Palmodictyon varium

(Nägeli) Lemmermann, 1915

Most likely ID: n.a.

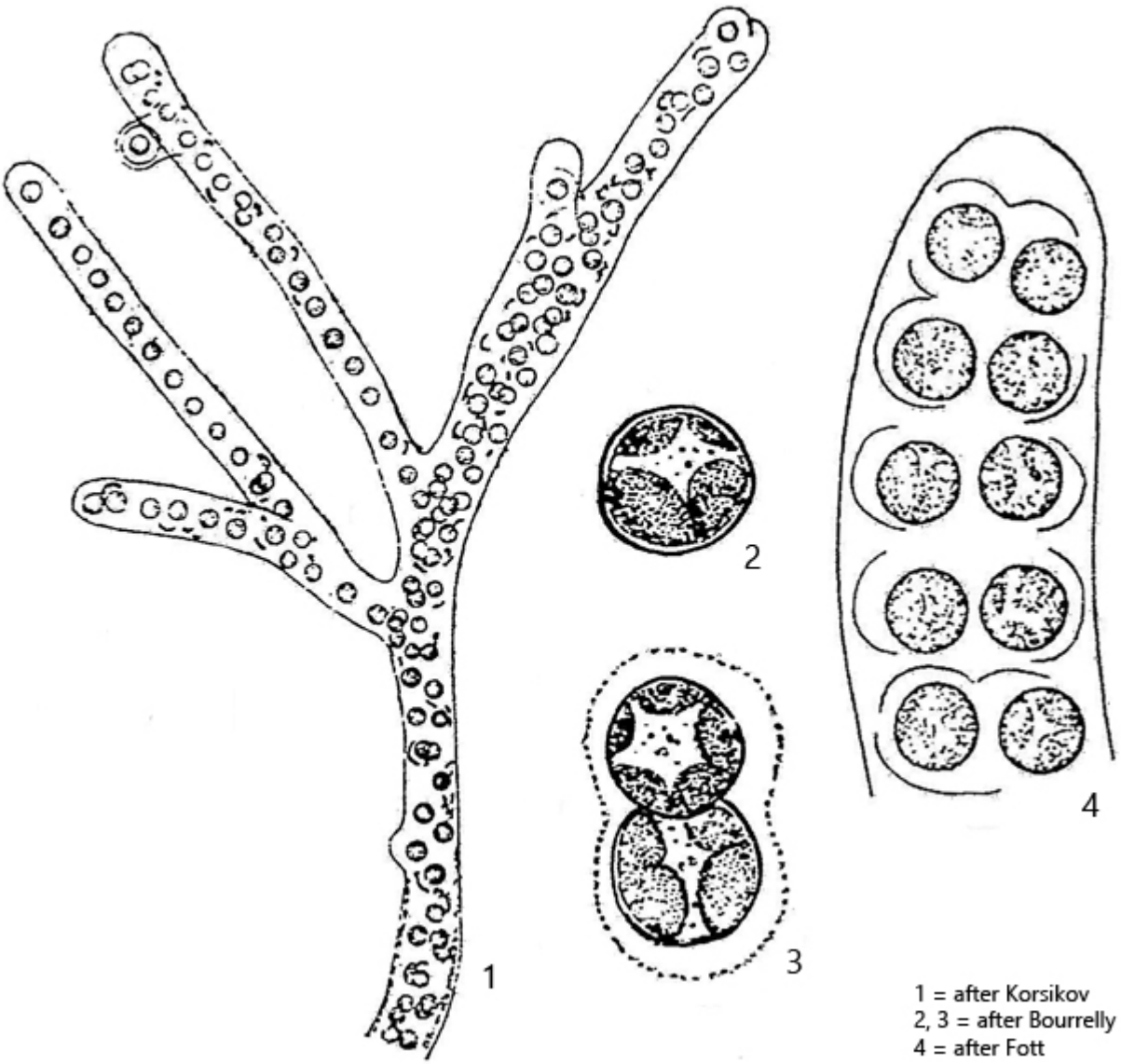
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Palmodictyon varium*

Diagnosis:

- cells spherical
- diameter 4–12 µm
- cells arranged in a single row or groups (2–4) in gelatinous tubes
- gelatinous tubes structureless, often branched
- 4–6 chloroplasts per cell
- pyrenoid absent



Palmodictyon varium

I find the tubular colonies of *Palmodictyon varium* rarely but regularly between floating plant masses in the Simmelried. The cells of the colonies in my population have a diameter of 8–9 µm. Close examination reveals several chloroplasts and no pyrenoid. This distinguishes *Palmodictyon varium* from the very similar species *Palmodictyon viride*, which has a single, cup-shaped chloroplast with a clearly visible pyrenoid.

In my population the gelatinous tubes of the colonies, in which the cells are embedded, often had a reddish coloration. In young colonies, however, the tubes were colorless. It is possible that this is a later storage of iron salts. In the tubes often the bowl-shaped remains of the mother cells are visible, which are still visible after cell division. Later these remains become slimy and become part of the gelatinous tubes.

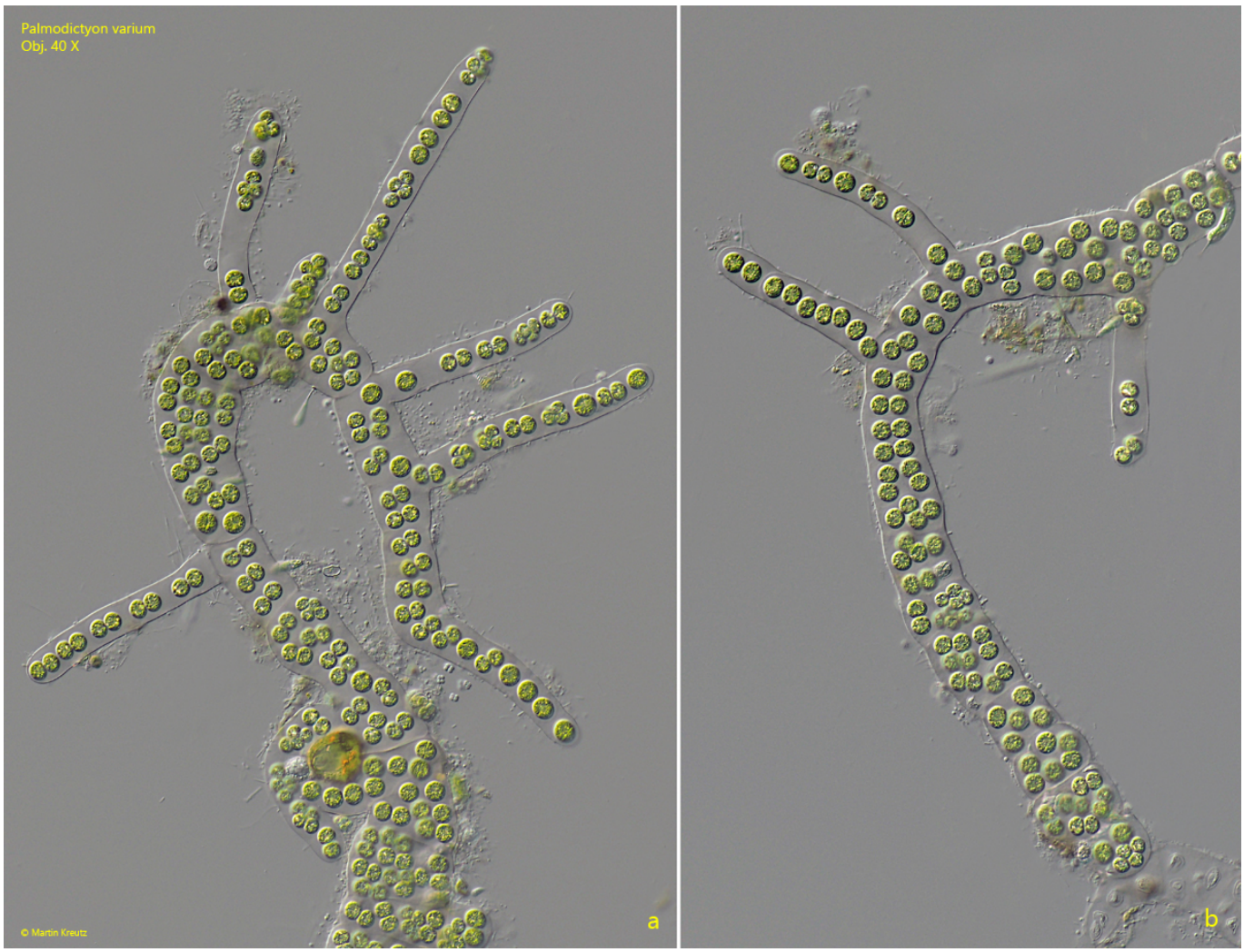


Fig. 1 a-b: *Palmodictyon varium*. Two different colonies with branched, gelatinous tubes. The colonies have a length of 300–350 µm. Obj. 40 X.

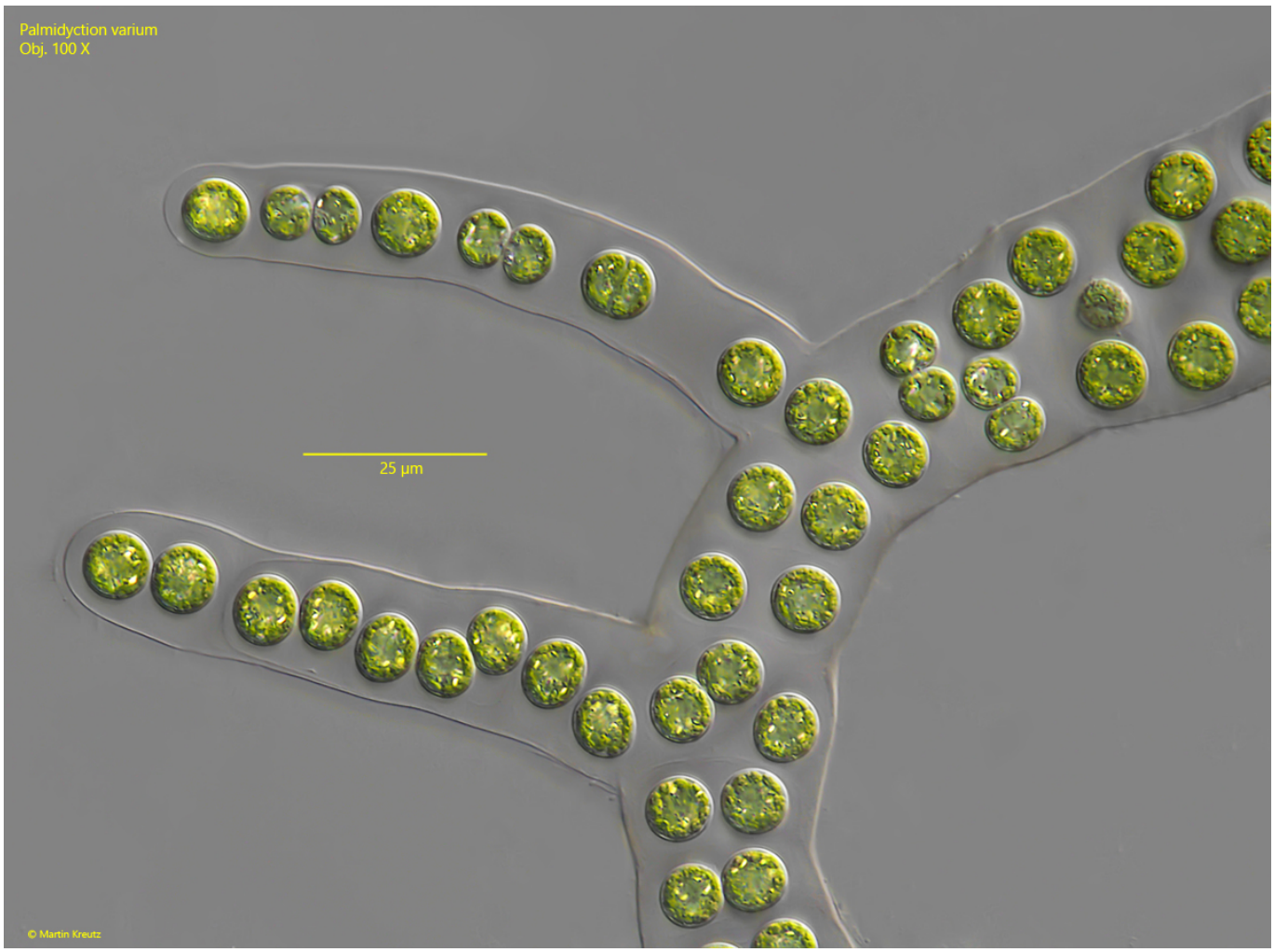


Fig. 2: *Palmodictyon varium*. A part of the colony as shown in fig. 1 b in deteil. Obj. 100 X.

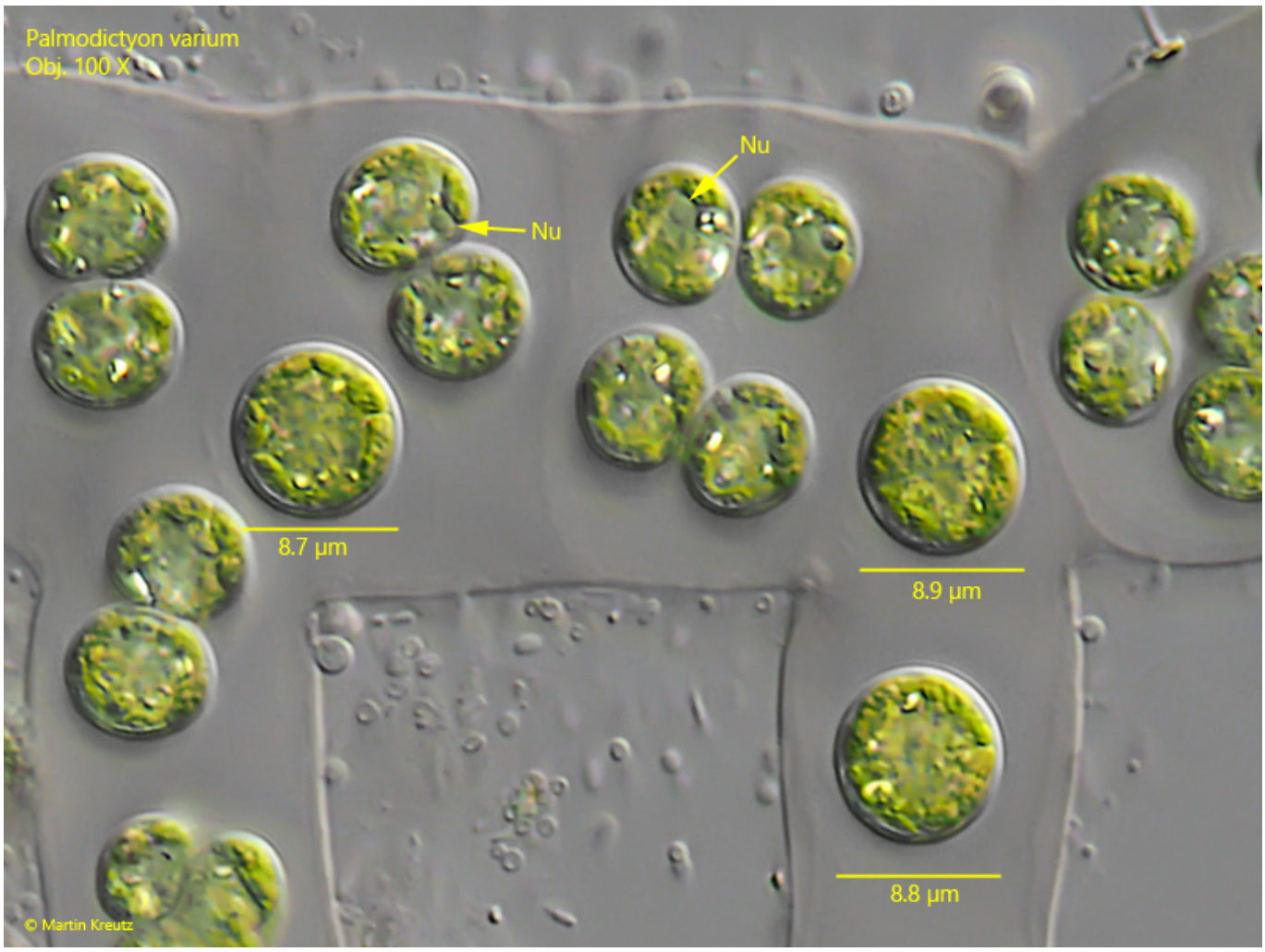


Fig. 3: *Palmodictyon varium*. The spherical cells with a diameter of 8.7–8.9 µm in detail. Nu = nucleus. Obj. 100 X.

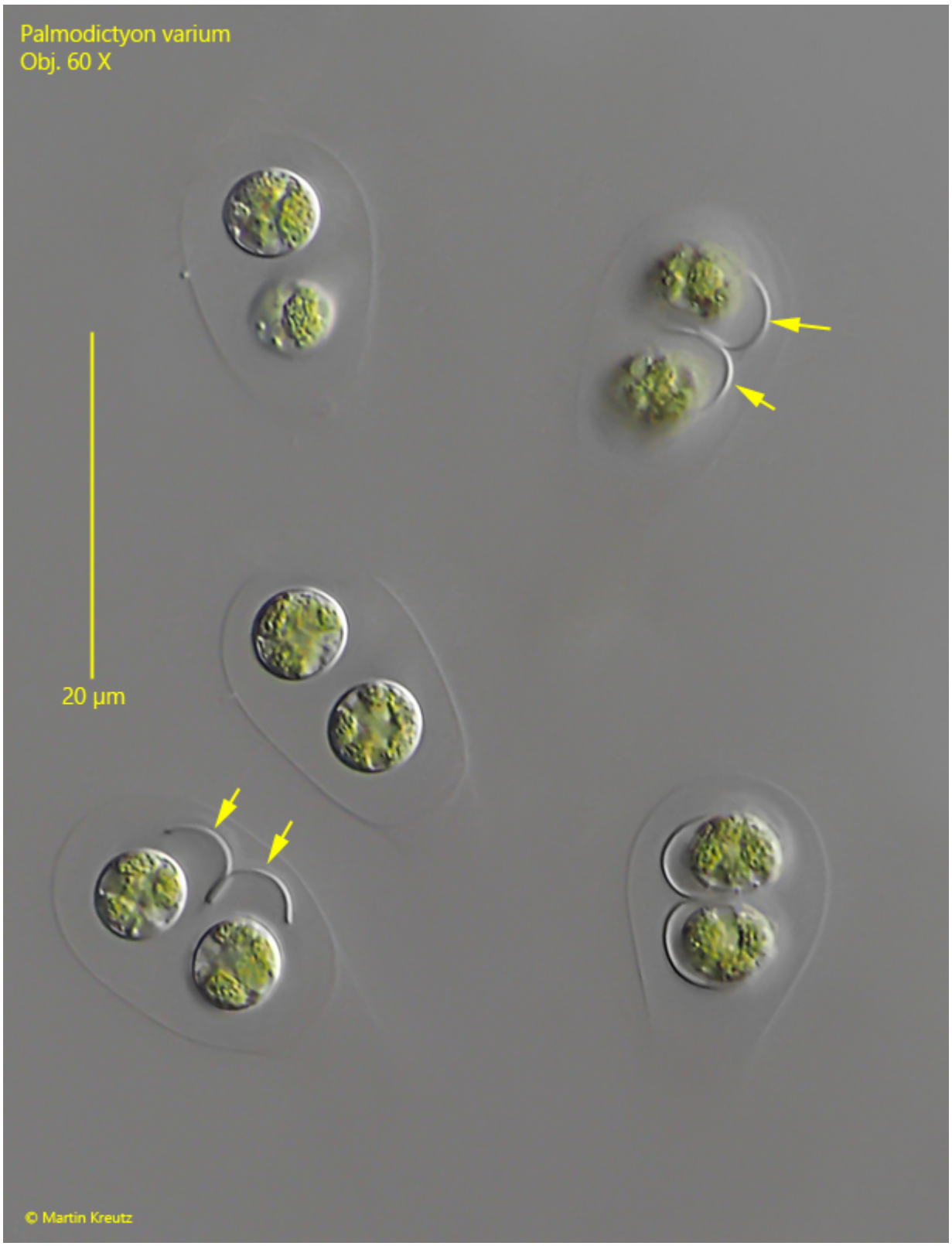


Fig. 4: *Palmodictyon varium*. Young colonies in a two-celled stage. Note the bowl-shaped remains of the mother cells (arrows). Obj. 100 X.

Fig. 5: *Palmodictyon varium*. A young colony of 10 cells. Obj. 100 X.

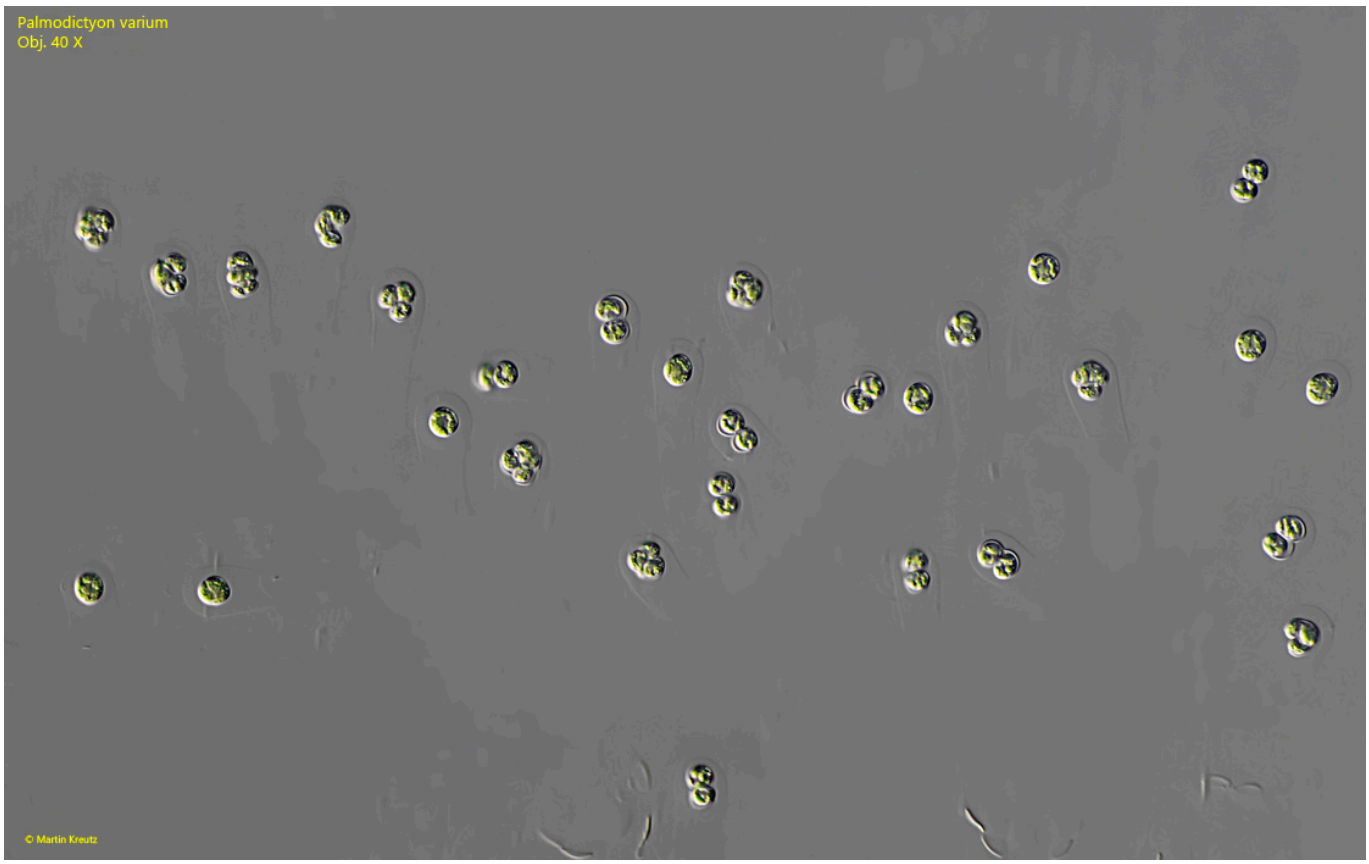


Fig. 6: *Palmodictyon varium*. Several young colonies in finger-shaped gelatinous tubes. Obj. 40 X.

Fig. 7: *Palmodictyon varium*. Some of the young colonies as shown in fig. 5 in detail. Four of the cells are in the stage of cell division. Obj. 100 X.

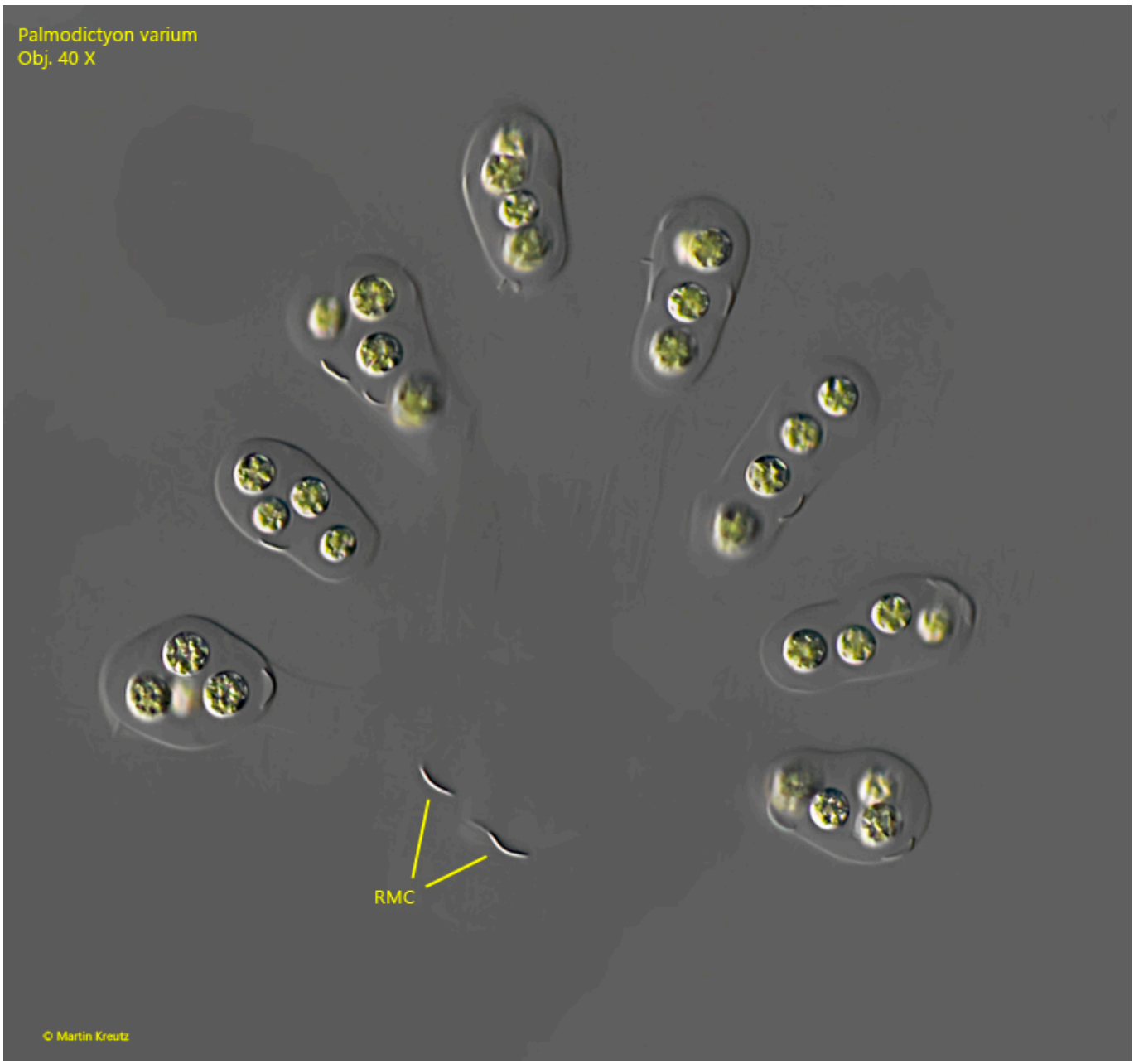


Fig. 8: *Palmodictyon varium*. Eight young colonies in the 4-cell stage, which have emerged from a mother cell. The remains of the mother cell wall (RMC) are still visible. Obj. 100 X.