Abstract

The paper follows up on previous analyses of changes in soil microstructure in the process of soil development on dumps around Sokolov, Czech Republic, using the soil thin section method. The distribution of structures in the topsoil of the profile was studied in two chronosequences, one overgrown with spontaneous vegetation and one reclaimed by alder planting. A comparison with historical data obtained at these locations 10 years ago was used, and, therefore, the same methods were also applied (Frouz et al., 2007b).

The most distinct trend in the process of soil development over time, as observed through both a comparison of soil thin sections from various areas of chronosequence and changes in particular sites over time, is a gradual reduction of purely mineral structures and their replacement by organic matter – litter and its fragments, faecal pellets of arthropods, earthworms coprolites, and roots. This is illustrative of a high share of biogenic structures and a fundamental contribution of organisms to forming topsoil, a fact also pointed out by other authors.

Keywords: Soil macrofauna; Soil microstructure; Soil thin section; Reclamation; Post-mining sites; Soil development; Earthworms