Elephant Figures 07

15/01/18

Figures and Tables

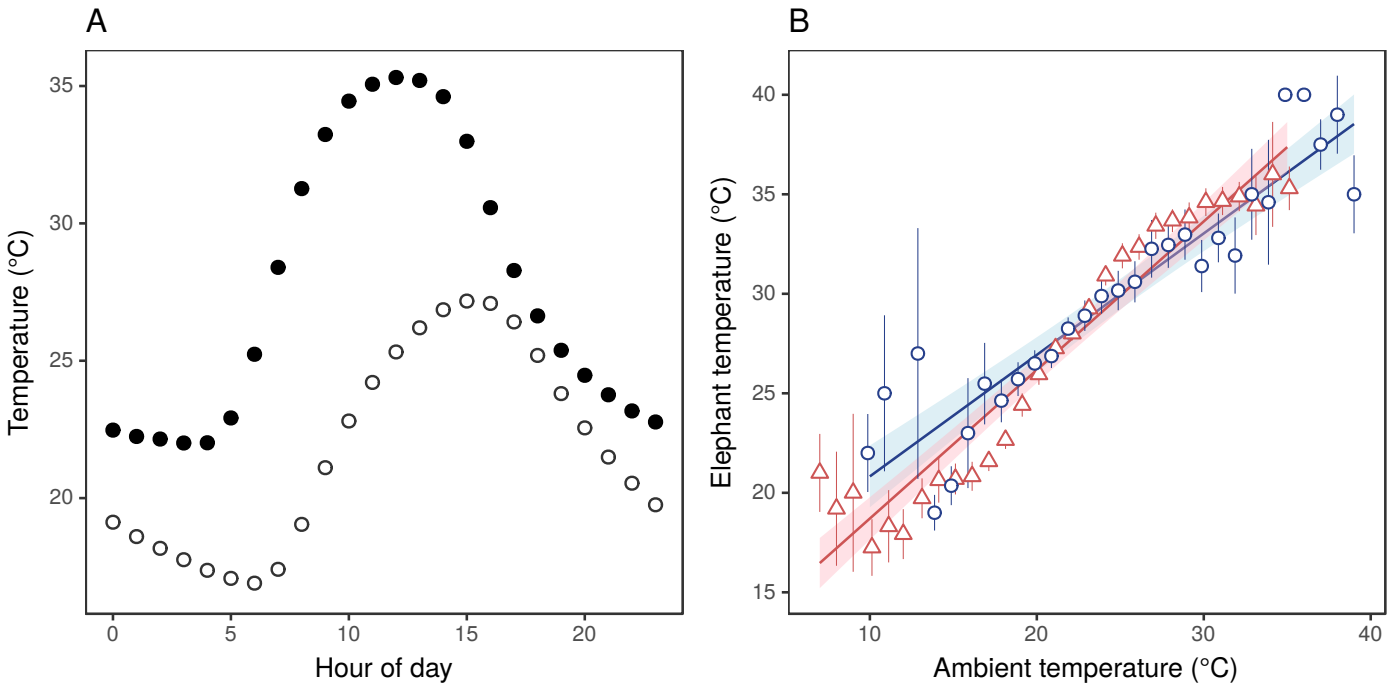

Figure 1: **A**: Mean thermochron temperature (filled circles) tracks mean ambient temperature (open circles) through the day. Vertical lineranges represent 95% confidence intervals. **B**: Mean thermochron temperature (points) at measured ambient temperature, and GLM fits (lines) in each season (cool-dry: blue circles & lines, hot-wet: red triangles & lines). Vertical lineranges and shaded areas (coloured by season) indicate 95% confidence intervals at each point.

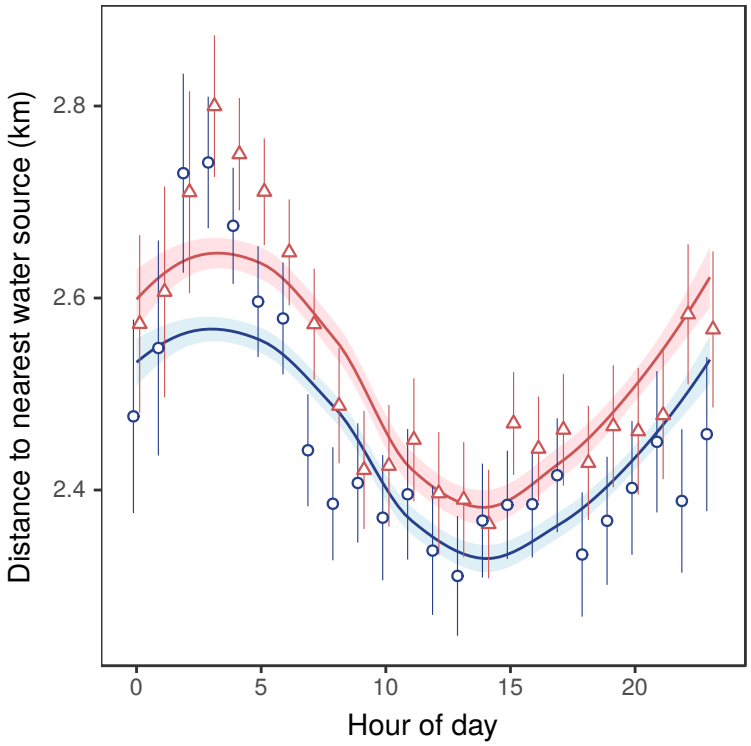

Figure 2: GAMM fit (lines) and mean distance to the nearest water source in each season (point) through the day in each season (cool-dry: blue circles & lines, hot-wet: red triangles & lines). Vertical lineranges and shaded areas (coloured by season) indicate 95% confidence intervals at each point. Only moving elephants included.

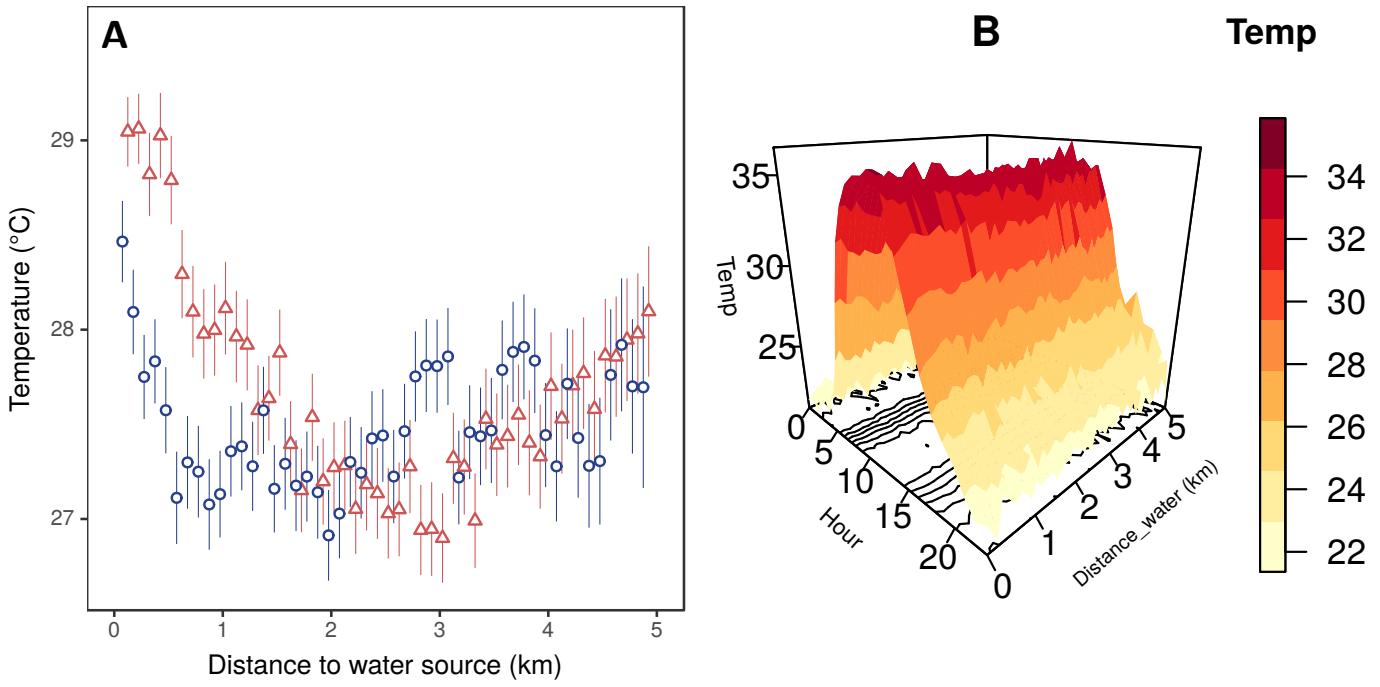

Figure 3: **A**: Mean elephant temperature (points) at 100m distance intervals from the nearest water source in each season (cool-dry: blue circles, hot-wet: red triangles). Vertical lineranges (coloured by season) represent 95% confidence intervals. **B**: Mean elephant temperatures (3D surface) at 100m distance intervals from the nearest water source (y-axis), at each hour of day (x-axis). Contour lines shown on base indicate rate of change (narrow contours indicate rapid changes). Only moving elephants included.

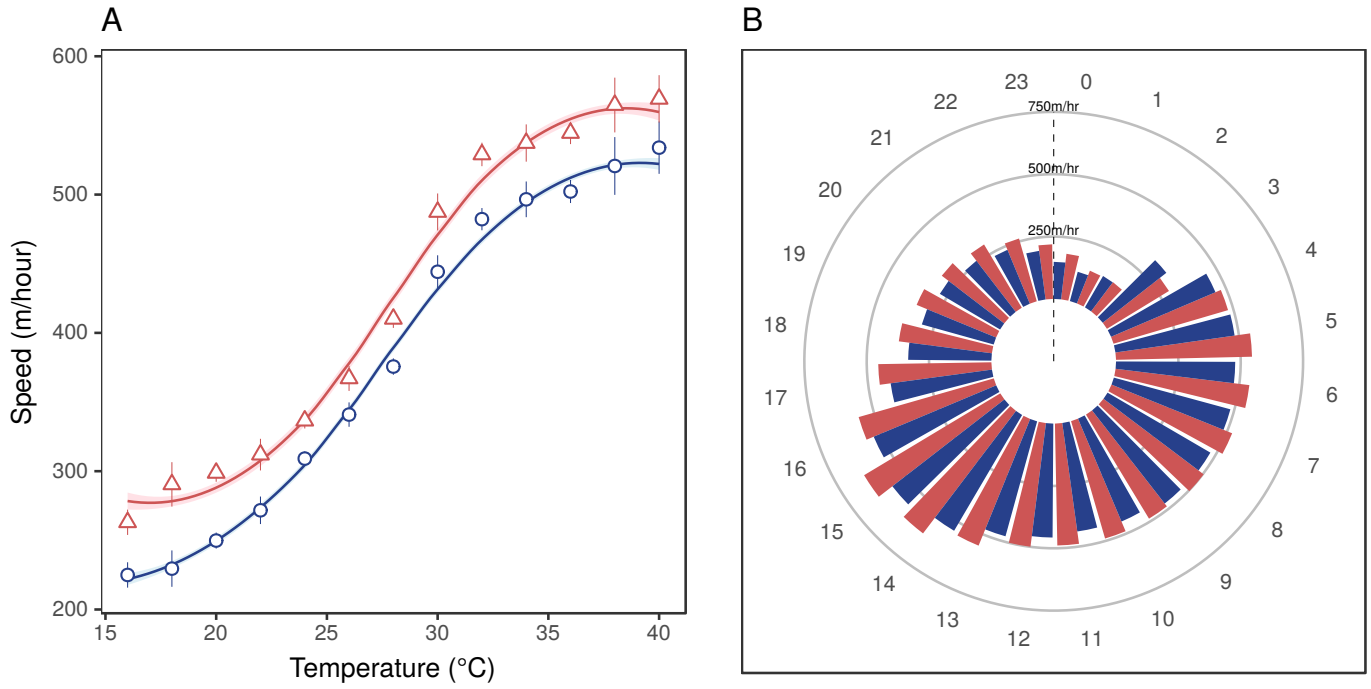

Figure 4: **A**. Mean steplength (points) at 2°C temperature intervals in each season (cool-dry: blue circles, hot-wet: red triangles). GAMM fit (lines), data error intervals (lineranges), and fit error intervals (shaded areas) are shown coloured by season. **B**. Mean steplength at each half hour interval (bars) in each season (cool-dry: blue, hot-wet: red, overlap: grey). Surrounding text indicates hour of day. All elephants included.

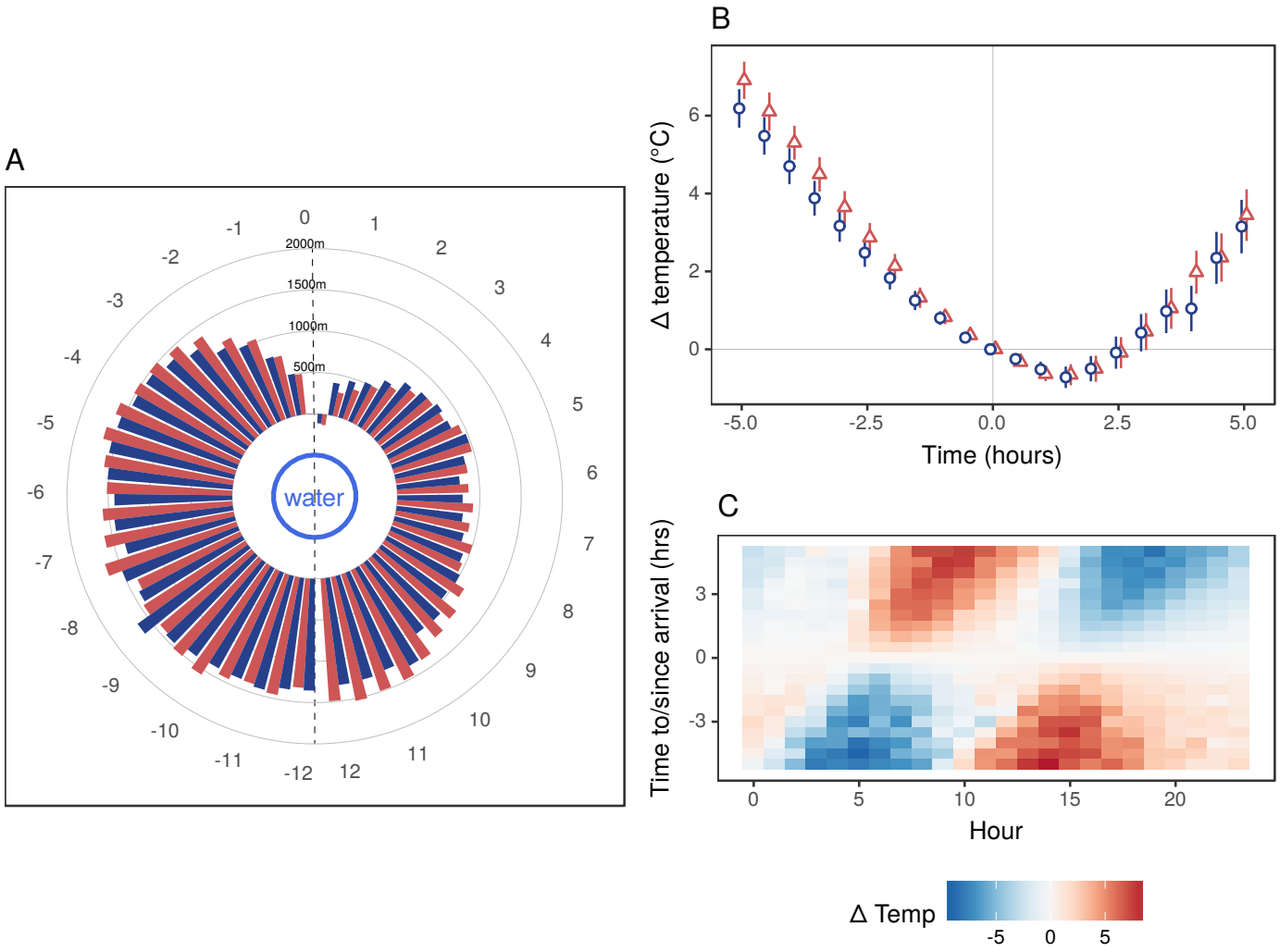

Figure 5: **A**. Mean distance to the point of arrival (bars) in the limnal zone (shaded grey, <500m from water) at each half hour interval over a 24 period (numbers on outside). Zero represents the arrival event, negative values represent hours prior to arrival. Bars are coloured by season (cool-dry: blue, hot-wet: red, overlap: grey). **B**. Mean temperature change (points) and 95% confidence intervals (lineranges) at half-hourly intervals centred on, and relative to, elephant arrival to limnal zone, separated by season (cool-dry: blue circles & lines, hot-wet: red triangles & lines). **C**. Mean temperature change relative to, and centred on, elephant arrival in the limnal zone at half-hourly intervals (y-axis). X-axis shows the true hour of day of each data point.

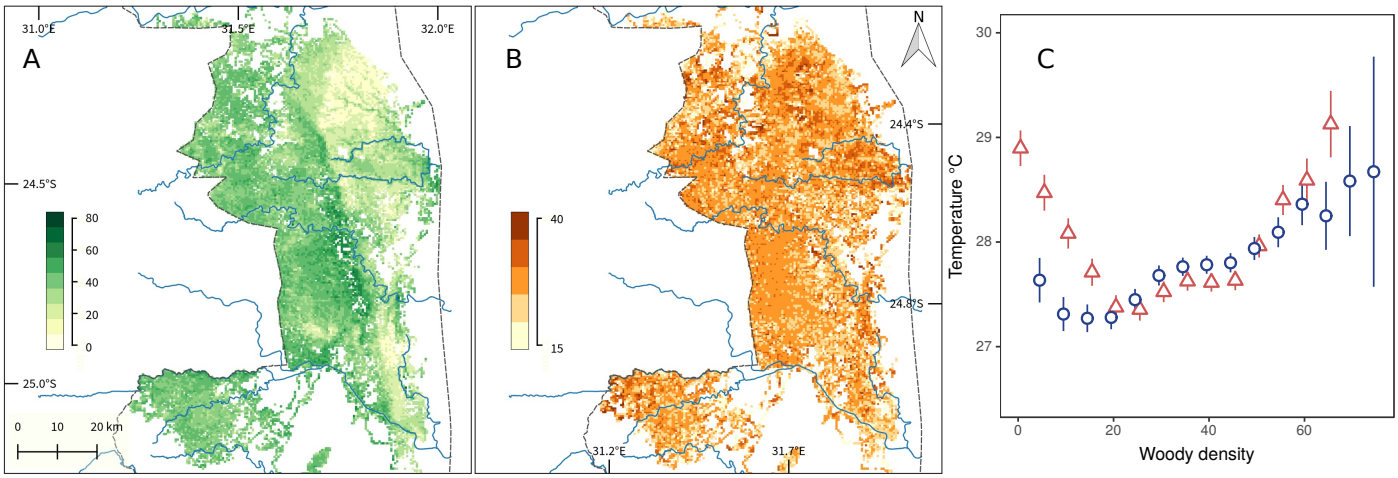

Figure 6: **A**. Woody density, and **B**. Elephant temperature at relocation sites. Values shown are 500m^2 pooled means. **C**. Mean elephant temperatures at woody densities in increments of 5, separated by season (cool dry: blue circles, hot wet: red triangles), showing 95% confidence intervals (lineranges coloured by season.). Rivers (light blue lines) and Kruger boundary (dashed black line) are shown.

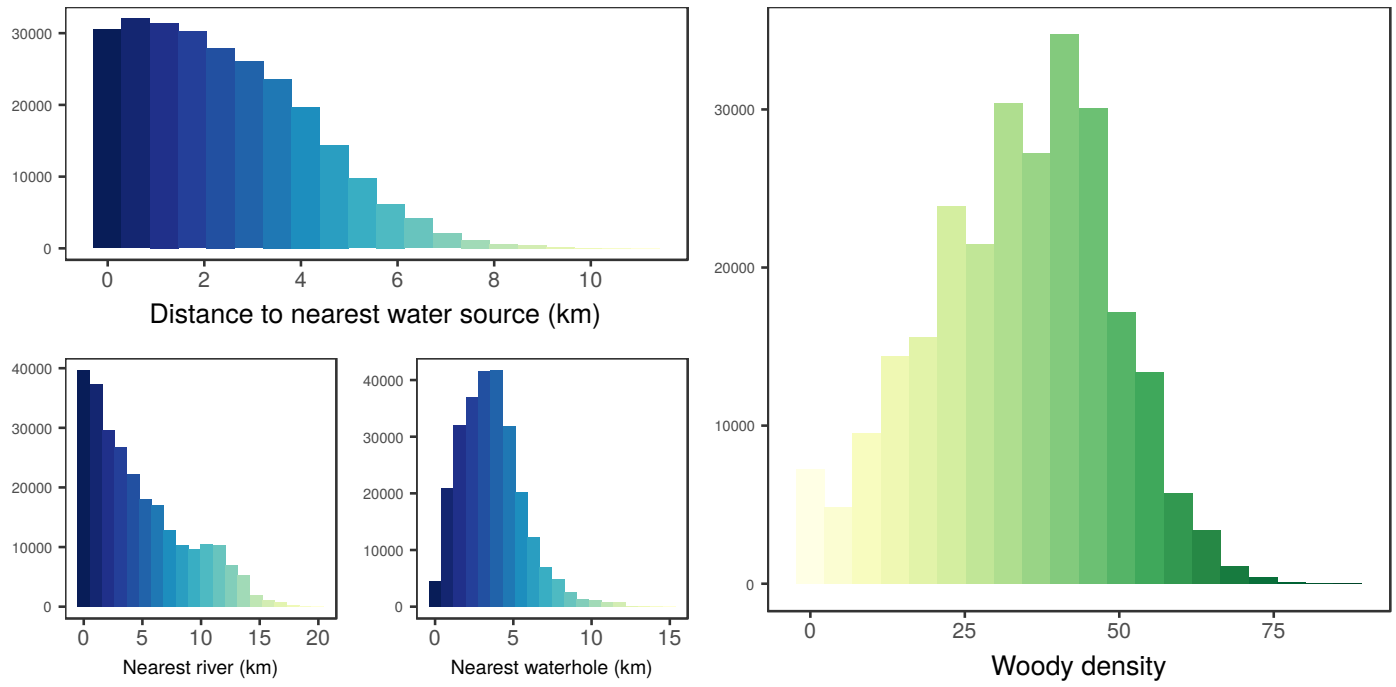

Figure 7: Supplementary material: **A**. Frequency distributions of distance to the nearest water source (waterhole or river, see separate histograms below), and **B**. Frequency distribution of the woody density encountered by elephants.

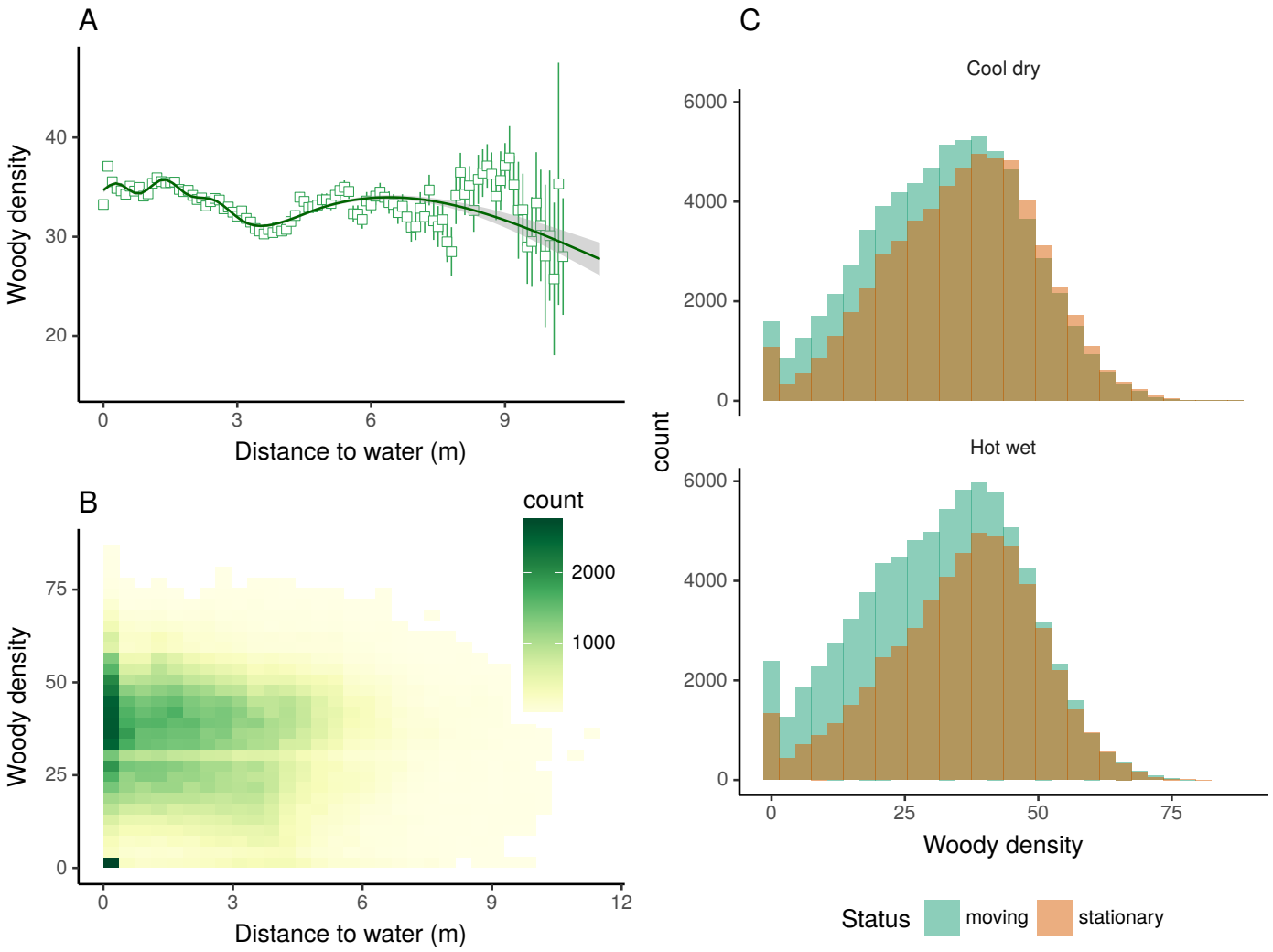

Figure 8: Supplementary material: **A**. Mean woody density (points), and GAM smoothed fit (line) at 100m distance intervals to the nearest water-source. Lineranges and shaded area represent 95% confidence intervals. **B**. Count bins of woody density and distance to water. Darker bins indicate more data points for a given combination.