Chromatium okenii

(Ehrenberg, 1838) Perty, 1852

Most likely ID: n.a.

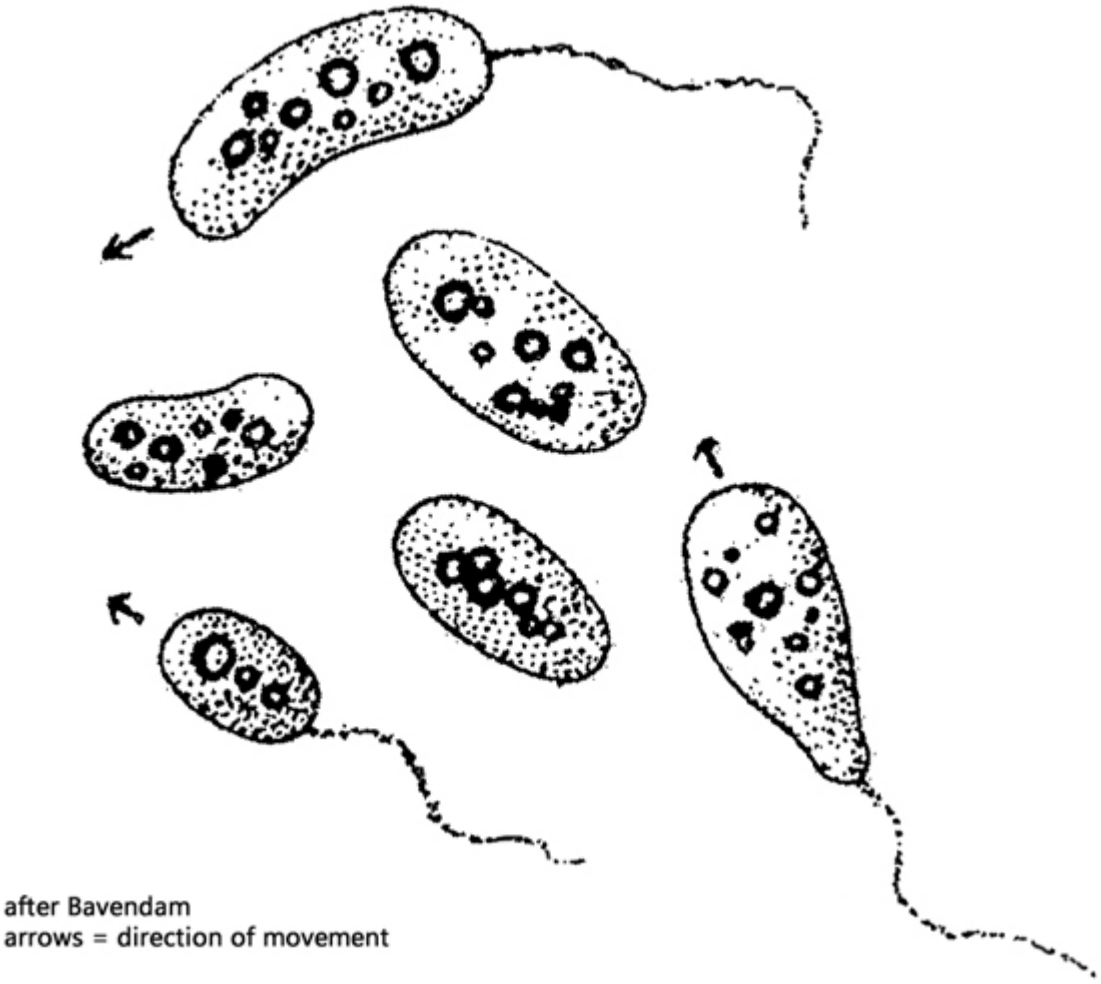
Synonym: n.a

Sampling location: **Simmelried**

Phylogenetic tree: ***Chromatium okenii***

Diagnosis:

- single-celled
- the cells are oval, oblong or kidney-shaped
- length 5 – 20 µm
- 1 flagellum, longer than cell
- purple or reddish
- cell completely filled with 1 – 3 µm globules of sulphur
- movement in the direction of the non-flagellated cell pole
- no visible gelatinuous sheet



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Rhodobacterium *Chromatium okenii* is very abundant in the upper mud layer in Simmelried. In my other sampling sites I could not detect it so far. The motile cells collect at the bottom of the collection vessel after some time and form a reddish layer there. This can be observed especially well in vessels with a pointed bottom. The species is easily identified by its color, flagellum, and typical backward swimming style. The flagellum thus pushes the cell and does not pull it. The globules in the cells are elemental sulfur, which is formed during the oxidation of hydrogen sulfide (H_2S) with oxygen (O_2) to water (H_2O), sulfur (S) and sulfuric acid (H_2SO_4).

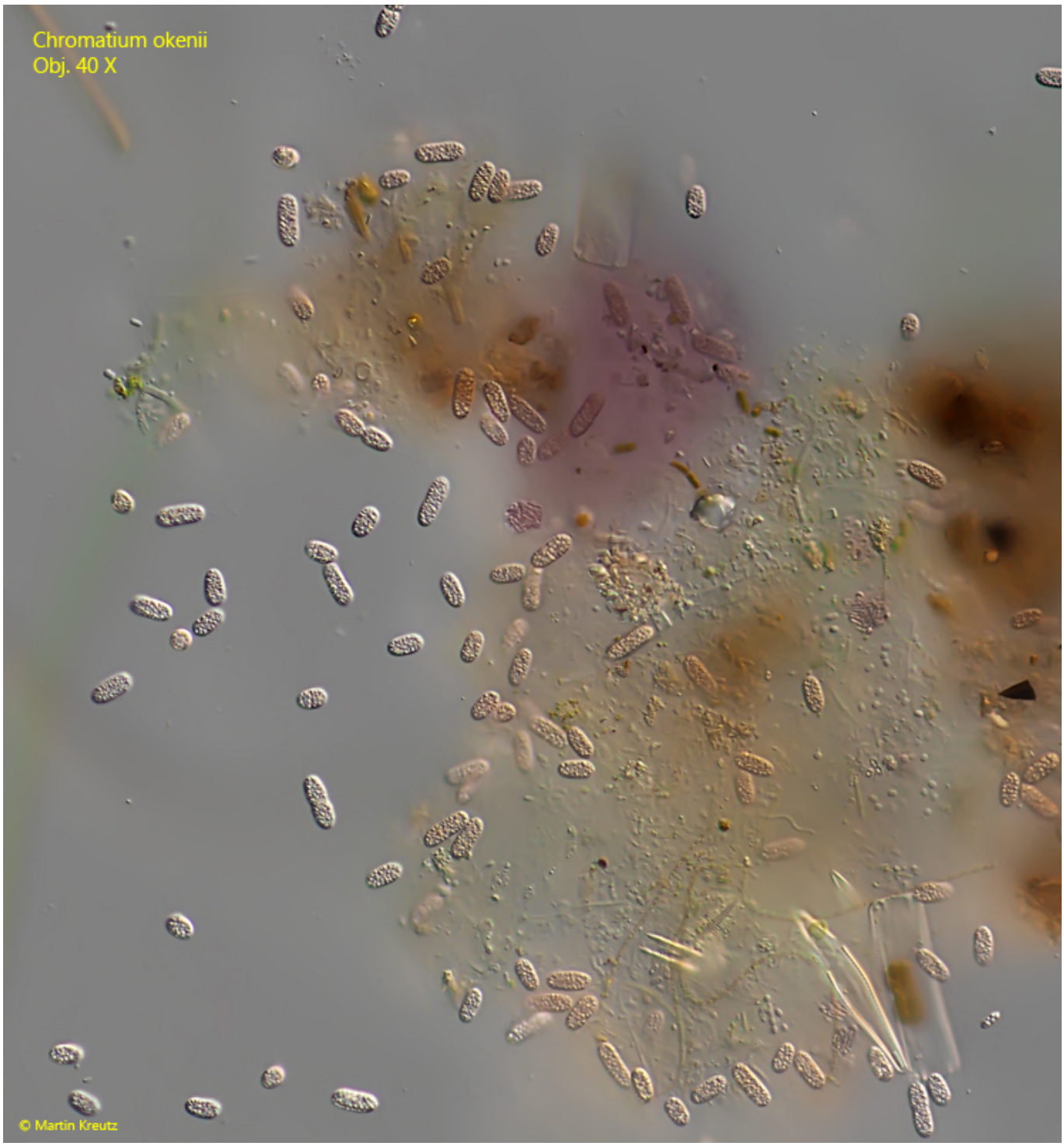


Fig. 1: *Chromatium okenii*. L = 11-16 µm. Overview of a mass development. Obj. 40 X.

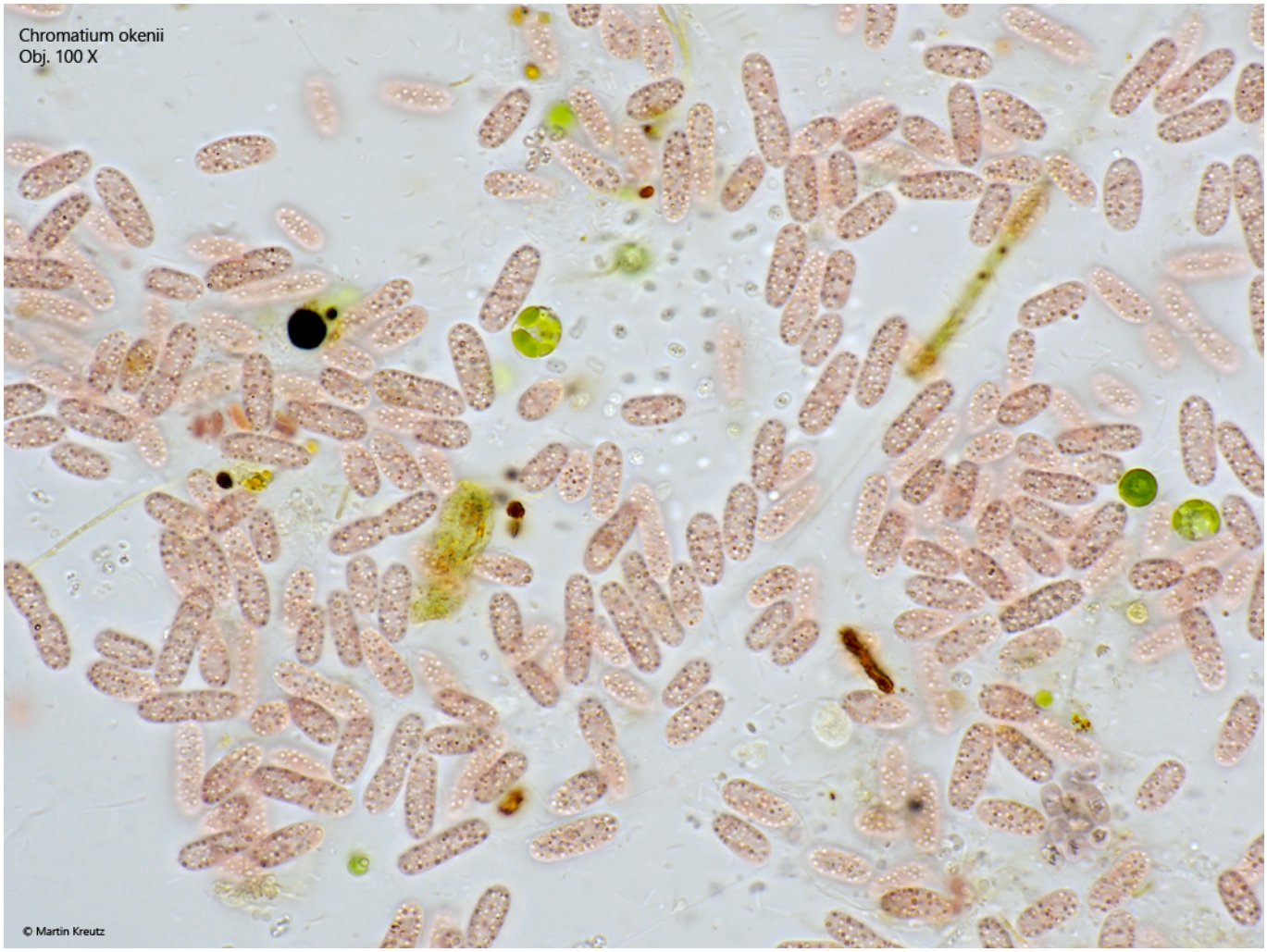


Fig. 2: *Chromatium okenii*. L = 10-19 µm. Overview of a mass development in brightfield illumination. Obj. 100 X.

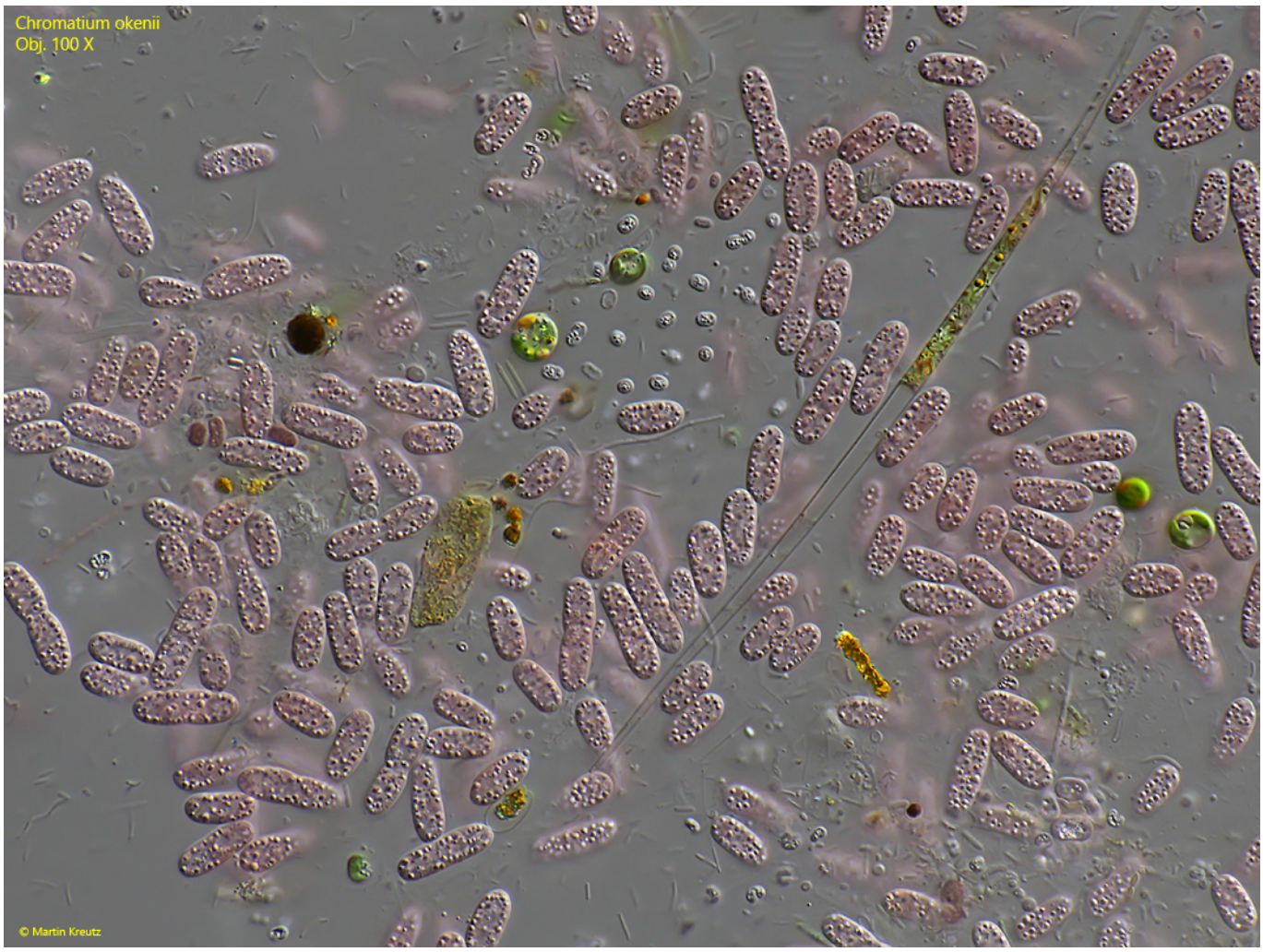


Fig. 3: *Chromatium okenii*. L = 10-19 µm. The same image section of a mass development as in fig. 1, but in DIC. Obj. 100 X.



Fig. 4: *Chromatium okenii*. L = 11-16 µm. Freely swimming specimen. Fl= flagellum. Obj. 100 X.