Aspidiophorus paradoxus Voigt, 1902

Most likely ID: n.a.

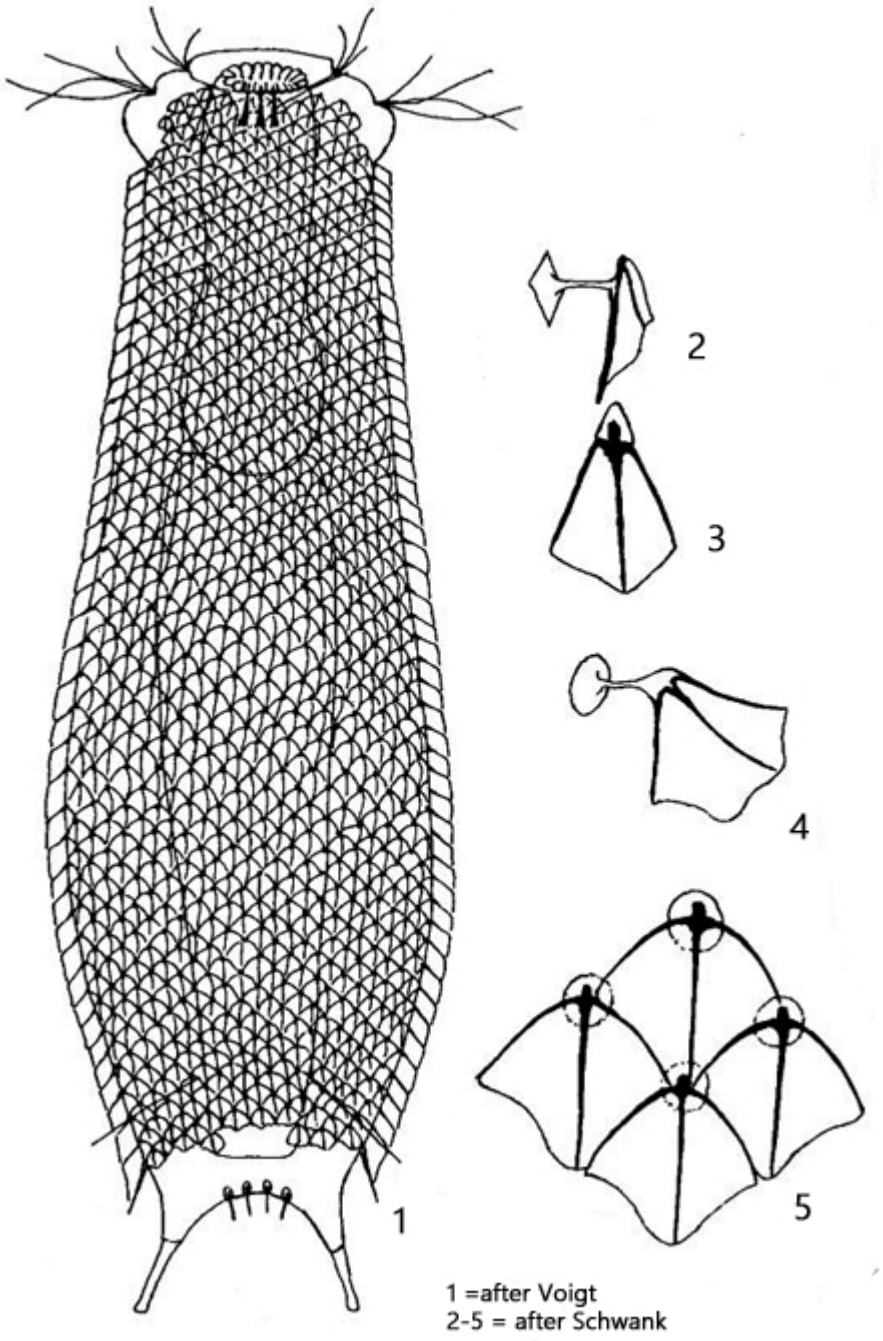
Synonym: n.a.

Sampling location: Purren pond, Bussenried, Simmelried, Drainage ditch Radolfzell industrial area

Phylogenetic tree: *Aspidiophorus paradoxus*

Diagnosis:

- body stocky sole-shaped
- length 245–326 µm, width 85–95 µm
- head five-lobed
- hypostomium a strong transverse clasp
- pharynx cylindrical with swollen end
- anterior end of the pharynx with three teeth
- dorsally 25 longitudinal rows of 40–45 petiolar scales
- dorsal scales with a stalk on a base plate
- ventrally small petiolar scales
- furca 32–38 µm long, unscaled
- between toes 4 short spines on oval scales



Aspidiophorus paradoxus

I find *Aspidiophorus paradoxus* only rarely and always in soil mud from different localities.

The specimens are easy to recognize even at low magnifications due to their size of around 300 µm. Characteristic are the stalk scales, which are clearly separated from the body. This can be recognized even at low magnifications.

At the anterior end of the pharynx there is a strong, clasp-shaped hypostomium (s. fig. 3). I was also able to identify a pointed tooth just behind the mouth opening in some specimens (s. fig, 3). There should be three teeth according Schwank (1994), but I could not recognize them. I also found specimens that appeared to have no teeth. I was also able to identify oral flaps around the mouth opening, which are not described in the literature (s. fig. 4).

The dorsal scales are very close together and overlap. This makes their shape difficult to recognize. In lateral view, however, it can be recognized that they sit on a distinct stalk, which in turn sits on a basal plate (s. fig. 6). The shape of the scales can only be recognized when they are detached from the body. To do this, I slightly shifted the coverslip over a squashed specimen. This move shears off the scales. Their shape resembles a duck's foot and have a central keel (s. fig. 7).

At the posterior end is a group of smaller scales with a keel. Only 4 of these scales have a spine. These spines are located between the toes (s. fig. 1 b).

I have not yet been able to examine the scales on the ventral side. According to Schwank (1994) they should also be stalk scales, but they are considerably smaller than the dorsal scales.

More images and information on *Aspidiophorus paradoxus*: Dr. Michael Müller-The small world of freshwater gastrotriches-*Aspidiophorus paradoxus*



Fig. 1 a-b: *Aspidiophorus paradoxus*. L = 340 µm. Two focal planes of a slightly squashed specimen. Note the 4 terminal spines (arrow). PH = pharynx. Obj. 40 X.

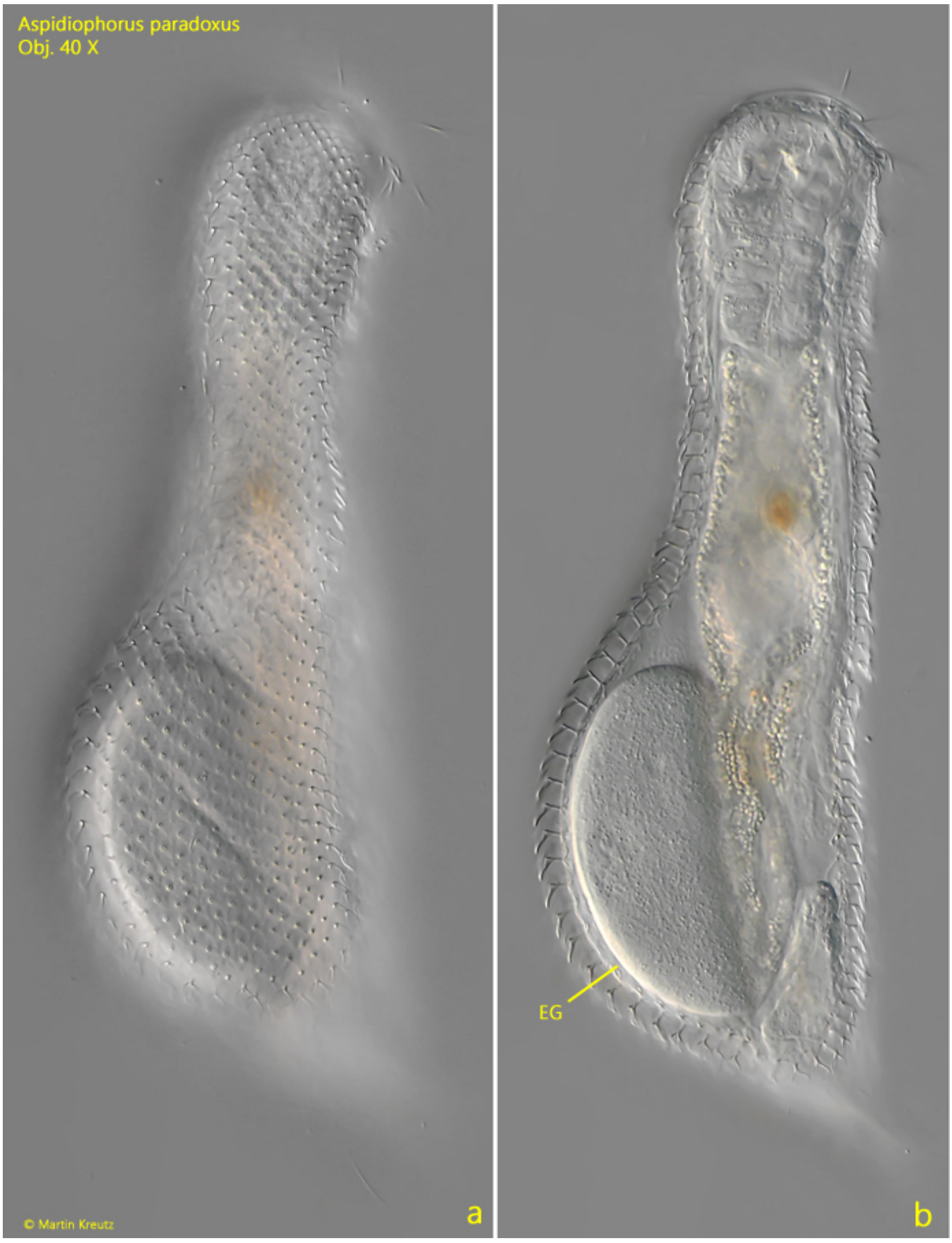


Fig. 2 a-b: *Aspidiophorus paradoxus*. L = 295 µm. A specimen bearing an egg (EG) in lateral view from right. Obj. 40 X.

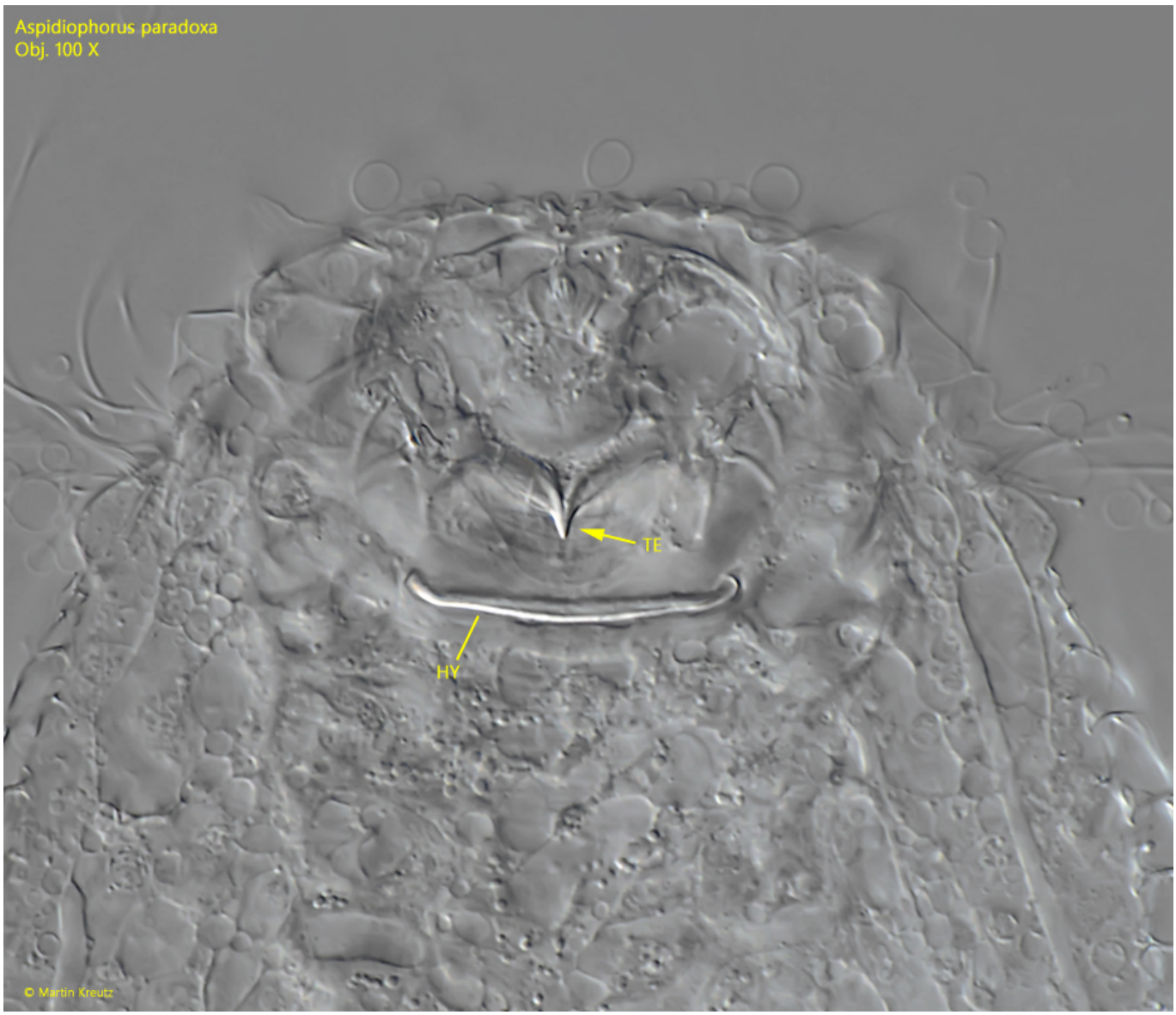


Fig. 3: *Aspidiophorus paradoxus*. One of the three teeth (TE) in the anterior end of the pharynx and the clasp-shaped hypostomium (HY). Obj. 100 X.

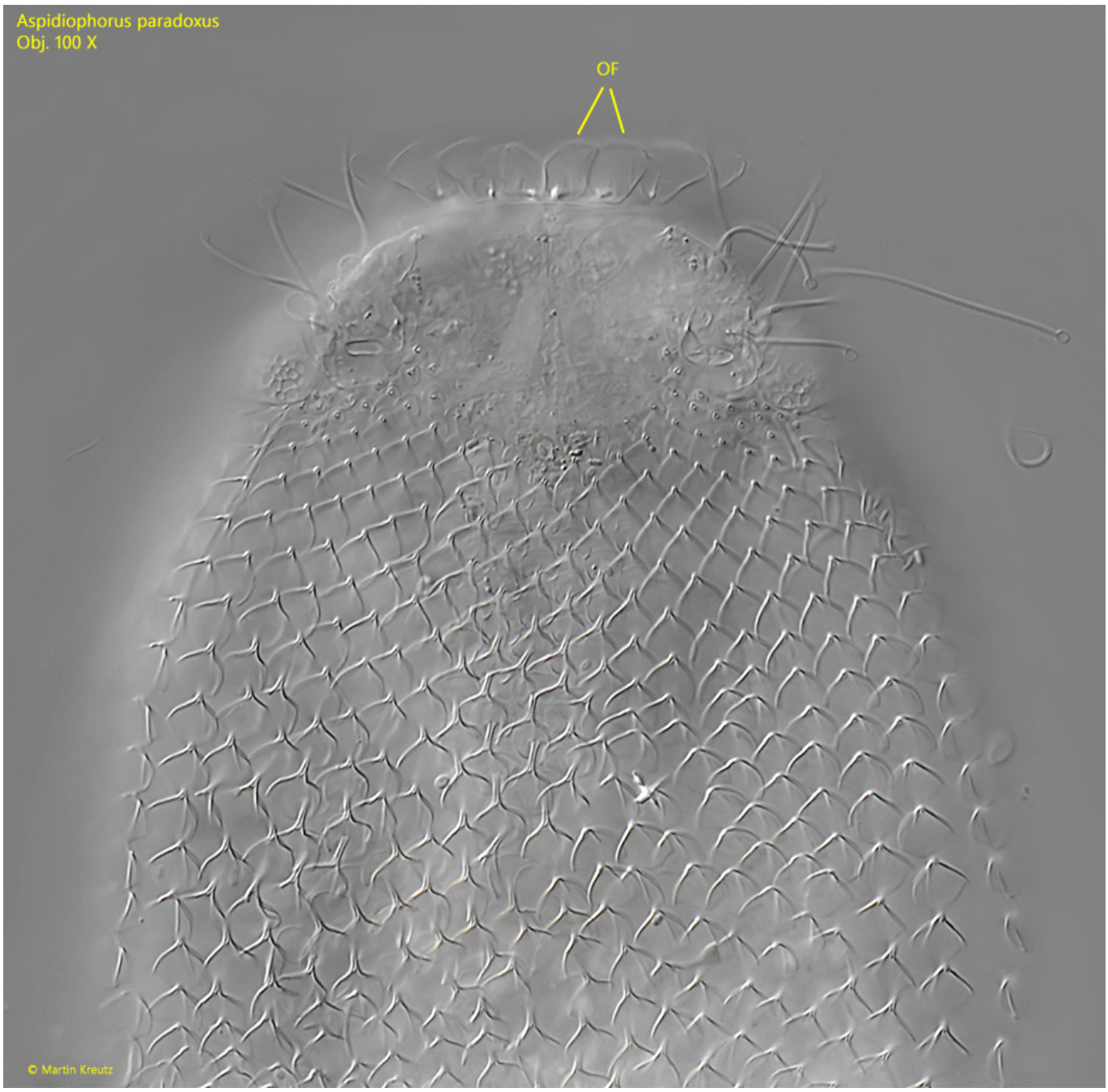


Fig. 4: *Aspidiophorus paradoxus*. The dorsal scales of the head- and neckregion. The mouth opening is surrounded by oral flaps (OF). Obj. 100 X.

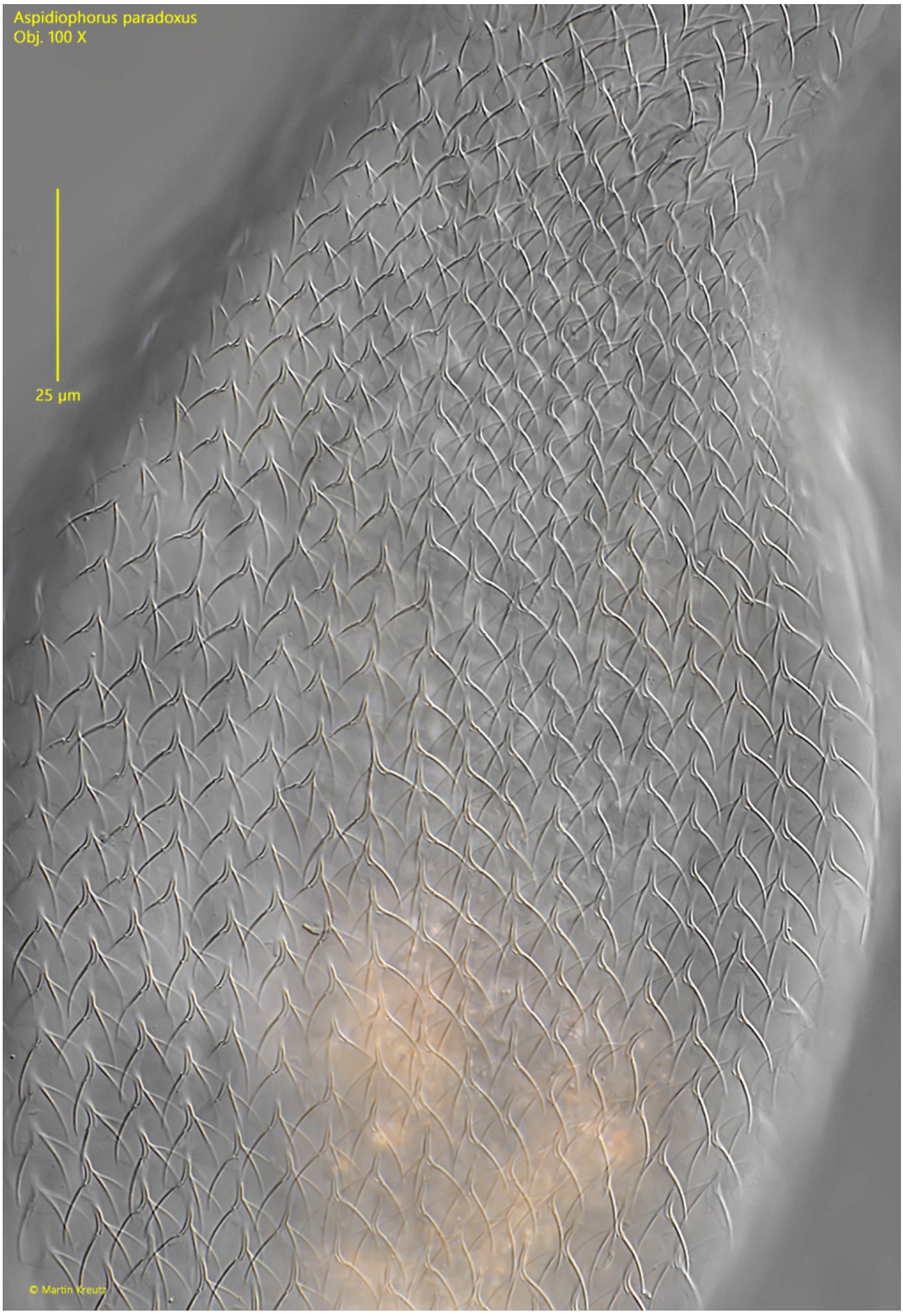

Aspidiophorus paradoxus
Obj. 100 X
25 µm
© Martin Kreutz

Fig. 5: *Aspidiophorus paradoxus*. The dorsal scales of mid-body. Obj. 100 X.

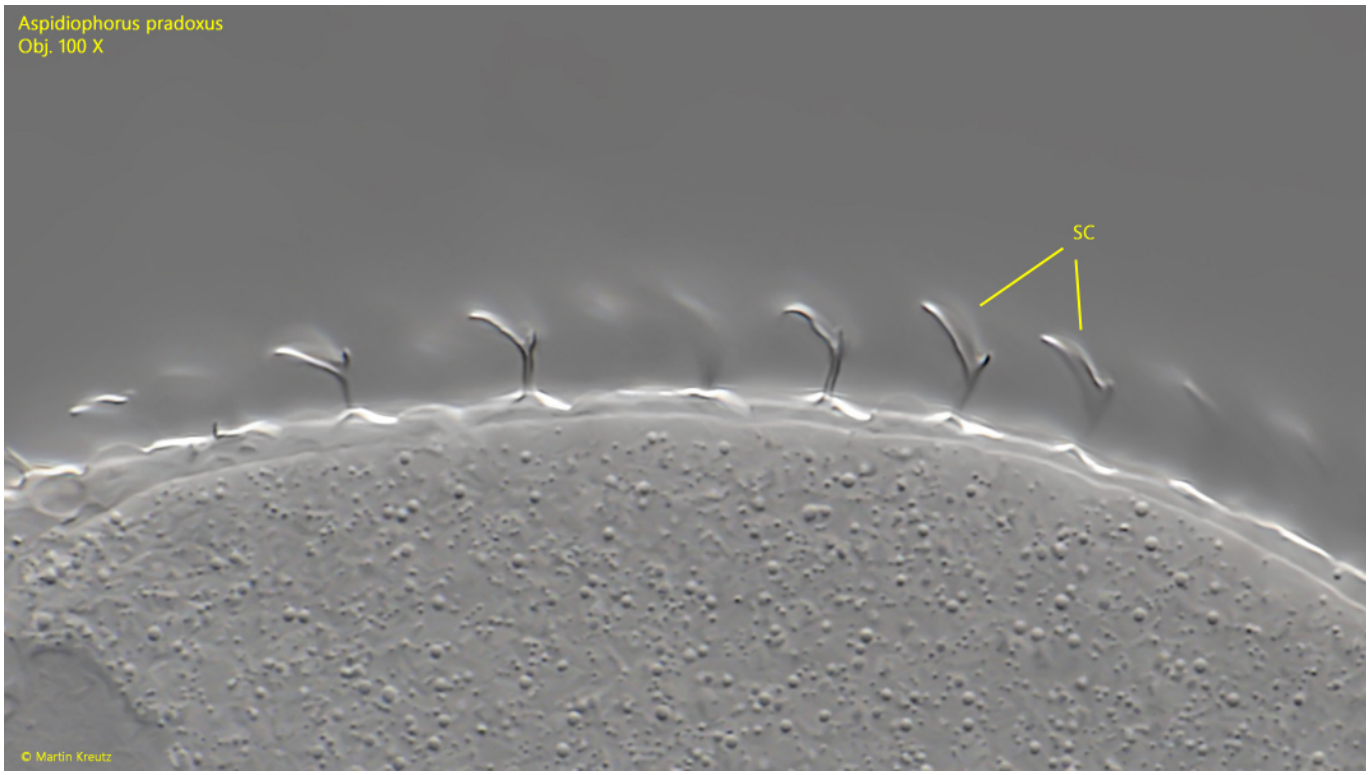


Fig. 6: *Aspidiophorus paradoxus*. Lateral view of the dorsal petiolar scales. Each scale sits on a stalk, which is connected to a basal plate on the cuticle. Obj. 100 X.

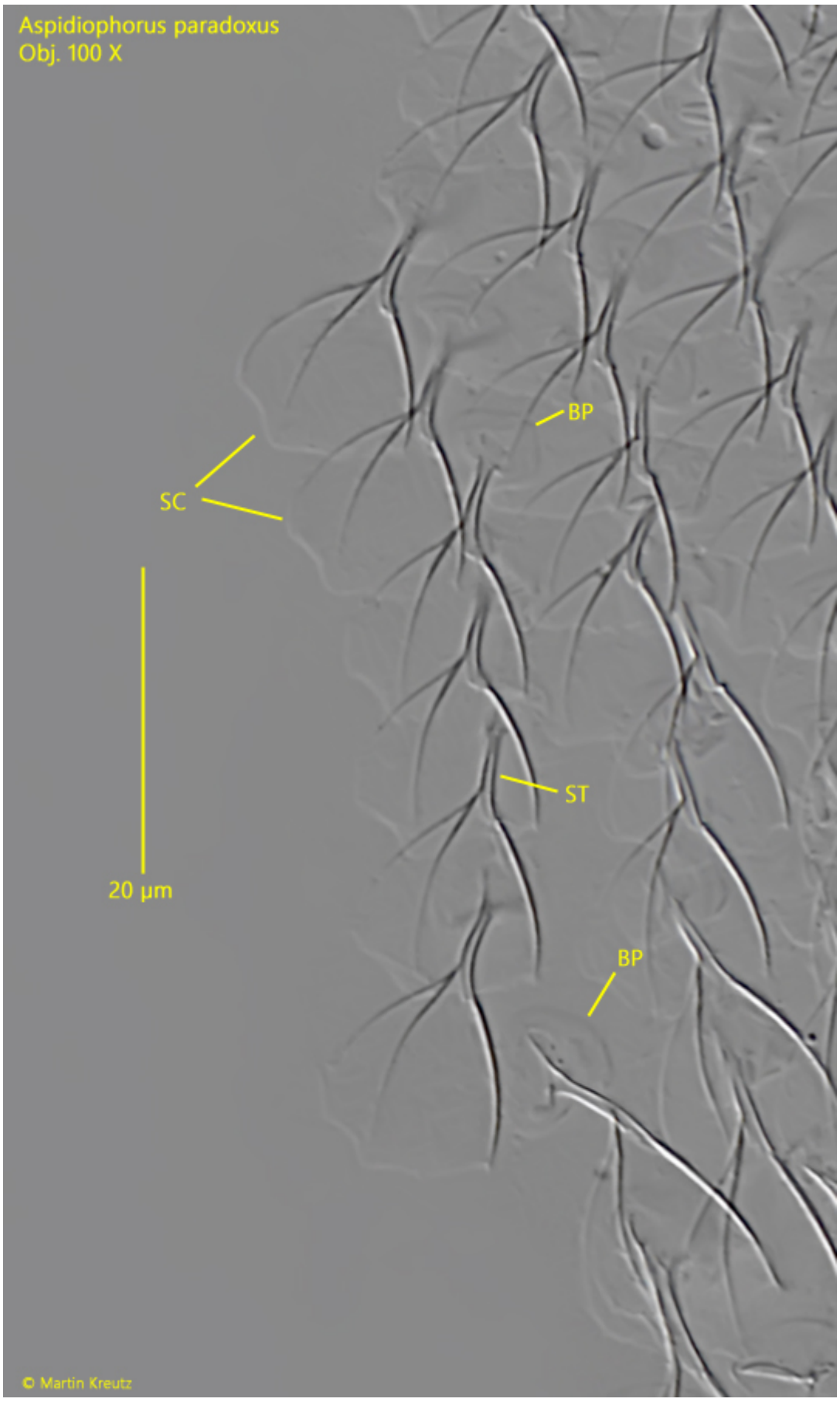


Fig. 7: *Aspidiophorus paradoxus*. Some detached dorsal scales in detail. The scales (SC) have the shape of a duck's foot and are connected via a stalk (ST) with the

basal plate (BP). Obj. 100 X.

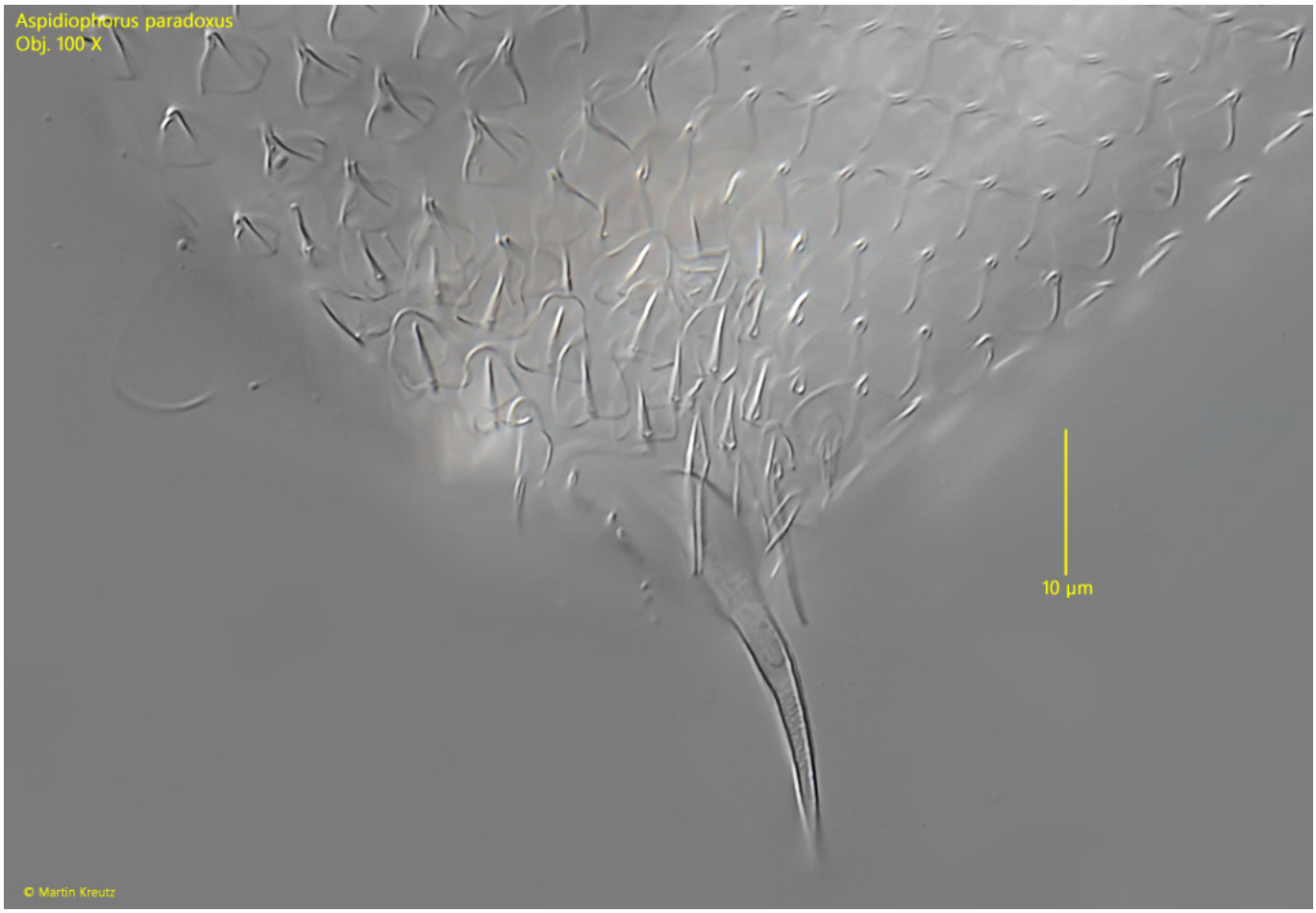


Fig. 8: *Aspidiophorus paradoxus*. The dorsal terminal scales. Obj. 100 X.