**Table S1.** Pearson correlation coefficients among the traits of 41 shrubs and canopy species at the species (above the diagonal) and community levels (below the diagonal) in the Liangshui forest dynamics plot.

| | SLA | LA | LT | LDMC | LCC | LNC | LPC |
|---|---|---|---|---|---|---|---|
| SLA | | **0.47** | **-0.87** | **-0.80** | -0.18 | **0.54** | 0.30 |
| LA | **0.41**(**0.50**) | | **-0.59** | -0.26 | **-0.66** | **0.65** | 0.30 |
| LT | **-0.81**(**-0.85**) | **-0.73**(**-0.72**) | | **0.47** | 0.35 | **-0.50** | -0.16 |
| LDMC | **-0.73**(**-0.90**) | 0.01(**-0.27**) | **0.24**(**0.58**) | | 0.11 | **-0.46** | -0.37 |
| LCC | **0.14**(-0.06) | **-0.49**(**-0.66**) | 0.06(**0.35**) | -0.06(-0.08) | | **-0.45** | -0.14 |
| LNC | **0.58**(**0.53**) | **0.63**(**0.76**) | **-0.62**(**-0.64**) | **-0.42**(**-0.34**) | **-0.47**(**-0.49**) | | **0.45** |
| LPC | **0.56**(**0.57**) | **0.15**(**0.26**) | **-0.31**(**-0.38**) | **-0.52**(**-0.58**) | **0.22**(0.13) | **0.21**(**0.41**) | |

The correlations out of the parentheses are calculated using species abundance data and the correlations in the parentheses are calculated using species occurrence data. SLA: specific leaf area; LA: leaf area; LT: leaf thickness; LDMC: leaf dry matter content; LCC: leaf carbon content; LNC: leaf nitrogen content; LPC: leaf phosphorus content. $P$ <0.05 is indicated in bold.

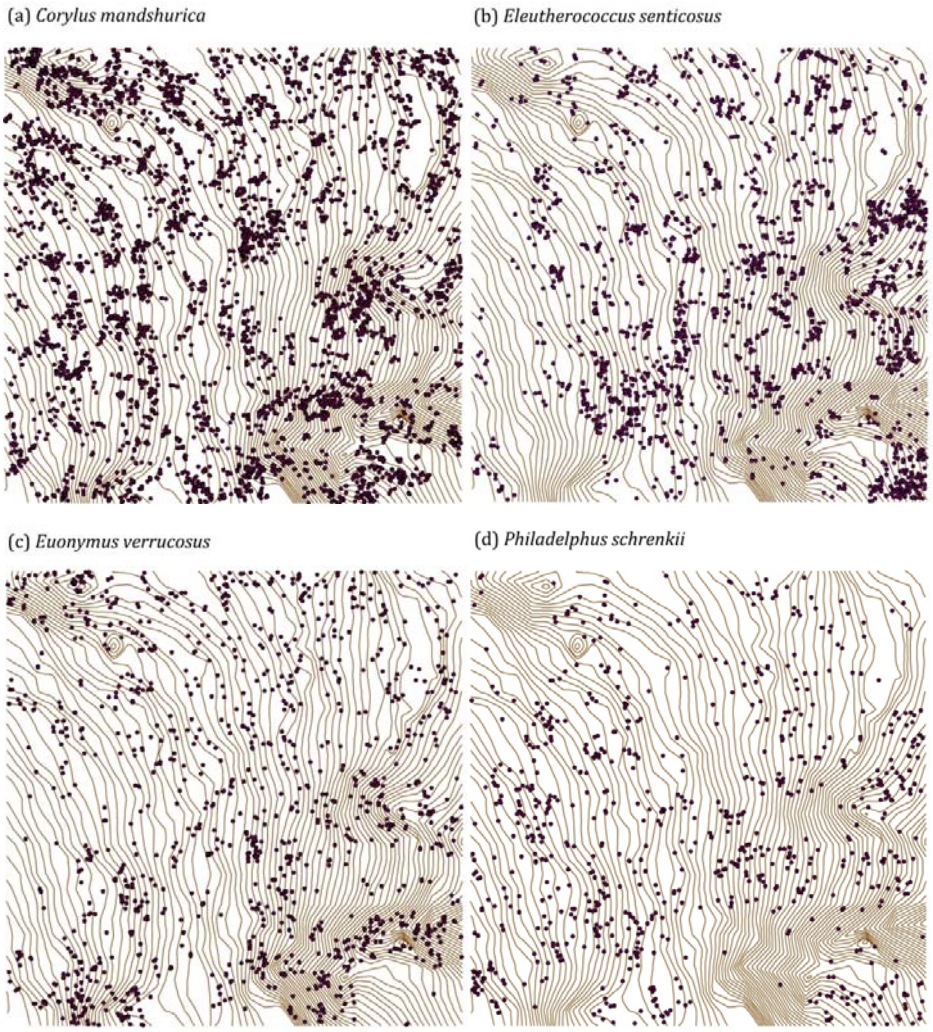


**Figure S1.** Spatial distributions of four most abundant shrub species in the 300 m × 300 m temperate forest dynamics plot.

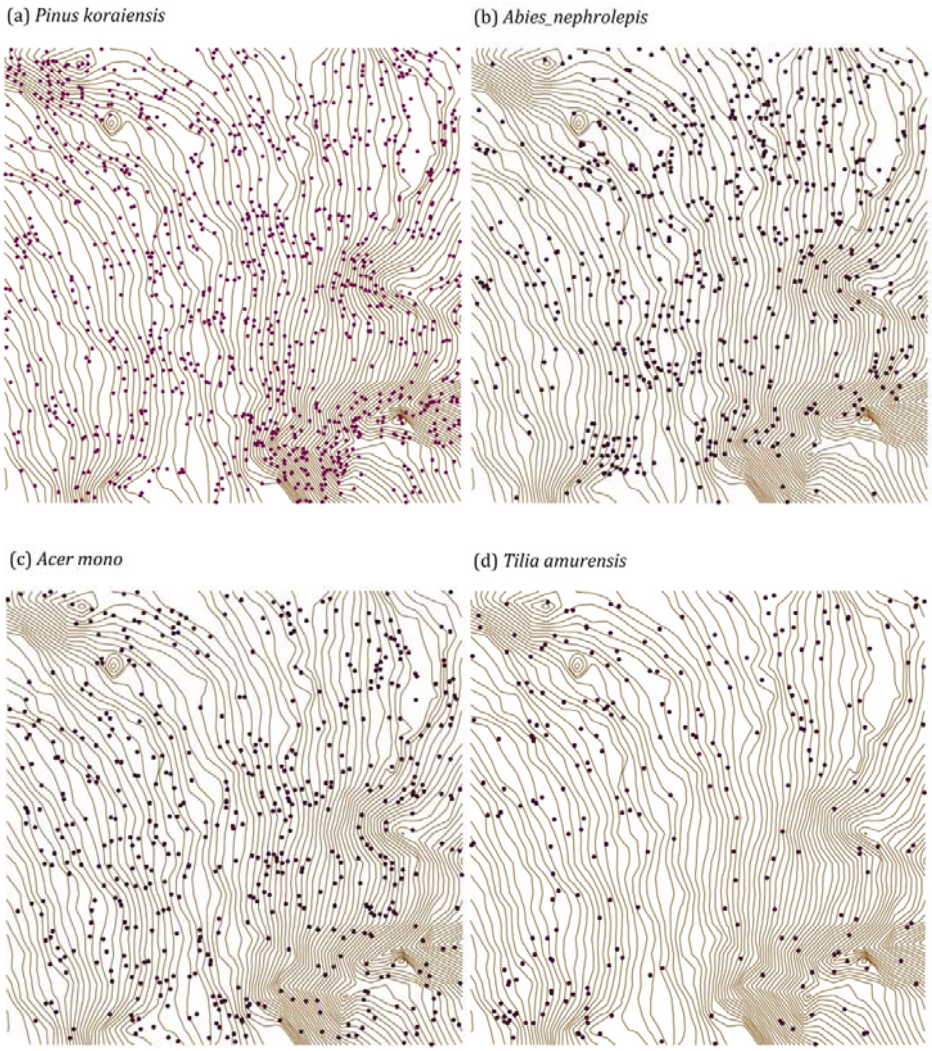


**Figure S2.** Spatial distributions of four most abundant canopy species (dbh > 10 cm) in the 300 m × 300 m temperate forest dynamics plot.

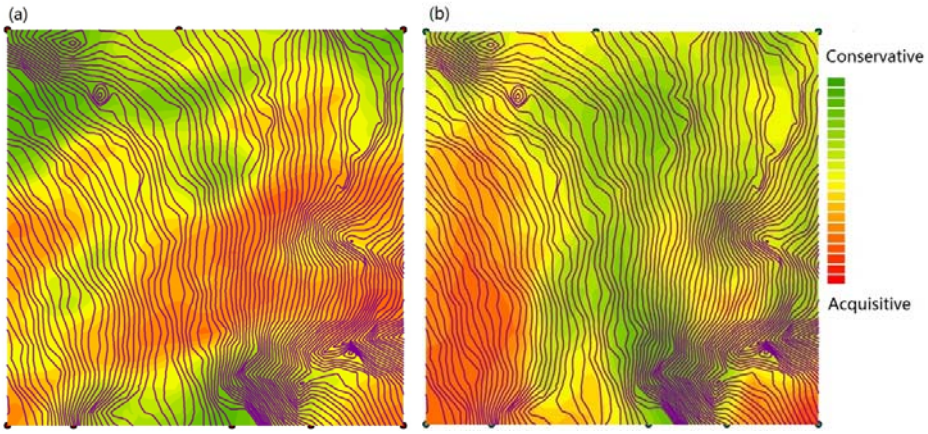


**Figure S3.** Distributions of leaf community economics spectrum (PC1 axis; using abundance data) of 13 shrubs species (a) and 28 canopy species (b) in the 300 m × 300 m forest dynamics plot.

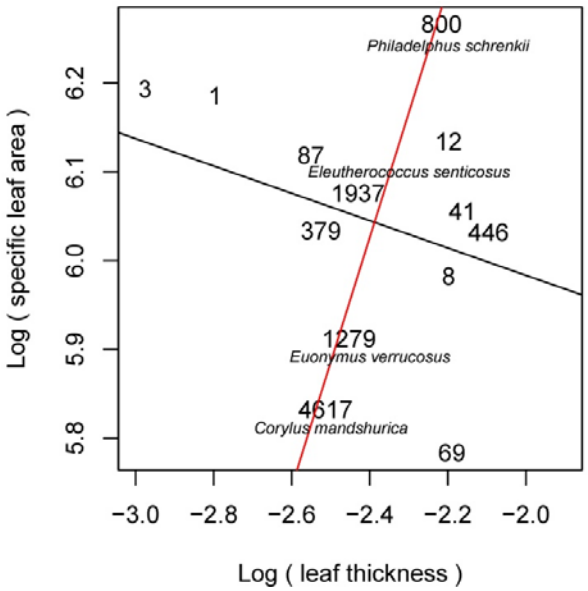


**Figure S4.** The relationship between specific leaf area and leaf thickness for shrubs at the species level. The number in the plot shows abundance of each species. The black line indicates the relationship for 13 shrub species. The red line indicates the relationship for four most abundant species, which account for 89.2% individuals of all shrubs.

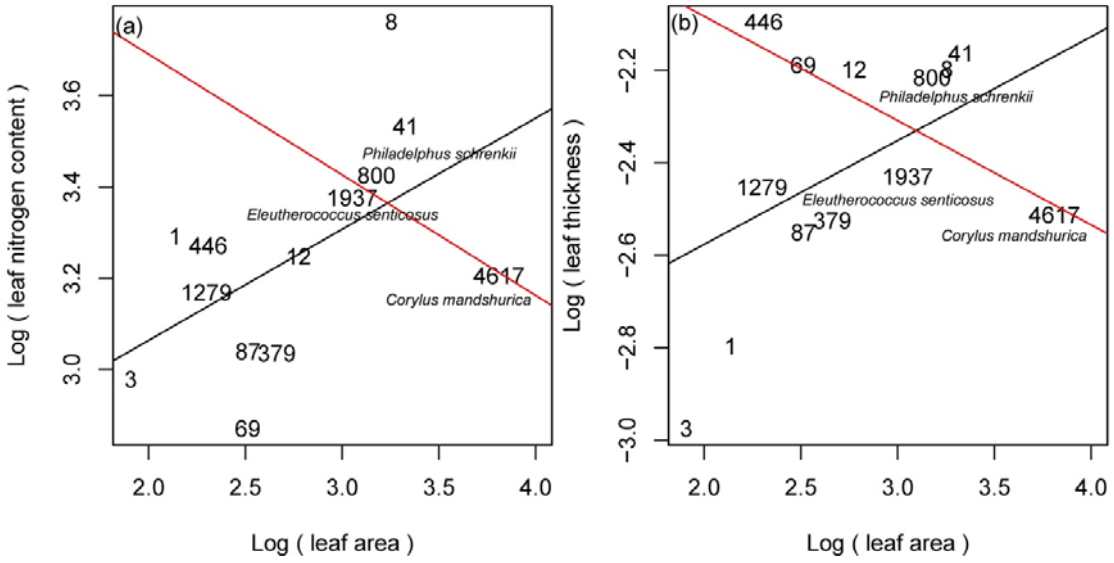


**Figure S5.** The relationships between leaf area, leaf nitrogen content and leaf thickness for shrubs at the species level. The number in the plot shows abundance of each species. The black line indicates the relationship for 13 shrub species. The red line indicates the relationship for three dominant species (*Corylus mandshurica*, *Eleutherococcus senticosus*, *Philadelphus schrenkii*), which account for 76.0% individuals of all shrubs.