

Summary

The study site was located in Małopolska, in the mine waste dumps: "Trzebionka", "Bolesław" and the quarry area in Mydlniki used as control site. The main aim of the study was to compare the communities of three different groups of soil invertebrates: earthworms (Lumbricidae), carabid beetles (Coleoptera, Carabidae) and ants (Hymenoptera, Formicidae). Research was carried out in 2010 and 2011 using Satchell's method for earthworms sampling and Barber pitfall trapping for insect sampling. The study showed that despite the extremely adverse conditions, both common and rare species are present. The study displayed that the performance of investigated invertebrates is difficult or prevented by the physical and chemical features of the ground. Species number, density and biomass of earthworms originated from "Trzebionka" and "Bolesław" was significantly lower than in the control site. As *Lumbricus rubellus* (Hoffmeister 1843) was found to be the most abundant species in "Trzebionka", this species might be possibly used for reclamation purposes. Similarly the average number of ants species was significantly lower in the "Trzebionka" and "Bolesław" than in the control site, whereas the opposite result was found in beetles. Dominance structure of ants and carabid beetles showed strong dominance of *Formica cinerea* (Mayr 1853) and *Calathus ambiguus* (Paykull 1790) and *Calathus erratus* (C. R. Sahlberg 1827) in "Trzebionka" and "Bolesław", which is typical for unstable habitats, experiencing frequent disturbances. The most of species found in "Trzebionka" and "Bolesław" are considered typical for initial phase of reclamation .