Kirchneriella obesa

(West) West & G.S.West, 1894

Most likely ID: n.a.

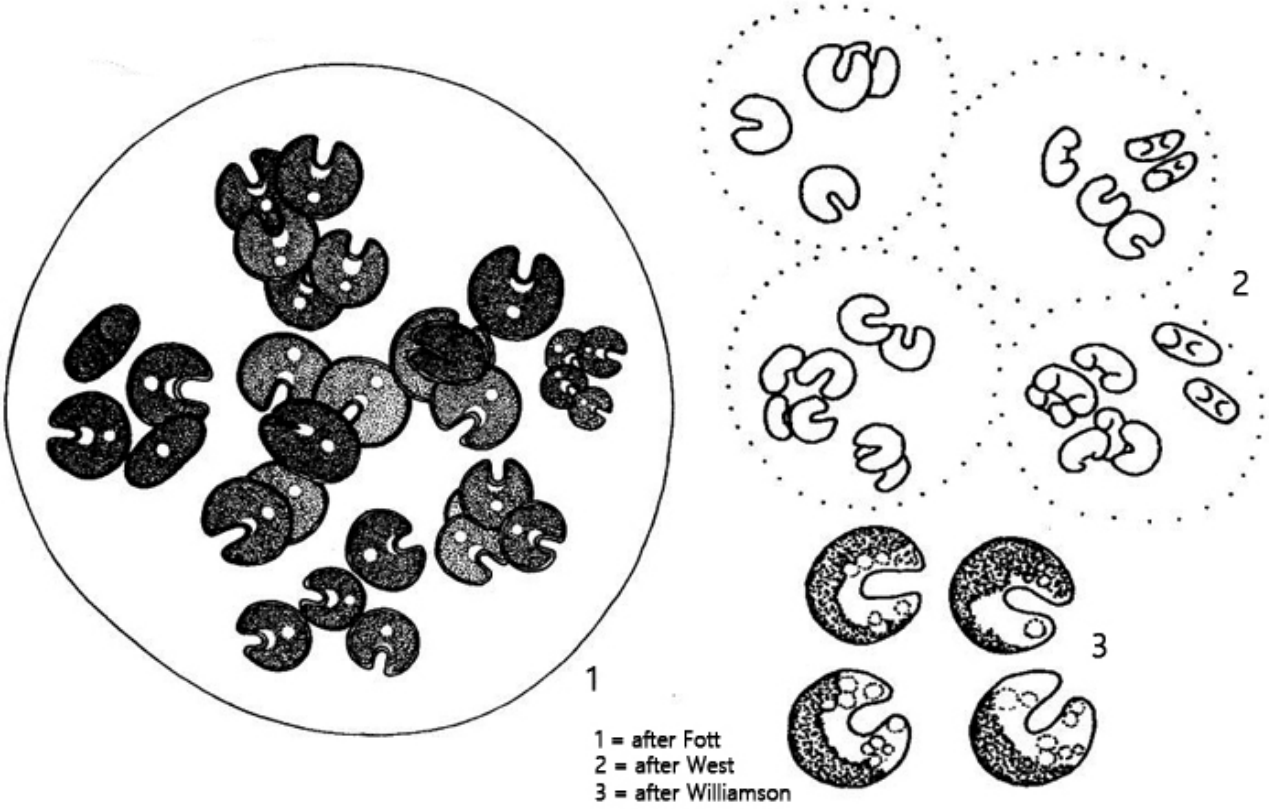
Synonym: n.a.

Sampling location: Pond of the waste disposal company Constance, Pond of the convent Hegne, Simmelried

Phylogenetic tree: *Kirchneriella obesa*

Diagnosis:

- cells crescent-shaped, incision U-shaped
- colonies of 4–32 cells in layer of mucilage
- apices rounded or bluntly pointed
- length (of cells) 6–16 µm
- chloroplast parietal
- one pyrenoid (sometimes absent)
- nucleus central
- planktonic lifestyle



Kirchneriella obesa

I find *Kirchneriella obesa* very frequently in plankton as well as between floating plants. The species can be recognized by the rounded apices and the U-shaped incision. The incision can be very wide or narrowly U-shaped. However, it is never V-shaped, as in the similar species *Kirchneriella aperta*.

The colonies of *Kircheriella obesa* are surrounded by a delicate gelatinous envelope, which can usually only be recognized by adhering bacteria (s. fig. 4 a-b). The chloroplast in the cells can occur with or without pyrenoid. In my population, most cells possessed a pyrenoid. (s. figs. 3 and 8).

Reproduction takes place by autospores. The mother cell divides several times within the old cell wall. The cell wall then ruptures and the daughter cells are released. The empty cell wall of the mother cell remains behind (s. fig. 6).

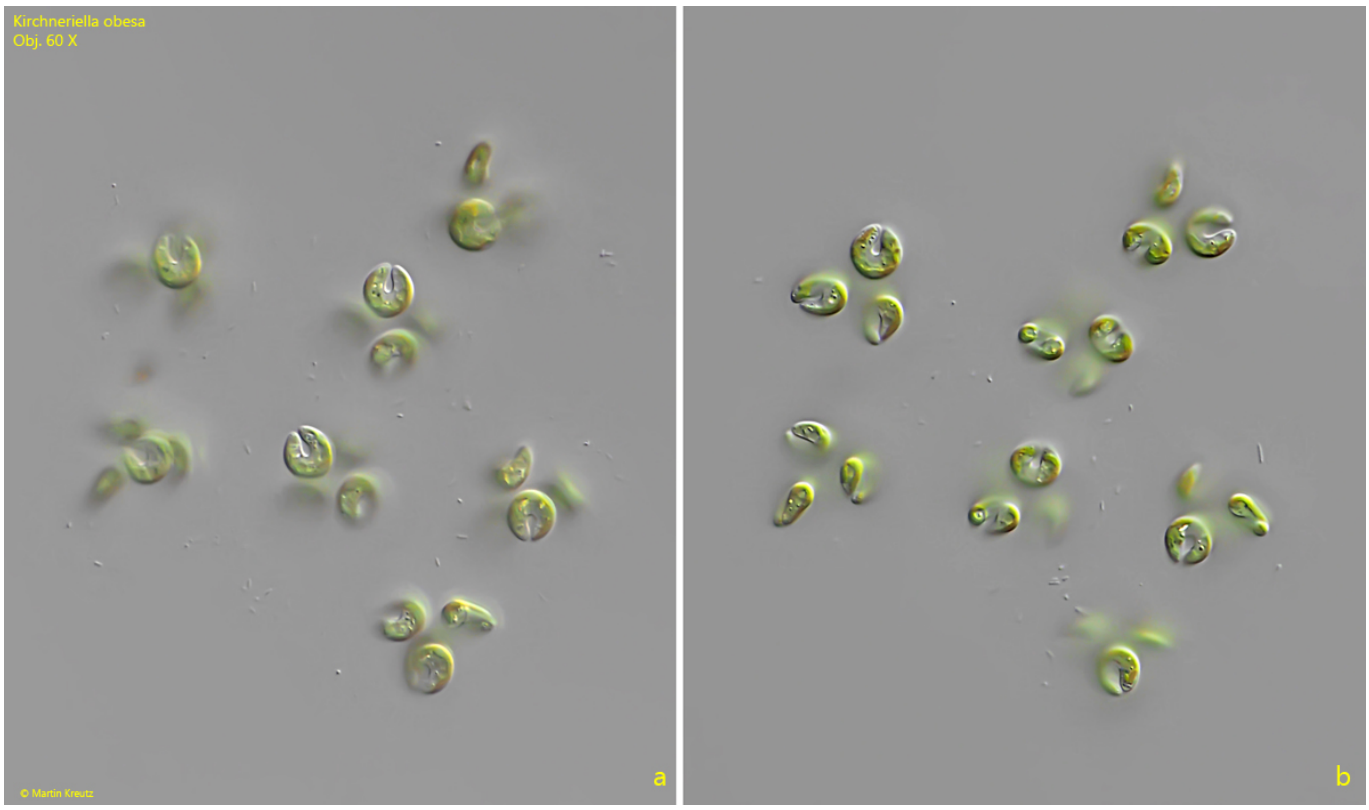


Fig. 1 a-b: *Kirchneriella obesa*. D = 92 µm (of colony). Two focal planes of an unsquashed colony. Obj. 60 X.



Fig. 2: *Kirchneriella obesa*. L = 8.6–10.0 µm (of cells). The squashed colony as shown in fig. 1 a-b. The apices of the cells are rounded and the incision is broadly or narrowly U-shaped. Obj. 100 X.

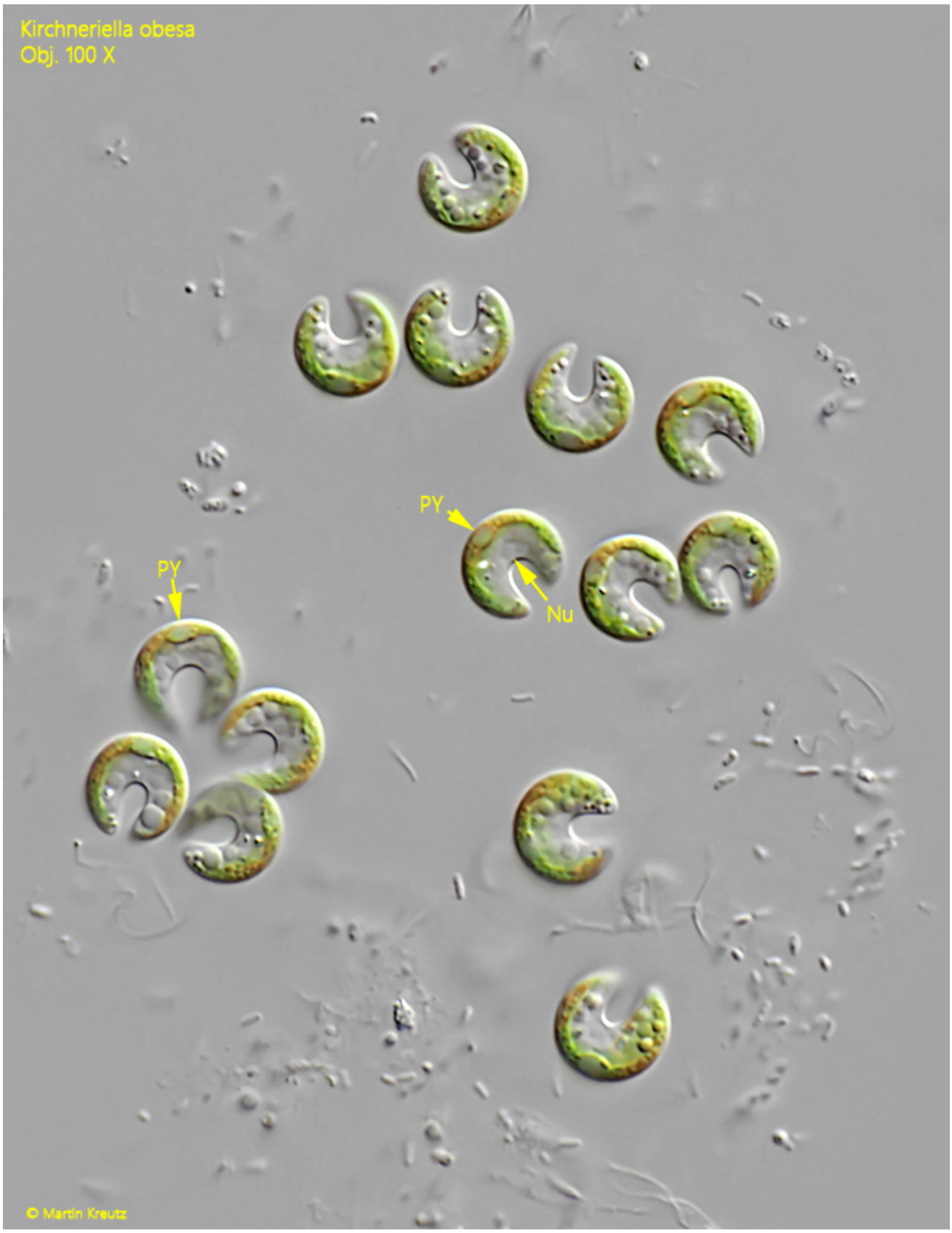
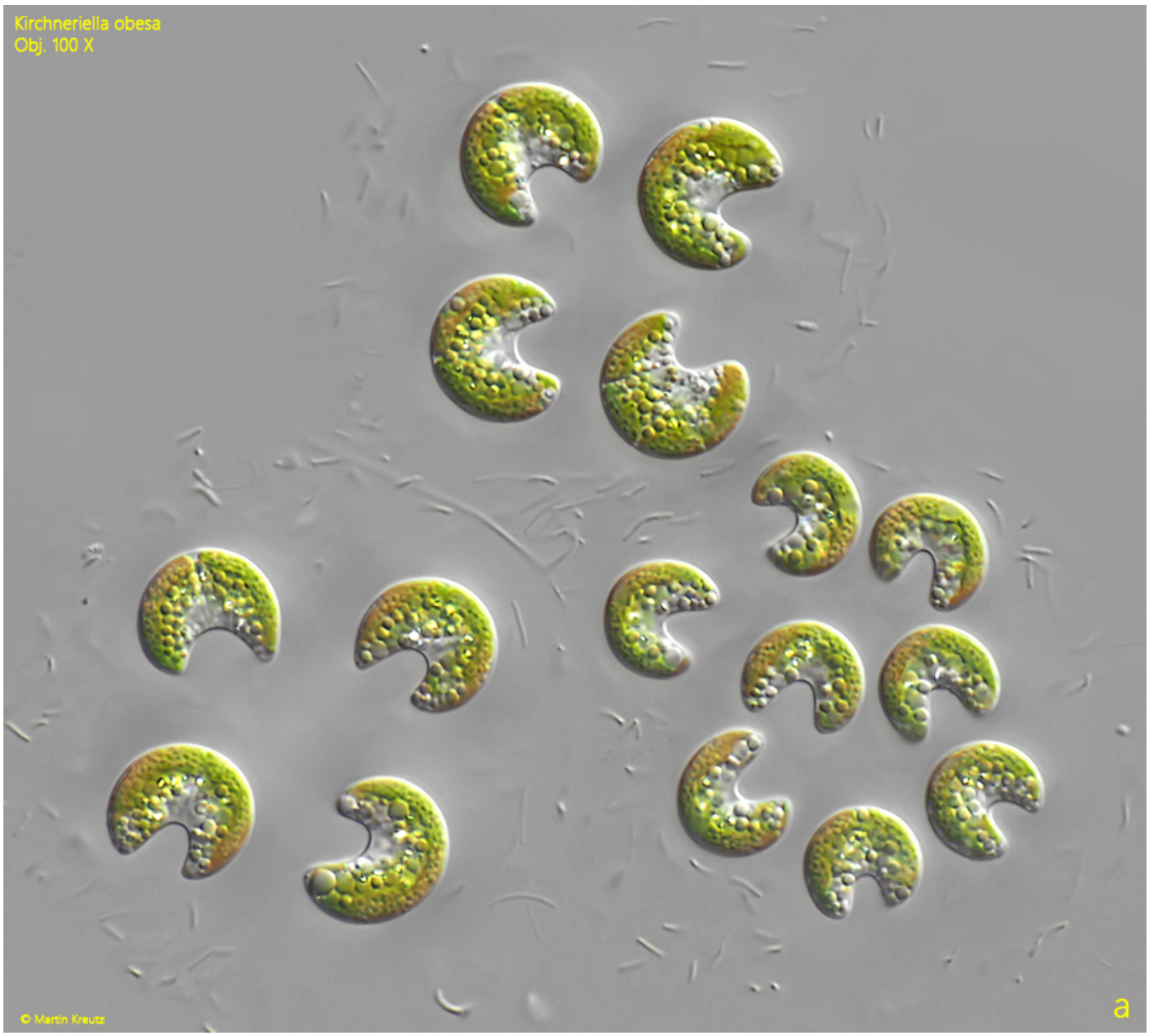


Fig. 3: *Kirchneriella obesa*. L = 7.0–7.5 µm (of cells). A second squashed colony. Near the convex margin the pyrenoid (PY) in the chloroplast is visible. Nu = nucleus. Obj. 100 X.


Kirchneriella obesa
Obj. 100 X
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a

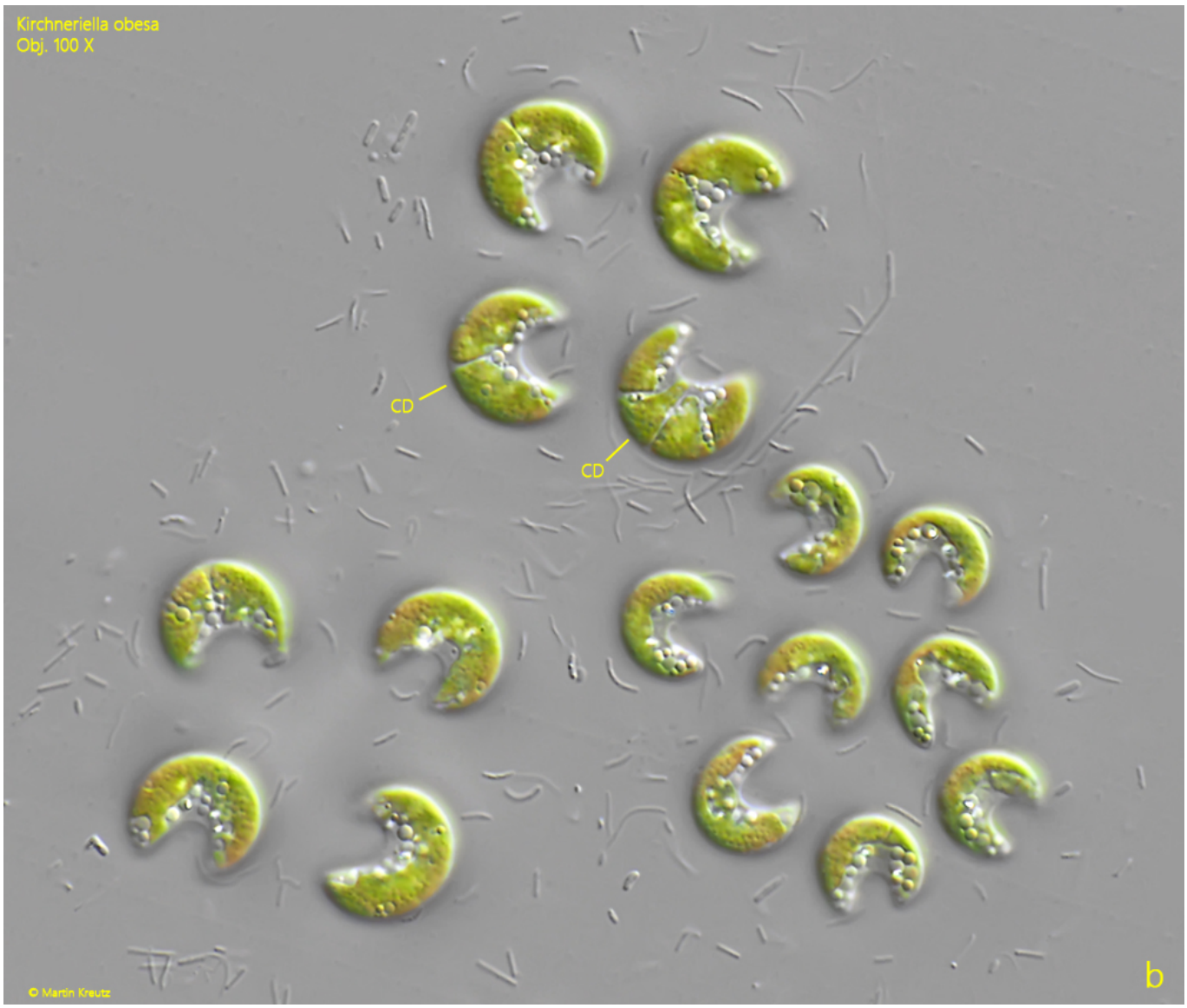


Fig. 4 a-b: *Kirchneriella obesa*. L = 11.8–13.5 µm (of cells). Two focal planes of a third colony. Some cells are in the process of cells division (CD) and two or four chloroplasts are visible in these cells. Obj. 100 X.

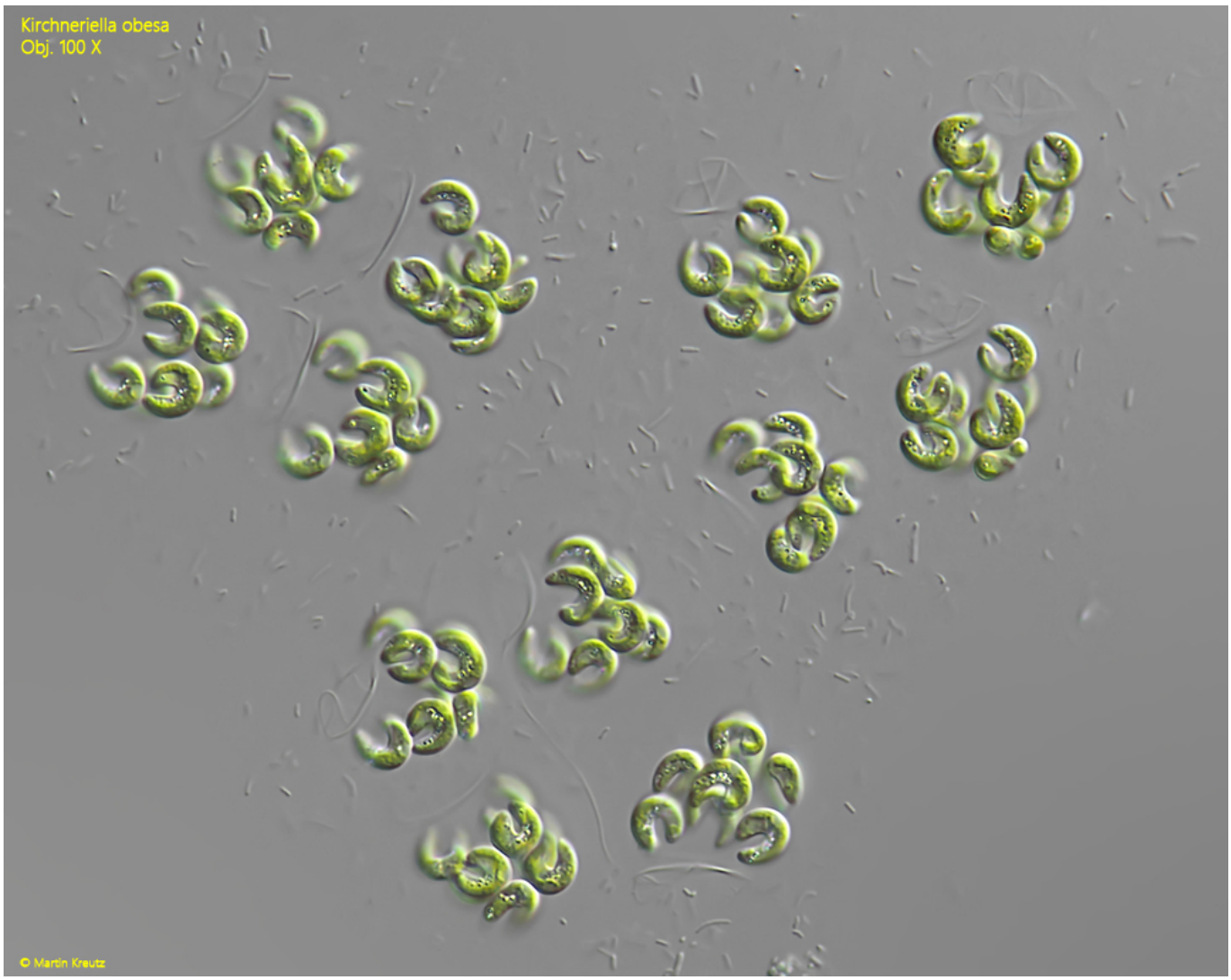


Fig. 5: *Kirchneriella obesa*. In this colony alls cells have undergo the cell division to form small colonies of each 8 cells. Obj. 100 X.

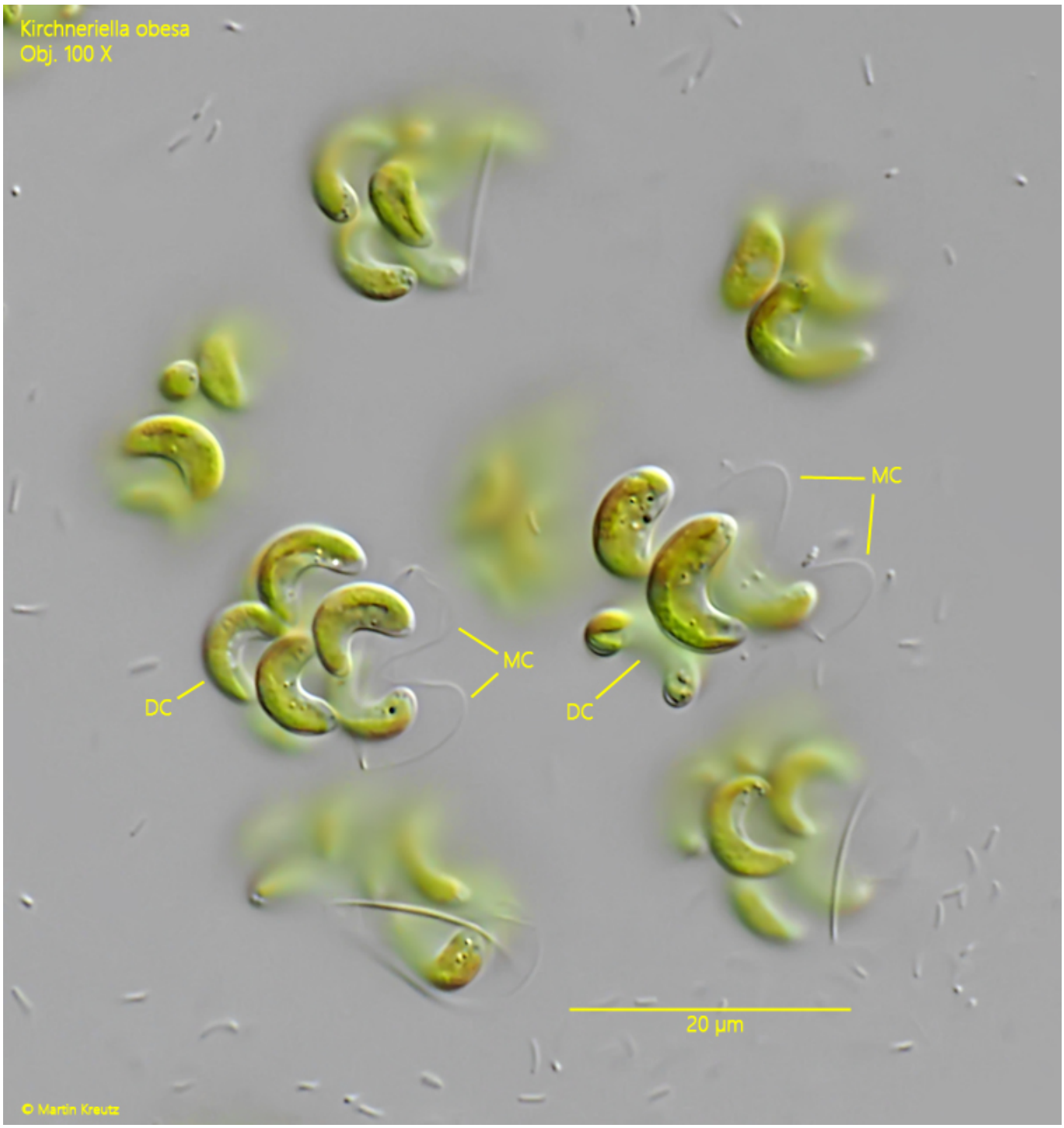


Fig. 6: *Kirchneriella obesa*. Detail of a colony in cell disvision. The daughter cells (DC) are released from the mother cell (MC). Obj. 100 X.



Fig. 7: *Kirchneriella obesa*. A single cell of a colony in detail. Note the central nucleus (Nu). The chloroplast covers the complete convex margin. This cell has no pyrenoid. Obj. 100 X.

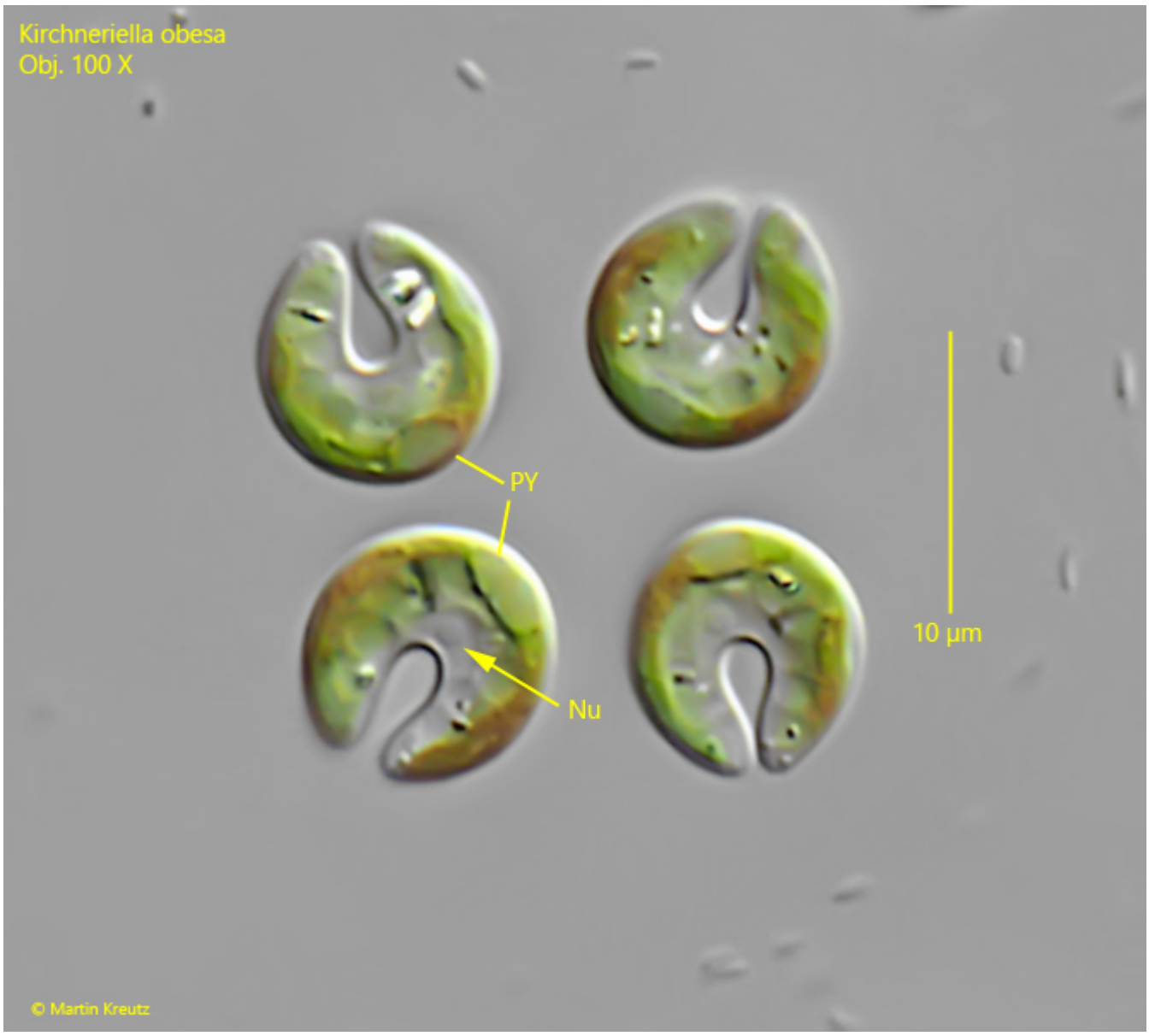


Fig. 8: *Kirchneriella obesa*. Four squashed, young cells. Nu = nucleus, PY = pyrenoid. Obj. 100 X.