Heteronema acus

(Ehrenberg) Stein, 1878

Most likely ID: n.a.

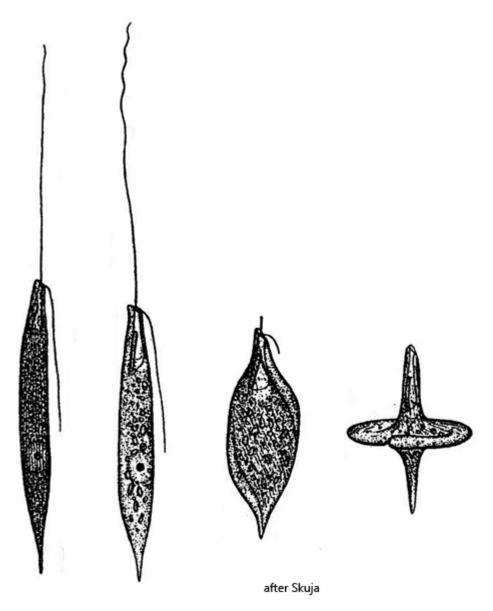
Synonym: Astasia acus, Pseudoperanema acus

Sampling location: Purren pond, Ulmisried, Bussenried, Mainau pond, Simmelried

Phylogenetic tree: <u>Heteronema acus</u>

Diagnosis:

- cell spindle-shaped, tapered towards both ends
- length 40-56 μm, width 8-20 μm
- leading flagellum about body length
- trailing flagellum half of body length
- periplast with delicate striation running in conterclockwise direction, sometimes smooth
- one contractile vacuole in anterior end
- nucleus central
- sometimes green and yellow remains of ingested algae



Heteronema acus

Heteronema acus is the most common representative of the genus Heteronema in my sampling sites. The species is well recognizable by the spindle-shaped body and the trailing flagellum, which is about half as long as the body. The leading flagellum is usually slightly longer than the body and forms a lasso-shaped loop at the distal end, while the rest of the flagellum remains straight when swimming. *Heteronema acus* likes to settle on the <u>floating</u> coverslip and is then easy to observe.

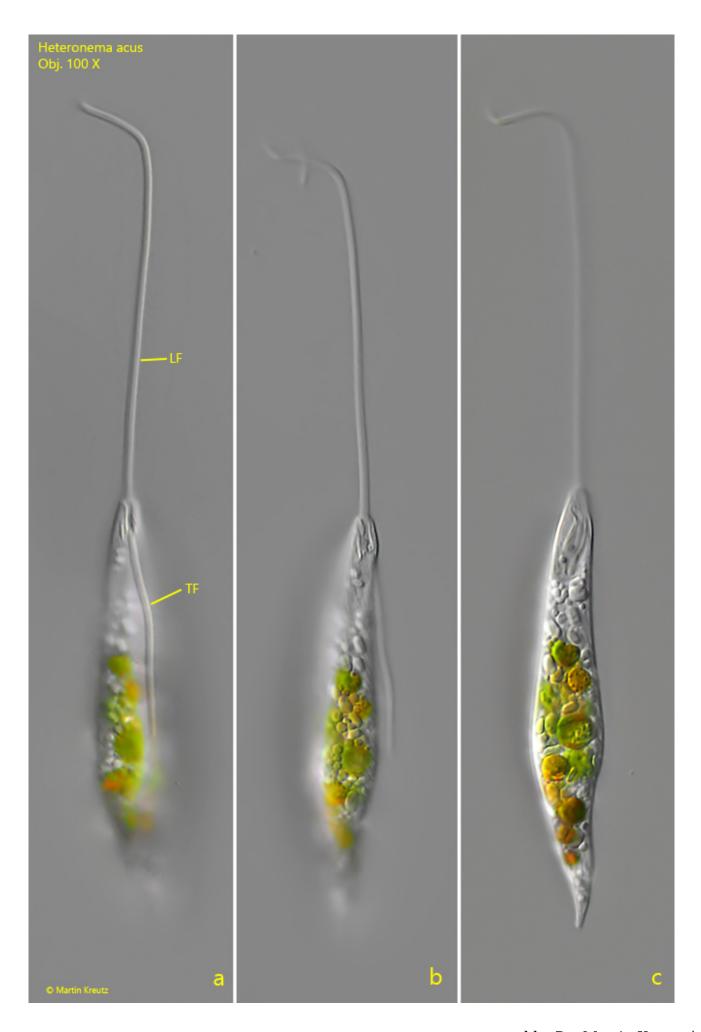


Fig. 1 a-c: *Heteronema acus.* $L = 59 \mu m$. Three focal planes of a freely swimming specimen. Note the trailing flagellum (TF) projecting posteriorly end parallel to the body. LF = leading flagellum. Obj. 100 X.

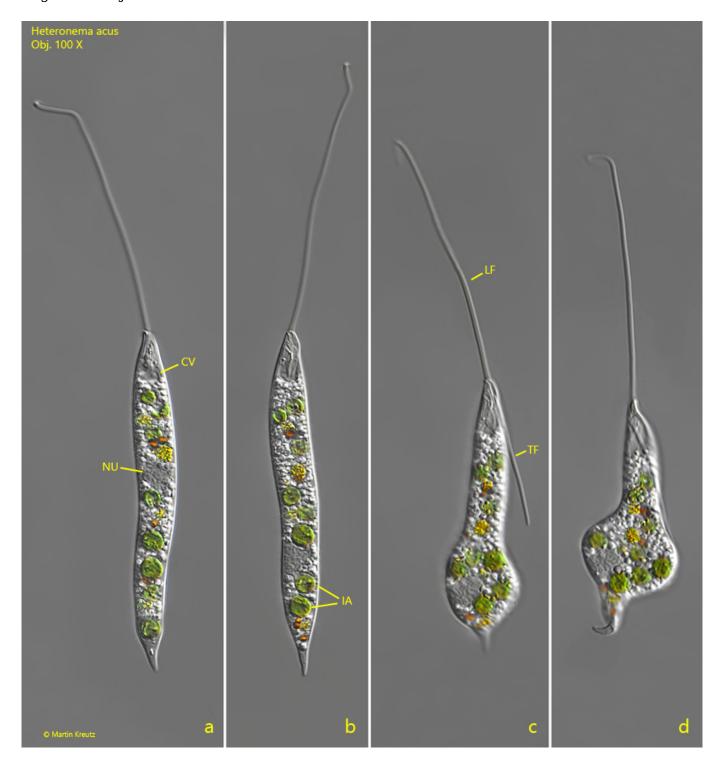


Fig. 2 a-d: Heteronema acus. $L = 78 \mu m$. A second, slightly squashed specimen. CV =contractile vacuole, IA = ingested algae, LF = leading flagellum, Nu = nucleus, TF = leadingtrailing flagellum. Obj. 100 X.

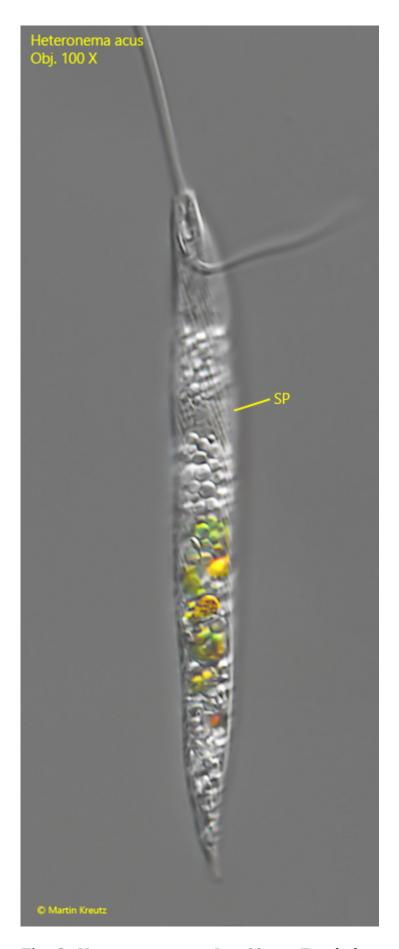


Fig. 3: Heteronema acus. $L=68~\mu m$. Focal plane on the delicate striation of the pellicle (SP) of a third specimen. The striation runs in counterclockwise direction to the posterior

end. Obj. 100 X.