

EARTHWORMS (*LUMBRICIDAE*) - AN IMPORTANT ROLE IN THE SOIL FORMATION

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Abstract

The Lumbricidae investigations were performed in the village of Chetrosu. The galleries that the *Lumbricidae* makes in the soil allow his venting and roots breathing the micro-fauna composed of other worms and insects, oxidation reactions of microorganisms in the soil and by calcium carbonate which eliminates via faeces and helps ensure microgranulare structure of the soil and in the neutralization pH variations. The factor that determines the productivity and diversity of soil biota is fertility, the correlation coefficient being 0.82 to 0.99. Thus the number of invertebrates varies from 110-135 ex/m² subtypes chernozems north of Republic 42-64 to ex/m² in the South. The number of the fungi - corresponding to 53-68 thousand/g of soil up to 15-22 thousand/g of soil. In the regions with very low temperatures, they are missing because for their activities optimum temperature is between + 6°C and 14°C. So they are where temperatures are moderate, especially in the hilly areas, lowland and plains. Experiences made on terrestriis *Lumbricidae*s shows that an individual consumes an average of 80 mg dried leaves wet weight per gram and by day, which returns annually on about 2,000 kg per hectare. In the soil and through galleries, deep I can therefore accumulate rather high amounts of minerals from 1 hectare during 1 year so it can work at depths over 60 kg of Na, 30 kg of phosphorus, 5 kg of K, 70 kg of Ca. As a result of long exploitation of soils the quantity and the biota of biomass was reduced by 2-3 times. Increased share of species of that causes degradation of humus. Their activity has increased to 7.8 to 15.9 mln/g of soil and saprofagoes biomass among invertebrates decreased to 17.2 to 6.1 g/cm². And according to research invertebrate diversity index, decreases to 0.582, and *Lumbricidae* family composition does not attests only 5 species compared to 9 species by 6 years ago.

Key words: *Lumbricidae*, the soil, the village of Chetrosu, Republic of Moldova
