pseudoreplication when testing the significance of the fixed predictor). We constructed separate models for each season (autumn and spring *Zugunruhe* periods, and summer and winter neutral periods). Data were centred before modelling to aid convergence; this does not affect fixed effect estimates.

Covariation of Activity Between Migratory and Non-migratory Contexts: Finally, we studied whether variation in mean *Zugunruhe* intensity could explain variation in activity during other times of the year, among individuals. We constructed linear mixed models with a migration period's mean *Zugunruhe* intensity as a fixed predictor and mean diurnal activity level during the adjacent summer or winter as the response variable. We included population, age, and sex as additional fixed effects and individual bird as a random intercept. We ran separate models for spring and autumn migration periods and their respective adjacent summer and winter periods (8 models total).

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