Lepocinclis hispidula

(Eichwald) Daday, 1905

Most likely ID: n.a.

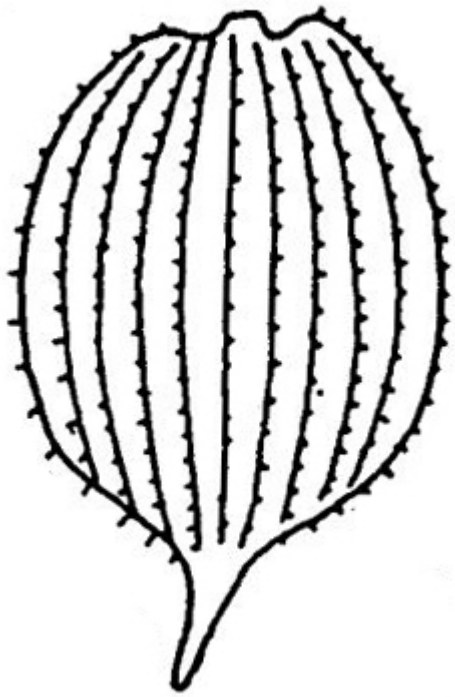
Synonyms: *Phacus hispidulus*, *Phacus suecicus var. latus*, *Phacus horridus*, *Phacus hystrix*, *Phacus latus*, *Phacus glaber*, *Phacus papillaris*, *Lepocinclis horrida*

Sampling location: Simmelried

Phylogenetic tree: *Lepocinclis hispidula*

Diagnosis:

- cells ovoid or obovoid
- length 39–55 µm, width 20–25 µm
- conical shaped apex
- flagellum shorther than cell
- numerous chloroplasts, disc-shaped
- pellicle with longitudinal rows of fine spines
- base of spines almost squared



after Popova

Lepocinclis hispidula

I’ve only been finding *Lepocinclis hispidula* in the Simmelried since 2019. Since then I find the species there regularly. Before that, I have no records and *Lepocinclis hispidula* is not present in my other sampling sites either.

The species was originally described as *Phacus hispidulus* (Lemmermann, 1910). In 2012, *Phacus hispidulus* was then transferred to the genus *Lepocinclis* by Bennet & Triemer on the basis of genetic analyses, together with some other *Phacus* species (e.g. *Phacus horridus*, s. “Synonyms” above).

Lepocinclis hispidula is easily recognized by its longitudinal rows of short spines on the pellicle (s. fig. 1 a-c). These have an almost square and rectangular base (s. fig. 4). In addition, the species has a conically shaped apex from which the flagellum originates. Many disc-shaped chloroplasts can be seen in the cell (s. fig. 1 b). Two large paramylon grains are said to be present, but I was unable to detect them. The cell wall of my specimens was either colorless or slightly yellow-brown in color. In my population I also found specimens with only a few rows of rudimentary spines (s. fig. 2 a-c). It is possible that these are daughter cells after a division has taken place.

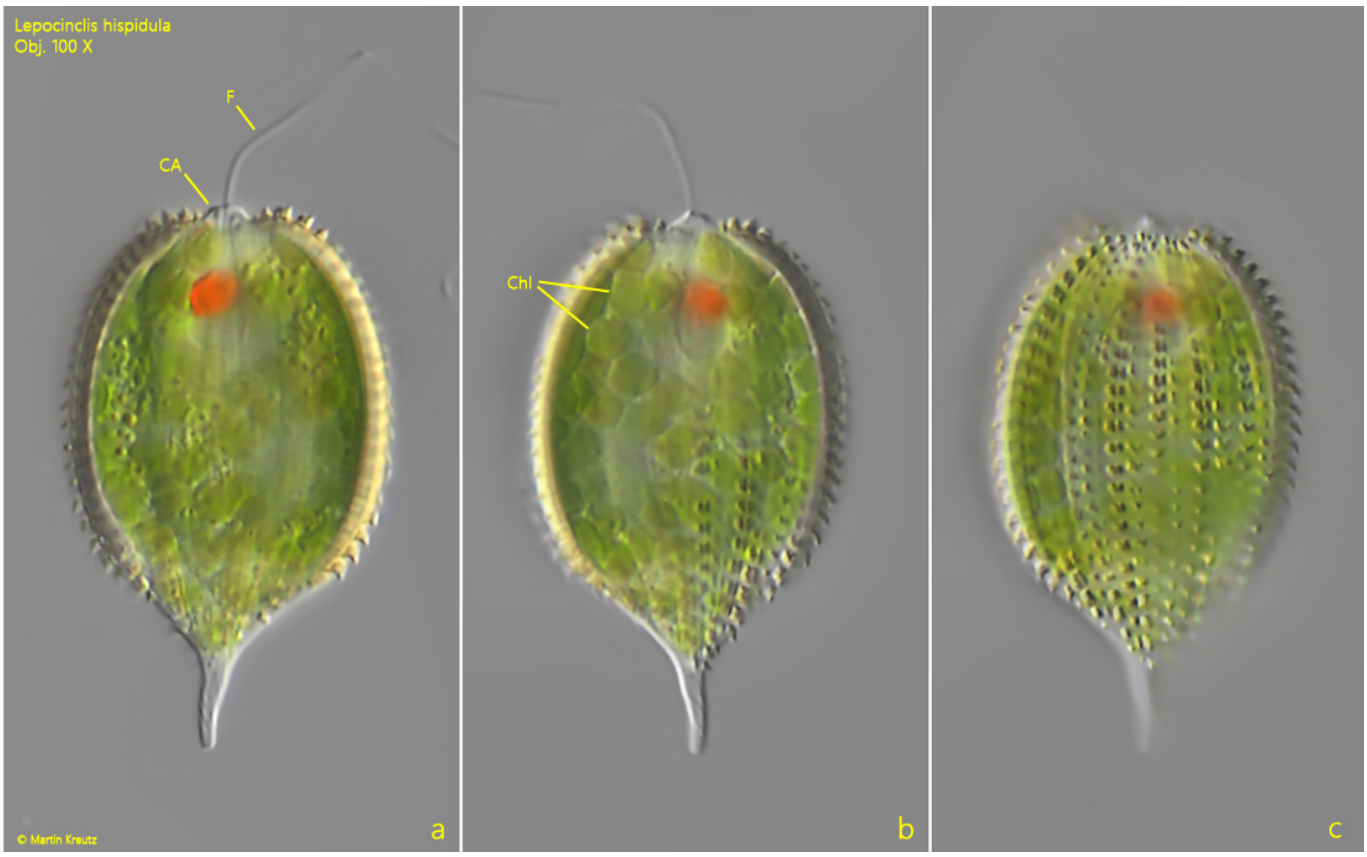


Fig. 1 a-c: *Lepocinclis hispidula*. L = 40 µm. Different focal planes of a freely swimming specimen. Note the cone-shaped apex (CA) where the flagellum (F) emerge. Chl = disc-shaped chloroplasts. Obj. 100 X.

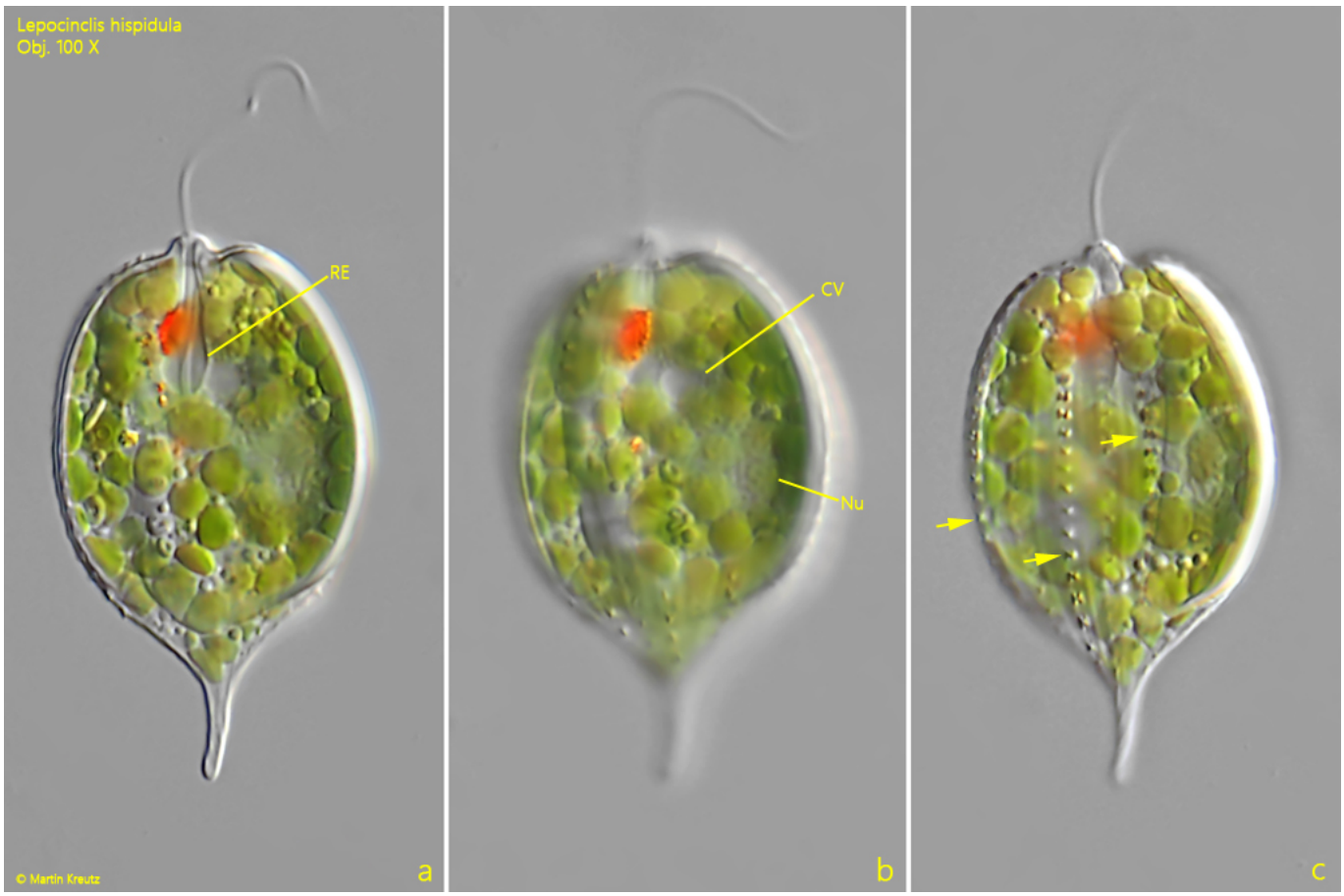


Fig. 2 a-c: *Lepocinclis hispidula*. L = 38 µm. Different focal planes of a specimen with only few rows of rudimentary spines (arrows). CV = contractile vacuole, Nu = nucleus, RE = reservoir. Obj. 100 X.

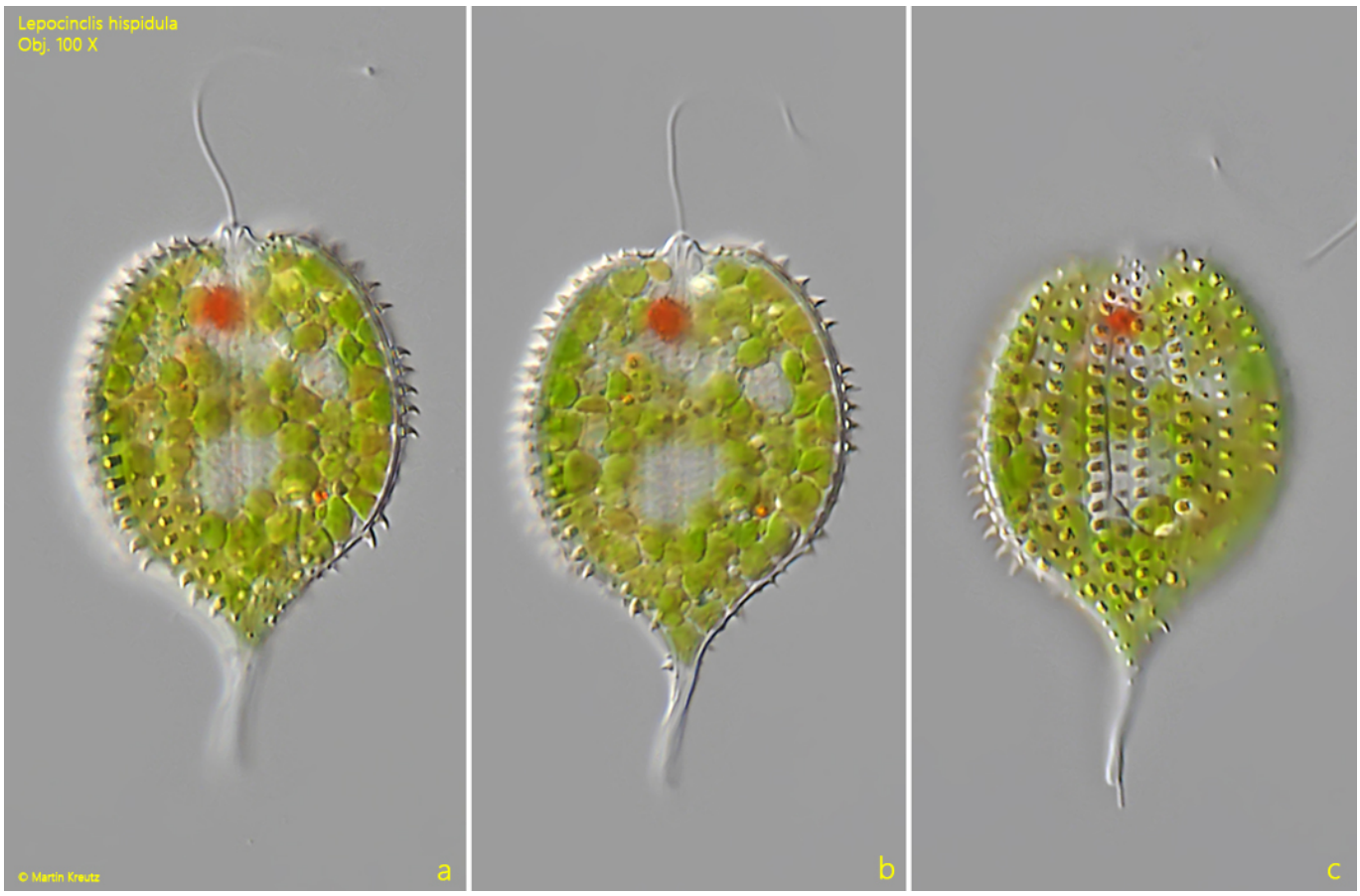


Fig. 3 a-c: *Lepocinclis hispidula*. L = 46 µm. A third, freely swimming specimen. Obj. 100 X.

Fig. 4: *Lepocinclis hispidula*. L = 45 µm. A slightly squashed specimen with focal plane on the almost squared base of short spines. Obj. 100 X.