



Earthworm populations in Eucalyptus plantations at Embrapa Forestry

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Changes in forest cover can affect the composition of soil fauna, including species of earthworms. However, studies on the edaphic beings in areas of eucalyptus plantations are still scarce in Brazil. This survey was conducted to evaluate the density and diversity of earthworms in five eucalyptus plantations at Embrapa Florestas - Colombo (PR): a *Eucalyptus benthamii* (EB) with 28 years on dystrophic Oxisol, a mixed plantation of eucalyptus (EM) of 26 years and three areas with *Eucalyptus dunnii*, called EDI, EDII and EDIII 30 to 31 years, on dystrophic Cambisols (humic and Haplic). Samples were collected in February 2010 and January 2012; five monoliths of 40 x 40 cm to 20 cm depth in each planting.

We found six species of earthworms: *Pontoscolex corethrurus* (Müller, 1857), *Amyntas gracilis* (Kinberg, 1867), *Amyntas corticis*, *Metaphire schmardae* (Kinberg, 1867), *Fimoscolex* sp. and *Glossoscolex* sp. Earthworm populations were lower in areas of *E. benthamii*, probably due an edaphic factor, not yet determined. In this plantation native species of *Glossoscolex* and *Fimoscolex* sp. were dominant. In areas of *E. dunnii* the incidence of *P. corethrurus* was >90% of all individuals collected. The species *M. schmardae* appeared in EM, EDI and EDII but was not found in EDIII and EB. The species *A. gracilis* and *A. corticis* appeared in EM, EDII and EDIII. As observed in other locations, Eucalyptus plantations tend to benefit the appearance of the species *P. corethrurus* while native species are less frequent. In the present case, the prevalence of *P. corethrurus* and high density and biomass of otheexotic/peregrine earthworms (*M. schmardae*, *A. gracilis*, *A. corticis*) in Eucalyptus, are probably due to prior agricultural use of the area, but further studies must be conducted to determine why these species are so widely present in Eucalyptus plantations around the world.