Posterior Predictive Check
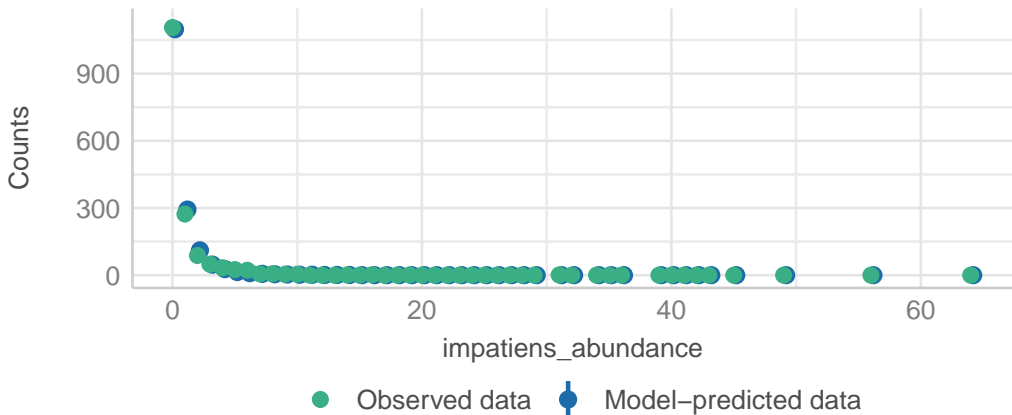Model-predicted intervals should include observed data points

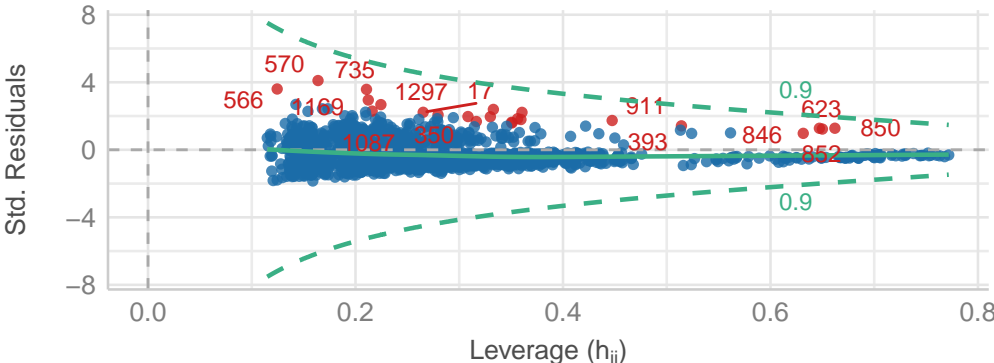Counts vs impatiens_abundance

- Observed data
- Model-predicted data

Misspecified dispersion and zero-inflation
Observed residual variance (green) should follow predicted residual variance (blue)

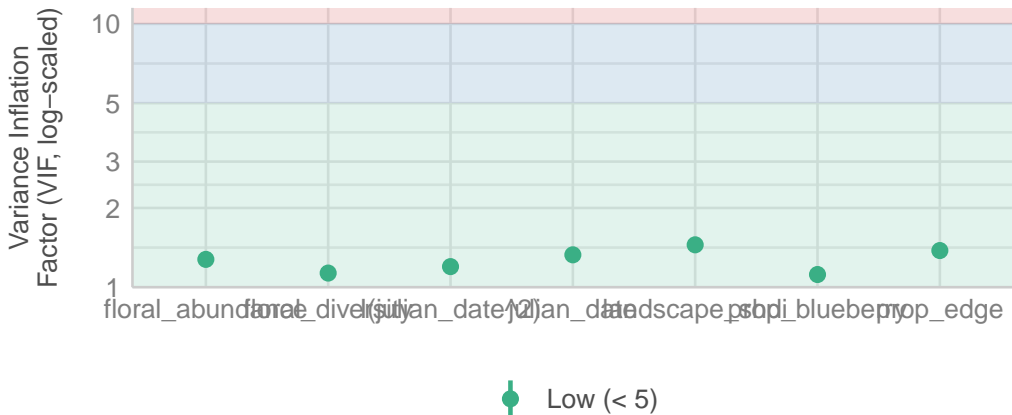Residual variance vs Predicted mean
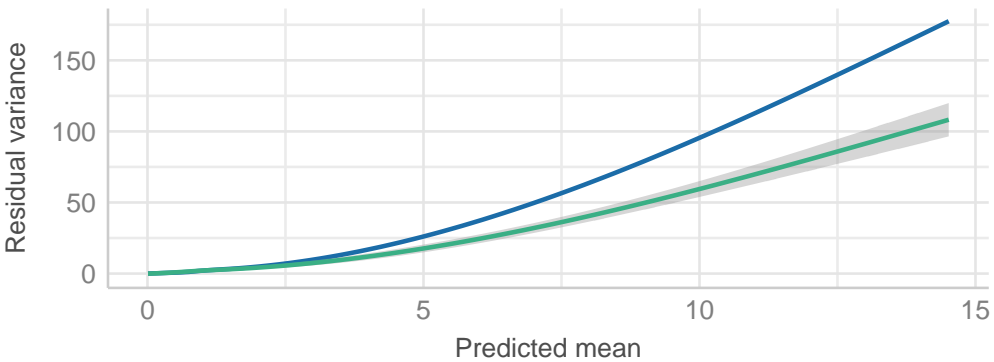
Homogeneity of Variance
Reference line should be flat and horizontal

$\sqrt{|\text{Std. residuals}|}$ vs Fitted values
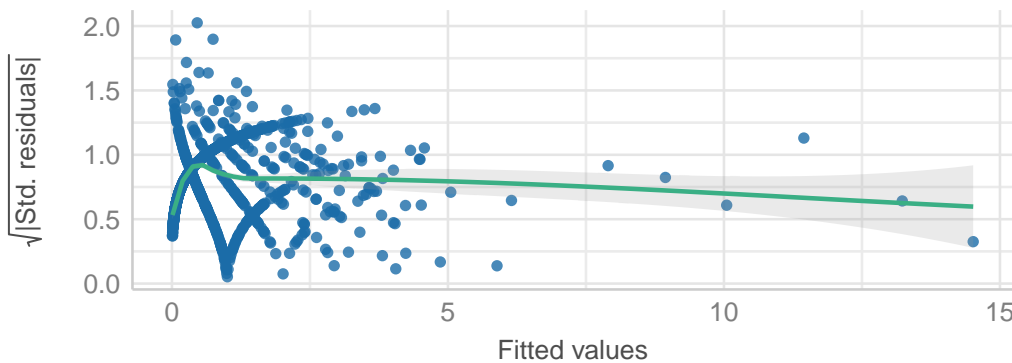
Influential Observations
Points should be inside the contour lines

Std. Residuals vs Leverage (h_{ii})

570 735 566 1169 1297 17 1007 350 911 393 846 850 852 623 0.9 0.9

Collinearity
High collinearity (VIF) may inflate parameter uncertainty

Variance Inflation Factor (VIF, log-scaled)

floral_abundance floral_diversity I(julian_date^2) julian_date landscape_psbli_blueberry prop_edge

- Low (< 5)

Uniformity of Residuals
Dots should fall along the line

Sample Quantiles vs Standard Uniform Distribution Quantiles
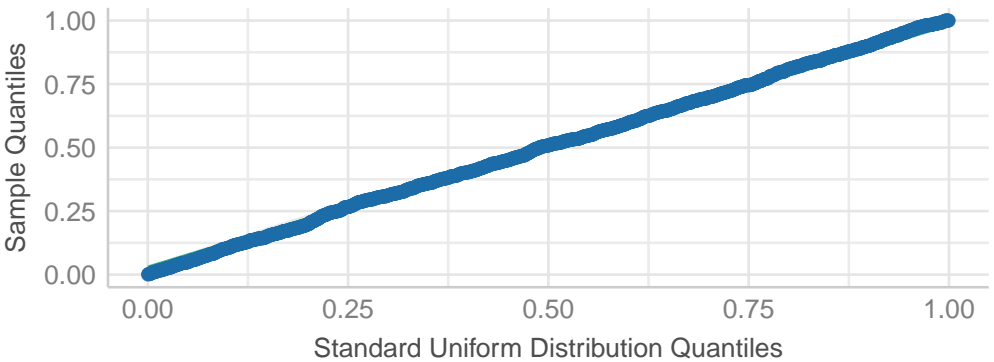
Normality of Random Effects (sample_pt)
Dots should be plotted along the line

RE Quantiles vs Theoretical Quantiles