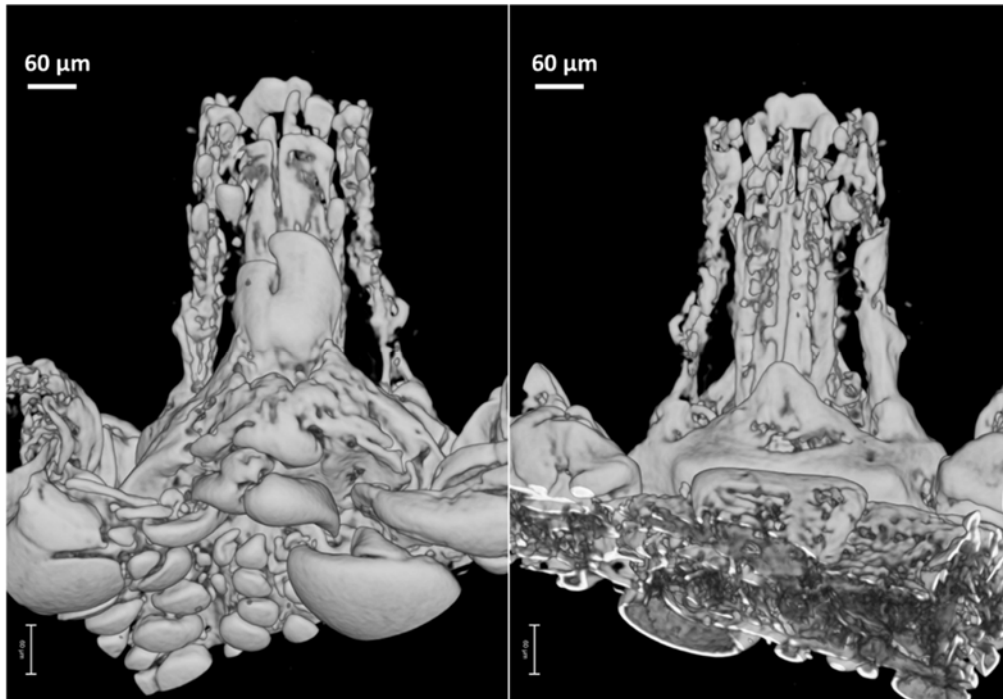


Supplementary figure 1: Ventral close-up of the mouth parts of *Ixodes antiquorum*. The tissue attached to mouth parts can be observed as a opaque inclusion.

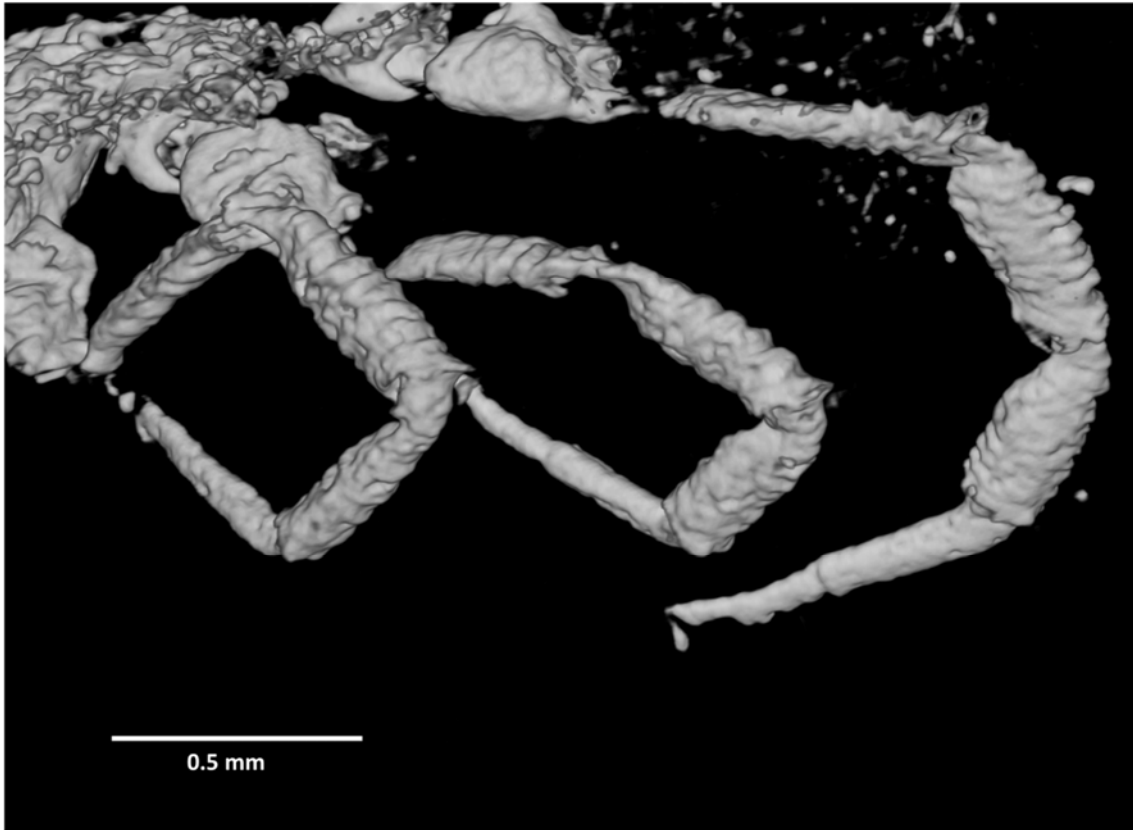


Supplementary figure 2: MicroCT scan of the hypostome of *Cornupalpatum burmanicum*.

Indicated is the dorsal view on the left and the ventral view on the right.



Supplementary figure 3: Tarsi from *Cornupalpatum burmanicum* grasping a barb from a feather.



Supplementary figure 4: MicroCT scan of the legs of *Deinocroton copia* sp. nov. The tarsi articulations with notch-like processes and rifled dorsal and ventral line can also be observed.



BVB3319_palps2.mpg

Supplementary video: A rendering of the microCT scan of the palps of *Deinocroton copia* sp. nov.