Polymerurus squammofurcatus

Preobrajanskaja, 1926

Most likely ID: n.a.

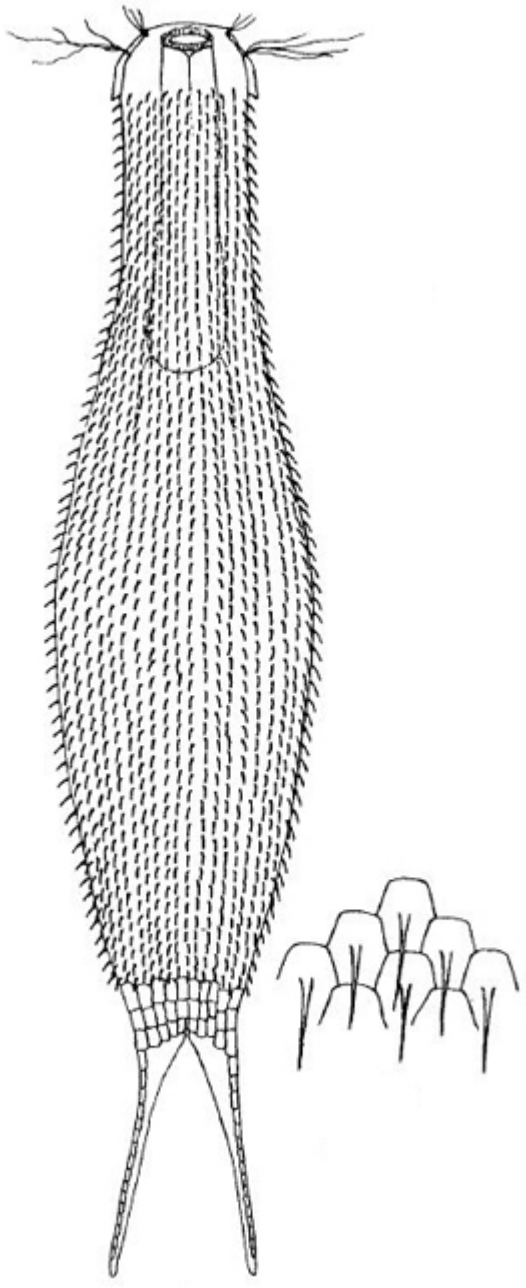
Synonym: n.a.

Sampling location: **Simmelried**

Phylogenetic tree: ***Polymerurus squammofurcatus***

Diagnosis:

- body slender, elongate, length 321–325 µm
- head plates strongly fused
- toes long (about 70 µm), smooth, not divided in rings
- toes laterally covered with smooth scales
- dorsally about 20 longitudinal rows of rectangular or trapezoidal scales with a short spine arising from the center
- at posterior end a field of spineless scales with a keel
- ventrally 18 transverse scales (5–6 times wider than high)



after Preobrajenskaja

Polymerurus squammofurcatus

I found *Polymerurus squammofurcatus* between decomposing plant masses in the Simmelried. The species is fast swimming, very mobile and flexible. The specimens of my populations were up to 480 µm long and thus about 150 µm longer than previously described. The species has been found rarely and the available descriptions are not complete. For example, the exact shape of the dorsal and ventral scales has not been described in detail so far. According to my observations the dorsal scales of the neck region are about 4 – 5 µm long (s. fig. 5) and about 10 µm long in the mod-body region (s. figs. 6 and 7). The anterior margin of them is rounded and the posterior margin is incised in a U-shape. At the posterior end, there is a field of spine-free scales on the dorsal side (s. fig. 12), but they are keeled. The

ventral scales on average 18 µm wide and 7 µm high (s. figs. 13 and 14). The anterior margin of them is straight and rounded at the corners, while the posterior margin is formed into a row of 5-8 teeth (s. fig. 13). A very distinct character of this species are the scales on the toes, which cover them only laterally on the outer side (s. fig. 12). I was able to demonstrate the presence of a hypostomium (s. fig. 14).

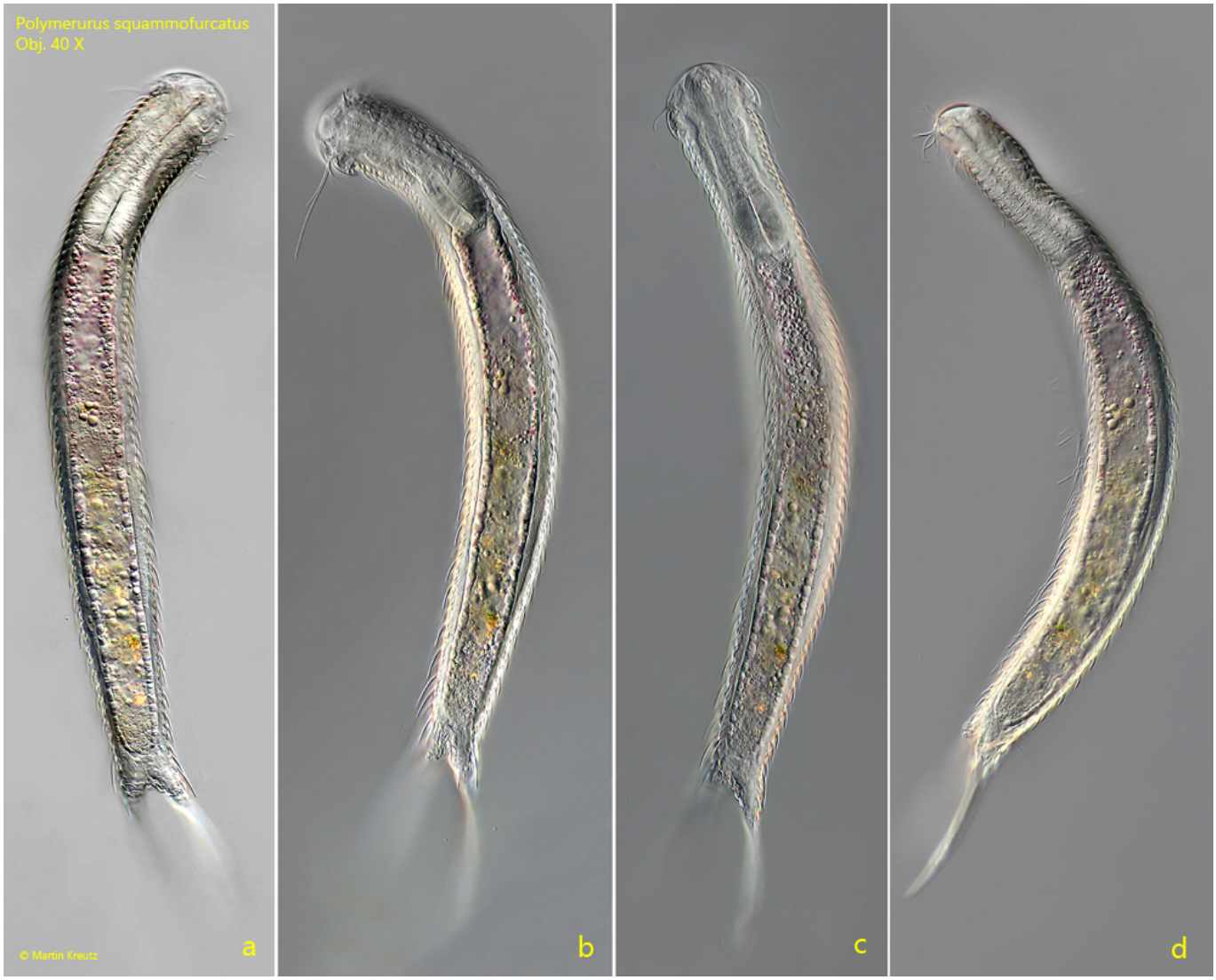


Fig. 1 a-d: *Polymerurus squammofurcatus*. L = 400 µm. Dorsal view (a-c) and lateral view from left (d) of a freely swimming specimen. Obj. 40 X.

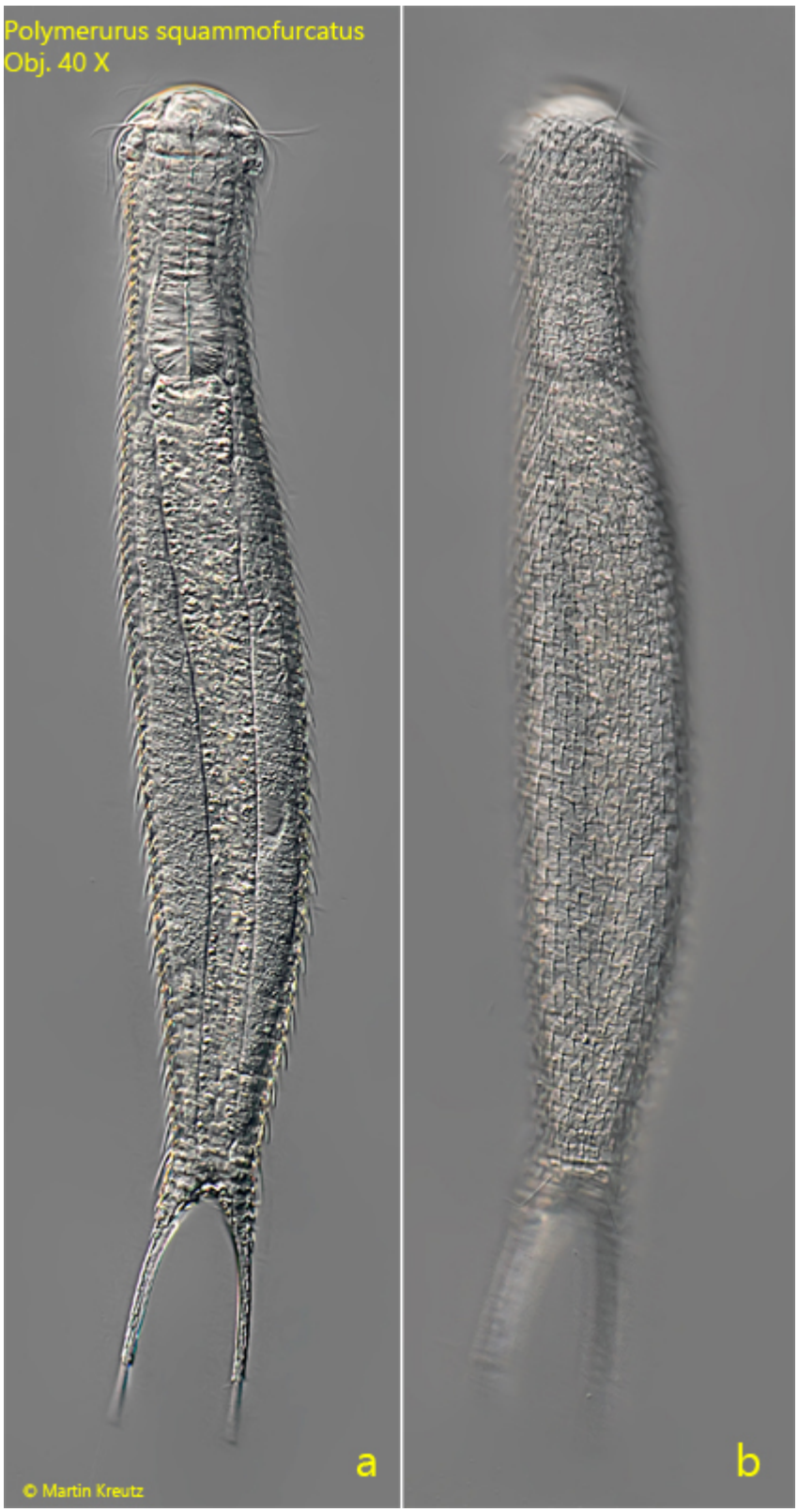


Fig. 2 a-b: *Polymerurus squammofurcatus*. L = 344 µm. Dorsal view of slightly squashed specimen. 40 X.

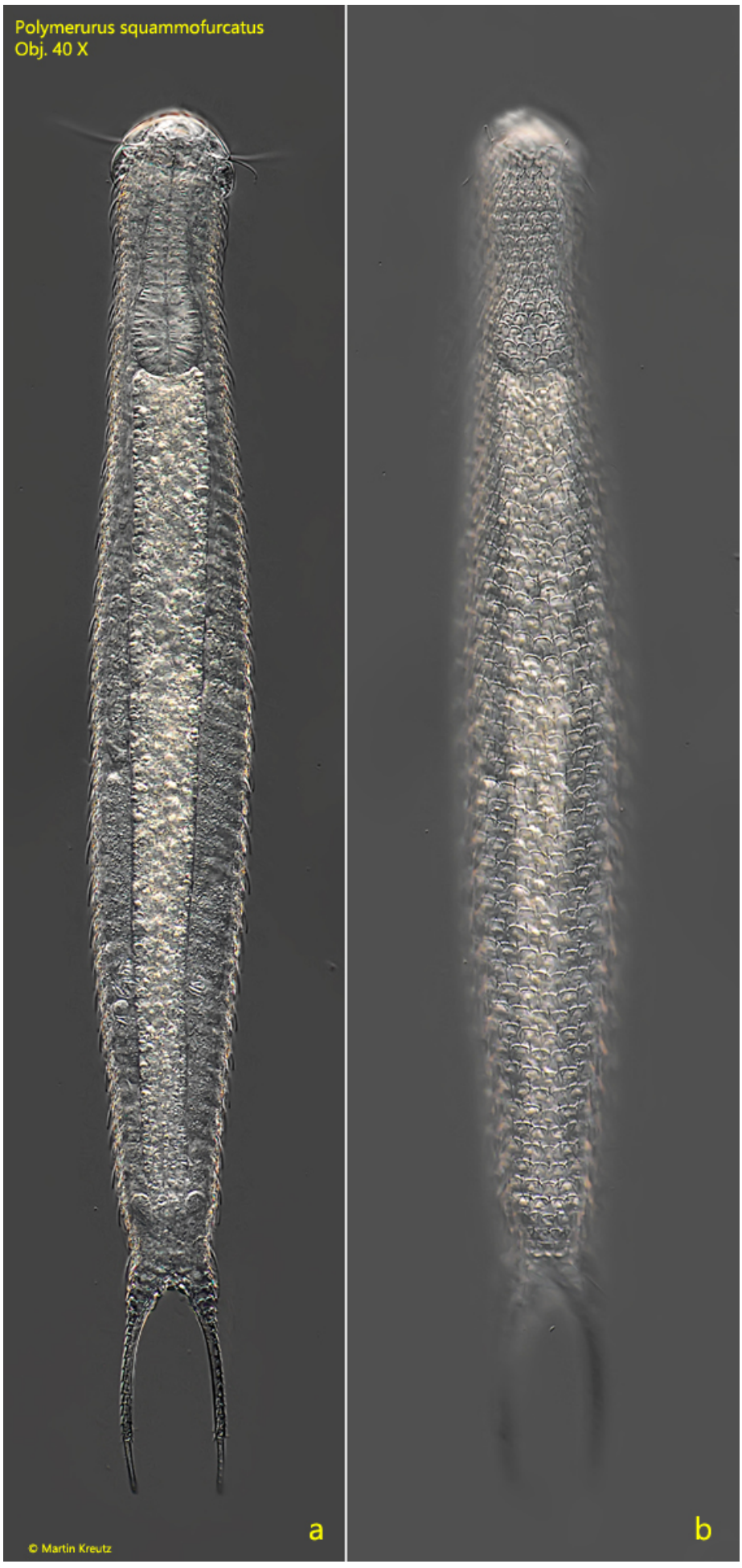

Polymerurus squammofurcatus
Obj. 40 X
© Martin Kreutz
a
b

Fig. 3 a-b: *Polymerurus squammofurcatus*. L = 480 µm. Dorsal view of a third slightly squashed specimen. 40 X.



Fig. 4: *Polymerurus squammofurcatus*. L = 400 µm. Lateral view of a freely swimming specimen. Obj. 40 X.

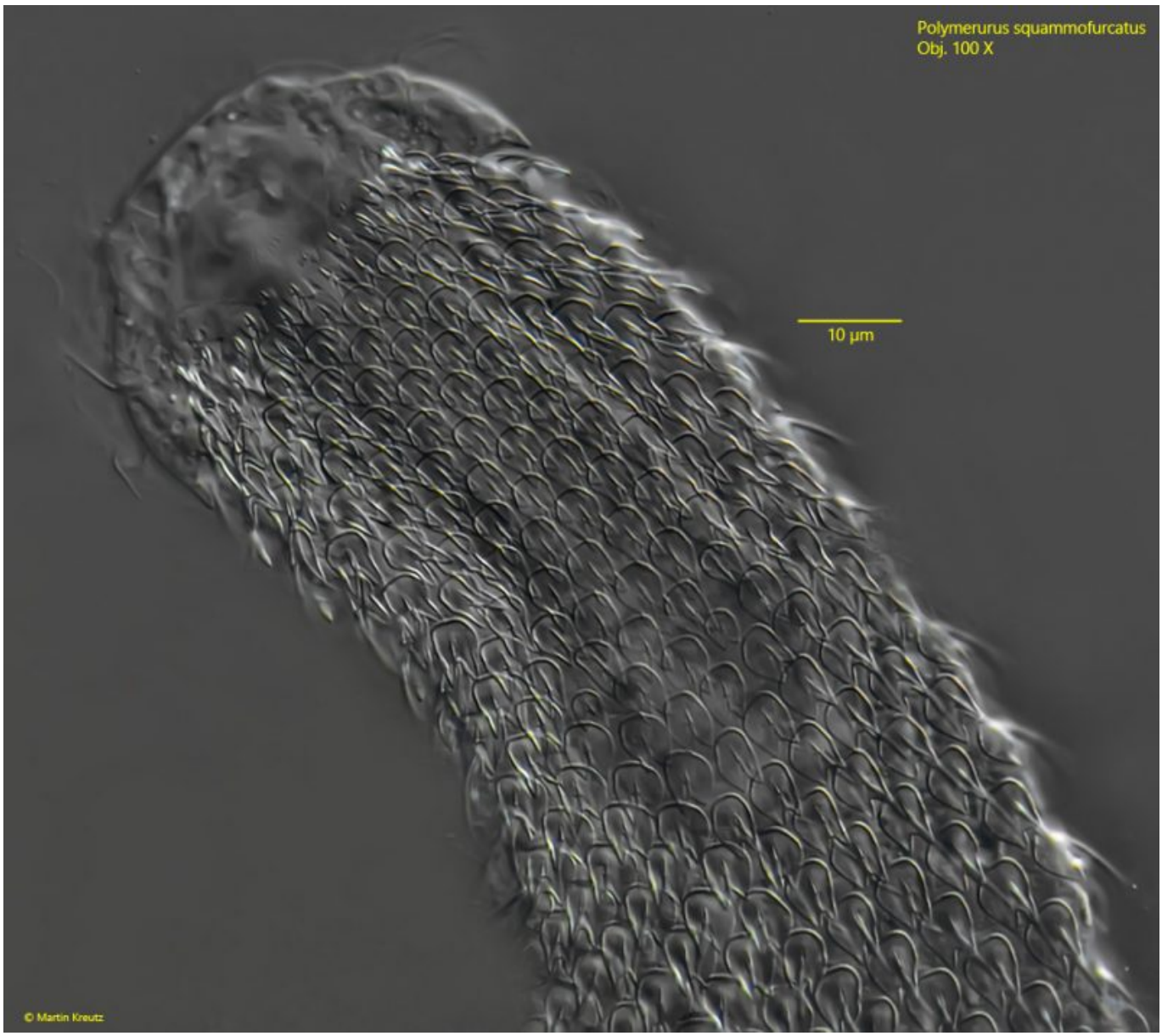


Fig. 5: *Polymerurus squammofurcatus*. L = 480 µm. Dorsal scales in the head and neck region. The scales are 4-5 µm long with a round anterior end and a V-shaped incisions at the posterior end. Obj. 100 X.

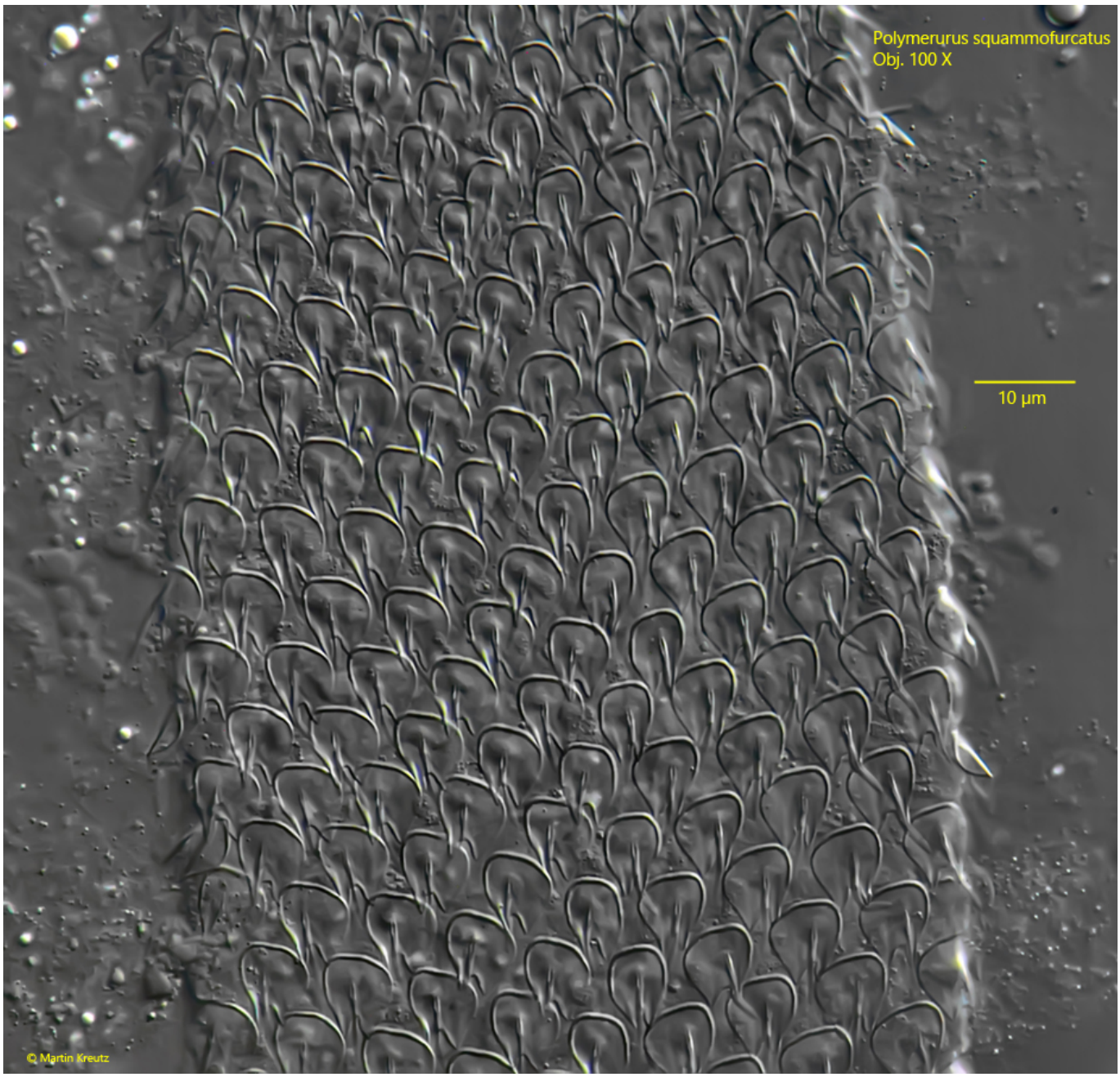


Fig. 6: *Polymerurus squammofurcatus*. L = 480 µm. The dorsal scales of the mid-body. Obj. 100 X.

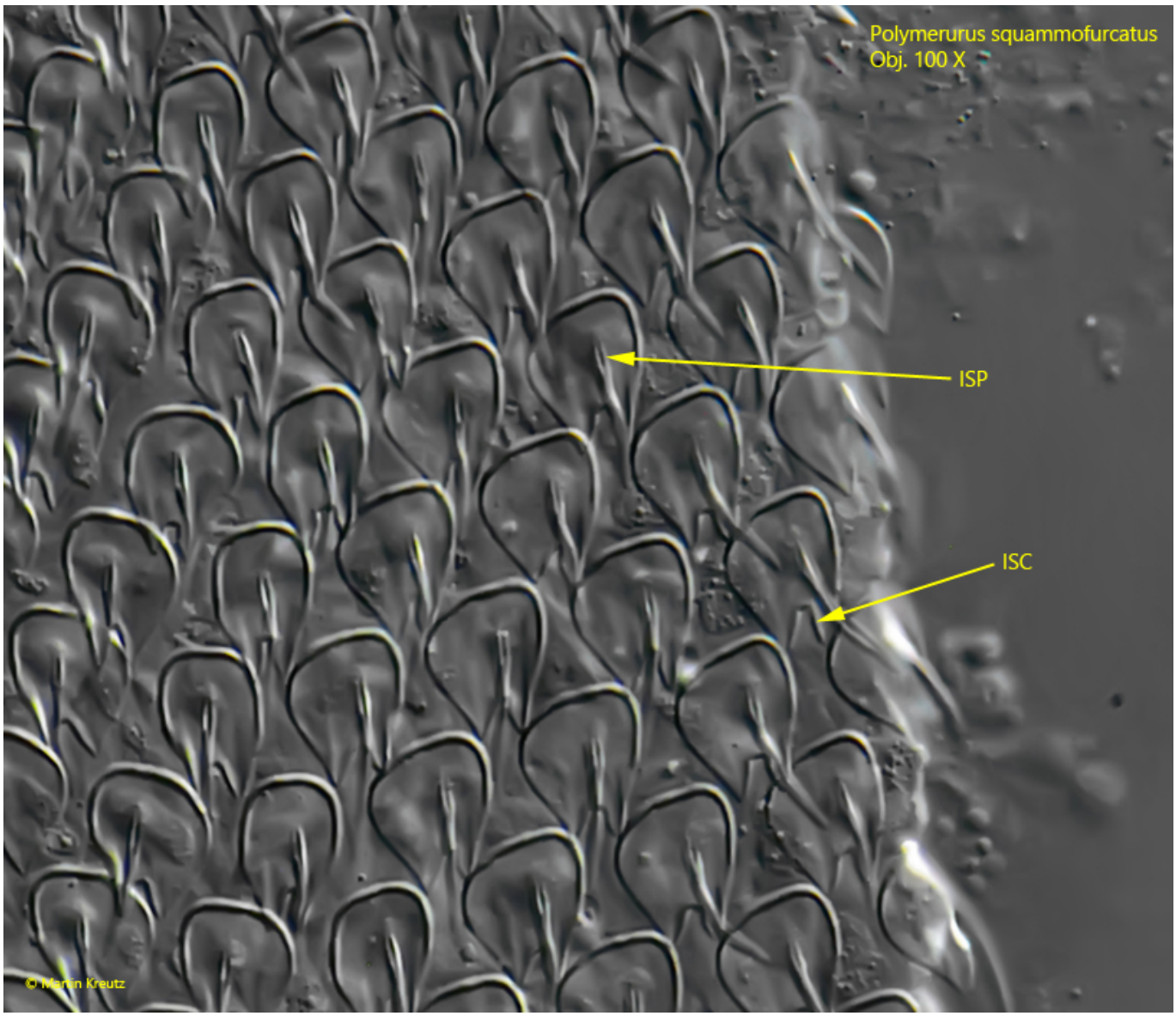


Fig. 7: *Polymerurus squammofurcatus*. L = 480 µm. The dorsal scales of the mid-body in detail. At the basis of the spines a narrow cleft is visible (ISP) and the posterior margin of the scales have a U-shaped incision (ISC). Obj. 100 X.

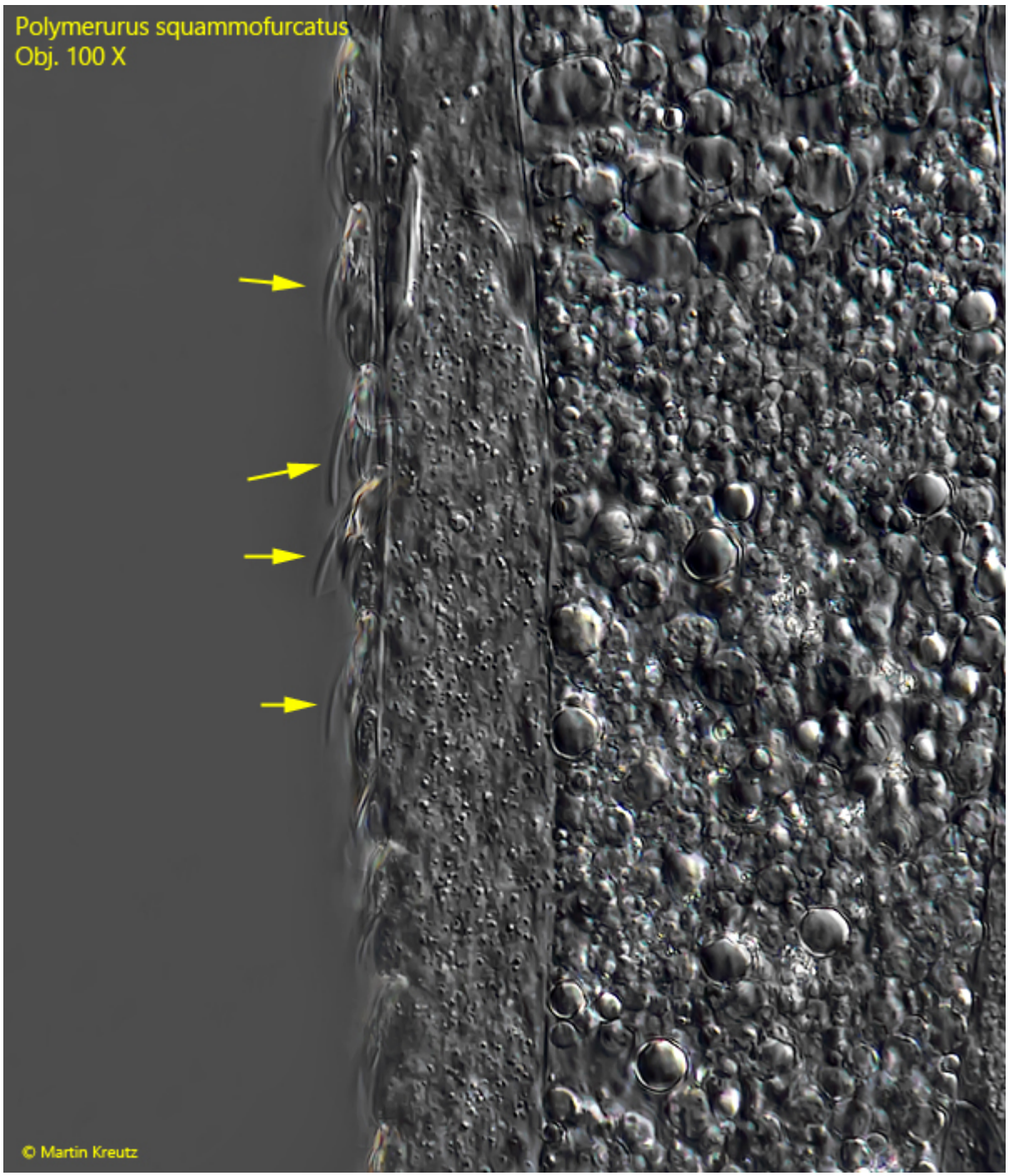


Fig. 8: *Polymerurus squammofurcatus*. L = 480 µm. The spines of the mid-body in lateral view (arrows). They have a length of 12 – 14 µm. Obj. 100 X.

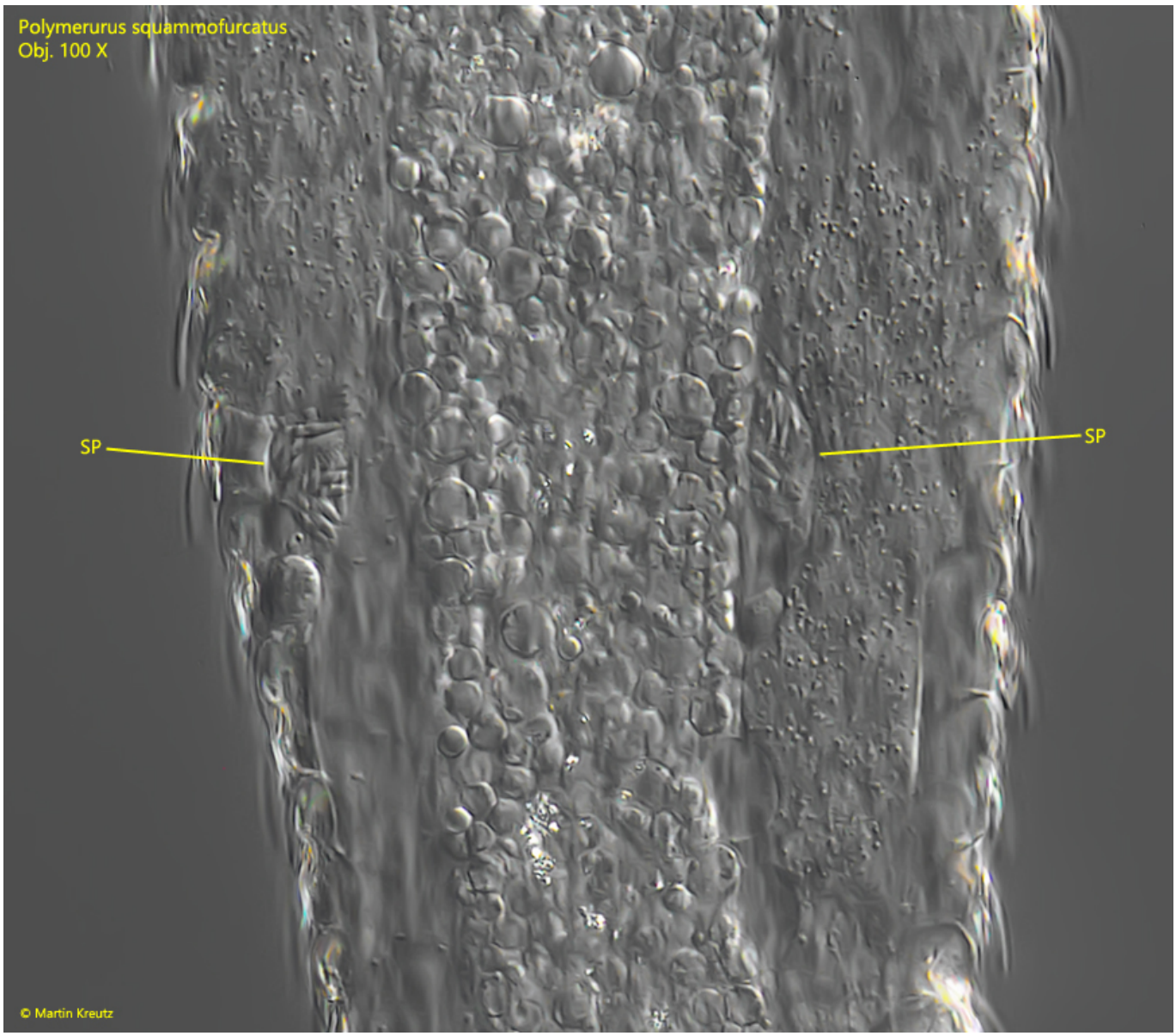


Fig. 9: *Polymerurus squammofurcatus*. In the posterior third of a strongly squashed specimen reservoirs of sperm cells (SP) are visible. Obj. 100 X.

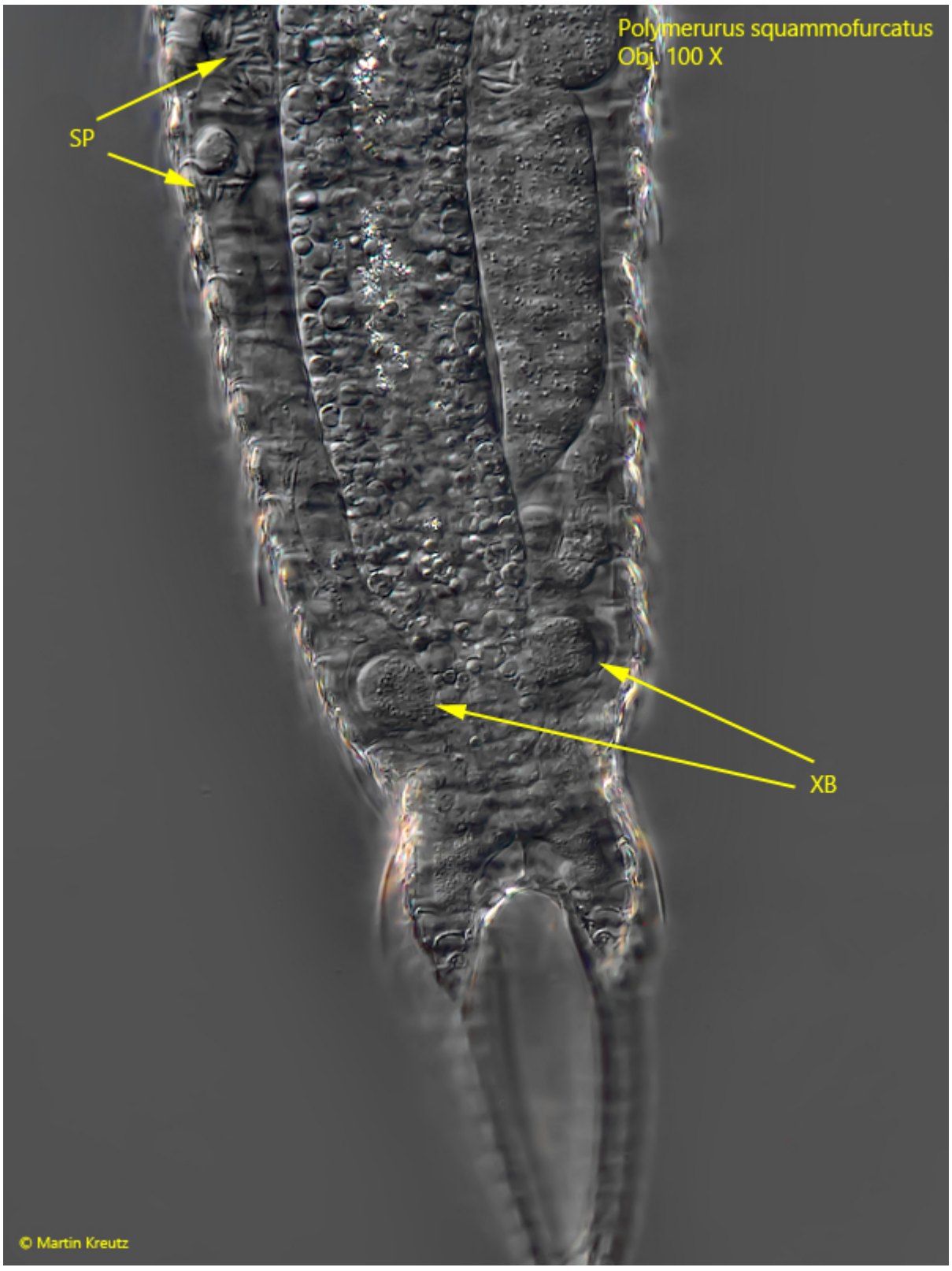


Fig. 10: *Polymerurus squammofurcatus*. In the posterior third of the same specimen as shown in fig. 9 also X-bodies (XB) are visible. SP= reservoir of sperma. Obj. 100 X.

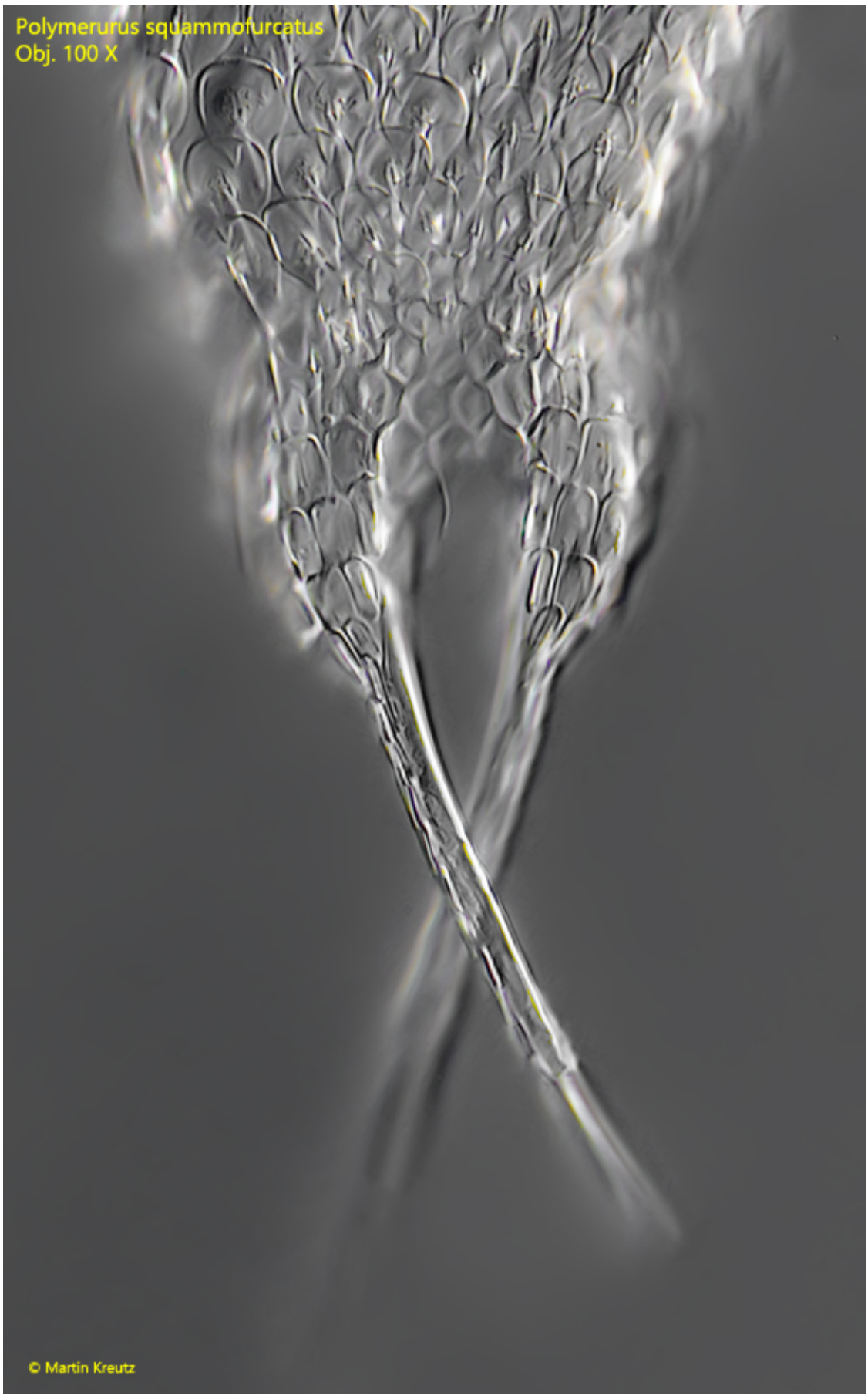


Fig. 11: *Polymerurus squammofurcatus*. L = 480 µm. The toes of a slightly squashed specimen. Obj. 100 X.

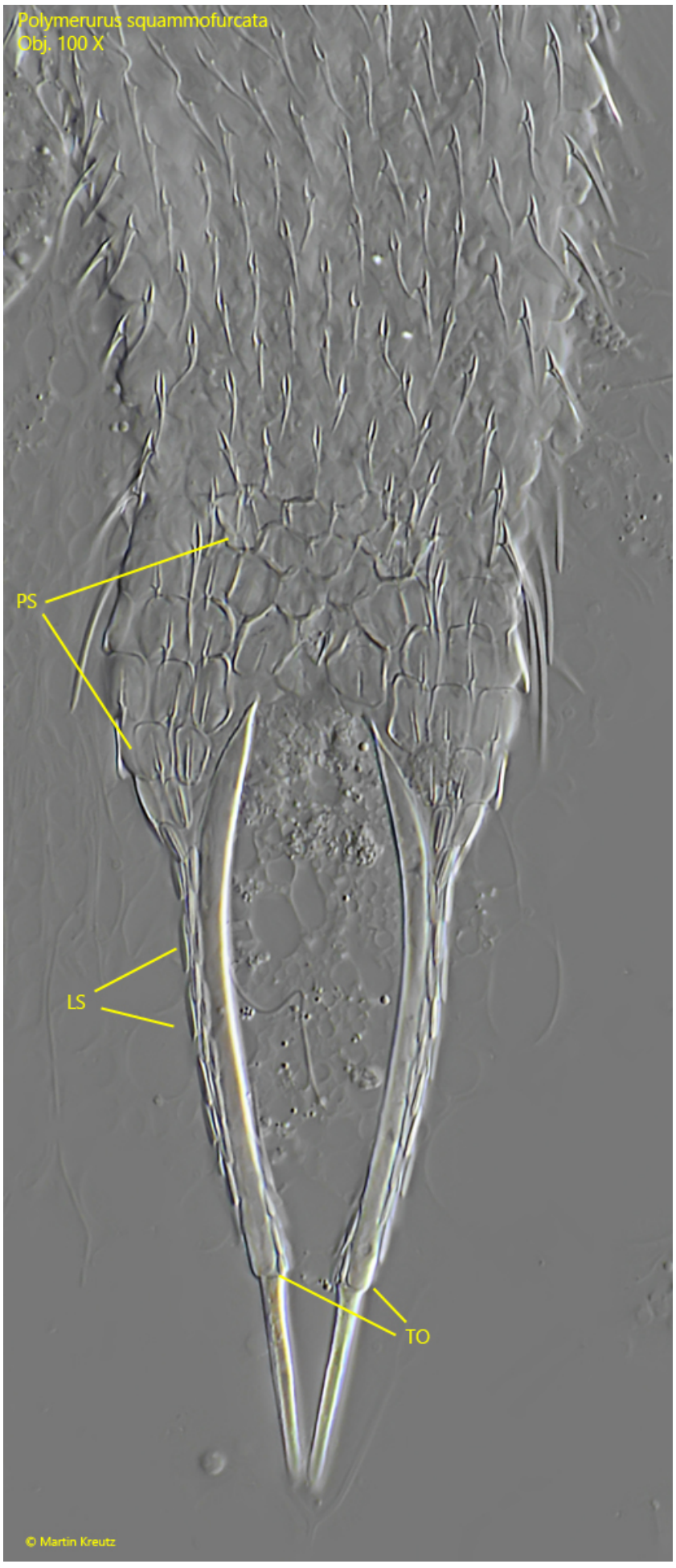

Polymerurus squammofurcata
Obj. 100 X
PS
LS
TO
© Martin Kreutz

Fig. 12: *Polymerurus squammofurcatus*. L = 400 µm. The dorsal scales of the posterior region and the toes. Note the posterior field of spineless scales with a keel (PS) and that the toes are covered only laterally with scales (LS). TO = toes. Obj. 100 X.



Fig. 13: *Polymerurus squammofurcatus*. L = 480 µm. The ventral scales focussed from the dorsal side. The ventral scales (VS) have a size of about 18 µm X 7 µm.

The anterior edge has rounded corners while the posterior margin bears a row of 7-8 teeth. Obj. 100 X.

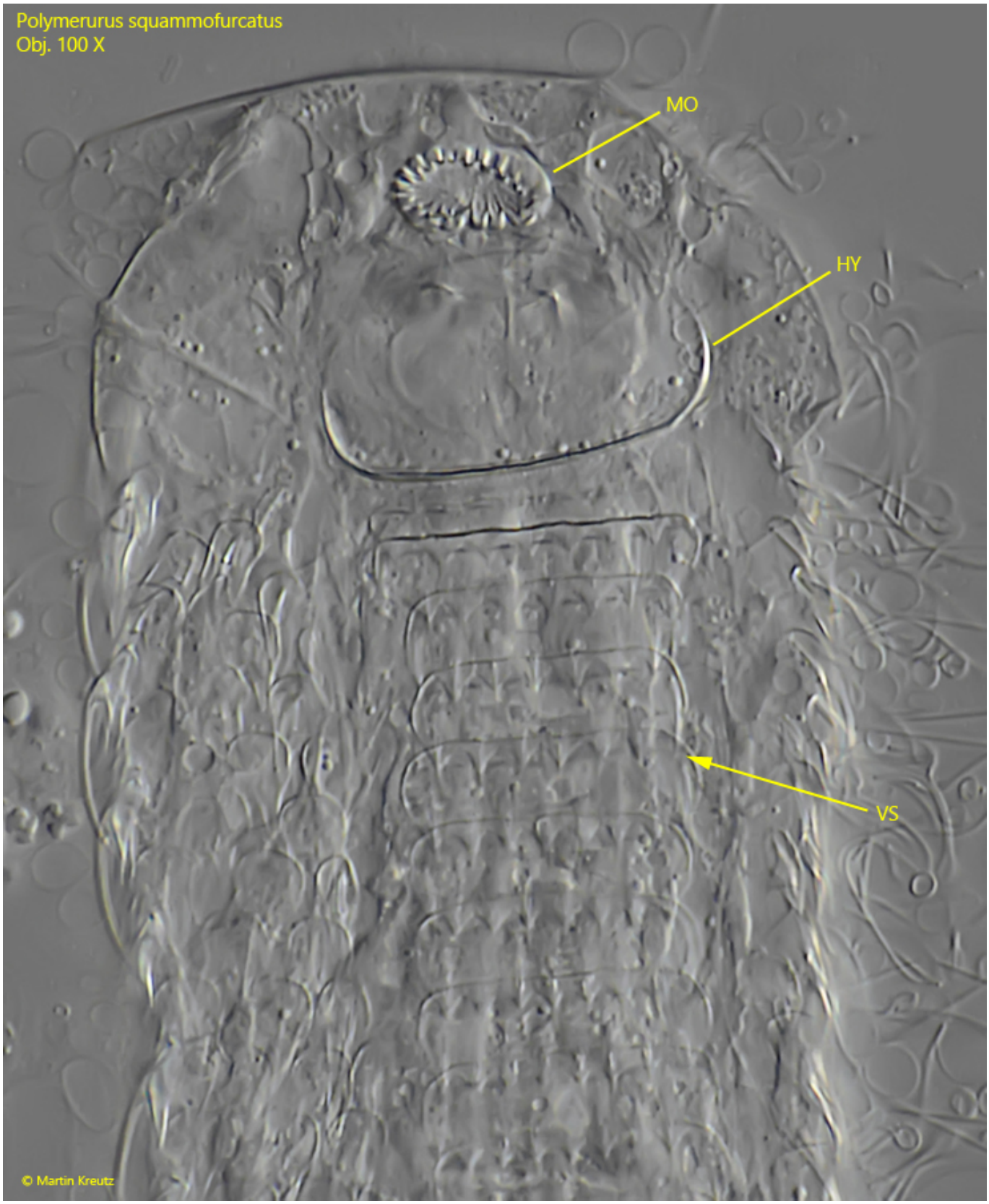


Fig. 14: *Polymerurus squammofurcatus*. L = 400 µm. The ventral scales (VS) and the clearly visible hypostomium (HY) focussed from the dorsal side of a second specimen. VS = ventral scales. Obj. 100 X.