Parachaos zoochlorellae Willumsen, 1982

Most likely ID: n.a.

Synonym: *Chaos zoochlorellae*

Sampling location: Simmelried

Phylogenetic tree: *Parachaos zoochlorellae*

Diagnosis:

- body polypodial or monopodial
- pseudopodia with hyaline caps
- length 164–403 µm
- about 50 nuclei
- many plate-like or polyhedral crystals in separate vacuoles
- one contractile vacuole near center
- nuclei spherical (5.3–12.3) with central nucleolus and parietal granules
- about 100–200 symbiotic algae of *Chlorella* type
- uroid bulbous

No drawings from previous authors available.

So far I have only found *Parachaos zoochlorellae* in the uppermost mud layer in the Simmelried. However, I find *Parachaos zoochlorellae* rarely.

At low magnifications, *Parachaos zoochlorellae* can easily be confused with *Mayorella viridis*. However, *Parachaos zoochlorellae* is considerably larger, has rounded pseudopodia (not mammilliformed or conically) and about 50 nuclei (*Mayorella viridis* has only one nucleus). Under the coverslip, *Parachaos zoochlorellae* often takes on a monopodial form. The polypodial can be observed less frequently.

Willumsen (1982) does not give any information on the number of contractile vacuoles and symbiotic algae in his description. According to my observations, only one contractile vacuole is present, which is often centrally located (s. fig. 2 a), sometimes also near the uroid. I was able to determine the number of symbiotic algae at 100–200 (s. fig. 3). Their diameter is 4.6–5.2 µm and they appear to be of the Chlorella type. The chloroplast is cup-shaped and each algal cell has its own nucleus.

Numerous crystals are scattered in the cytoplasm of *Parachaos zoochlorellae*. These are described by Willumsen as plate-shaped. In my population, all crystals were polyhedric and located in separate vacuoles (s. fig. 3). The crystals had a size of 3–4 µm.

Further images and information on *Parachaos zoochlorellae*: Ferry Siemensma-Microworld-*Parachaos zoochlorellae*

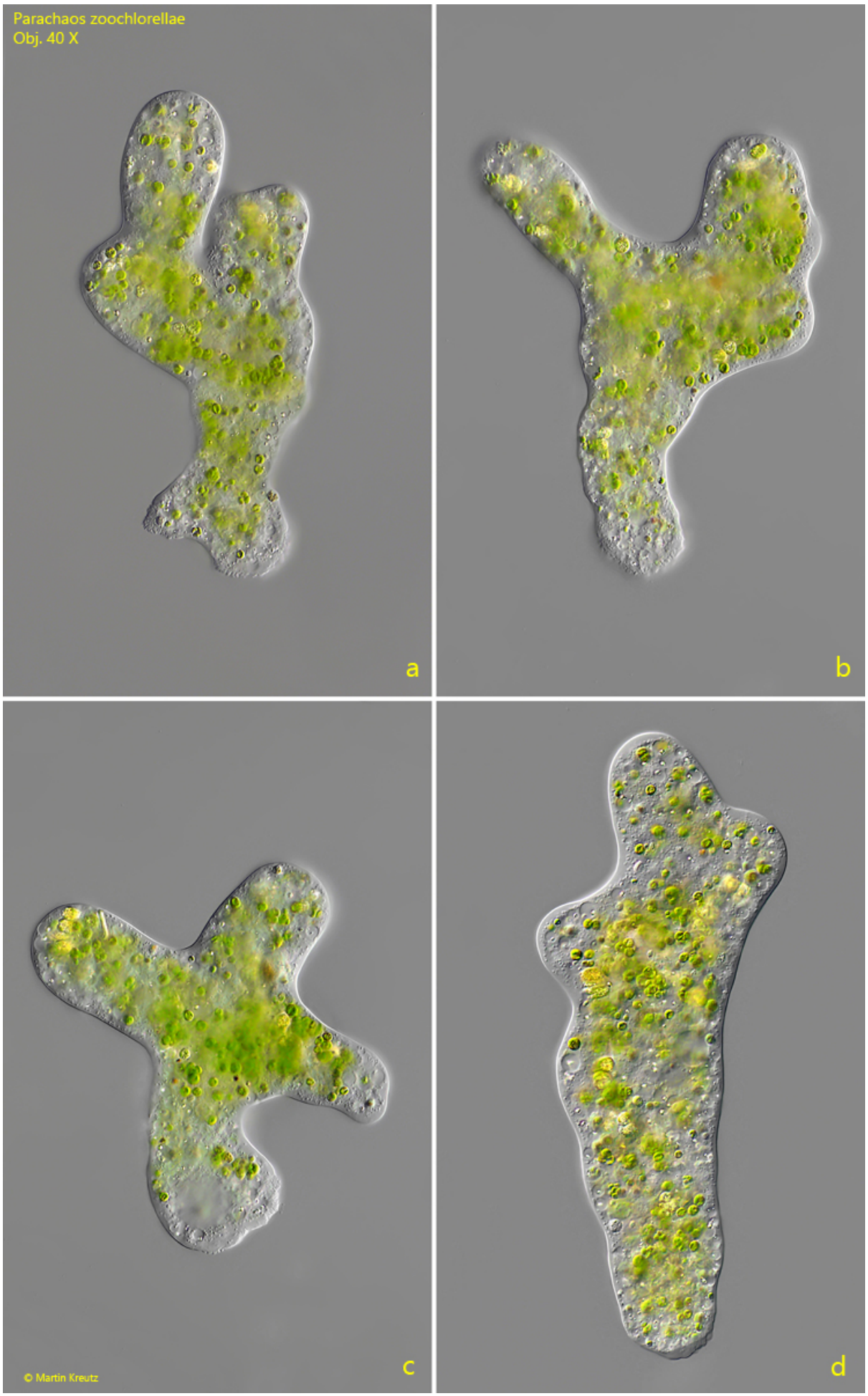
Parachaos zoochlorellae
Obj. 40 X
a
b
c
d
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Fig. 1 a-d: *Parachaos zoochlorellae*. L = 304 µm (of monopodial form). A specimen is changing from the polypodial form (a-c) to the monopodial form (d). Obj. 40 X.

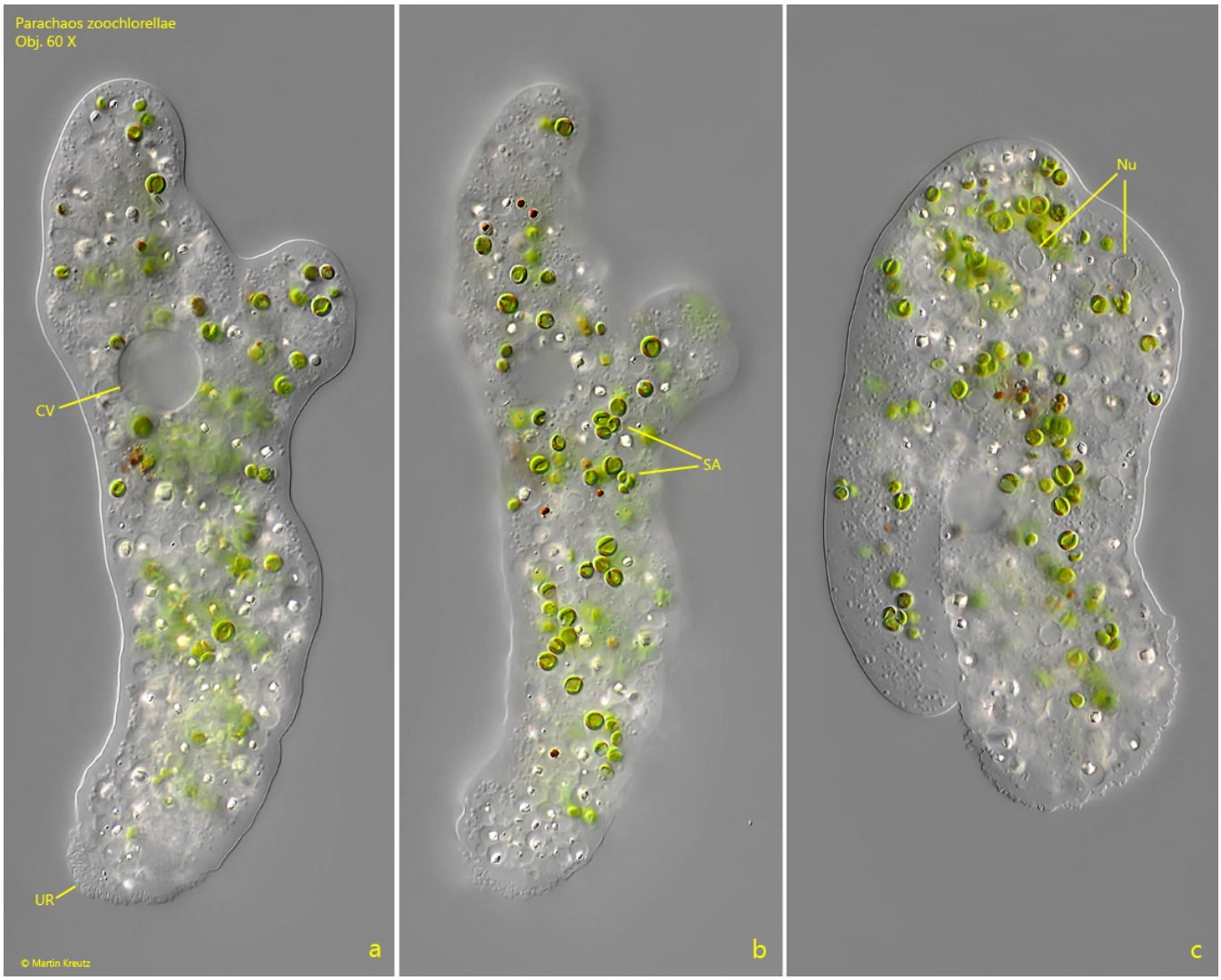

Fig. 2 a-c: *Parachaos zoochlorellae*. L = 206 µm. A specimen in monopodial locomotion. Nu = nuclei, SA = symbiotic algae, UR = bulbous uroid. Obj. 60 X

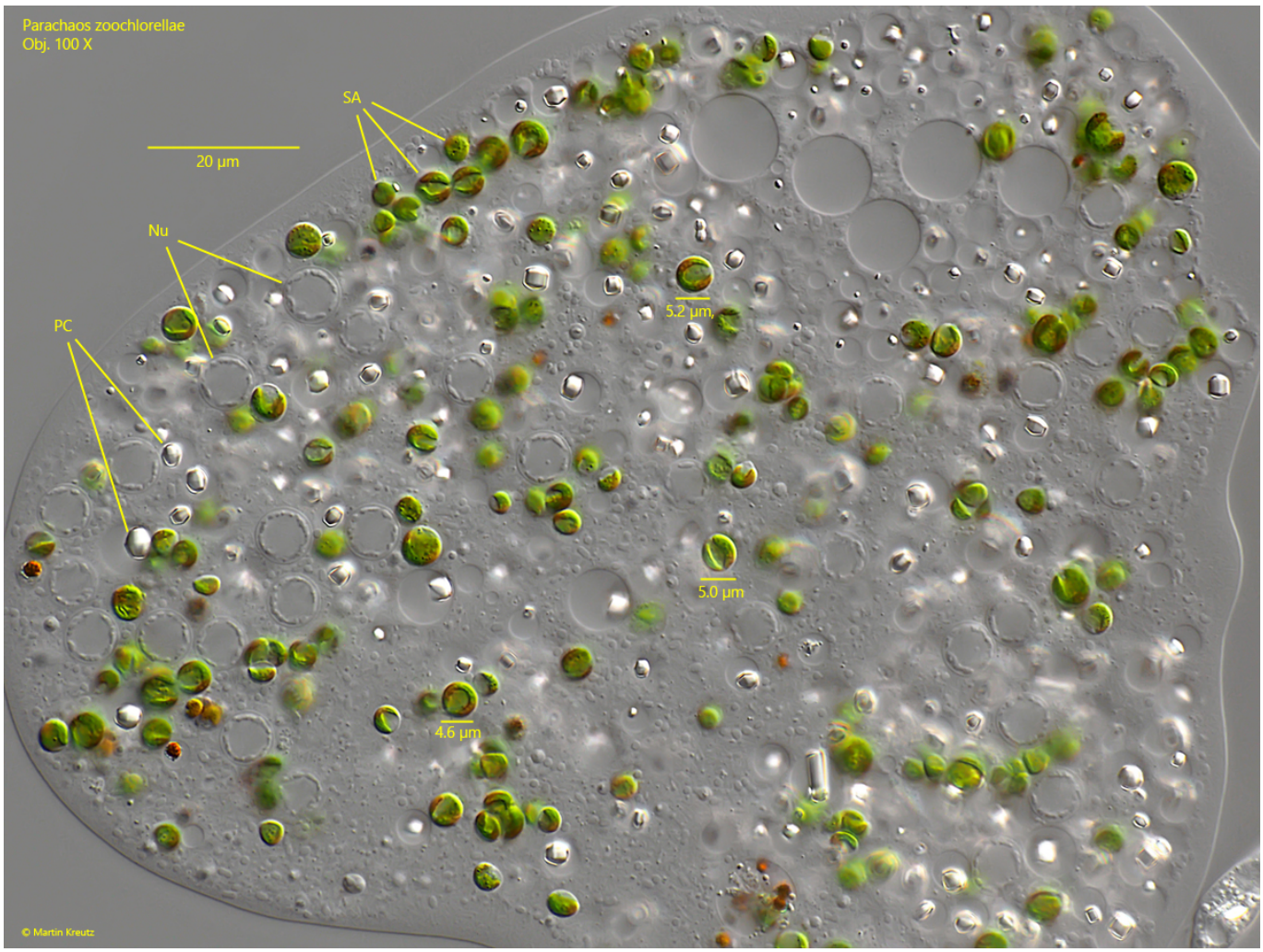

Fig. 3: *Parachaos zoochlorellae*. In a strongly squashed specimen the numerous nuclei (Nu) become visible. The symbiotic algae are from the *Chlorella* type with a cup-shaped chloroplast. The diameter of the algae cells is 4.6–5.2 µm. In the cytoplasm are numerous polyhedral crystals (PC) scattered. All crystals are located in separate vacuoles. Obj. 100 X