

***Phacus lismorensis* (Playfair, 1921)**

Most likely ID: n.a.

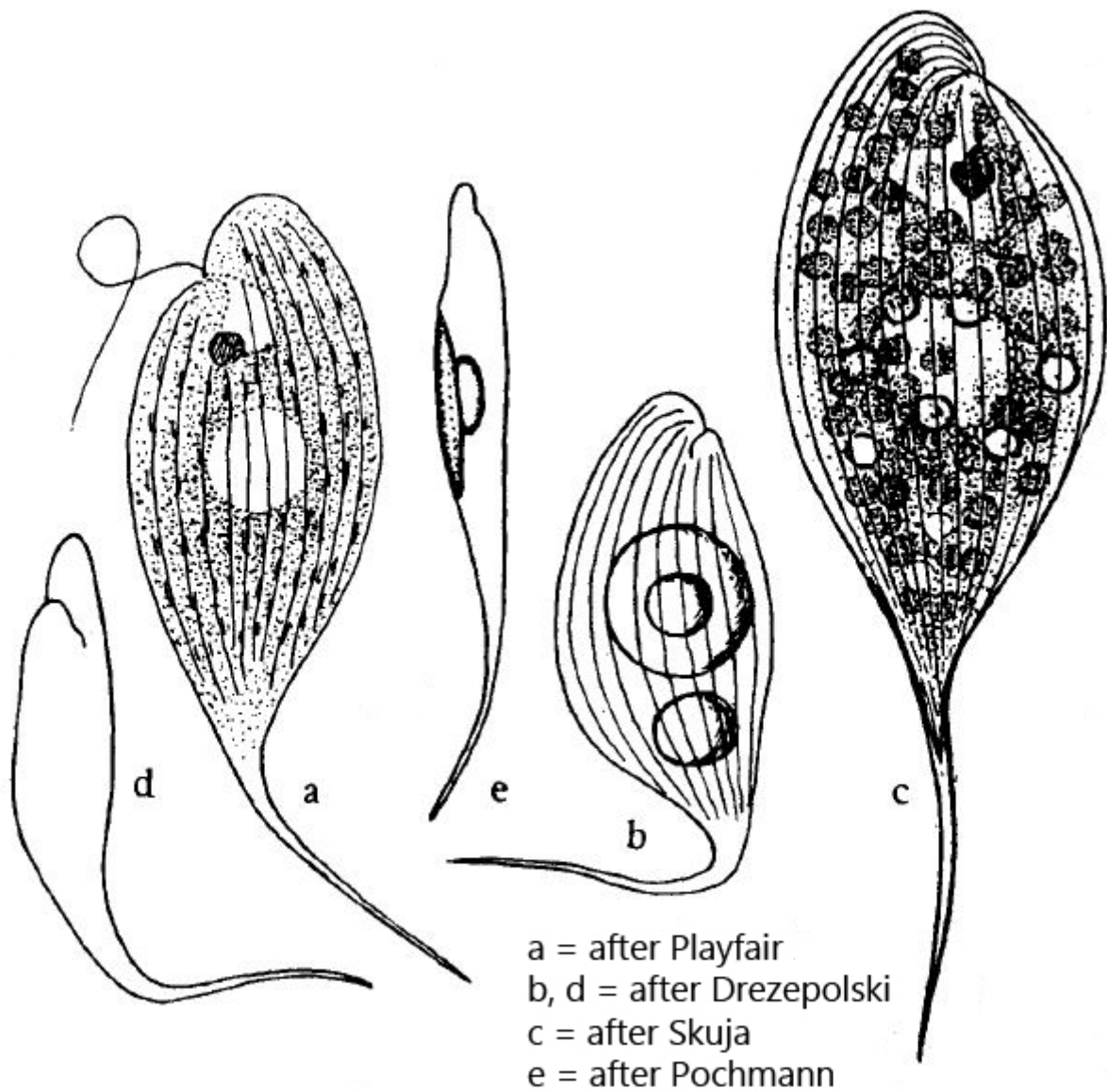
Synonym: *Phacus Rostafinskii*, *Phacus longicauda* var. *ovalis*

Sampling location: [Simmelried](#), [Ulmisried](#)

Phylogenetic tree: [Phacus lismorensis](#)

Diagnosis:

- cell 85 – 130 µm long, about 30 µm broad
- longitudinally obvoid in outline, slightly asymmetric
- anterior “lips” overlapping
- narrowing abruptly in a long spine, spine often bent
- pellicle longitudinally striated
- red eyespot prominent
- chloroplast disc shaped
- paramylon in small discs or 1-2 large discs
- flagellum shorter than cell
- pyrenoids absent



Phacus lismorensis

I found the first specimens of *Phacus lismorensis* in 1994 in [Simmelried](#) and later also in [Ulmisried](#). In both locations the species is very common. The cells are typically asymmetrically shaped with a rapidly tapering spine. The cells can appear very curved and bent (s. Fig. 3). The shape of the paramylon grains did not seem constant to me. I found specimens with larger, disc-shaped paramylon as well as those in which it was present in many small discs.

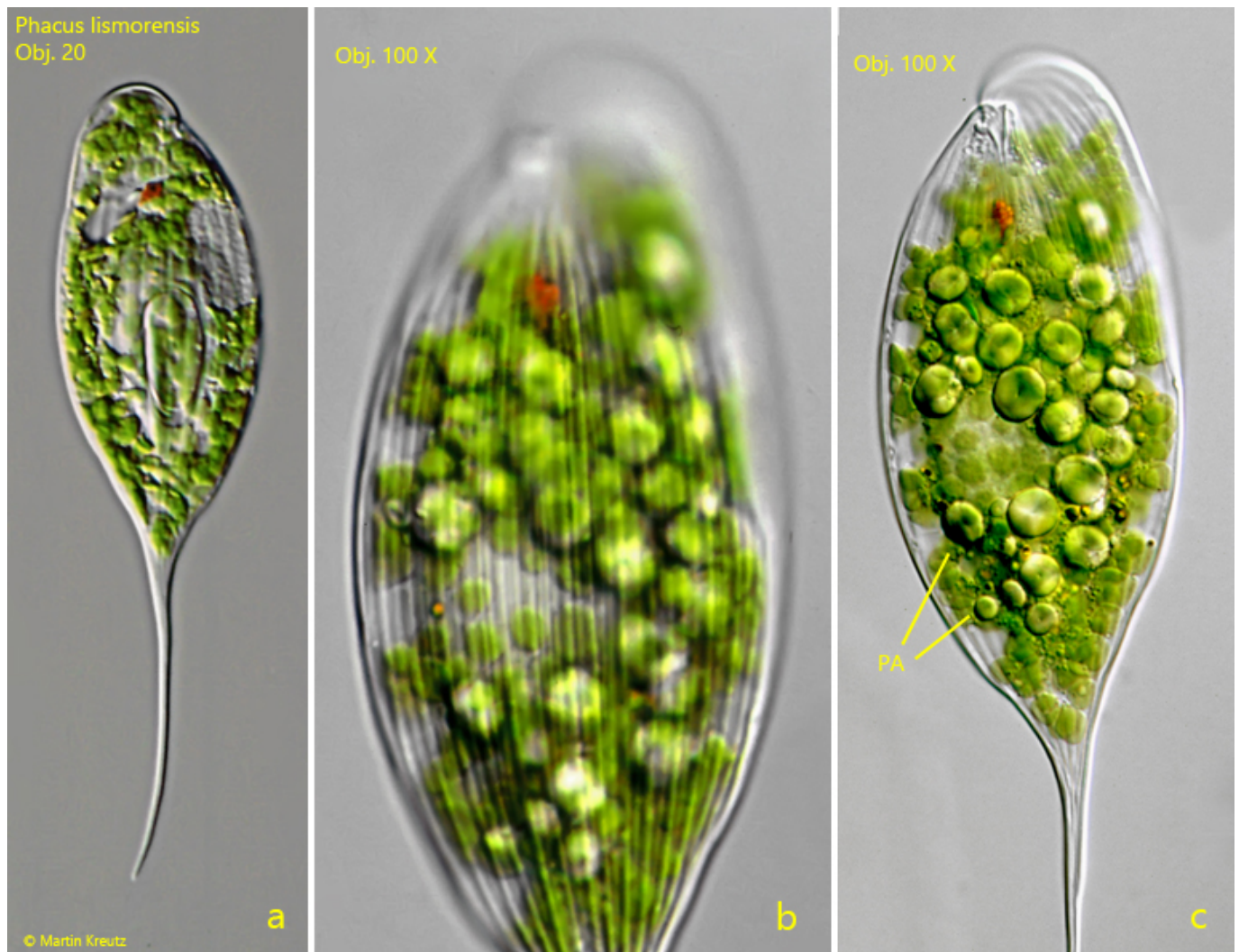


Fig. 1 a-c: *Phacus lismorensis*. L = 105 μm . a) a strongly squashed specimen, Obj. 20 X. b) the longitudinal striation of the pellicle, Obj. 100 X. c) The paramylon discs in the squashed specimen, Obj. 100 X.

b

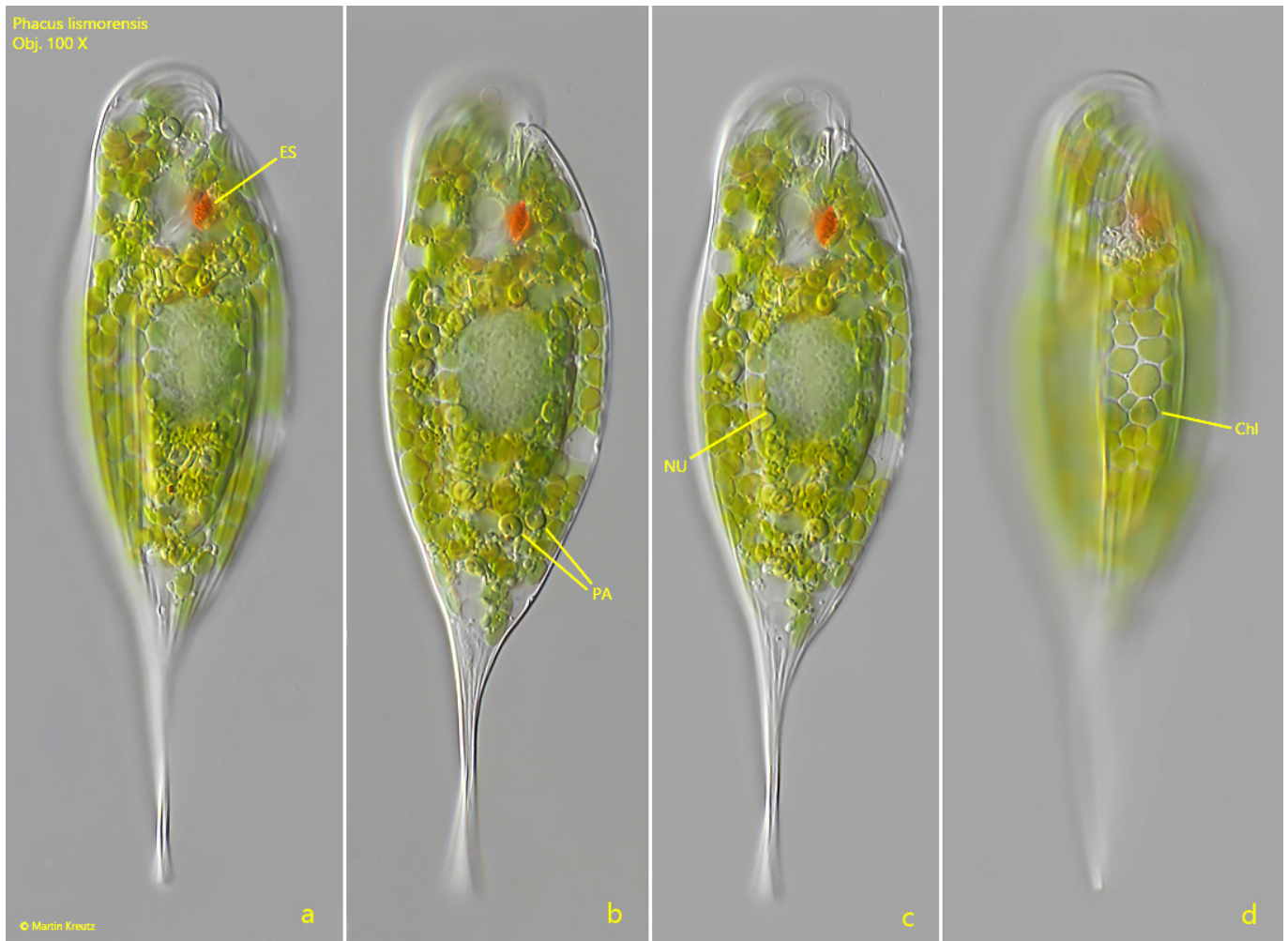


Fig. 2 a-d: *Phacus lismorensis*. L = 128 μ m. A slightly squashed specimen. Chl = disc shaped chloroplasts, ES = eye spot, NU = nucleus, PA = disc shaped paramylon granules. Obj. 100 X.

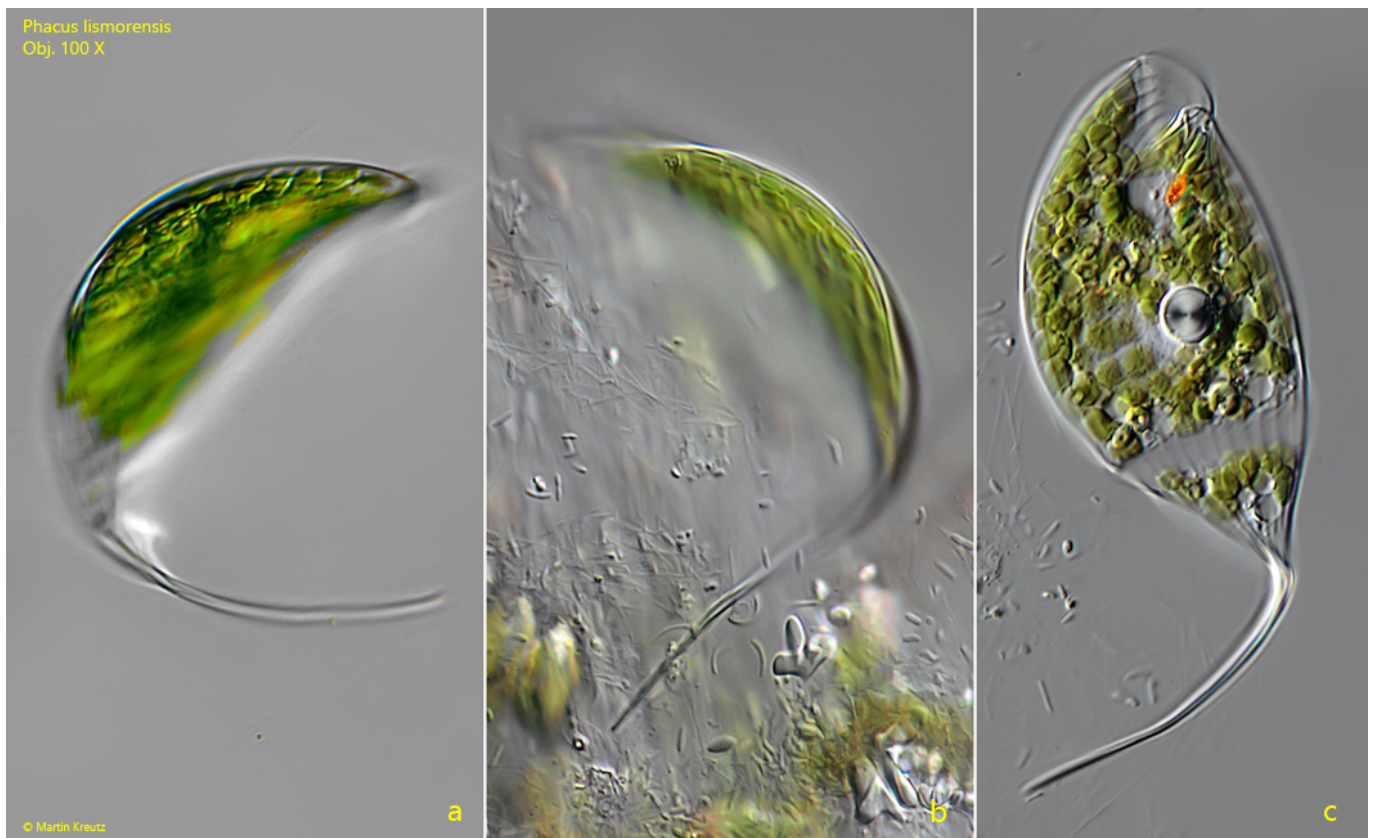


Fig. 3 a-c: *Phacus lismorensis*. L = 105 μm . a, b) a strongly bent specimen. c) the same specimen strongly squashed. Obj. 100 X.

In many samples I found infestation of *Phacus lismorensis* by a parasitic fungus. In most cases it was only one very large parasitic cell, which was intracellular (s. Fig. 4). Sometimes there were even two parasitic cells. Reddish-brown metabolites were deposited in these cells and after prolonged infestation, the paramylon granules were completely degraded to feed the parasite. Unfortunately, I could not observe the complete life cycle of the parasitic fungus.



Fig. 1 a-c: *Phacus lismorensis*. L = 88 µm. A specimen that has been attacked by a parasitic fungus. PC = parasitic cell, NuP = nucleus of the parasitic cell. Obj. 100 X.