**When and Where? Day-night Alterations in Wild Boar Space Use Captured by a Generalized Additive Model.**

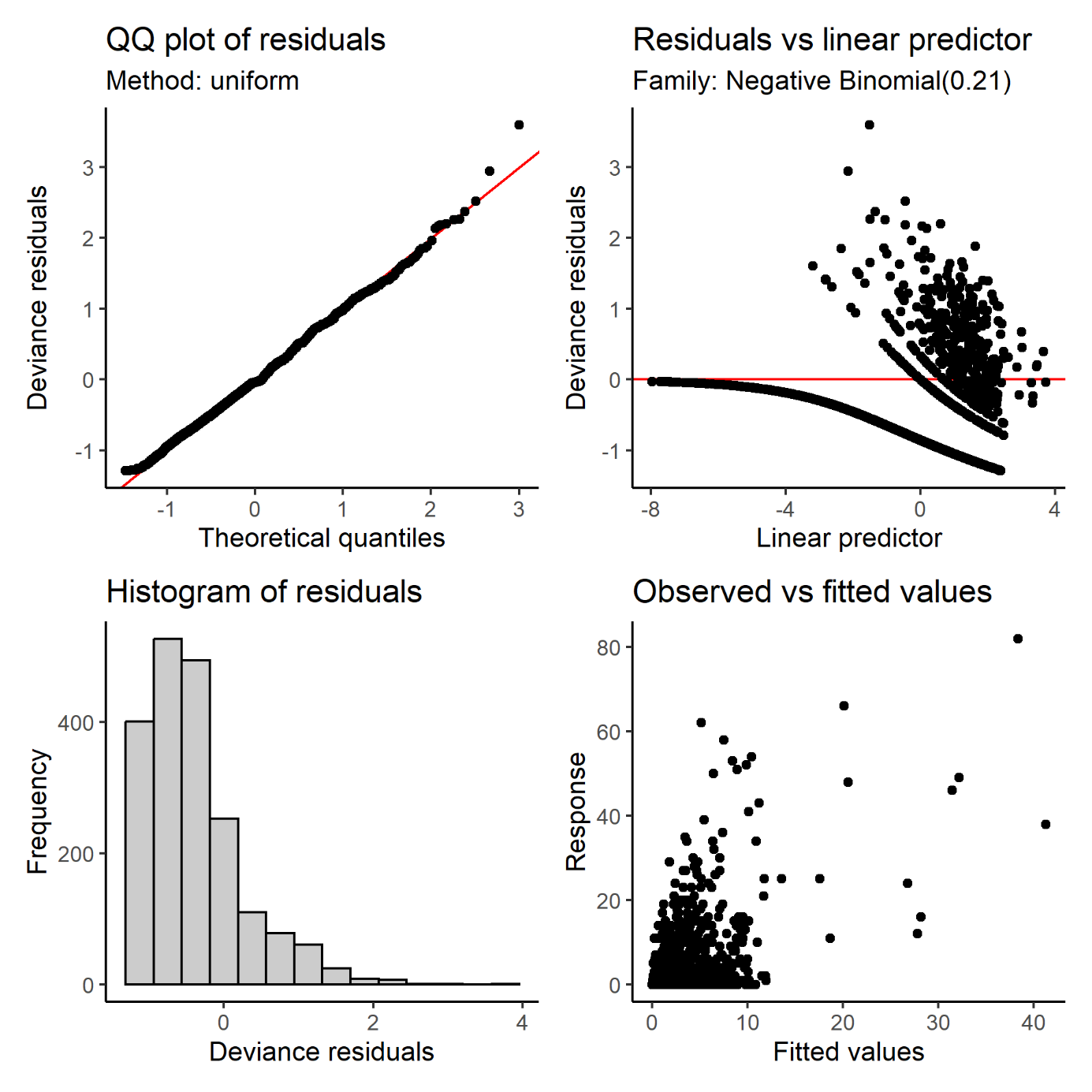
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Supplementary file S2: Information reduced GAM to model diel space use for wild boar

In the main paper we presented a GAM that models wild boar encounter rates from counts retrieved from cameras with coordinates , on survey days and solar hours . Here, we present a simpler model using inputs obtained by summation of counts across survey days on which the th camera was active and that increases the percentage of non-zero counts. This model is expressed as:

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with the total number of survey days at the th camera as an offset term, such that the encounter rates represent the expected number of wild boars captured during solar hour of any given day (instead of the expectation across all days). Note that this model still permits the modelling of smooth curves for solar hour, *i.e.,* and for the combination of solar hour and spatial location, *i.e.,* , but not for week of the year . Additionally, it is not possible anymore to specify random effects for survey days , *i.e.,* . Hereafter, we provide the residual plots and spatiotemporal predictions from this model showing that the goodness-of-fit improves under this model, while the diel space use inferred from it is qualitatively the same as that estimated from the extended model of the main paper.



**Figure S2.1.** Residual plots for a negative binomial GAM modelling wild boar diel space use from counts aggregated across survey days.

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**Figure S2.2.** Predicted spatiotemporal variation in wild boar trapping rates from the reduced model across 24 solar hours. SN: sun nadir, SR: sunrise, SZ: sun zenith, SS: sunset.



**Figure S2.3.** Standard errors in predicted spatiotemporal variation in wild boar trapping rates from the reduced model across 24 solar hours. SN: sun nadir, SR: sunrise, SZ: sun zenith, SS: sunset.