Loxocephalus plagius

(Stokes 1885) Kahl, 1931

Most likely ID: n.a.

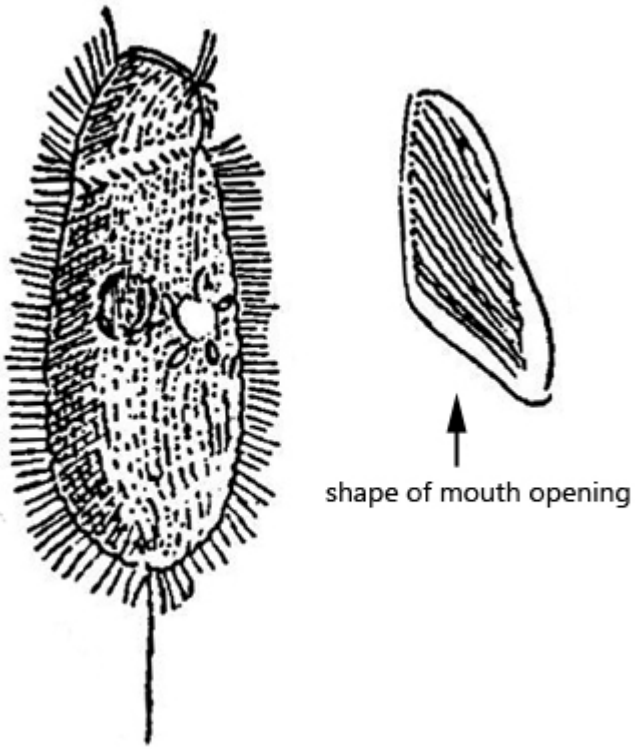
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Loxocephalus plagius*

Diagnosis:

- body elongated oval or cylindroid, often dark colored
- length 50–65 µm
- apical front plate present
- transverse ring of long adoral cilia in anterior third
- oral opening almost crescentically shaped
- spherical or broadly oval macronucleus in mid-body
- one contractile vacuole in mid-body
- conical shaped extrusomes, 3.2–3.3 µm long
- numerous granules in cytoplasm, not ring-shaped
- one caudal cilium



Loxocephalus plagius

So far I have only found *Loxocephalus plagius* in the Simmelried. However, as it is a very common ciliate, I assume that it also occurs in my other sites with a layer of mud and rotting plant parts.

Loxocephalus plagius is very easy to confuse with *Dexiotricha granulosa*, as both species are about the same size. In *Dexiotricha granulosa*, however, the granules in the cytoplasm are ring-shaped and the cilia (inclusive the caudal cilium) are rigid and straight. In addition, the mouth opening of *Dexiotricha granulosa* is smaller and the left side is C-shaped. In *Loxocephalus plagius* the mouth opening is elongated, almost crescent-shaped and on the left edge there is a characteristic angle of about 120 °, as also drawn by Kahl (s. drawing above and figs. 1 c and 4 c).

In my population of *Loxocephalus plagius* I could find distinct, spindle-shaped extrusomes, which are 2.2–3.3 µm long and are arranged beneath the pellicle (s. figs. 2 a, 3 a and 5). These extrusomes are not mentioned or drawn by Kahl in his very short description.

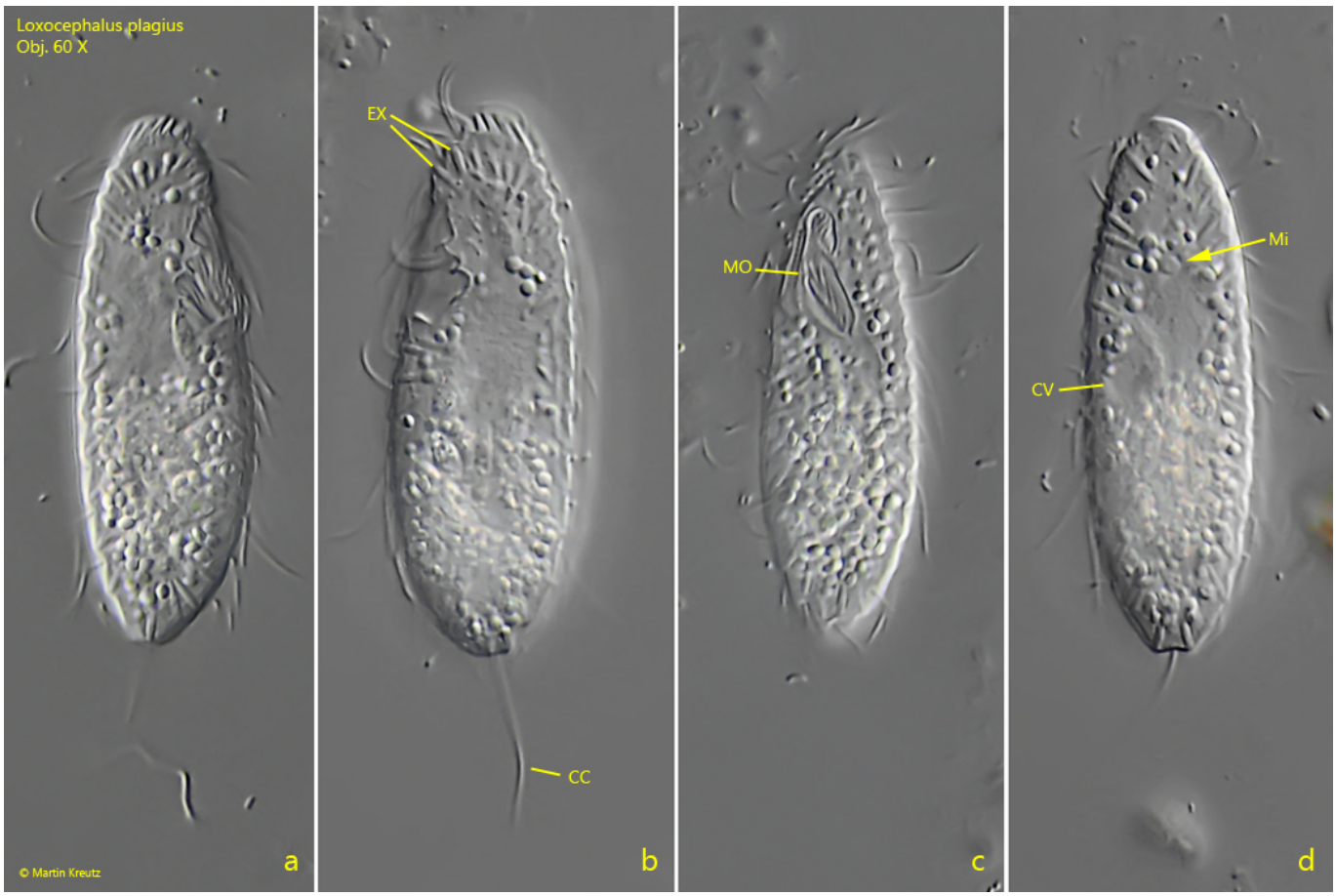


Fig. 1 a-d: *Loxocephalus plagius*. L = 46 µm. Different focal planes of a freely swimming specimen. Note the crecentic shape of the mouth opening (MO). CC = caudal cilium, CV = contractile vacuole, EX = extrusomes, Mi = micronucleus. Obj. 60 X.

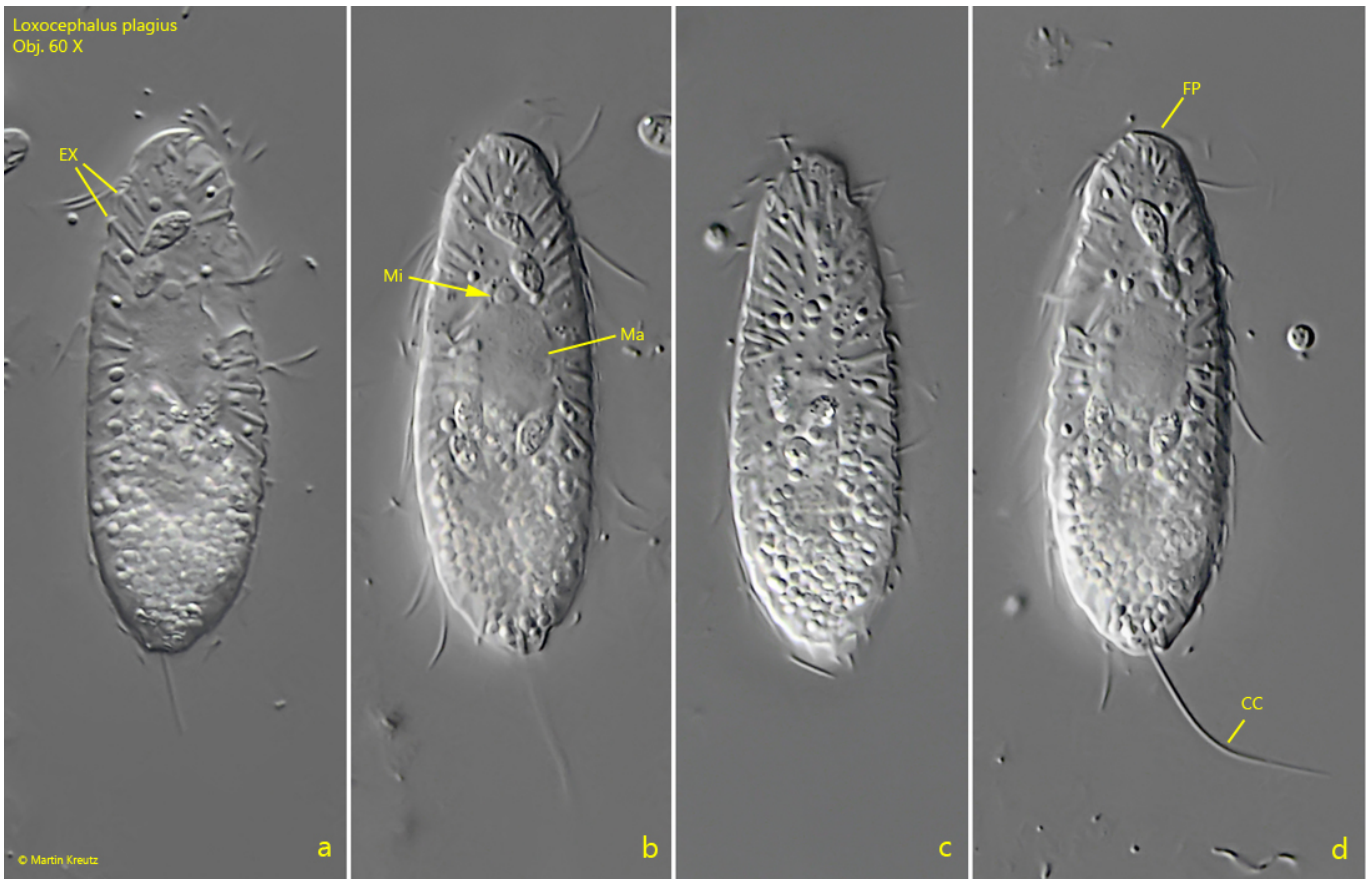


Fig. 2 a-d: *Loxocephalus plagius*. L = 46 µm. Different focal planes of a second freely swimming specimen. CC = caudal cilium, EX = extrusomes, FP = frontal plate, Ma = macronucleus, Mi = micronucleus. Obj. 60 X.



Fig. 3 a-c: *Loxocephalus plagius*. L = 46 µm. The specimen as shown in fig. 2 a-d in detail. CC = caudal cilia, EP = excetuion porus of the contractile vacuole, EX = extrusome, Ma = macronucleus, UM = undulating membranelle. Obj. 100 X.

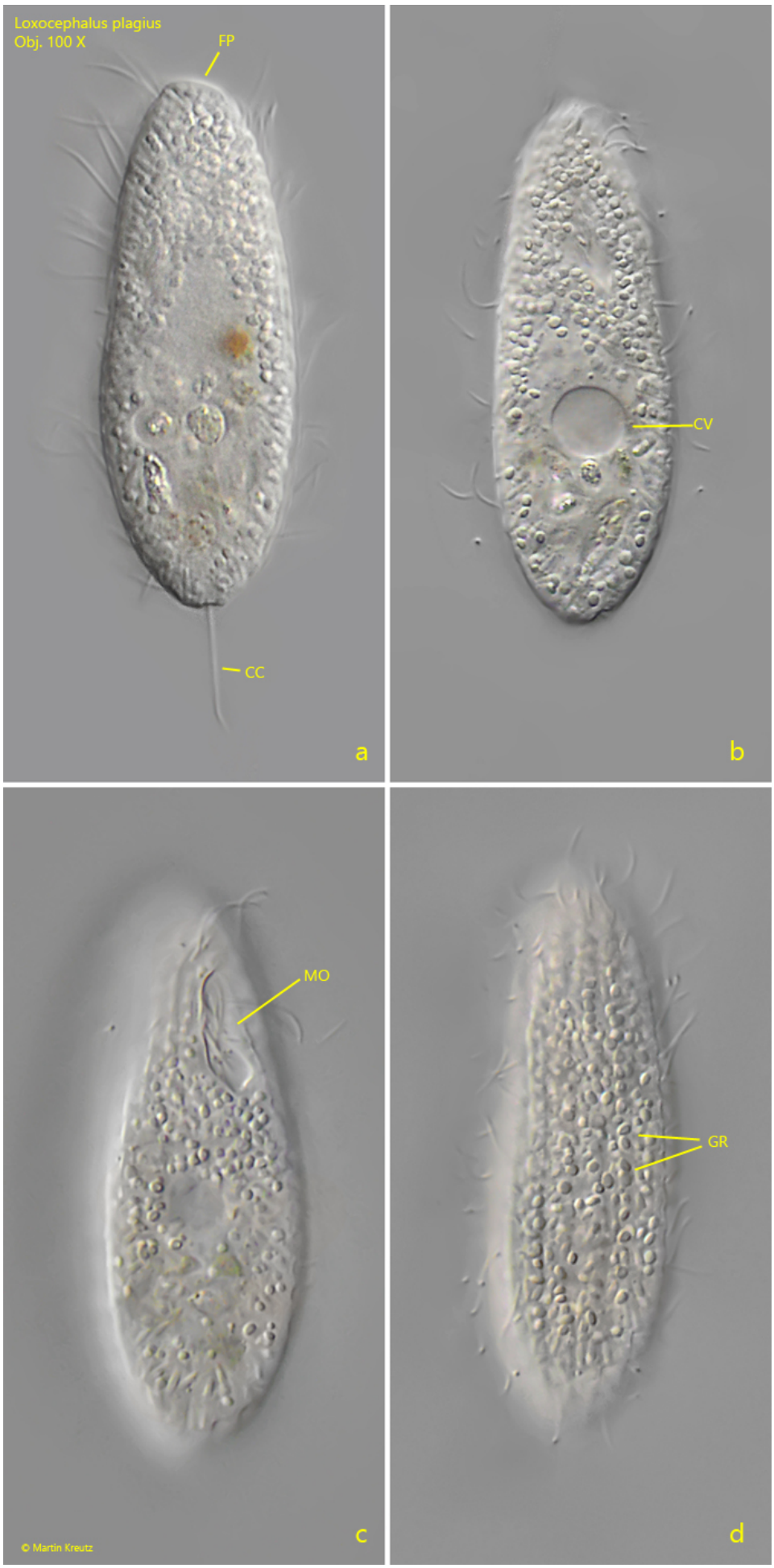

Loxocephalus plagius
Obj. 100 X
FP
CC
a
CV
b
MO
c
© Martin Kreutz
GR
d

Fig. 4 a-d: *Loxocephalus plagius*. L = 53 µm. Different focal planes of a third freely swimming specimen. Note the crecentic shape of the mouth opening (MO) and the irregularly, not ring-shaped granules (GR). CC = caudal cilium, CV = contractile vacuole, FP = frontal plate. Obj. 100 X.



Fig. 5: *Loxocephalus plagius*. L = 55 µm. A slightly squashed specimen from right. CC = caudal cilium, CV = contractile vacuole, EX = extrusomes, FP = frontal plate,

Ma = macronucleus, MO = mouth opening. Obj. 100 X.