

***Lepocinclis hispidula***

**(Eichwald) Daday, 1905**

**Most likely ID:** n.a.

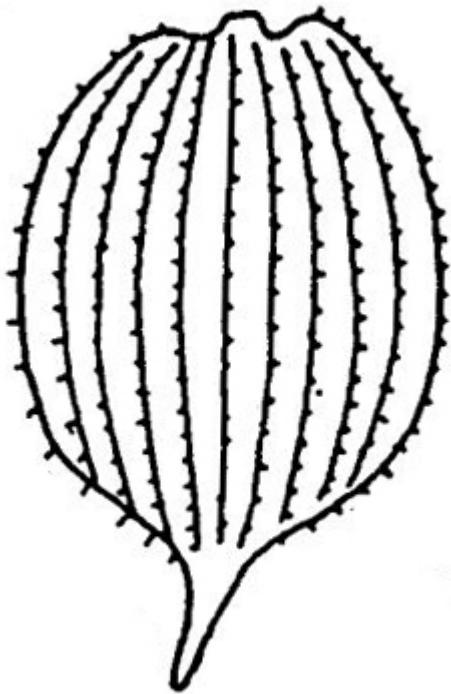
**Synonyms:** *Phacus hispidulus*, *Phacus suecicus* var. *latus*, *Phacus horridus*, *Phacus hystrix*, *Phacus latus*, *Phacus glaber*, *Phacus papillaris*, *Lepocinclis horrida*

**Sampling location:** [Simmelried](#)

**Phylogenetic tree:** [\*Lepocinclis hispidula\*](#)

**Diagnosis:**

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



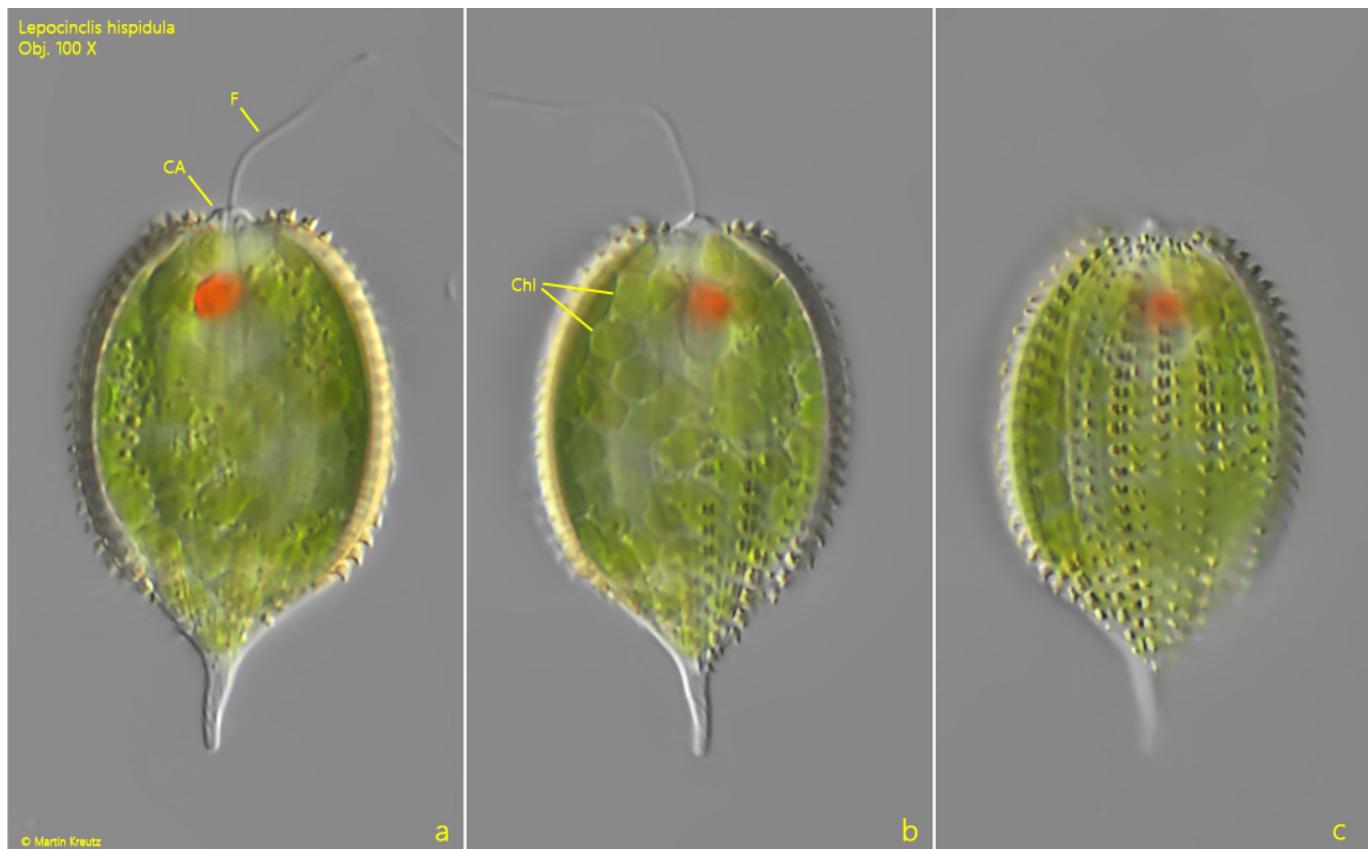
after Popova

### *Lepocinclus hispidula*

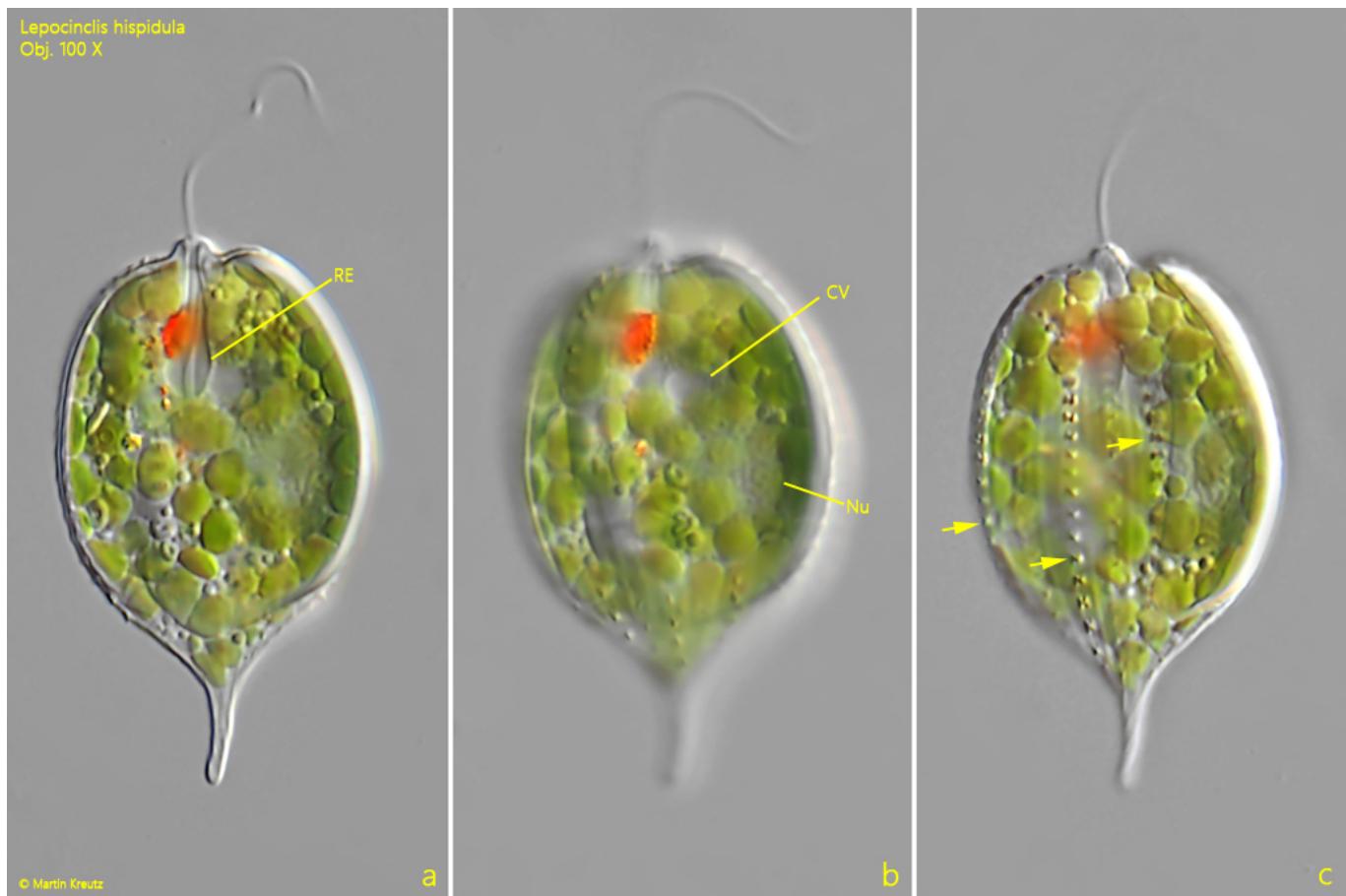
I've only been finding *Lepocinclus hispidula* in the [Simmelried](#) since 2019. Since then I find the species there regularly. Before that, I have no records and *Lepocinclus hispidula* is not present in my other sampling sites either.

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

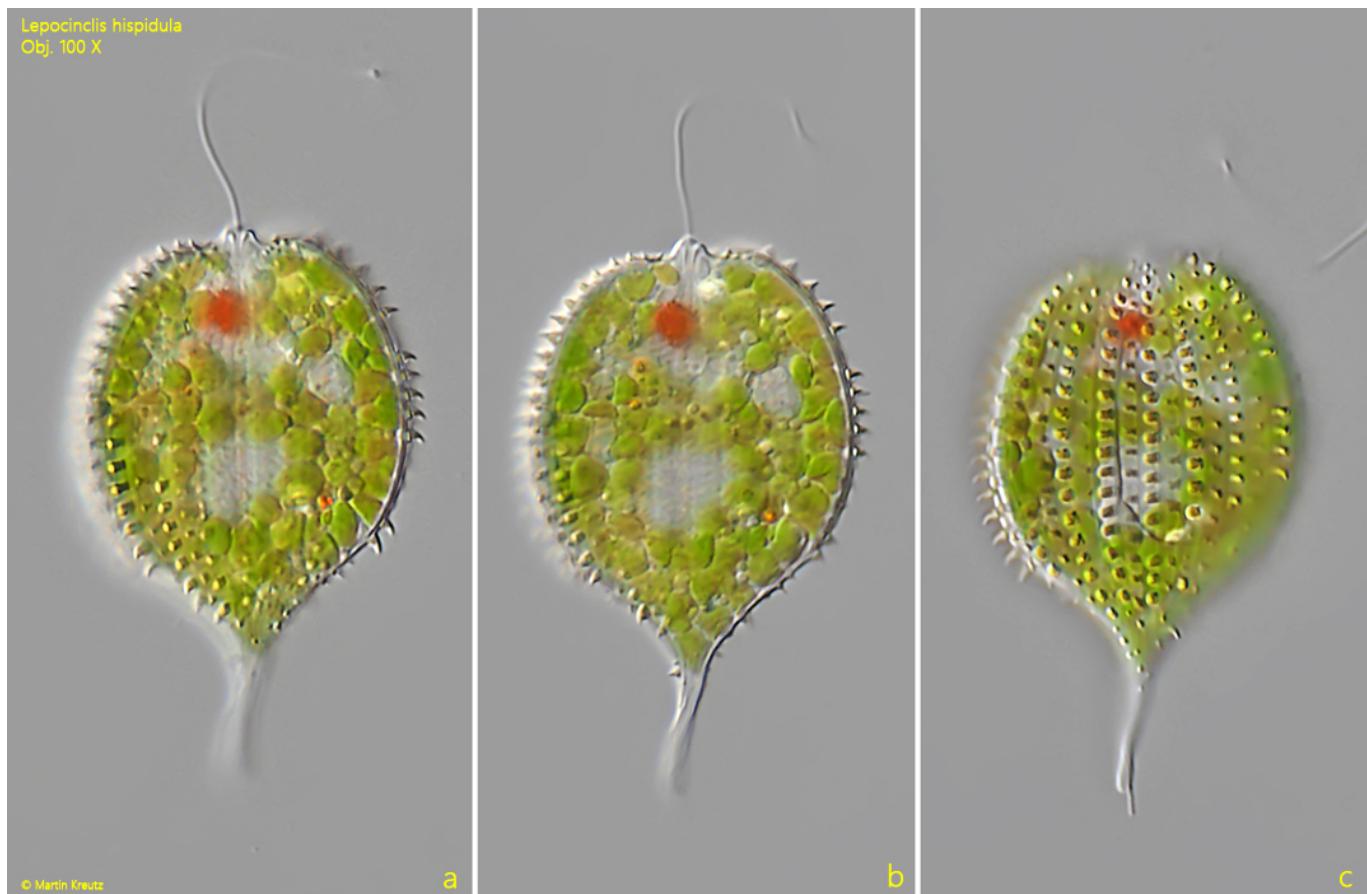
*Lepocinclus hispidula* is easily recognized by its longitudinal rows of short spines on the pellicle (s. fig. 1 a-c). These have an almost square and rectangular base (s. fig. 4). In addition, the species has a conically shaped apex from which the flagellum originates. Many disc-shaped chloroplasts 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  $\mu$ m. 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.

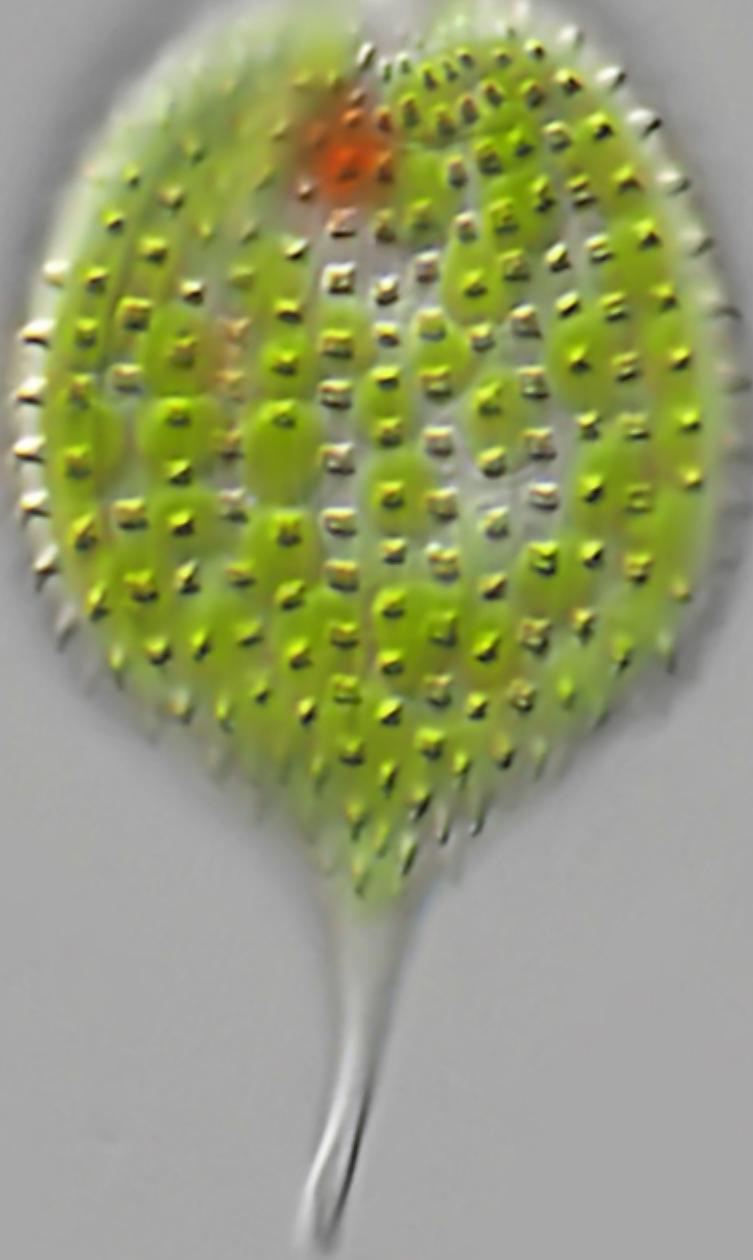


**Fig. 2 a-c:** *Lepocinclis hispidula*. L = 38  $\mu$ m. Different focal planes of a specimen with only few rows of rudimentary spines (arrows). CV = contractile vacuole, Nu = nucleus, RE = reservoir. Obj. 100 X.



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

*Lepocinclus hispidula*  
Obj. 100 X



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**Fig. 4:** *Lepocinclus hispidula*. L = 45  $\mu$ m. A slightly squashed specimen with focal plane on the almost squared base of short spines. Obj. 100 X.