Dysteria monostyla

(Ehrenberg, 1838) Kahl, 1931

Most likely ID: n.a.

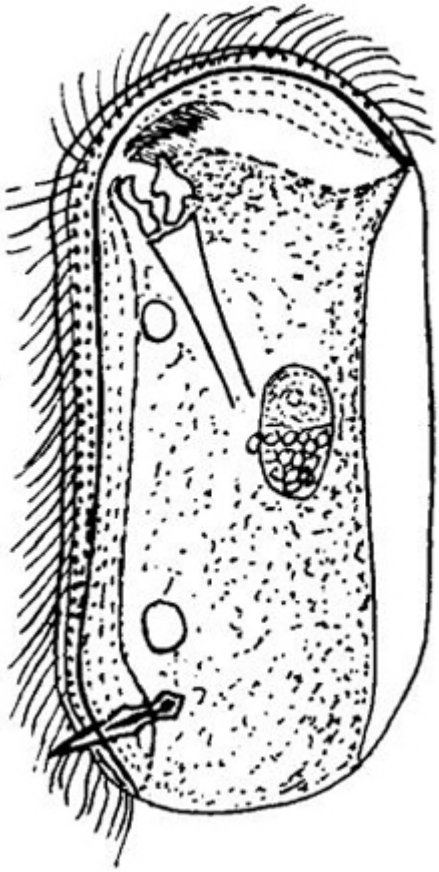
Synonym: n.a.

Sampling location: Fire-fighting pond Hiddensee

Phylogenetic tree: *Dysteria monostyla*

Diagnosis:

- body rectangular, dorso-ventrally flattened
- length 80–100 µm
- heteromerous macronucleus ovoid, central
- one small, spherical micronucleus
- ventral ciliation reduced to a stripe in a groove on right side
- groove with cilia vovered partly by ventral plate
- dorsal side naked
- two contractile vacuoles at right side
- cytopharyngeal basket oriented diagonally
- ventral spine at posterior end on right side



Dysteria monostyla

So far I have only found *Dysteria monostyla* once in a fire-fighting pond on the island of Hiddensse. The fire-fighting pond is located near the Hiddensee Biological Station in a south-easterly direction. It contains fresh water.

The samples from the fire-fighting pond contained only a few specimens. *Dysteria monostyla* has actually been described as a marine species, but the species appears to be adaptable.

The characteristics of my *Dysteria monostyla* population are consistent with Kahl's description apart from the length of the specimens. Kahl give a range from 80–100 µm while the specimens of my population had a length of about 50 µm. However, it is possible that the variability in size is also greater than previously known, as Wang et al. (2019) described a population of *Dysteria monostyla* from the China Sea with a length of 40–70 µm.

The almost rectangular body shape of *Dysteria monostyla* is very characteristic. At the posterior end there is a spine on the right side, which probably has a sensory function. This

is located at the end of a groove formed by the dorsal and ventral plate. The strongly reduced ciliatur in the form of a narrow band is localized in this groove. The cytophyryngeal basket is clearly arranged diagonally and the distal end of the nematodesmal rods are connected with a complex structure that is difficult to interpret under the light microscope. The macronucleus consists of two parts, similar to the related genus *Trochilia*. There are two contractile vacuoles on the right side.

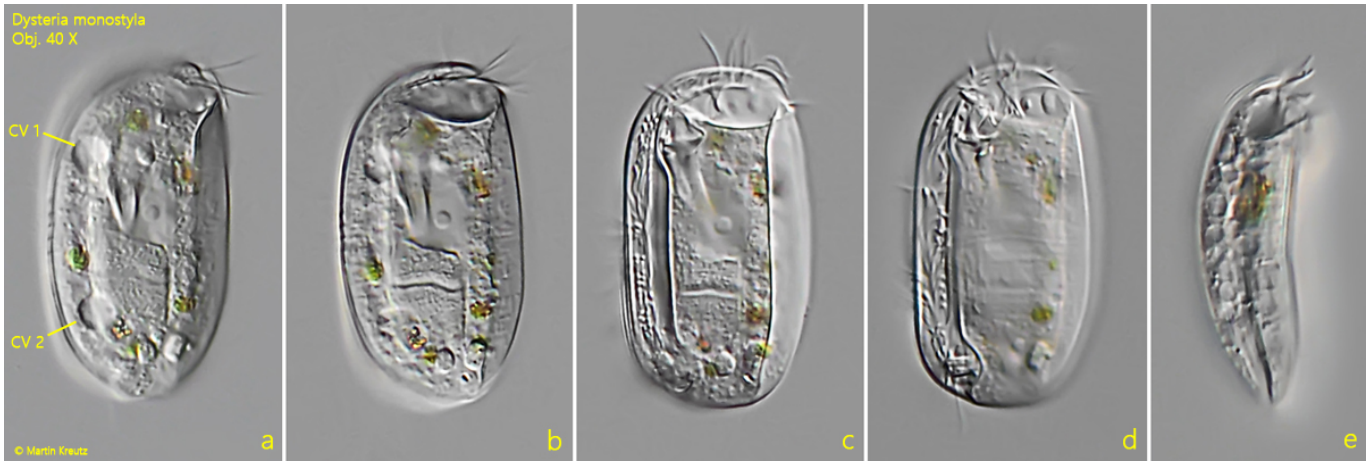


Fig. 1 a-e: *Dysteria monostyla*. L = 53 µm. A freely swimming specimen from ventral (a-d) and from right (e). Note the two contractile vacuoles (CV 1, CV 2) on the right side. Obj. 40 X.

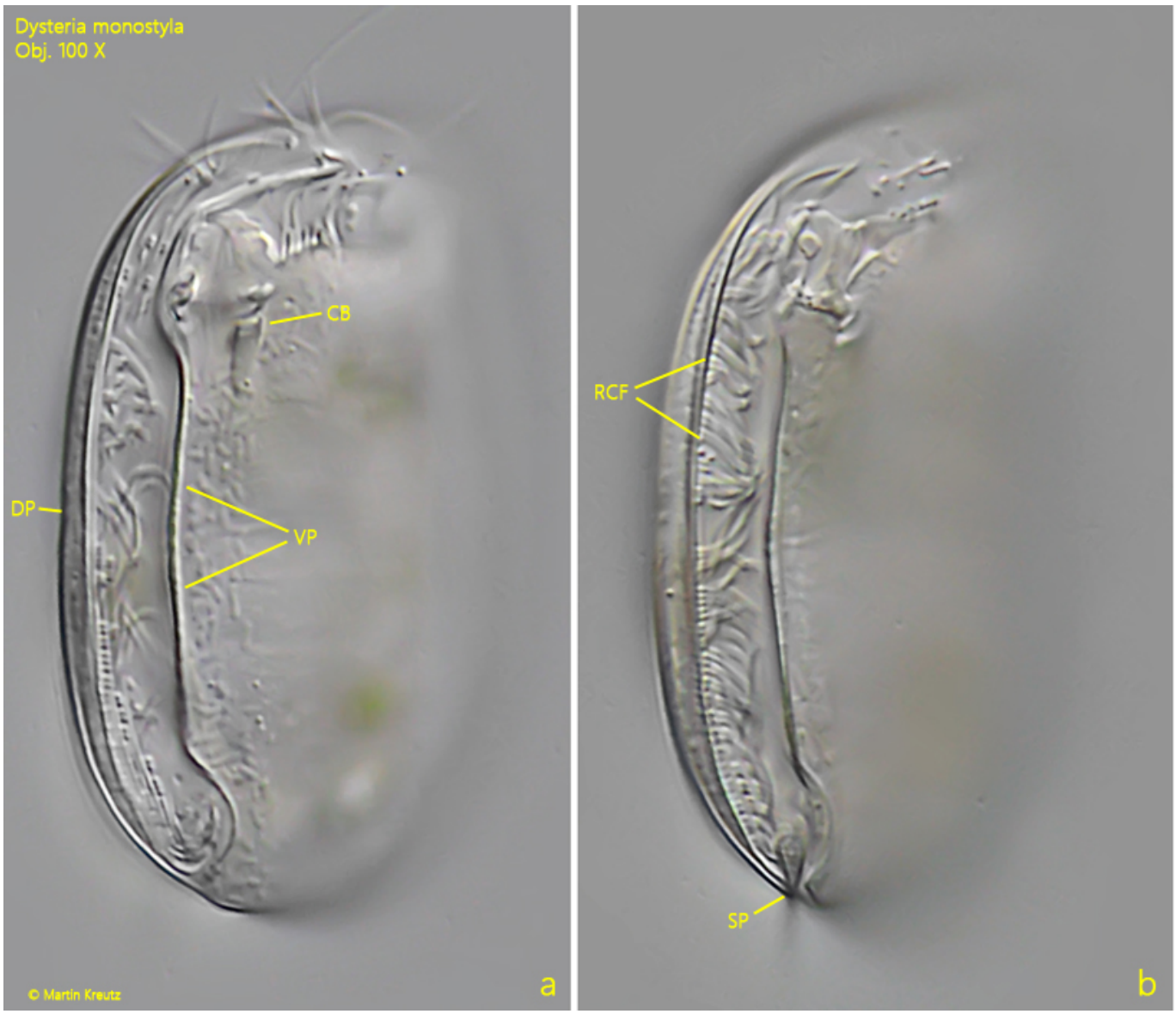


Fig. 2 a-b: *Dysteria monostyla*. L = 52 µm. A freely swimming specimen from right with focal plane on the groove between the dorsal plate (DP) and ventral plate (VP) with the right ciliary field (RCF). CB = cytopharyngeal basket, SP = posterior spine. Obj. 100 X.

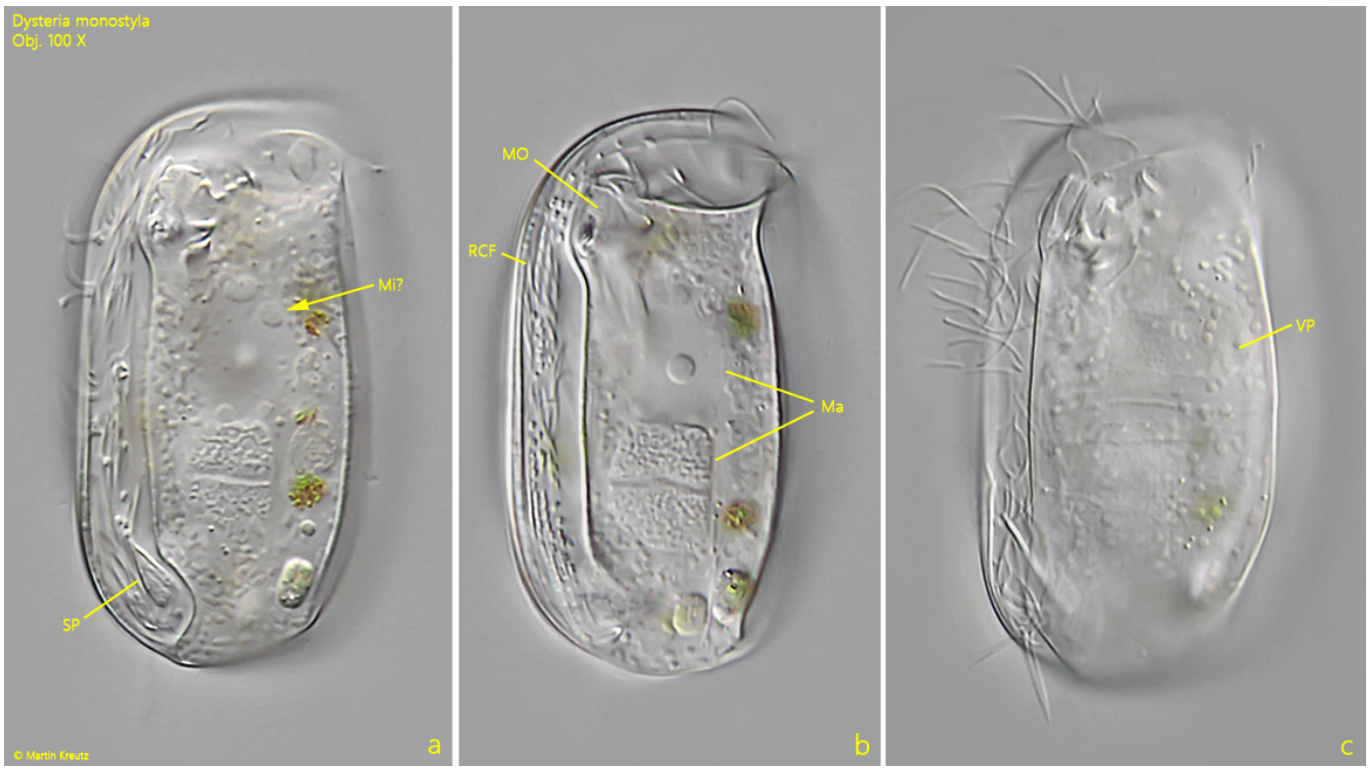


Fig. 3 a-c: *Dysteria monostyla*. L = 52 µm. Different focal planes of a slightly squashed specimen from ventral. Note the posterior spine (SP) located at the posterior end of the lateral groove and the heteromerous macronucleus (Ma). Mi? = probably the micronucleus, MO = mouth opening, RCF = right ciliary field, VP = ventral plate. Obj. 100 X.

Fig. 4: *Dysteria monostyla*. A squashed specimen from ventral. The cytopharyngeal basket (CB) is oriented diagonally. The teeth at the distal end of the nematodesmal rods are connected to a complex structure. Mi = micronucleus. Obj. 100 X.