Elephant Figures

13/01/18

Answers

1. n = 114303 (43%)
2. Fig.1 averages temperatures from all elephants at different times of day, regardless of their proximity to water. Elephants far from water with high temperatures likely push up the mean at all times. Temperatures at greater distances from water in Fig.2a do reach those levels.
3. See Fig. 2B.
4. See Figs. 2B, 3A.
5. See updated Fig. 3A.
6. See updated Fig. 4.

Figures and Tables

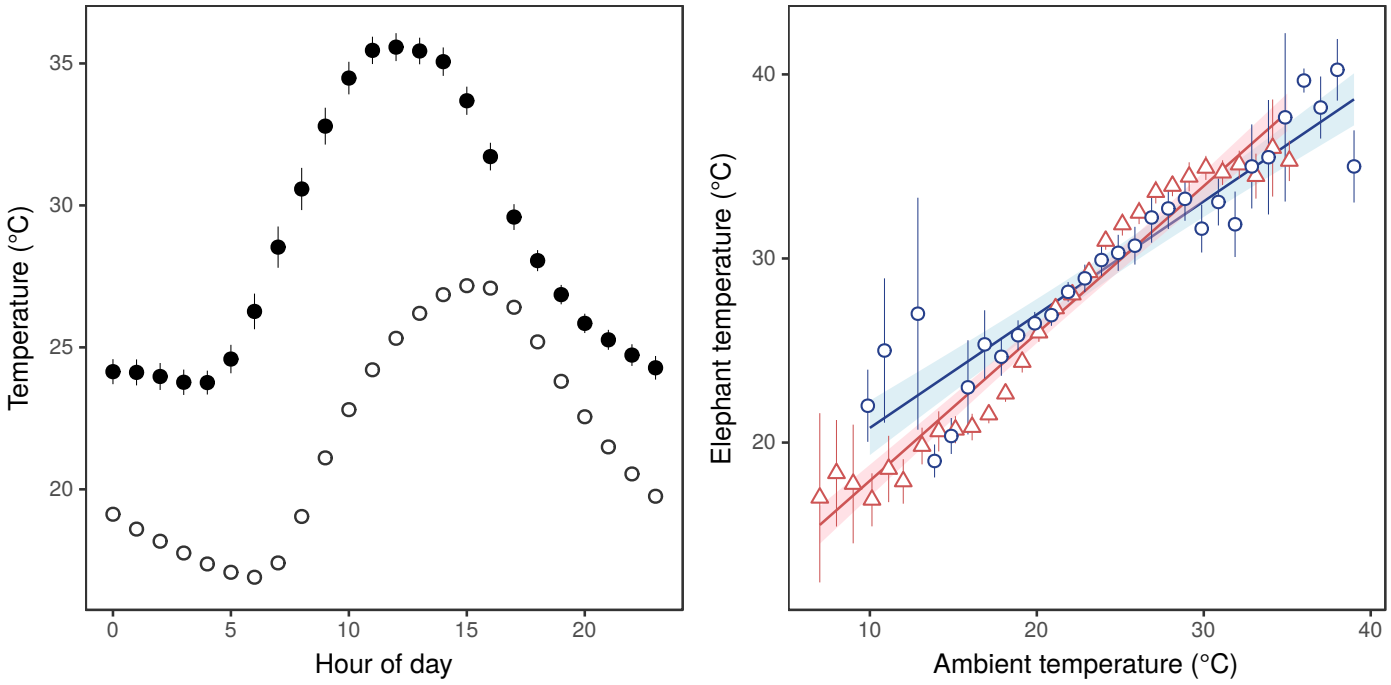

Figure 1: A: Mean thermochron temperature (filled circles) tracks mean ambient temperature (open circles) through the day. Vertical lineranges represent 95% confidence intervals. B: Mean thermochron temperature (points) at measured ambient temperature, and GLM fits (lines) in each season (cool-dry: blue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

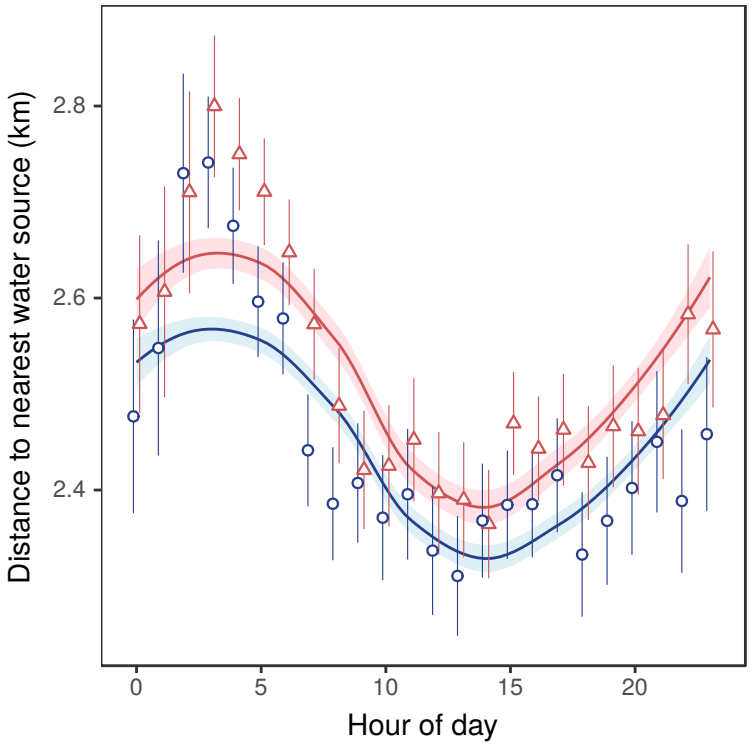

Figure 2: GAMM fit (lines) and mean distance to the nearest water source in each season (point) through the day in each season (cool-dry: blue circles & lines, hot-wet: red triangles & lines). Vertical lineranges and shaded areas (coloured by season) indicate 95% confidence intervals at each point.

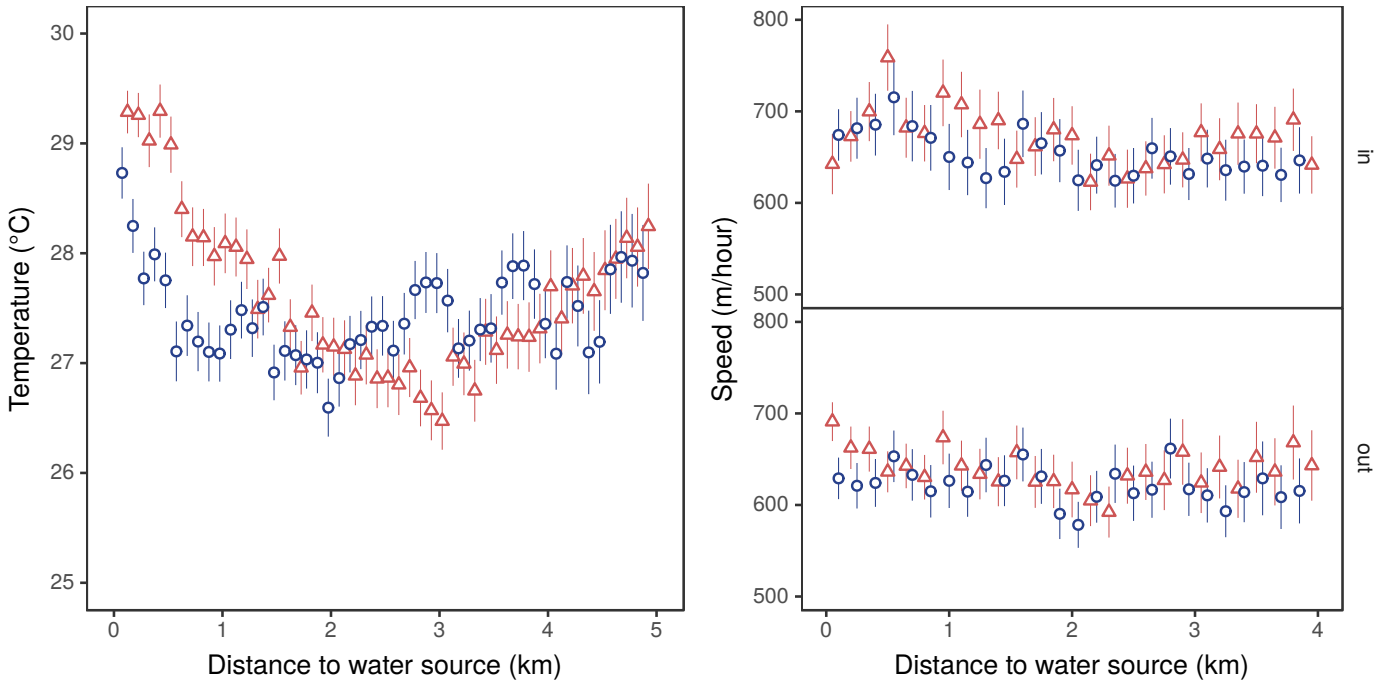

Figure 3: A: Mean elephant temperature (points) at 100m distance intervals from the nearest water source in each season (cool-dry: blue circles, hot-wet: red triangles). Vertical lineranges (coloured by season) represent 95% confidence intervals. B: Mean elephant temperatures (3D surface) at 100m distance 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).

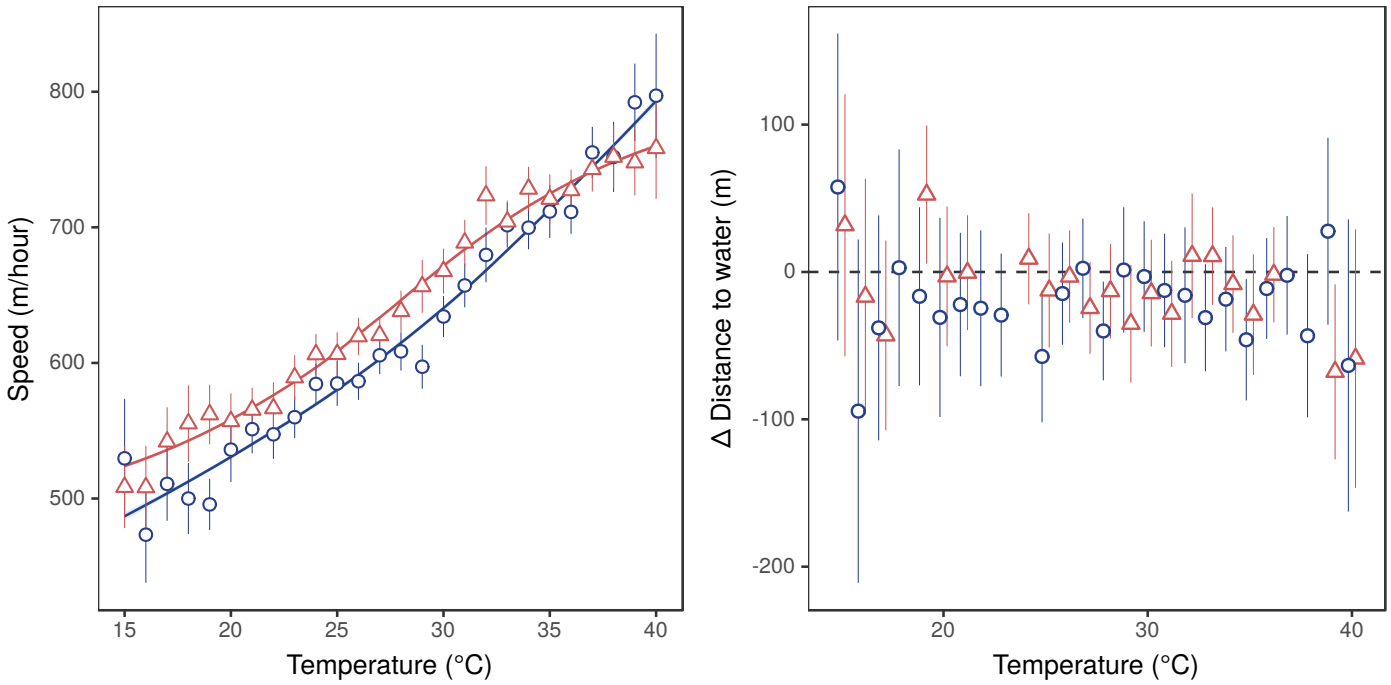

Figure 4: A. Mean steplength (points) at 1°C temperature intervals in each season (cool-dry: blue circles, hot-wet: red triangles). GAMM fit (lines), data error intervals (lineranges), and fit error intervals (shaded areas) are shown coloured by season. B. Change in distance to water sources (points) at degree temperature intervals in each season (cool-dry: blue circles, hot-wet: red triangles). Vertical lineranges (coloured by season) indicate 95% confidence intervals at each point.

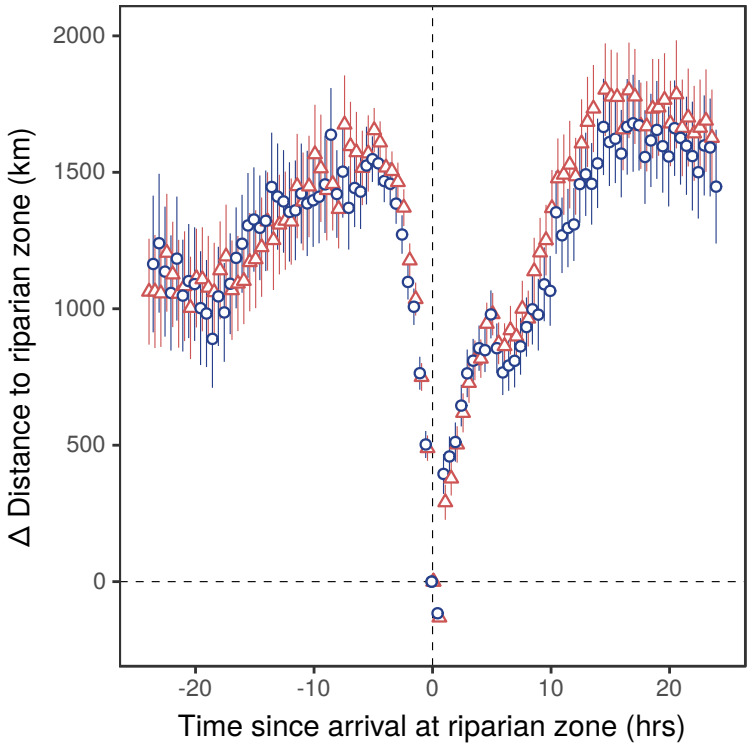

Figure 5: Mean distance to the point of arrival in the limnal zone (<500m from water) at each half hour interval over a 24 period centred on the arrival event, separated by season (points; cool-dry: blue circles, hot-wet: red triangles). Vertical lineranges coloured by season show 95% confidence intervals at each point.

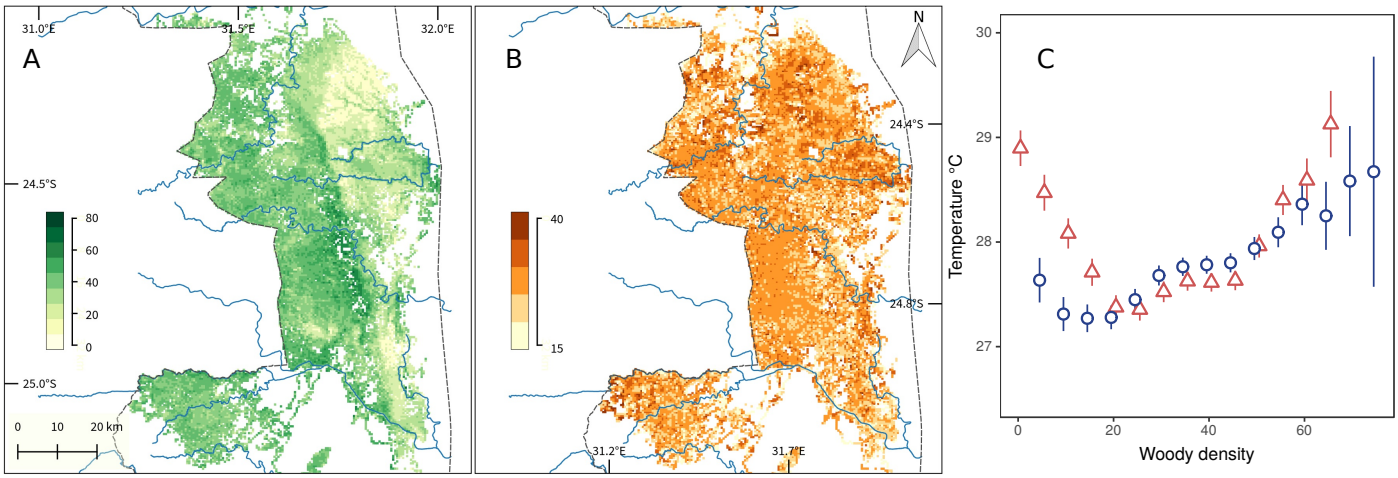

Figure 6: A. Woody density, and B. Elephant temperature at relocation sites. Values shown are 500m^2 pooled means. C. Mean elephant temperatures at woody densities in increments of 5, separated by season (cool dry: blue circles, hot wet: red triangles), showing 95% confidence intervals (lineranges coloured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

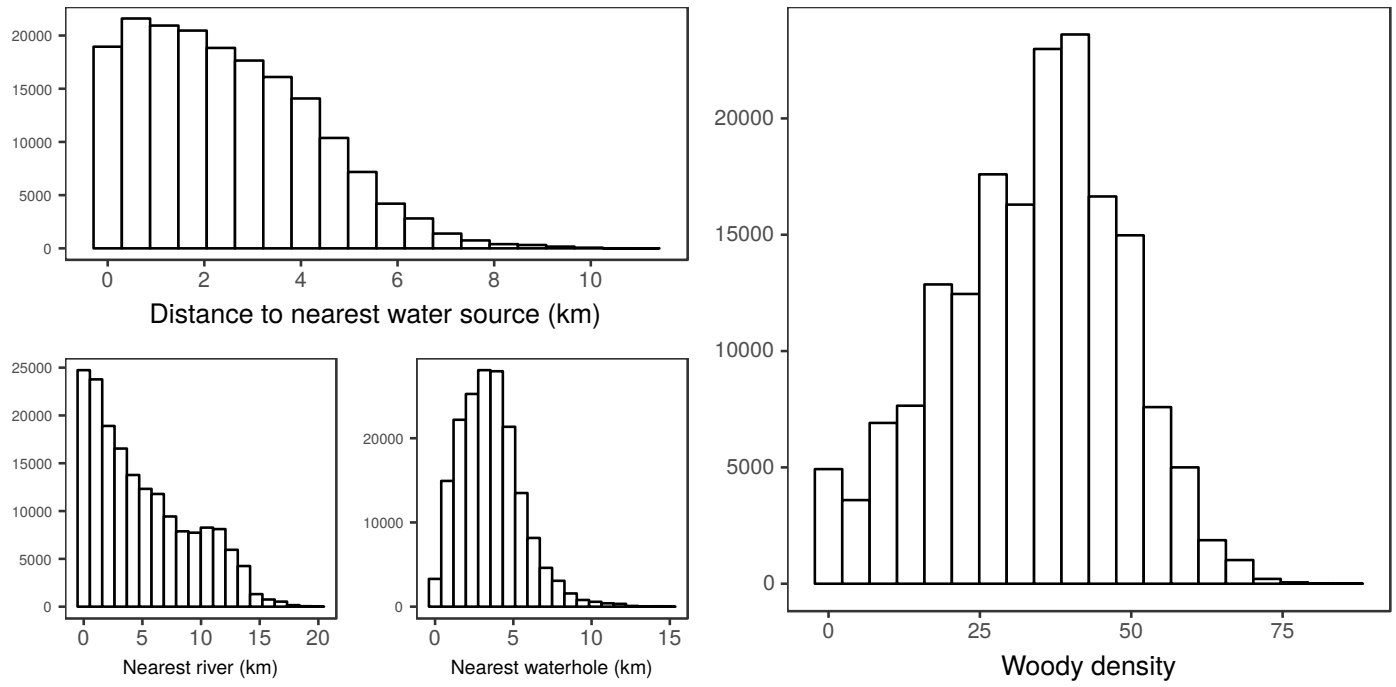

Figure 7: Supplementary material: A. Frequency distributions of distance to the nearest water source (waterhole or river, see separate histograms below), and B. Frequency distribution of the woody density encountered by elephants.

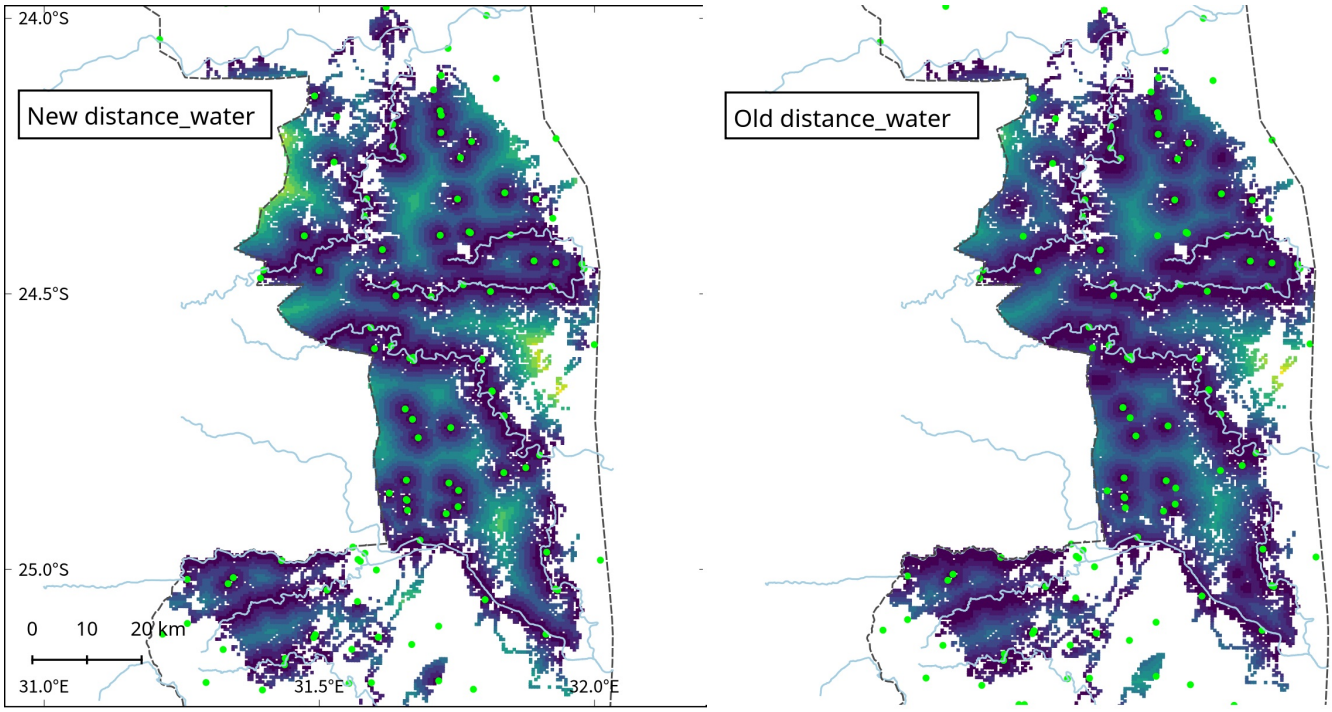

Figure 8: Supplementary material: Distances to water calculated from active waterholes and river.