Supplementary Information for

Contrasting impacts of tropical cyclone disturbances in temperate broadleaf and coniferous forests

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Supplementary Table

Supplementary Figures

Table S1. The strongest predictors related to the respective response variable from multiple linear regressions in both pre-disturbance and post-disturbance forests. Up/down arrow shows the positive/negative relationship between variables. The horizontal bar indicates no significant relationship. Abbreviations: altit – altitude, cover3 – total cover of the tree layer, Pcon – a fraction of basal area of conifers, BA_{tot} – total tree basal area, Mg – soil magnesium, ΔpH – potential soil acidity. Significance of individual models is indicated using standard codes: *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$.

Response	Pre-disturbance			Post-disturbance		
	Predictor	Change	R^2 (%)	Predictor	Change	R^2 (%)
Geographical and canopy structural predictors						
Number of woody species in E3 layer	altit	↓	43.7 *	altit	↓	48.8 **
Number of woody species in E2 layer	—			—		
Number of herbaceous species	altit	↑	65.4 **	altit	↑	51.8 **
Number of species of woody juveniles	cover3	↓	45.7 ***	BA_{tot}	↑	18.0 *
Simpson index for herbaceous species	Pcon	↑	70.6 **	altit	↑	54.1 **
Total cover of graminoids	altit	↑	52.6 **	altit	↑	64.2 **
Soil predictors						
Number of woody species in E3 layer	—			—		
Number of woody species in E2 layer	—			—		
Number of herbaceous species	Mg	↓	74.7 **	ΔpH	↓	40.7 *
Number of species of woody juveniles	Mg	↓	46.6 *	—		
Simpson index for herbaceous species	Mg	↓	77.3 **	ΔpH	↓	41.9 *
Total cover of graminoids	Mg	↓	60.2 **	—		
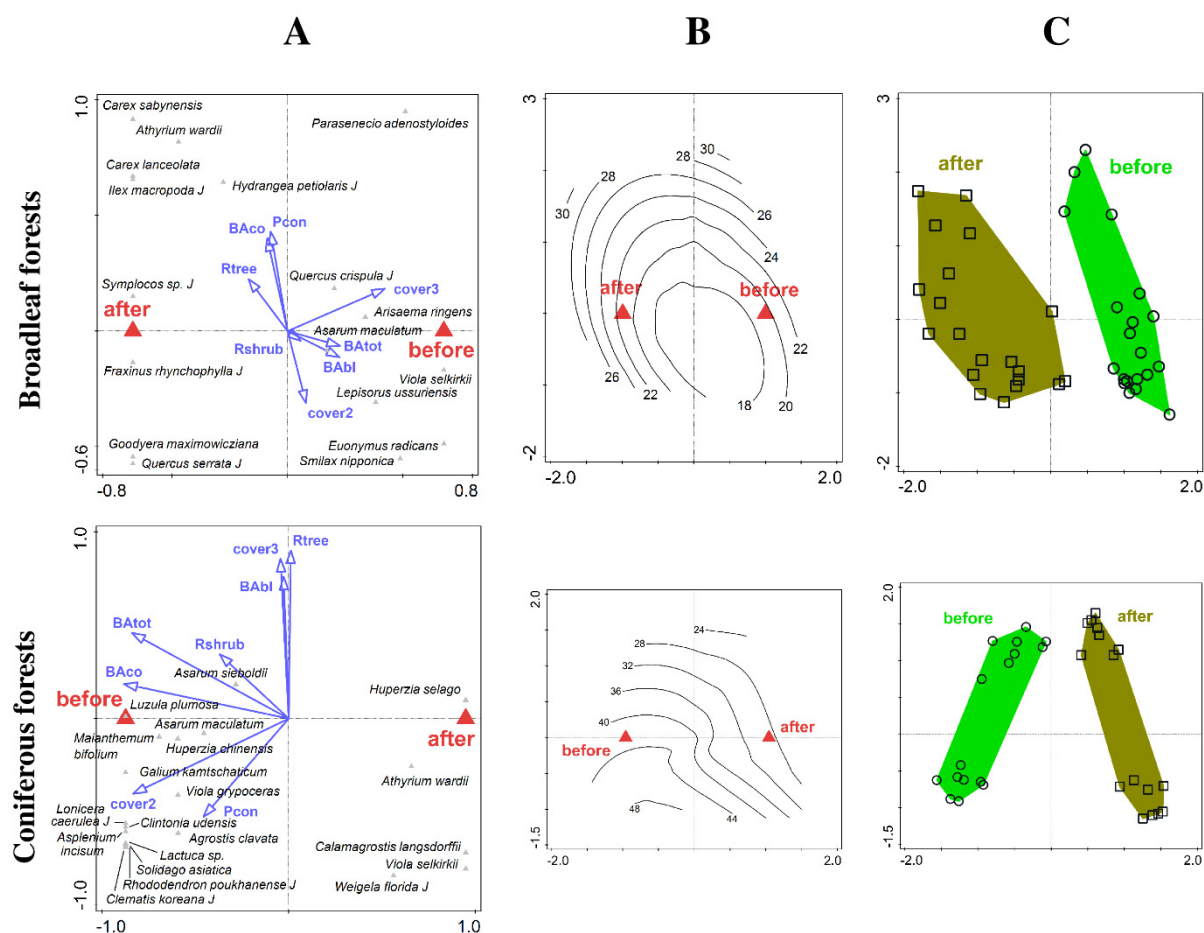
Figure S1. CCA ordination diagrams showing temporal shifts (*before* and *after* typhoon disturbance) in herbs (no suffix) and woody juveniles (*J* suffix) separately in broadleaf forests (time explains 4.4% of the total species variability, $p = 0.001$) and coniferous forests (time explains 7.9% of the total species variability, $p = 0.002$). Blue arrows represent supplementary variables (see Table 1 for abbreviations). **(A)** Ordination of species showing species compositional shifts – only the subset of best fitting species is shown, **(B)** contour plot with the loess smoothed species richness isolines, **(C)** classified diagram of plots.
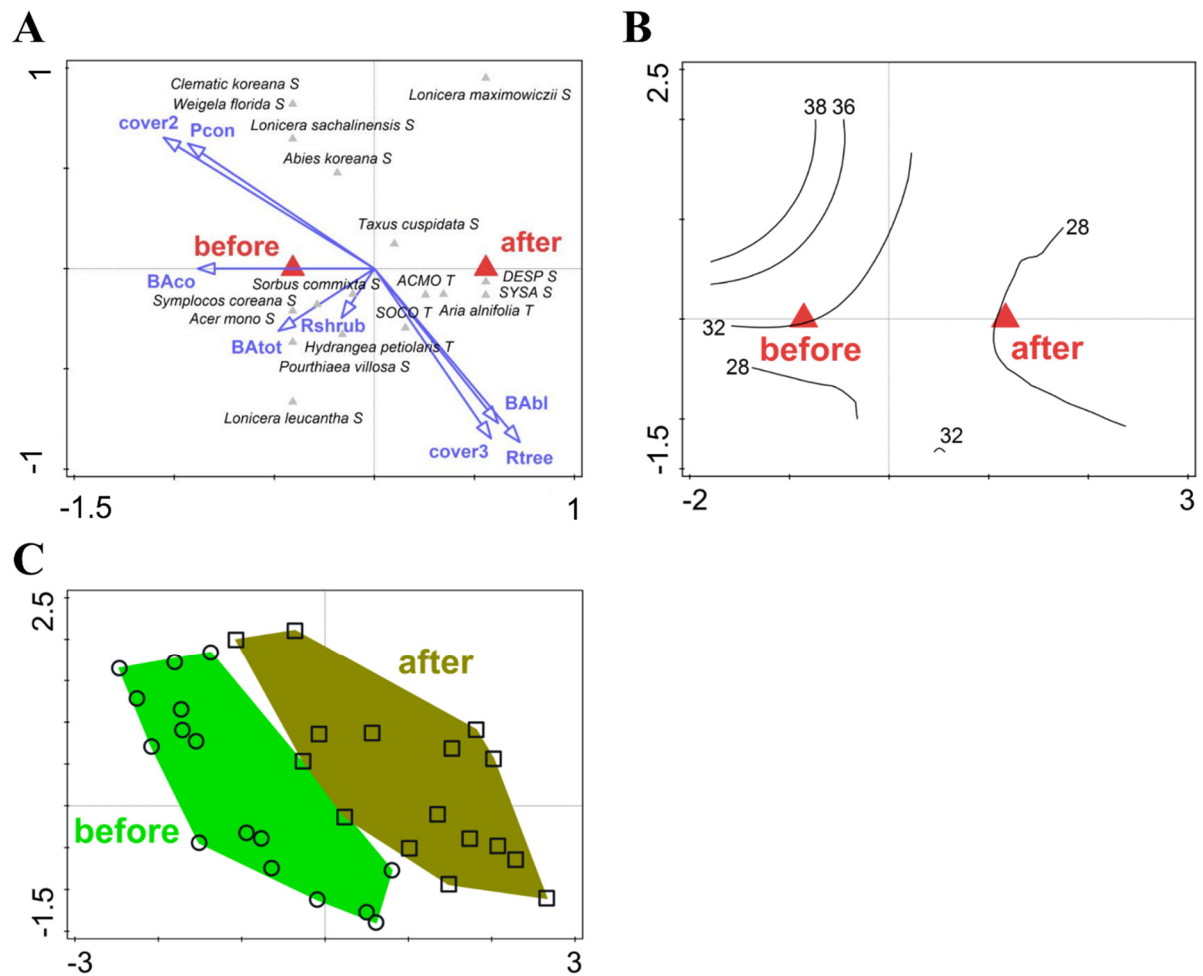
Figure S2. CCA ordination diagrams showing vegetation change in coniferous forests, based on field records made on permanent plots *before* and *after* typhoon disturbance. Here only subset of woody species occurring in shrub and tree layers were analyzed, constrained by the categorical temporal variable. Observed difference is marginally significant at $p = 0.052$, time explains 2.16% of the total species variability. Three types of results are presented: **(A)** Ordination of species showing species compositional shifts, blue arrows represent supplementary variables (see Table 1 for abbreviations); **(B)** contour plot with the modelled species richness; **(C)** classified diagram of plots. In **A** some species are abbreviated to prevent text clumpiness: *ACMO = Acer mono*, *DESP = Deutzia* sp., *SOCO = Sorbus commixta*, *SYSA = Symplocos sawafutagi*; *S* or *T* following species name stands for the shrub or tree layer, respectively.

Figure S3. Two photographs of stands of *Abies koreana*-dominated subalpine forest on Mt. Halla, severely perturbed by two typhoons that hit Jeju Island in late summer 2012. The prevalence of uprooted individuals (not snapped) is remarkable. Photos taken 9-29-2017 by Černý T. (first photo) and Altman J. (second photo).