Polychaos dubium Schaeffer, 1917

Most likely ID: n.a.

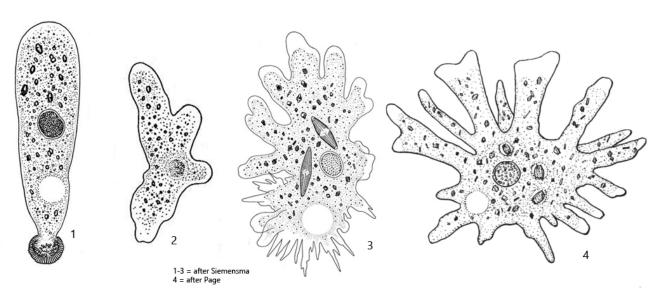
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: Polychaos dubium

Diagnosis:

- body polypodial, sometimes monopodial
- slow locomotion of polypodial form, fast locomotion of monopodial form
- length 200-400 μm (polypodial) or 250-750 μm (monopodial)
- globular nucleus, granular, diameter 30-40 µm
- one contractile vacuole
- uroid large, fasciculate or with numerous villi
- cytoplasm with large crystals of different form (bi-pyramidal, polyhedral, rod-shaped or "twins")



Polychaos dubium

In December 2014, I found *Polychaos dubium* in the upper mud layer in the <u>Simmelried</u>. At high layer thickness, the specimens moved exclusively in the monopodial form, with a welldeveloped uroid (s. drawing 1 and fig. 1 a-d). This is unusual because *Polychaos dubium* is described to prefer a polypodial form. However, it is certainly *Polychaos dubium* because the nucleus is clearly granular and has a diameter of about 30 µm and has a distinct nuclear membrane (s. fig. 3). There is only one large contractile vacuole present and the cytoplasm contains large crystals of 5-10 µm in size. In my specimens these crystals were mostly polyhedral (s. fig. 4). The specimens were 280-320 µm long during monopodial locomotion. Thus, they are essentially similar to a form of *Polychaos dubium*, which was also found by Siemensma and which he called "Polychaos dubium 2" (s. Ferry Siemensma-Microworld-Polychaos dubium-2). I have not yet found any specimens with a polypodial form as described for the parent form.

More images and information on Polychaos dubium:

- Ferry Siemensma-Microworld-Polychaos dubium
- Ferry Siemensma-Microworld-Polychaos dubium-2
- Ferry Siemensma-Microworld-Polychaos dubium-3

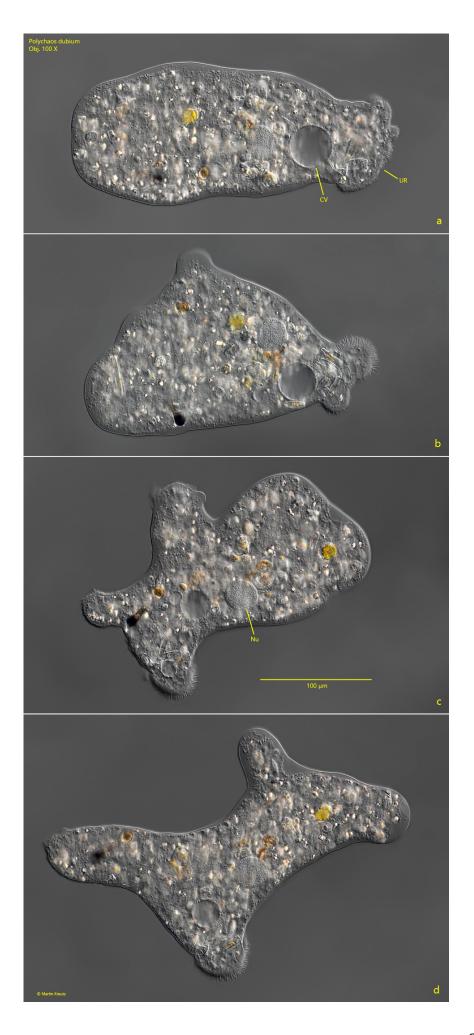


Fig. 1 a-d: Polychaos dubium. $L = 310 \mu m$. Different stages of the monopodial form during locomotion. Note the distinctly fasciculate uroid (UR). CV = contractile vacuole, Nu = nucleus. Obj. 40 X.

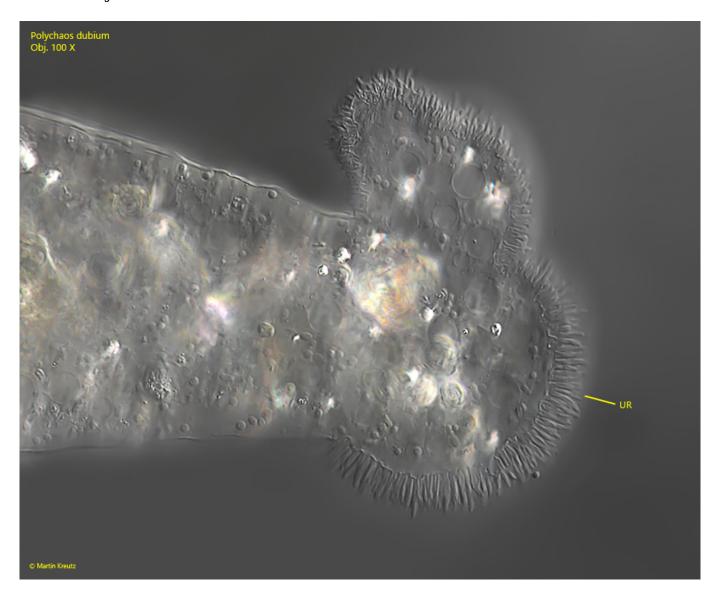


Fig. 2: Polychaos dubium. The uroid (UR) with hundreds of villi in detail. Obj. 100 X.

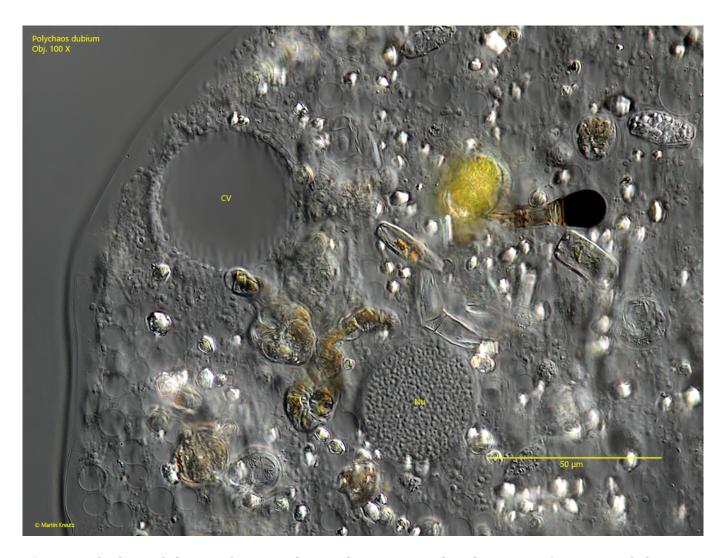


Fig. 3: Polychaos dubium. The granular nucleus (Nu) with a diameter of 30 μ m and the large contractile vacuole in the strongly squashed specimen as shown in fig. 1 a-d. Obj. 100 X.

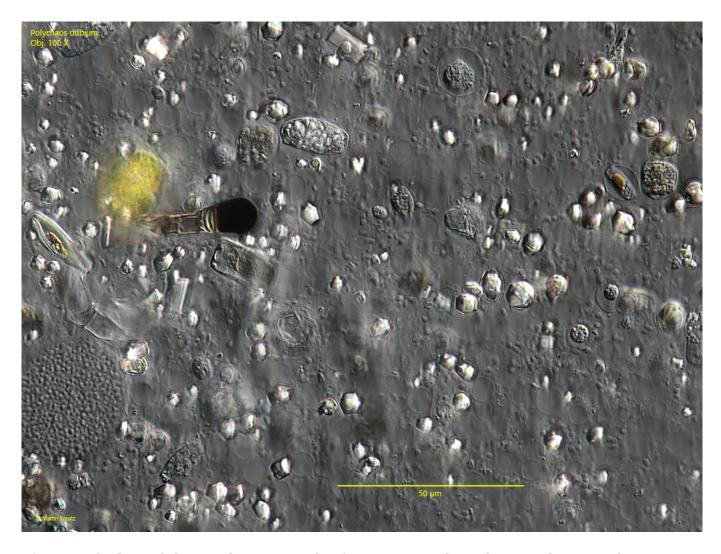


Fig. 4: Polychaos dubium. The scattered refractive crystals in the cytoplasm. In this specimen the polyhedrical crystals with a diameter of 5-10 μm are dominant. Obj. 100 X.