Appendix 1 - Diversity indices and the corresponding equations.

Index	Source	Equation
Brillouin diversity (HB)	Magurran (2004)	$HB = \frac{\ln N! - \sum \ln n_i!}{N}$
Brillouin evenness (E)	Magurran (2004)	$E = \frac{HB}{HB_{\max}}$ $HB_{\max} = \frac{1}{N}\ln\frac{N!}{\{[N/S]!\}^{S-r}\cdot\{([N/S]+1)!\}^{r}}$
Tree Height Diversity (THD)	Kuuluvainen et al. (1996)	$H' = -\sum_{i=1}^{S}(p_i \ln p_i)$
Tree Diameter Diversity (TDD)	Rouvinen & Kuuluvainen (2005)	$H' = -\sum_{i=1}^{S}(p_i \ln p_i)$
Vertical evenness (VE)	Neumann & Starlinger (2001)	$VE = \sum_{i}^{4}(-ln\,\pi_i)\cdot\frac{\pi_i}{ln\,4}$
Ripley's *K(t)*	Haase (1995)	$K(t) = \frac{1}{n^2}A\sum_{i=1}^{n}\sum_{j=1}^{n}\frac{I_t(\delta_{ij})}{w_{ij}}$, for $i \neq j$ $L(t) = \sqrt{\frac{K(t)}{\pi}} - t$
Ripley's $K_{12}(t)$	Haase (1995, 2001)	$K_{ij} = (n_1 n_2)^{-1} A\sum_{i=1}^{n1}\sum_{j=1}^{n2} w_{ij}^{-1} I_t(\delta_{ij})$ $K_{12}(t) = \frac{n_2 K_{12}(t) + n_1 K_{21}(t)}{n_1 + n_2}$ $L_{12}(t) = \sqrt{\frac{K_{12}(t)}{\pi}} - t$
O-ring *(r)*	Wiegand & Moloney (2004)	$O_{12}(r) = \lambda_2 g_{12}(r)$ $g_{12}(r) = \frac{dK_{12}(r)}{dr}\cdot(2\pi r)^{-1}$

Legend: (n_i): number of individuals in the *i*th species; (*N*): total number of individuals; (*S*): number of species in the sample; [*N/S*]: the integer of *N/S;* (*r*): $N - S\,[N/S]$; (p_i): proportion of stems in the *i*th layer, based respectively on tree height for THD and tree diameter for TDD; (π_i): relative crown area of all trees in the *i*th height layer; (t): distance lag; (*A*): plot area with *n* trees; (*It*): counter variable set to 1 if the distance δ_{ij} between tree *i* and tree *j* is less or equal to *t*; (w_{ij}): weighting factor to correct for the edge effects; (n_1) and (n_2): number of events in the two classes.