Table S2. Main index calculated equations of alpha diversity for shrubs and herbs.

Index	Formula or value	Comments
Frequency (F)	Frequency of x specie that occurs in all the quadrats	
Relative frequency (F_r)	$F_r = F_i / \sum F$	F_i is the frequency of i species
Coverage (C)	The ratio of a plant that vertically projected onto the ground	
Relative coverage (C_r)	$C_r = C_i / \sum C$	C_i is the coverage of i species
Density (d)	$d = S_i / A$	S_i is the amount in the quarats of i species; A is the area of quarats
Relative density (d_r)	$d_r = S_i / S$	S_i is the amount in the quarats of i species; S is total amount of shrubs or herbs in the quarats
Important value index (P)	$P = (F_r + C_r + d_r)/3$	
Shannon diversity index (H')	$H' = -\sum P_i \cdot lnP_i$	P_i is the important value index of i species
Simpson dominance index (D)	$D = 1 - \sum P_i^2$	P_i is the important value index of i species
Evenness index (J_w)	$J_w = H' / \ln S$	H' is Shannon diversity index; S is total amount of shrubs or herbs in the quarats
Diversity threshold (D_v)	$D_v = H' / \ln J_w$	H' is Shannon diversity index; J_w is evenness index