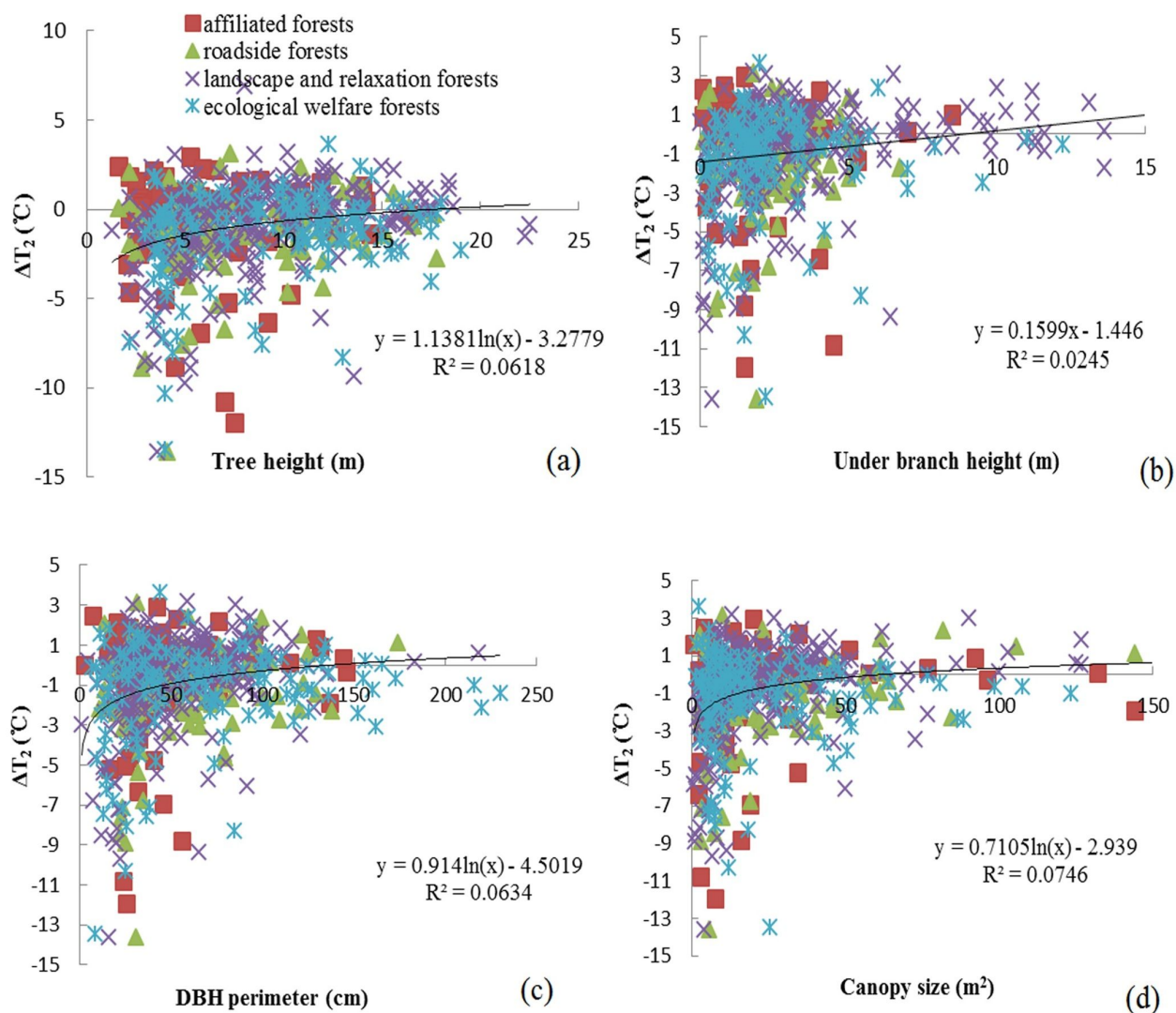


Supplementary Material

Fig. S1 - The relationships between vertical differences and tree growth characteristics in four different types of urban forests.



Tab. S1 - Results of the redundancy analysis of microclimate regulation functions: horizontal cooling (ΔT_1), vertical cooling (ΔT_2), soil cooling (ΔT_3), shading effects (ΔE and shading %) and humidifying (ΔRH). (a) Summary of results; total variation was 3534.000, explanatory variable accounted for 38.6% (adjusted explanatory variable was 37.8%); (b) Forward selection results.

(a)

Statistic	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5	Axis 6
Eigenvalues	0.2039	0.1251	0.0271	0.0223	0.0072	0.0008
Explained variation (cumulative)	20.39	32.9	35.61	37.84	38.56	38.64
Pseudo-canonical correlation	0.8895	0.788	0.3892	0.4734	0.2198	0.0839
Explained fitted variation (cumulative)	52.78	85.16	92.16	97.94	99.79	100

(b)

Name	Explains %	pseudo-F	<i>p</i>	P (adj)
Radiation	18.7	135	0.002	0.016
RH	12.4	106	0.002	0.016
T _{air}	2.9	25.9	0.002	0.016
T _{soil}	2.1	19.5	0.002	0.016
Height	1.5	14	0.002	0.016
Canopy size	0.7	6.6	0.002	0.016
Under branch Height	0.3	2.5	0.044	0.088
DBH	<0.1	0.3	0.914	0.914

Tab. S2 - Results of the redundancy analysis of microclimatic regulation functions: radiation, RH, T_{soil} , forest floor T_{air} and under-canopy T_{air} . (a) Summary of the results; total variation was 2950.000, explanatory variables accounted for 57.4%; adjusted explanatory variable was 56.8%); (b) Forward selection results.

(a)

Statistic	Axis 1	Axis 2	Axis 3	Axis 4
Eigenvalues	0.3448	0.1029	0.094	0.0306
Explained variation (cumulative)	34.48	44.78	54.17	57.23
Pseudo-canonical correlation	0.8646	0.7669	0.6764	0.5138
Explained fitted variation (cumulative)	60.04	77.97	94.33	99.65

(b)

Name	Explains %	pseudo-F	<i>p</i>	P (adj)
T_{air}	30.7	261	0.002	0.018
RH	9.8	96.9	0.002	0.018
T_{soil}	8.5	98.2	0.002	0.018
Upper canopy T_{air}	6.7	87.9	0.002	0.018
Height	0.8	10.7	0.002	0.018
Canopy size	0.3	4.2	0.008	0.032
Under branch Height	0.3	3.8	0.012	0.036
Radiation	0.3	3.5	0.036	0.072
DBH	<0.1	1	0.374	0.374