

Ichthydium 1

Most likely ID: *Ichthydium nov. spec.*

Synonym: n.a.

Sampling location: [Simmelried](#)

Phylogenetic tree: n.a.

Diagnosis:

- body slender and elongated, almost parallel sides
- length 162, width 34 μm
- head oval, almost wide as body
- lateral lobes strongly reduced
- kephalion almost rectangular, drawn out anteriorly
- pharynx almost cylindrical
- ring-shaped thickening of intestinal entrance
- dorsal cuticle with lanceolate scales (L = 6 μm) with distal, simple spine (L = 7 μm)
- ventral cuticle covered with identical scale as dorsal
- toes very short (length about 10 μm), V-shaped branched

No drawings of previous authors available.

In December 2022 I found a 162 μm long gastrotrich in the mud of the [Simmelried](#) with features that suggest a classification in the genus *Ichthydium*. The head is oval and slightly narrowed towards the anterior end (s. figs. 4 a-b and 5). Apically there is an almost rectangular kephalion, which protrudes slightly (s. fig. 5). Most representatives of *Ichthydium* have a soft cuticle and are completely naked. Only a few species have a delicate longitudinal striation on the dorsal side (e.g. *Ichthydium fossae*). In my specimen, however, I could clearly recognize scales at high magnification, both on the dorsal and the ventral side (s. figs. 6, 7, 8 and 9). These very delicate scales are lanceolate, with a distal, simple spine (s. fig. 7). The scales are 12–15 μm long. The spines make up about 60% of the scale length. The spines overlap the lanceolate parts of the scales, giving the impression that they are keeled. However, this is not the case. Identical scales are found on the ventral side (s. fig. 9). The toes are very short at about 10 μm and conical in shape (s. fig. 10). At the entrance

of the intestine a thickening ring can be recognized, which is typical for the genus *Ichthyidium* (s. 4 b). The pharynx is almost cylindrical, without thickening and about 40 μm long (s. fig. 4 a).

Similar species within the genus *Ichthyidium* are *Ichthyidium bifaciale* and *Ichthyidium brachykolon*. However, *Ichthyidium bifaciale* is completely naked, has no rectangular kephalion and the toes are significantly larger (17–18 μm) while the head of *Ichthyidium brachykolon* is wider than the body and the pharynx is said to show a distinct thickening in the middle, which is not the case in my species. In addition, *Ichthyidium brachykolon* is somewhat smaller (about 130 μm) and the cuticle is also completely naked.

Since no comparable species is described in the literature available to me, it could be a new species that has not yet been described.

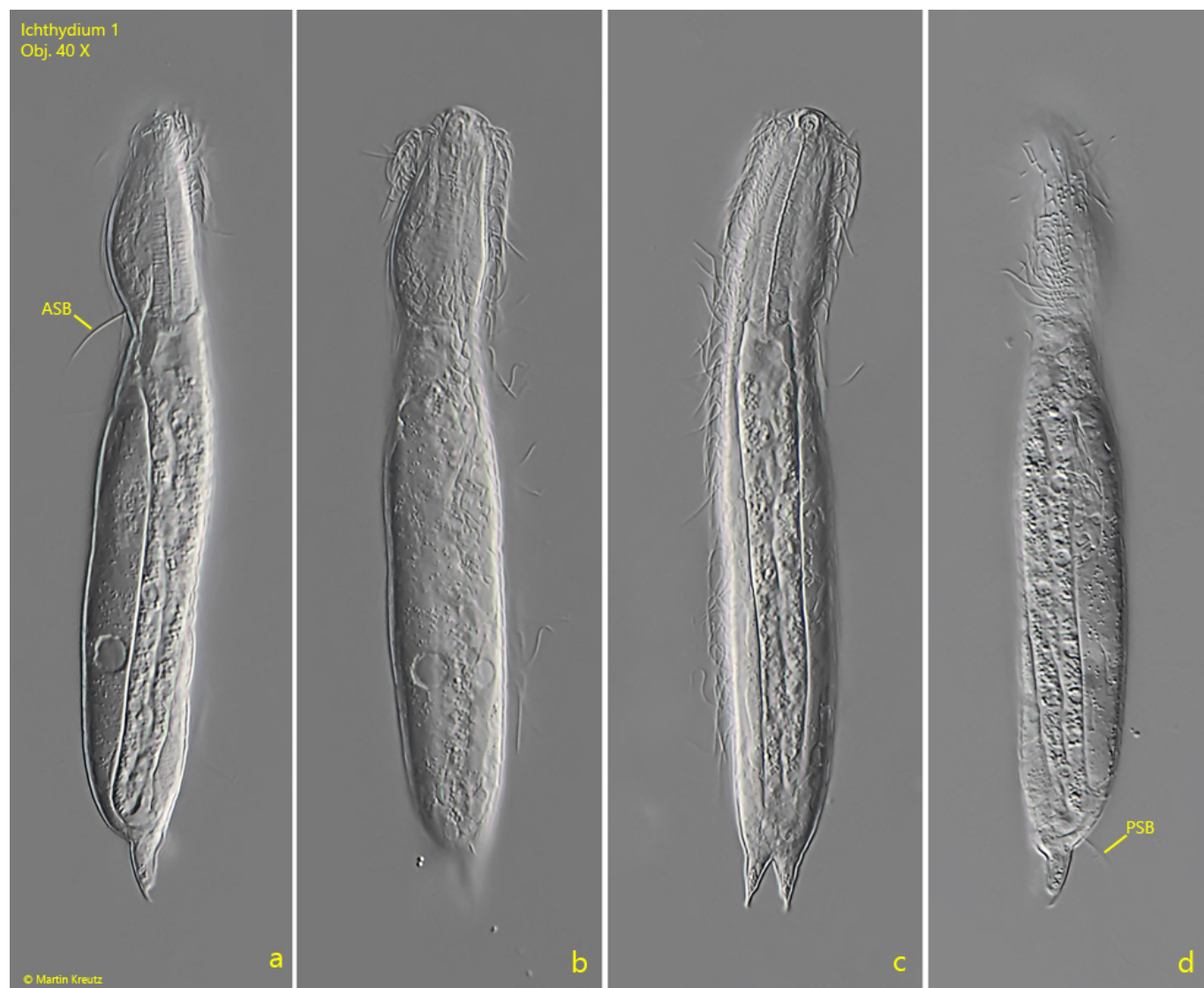


Fig. 1 a-d: *Ichthyidium 1*. L = 162 μm . A freely swimming specimen from right (a), dorsal (b,

c) and from left (d). Obj. 100 X.



Fig. 2 a-b: *Ichthyidium 1*. L = 162 μ m. The slightly squashed specimen as shown in fig. 1 a-d. Obj. 40 X.

Ichthydium 1
Obj. 100 X



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Fig. 3: *Ichthyidium 1*. L = 162 μm . Total view from dorsal of the slightly squashed specimen as shown in fig. 1 a-d. IN = intestine, PH = pharynx, RI = ring-shaped thickening of the intestine entrance. Obj. 100 X.

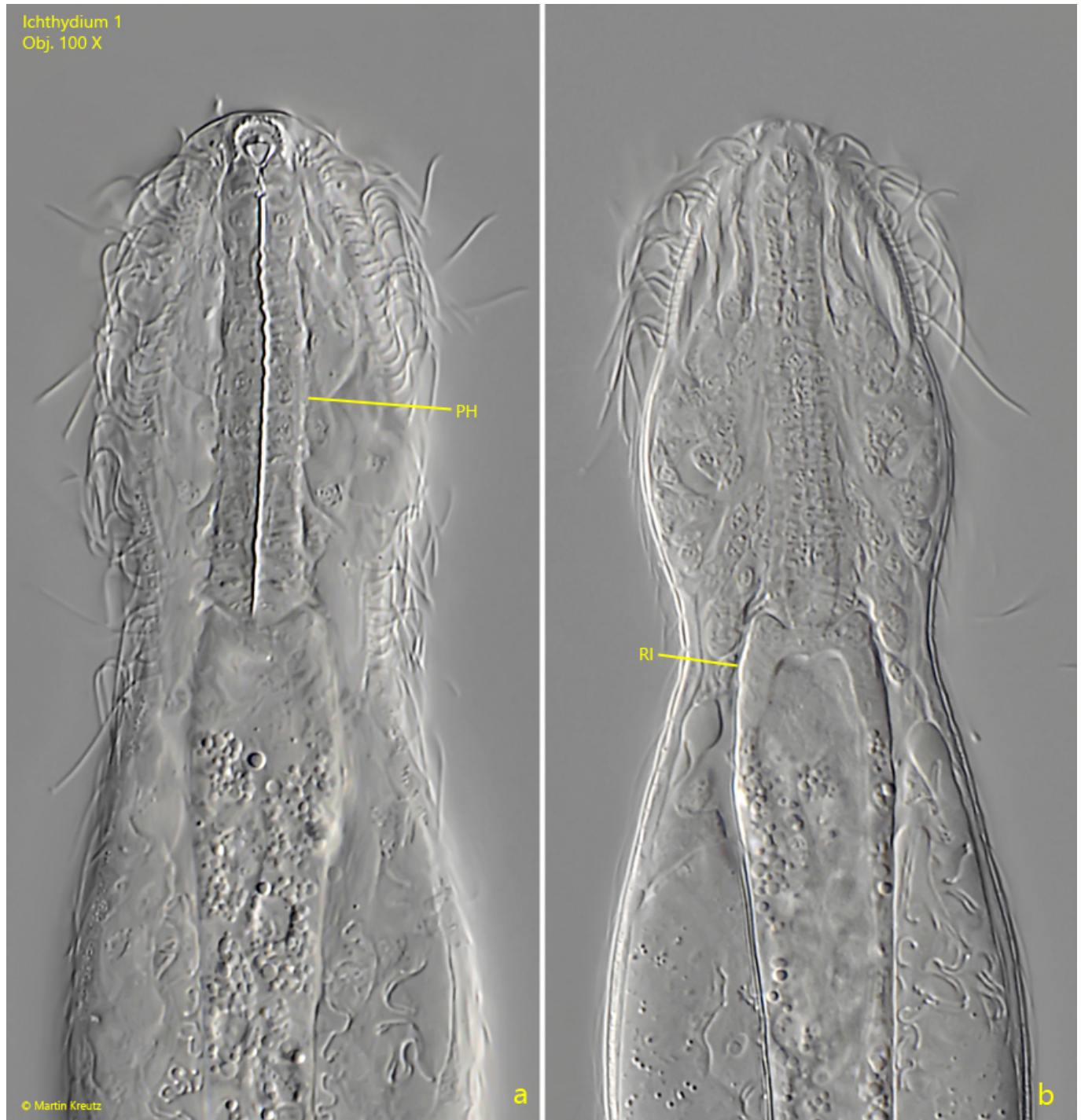


Fig. 4 a-b: *Ichthyidium 1*. Two focal planes of the head. PH = pharynx, RI = ring-shaped thickening of the intestine entrance. Obj. 100 X.

Ichthyidium brachykolon
Obj. 100 X

KE



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Fig. 5: *Ichthyidium 1*. Focal plane on the almost rectangular shaped kephalion (KE). Obj. 100 X.

Ichthyidium 1
Obj. 100 X



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Fig. 6: *Ichthyidium 1*. Focal plane on the delicate, lanceolate shaped scales of the dorsal side. Obj. 100 X.

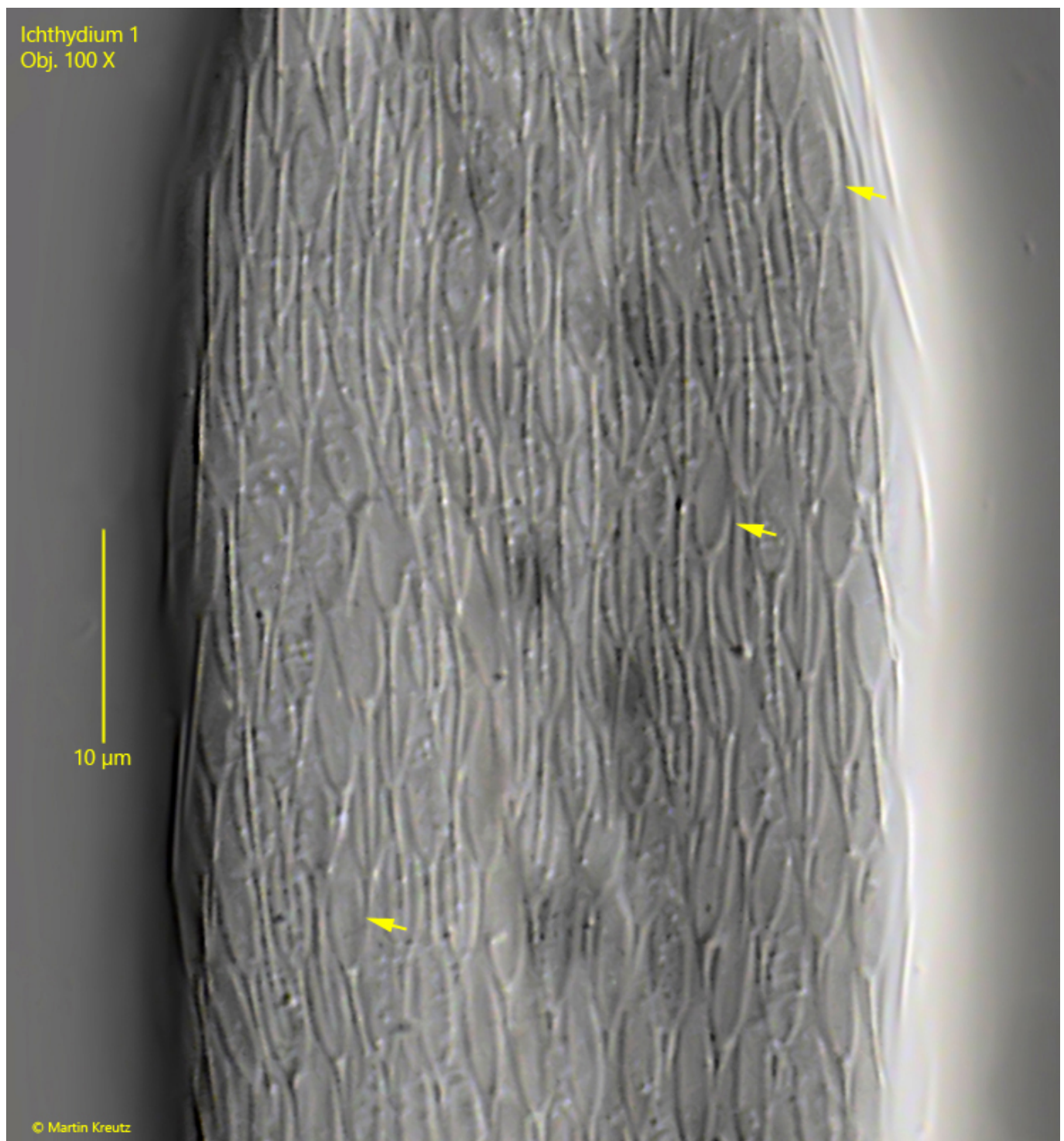


Fig. 7: *Ichthyidium 1*. The lanceolate shaped scales of the dorsal side in detail (arrows). Each scale has a simple spine at the distal end with a length of 5–7 µm. The lanceolate shaped part of the scales has a length of 6–7 µm. Obj. 100 X.

Ichthydium 1
Obj. 100 X



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Fig. 8: *Ichthydium 1*. Focal plane on the delicate, lanceolate shaped scales of the ventral side. Obj. 100 X.

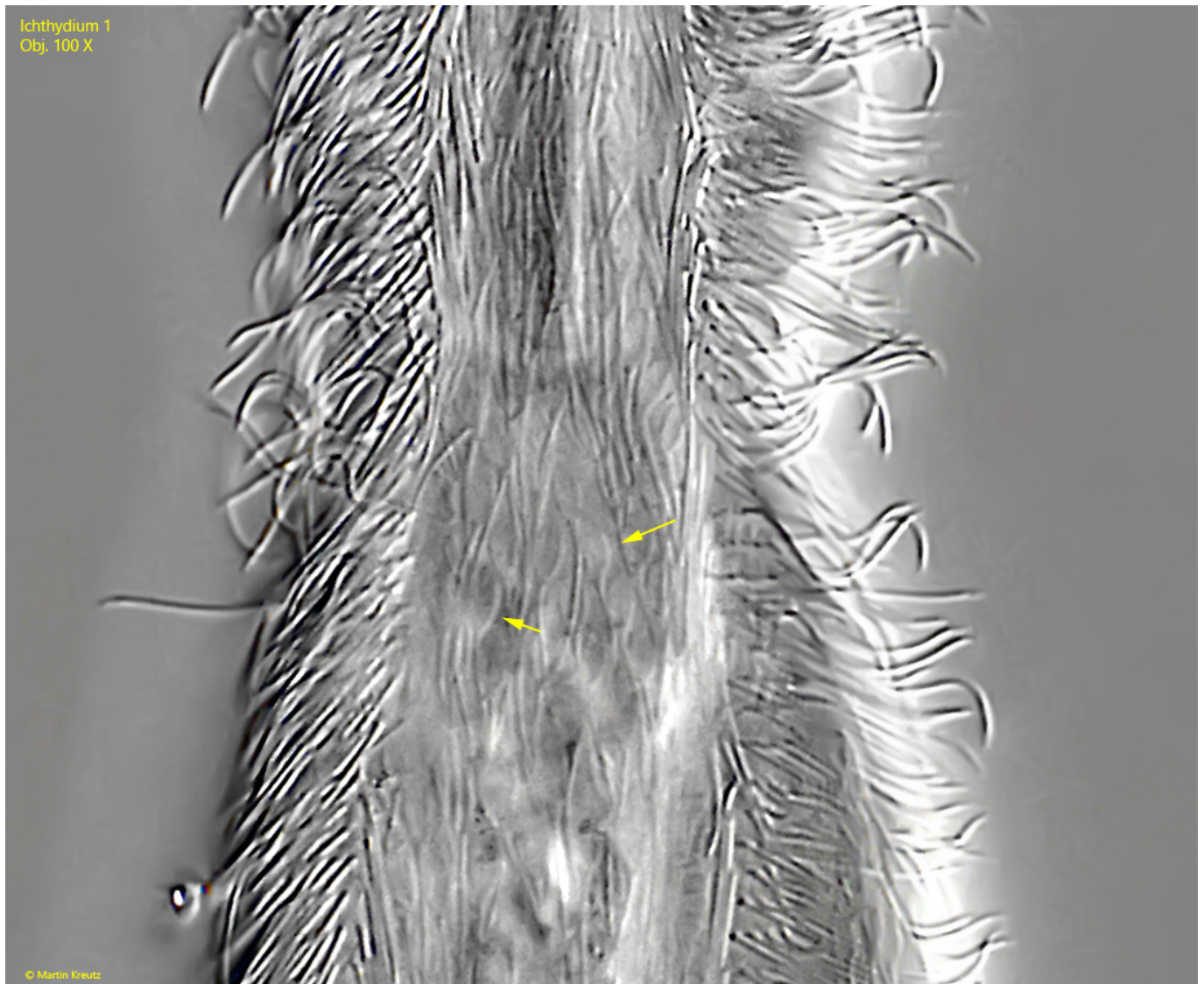


Fig. 9: *Ichthydium 1*. A strongly contrasted part of the image as shown in fig. 8 for visualisation of the ventral scales. They are from the same type as the dorsal scales. Obj. 100 X.



Fig. 10: *Ichthyidium 1*. The short, conical shaped toes with a length of about 10 µm in a squashed specimen. Obj. 100 X.