Chaetonotus cordiformis Greuter, 1917

Most likely ID: n.a.

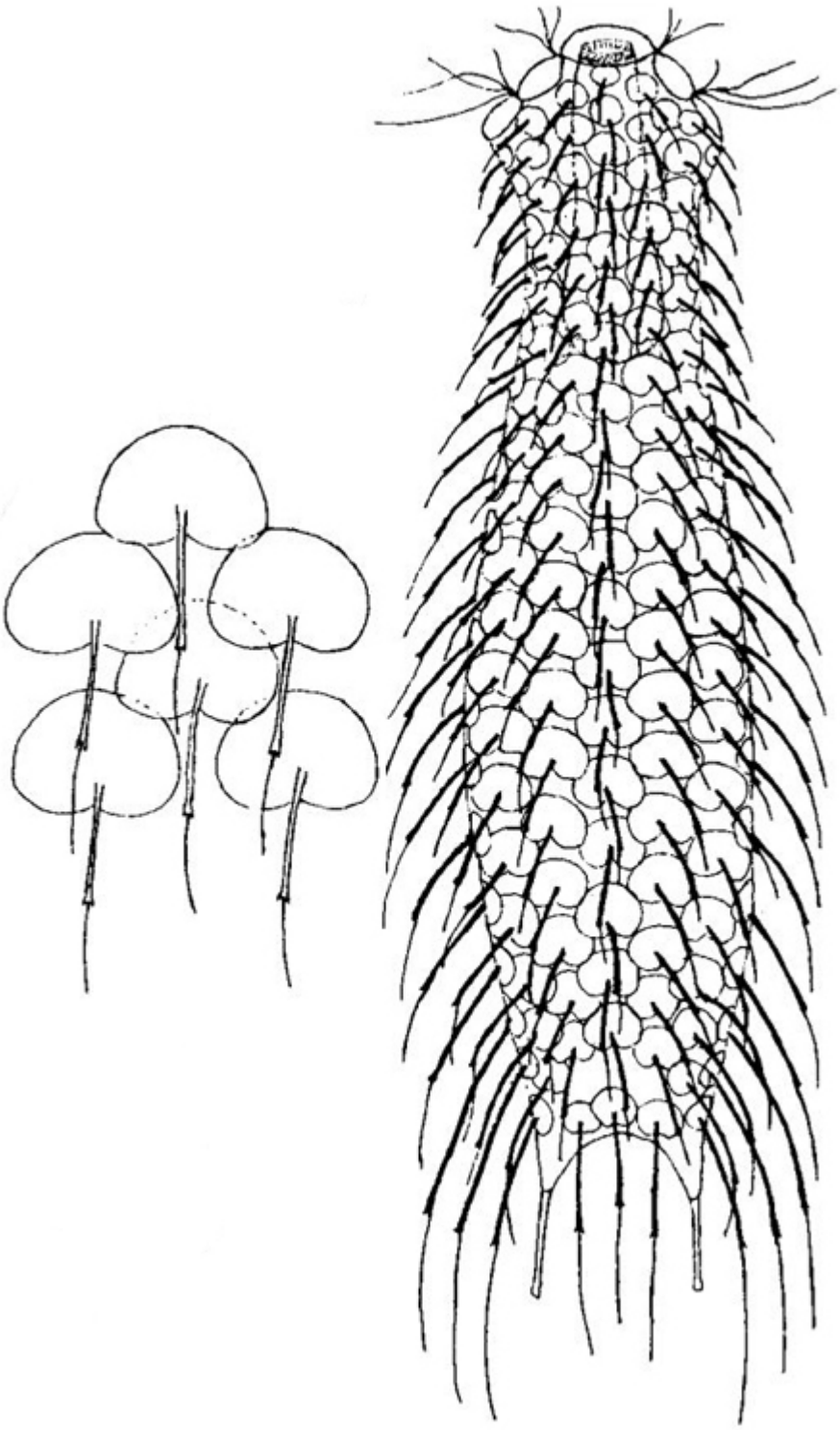
Synonym: n.a.

Sampling location: Simmelried

Phylogenetic tree: *Chaetonotus cordiformis*

Diagnosis:

- body sole shaped
- length 190–225 µm
- head five lobed, cephalion clearly visible
- pharynx terminally swollen
- 4 lateral ciliary tufts
- dorsally 7 longitudinal rows of transverse oval to heart-shaped scales
- dorsal scales with strongly curved spines (34–39 µm)
- in middle of dorsal spines a secondary spine
- dorsal scales overlap slightly
- 3 pairs of lateral spines at posterior end exceed length of toes
- ventrally 11 rows of small, almost circular scales with short simple spines



after Greuter

Chaetonotus cordiformis

I find *Chaetonotus cordiformis* comparatively rarely and only in the Simmelried. There, this species is mainly found in the uppermost mud layer.

Chaetonotus cordiformis stands out even at small magnifications due to its strong,

curved spines. This gastrotrich is also quite large at around 200 µm in length. The transversely oval or almost heart-shaped scales can be easily recognized even at medium magnifications, as they are also very large and overlap only slightly. The shape of the dorsal scales is subject to a certain variability in *Chaetonotus cordiformis*, as described by Schwank (1990). In the dorsal scales of the specimens in my population, the anterior margin was folded over, giving the impression of a “double margin” under the light microscope (s. figs. 3 and 4). The spines in the middle of the trunk were a maximum of 30 µm long in my specimens and thus somewhat shorter than Schwank’s description (34–39 µm). Shortly before the posterior end there is a conspicuous scale with two short spines (s. fig. 4), which I was able to detect in all specimens, but which is not mentioned by Schwank. I was only able to examine the ventral side from the dorsal side (s. fig. 6). The ventral scales are almost round and have a simple spine without a secondary tip.

More images and information on *Chaetonotus cordiformis*: Michael Müller-The small world of gastrotrichs-*Chaetonotus cordiformis*

Fig. 1 a-d: *Chaetonotus cordiformis*. L = 186 µm. Different focal planes of a freely swimming specimen from dorsal. Obj. 40 X.

Fig. 2 a-b: *Chaetonotus cordiformis*. L = 186 µm. Two focal planes of the slightly squashed specimen as shown in fig. 1 a-b from dorsal. Note the pair auf so called X-organs (XO) of unknown function. Int = intenstine, PH = pharynx. Obj. 60 X.

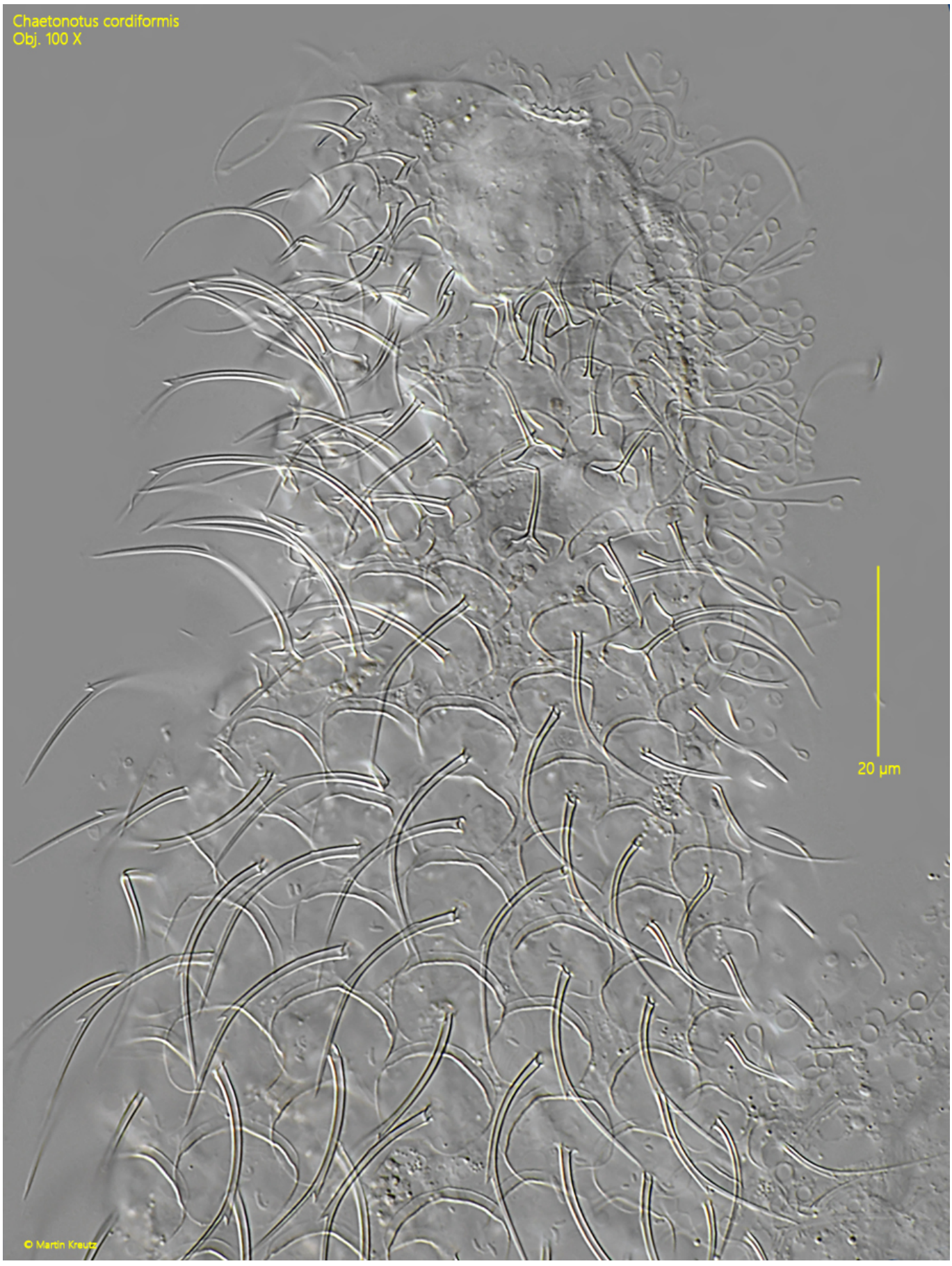


Fig. 3: *Chaetonotus cordiformis*. The dorsal scales of the head- and neck-region in a squashed specimen. The scales have a slight indentation at the posterior margin,

making them appear almost heart-shaped. Obj. 100 X.

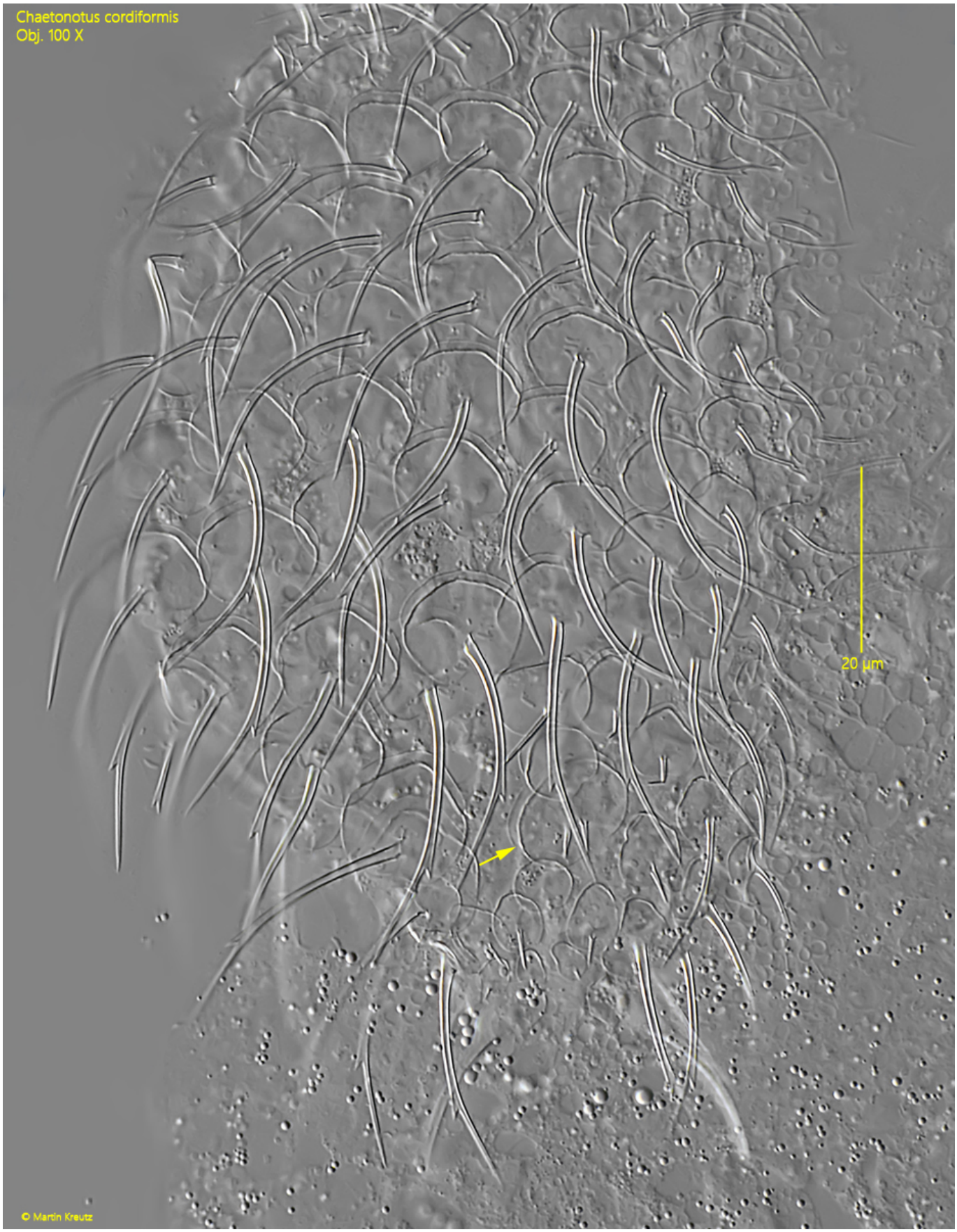


Fig. 4: *Chaetonotus cordiformis*. The dorsal scales of the trunk region and at the

posterior end. The largest scals have a width of 13–14 µm and a length of 10–12 µm. The anterior margin of the scales is folded. Note the scales with a double spine near the posterior end (arrow). Obj. 100 X.

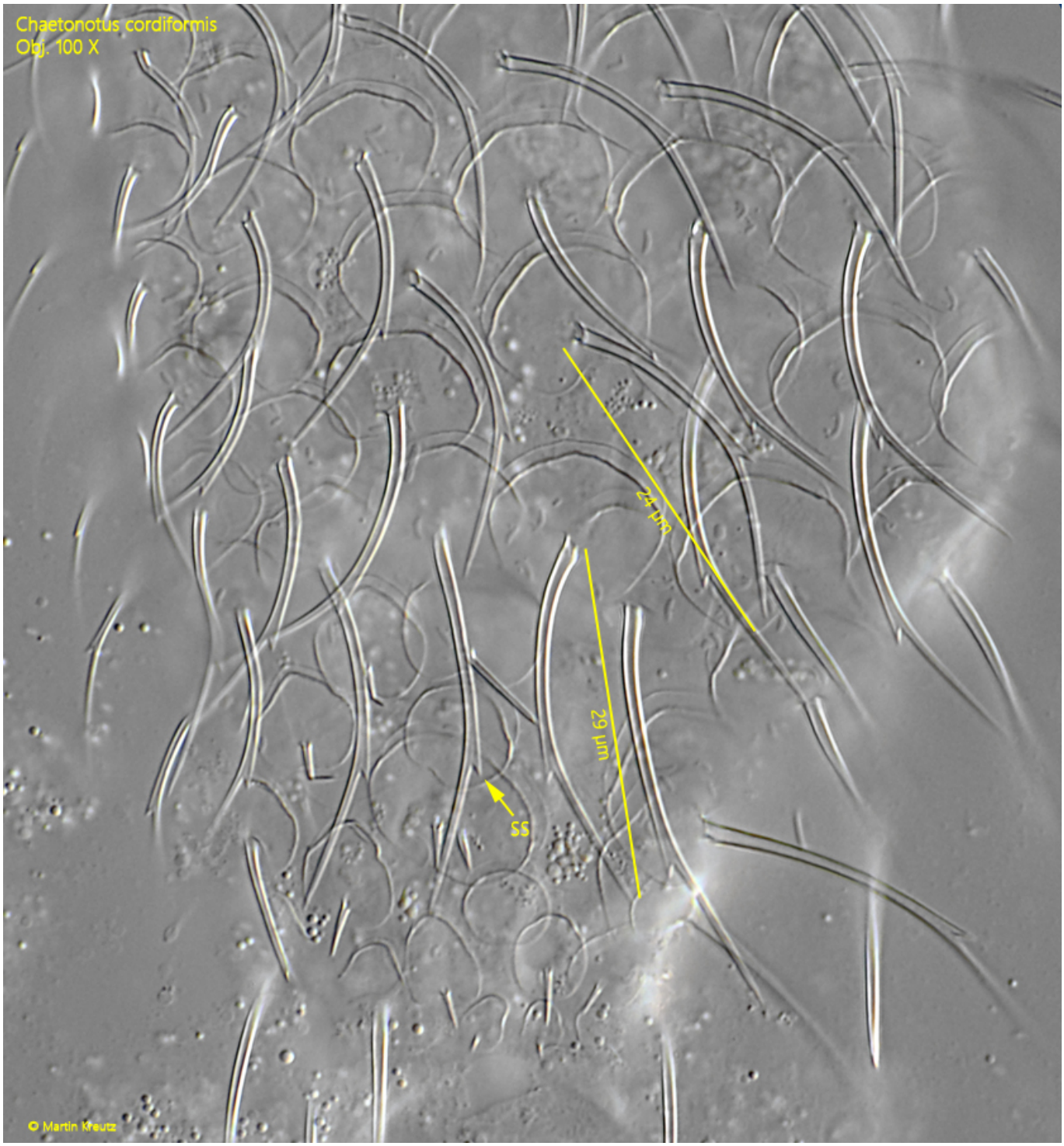


Fig. 5: *Chaetonotus cordiformis*. Focal plane on the curved spines of the dorsal scales. The spines in the middle of the trunk about 24–30 µm long. The secondary spines (SS) are located almost in the middle. Obj. 100 X.

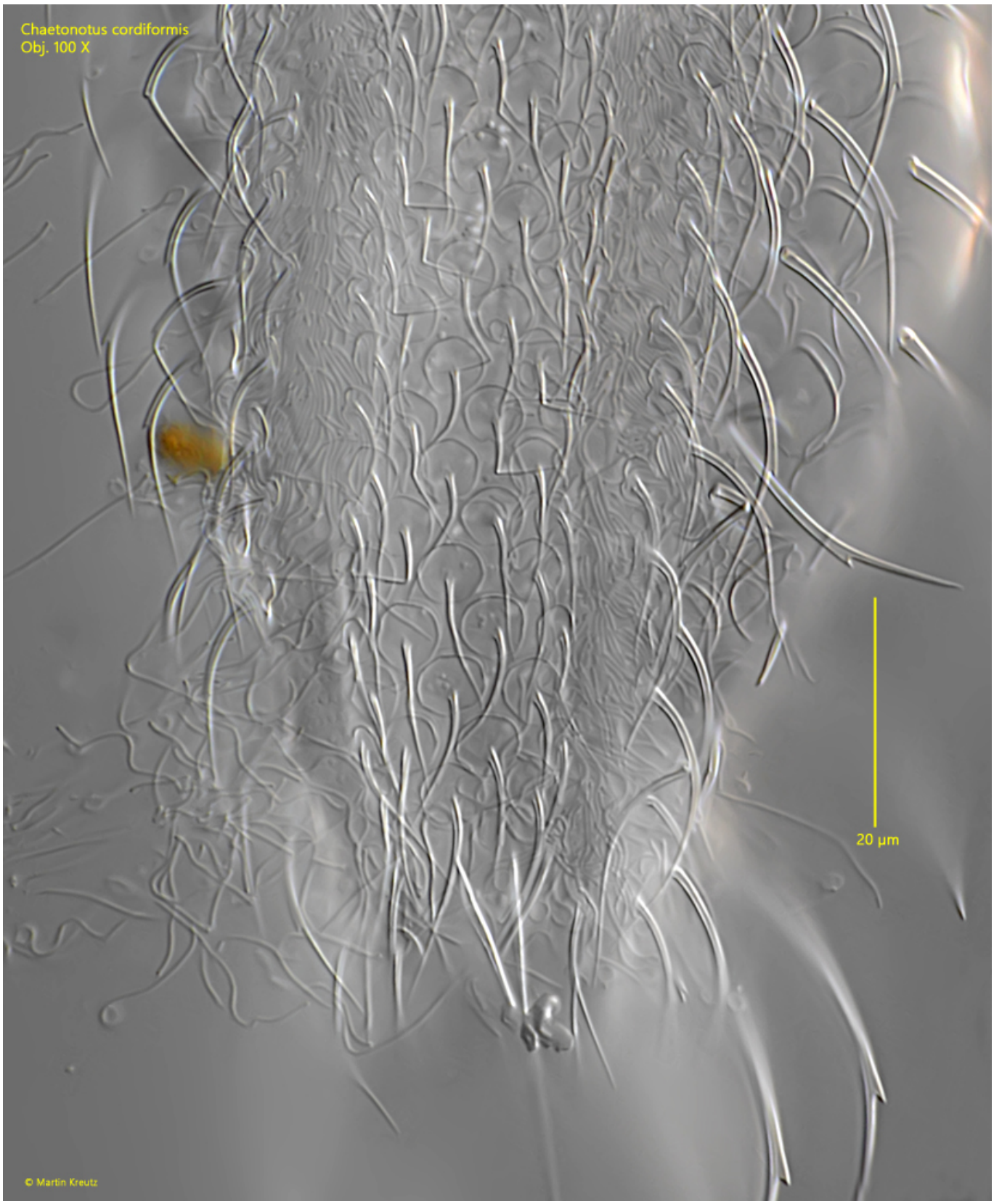


Fig. 6: *Chaetonotus cordiformis*. The ventral scales are almost circular with a diameter of about 3–4 µm with a simple spine. Obj. 100 X.