

***Polychaos annulatum***

**(Penard, 1902) Smirnov & Goodkov, 1997**

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

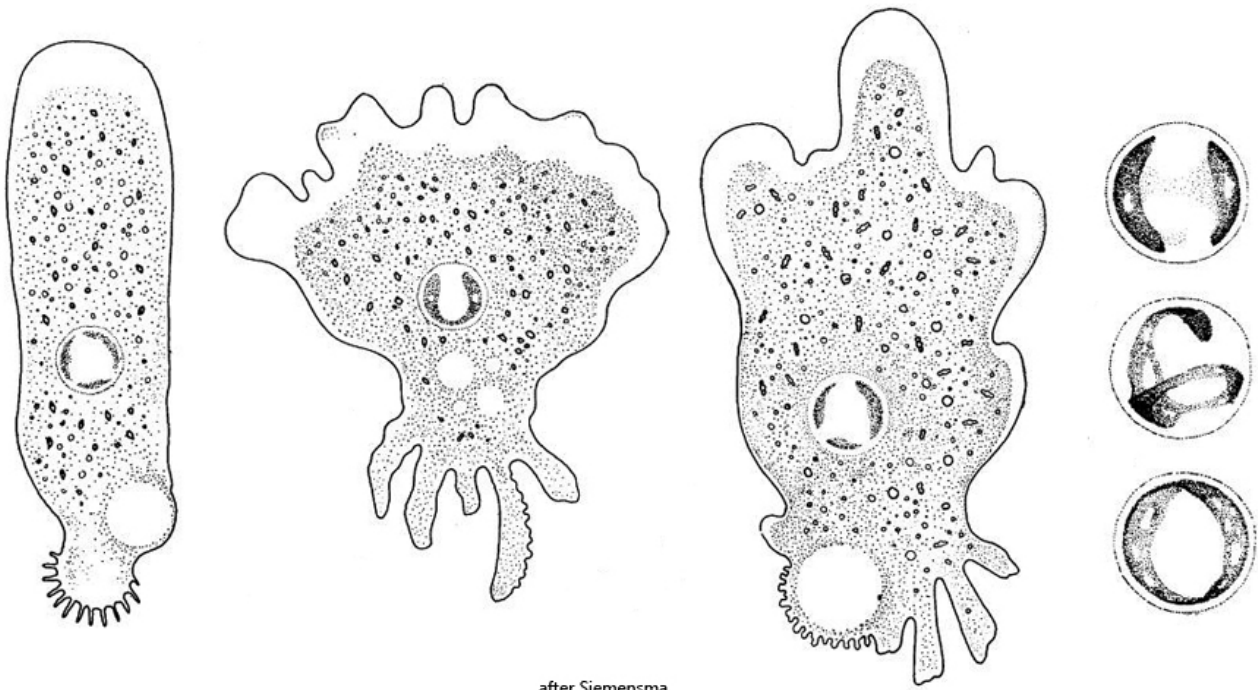
**Synonym:** n.a.

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

**Phylogenetic tree:** [Polychaos annulatum](#)

**Diagnosis:**

- body polypodial, sometimes monopodial
- pseudopodia broad with hyaline cap
- slow locomotion of polypodial form, fast locomotion of monopodial form
- length 60–325  $\mu\text{m}$  (monopodial), usually 60–190  $\mu\text{m}$
- globular nucleus (12–25  $\mu\text{m}$ ), nucleolus forming a hollow, perforated sphere (appears ring-shaped)
- one contractile vacuole, often near uroid
- uroid bulbous in monopodial form, faciculate in palmate form
- cytoplasm with crystals up to 5  $\mu\text{m}$  (bi-pyramidal, polyhedral or rectangular)

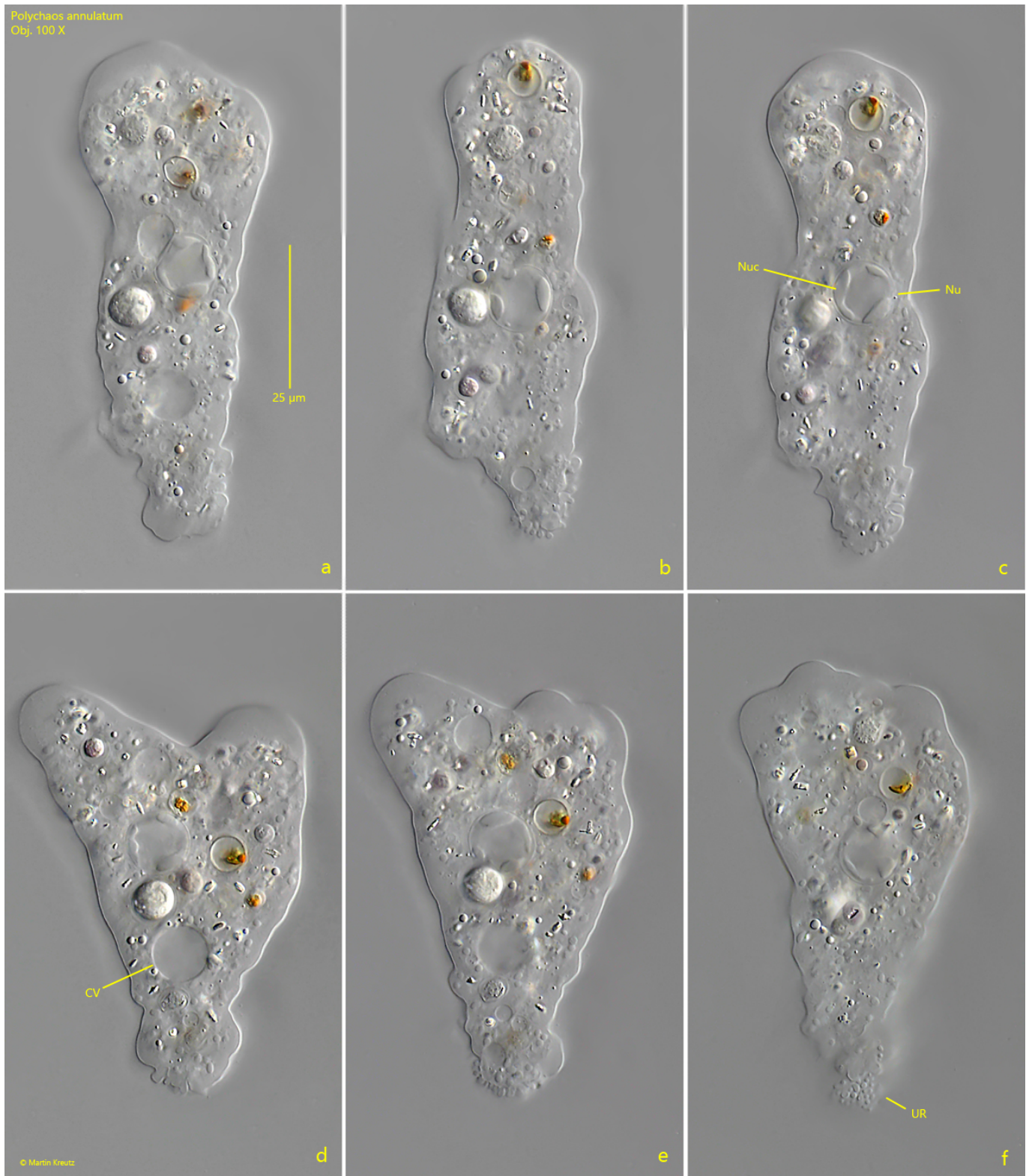


Polychaos annulatum

I have found *Polychaos annulatum* in the [Simmelried](#), where the species is much more common than the larger representative of the genus [Polychaos dubium](#). The two species can be distinguished not only by their size, but mainly by the shape of the nucleus. In *Polychaos annulatum*, the nucleolus, i.e. the condensed nuclear material, is concentrated on the wall of the nucleus and thus forms an perforated hollow sphere. In the microscope, this hollow sphere then appears like an interrupted ring, which is clearly different from the granular nucleus of [Polychaos dubium](#).

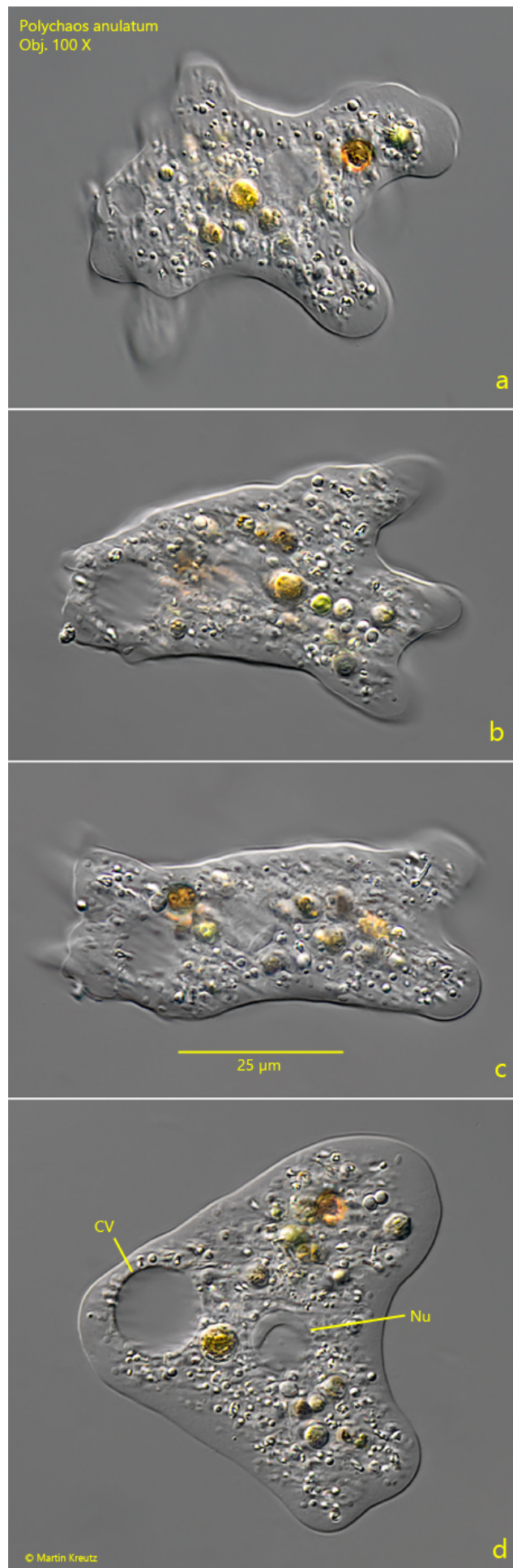
So far I have only been able to observe the monopodial form of *Polychaos annulatum* (s. figs. 1 a-f and 2 a-d). However, this may be due to an insufficient layer thickness under the coverslip, so that the monopodial form is preferred. As described by Siemensma, the monopodial form has a bulbous uroid (s. fig. 1 a-f).

More information on *Polychaos annulatum*: [Ferry Siemensma-Microworld-Polychaos annulatum](#).

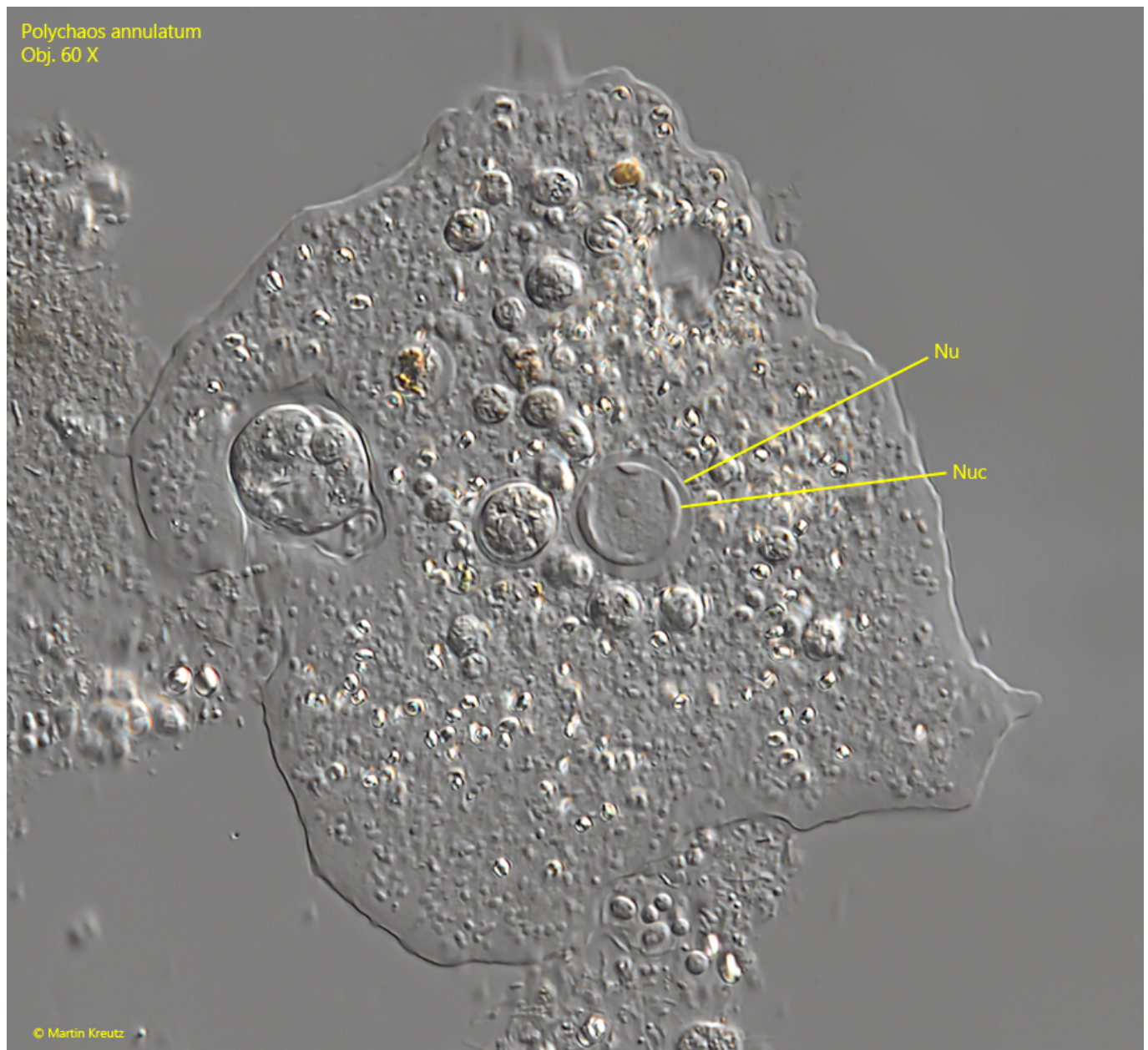


**Fig. 1 a-f:** *Polychaos annulatum*. L = 88 µm. Different stages of the monopodial locomotion. Note the bulbous uroid (UR). The diameter of the nucleus in this specimen is 11 µm. CV = contractile vacuole, Nu = nucleus, Nuc = nucleolus. Obj. 100 X.





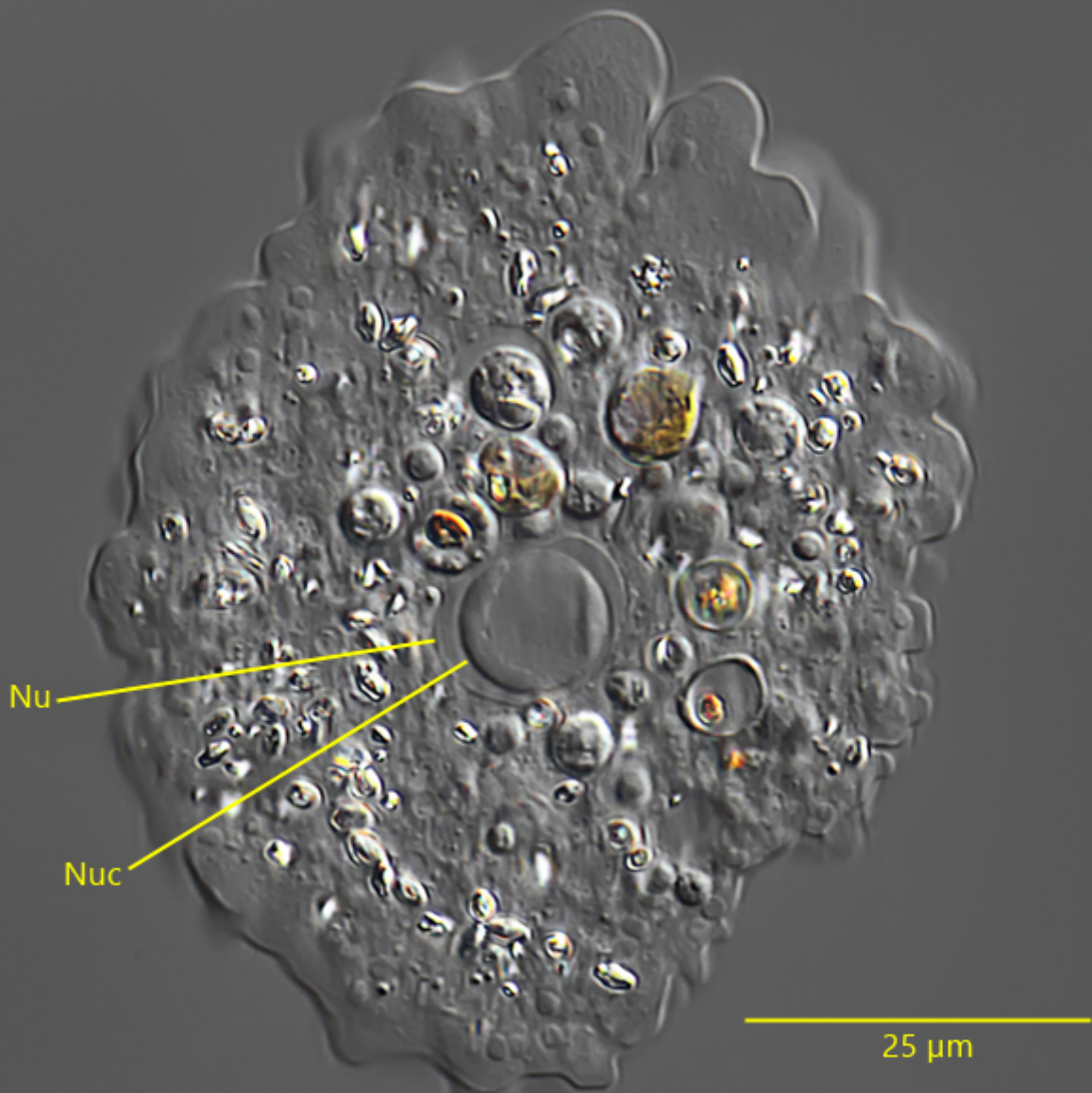
**Fig. 2 a-d:** *Polychaos annulatum*. L = 76  $\mu$ m. A specimen during monopodial locomotion (a-c) and slightly squashed (d). CV = contractile vacuole, Nuc = ring-shaped nucleolus. Obj. 100 X.



**Fig. 3:** *Polychaos annulatum*. The nucleus (Nu) in a strongly squashed specimen. The nucleolus (Nuc) is a perforated hollow sphere and apperas as an interrupted ring. Obj. 60 X.



*Polychaos annulatum*  
Obj. 100 X



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**Fig. 4:** *Polychaos annulatum*. The nucleus (Nu) and nucleolus (Nuc) in a second squashed specimen. Obj. 100 X.