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Interaction of plant and earthworm during primary succession in heaps after coal

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These results of field manipulation experiment show that earthworms can remarkably influence vegetation succession on spoil heaps, namely promoting grasses and late succession species. This is in agreement with concurrent appearance of earthworms and some plant species typical for late-succession communities of meadows and forests aren't purely coincidental.
On the other hand, facilitation of soil conditions by plant communities during succession is an important factor in earthworm distribution on the spoil heaps; earthworms showed a low survival on sites with sparse vegetation cover and thin litter layer, which means that their occurrence in certain stages of succession isn't determined only by migration abilities or passive dispersal. More field experiments are needed to test if earthworms could be used in directed succession management practices to speed up the natural rate of succession. Preliminary results from an experiment with introduction earthworms to a 20- year old, earthworm-free site indicate that colonization of this site from a single deposition of about 100 specimen of epigeic and 100 endogeic earthworms is slow and not very efficient.
Results show that interaction between earthworm and vegetation are important in ecosystem development in post mining sites.