Polychaos dubium Schaeffer, 1917

Most likely ID: n.a.

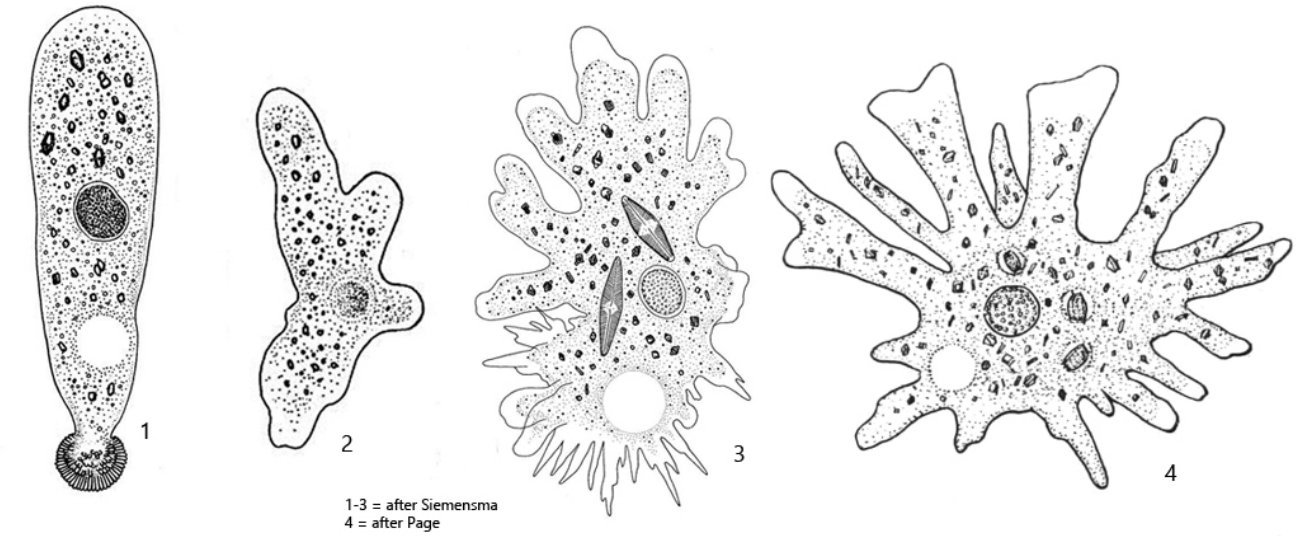
Synonym: n.a.

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 Simmelried. At high layer thickness, the specimens moved exclusively in the

monopodial form, with a well-developed 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*

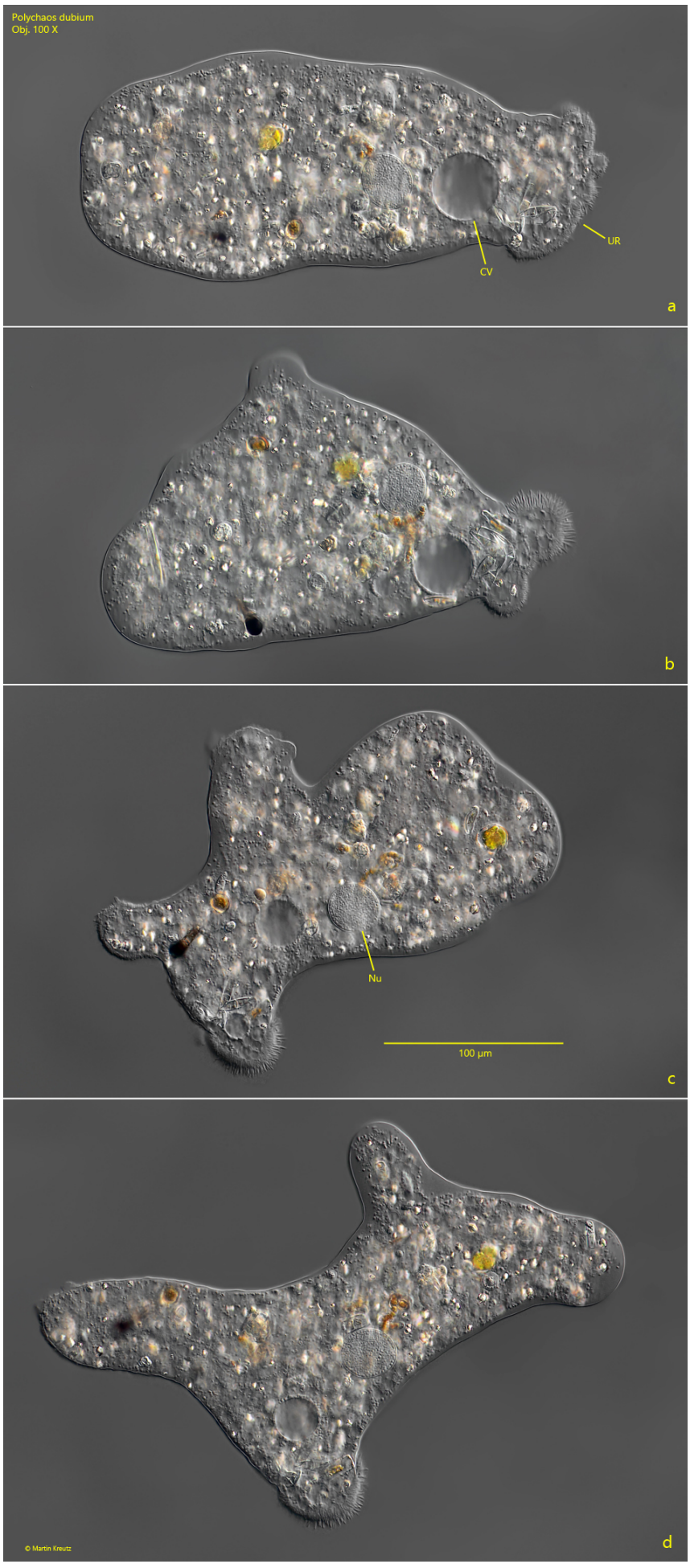

Polychaos dubium
Obj. 100 X
CV
UR
a
b
Nu
100 µm
c
© Martin Kreutz
d

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

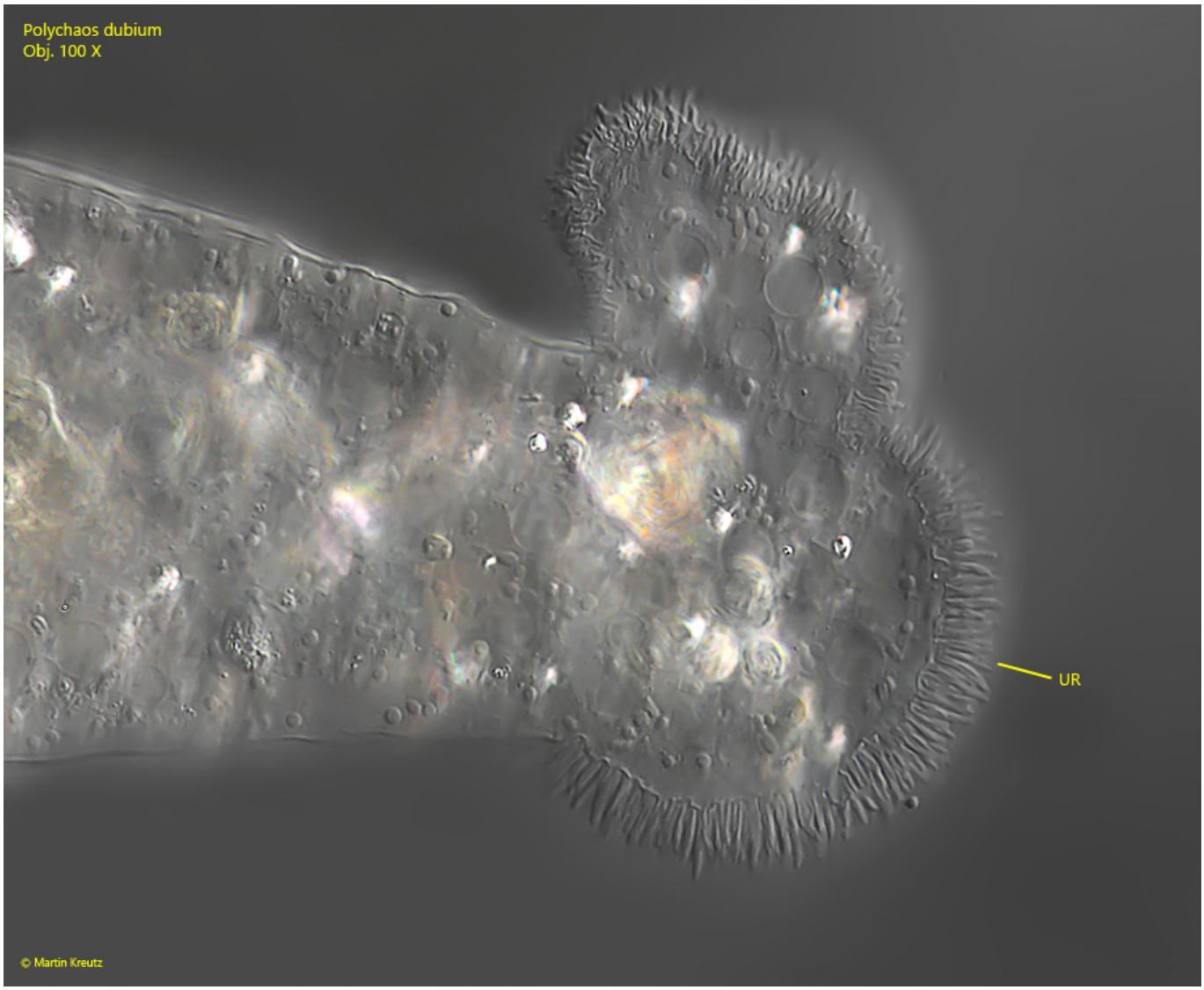


Fig. 2: *Polychaos dubium*. The uroid (UR) with hundreds of villi in detail. Obj. 100 X.

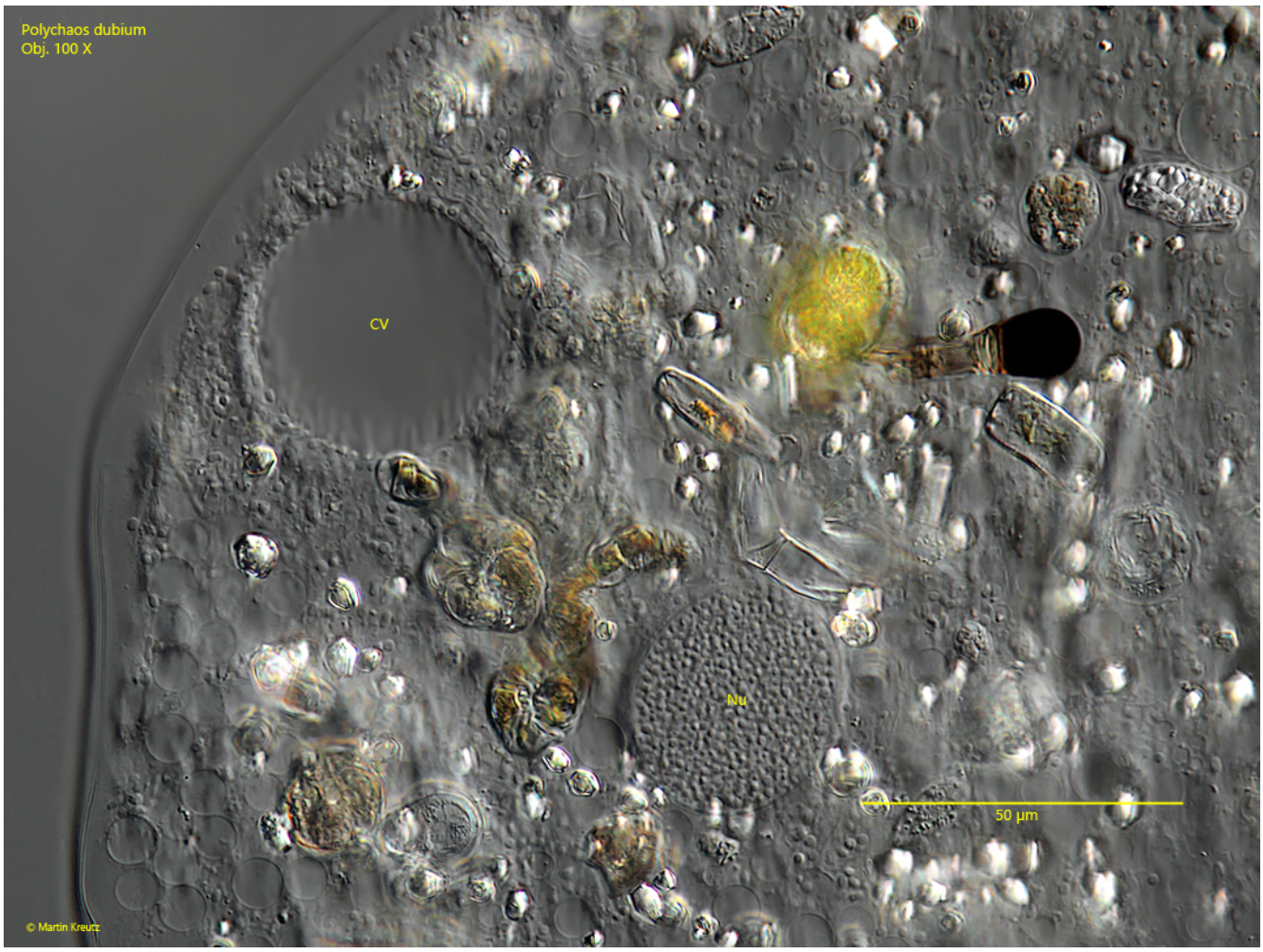


Fig. 3: *Polychaos dubium*. The granular nucleus (Nu) with a diameter of 30 µm and the large contractile vacuole in the strongly squashed specimen as shown in fig. 1 a-d. Obj. 100 X.

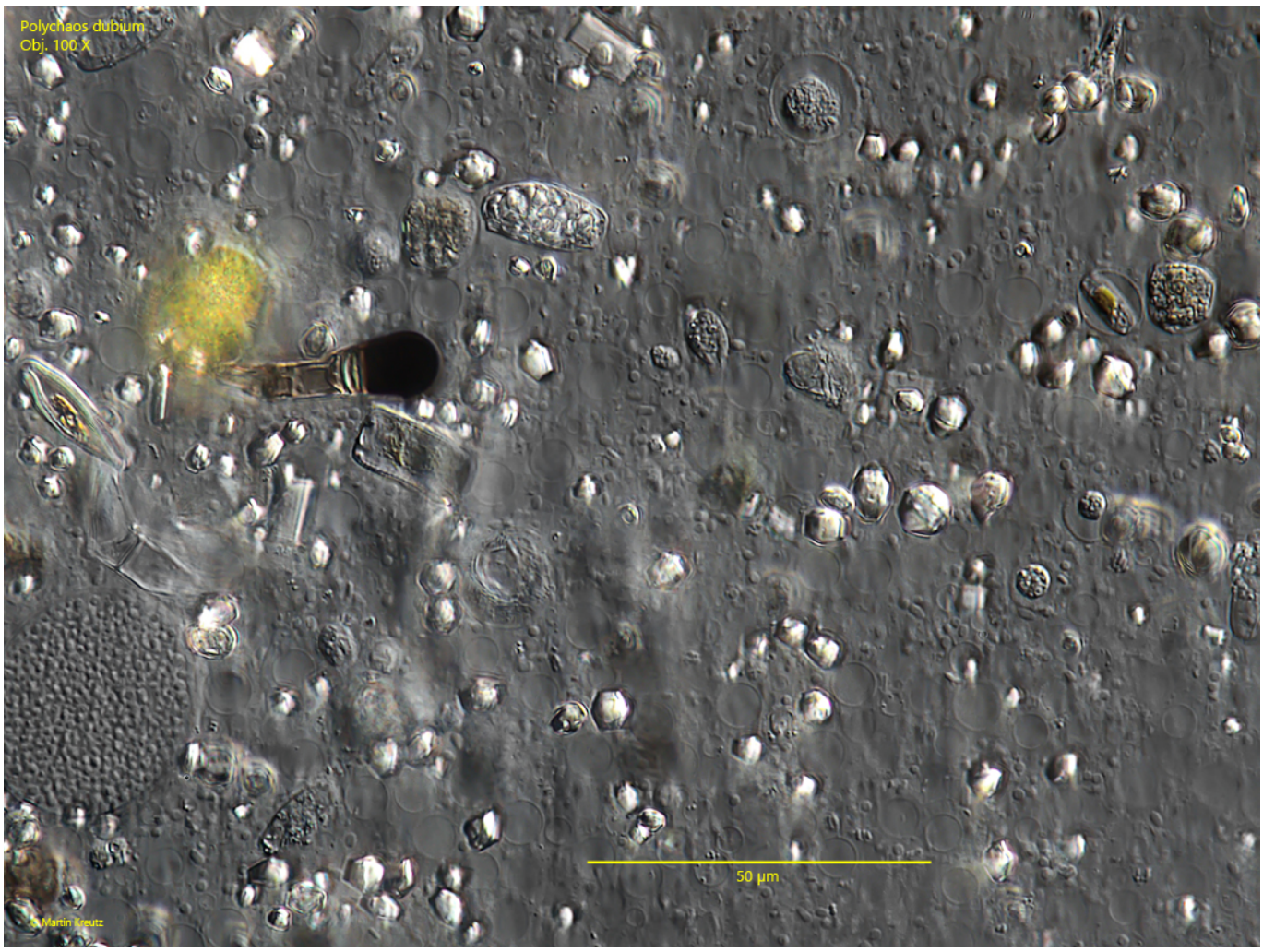


Fig. 4: *Polychaos dubium*. The scattered refractive crystals in the cytoplasm. In this specimen the polyhedrical crystals with a diameter of 5–10 µm are dominant. Obj. 100 X.