Nephrocytium limneticum (G. M. Smith, 1933)

Most likely ID: n.a.

Synonym: Gloeocystopsis limnetica

Sampling location: <u>Hagstaffel pond</u>

Phylogenetic tree: <u>Nephrocytium limneticum</u>

Diagnosis:

- coenobia of 4-8-16 cells in mucilage envelope
- daughter colonies 20–50 μ m in diameter
- daughter cells remain united within gelatinized cell wall of mother cell
- \bullet cells 10–15 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.



Fig. 2 a-b: Nephrocytium limneticum. $L = 10-12 \mu m$ (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.