Choanocystis perpusilla

(Petersen & Hansen, 1960) Siemensma, 1991

Most likely ID: n.a.

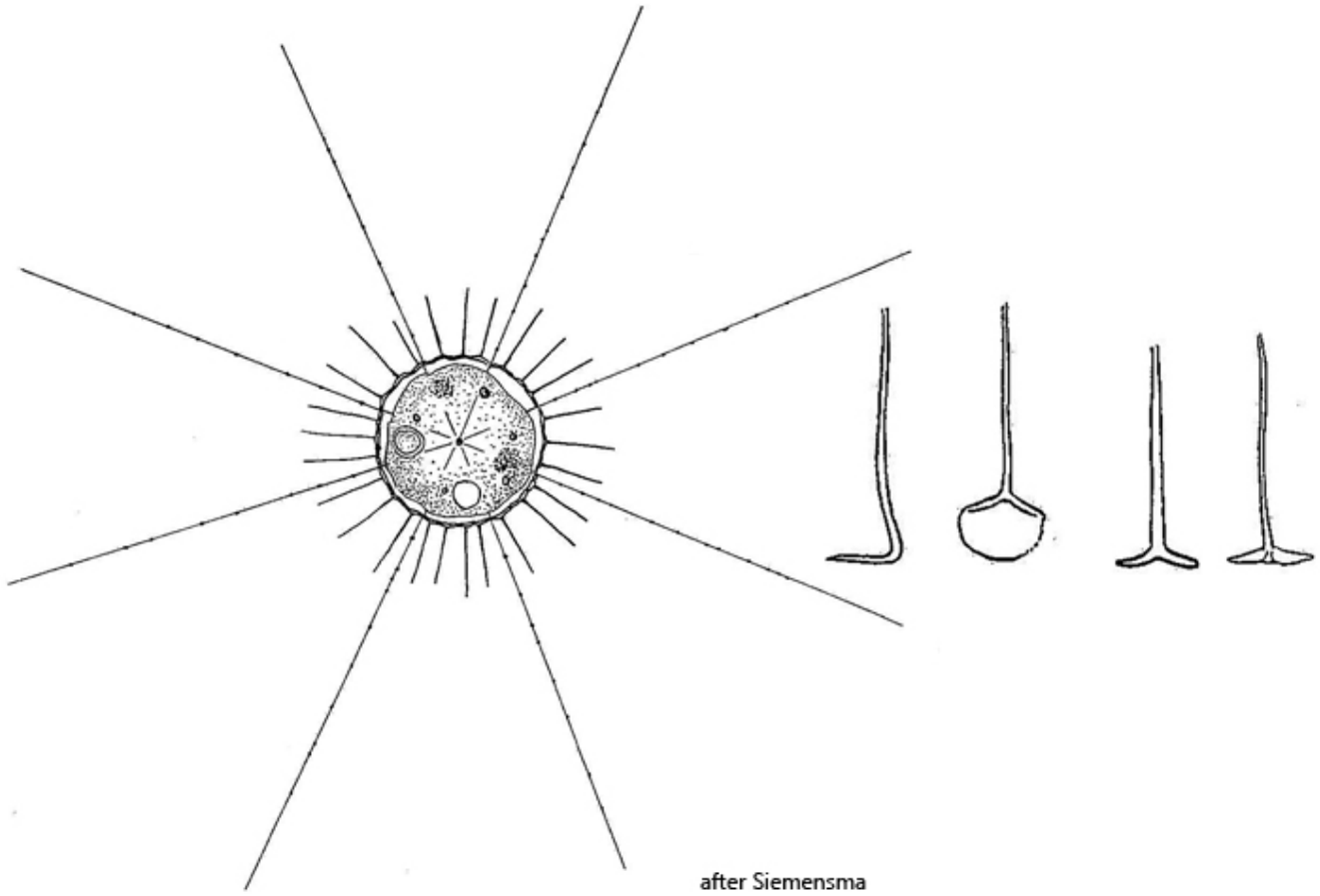
Synonym: *Acanthocystis perpusilla*

Sampling location: Bog pond Warnsdorfer spring

Phylogenetic tree: *Choanocystis perpusilla*

Diagnosis:

- body spherical
- diameter (with tangential scales) 7–12 µm
- radial spines straight or slightly curved, length 2–8.2 µm
- tangential scales oval, 2.5 x 1.7 µm, hard to see
- cytoplasm often with algae cells and oil droplets
- only few axopodia, lengths about 30–35 µm, with granules
- one contractile vacuole



Choanocystis perpusilla

So far I have only found *Choanocystis perpussila* in samples from a bog pond near the Warnsdorf spring (Tharandt forest). The specimens were found on the surface of the mud layer and on the walls of the sample container.

Within the genus *Choanocystis*, most species can only be distinguished with the aid of the electron microscope, which can be used to recognize the exact shape of the radial and tangential spines and scales. In the case of *Choanocystis perpusilla*, however, classification is possible due to the small size, which is given as 7–12 µm in diameter (Siemensma, 1991). The specimen shown below has a diameter of 16 µm, although the flattening due to the slight pressure of the coverslip must be taken into account.

The tangential spines of *Choanocystis perpusilla* are widely spaced and have more or less the same length. In my specimens the length of it was about 5 µm. I could not recognize the tangential scales in DIC, as they are very delicate. Only a few axopodia are formed, which is also typical for this species. In addition, only one contractile vacuole is present. The cells of my population also often contained algal cells, as already mentioned by Rainer (1968). In addition, colorless, highly refractive

oil bodies were visible in the cytoplasm.

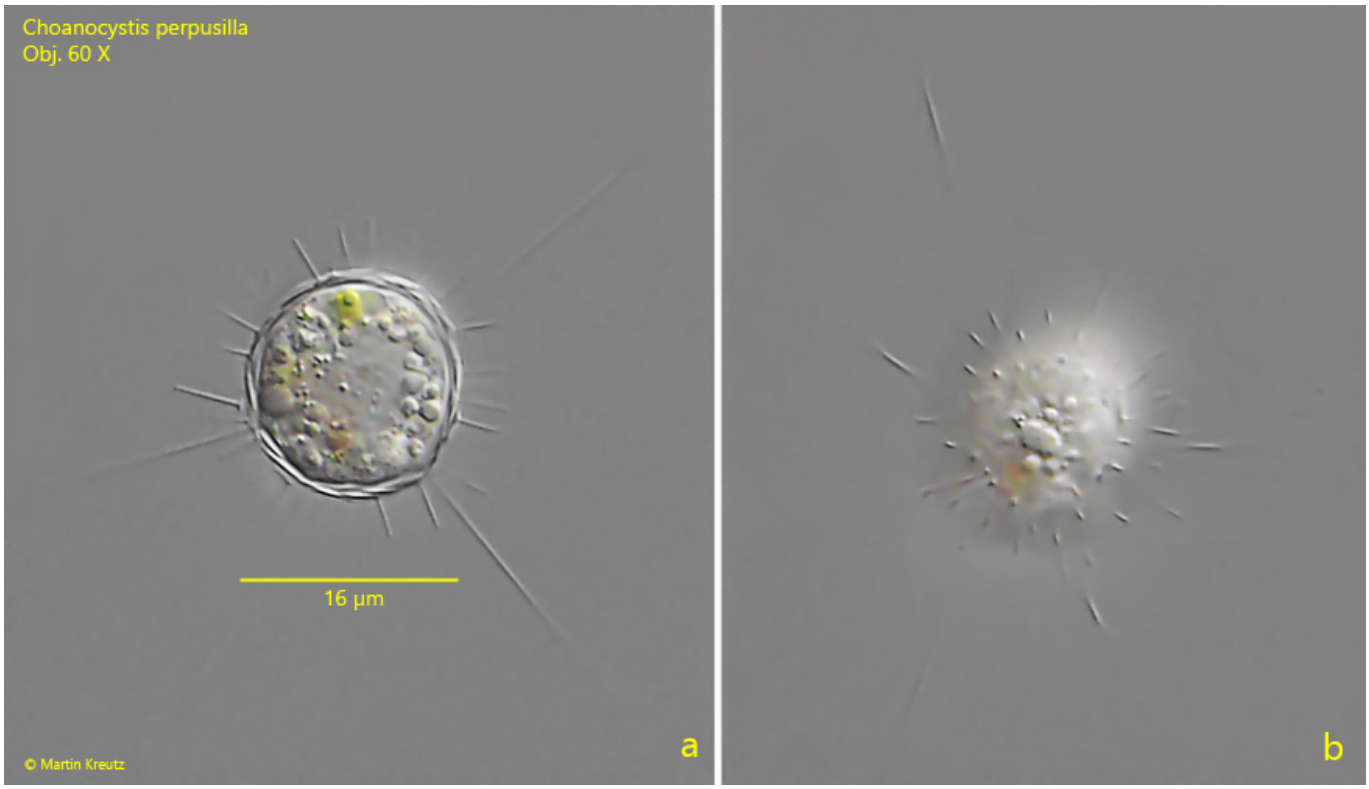


Fig. 1 a-b: *Choanocystis perpusilla*. D = 16 µm. Two focal planes of a slightly squashed specimen. Obj. 60 X.

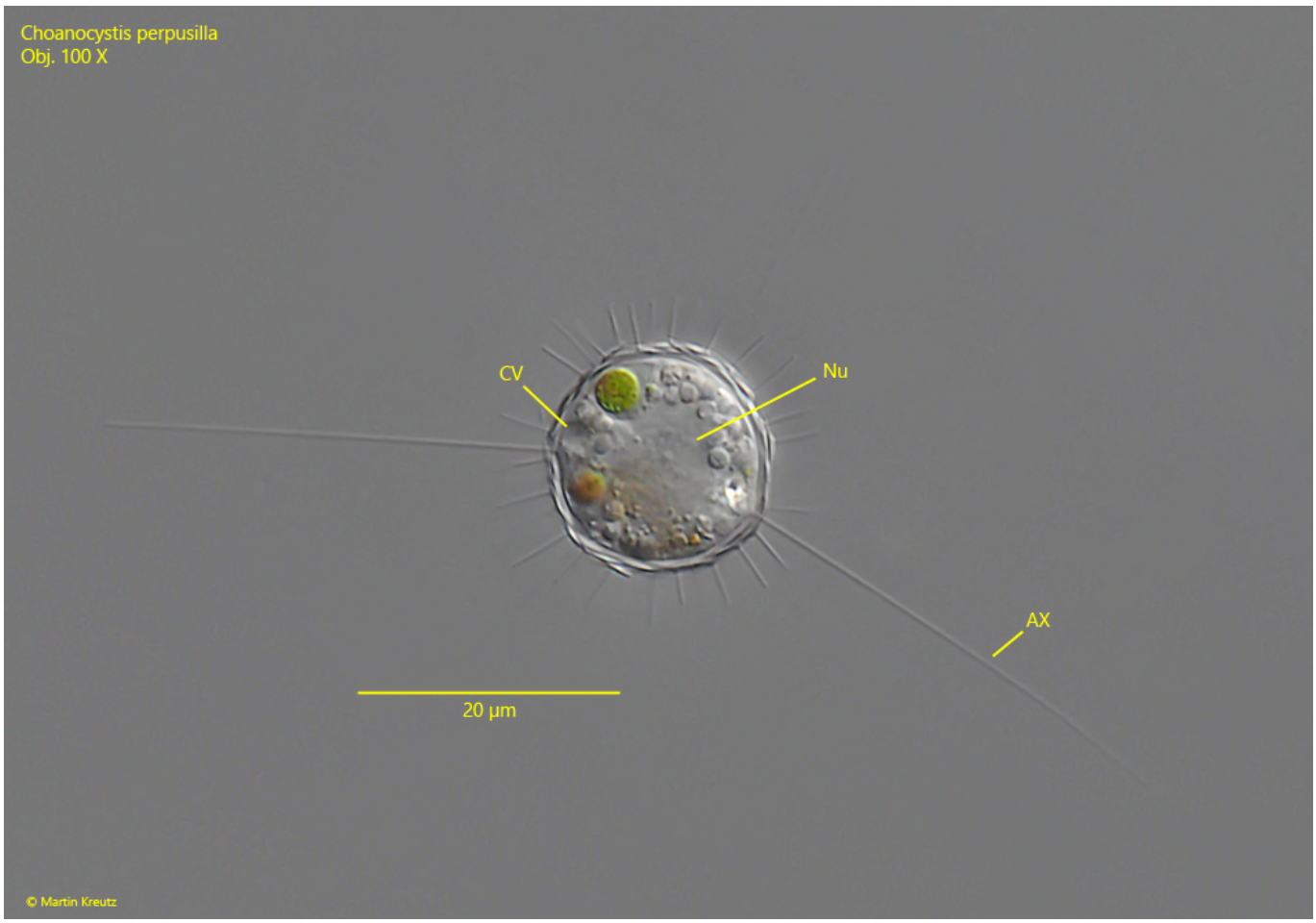


Fig. 2: *Choanocystis perpusilla*. D = 16 µm. The slightly squashed specimen a shown in fig. 1 a-b. The radial spines have a length of 4–6 µm. AX = axopodia, CV = contractile vacuole, Nu = nucleus. Obj. 100 X.