

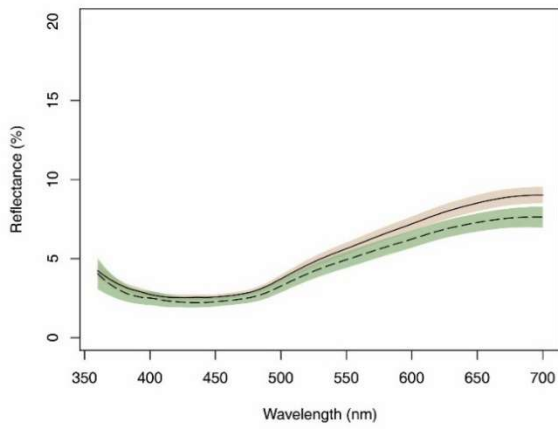
Supplementary Material

Chromatic variation across body parts in female sand lizards (*Lacerta agilis*) DOI: 10.25225/jvb.26010

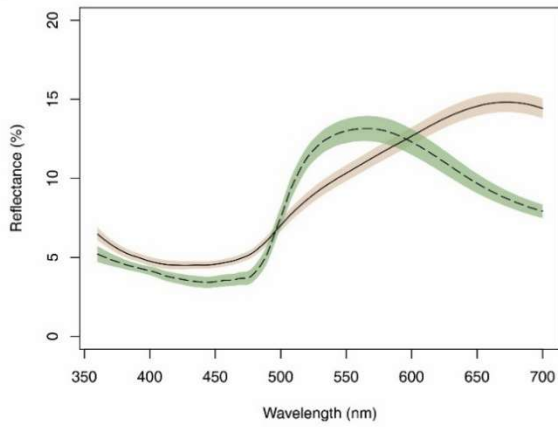
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A)



B)



C)

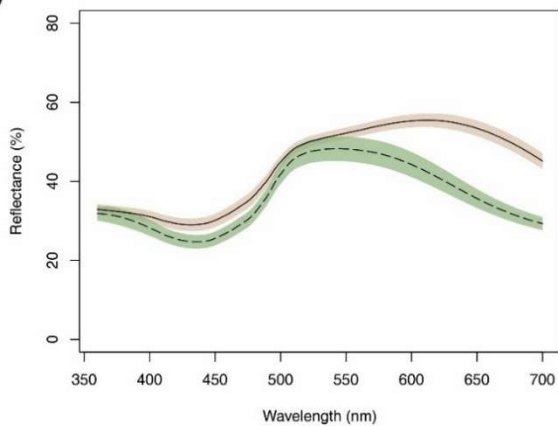
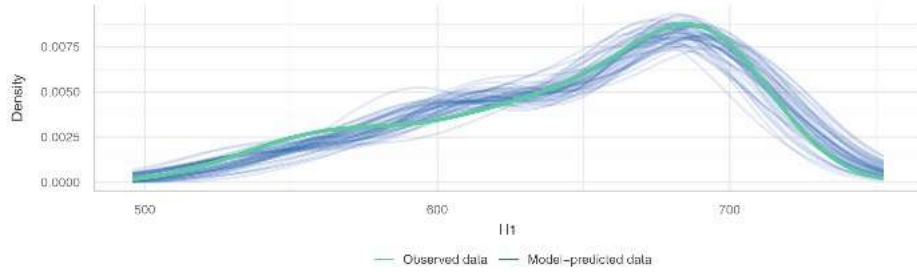


Fig. S1. Reflectance curves (mean and standard error) of female sand lizards according to phenotype (dashed line 'green'; solid line 'dull') for A) dorsal, B) lateral and C) ventral body regions. Recaptures were included as independent observations.

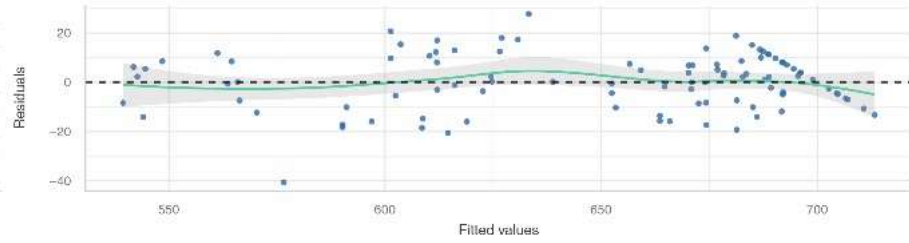
Posterior Predictive Check

Model-predicted lines should resemble observed data line



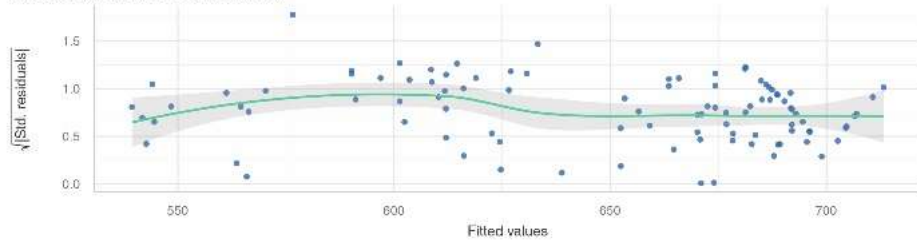
Linearity

Reference line should be flat and horizontal



Homogeneity of Variance

Reference line should be flat and horizontal



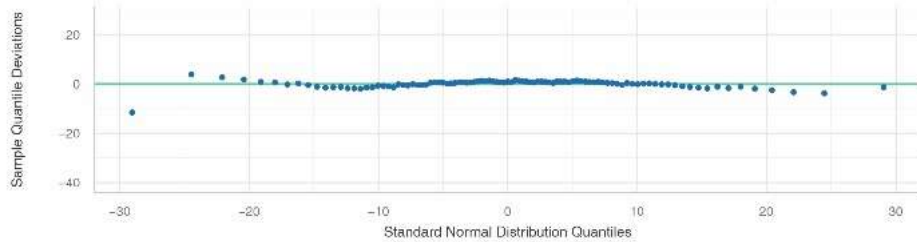
Collinearity

High collinearity (VIF) may inflate parameter uncertainty



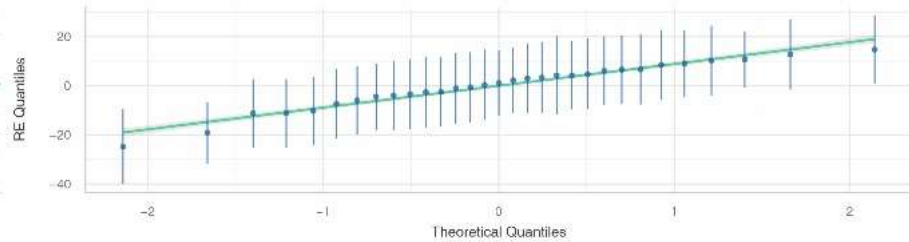
Normality of Residuals

Dots should fall along the line



Normality of Random Effects (ID:site)

Dots should be plotted along the line



Normality of Random Effects (site)

Dots should be plotted along the line

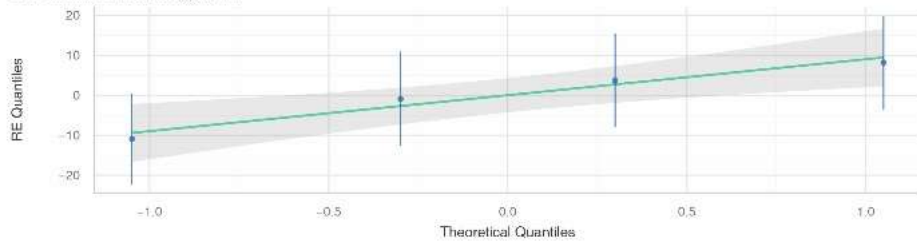
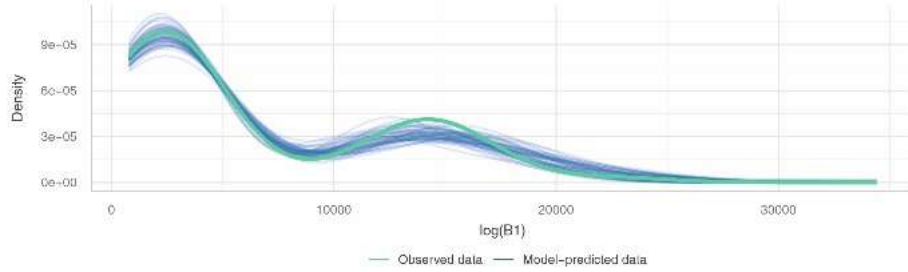


Fig. S2. Visual assessment of model assumptions for a Gaussian model including hue as response variable, body part and phenotype as fixed factors (and its interaction) as well as individual ID nested within site as random term.

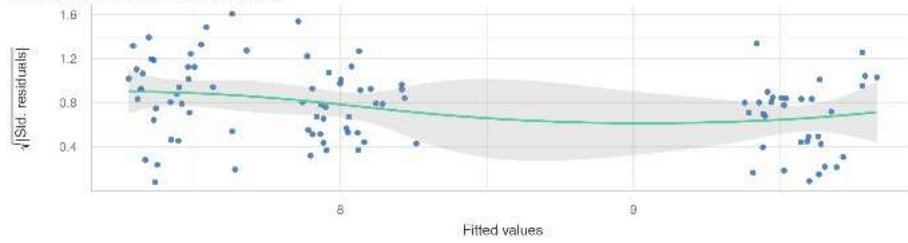
Posterior Predictive Check

Model-predicted lines should resemble observed data line



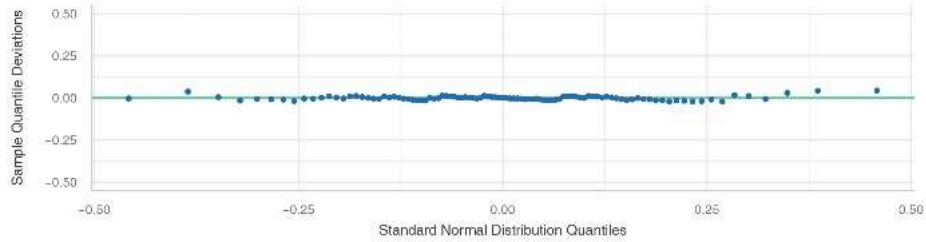
Homogeneity of Variance

Reference line should be flat and horizontal



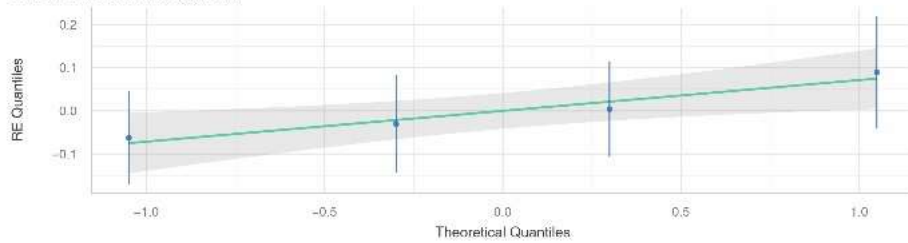
Normality of Residuals

Dots should fall along the line



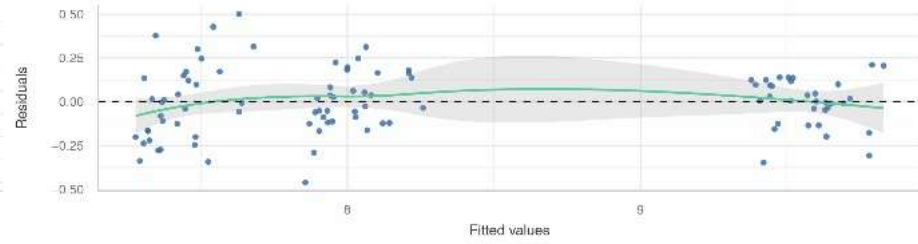
Normality of Random Effects (site)

Dots should be plotted along the line



Linearity

Reference line should be flat and horizontal



Collinearity

High collinearity (VIF) may inflate parameter uncertainty



Normality of Random Effects (ID:site)

Dots should be plotted along the line

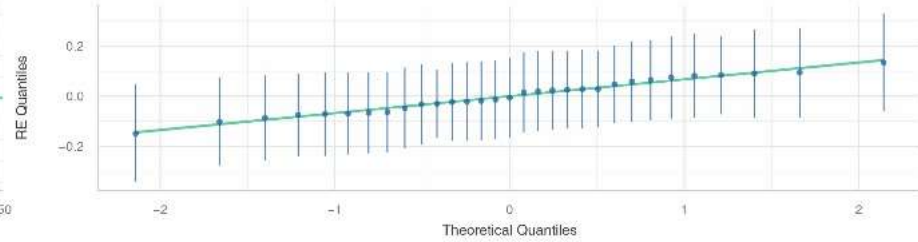
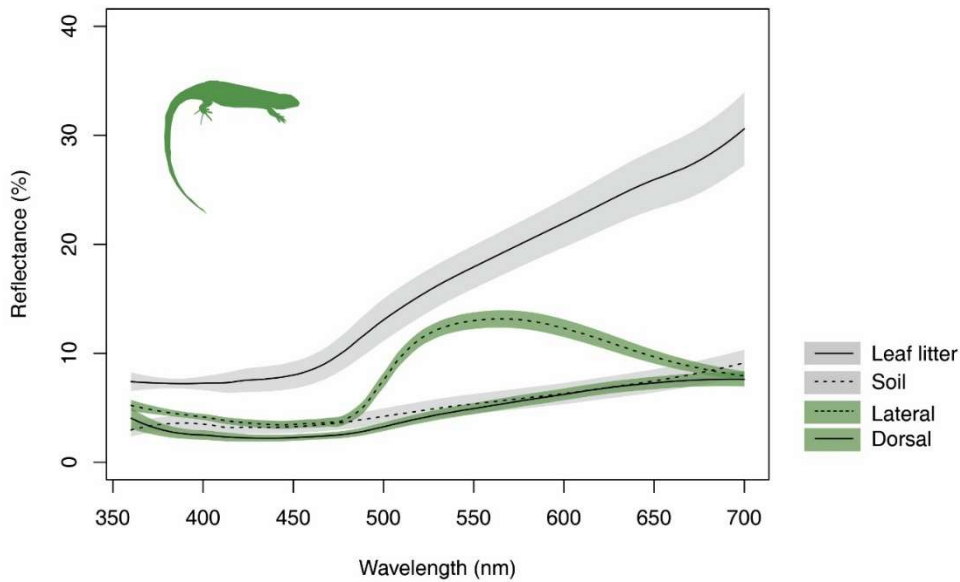


Fig. S3. Visual assessment of model assumptions for a Gaussian model including brightness (log transformed) as response variable, body part and phenotype as fixed factors (and its interaction) as well as individual ID nested within site as random term.

A)



B)

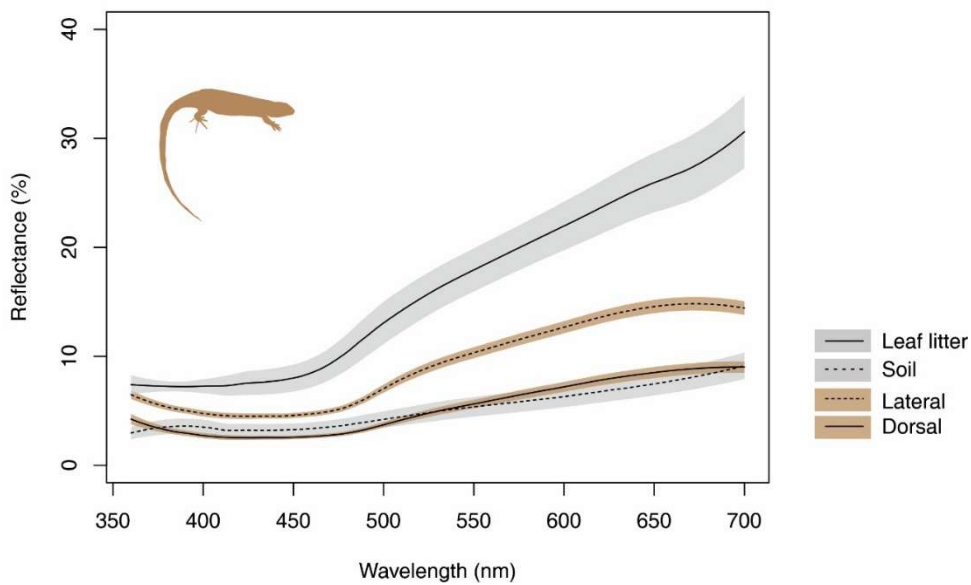


Fig. S4. Reflectance spectra (mean and standard error) for background samples (soil and leaf litter) and visually exposed lizard body parts (dorsal and lateral regions). Spectra for 'green' (A) and 'dull' (B) phenotypes are shown separately.

Table S1. Mean and standard deviation values of Hue and Brightness (raw values, not transformed) for background samples (soil and leaf litter). One sample of each site was measured.

Background type	Hue	Brightness
Soil	700 ± 0	1778.23 ± 568.96
Leaf litter	700 ± 0	5567.10 ± 1208.10

Table S2. Mean and standard deviation values of Hue and Brightness (raw values, not transformed) by body area and phenotype. Data is based on 31 females (values of two recaptures were included in the calculations as independent observations; n = 33).

Phenotype	Hue	Brightness
Dull		
Dorsal	690.52 ± 12.35	1812.93 ± 603.55
Lateral	672.78 ± 20.12	3167.8 ± 740.29
Ventral	610.52 ± 27.17	15023.32 ± 2615.87
Green		
Dorsal	686.83 ± 11.96	1576.91 ± 380.18
Lateral	565.33 ± 6.59	2791.04 ± 416.39
Ventral	543.5 ± 10.82	12411.29 ± 1892