

Table S1 Stand factor table of the experimental site and soil properties (0 ~ 20 cm) of the evergreen broad-leaved forest in November 2013

Stand factors				Soil properties				
Canopy density	Hectare	Mean DHB (cm)	Mean height (m)	pH	Total C (g·kg ⁻¹)	Total N (g·kg ⁻¹)	Nitrate N (mg·kg ⁻¹)	Ammonium N(mg·kg ⁻¹)
	number (Ind·hm ⁻²)							
0.8	900	24	16	6.2±0.1	17.2±1.5	1.1±0.1	9.5±1.0	6.9±0.6

Values are the means ± SE, n = 5.

TableS2 Initial leaf litter quality in the broad-leaf litter of the experimental site

C (g·kg ⁻¹)	N (g·kg ⁻¹)	P (g·kg ⁻¹)	K (g·kg ⁻¹)	Ca (g·kg ⁻¹)	Mg (g·kg ⁻¹)	Fe (g·kg ⁻¹)
476.35±10.71	9.11±0.54	0.31±0.05	11.21±0.87	1.59±0.07	3.70±0.41	0.21±0.03

Mn (g·kg ⁻¹)	AUR (%)	Cellulose (%)	Total phenols (g·kg ⁻¹)	Condensed tannins (g·kg ⁻¹)	C/N	Lignin/N
0.53±0.03	33.41±2.11	14.17±0.72	12.79±0.65	69.63±3.59	52.29±0.72	36.67±2.07

Values are the means ± SD, n = 10. C: total carbon; N: total nitrogen; P: total phosphorus; K: total potassium; Ca: total calcium; Mg: total magnesium; Mn: total manganese; AUR: acid unhydrolyzable residue.

Figure S1 Dynamics of accumulated mass loss of leaf litter in the litterbags in the field during the two-year experiment. Ctr: without nitrogen deposition or throughfall reduction, N: nitrogen deposition ($150 \text{ kg} \cdot \text{N} \cdot \text{ha}^{-1} \cdot \text{yr}^{-1}$), T: throughfall reduction (10 %), NT: nitrogen deposition ($150 \text{ kg} \cdot \text{N} \cdot \text{ha}^{-1} \cdot \text{yr}^{-1}$) and throughfall reduction (10 %).

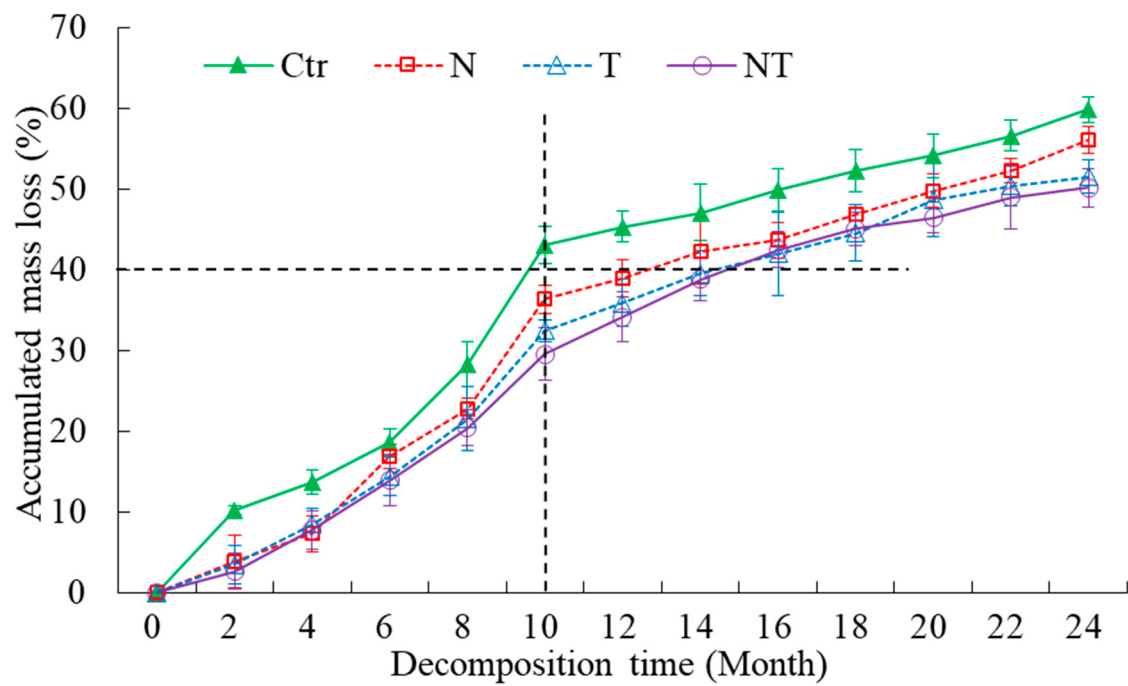


Figure S2 Effects of N deposition and throughfall reduction on mean Ca, Mg and Mn concentration of leaf litter exposed in the field during different decomposition stages based on the Linear mixed effects models. Different lowercase letters in the same decomposition stage denote significant differences (Multiple comparisons with Bonferroni adjustment method, $P < 0.05$) between treatments. Error bars represent the standard deviations of the means ($n = 36$). Abbreviations of treatments are given in Figure S1.

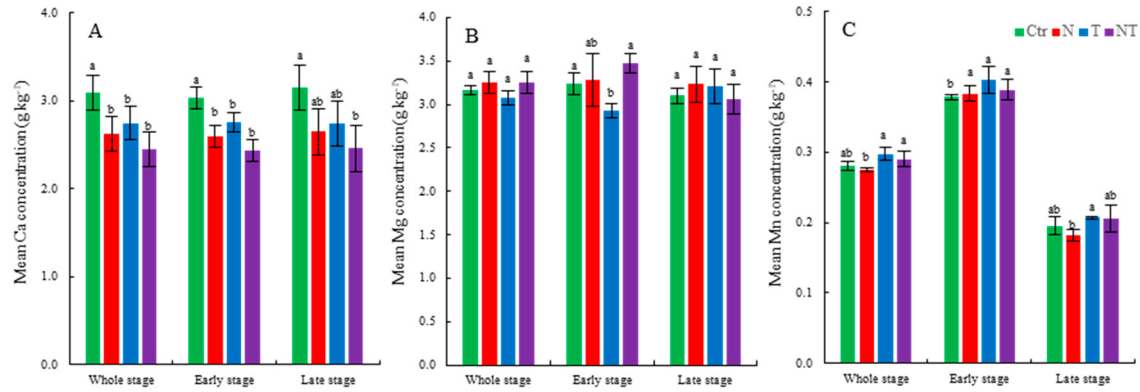


Figure S3 Effects of N deposition and throughfall reduction on mean Ca, Mg and Mn loss of leaf litter exposed in the field during different decomposition stages based on the Linear mixed effects models. Different lowercase letters in the same decomposition stage denote significant differences (Multiple comparisons with Bonferroni adjustment method, $P < 0.05$) between treatments. Error bars represent the standard deviations of the means ($n = 36$). Abbreviations of treatments are given in Figure S1.

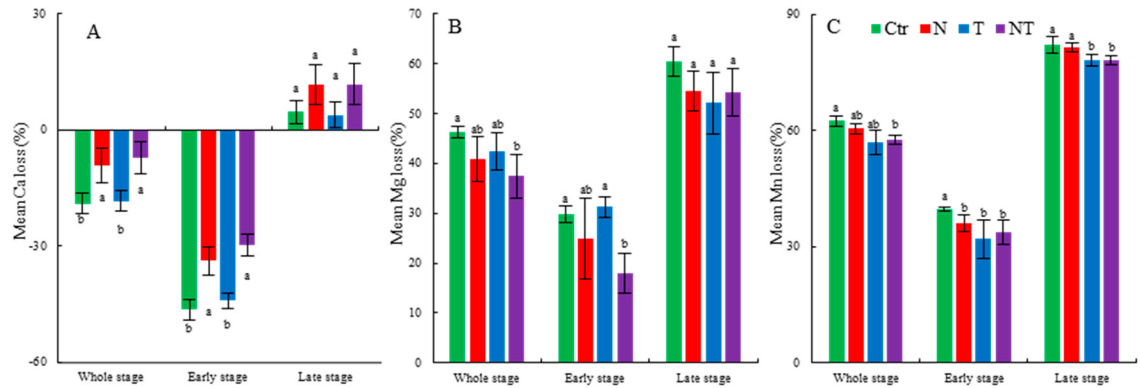


Figure S4. Relationships between Ca, Mg, and Mn concentrations and mass loss in different treatments and different decomposition stages. A, B: the relationships between Ca concentration and mass loss in the early (A) and late (B) decomposition stage; C, D: the relationships between Mg concentration and mass loss in the early (C) and late (D) decomposition stage; E, F: the relationships between Mn concentration and mass loss in the early (E) and late (F) decomposition stage. Abbreviations of treatments are given in Figure S1.

