

European Alder (<i>Alnus glutinosa</i>)				2, 33.8								
Common Beech (<i>Fagus sylvatica</i>)					5, 42.7							34.4

786 **Table S2. Tree species composition and DBH for conifer forest sites.** Numbers on top row denote site
787 identification. Numbers in cells display number of trunks, followed by mean DBH. Empty cells denote
788 that a tree species was not present at site.

[illegible]

English Oak (<i>Quercus robur</i>)														
Hornbeam (<i>Carpinus betulus</i>)														
European Alder (<i>Alnus glutinosa</i>)														
Common Beech (<i>Fagus sylvatica</i>)														

Table S3. ANOVA statistics: F values and associated P-values (in parentheses) for N cycling measurements against experimental factors. Bolded values denote significance at <0.05.

	Net ammonification rate ($\mu\text{g NH}_4^+ \text{ g}^{-1}$ $^1 \text{ dry soil day}^{-1}$)	Net Nitrification rate ($\mu\text{g NO}_3^-$ $\text{g}^{-1} \text{ day}^{-1}$)	Total N concentration ($\mu\text{g NH}_4^+ + \text{NO}_3^-$)	NH_4^+ concentration ($\mu\text{g NH}_4^+ \text{ g}^{-1}$ dry soil)	NO_3^- concentration ($\mu\text{g NO}_3^- \text{ g}^{-1} \text{ day}^{-1}$)
<i>Soil factors</i>					
Soil type	2.74 (0.100)	9.58 (0.002)	0.027 (0.869)	0.522 (0.470)	17.0 (<0.001)
Soil pH	10.64 (0.001)	10.58 (0.001)	3.68 (0.079)	4.73 (0.031)	1.66 (0.200)
Horizon	1.26 (0.262)	0.724 (0.400)	25.9 (<0.001)	28.0 (<0.001)	0.040 (0.842)
<i>Forest factors</i>					
Forest type	6.537 (0.011)	5.30 (0.022)	13.7 (<0.001)	12.8 (<0.001)	4.75 (0.030)
Basal area	8.34 (0.004)	8.30 (0.396)	29.3 (<0.001)	38.0 (<0.001)	14.8 (<0.001)
<i>Climate factors</i>					
MAT	0.005 (0.946)	14.0 (<0.001)	1.21 (0.272)	3.10 (0.080)	21.1 (<0.001)
MAP	0.226 (0.635)	0.877 (0.350)	3.12 (0.0789)	4.35 (0.038)	3.21 (0.074)
<i>N deposition</i>					
N deposition	2.84 (0.094)	0.003 (0.956)	13.9 (<0.001)	13.9 (<0.001)	1.51 (0.221)
N deposition * soil type	0.831 (0.363)	0.926 (0.337)	0.700 (0.404)	0.729 (0.394)	0.024 (0.878)
N deposition * forest type	5.38 (0.021)	2.21 (0.138)	3.68 (0.056)	2.94 (0.088)	4.75 (0.030)

Table S4. ANOVA statistics: F values and associated P-values (in parentheses) for enzyme activities (all in units of $\mu\text{mol g dry soil hour}$) against experimental factors. Bolded values denote significance at <0.05 .

	AP	BG	BX	LAP	NAG	PPO
<i>Soil factors</i>						
Soil type	2.79 (0.096)	0.396 (0.530)	0.477 (0.491)	1.55 (0.214)	0.482 (0.489)	21.5 (<0.001)
Soil pH	0.964 (0.327)	1.02 (0.314)	0.700 (0.404)	1.20 (0.276)	0.280 (0.598)	3.62 (0.058)
Horizon	1.44 (0.231)	0.768 (0.382)	0.739 (0.391)	7.951 (0.005)	2.61 (0.108)	11.1 (0.001)
<i>Forest factors</i>						
Forest type	44.0 (<0.001)	46.2 (<0.001)	45.1 (<0.001)	7.47 (0.007)	51.7 (<0.001)	13.4 (<0.001)
Basal area	33.5 (<0.001)	26.4 (<0.001)	26.9 (<0.001)	0.473 (0.492)	28.0 (<0.001)	16.2 (<0.001)
<i>Climate factors</i>						
MAT	0.045 (0.831)	0.598 (0.440)	0.679 (0.411)	1.62 (0.204)	0.096 (0.757)	18.8 (<0.001)
MAP	4.51 (0.035)	1.74 (0.189)	1.84 (0.176)	0.442 (0.507)	5.66 (0.018)	0.036 (0.850)
<i>N deposition</i>						
N deposition	0.015 (0.904)	0.909 (0.342)	1.048 (0.307)	2.04 (0.155)	0.148 (0.701)	4.89 (0.028)
N deposition * soil type	2.70 (0.102)	1.42 (0.235)	1.43 (0.234)	1.20 (0.280)	1.72 (0.192)	0.623 (0.431)
N deposition * forest type	0.368 (0.545)	0.304 (0.582)	0.253 (0.615)	1.244 (0.266)	0.021 (0.884)	7.863 (0.006)

797 **Table S5.** ANOVA statistics: F values and associated P-values (in parentheses) for hyphal abundance
798 measurements against experimental factors. Bolded values denote significance at <0.05.

	Arbuscular mycorrhizal hyphal biomass (mm hyphae g ⁻¹ dry soil)	Saprotrophic hyphal biomass (mm hyphae g ⁻¹ dry soil)
<i>Soil factors</i>		
Soil type	2.35 (0.127)	0.039 (0.843)
Soil pH	1.99 (0.160)	4.251 (0.040)
Horizon	0.070 (0.793)	16.4 (<0.001)
<i>Forest factors</i>		
Forest type	0.980 (0.323)	1.89 (0.171)
Basal area	10.4 (0.001)	18.0 (<0.001)
<i>Climate factors</i>		
MAT	15.8 (<0.001)	0.045 (0.831)
MAP	0.007 (0.933)	8.54 (0.004)
<i>N deposition</i>		
N deposition	0.002 (0.969)	7.23 (<0.001)
N deposition * soil type	29.5 (<0.001)	35.6 (<0.001)
N deposition * forest type	17.3 (<0.001)	9.43 (0.002)