

Observations on

Nuclearia Cienkowsky 1865

Most likely ID: *Nuclearia simplex*

Synonyms: n. a.

EOL Phylogenetic tree: [Nuclearia](#)

Defecation in Nuclearia

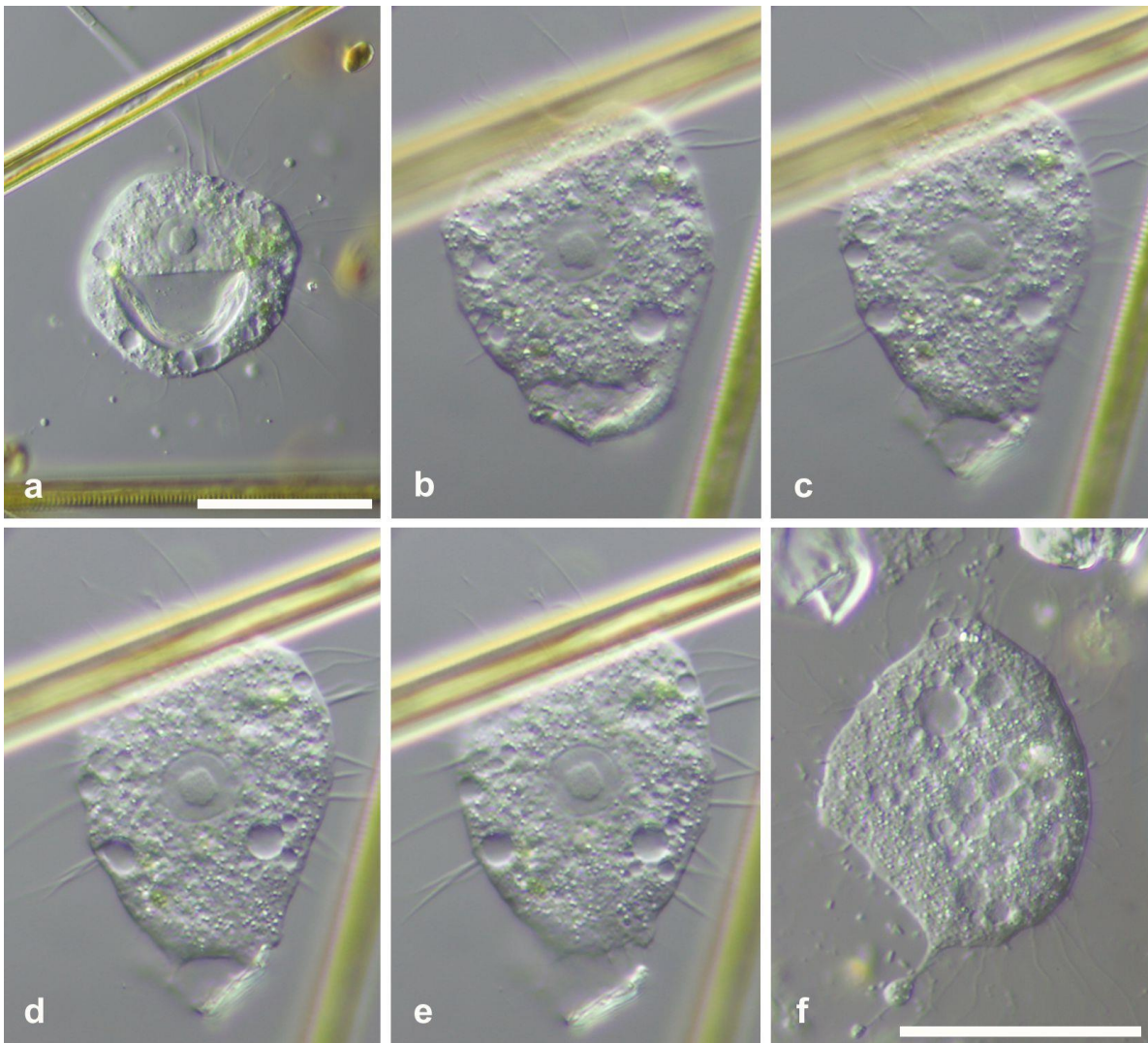


Fig. 1: Defecation in a *Nuclearia* cell. **a** Cell with large defecation vacuole. **b** The vacuole has migrated to the edge of the cell. **c** The vacuole has opened to the outside. **d** and **e** The indigestible material is being discharged. **f** End of the defecation process. Scale bar indicates 25 μm . Sample from a tropical freshwater aquarium.

Fig. 1 shows a *Nuclearia* cell which has trapped a large piece of indigestible material in a vacuole. Its shininess in polarized light indicated its birefringent property. This and the fibrous structure leads to the conclusion that it is cellulose. The series of images shows how the piece of cellulose was excreted. Unlike ciliates, for example, amoeboids have no special areas prepared for defecation openings, no cytoproct. Fig. 1 f gives the impression that the large piece of waste affected the cell somewhat during the excretion process. In the genus *Nuclearia*, however, the formation of such cell appendages is not uncommon.