

Heteronema acus
(Ehrenberg) Stein, 1878

Most likely ID: n.a.

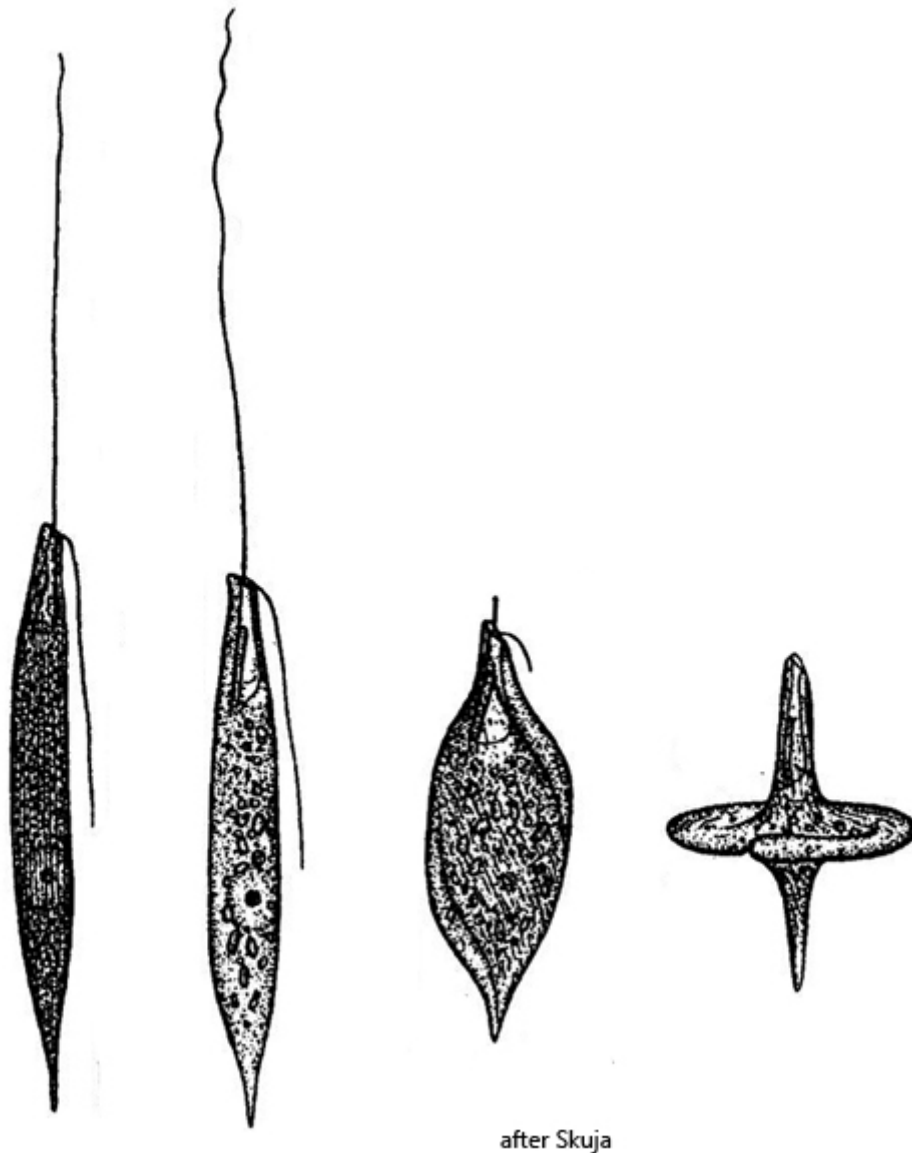
Synonym: *Astasia acus*, *Pseudoperanema acus*

Sampling location: [Purren pond](#), [Ulmsried](#), [Bussenried](#), [Mainau pond](#), [Simmelried](#)

Phylogenetic tree: [Heteronema acus](#)

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 counterclockwise, sometimes smooth
- one contractile vacuole in anterior end
- nucleus central
- sometimes green and yellow remains of ingested algae



after Skuja

Heteronema acus

Heteronema acus is the most common representative of the genus *Heteronema* in my sampling sites. The species is well recognized 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 [floating coverslip](#) and is then easy to observe.

Heteronema acus
Obj. 100 X

LF

TF

a

b

c

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

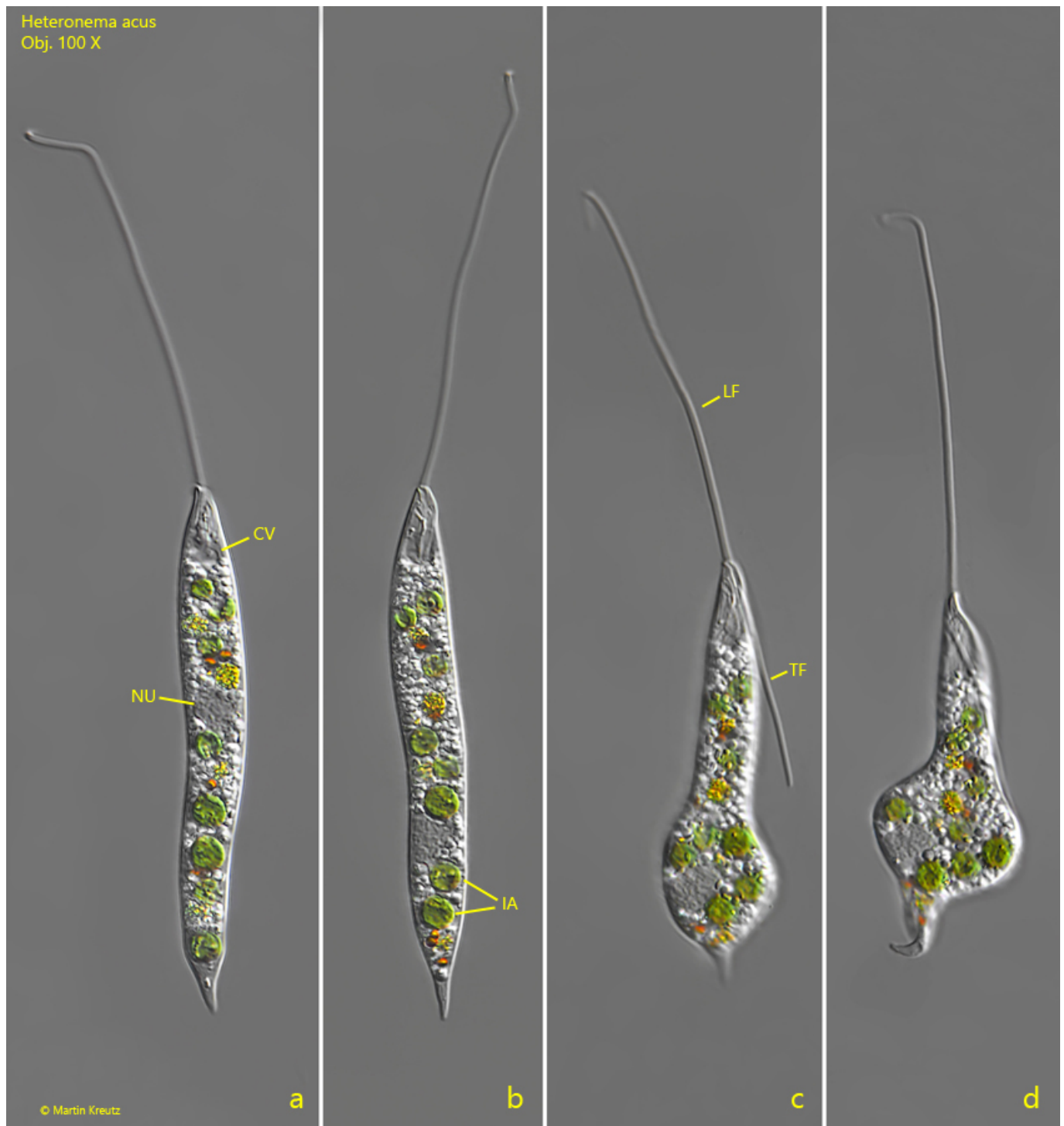


Fig. 2 a-d: *Heteronema acus*. L = 78 μ m. A second, slightly squashed specimen. CV = contractile vacuole, IA = ingested algae, LF = leading flagellum, Nu = nucleus, TF = trailing flagellum. Obj. 100 X.

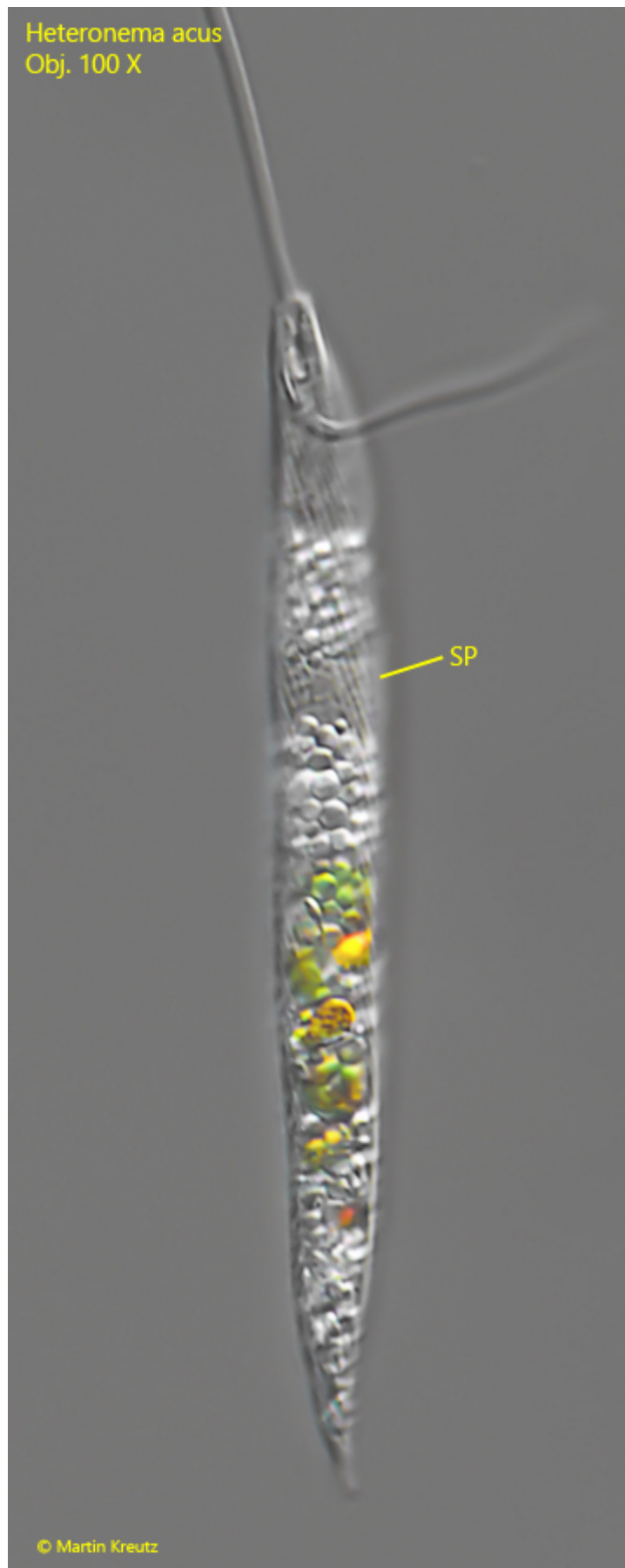


Fig. 3: *Heteronema acus*. L = 68 μ m. Focal plane on the delicate striation of the pellicle (SP) of a third specimen. The striation is running counterclockwise to the posterior end. Obj.

100 X.