



Earthworm species in Santa Catarina State, Brazil*

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The state of Santa Catarina has not much information on earthworm richness and in fact it the state with the lowest number of recorded species in the southern region of Brazil. Currently there are 18 species recorded in the state, being 50% of that native. The aim of this study was to assess the species richness of earthworms in different land-use systems (LUS). The study was carried in the Santa Catarina State in Brazil. Five ecosystems were sampled (native forest - FN, eucalyptus plantation - RE, pasture - PA, no-till - PD and crop-livestock integration - ILP) in 12 counties, three for each region (West, Plateau, East and South). Nine monoliths of 25 x 25 cm x 20 cm (TSBF) were sampled at each site and worms were collected by hand sorting and combined to a qualitative sampling (dug at least 20 points randomly in each site). The sampling was carried out in winter (July and August of 2011 and July of 2012) and summer (December of 2011 and January of 2012).

A total of 34 species were identified in all LUS, 21 native (*Urobenus brasiliensis*, *Glossoscolex* sp.1, *Glossoscolex* sp.2, *Glossoscolex* sp.3, *Glossoscolex* sp.4, *Glossoscolex* sp.5, *Glossoscolex* sp.6, *Glossoscolex* sp.7, *Glossoscolex* sp.8, *Fimoscolex* sp.1, *Fimoscolex* sp.2, *Fimoscolex* sp.3, *Fimoscolex* sp.4, *Andriorrhinus* sp.1, *Andriorrhinus* sp.2, *Andriorrhinus* sp.3, *Ocnerodrilidae* sp.1, *Ocnerodrilidae* sp.2, *Ocnerodrilidae* sp.3, *Ocnerodrilidae* sp.4, *Ocnerodrilidae* sp.5), 11 exotic (*Amyntas gracilis*, *Amyntas corticis*, *Metaphire californica*, *Metaphire* sp.1, *Megascolecidae* sp.1, *Megascolecidae* sp.2, *Octolasion tyrtaeum*, *Bimastus parvus*, *Dichogaster gracilis*, *Dichogaster bolau* and *Dichogaster saliens*), one peregrine species (*Pontoscolex corethrurus*) and a not identified species at family level (NI sp.1). In the West and Plateau regions, the exotic species are mostly related to the agricultural sites (ILP and PD) where they comprise 60% of the populations, although native species were also found in those sites. In these regions the FN sites were characterized by occurrence of 100% native species. In the East and South regions the studied LUS were inhabited predominantly by (*Pontoscolex corethrurus* which was occurring in at least 80% of the earthworm populations.