Landscape scale movements as a thermoregulatory mechanism in African elephants (*Loxodonta africana*)

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Methods

Elephant tracking

We collected half-hourly positions of individual (n = 14) free-ranging female African elephants (*Loxodonta africana*) in Kruger National Park, South Africa (24°S, 31.5°E) between August 2007 and August 2009 (see Appendix 1), using GPS logger-transmitter collars (*manufacturer and mass here*). Each elephant in the study was from a different herd. We also collected half-hourly on-board temperature data from temperature loggers (hereafter, thermochrons) fitted to each collar. The temperature logged by each thermochron reflected a combination of the ambient temperature, the elephant's body temperature, and the heat generated by the operation of the other electronics.

Environmental data

To verify that collar-borne thermochrons reported values reflecting ambient temperatures experienced by elephants, we collected weather data (mean half-hourly temperature, mean daily rainfall[1]) from the weather station at Kruger NP headquarters (Skukuza: 24.98°S, 31.5°E). We used rainfall data to classify (*how is this to be done?*) the study period into warm-wet, and cold-dry seasons. We further collected the following environmental data: 1. Courses of park rivers, 2. Locations of waterholes, 3. Gertenbach land cover classfication of the park area (*look into this, what is it?*), 4. MODIS data (**look into this**, *what is it? which bands, which scene: this includes the actual scene number with the date, a link in the appendix, as well as information on how the scene bands were processed to get the* `woody density`).

[1] Where did the data come from?