Advances in terrestrial oligochaete research with a special focus on Brazil

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Over 1100 terrestrial oligochaete species are known from Latin America (LA), most of which are earthworms (1013 sp.) while only 96 are enchytraeids. Since the inception of the ELAETAO and the IOTM in 2003, over 100 papers have been published on LA oligochaetes, dealing with various aspects of their ecology, biology and taxonomy. Furthermore, 10 training courses have been given in earthworm and 2 in enchytraeid taxonomy, while 2 courses covered terrestrial ecotoxicology and molecular genetics, training 150 persons and significantly increasing the region's ability to perform research on LA oligochaetes.

In Brazil, this has led in the past 10 years to: higher number of professionals and students working on oligochaetes and able to identify earthworms to species level; establishment of ELAETAO as the forum for exchange between LA oligochaete researchers; building of a data base with records of earthworm collections; establishment of a formal collection of oligochaetes at Embrapa; discovery of >60 new earthworm and >40 new enchytraeid species; discovery of several new "aquatic" Ocnerodrilidae and Almidae/Criodrilidae species; naming of 37 and 13 new earthworm and enchytraeid species, respectively; discovery of a very large (4 cm) enchytraeid; separation of Glossoscolecidae into two families; erection of a new *Andiorrhinus* subgenus; barcoding of >150 earthworm species; discovery of cryptic earthworm species; expansion of the distribution of several native taxa (families, species and genera); assessment of the risk of extinction of earthworm species; identification of the life cycle of several oligochaete species; identification of the potential use of several enchytraeid and earthworm species in ecotoxicology; writing of manuals on earthworm ID and oligochaete ecotoxicology; discovery of the emission of N2O and CH4 by several earthworm species; earthworm inventories in several natural and anthropogenic ecosystems and updated species lists for several states; establishment of best oligochaete collection methods; assessment of the potential use of earthworms as soil quality bioindicators in no-tillage systems, and as indicators of disturbance in natural ecosystems; assessment of the invasion ability of *Pontoscolex corethrurus*; identification of some earthworms as rice pests; assessment of the role of some earthworm species on Eucalyptus seedling growth; studies on the role of some native and exotic species on soil nutrient dynamics; participation in an earthworm documentary and several important news releases.