

***Petalomonas quadrilineata* Penard, 1890**

**Most likely ID:** n.a.

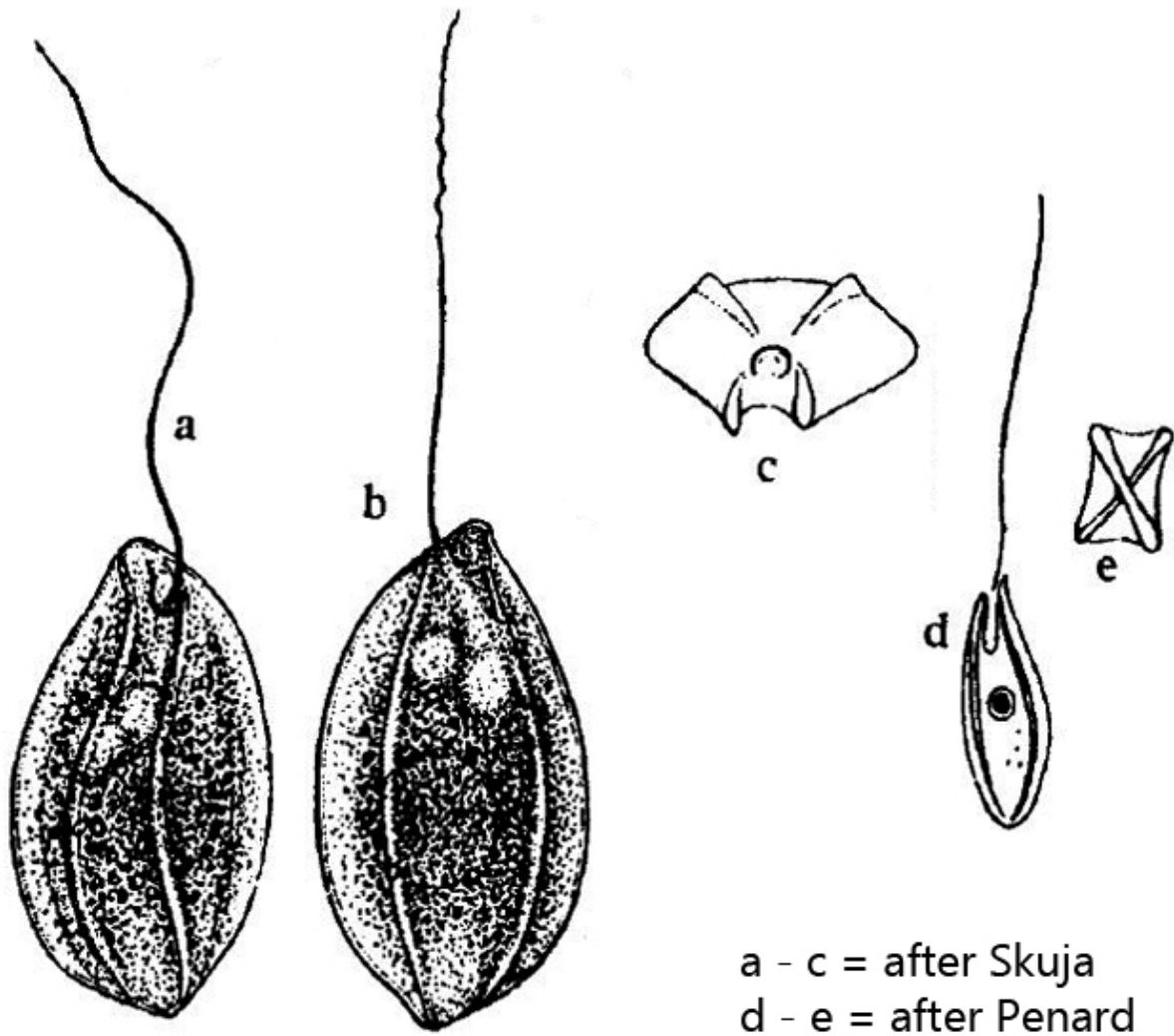
**Synonym:** n.a.

**Sampling location:** [Simmelried](#)

**Phylogenetic tree:** [Petalomonas quadrilineata](#)

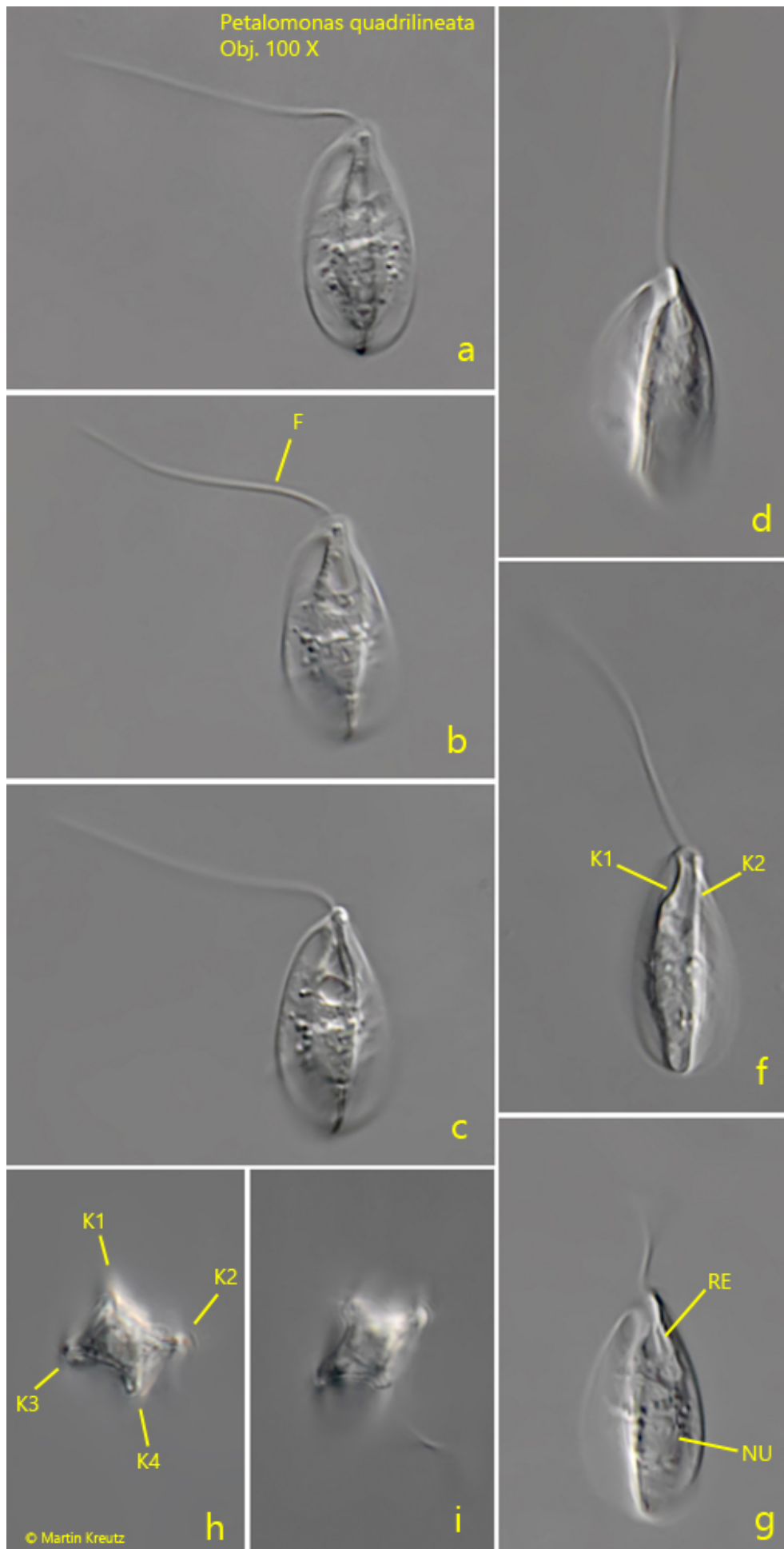
**Diagnosis:**

- length 20 µm, width 10 µm, thickness 7 µm
- broadly spindle-shaped to ellipsoidal
- dorso-ventrally flattened
- one flagellum
- each two keels ventrally and dorsally
- the keels converge anteriorly and posteriorly
- cross shaped in apical view



### *Petalomonas quadrilineata*

I found *Petalomonas quadrilineata* in 2007 in the same sample as [Petalomonas mira var. bicarinata](#). The assignment of *Petalomonas quadrilineata* is really only possible by an apical view. Only in this way the cruciform cross section can be observed, which is caused by the 4 keels. Two of them run on the dorsal side and two on the ventral side. The dimensions are given by Penard with 20 X 10 µm, without naming a size range. My specimen was 27 µm long and 14 µm wide. The keels of the similar species *Petalomonas alata* are much higher and steeper, giving an almost X-shaped apical view, with deep depressions between the keels.



**Fig. 1 a-i:** *Petalomonas quadrilineata*. L = 27  $\mu\text{m}$ , W = 14  $\mu\text{m}$ . A freely swimming specimen. h, i) In apical view the specimen is cross-shaped due to the 4 keels (each two dorsal and ventral). F = flagellum, K1 - K 4 = dorsal and ventral keels, NU = nucleus, RE = reservoir. Obj. 100 X.