

Supplementary Materials

Fine root biomass mediates soil fauna community in response to nitrogen addition in poplar plantations (*Populus deltoids*) on the east coast of China

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Table S1. Results of two-way ANOVA for the responses of each individual soil fauna's proportion over total soil fauna to nitrogen (N) addition (0, 50, 100, 150, and 300 kg N ha⁻¹ year⁻¹) and soil depth (0 - 10, 10 - 25, and 25 - 40 cm). *P* levels are indicated beside the *F* values by the following: *<0.05, **: <0.01, ***: <0.001, and no asterisks indicate *P*> 0.05.

	N addition (N)		Soil depth (D)		N×D	
	<i>df</i>	<i>F, P</i>	<i>df</i>	<i>F, P</i>	<i>df</i>	<i>F, P</i>
Oligochaeta	4	1.00	2	1.00	8	1.00
Nematoda	4	1.62	2	4.64*	8	0.91
Isopoda	4	1.00	2	1.00	8	1.00
Symphyla	4	1.20	2	0.36	8	2.27
Araneae	4	1.00	2	1.00	8	1.00
Oribatida	4	1.76	2	5.35*	8	0.63
Prostigmata	4	2.44	2	16.76***	8	1.00
Collembola	4	3.49*	2	6.24**	8	1.02
Diplura	4	0.21	2	1.84	8	1.55
Coleoptera	4	2.04	2	2.49	8	1.58
Coleoptera Larvae	4	0.72	2	2.59	8	1.19
Diptera larvae	4	2.66	2	8.61**	8	2.06
Hymenoptera	4	0.50	2	1.11	8	0.97
Macrofauna	4	0.65	2	6.43**	8	1.91
Mesofauna	4	2.09	2	6.60**	8	0.41
Microfauna	4	1.62	2	4.64*	8	0.91

Figure legends

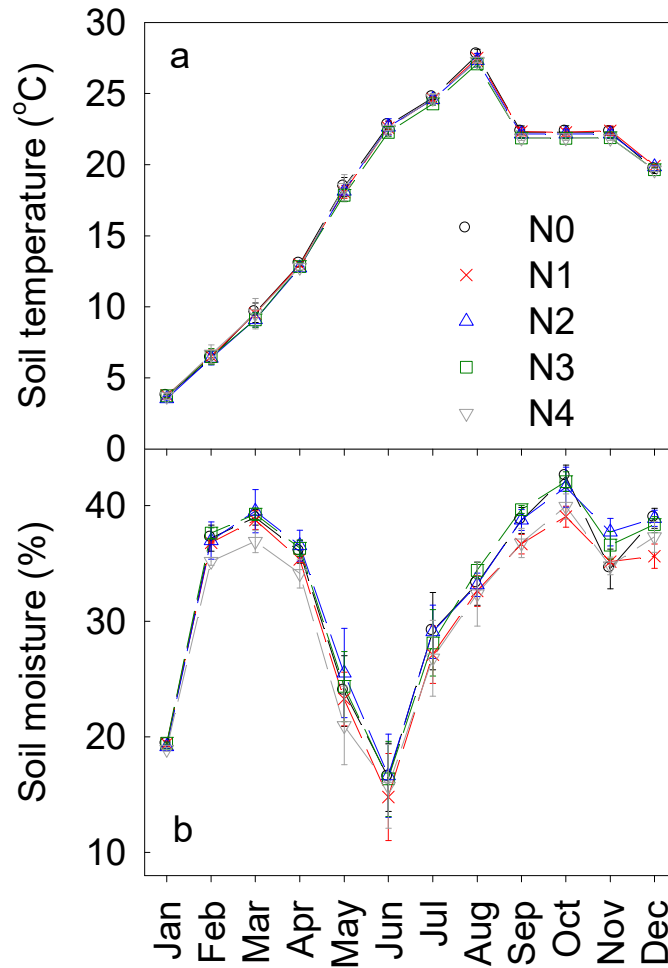


Figure S1 Variations in soil temperature (a) and moisture (b) from January to December along the nitrogen (N) addition gradient in 2016. N₀, N₁, N₂, N₃, N₄ indicate different N additions (N₀: 0 kg N ha⁻¹ year⁻¹; N₁: 50 kg N ha⁻¹ year⁻¹; N₂: 100 kg N ha⁻¹ year⁻¹; N₃: 150 kg N ha⁻¹ year⁻¹; N₄: 300 kg N ha⁻¹ year⁻¹).

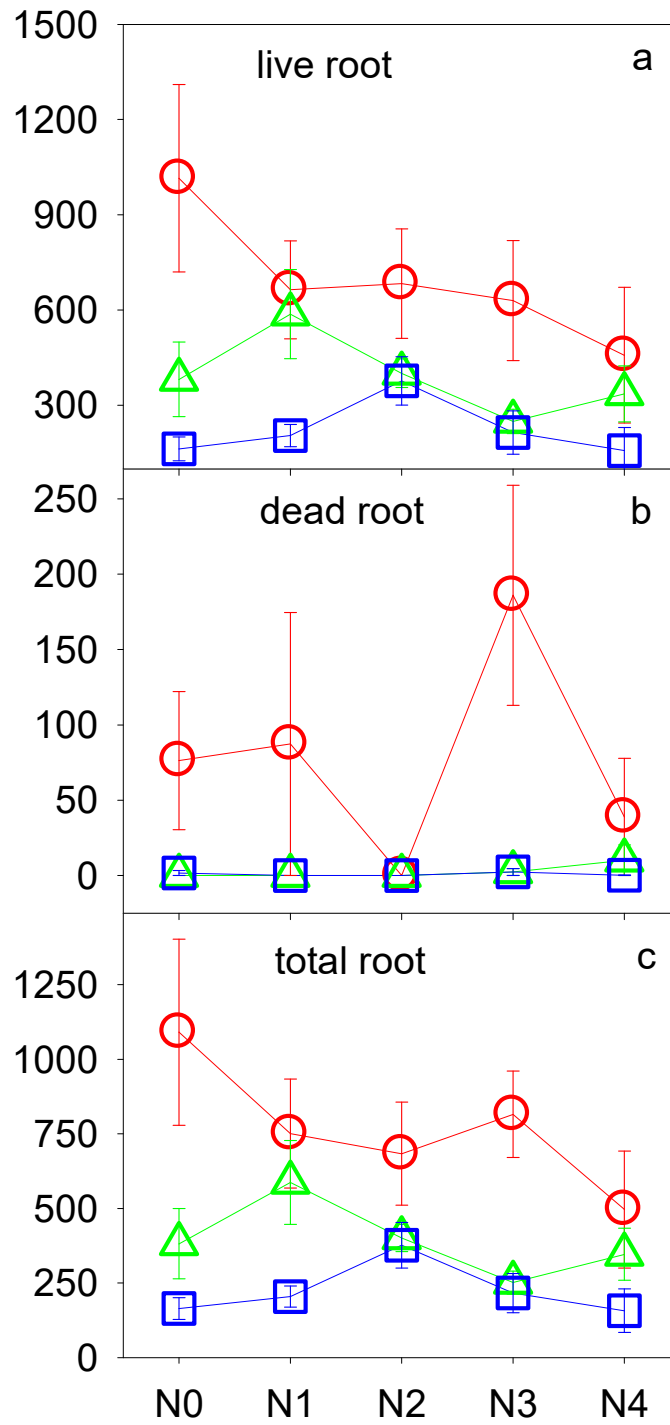


Figure S2 The live (a), dead (b), and total (c) fine root biomass along the N addition gradient and the soil profile (red for 0 - 10 cm, green for 10 - 25 cm, and blue for 25 - 40 cm). See Figure S1 for abbreviations.

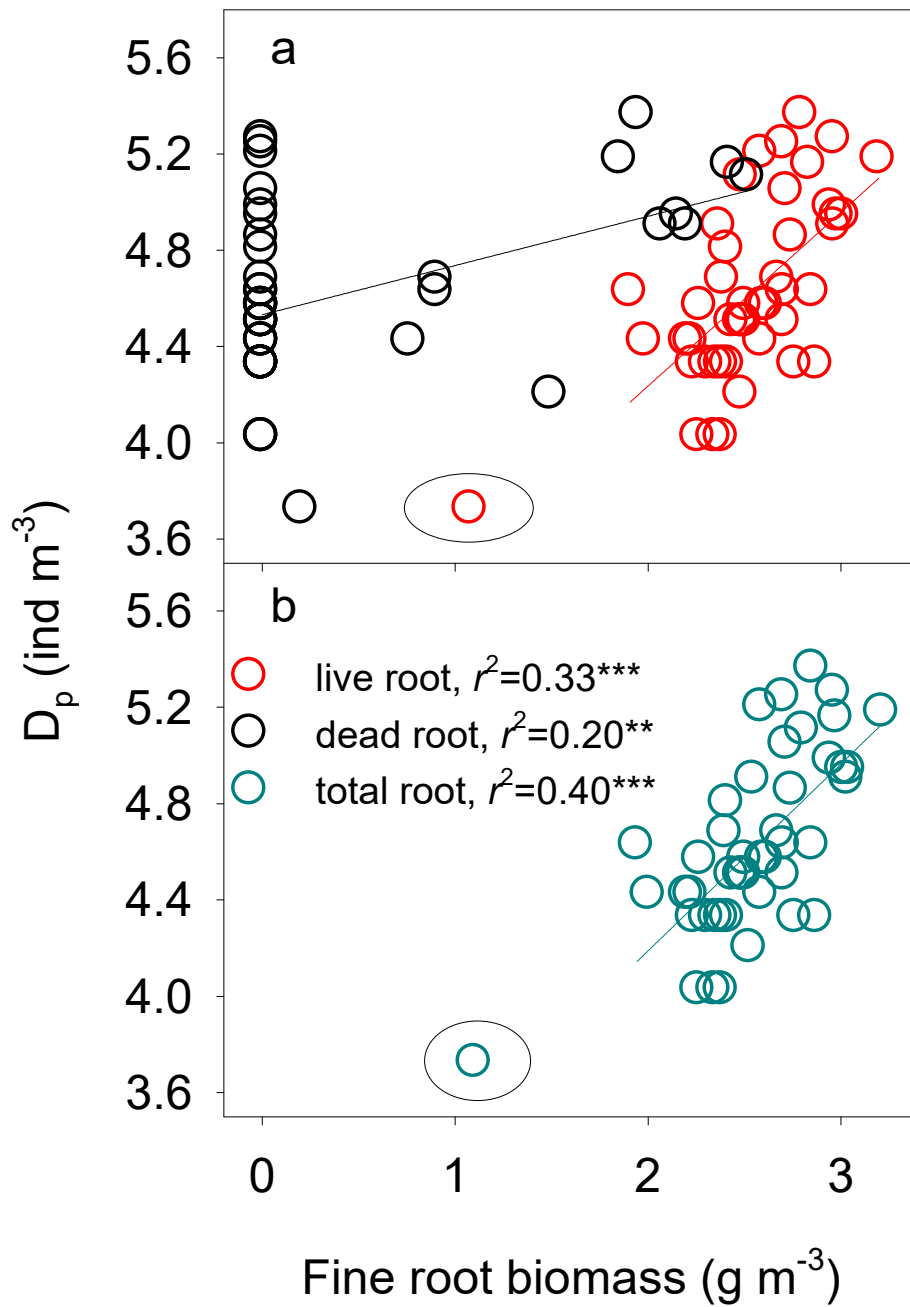


Figure S3 Regulation of fine root biomass (a: live and dead root biomass; b: total root biomass) on the density of phytophagous soil fauna (D_p), without the very small points (circled in the panels). **: $P < 0.01$, ***: $P < 0.001$.

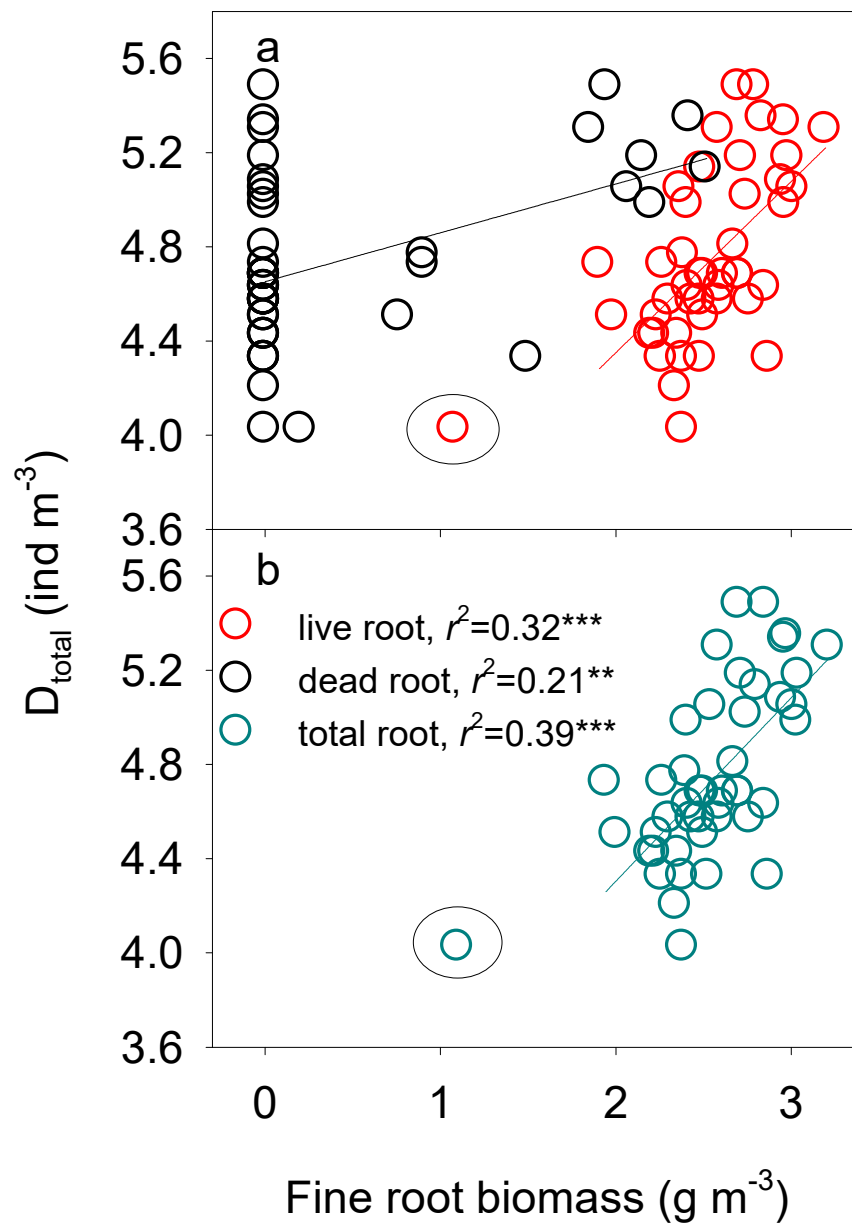


Figure S4 Regulation of fine root biomass (a: live and dead root biomass; b: total root biomass) on the density of total soil fauna (D_{total}), without the very small points (circled in the panels). **: $P < 0.01$, ***: $P < 0.001$.

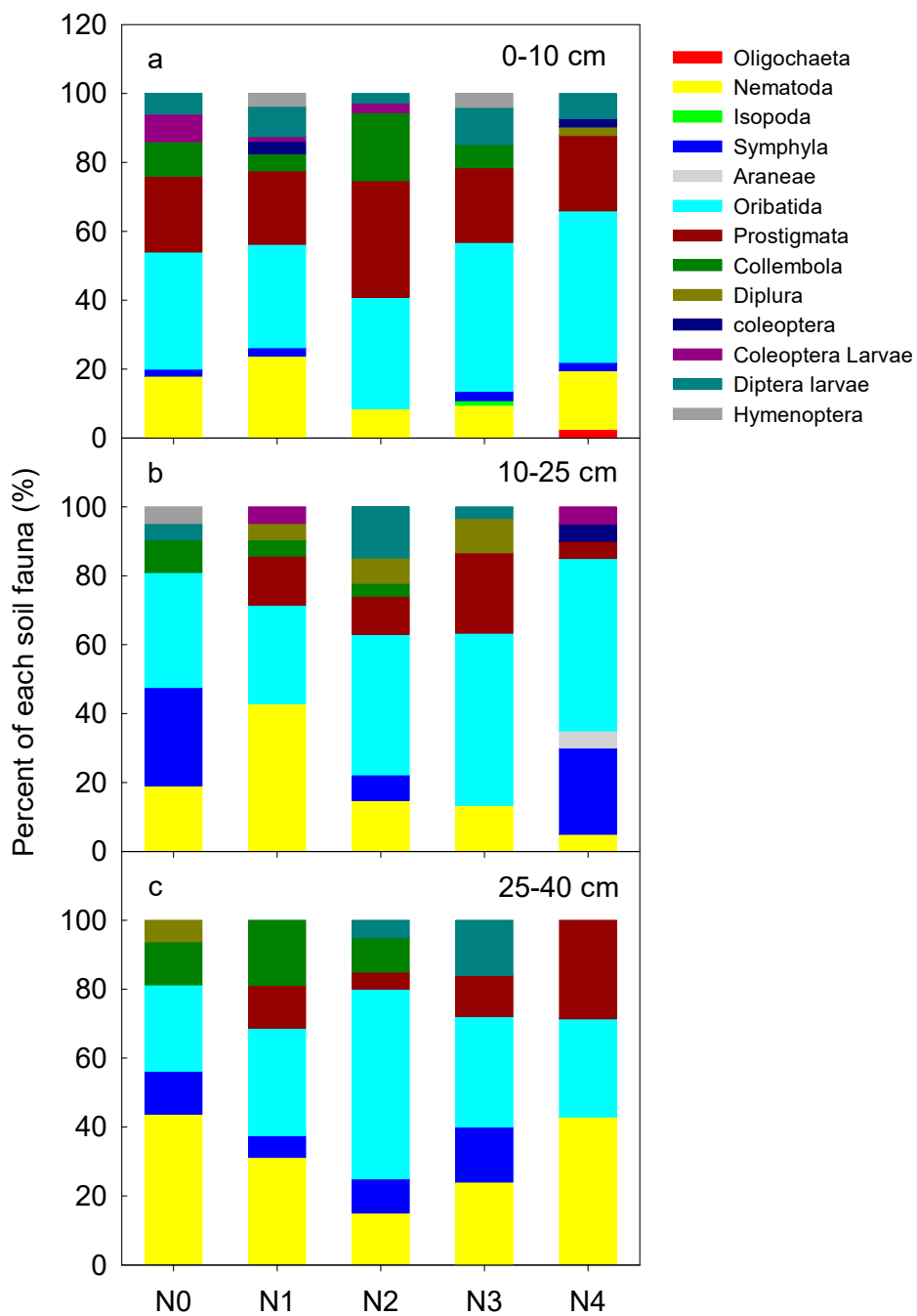


Figure S5 The proportion of each individual soil fauna over total soil fauna along the nitrogen (N) addition gradient and the soil profile. See Figure S1 for abbreviations.

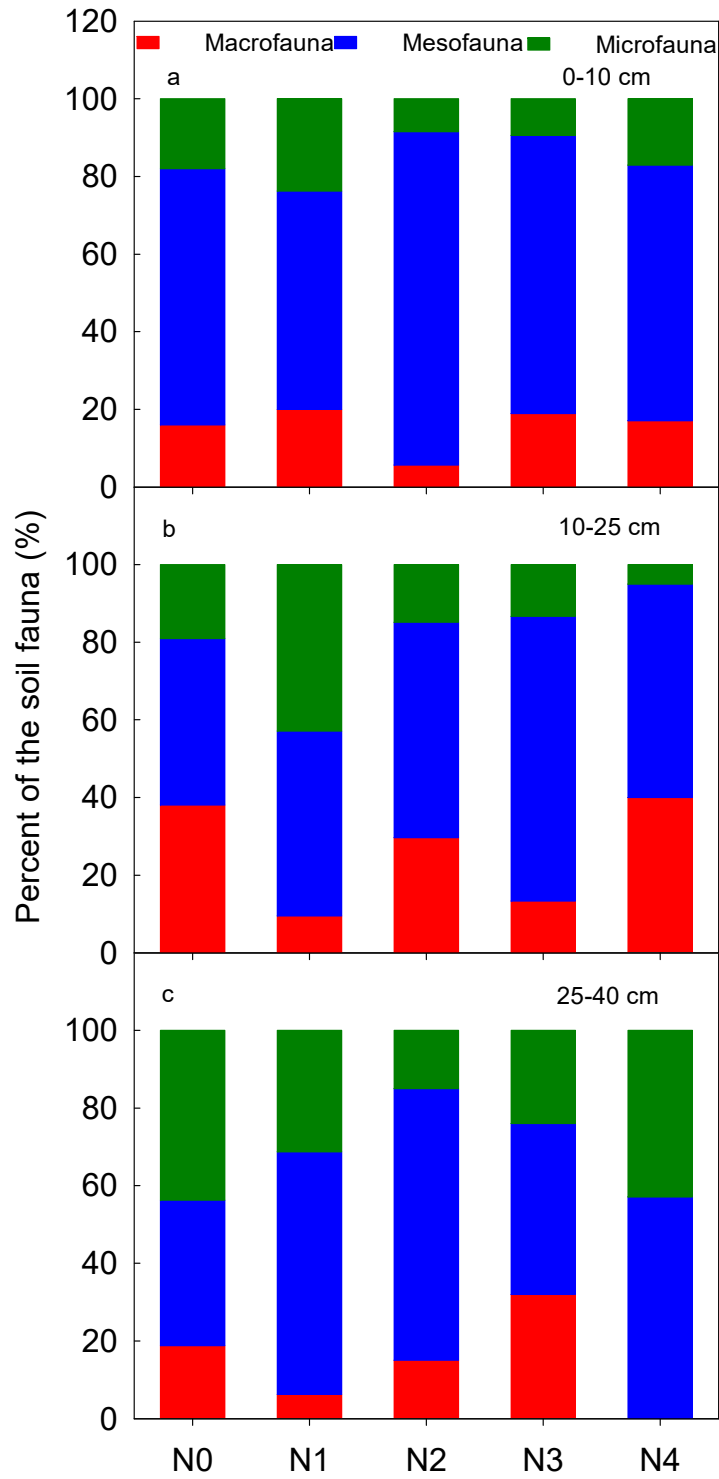


Figure S6 The proportions of macrofauna, mesofauna, and microfauna over total soil fauna along the nitrogen (N) addition gradient and the soil profile. See Figure S1 for abbreviations.