Earthworm population in a topographic gradient in Capão Alto, Santa Catarina, Brazil

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This study aimed to analyze earthworm species richness along a topographic gradient in an area of ecotone in Capão Alto, Santa Catarina, Brazil. We sampled 35 plots of 200 m² each, divided into three distinct sectors, defined by topographic variations. The first sector (lower) stood on the border of the river, consisting of 15 plots (646 m altitude). The second sector (intermediate) was located in an area of higher topographic gradient consisting of 10 plots (711 m). The third sector (top) was allocated on a topographic gradient steeper still, and consisted of 10 plots (732 m). Earthworms were sampled qualitatively, consisting in the digging of randomly selected holes in each plot. Earthworms were fixed in alcohol (92.8%) and later identified to family, genus and species level. A total of 133 individuals were found belonging to seven species in four earthworm families. The lower sector showed the higher earthworm richness (seven species, one exotic and six native) and an average of six earthworms per plot. In the intermediate and top sectors we found four species (all native) and an average of one or two earthworms per plot, respectively. The most common species was *Urobenus brasiliensis* in the three sectors. The only exotic species was found in the lower sectors (two juvenile individuals of Megascolecidae). Three *Glossoscolex* species were identified and were more abundant in the lower sector and less abundant in direction to the top sector. There is also a difference in vegetation across the sectors and future correlations with the earthworm population are needed to better understand these population distributions.