Pseudodendromonas vlkii

Bourrelly, 1953

Most likely ID: n.a.

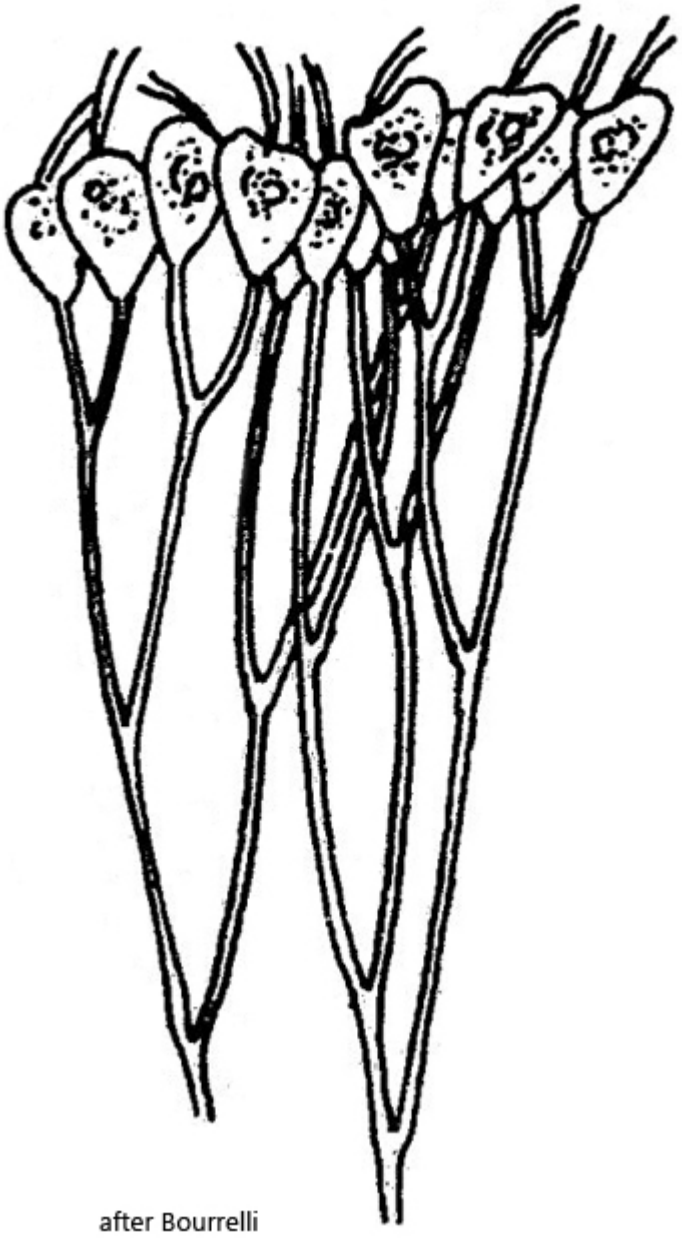
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Pseudodendromonas vlkii*

Diagnosis:

- colonies umbel-shaped, rarely spherical, up to 200 µm high
- cells obovate or nearly triangular at ends of branched stalks
- length (of cells) 6–10 µm
- cells covered with mucuous sheath with embedded scales
- one contractile vacuole at anteror end
- spherical nucleus in posterior third
- two flagella of almost equal length
- stalks stiff, hollow, about 1 µm in diameter



Pseudodendromonas vlkii

I only find *Pseudodendromonas vlkii* in the Simmelried. There the species is regularly found between floating plant masses.

Apart from the original description by Bourrelli (1953), there are practically no further studies on *Pseudodendromonas vlkii*. The cells of *Pseudodendromonas vlkii* are surrounded by a layer of mucus in which very fine scales are embedded. In most cases, the mucus sheath also extends to parts of the stalk on which the cells are located (s. fig. 3, 4 and 5). The mucous sheath appears granular in the DIC. Bourrelli did not mention this mucus sheath, nor did he draw it (see drawing above). Since it is very difficult to see under a transmitted light microscope, it cannot be ruled out that Bourrelli overlooked it.

In addition to this mucus sheath, the flagella of Pseudodendromonas vlkii have almost the same length (s. figs. 4 and 5) what is an important distinguishing feature from the similar species *Dendromonas virgaria*, in which the flagella have a clearly different length.

The contractile vacuole of *Pseudodendromonas vlkii* is localized at the anterior end. I was able to find the nucleus in the posterior third in all cases. The cells of my population always contained several, comparatively large food vacuoles (s. fig. 3). The dichotomously branched stalks are hollow and, according to my measurements, have a diameter of 1.2–1.4 µm. The cells were 6–10 µm long.

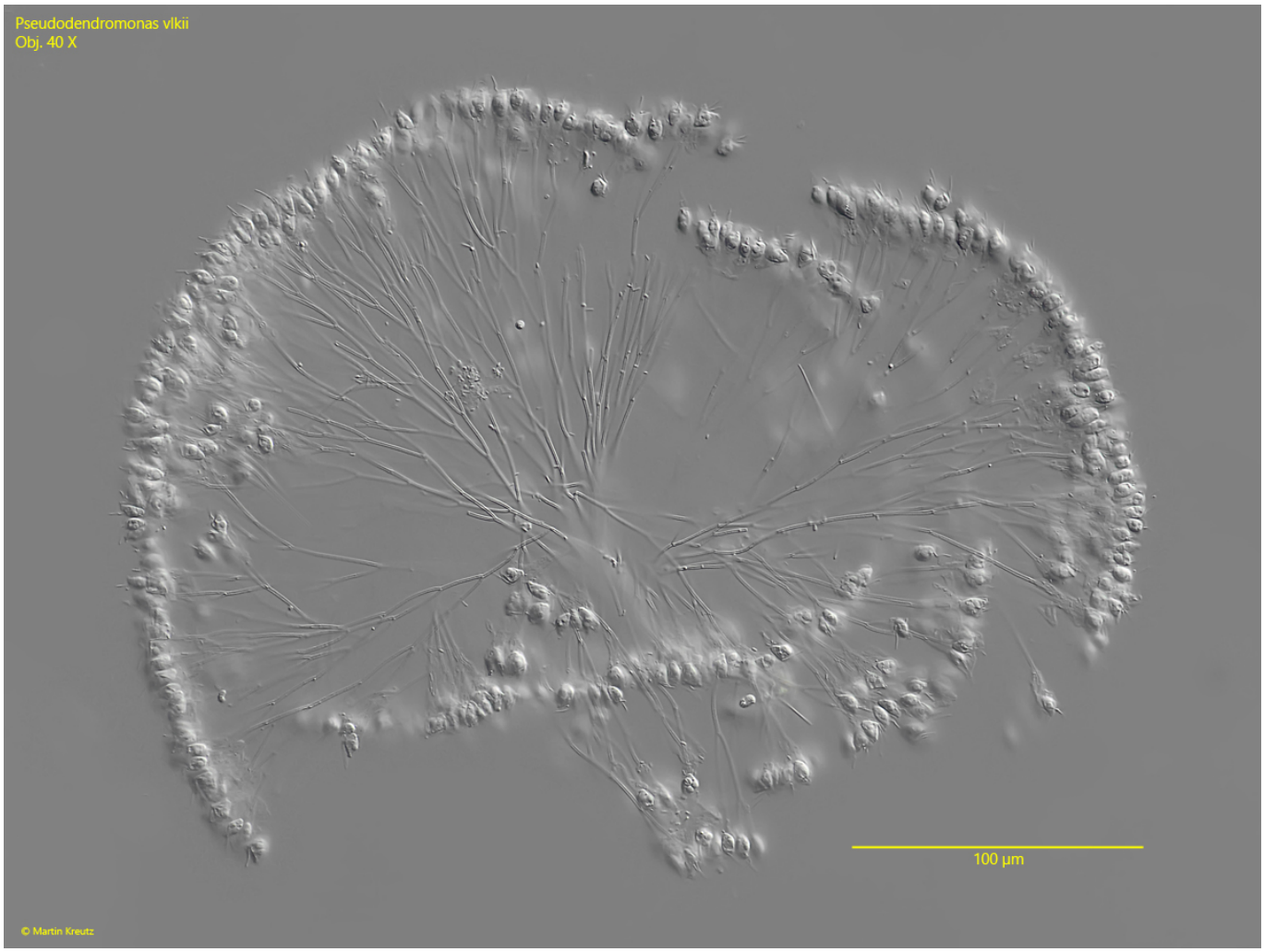


Fig. 1: *Pseudodendromonas vlkii*. D = 340 µm (of colony). An almost spherical colony. Obj. 40 X.

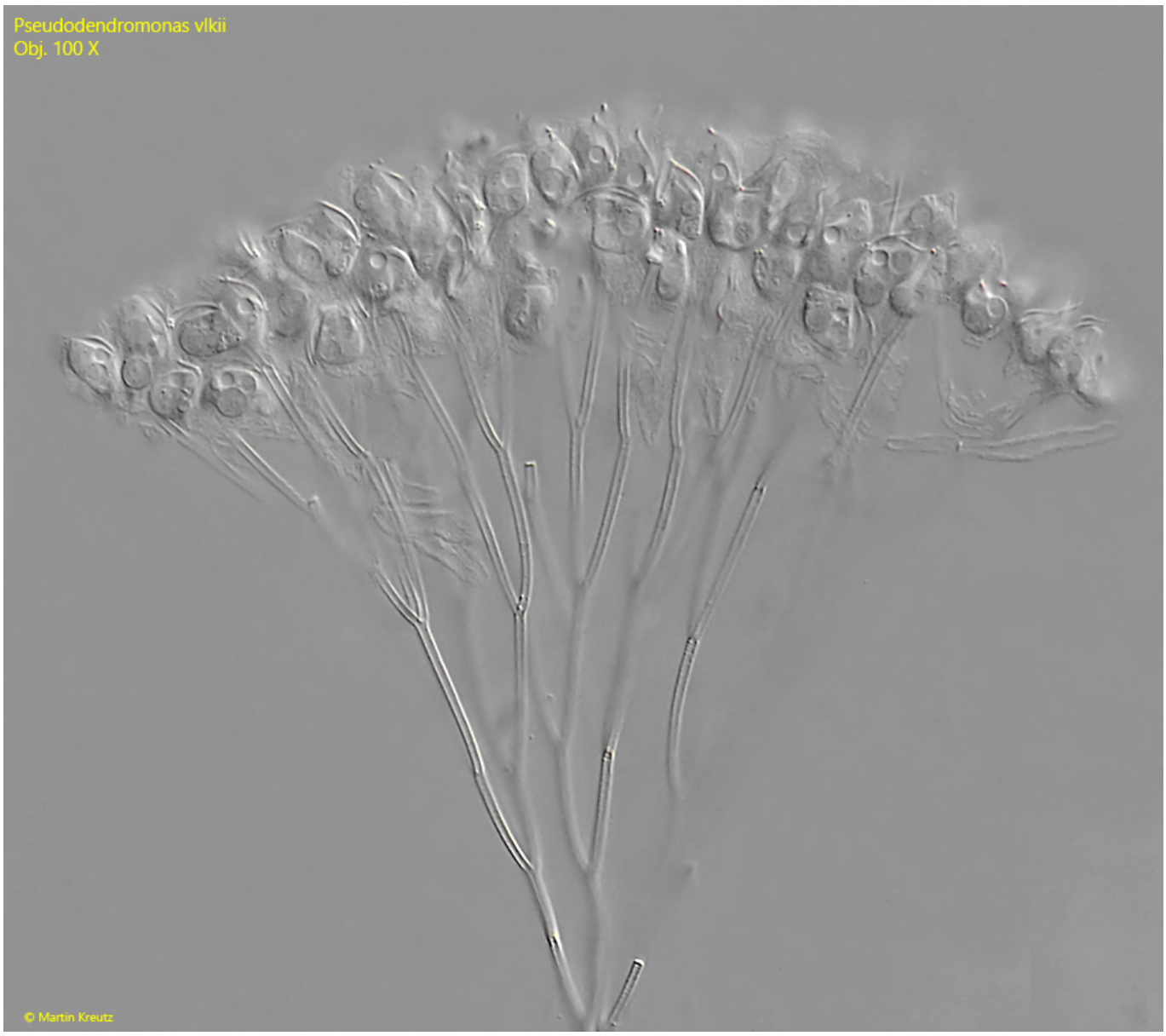


Fig. 2: *Pseudodendromonas vlkii*. A second, umbel-shaped colony. Obj. 100 X.

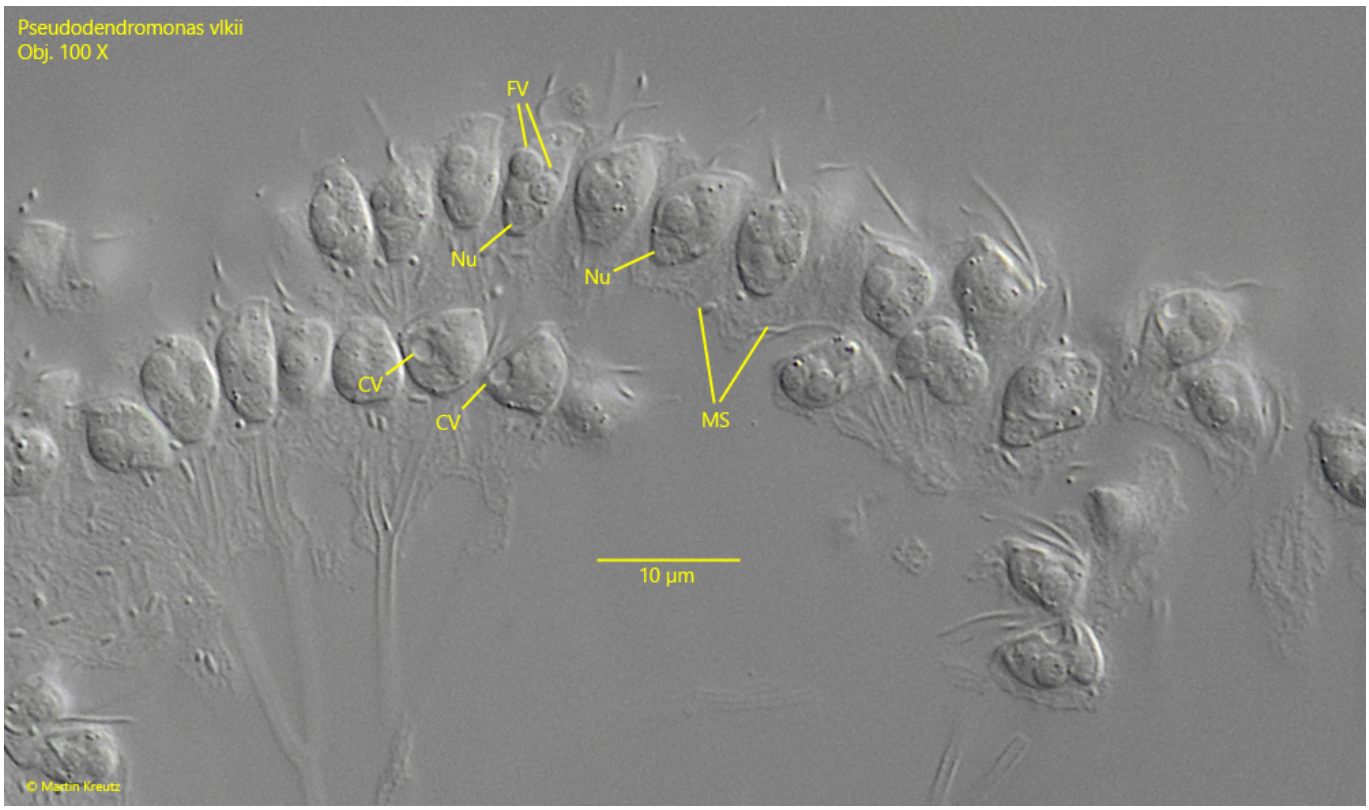


Fig. 3: *Pseudodendromonas vlkii*. L = 7.1–10.2 µm (of cells) The cells of a squashed colony in detail. The cells are covered with an mucus sheath (MS) with embedded small scales. The sice of the delicate scales is below the resolution of a light microscope. CV = contractile vacuole, FV = food vacuoles, NU = nucleus. Obj. 100 X.

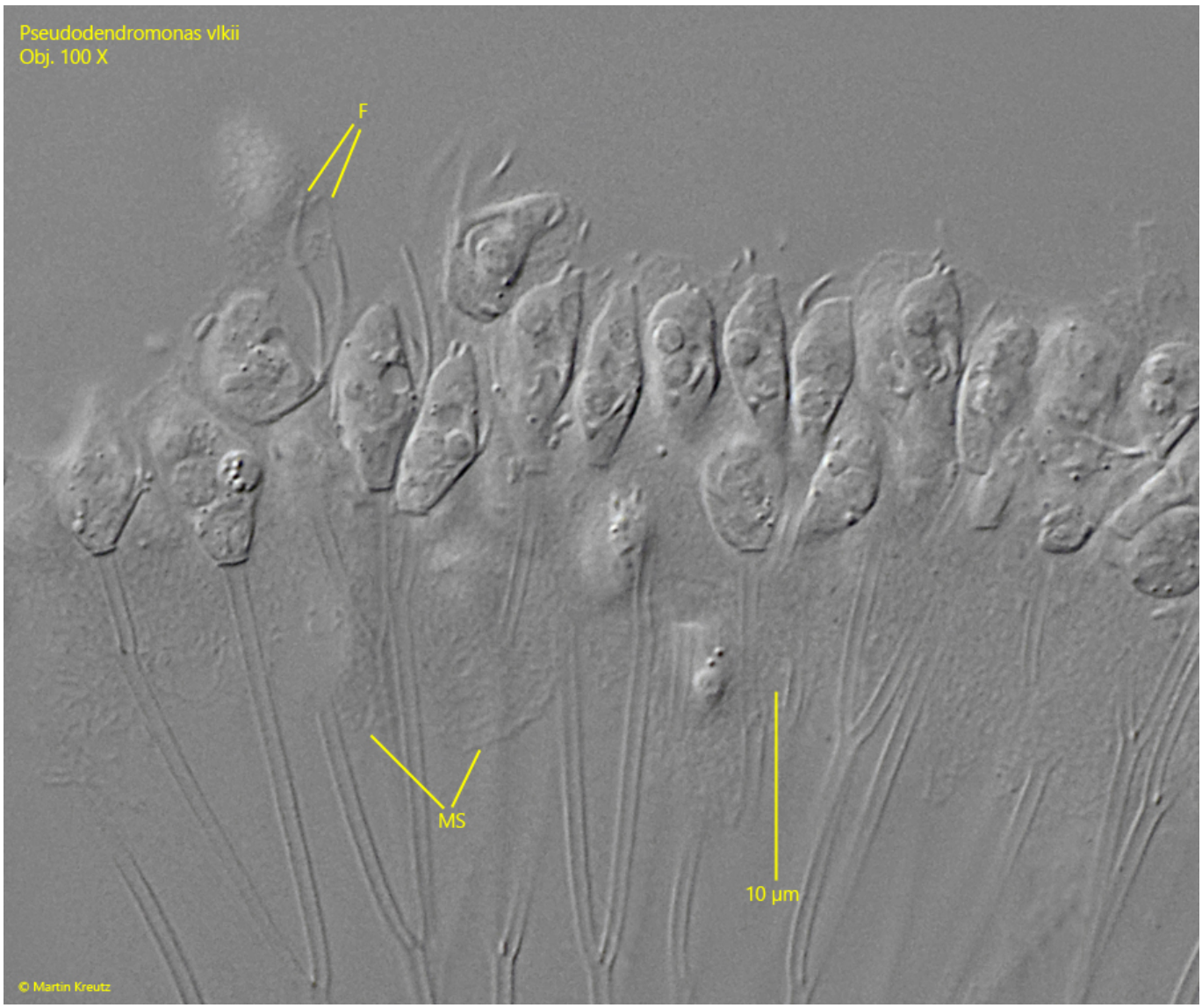


Fig. 4: *Pseudodendromonas vlkii*. L = 8.3–10.0 µm (of cells) The cells of a second squashed colony. Note the two flagella (F) of almost equal length. MS =mucus sheath (MS) with embedded small scales. Obj. 100 X.



Fig. 5: *Pseudodendromonas vlkii*. L = 6.8–9.2 µm (of cells) The cells of a third squashed colony. F = two flagella of almost equal length, MS = mucus sheath with embedded small scales. Obj. 100 X.