



Soil fauna slow down decomposition of leaf litter

J. Frouz

Biological centre ASCR, Inst Soil biology, Ceske Budejovice, Czech Republic (frouz@upb.cas.cz)

In one year incubation laboratory experiment, decomposition of alder, oak and willow litter was compared with decomposition of excrements of St marks Fly larvae (*Bibio marci*), produced from the same litter. Decomposition (amount of CO₂ produced) was significantly higher in leaf litter than in excrements. Invertebrates affect litter by many ways litter is fragmented mechanically during feeding exposed to alkaline environment and enzymes in the gut and coated by clay mineral during gut passage. In order to explore potential mechanisms that may be responsible for reduction of decomposition process 3 litter treatments with mimic certain aspects of invertebrate influence was prepared: fragmented litter, litter treated by alkaline solution and mixed with clay (kaolinite). Among those treatments Alkalization has the most strong effect on decomposition slow down.