

***Menoidium obtusum* Pringsheim, 1942**

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

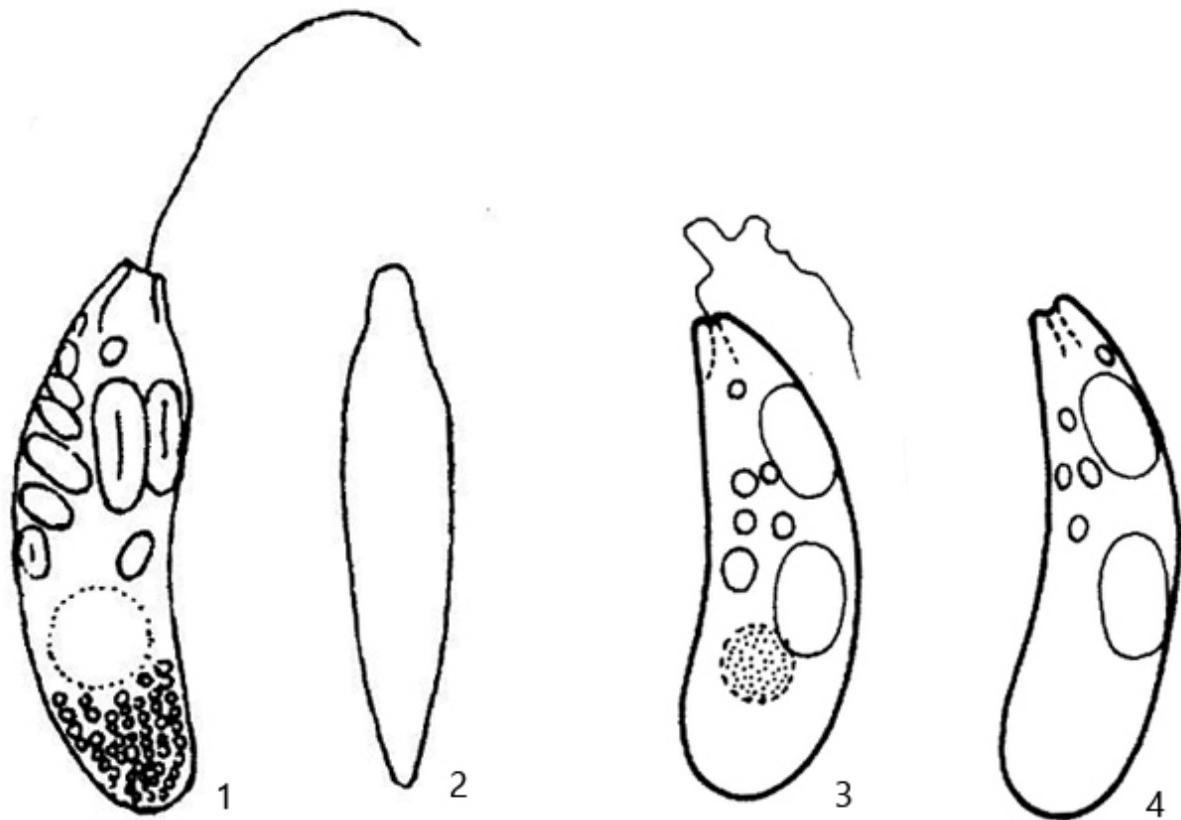
**Synonym:** n.a.

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

**Phylogenetic tree:** [\*Menoidium obtusum\*](#)

**Diagnosis:**

- cells curved, laterally strongly compressed
- length 30–42 µm
- anterior end slightly tapered and transversely blunted
- posterior end broadly rounded
- pellicle with longitudinal striation
- one flagellum, not reaching body length
- nucleus globular below mid-body with central nucleolus
- large paramylon grains in anterior half of cell
- aggregation of small paramylon granules in posterior half



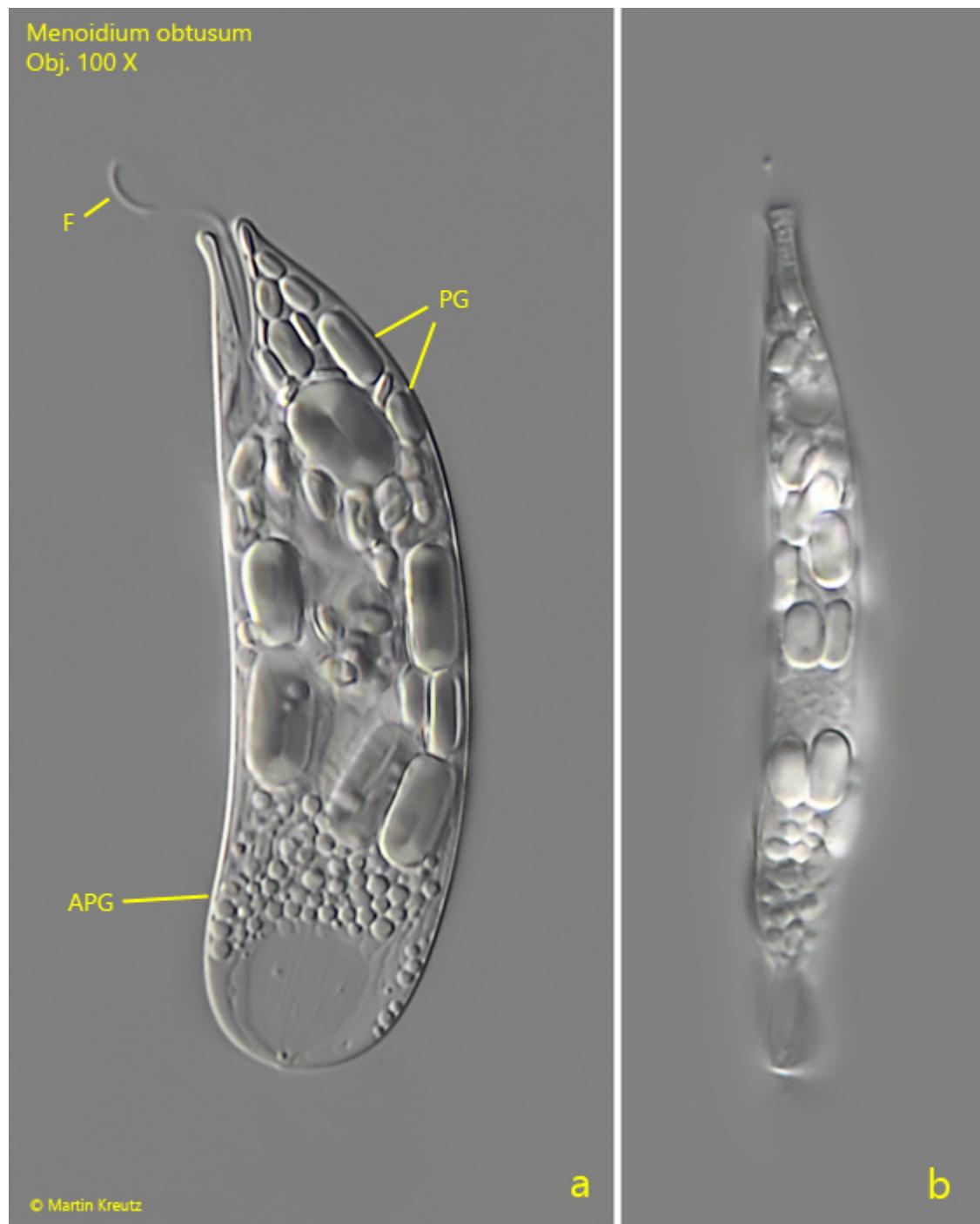
1, 2 = after Pringsheim  
 3, 4 = after Alves da Silva

### Menoidium obtusum

*Menoidium obtusum* is by far the most common species of the genus *Menoidium* in the [Simmelried](#). There it sometimes emerges in enormous masses, with thousands of specimens per milliliter. However, until 2017, this species was completely absent from [Simmelried](#). After that, the population has grew steadily and reached its current strength around 2019.

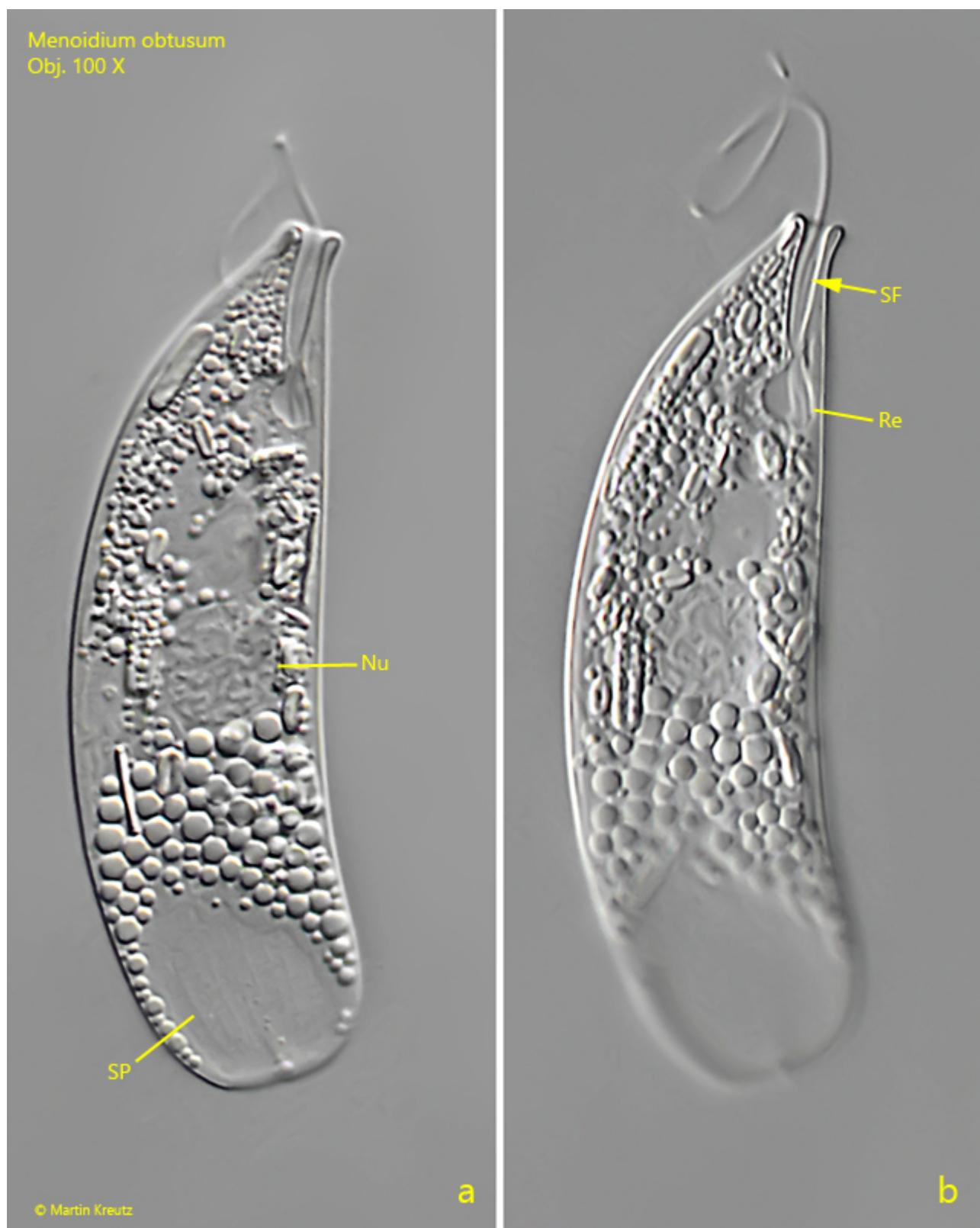
*Menoidium obtusum* can be easily identified by its somewhat clumsy shape in lateral view. The anterior end is not snout-like extended as in [Menoidium pellucidum](#), but obliquely truncated. The distribution of the paramylon grains is typical of *Menoidium*. The anterior half contains the large paramylon grains, while the posterior half often contains a cluster of small paramylon grains. I also found transparent specimens that lacked large paramylon grains entirely (s. fig. 2 a-b). In these specimens, the nucleus was clearly visible, which is usually obscured by the paramylon grains (s. fig. 2 a). In addition, the delicate, longitudinal striation of the pellicle described by Pringsheim was visible in these transparent specimens (s. fig. 2 a). The specimens in my population were consistently about 50 µm long, with some specimens as long as 58 µm. This is longer than indicated by Pringsheim (30-37 µm). *Menoidium obtusum* was also described by Alves-da Silva and Friedrich

(2009). These authors give a length of 41–42  $\mu\text{m}$ . Due to the few descriptions of *Menoidium obtusum*, the variability of the body length is obviously not sufficiently evaluated.



**Fig. 1 a-b:** *Menoidium obtusum*. L = 53  $\mu\text{m}$ . A freely swimming specimen from left and from the narrow side. APG = aggregation of small paramylon grains, F = flagellum, PG = paramylon grains. Obj. 100 X.

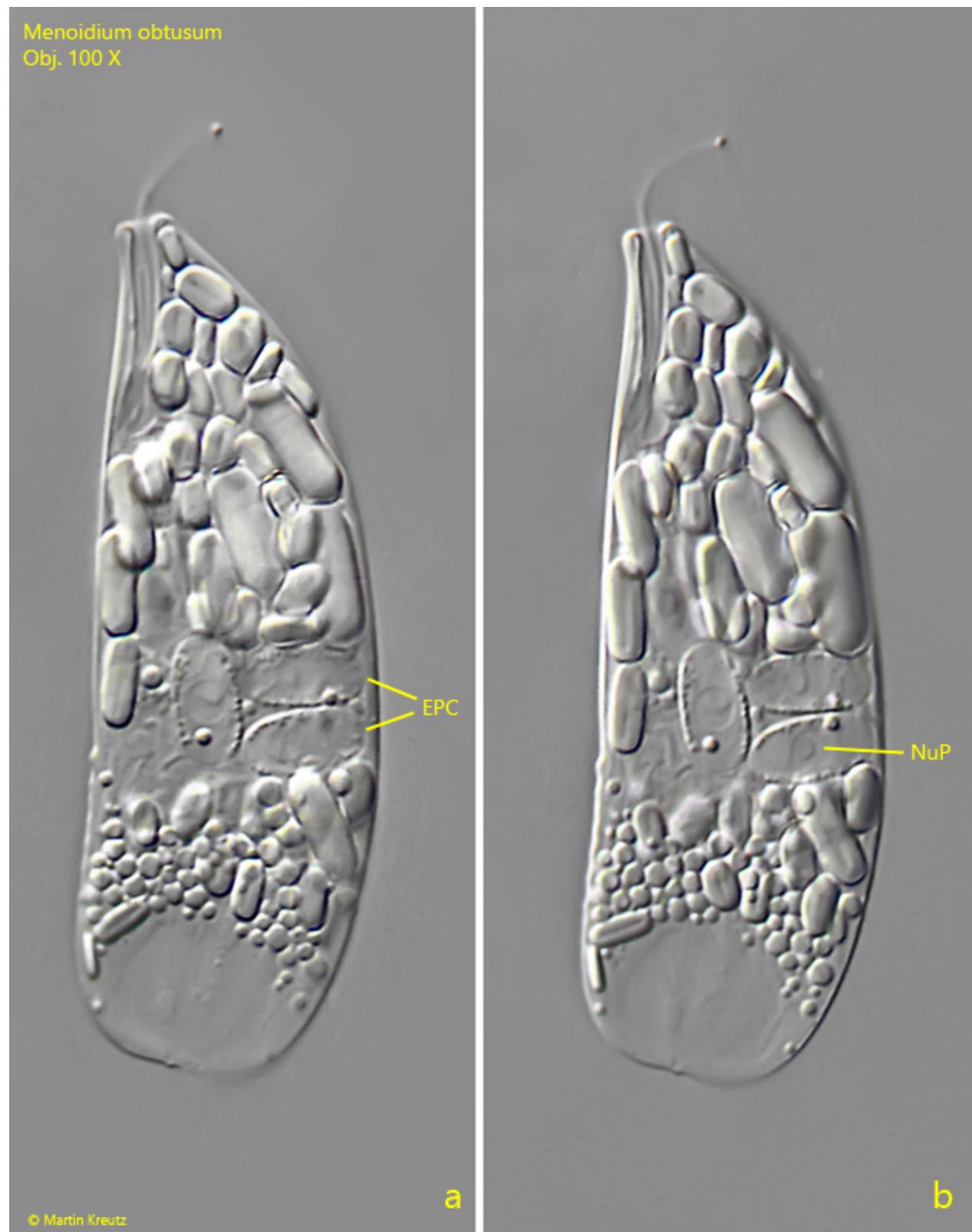
*Menoidium obtusum*  
Obj. 100 X



**Fig. 2 a-b:** *Menoidium obtusum*. L = 53  $\mu$ m. A second specimen without large paramylon grains. Note the longitudinal striation of the pellicle (SP) and the short, secondary flagellum (SF) in the reservoir (Re). Nu = nucleus. Obj. 100 X.

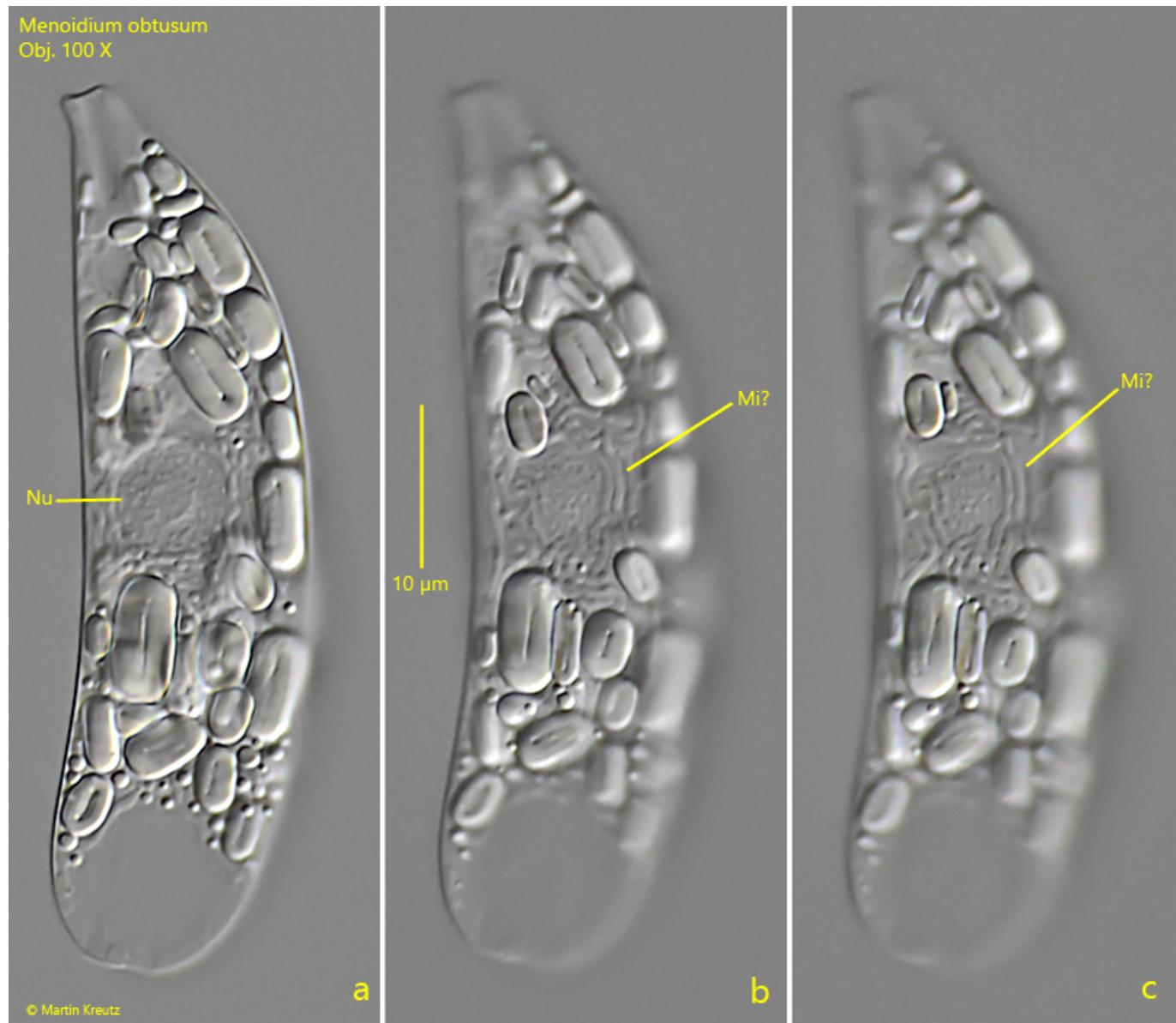
In my population I could find many specimens which were obviously infested by endoparasitic cells. Around the nucleus of these specimens, oval, transparent cells

with a length of 7-8  $\mu\text{m}$  were present (s. fig. 3 a-b). Each of these endoparasitic cells had its own nucleus. Possibly, this is an endoparasitic fungus. I could not observe developmental stages of this endoparasite.



**Fig. 3 a-b:** *Menoidium obtusum*. L = 49  $\mu\text{m}$ . A specimen infested by endoparasitic cells (EPC). In each of these endoparasitic cells a separate nucleus is visible (NuP). The length of the endoparasitic cells is 7-8  $\mu\text{m}$ . Obj. 100 X.

In other specimens of *Menoidium obtusum* I could see worm-like structures in the area around the nucleus (s. fig. 4 a-c). The nature of these structures is unknown to me. Possibly they are mitochondria, which sometimes can also have a worm-like appearance.



**Fig. 4 a-c:** *Menoidium obtusum*. L = 56 µm. A specimen with worm-like structures in the area around the nucleus. Possibly these are mitochondria (Mi?). Nu = nucleus. Obj. 100 X.