Mucidosphaerium pulchellum

(Wood) Bock, Proschold & Krienitz, 2011

Most likely ID: n.a.

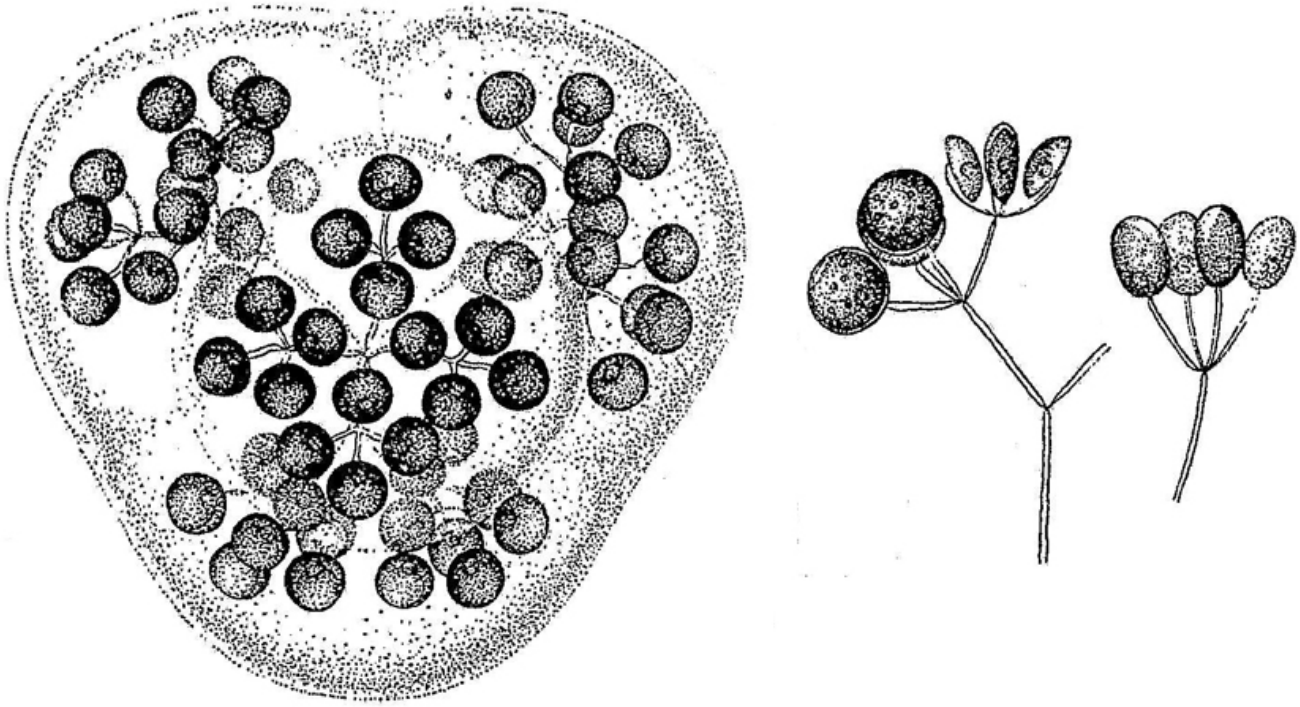
Synonym: *Dictyosphaerium pulchellum*

Sampling location: Mühlweiher Litzelstetten, pond of the waste disposal company Constance, pond of the convent Hegne, Ulmisried, Simmelried, Bussenried, Lake Constance, Hagstaffel pond

Phylogenetic tree: *Mucidosphaerium pulchellum*

Diagnosis:

- colonies spherical, ovoid or irregular
- 4–64 celled
- cells connected by tetrachotomously branched stalks
- colonies covered by an indefinite mucilaginous envelope (hard to see)
- cells (4)–5–8–(10 µm) in diameter
- old cells spherical
- young cells obovoid, ellipsoidal or spindle-shaped
- one cup-shaped chloroplast with one pyrenoid
- cell wall smooth, thin
- planktonic lifestyle

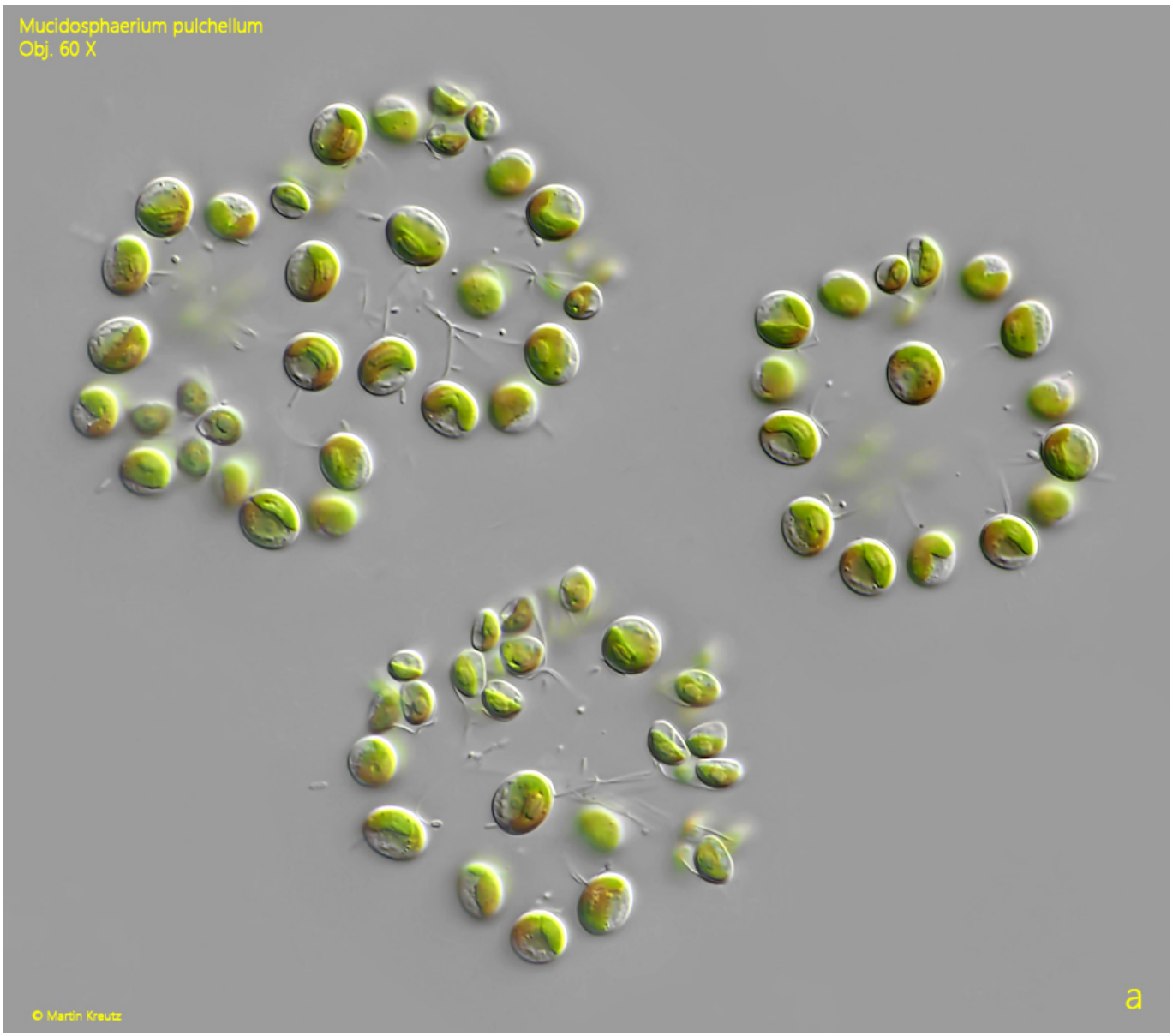


Mucidosphaerium pulchellum

In 2011, the planktonic alga *Dictyosphaerium pulchellum* was transferred to the newly created genus *Mucidosphaerium* by Bock, Proschold & Krienitz and named *Mucidosphaerium pulchellum*.

I find *Mucidosphaerium pulchellum* very frequently in plankton samples. Sometimes mass developments also occur in my sampling sites. Mucidosphaerium pulchellum can easily be recognized by the shape of the young and old cells. Old cells are always spherical, while the young ones are obovoid or even spindle-shaped shortly after division. This distinguishes *Mucidosphaerium pulchellum* from the similar species *Dictyosphaerium ehrenbergianum*, where the old cells are broadly oval.

The cells of *Mucidosphaerium pulchellum* are connected to each other by gelatinous stalks. These are not round tubes but flat bands. This is why the stalks appear much thinner when viewed from the side. They are formed by the mucilage of the mother cell wall. Each mother cell gives rise to 4 gelatinous stalks, which leads to the branched structure of the colonies.


Mucidosphaerium pulchellum
Obj. 60 X
© Martin Kreutz
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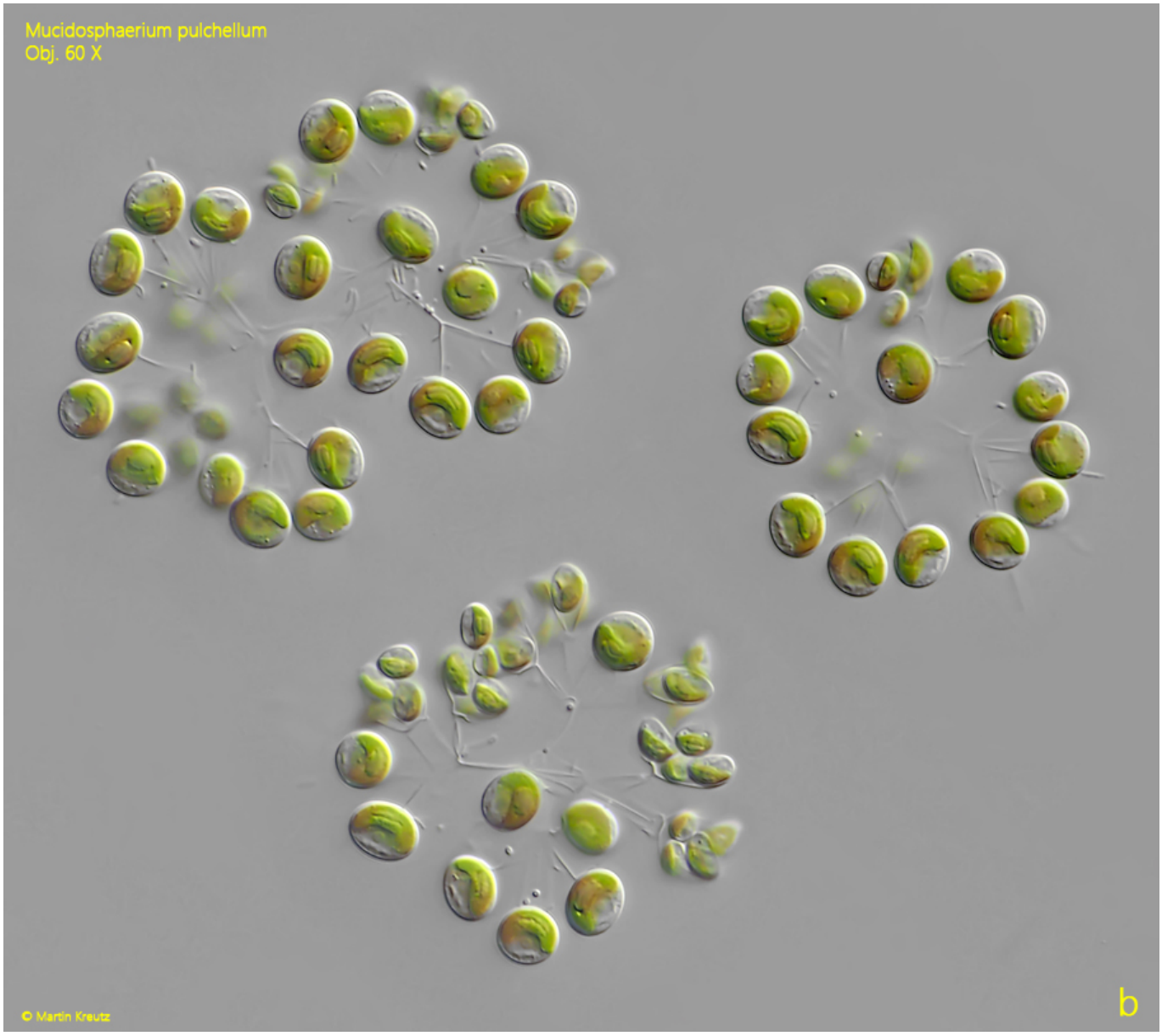

Fig. 1 a-b: *Mucidosphaerium pulchellum*. L = 52–74 µm (of colonies). Two slightly different focal planes of three colonies. Obj. 60 X.

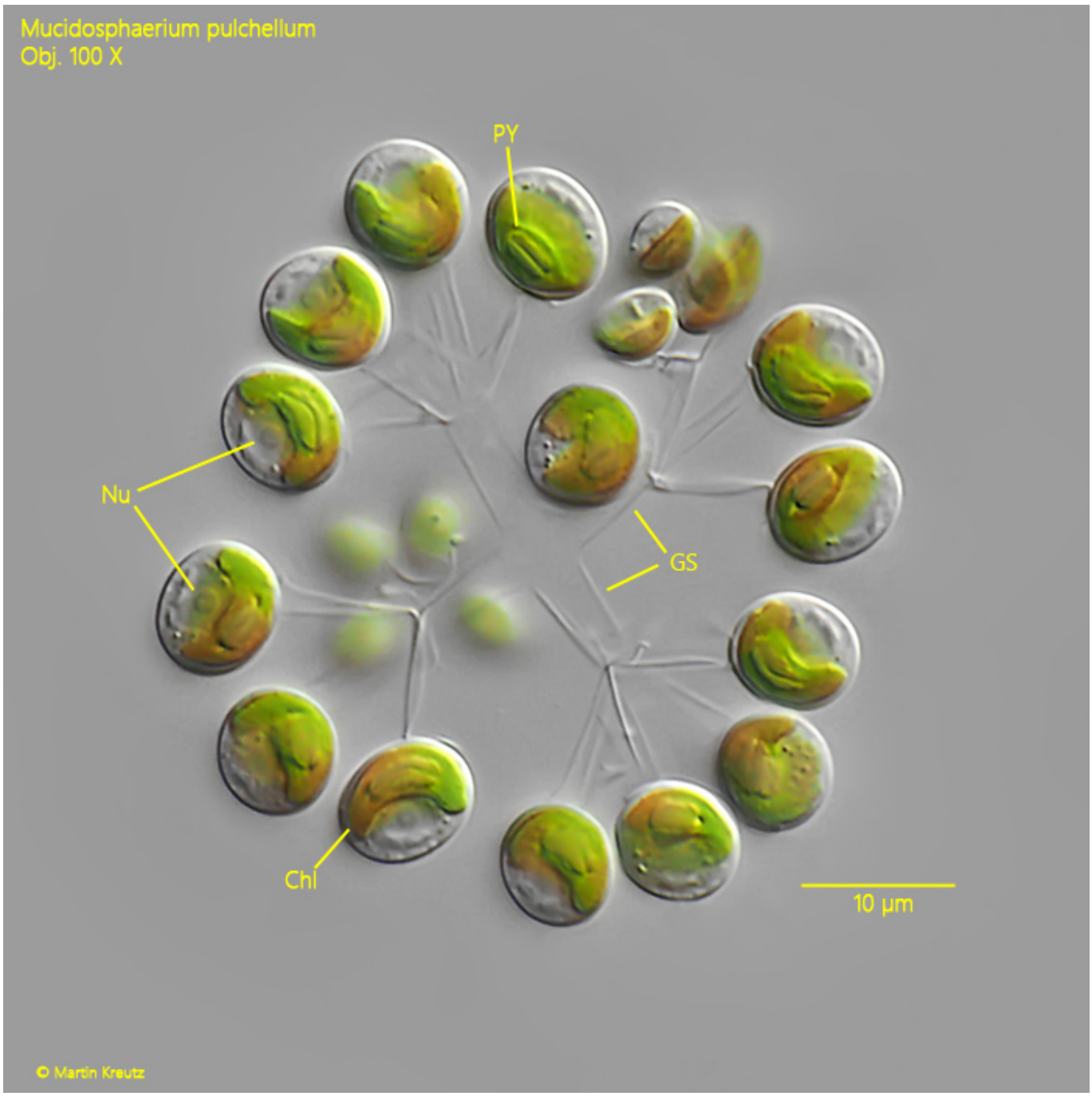

Fig. 2: *Mucidosphaerium pulchellum*. D = 7.2–8.5 µm (of cells). A small colony of about 20 cells. Note the gelatinous stalks (GS) connected in the center. Chl = cup-shaped chloroplast, Nu = nucleus, PY = pyrenoid. Obj. 100 X.

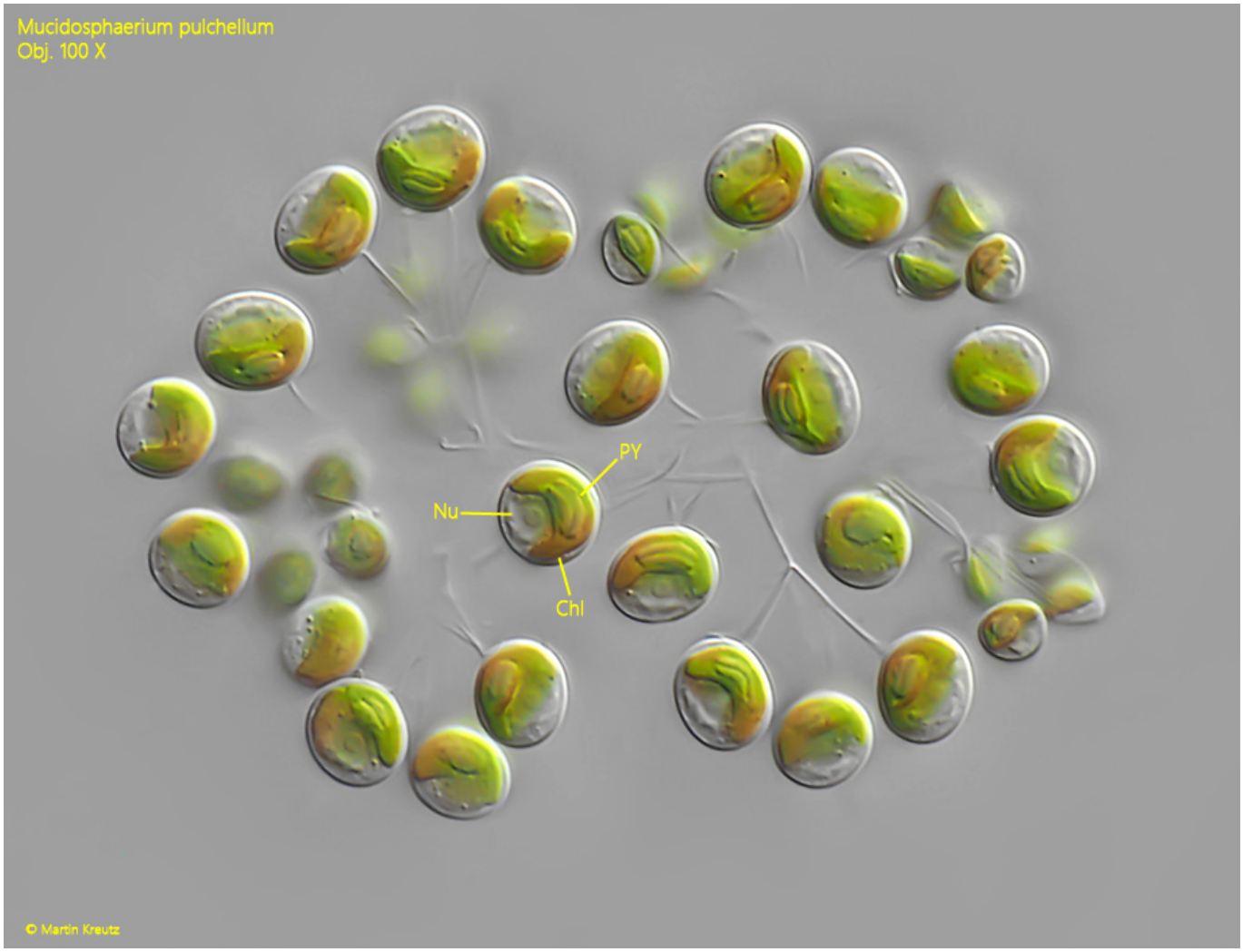

Fig. 3: *Mucidosphaerium pulchellum*. D = 6.9–8.7 µm (of cells). A second colony of about 36 cells. Chl = cup-shaped chloroplast, Nu = nucleus, PY = pyrenoid. Obj. 100 X.