

***Polymerurus squammofurcatus***

**Preobrajanskaja, 1926**

**Most likely ID:** n.a.

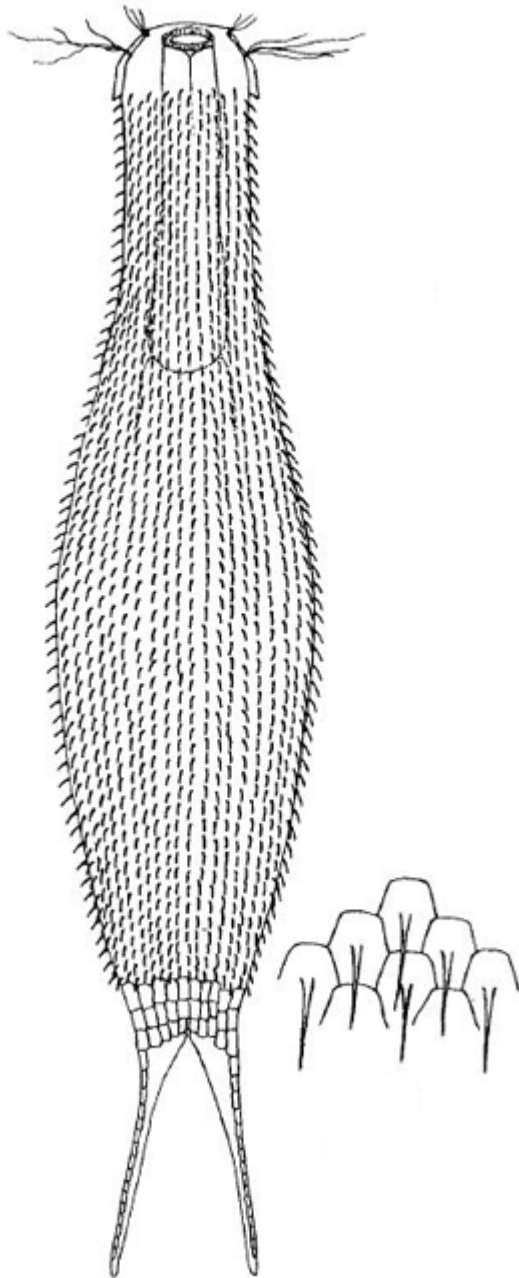
**Synonym:** n.a.

**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

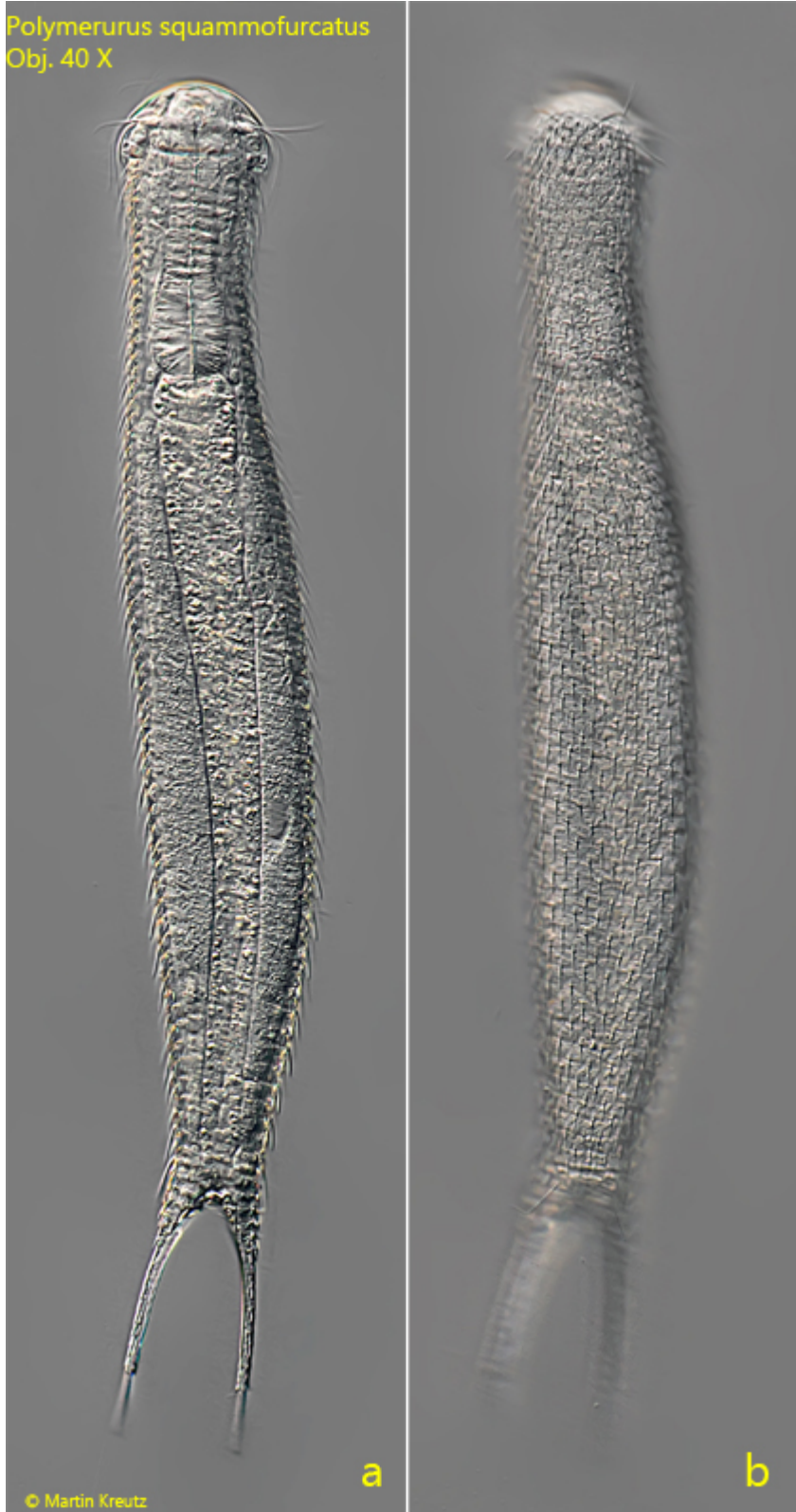
I found *Polymerurus squammofurcatus* between decomposing plant masses in the [Simmelried](#). The species is fast swimming, very mobile and flexible. The specimens of my populations were up to 480  $\mu\text{m}$  long and thus about 150  $\mu\text{m}$  longer than previously described. The species has 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  $\mu\text{m}$  long (s. fig. 5) and about 10  $\mu\text{m}$  long in the mid-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  $\mu\text{m}$  wide and 7  $\mu\text{m}$  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  $\mu\text{m}$ . Dorsal view (a-c) and lateral view from left (d) of a freely swimming specimen. Obj. 40 X.

Polymerurus squammofurcatus  
Obj. 40 X



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



*Polymerurus squamofurcatus*  
Obj. 40 X



a

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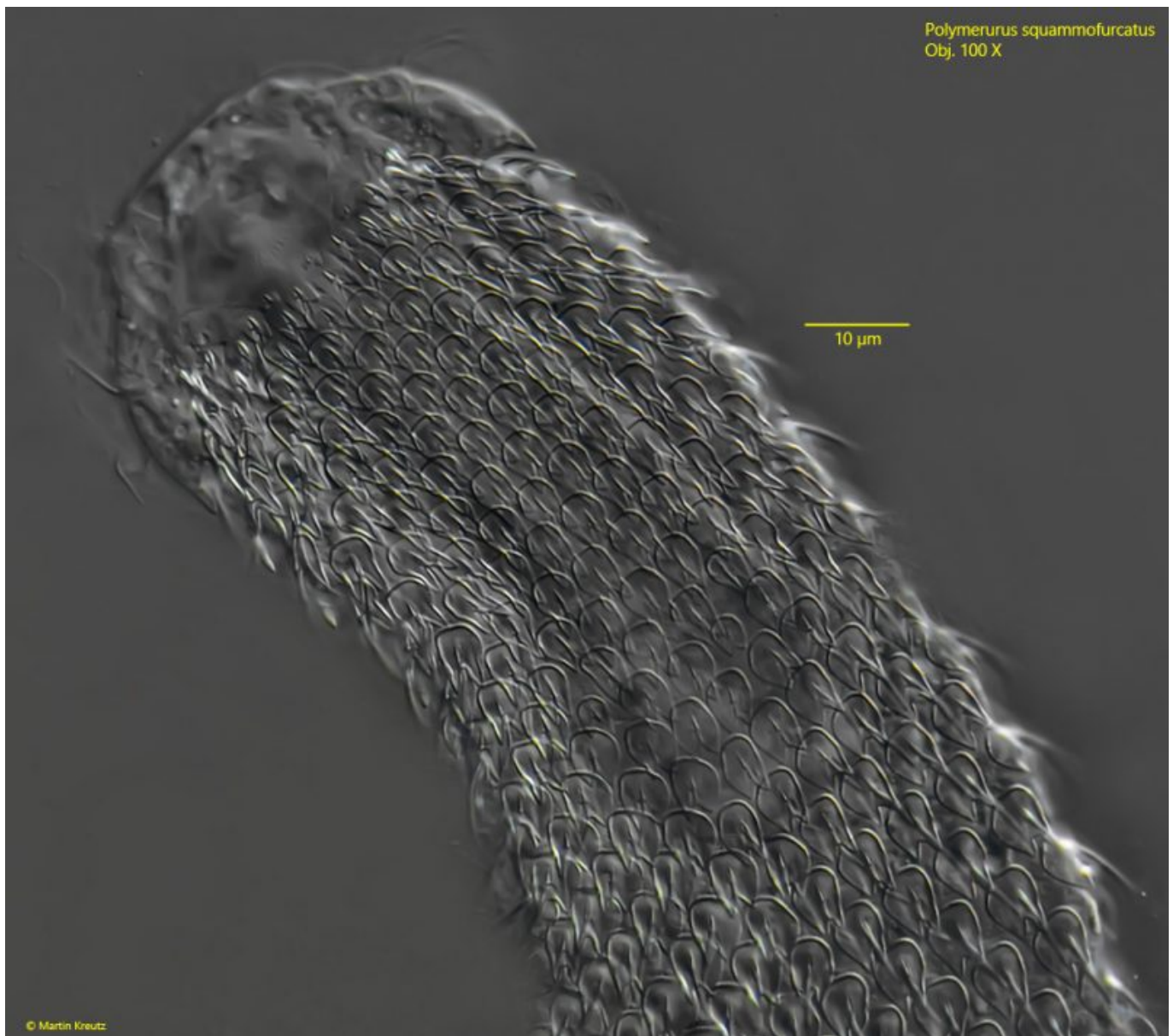


b

**Fig. 3 a-b:** *Polymerurus squammofurcatus*. L = 480  $\mu\text{m}$ . Dorsal view of a third slightly squashed specimen. 40 X.

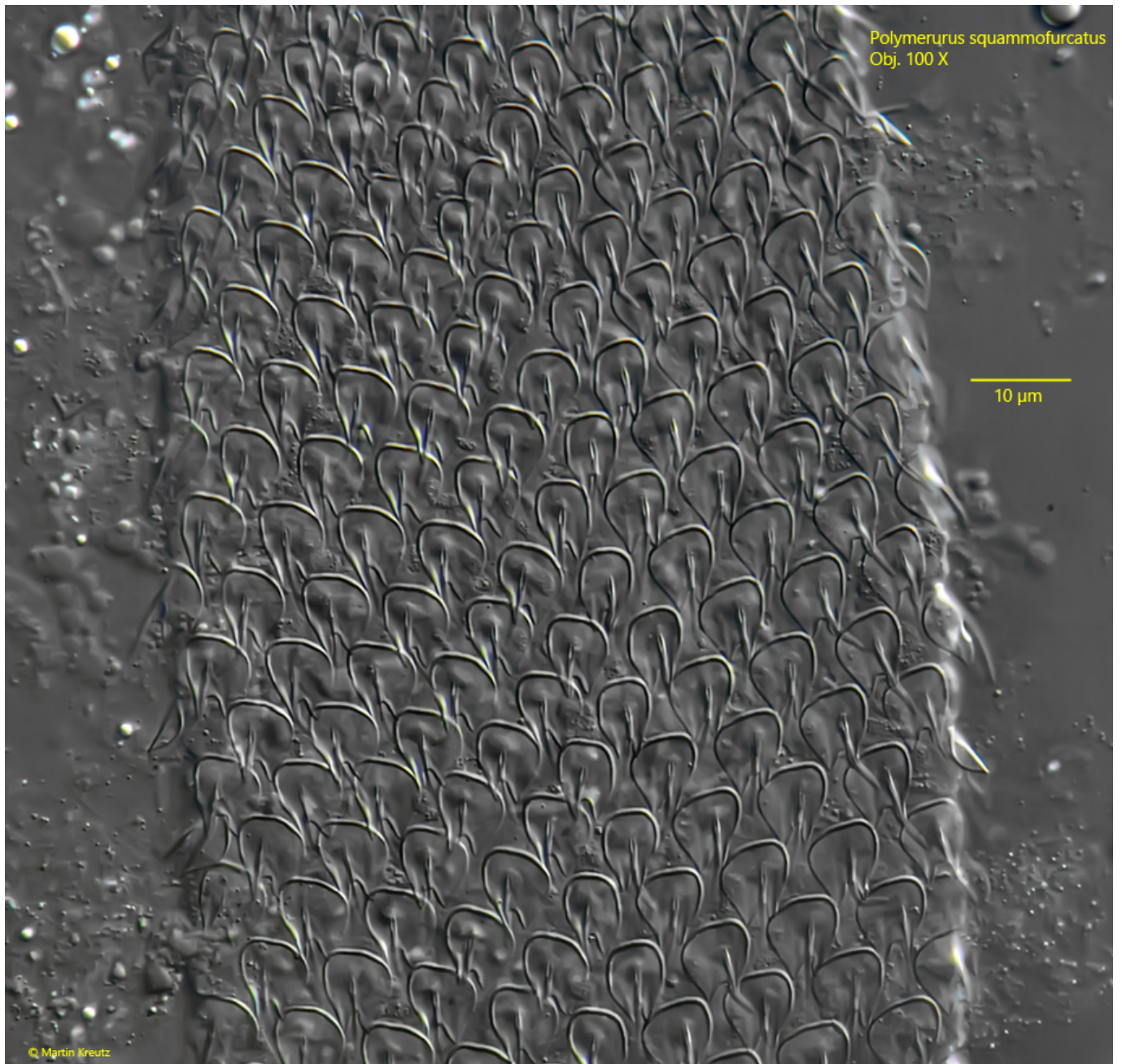


**Fig. 4:** *Polymerurus squammofurcatus*. L = 400  $\mu\text{m}$ . Lateral view of a freely swimming specimen. Obj. 40 X.



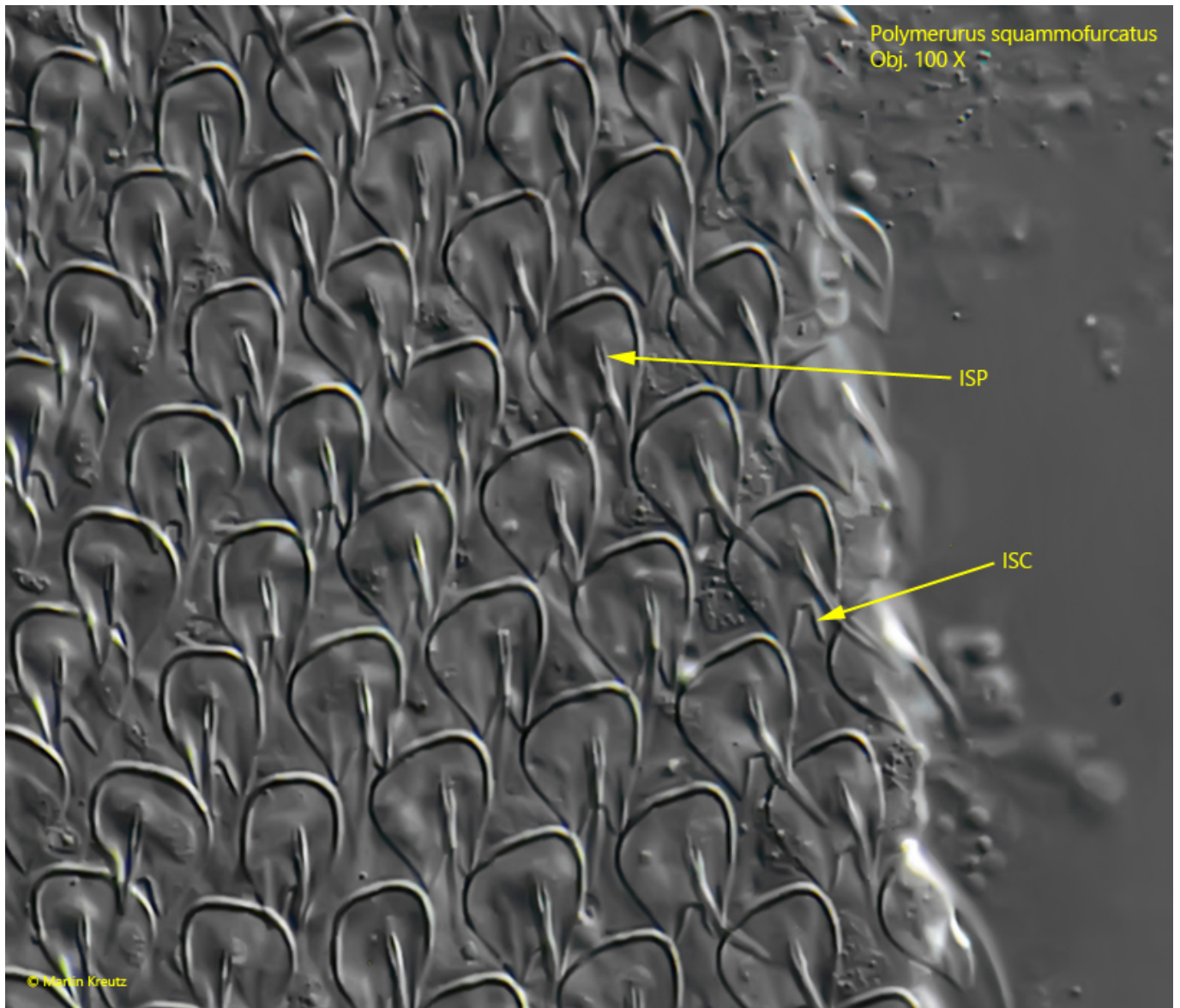
**Fig. 5:** *Polymerurus squammofurcatus*. L = 480 µm. Dorsal scales in the head and neck region. The scales are 4-5 µm long with a round anterior end and a V-shaped incisions at the posterior end. Obj. 100 X.





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





**Fig. 7:** *Polymerurus squammofurcatus*. L = 480  $\mu$ m. 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.

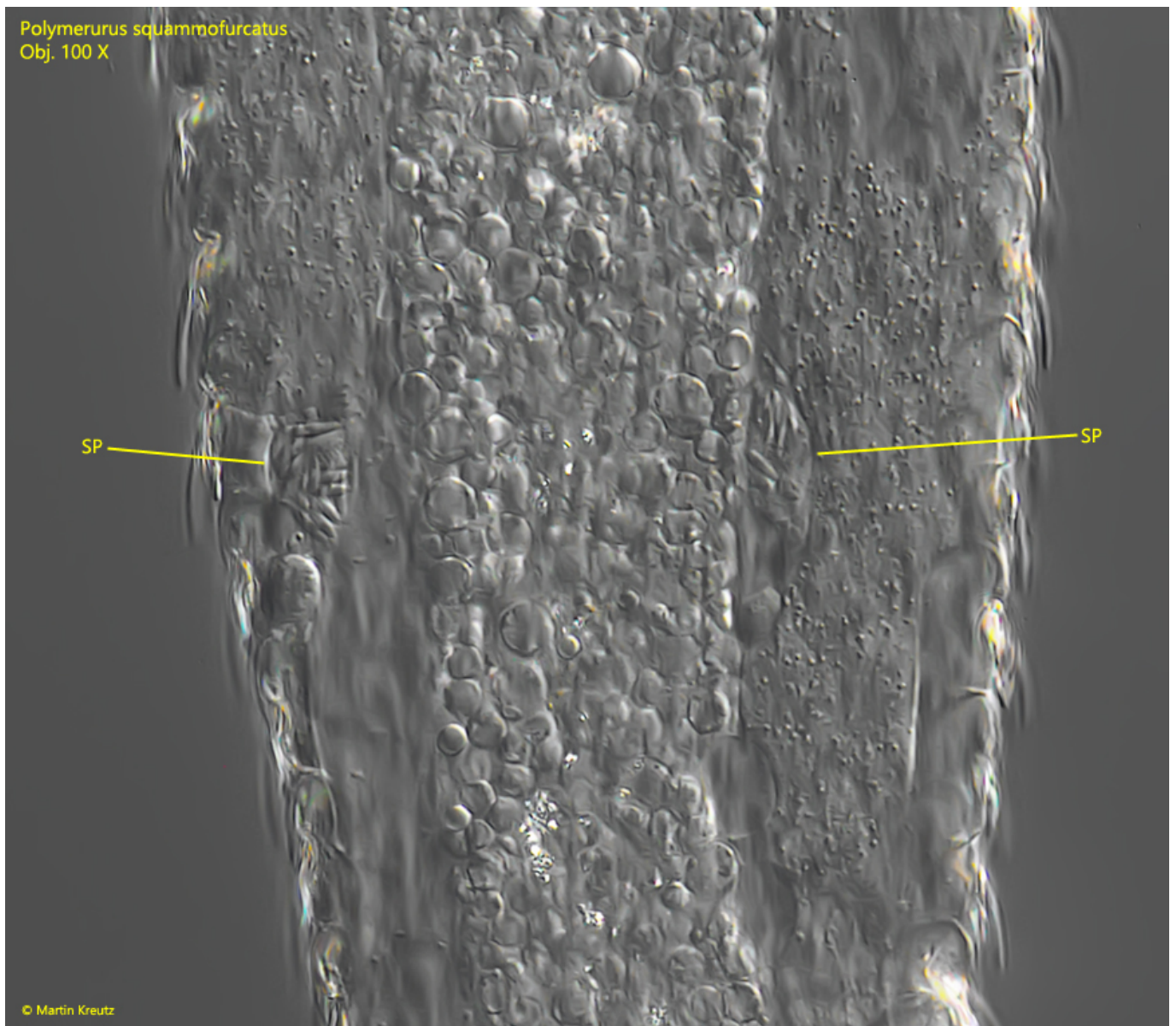
*Polymerurus squammofurcatus*  
Obj. 100 X



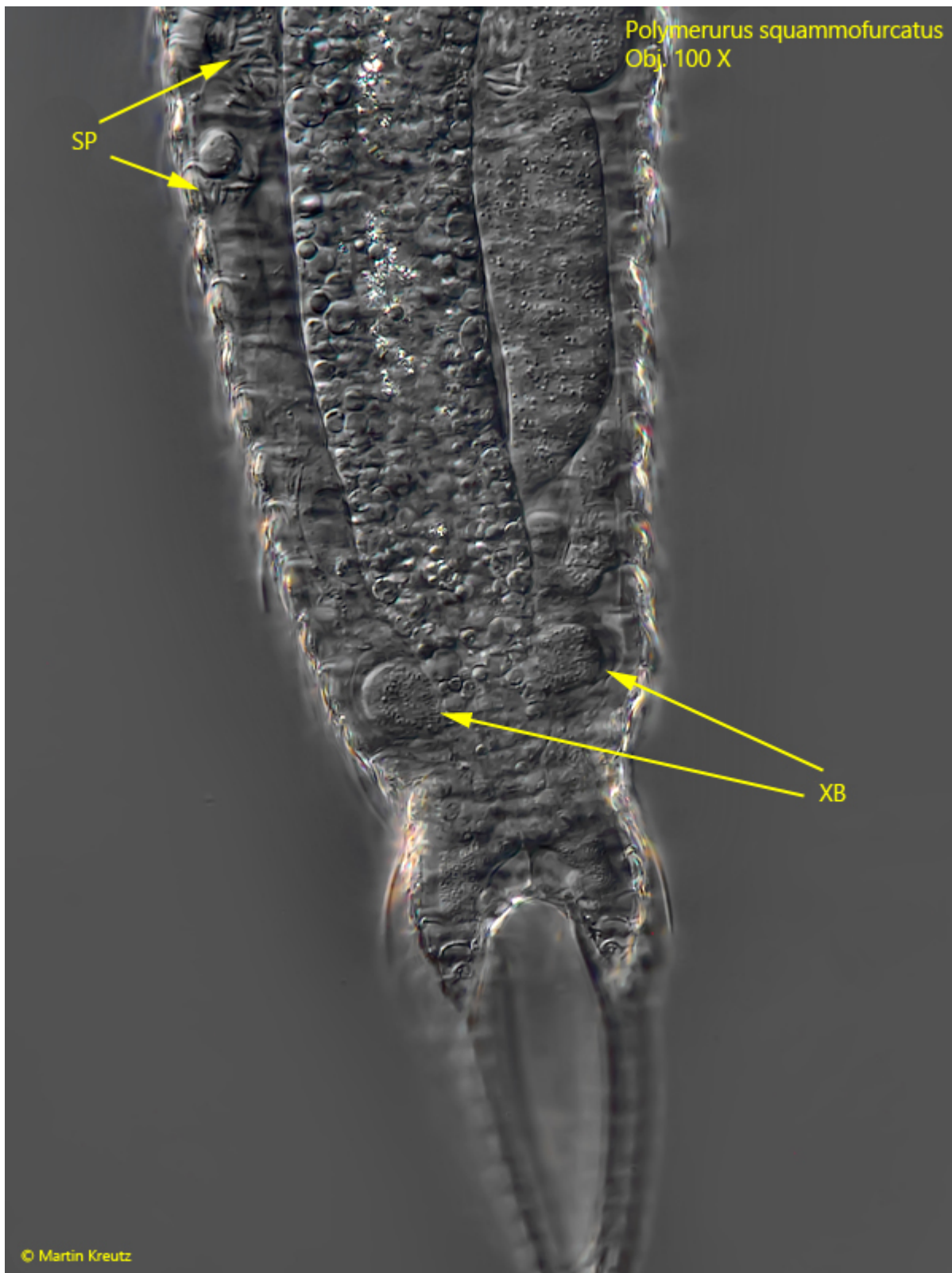
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**Fig. 8:** *Polymerurus squammofurcatus*. L = 480  $\mu\text{m}$ . The spines of the mid-body in lateral view (arrows). They have a length of 12 - 14  $\mu\text{m}$ . Obj. 100 X.



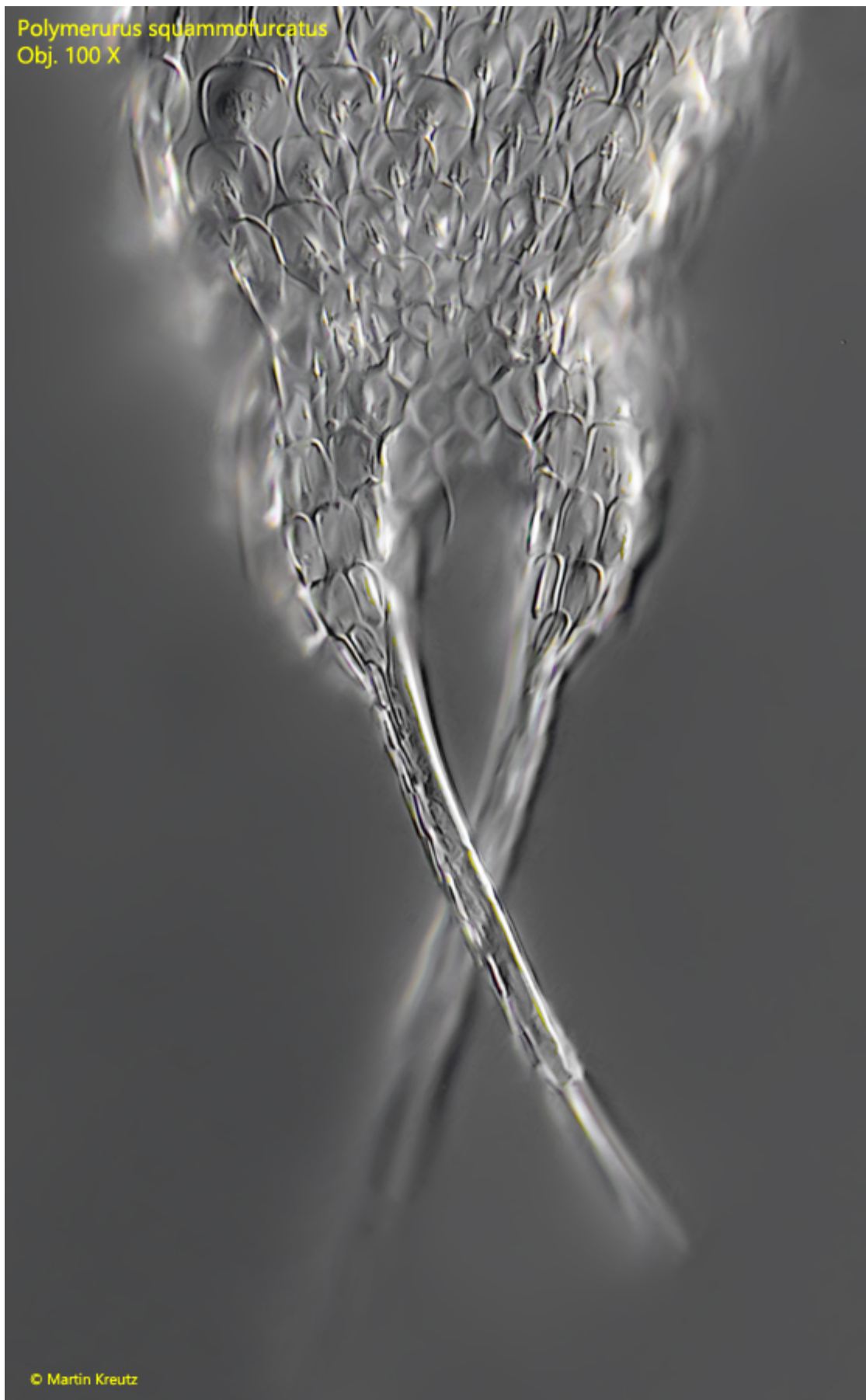


**Fig. 9:** *Polymerurus squammofurcatus*. In the posterior third of a strongly squashed specimen reservoirs of sperm cells (SP) are visible. Obj. 100 X.



**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  $\mu$ m. The toes of a slightly squashed specimen. Obj. 100 X.



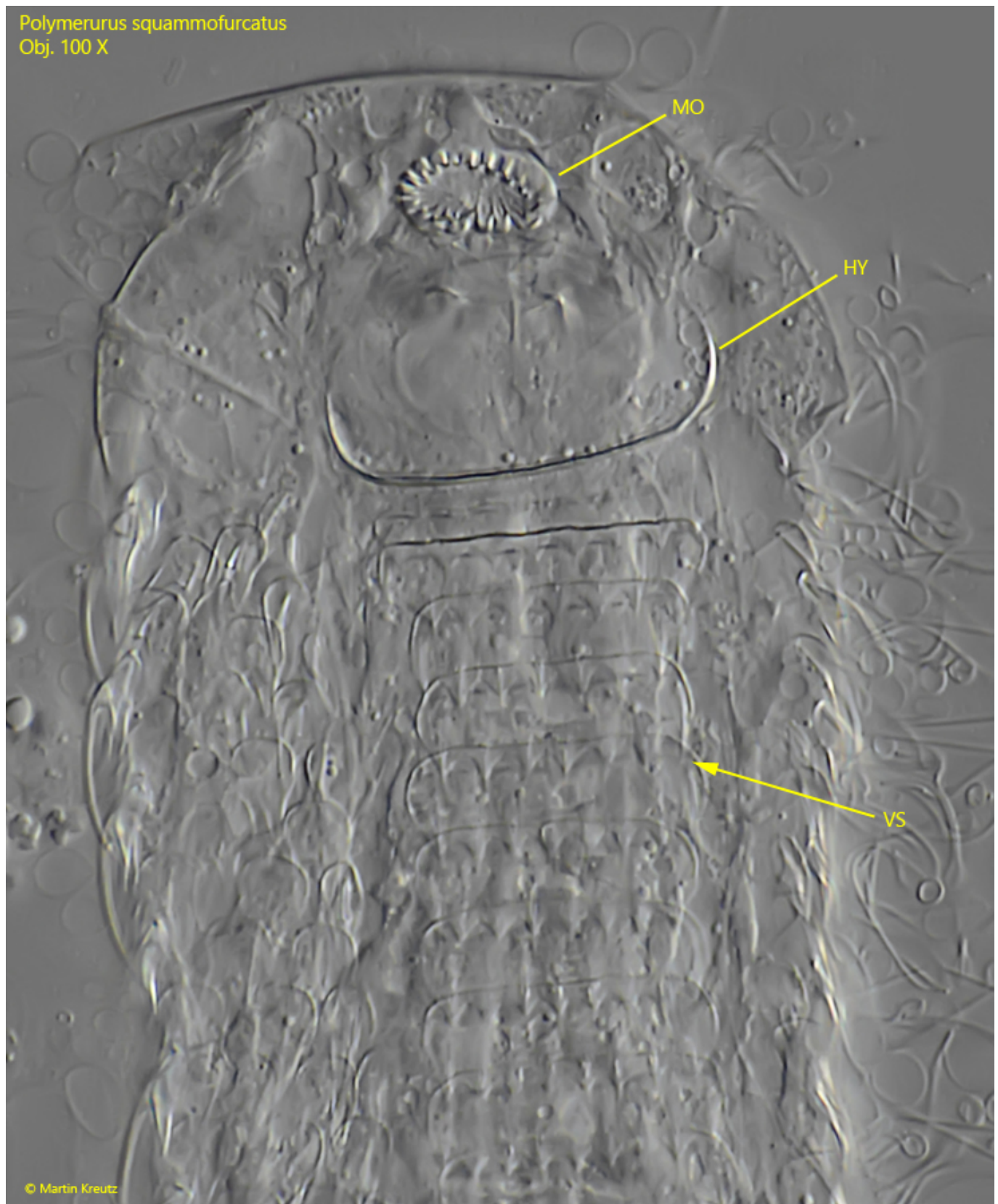


**Fig. 12:** *Polymerurus squammofurcatus*. L = 400  $\mu\text{m}$ . The dorsal scales of the posterior region and the toes. Note the posterior field of spineless scales with a keel (PS) and that the toes are covered only laterally with scales (LS). TO = toes. Obj. 100 X.



**Fig. 13:** *Polymerurus squammofurcatus*. L = 480  $\mu\text{m}$ . The ventral scales focussed from the dorsal side. The ventral scales (VS) have a size of about 18  $\mu\text{m}$  X 7  $\mu\text{m}$ .

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  $\mu$ m. 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.