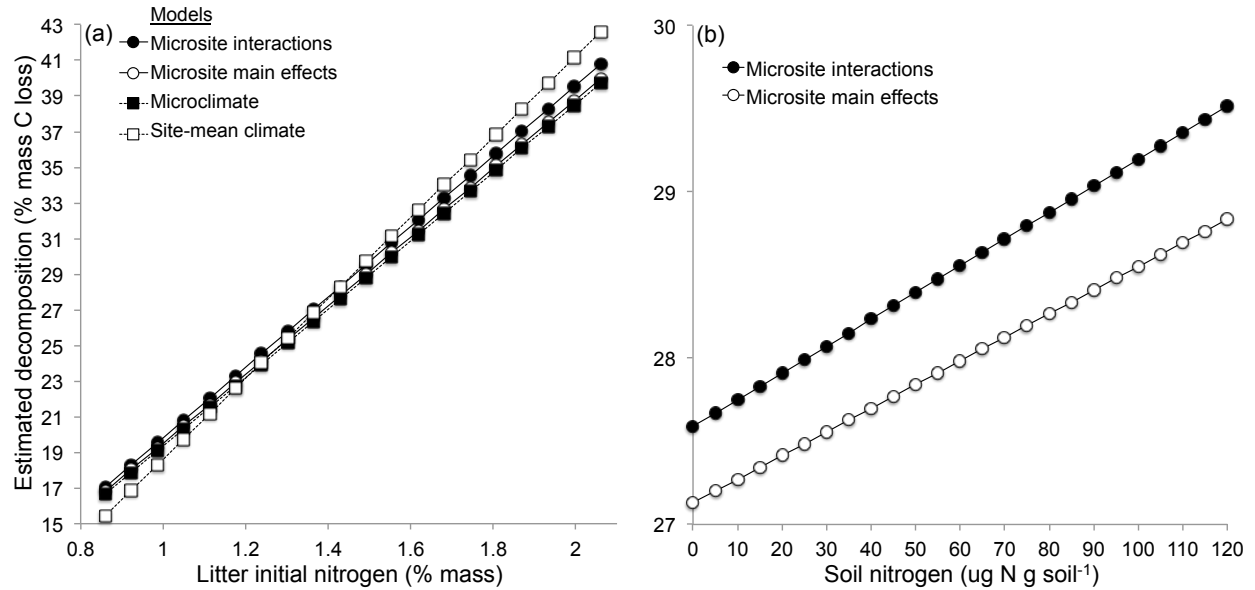


# Testing the hierarchical model of litter decomposition

## Supplementary Information

### Supplementary Figure 1



**Supplementary Figure 1 | Estimated effects of litter quality and soil N availability on decomposition rates.** Effect sizes are estimated for litter initial N (a) and extractable soil inorganic N (b) from the models presented in Table 1, following the procedure described in the legend of Fig. 4. Comparisons of effect sizes between the Microclimate versus Site-mean climate models test whether patterns between site-mean litter quality and decomposition rates (effect sizes from the Site-mean climate model) approximate those operating at the microsite scales at which decomposer organisms perceive the environment (effect sizes from the Microclimate model using individual litterbag initial N values). The litter quality-decomposition relationship appears scale invariant, as expected given the experimental design (see main text). The two Microsite models in (a) ask whether inclusion of microbial biomass and N availability as additional variables alters the estimated effects of litter quality. Their inclusion does not appear to strongly affect the litter quality-decomposition relationship. In (b) the positive but relatively minor effects of soil N availability are shown.