

A random walk model that accounts for space occupation and movements of a large herbivore

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Supplementary Figure S1: Step-size distribution for the first deer (gray bars).

The step-size distribution of the motion corresponds to the relative Euclidean distances covered between pairs of GPS observations in a given individual. Three distributions are adjusted:

log-normal, Weibull and Gamma. The resulting fits for deer 1 are presented:

log-normal (red line, parameters: $\mu=2.94$, $\sigma=1.01$),

Weibull (green line, $\lambda=31.43$, $k=0.97$) and

Gamma (black line, $k=1.08$, $\theta=29.42$).

The log-normal distribution appears to fit the data accordingly in all deer and is used in the proposed model.

