



What can litter bags tell us about fauna effect on decomposition?

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Litter bags with various mesh sizes are common method to investigate role of individual size classes of soil organisms on litter decomposition in particular in investigation of fauna effect. These experiments showed that fauna in generally increased litter loss from the bags, which is interpreted as positive effect of fauna on decomposition. If the litter is presented in fine bags, all loss from the bags is likely to occur as CO₂ or leaching however, in fauna accessible bags substantial amount of organic matter may loss bags as fauna excitements either because fauna migration out of the bag or just because excrement may mechanically fall out of the bag. Fauna have low assimilation efficiency so these excrements contain large amount of organic matter which is in fact not decomposed but just moved in soil profile. In order to detect this specialized microcosms techniques was applied, using two layer microcosms with litter and mineral layer, this techniques allow to measure not only amount of c that was lost from the litter bag nut also amount of c that accumulate below the bag. Thirteen experiments using these techniques in various parts of the world are revived here, these experiments showed no positive effect of fauna on C loss from the system but positive effect of fauna in litter removal from soil surface and its accumulation in mineral soil.