

Supplementary Information: Tropical tree drought sensitivity is jointly shaped by drought characteristics, species adaptations, and individual microenvironments

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Climate data and correlations

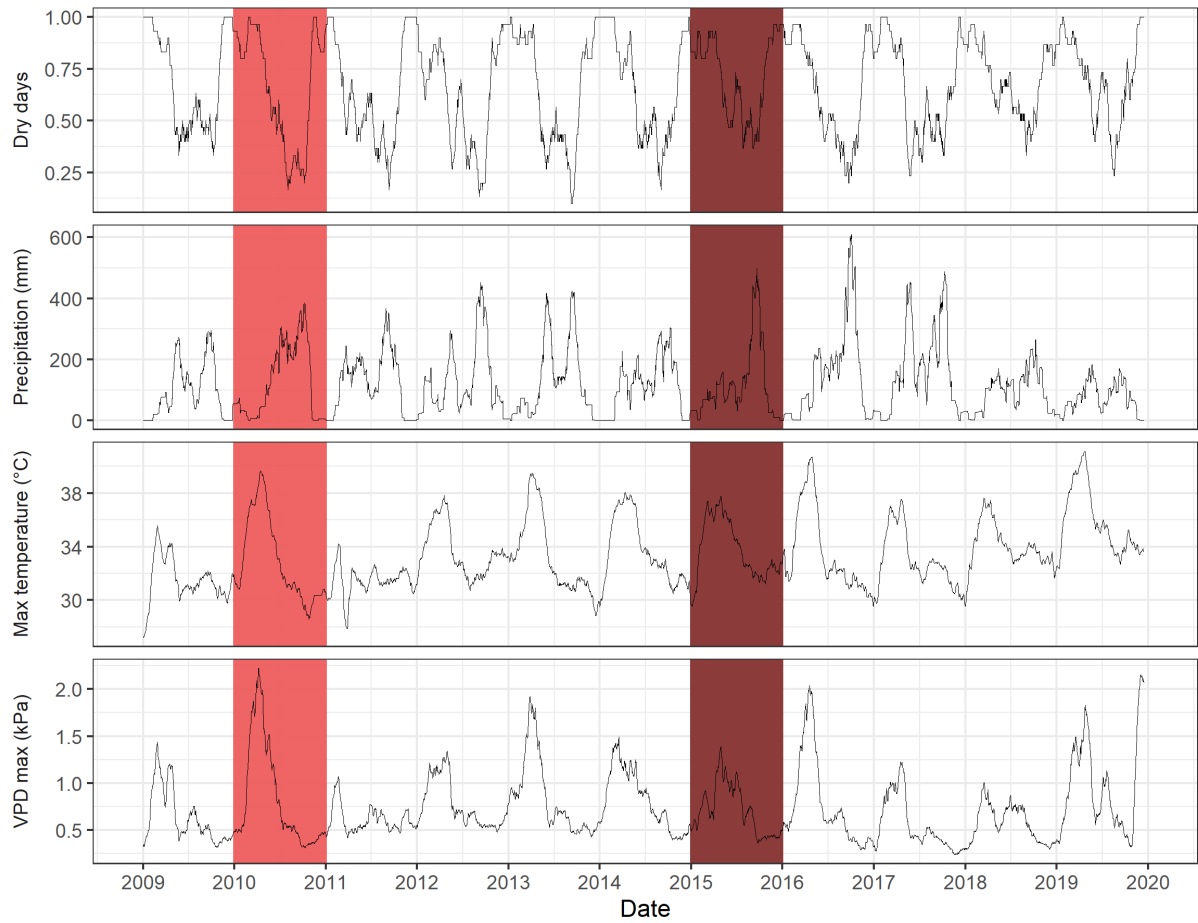


Figure S1: Raw climate data timeseries from 2009 to 2020 from the Forest Fire Research Station near HKK. Measurements represent daily rolling means over a 30-day time window for precipitation, max temperature and VPD and rolling sum for number of dry days.

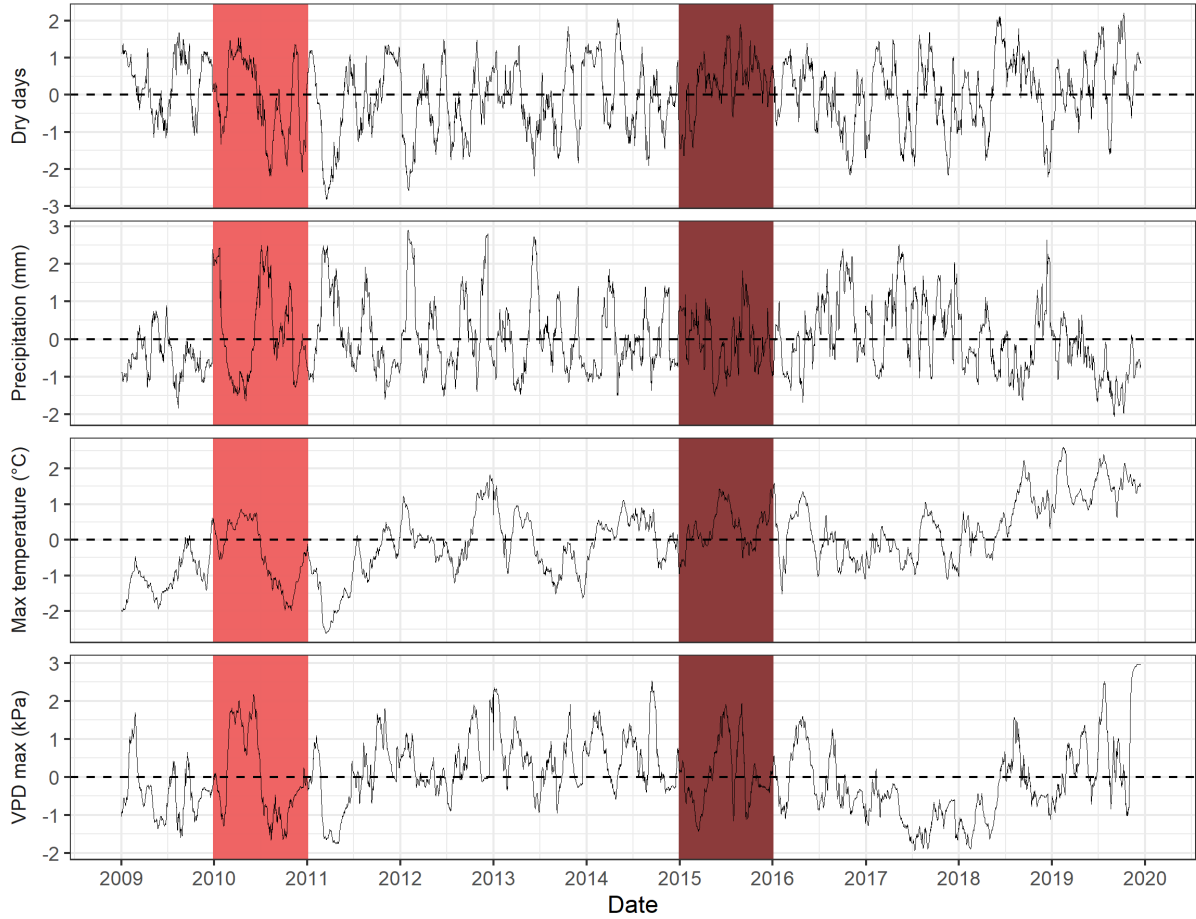


Figure S2: Climate anomalies for all variables from 2009 to 2020 from the Forest Fire Research Station near HKK. Values represent number of standard deviations from the long-term mean for daily rolling mean values.

Data cleaning additional methods

- Data cleaning steps
- Calculating DBH equation
- Corroboration with tape measurements
- error distribution

Growth timeseries and anomalies

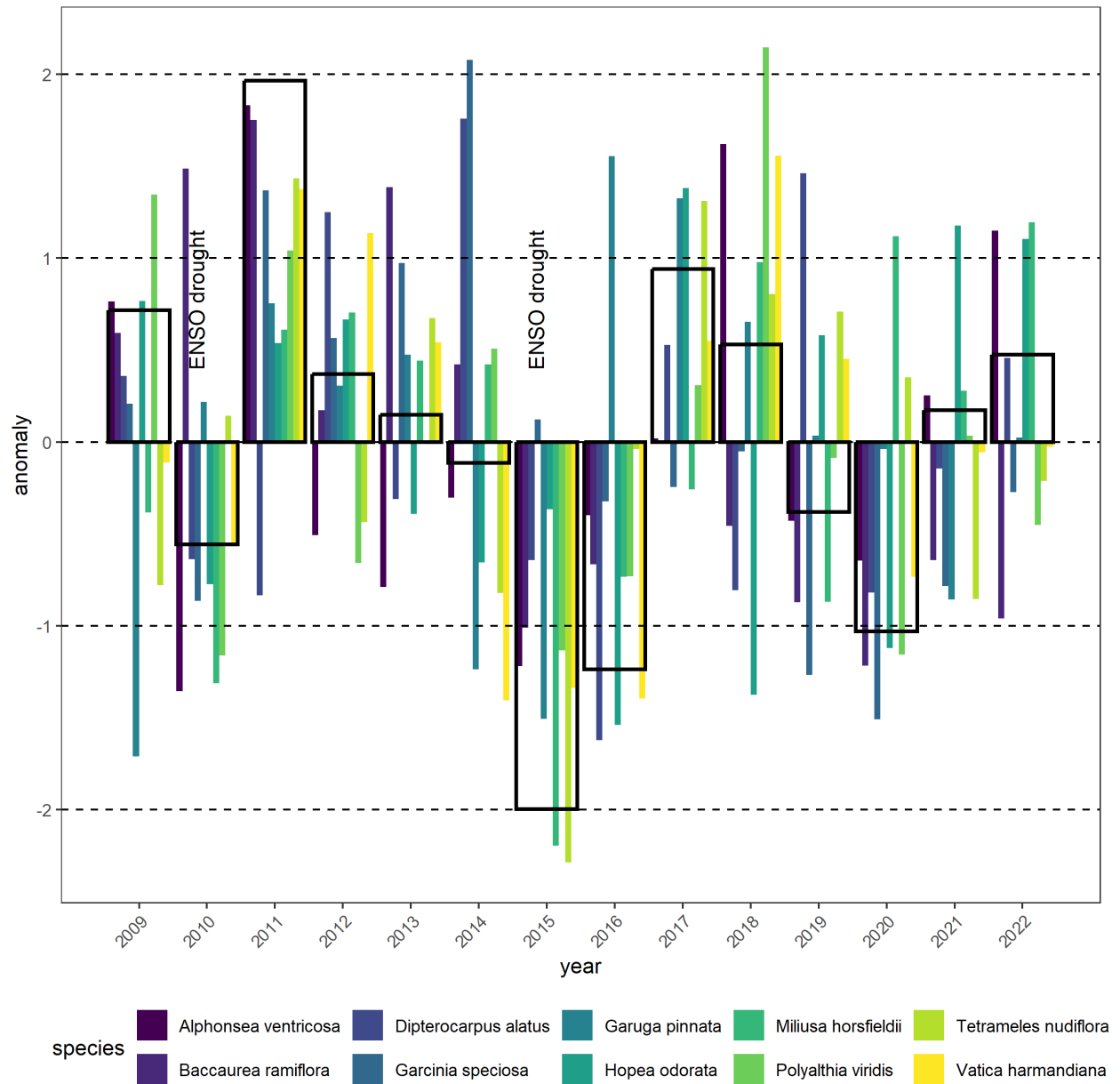


Figure S3: Growth anomalies across the timeseries. Growth anomalies for each year calculated as the number of standard deviations in growth each year from mean growth across all years and summarised for plot and species.

Drought year growth of species and individuals

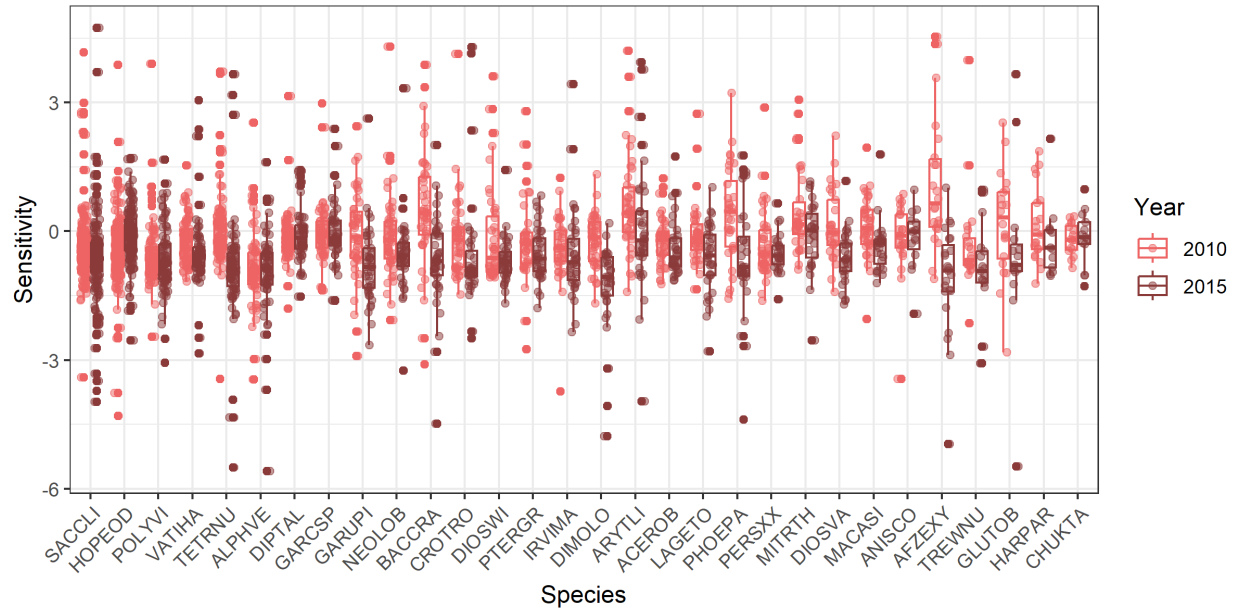


Figure S4: Species sensitivities in drought years 2010 and 2015. Boxplots represent 25th, 50th (median) and 75th percentile of sensitivity for each species in each year and whiskers represent 95% CIs. All individual sensitivities represented by jittered points.

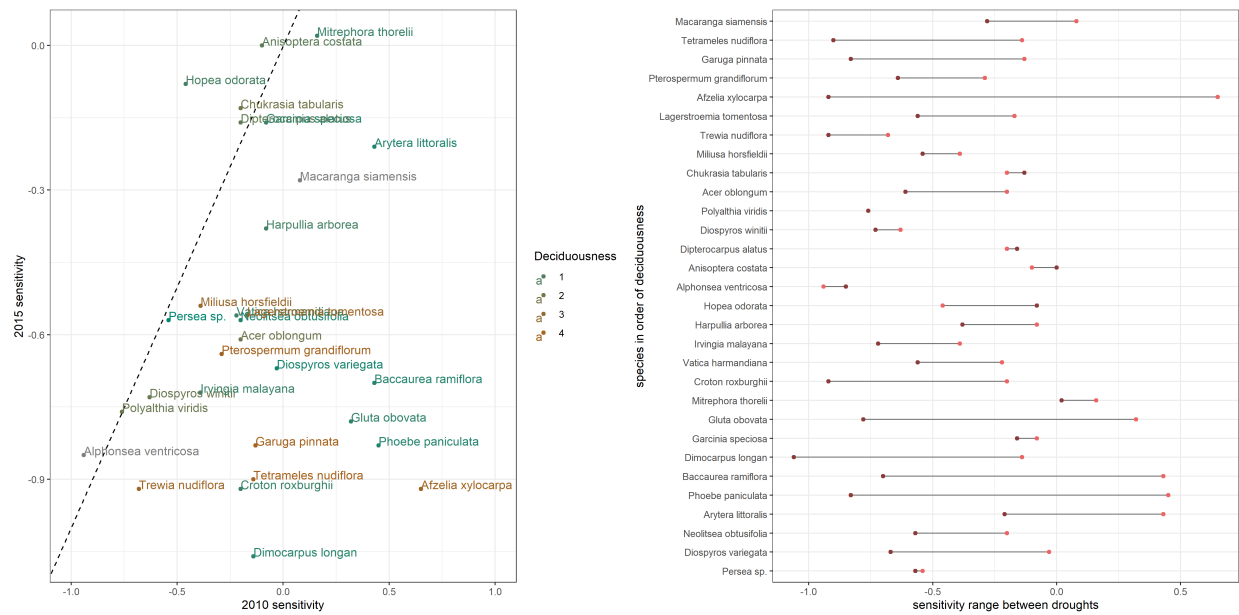


Figure S5: Correlations of species sensitivities across the two years. Panel a shows correlation of species median sensitivities in the two years and Pearson's correlation coefficient. Colour gradient represents deciduousness scale and dotted line is the 1:1 line. Panel b shows difference in magnitude of species median sensitivities among the two years

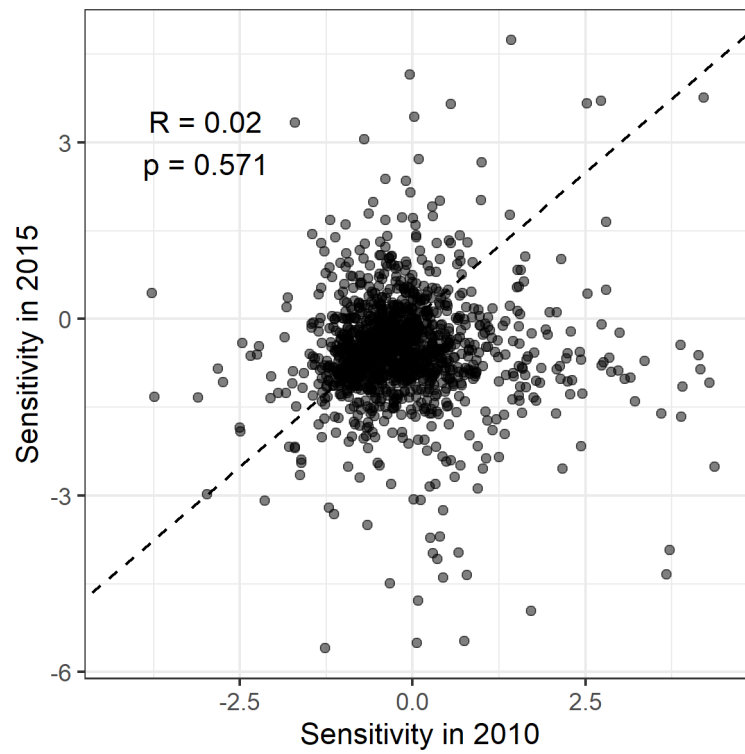


Figure S6: Correlation of individual sensitivities across the two years along with Pearson's correlation coefficient and the 1:1 line.

Variables and their distributions

Map of trees

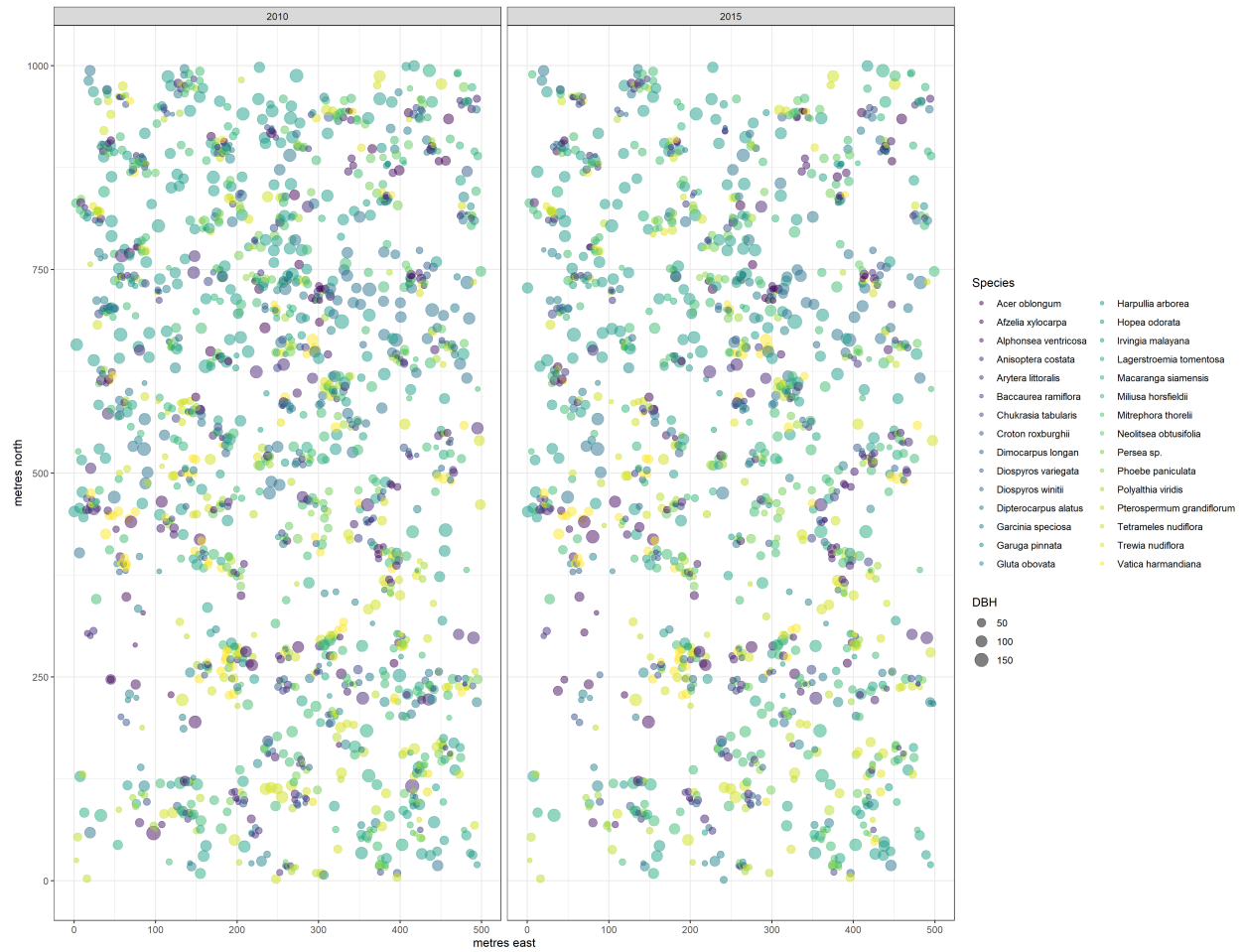


Fig S7:

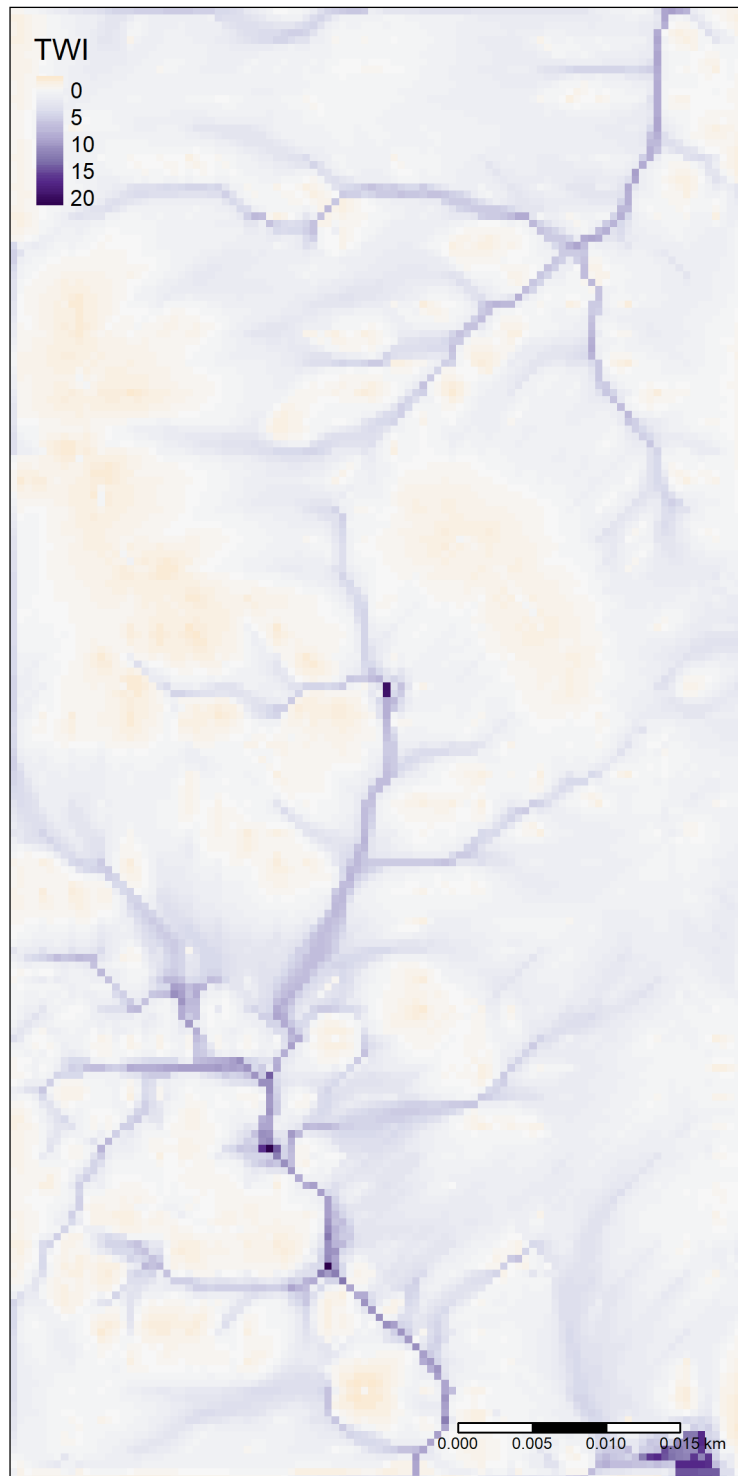


Fig S8:

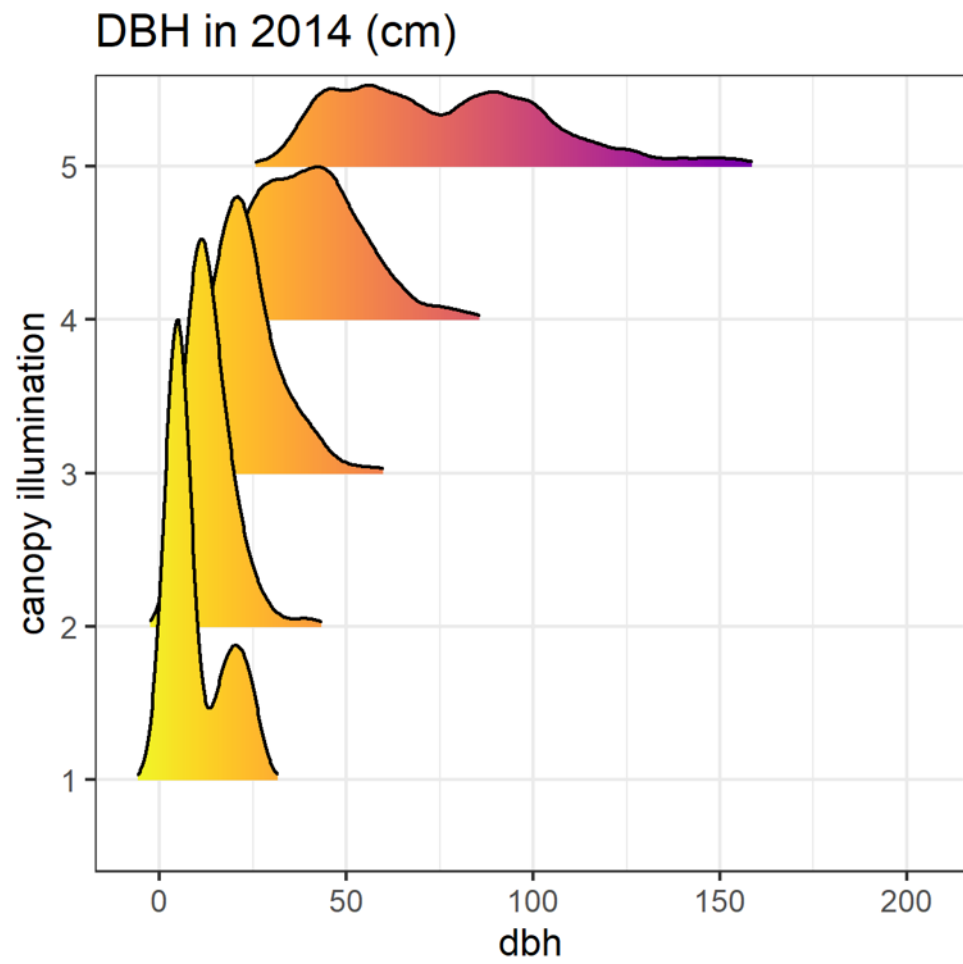


Fig S9:

Conditional dependencies

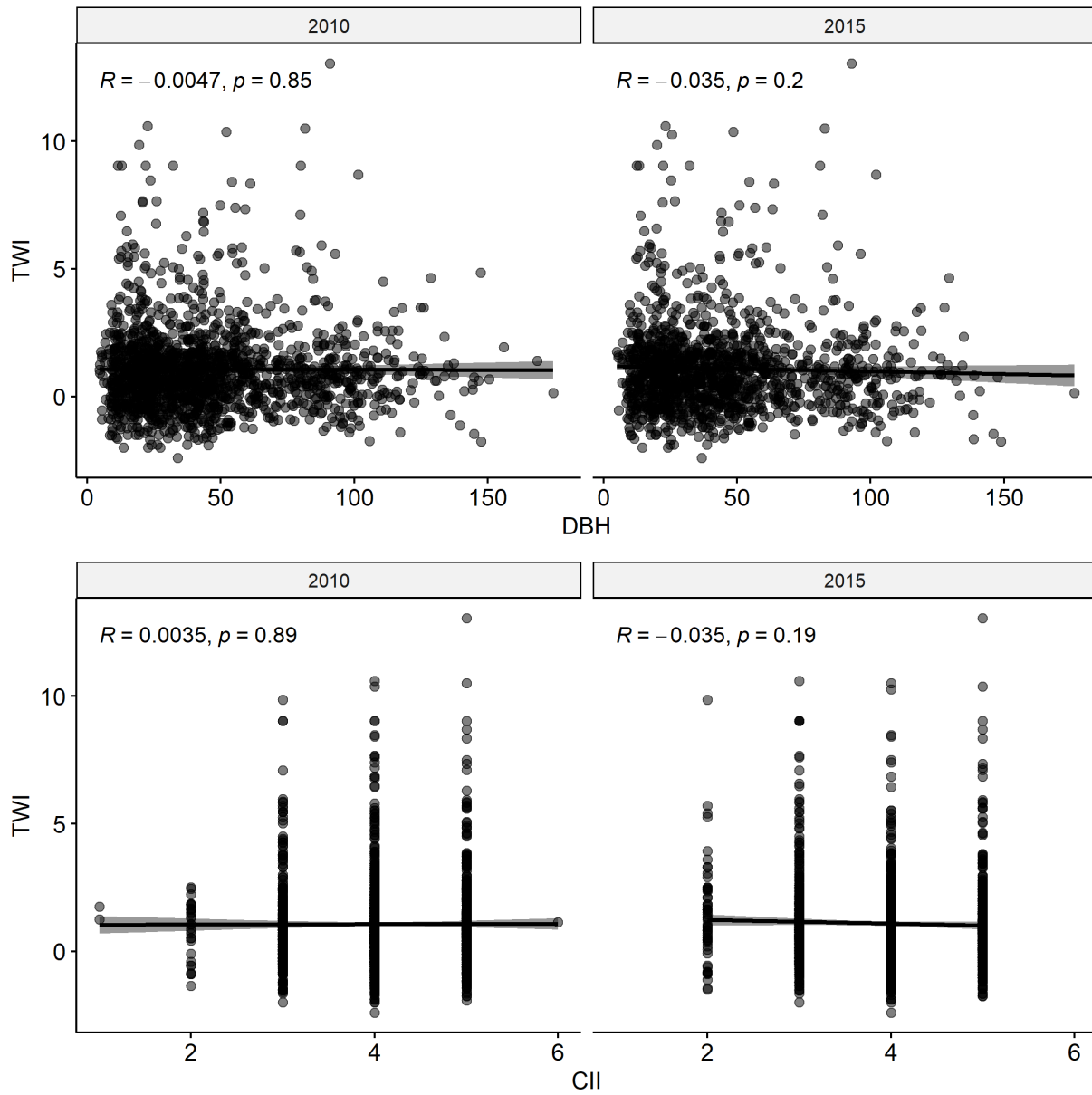


Fig S10:

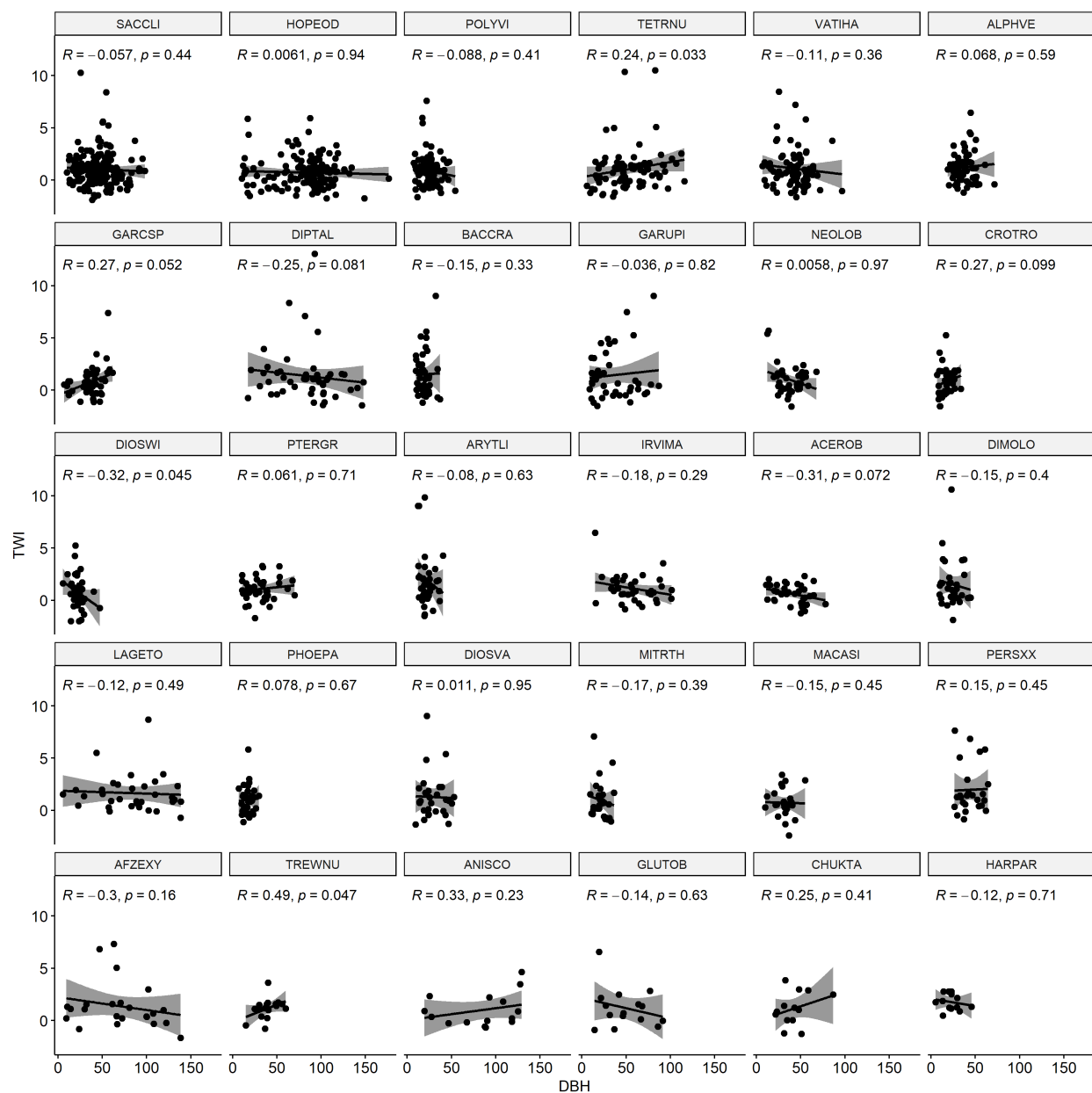


Fig S11:

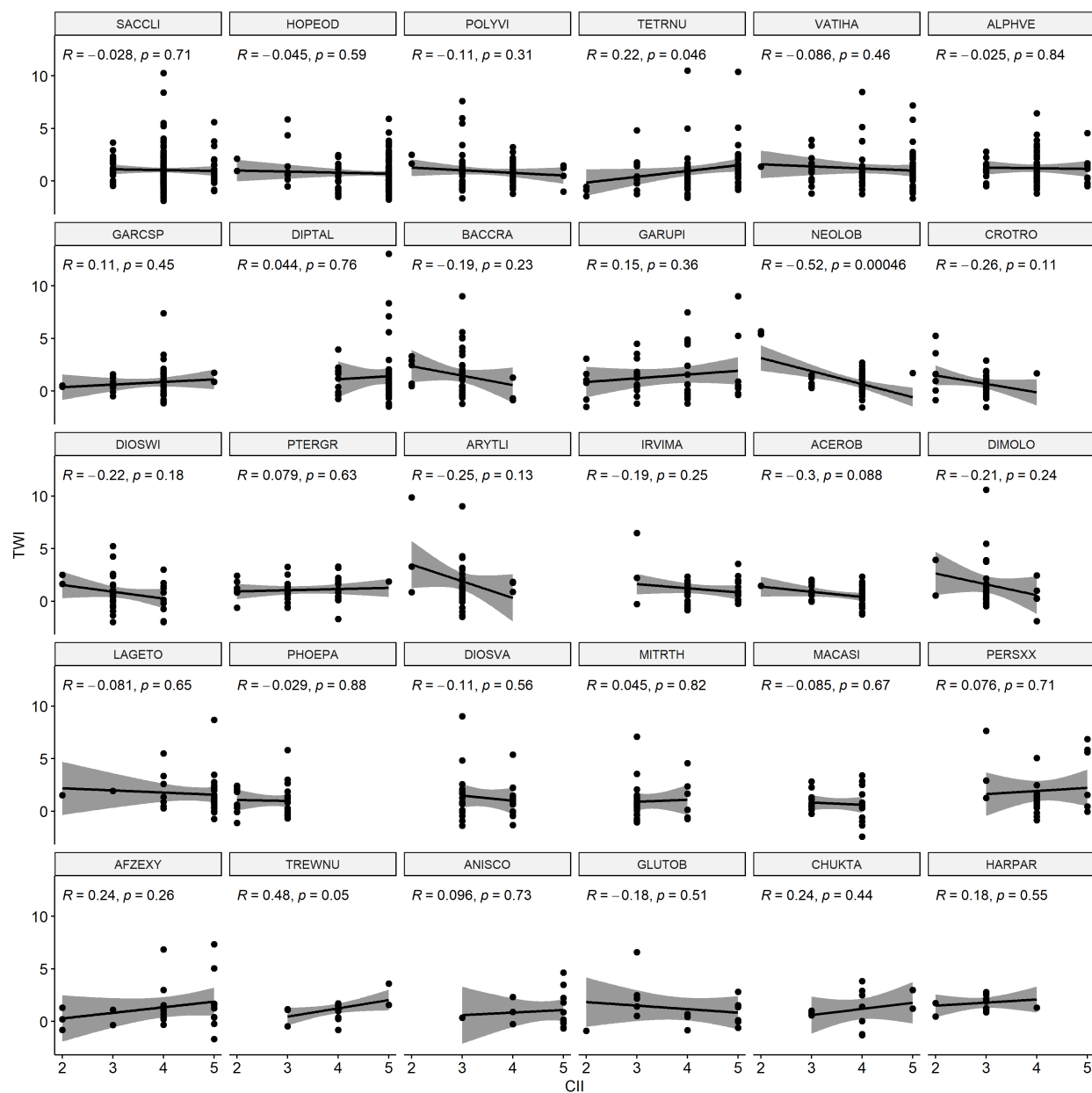


Fig S12: