



Supplementary Figure 1 Differential circumferences of the nerve cord within the interpedal and the leg-bearing regions in Onychophora. Light micrographs (**a**) and fluorescence micrographs (**b, c**). Median is left in all images, dorsal is up (**b, c**). **a** Dissected nerve cord of a juvenile *Euperipatoides rowelli*. *Bracket* indicates one hemisegment from one body side delimited by two consecutive posterior leg nerves. *Dotted lines* indicate the region of the sections represented as insets (**b, c**). **b, c** Cross sections of the interpedal region (**b**) and the leg-bearing region (**c**) of the same nerve cord as in **a** stained with a DNA-selective marker (DAPI). All sections are to scale. Note the differences in circumferences and number of nuclei comparing the interpedal and the leg-bearing regions. Additionally, the region of the neuropil is more voluminous in the leg-bearing region. In, leg nerve; np, region of the neuropil; pe, perikaryal layer. Scale bars: 200 μm (**a**) and 50 μm (**b, c**)