

***Lepochromulina bursa* (Scherff, 1911)**

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

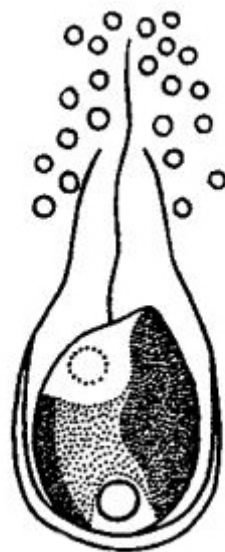
**Synonym:** n.a.

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

**Phylogenetic tree:** [Lepochromulina bursa](#)

**Diagnosis:**

- lorica flask-shaped, with broadly rounded base, stalk absent
- base of lorica often thickened and irregular
- length of lorica about 10  $\mu\text{m}$
- cell spherical, diameter about 5  $\mu\text{m}$ , attached to bottom of lorica
- one chloroplast
- one flagellum of body length
- one contractile vacuole located apically
- spherical nucleus near posterior end
- aperture of lorica with a distinct cloud of spherical granules



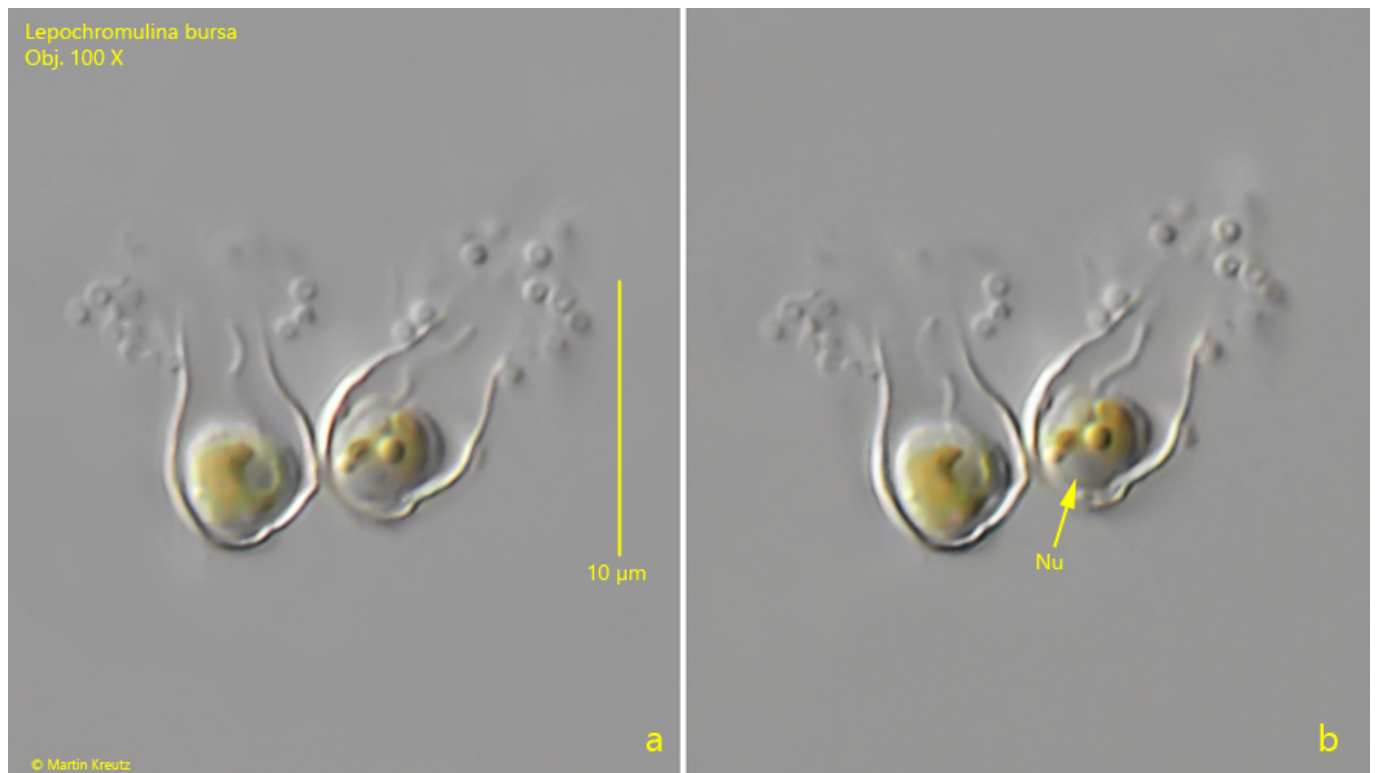
after Fott

## Lepochromulina bursa

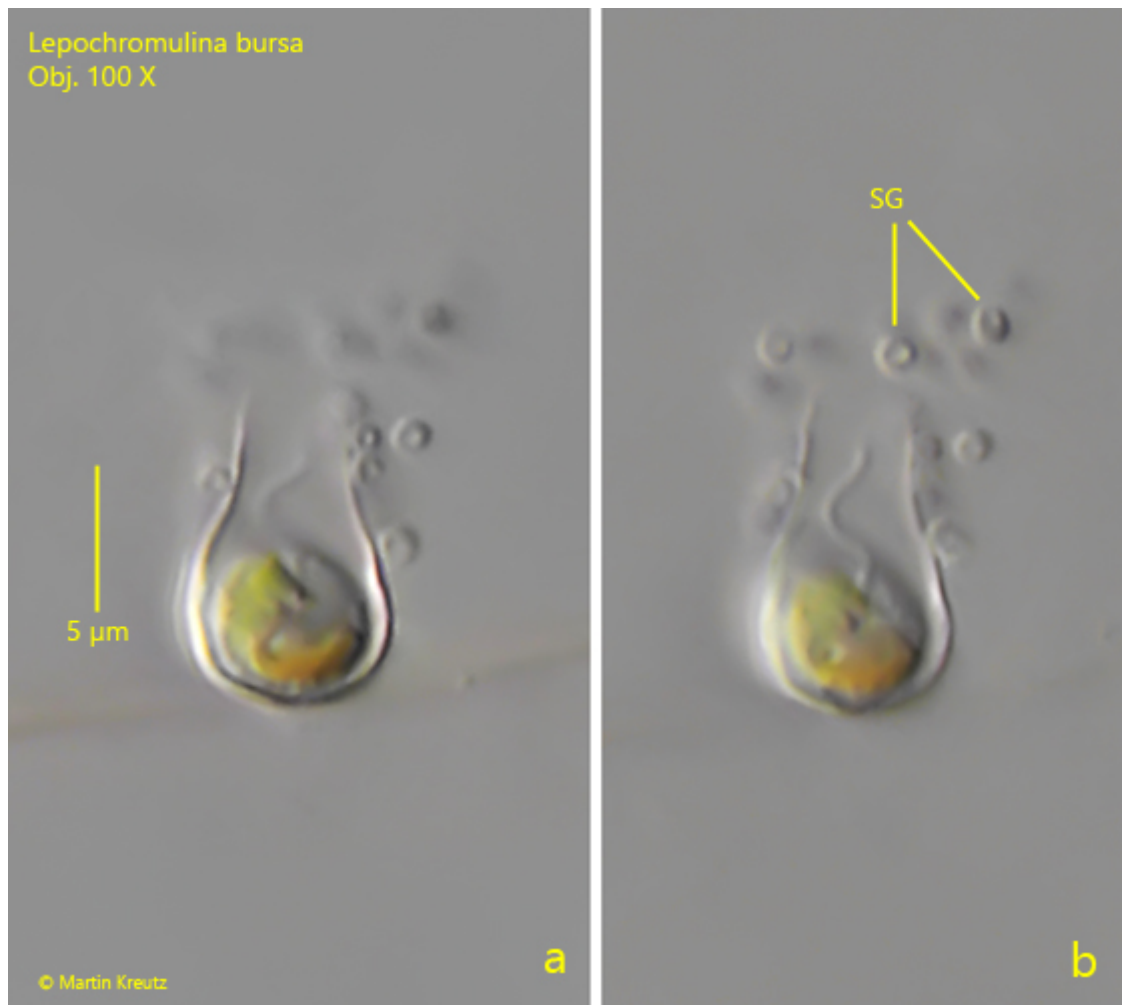
*Lepochromulina bursa* is a very small Chrysophyceae, which I rarely find in the [Simmelried](#). I usually find the specimens growing on detritus flakes. So far I have not been able to find any specimens on algal filaments.

The cells are at most 5 µm in size, spherical and with one chloroplast. They build an approximately 10 µm long, flask-shaped case, which always has a cloud of spherical granules around its opening. If these granules are absent, then it is the similar species *Lepochromulina calyx*, which also has a stalk.

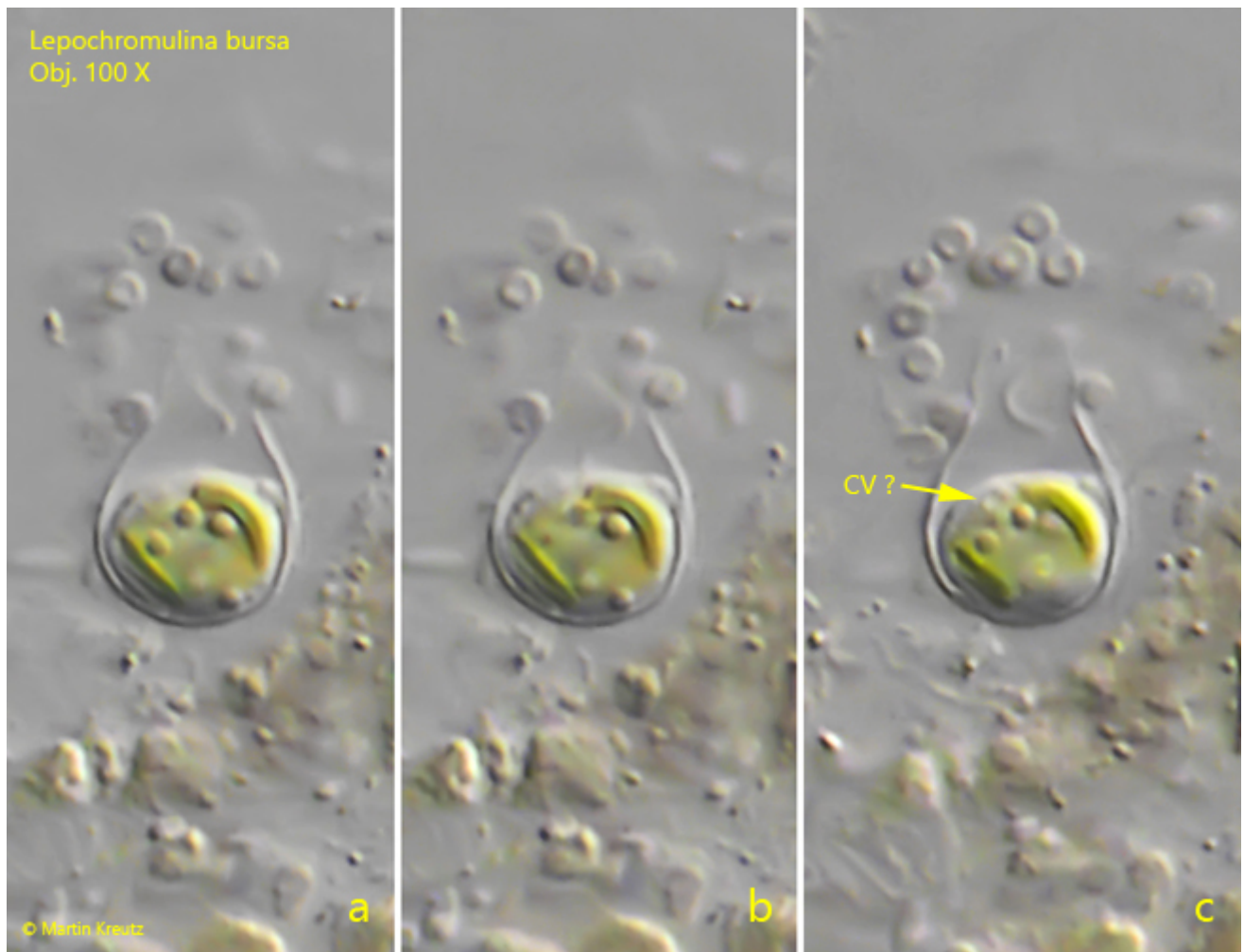
It was assumed by Fott (1963) that the grains around the aperture of the lorica were possibly symbiotic bacteria, as they are always present in *Lepochromulina bursa*. However, it was later shown by Hibbert (1983) that these granules are formed intracellularly and then excreted. Similar bodies are also found in *Spongomonas spec.* or [Rhipidodendron huxleyi](#). At high magnification I could see that these approximately 1 µm large granules are obviously hollow (s. fig. 2 b). Why they are deposited around the aperture of the lorica opening is not known. Since they are all held in position, there is probably also a gelatinous sheath, but this cannot be seen in the DIC.



**Fig. 1 a-b:** *Lepochromulina bursa*. L = 8.6–9.1 µm (of lorica). Slightly different focal planes of two specimens. Note the cloud of spherical granules around the apertures of the loricae. Nu = nucleus. Obj. 100 X.



**Fig. 2 a-b:** *Lepochromulina bursa*.  $L = 9.5\ \mu\text{m}$  (of lorica). Two focal planes of a specimen. The spherical granules (SG) seems to be hollow globules with a diameter of about  $1\ \mu\text{m}$ . Nu = nucleus. Obj. 100 X.



**Fig. 3 a-c:** *Lepochromulina bursa*. L = 9.2  $\mu\text{m}$  (of lorica). A third specimen attached to a detritus flake. CV ?= probably the contractile vacuole. Obj. 100 X.