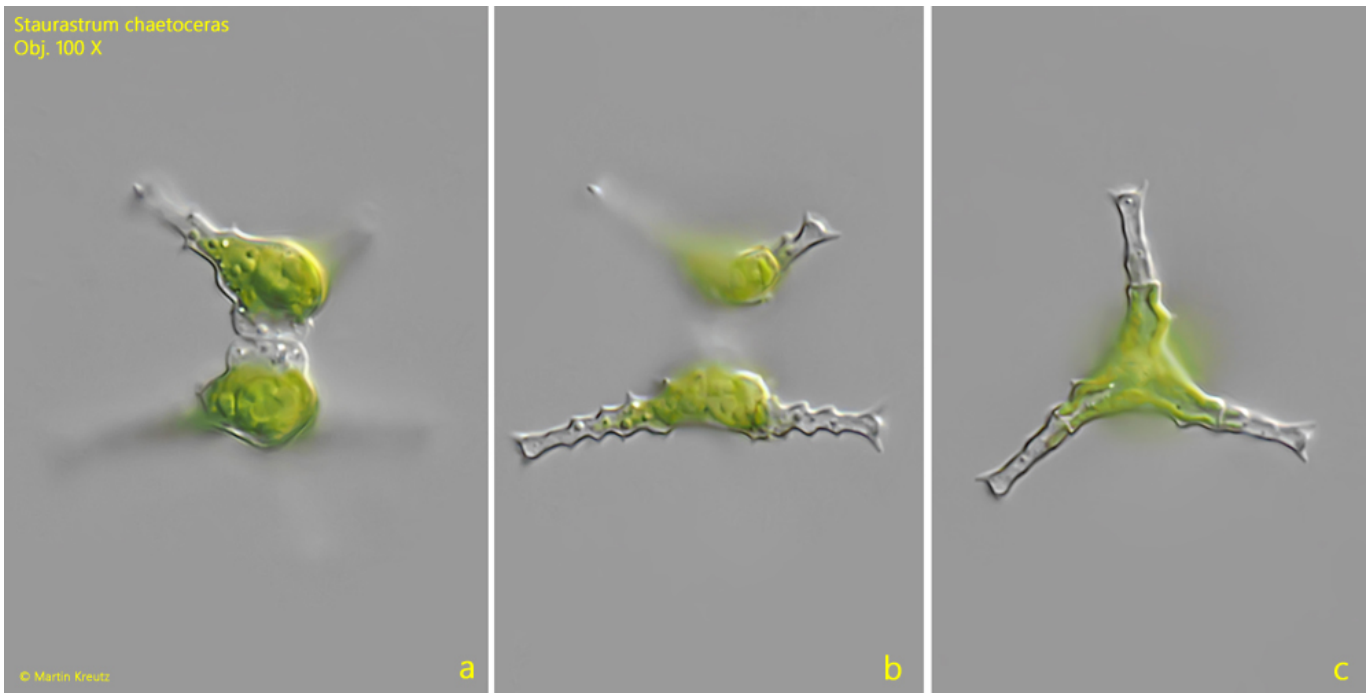


Fig. 4 a-c: *Staurastrum chaetoceras*. L = 26 (with processes). A triradiate specimen from the mud of the pond of the convent Hegne. Obj. 100 X.