

***Polyarthra minor* Voigt, 1904**

Most likely ID: n.a.

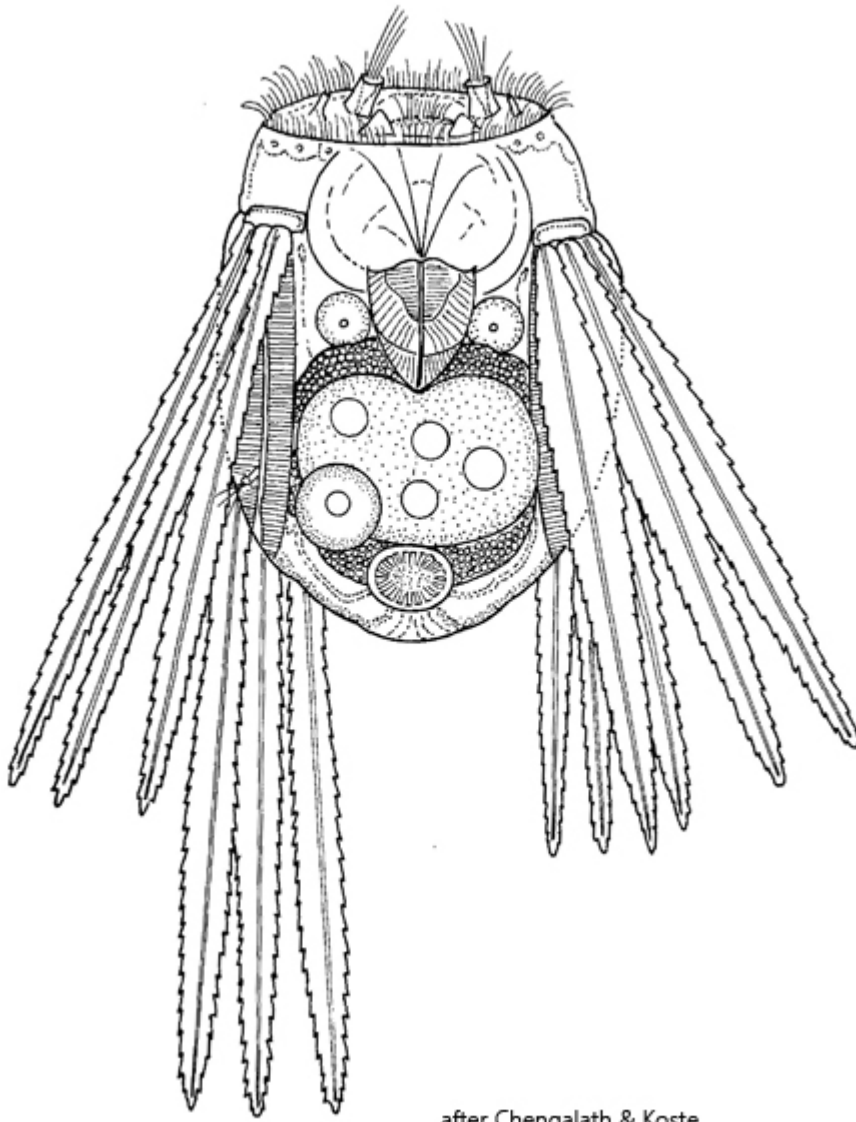
Synonym: n.a.

Sampling location: [Sima Moor \(Austria\)](#), Diebelsee (near Johannisthal)

Phylogenetic tree: [Polyarthra minor](#)

Diagnosis:

- body almost rectangular
- length 68–70 μm (of body)
- four groups of each 3 lateral fins
- two groups of fins inserted dorsally
- two groups of fins inserted ventrally
- the fins of the left dorsal group significantly longer
- dorsal fins very thin
- lateral antennae near mid-body
- vitellarium with 4 nuclei
- one dorsal eyespot



after Chengalath & Koste

Polyarthra minor

So far I have found *Polyarthra minor* only in the [Sima Moor](#) and in the Diebelsee near Johannisthal. Both bodies of water have a moor-like character with a lot of *Sphagnum* moss. This is the preferred habitat, as also described in the literature.

Polyarthra minor is the smallest representative within the genus *Polyarthra*, with a body length of approx. 80 μm . In the samples, the specimens are easily recognized by the typical body shape. This is approximately rectangular, with the folded lateral fins angled roof-like toward the central body axis at the posterior end. On each side of the body there are two bundles of 3 fins each, with each bundle having a joint to which a strong muscle is attached (s. fig. 4). With the muscles that insert at the joint, the fins can be splayed out abruptly, resulting in a very rapid escape movement.

As early as 1904, Voigt noted that the fins of *Polyarthra minor* exhibit a peculiar asymmetry. The left, dorsal bundle of fins is significantly longer than the fins of the other bundles. In freely swimming specimens this asymmetry is difficult to discern, but in compressed specimens it becomes apparent (s. figs 4 and 5). According to my measurements, the fins of the left dorsal bundle are about 25–30 % longer than those of the other bundles. The reasons for this asymmetry are not clarified.

More images and information on *Polyarthra minor*: [Michael Plewka-Freshwater life-Polyarthra minor](#)

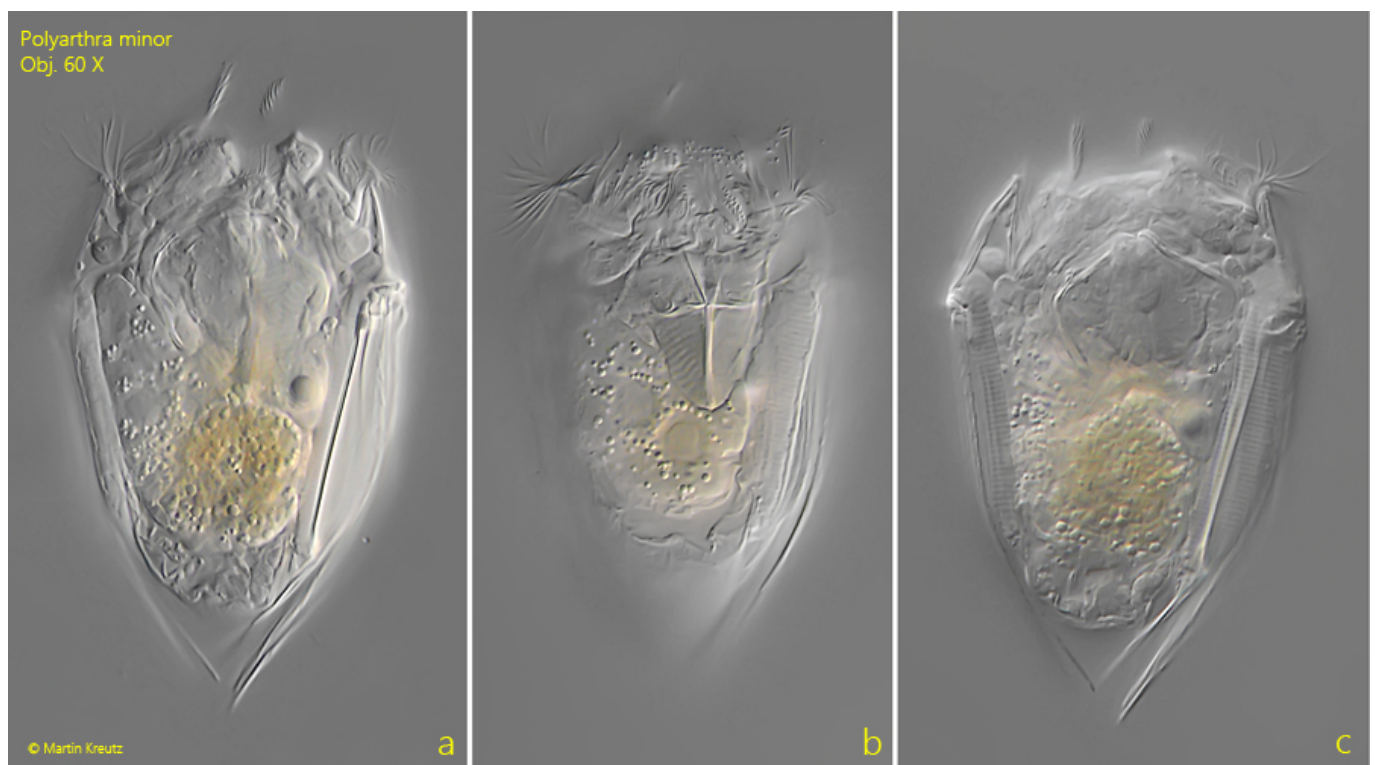


Fig. 1 a-c: *Polyarthra minor*. L = 73 μ m (of body). A freely swimming specimen from ventral. Obj. 60 X.

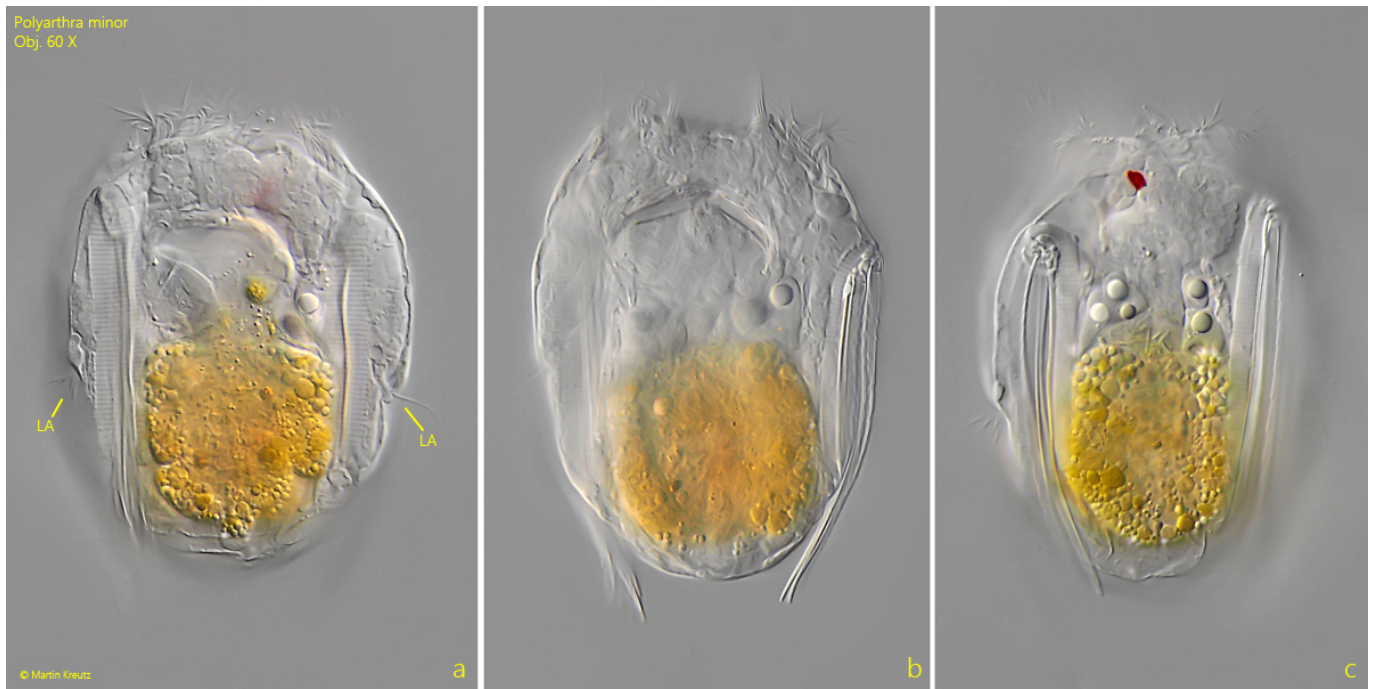


Fig. 2 a-c: *Polyarthra minor*. L = 87 μ m (of body). A second freely swimming specimen from dorsal. Note the lateral antennae (LA) near mid-body. Obj. 60 X.

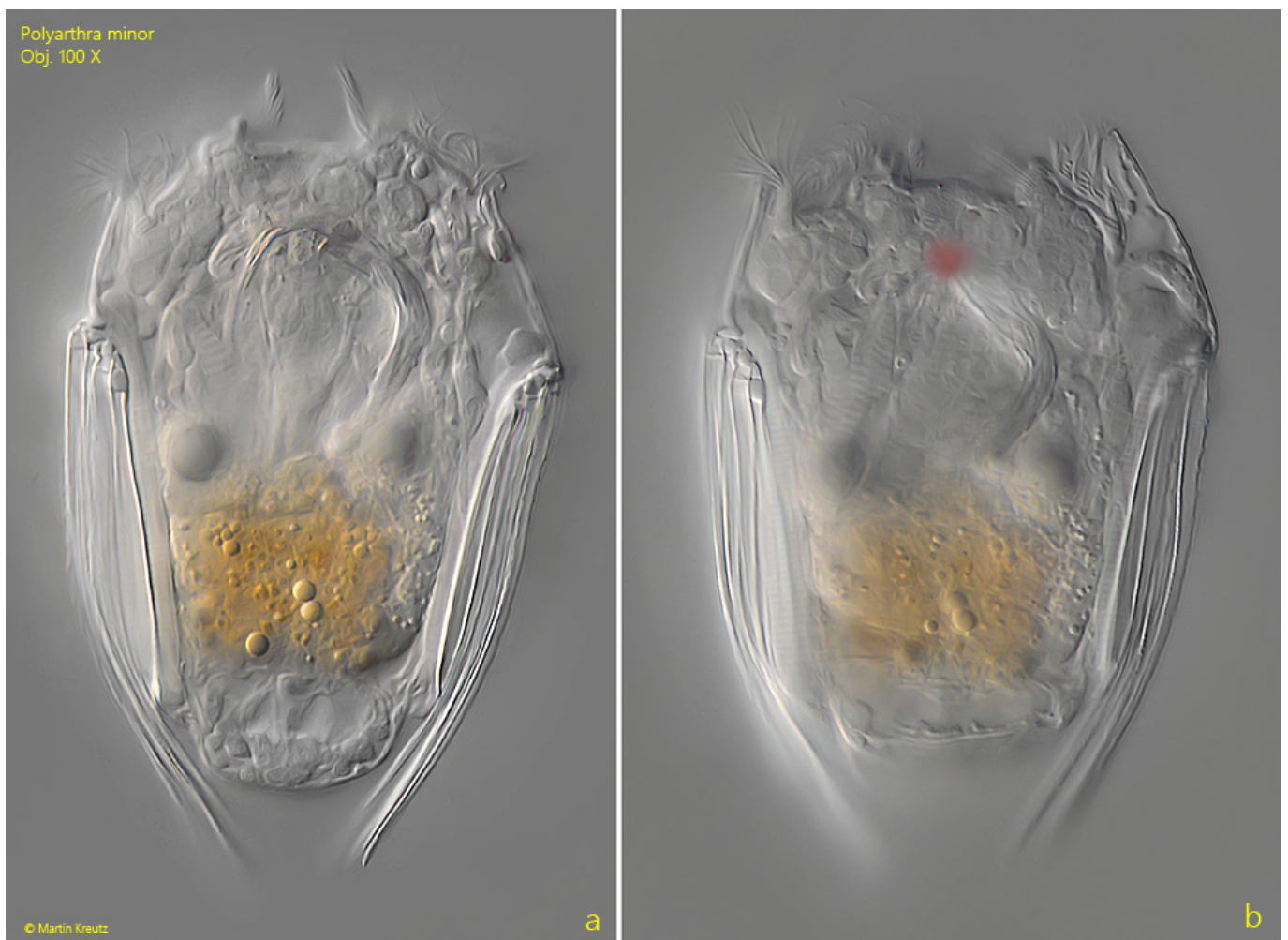
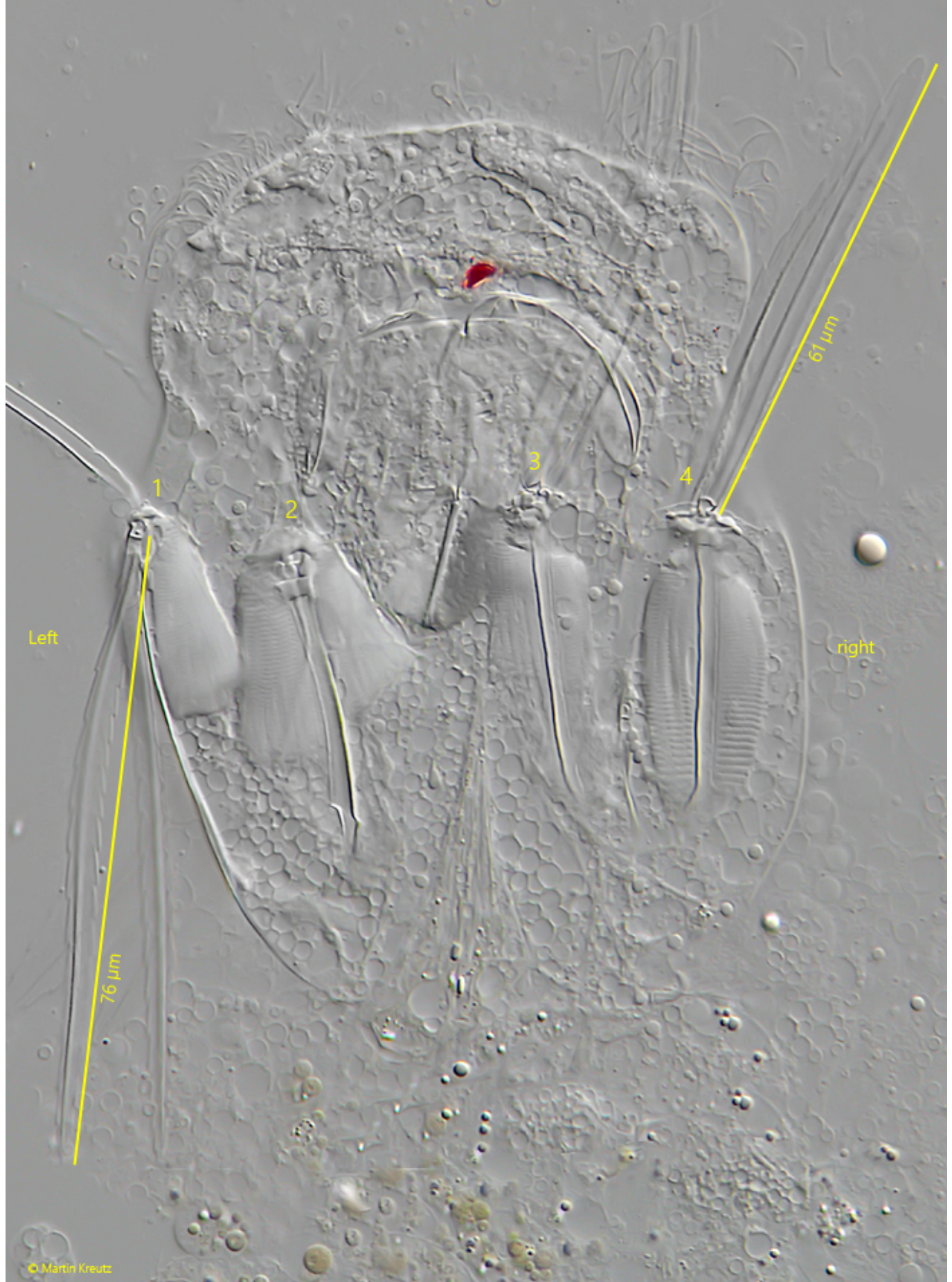


Fig. 3 a-b: *Polyarthra minor*. L = 78 μ m (of body). A third freely swimming

specimen from ventral. Obj. 60 X.

Polyarthra minor
Obj. 100 X



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Fig. 4: *Polyarthra minor*. A strongly squashed specimen from dorsal. The joints (1-4) of the 4 groups of fins are visible with the muscles below. The fins of the left dorsal group (joint 1) are 15 μm longer than the fins on the right side (joint 4), what corresponds to a difference of 25 %. Obj. 100 X.

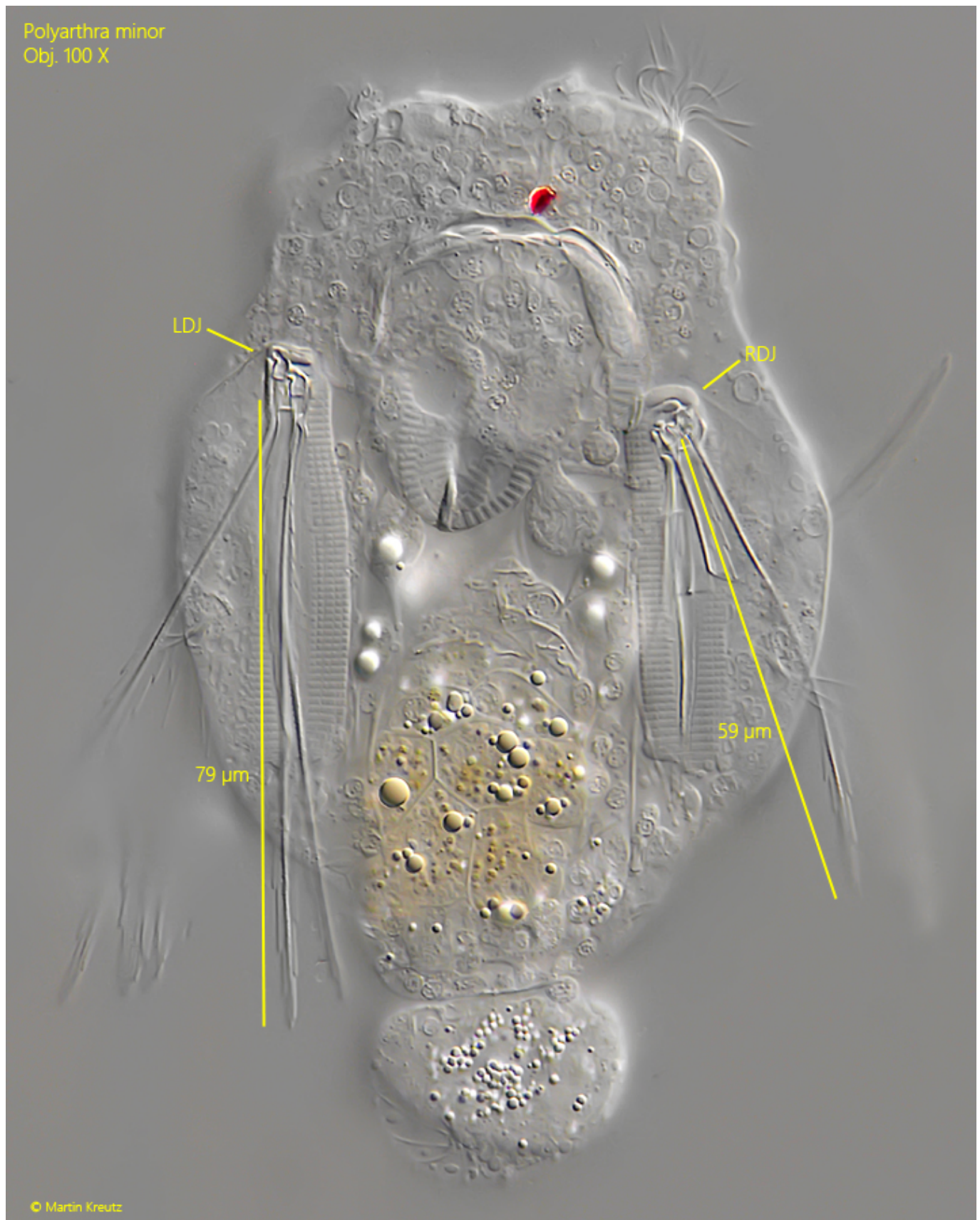


Fig. 5: *Polyarthra minor*. A second squashed specimen from dorsal. The fins of the left dorsal joint (LDJ) are 20 μm longer than the fins of the right dorsal joint (RDJ) what corresponds to a difference of 29 %. Obj. 60 X.

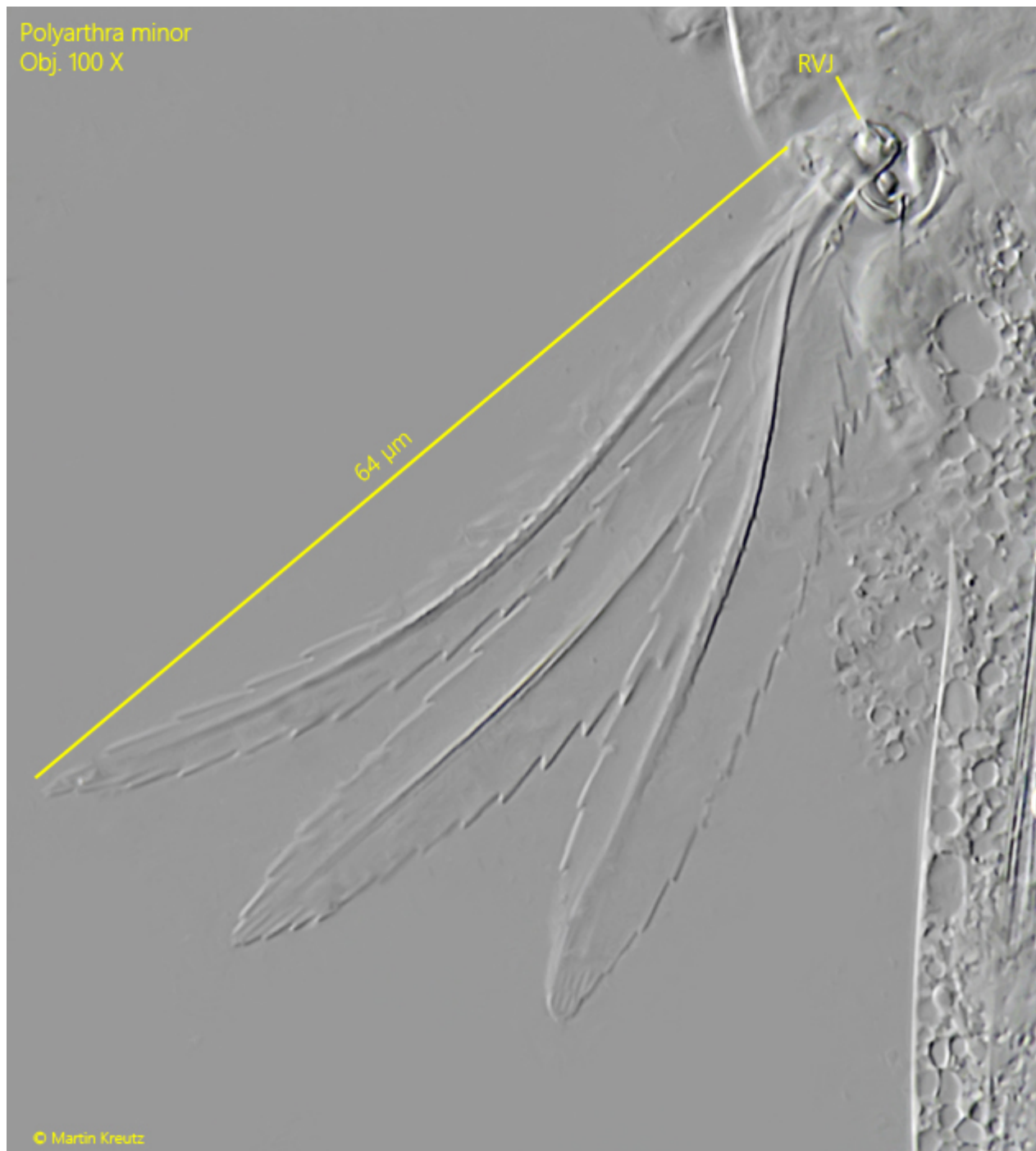


Fig. 6: *Polyarthra minor*. The fins of the ventral bundles are broader compared to the dorsal fins. RVJ = right ventral joint. Obj. 100 X.

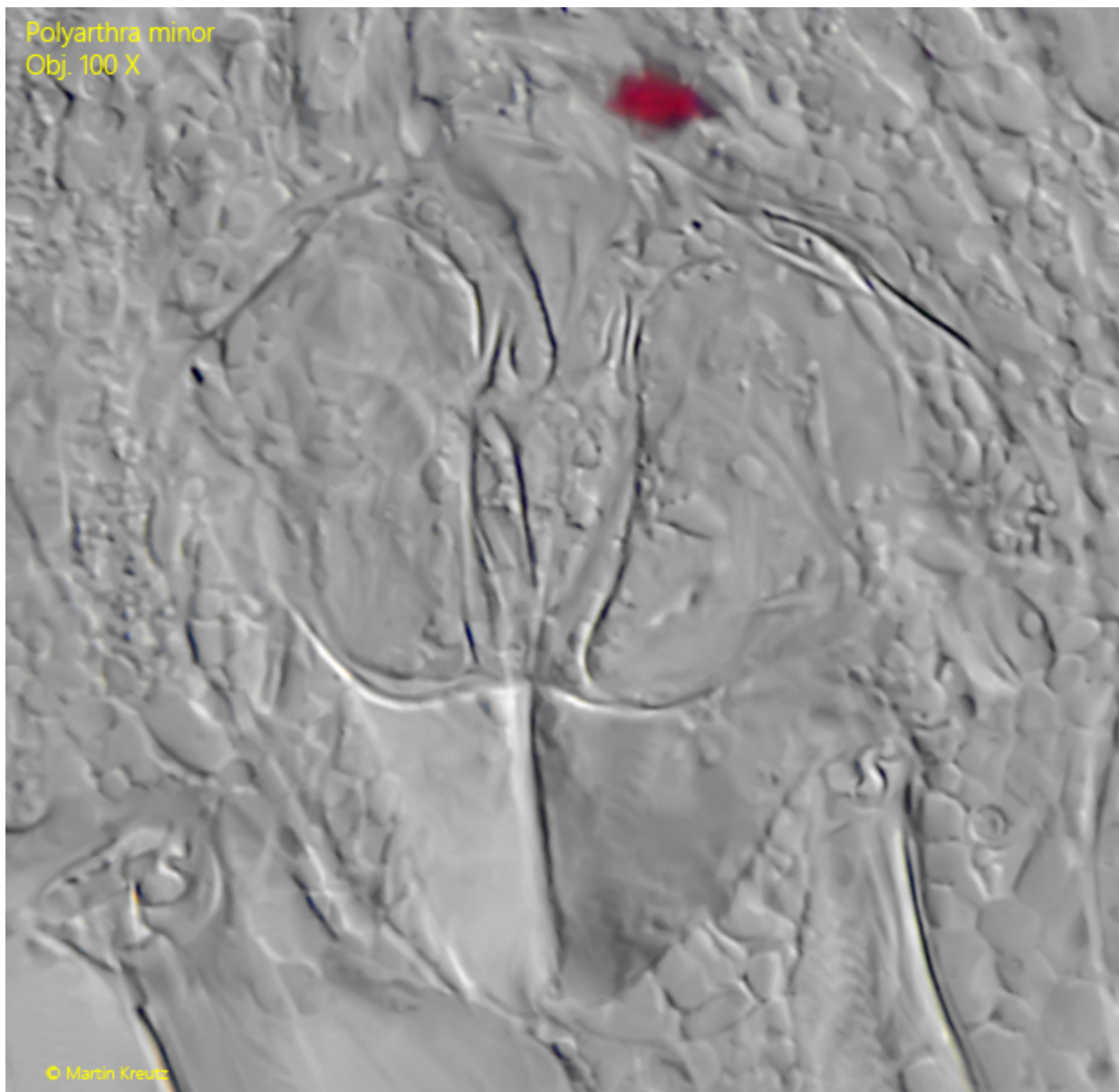


Fig. 7: *Polyarthra minor*. The trophi in a strongly squashed specimen. Obj. 100 X.