Nephrocytium limneticum Smith, 1933

Most likely ID: n.a.

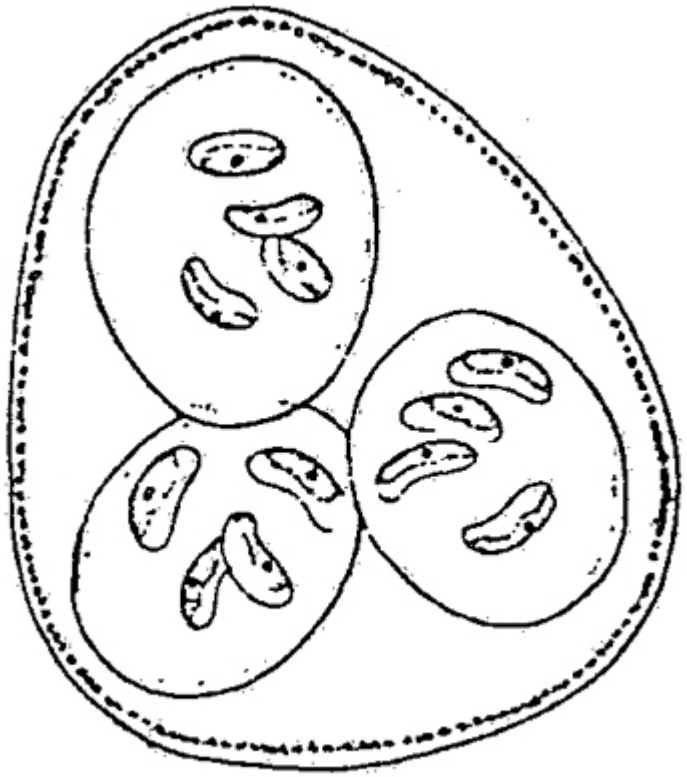
Synonym: *Gloeocystopsis limnetica*

Sampling location: Hagstaffel pond

Phylogenetic tree: *Nephrocytium limneticum*

Diagnosis:

- coenobia of 4–8–16 cells in mucilage envelope
- daughter colonies 20–50 µm in diameter
- daughter cells remain united within gelatinized cell wall of mother cell
- cells 10–20 µm long, kidney-shaped, slightly curved with rounded apices
- one pyrenoid
- one parietal chloroplast
- planctonic lifestyle



after Guarrera

Nephrocytium limneticum

I find *Nephrocytium limneticum* very rarely in plankton samples, always with several years between them. *Nephrocytium* can be confused with *Kirchneriella*, whose cells are also kidney-shaped or crescent-shaped. However, the colonies of *Nephrocytium* are covered by a distinct and thick layer of mucus, which is absent in *Kirchneriella*. In addition, the daughter colonies of *Nephrocytium* remain united for a long time in the swollen and gelatinized cell wall of the mother cell (s. fig. 2 a).

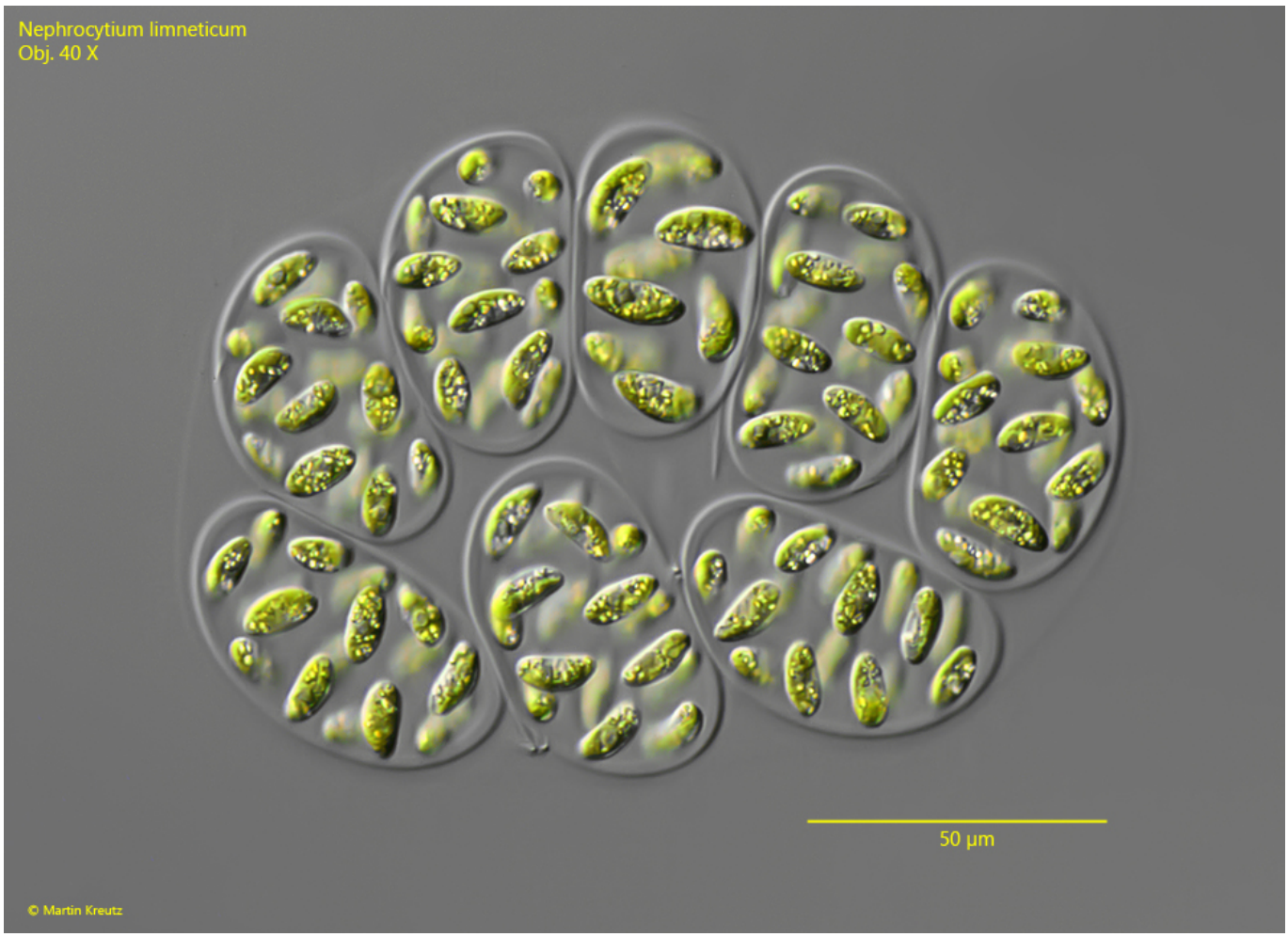


Fig. 1: *Nephrocytium limneticum*. L = 156 (of coenobium). A coenobium of 8 colonies with 16 cells each within the gelatinized cell wall of the mother cell. Obj. 40 X.

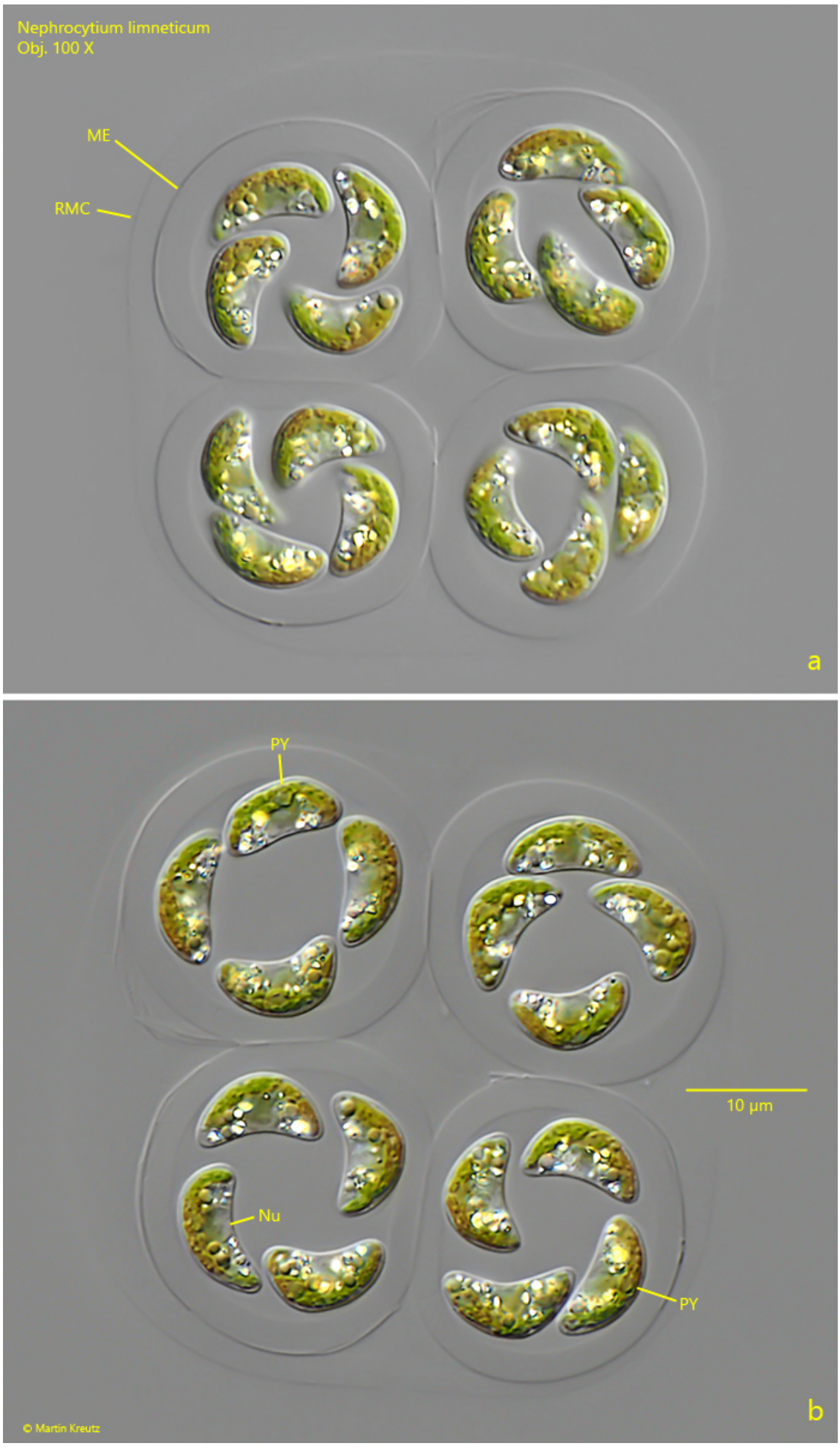

Nephrocytium limneticum
Obj. 100 X
ME
RMC
a
PY
10 µm
Nu
PY
b
© Martin Kreutz

Fig. 2 a-b: *Nephrocytium limneticum*. L = 10–12 µm (of the cells). A slightly squashed (a) and a strongly squashed (b) coenobium of 4 colonies with 4 cells each within the remains of the mother cell (RMC). Each colony is in a thick mucilage envelope (ME). Nu = nucleus, PY = pyrenoid. Obj. 100 X.

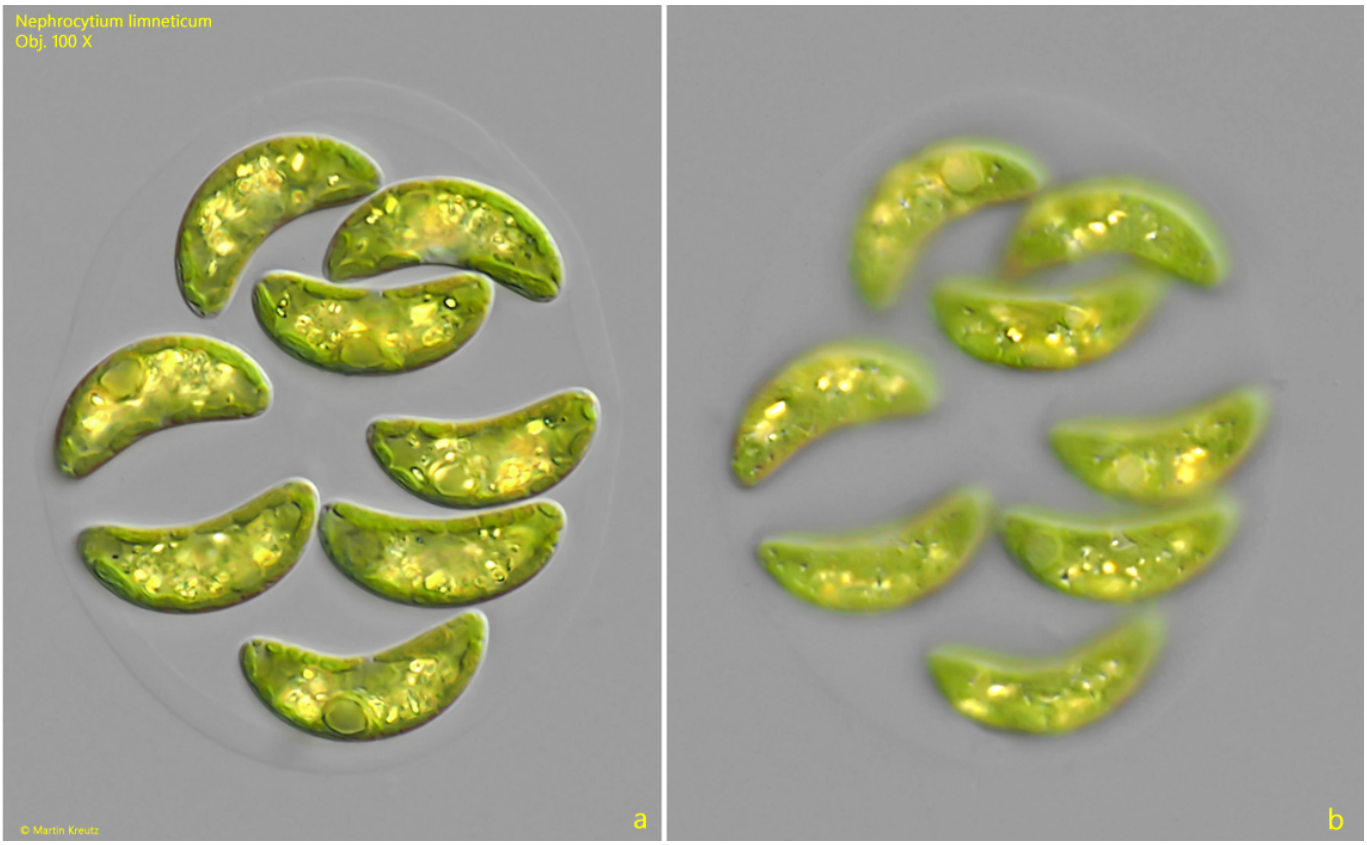


Fig. 3 a-b: *Nephrocytium limneticum*. L = 19–21 µm (of the cells). Two focal planes of a second coenobium of 8 cells. Obj. 100 X.