

Introduction

Bias correction needed (see figure 1)

Methods

formula for bias correction

Results and Findings

Fake data actual values: intercept 8,slope=.1 mean over all species: mean spint, mean speff It is good! see?

formula: $\log_{10} vol \sim doy + (doy | sp)$ ———

Estimates: Median $MAD_S D(Intercept)8.31.4doy0.10.0sigma4.10.1$

TO DO: CALCULATE 95 CI

0.1 Modeling temporal bias and correction

formula: $\log_{10} vol \sim doy + (doy | name)$ — — — — —

Estimates: Median $MAD_S D(Intercept)0.30.3doy0.00.0sigma1.40.0$

make this into a table > coef(truval) name(*Intercept*)*doyAcer_pensylvanicum*0.974580620.0135474656*Acer_rubrum* —
0.877692160.0178379549*Acer_saccharum*—0.33066940—0.0085356410*Alnus_incana*1.918133970.0033483077*Aronia_melanocarpa*—
1.12912393—0.0021545908*Betula_alleganiensis*1.738796630.0023795954*Betula_lenta*1.98438474—0.0021823538*Betula_papyrifera*1.75
0.146534140.0179099137*Fraxinus_agra*0.926815740.0001589012*Hamamelis_virginiana*0.37882207—0.0008616836*Ilex_mucronata*—
0.860217530.0078131211*Lonicera_canadensis*—1.479474500.0227057059*Lyonia_ligustrina*0.089676010.0058018335*Nyssa_sylvatica*0.29
0.0095892349*Prunus_pensylvanica*—0.827932480.0098234703*Quercus_alba*0.45222579—0.0164645539*Quercus_rubra*0.226985850.004837
0.108238000.0045472003*Rhododendron_rinophyllum*—1.127362180.0060342932*Spiraea_alba*—0.67236604—0.0041050694*Vaccinium_myrtilloides*
2.382049360.0059859085*Viburnum_cassinoides* — 0.409344290.0064627936*Viburnum_lantanoides*4.21958712 — 0.0011653093

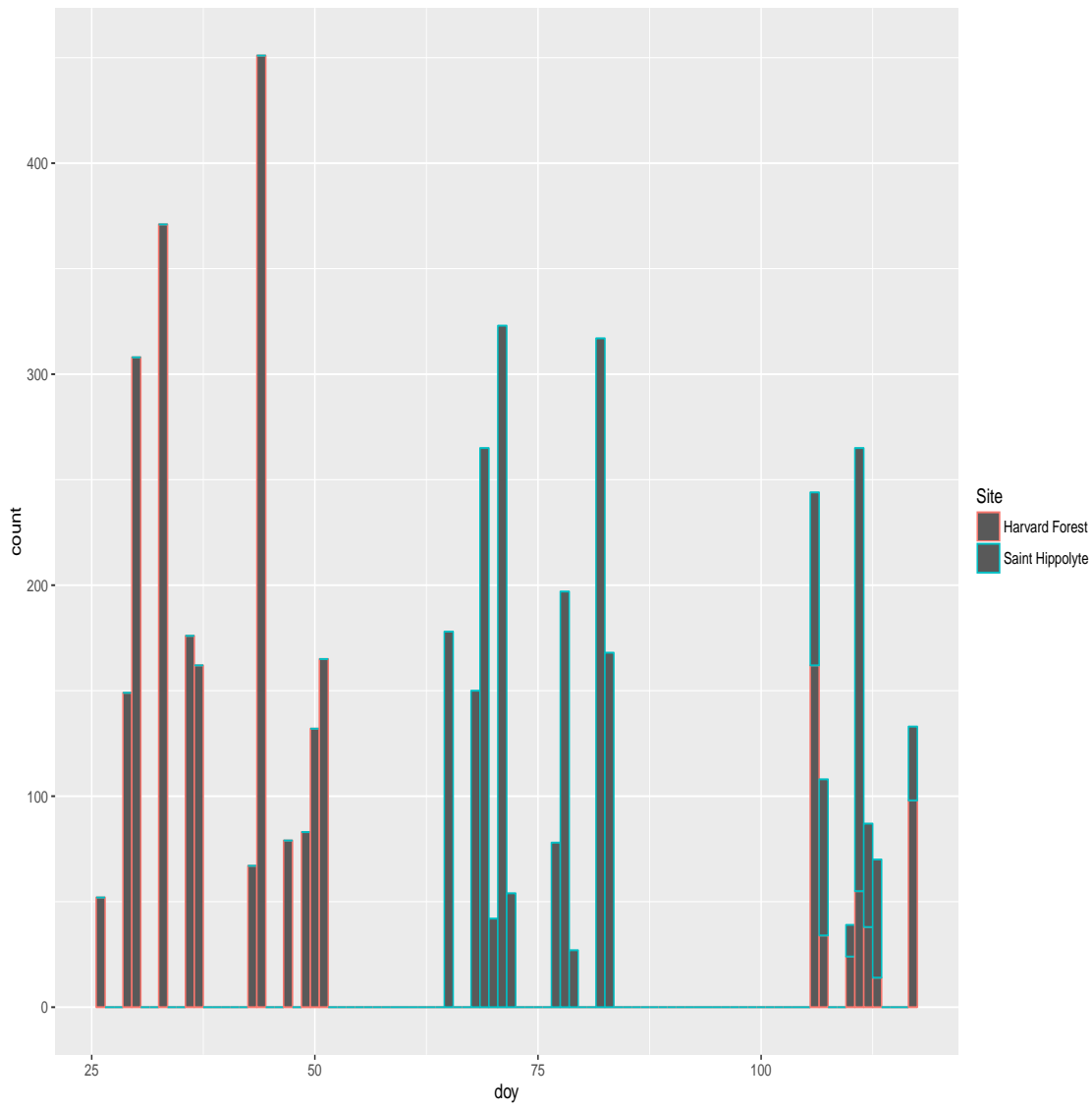


Figure 1: Measurement days of buds colored by site. Twigs from the different site were measured non-randomly, producing a temporal bias

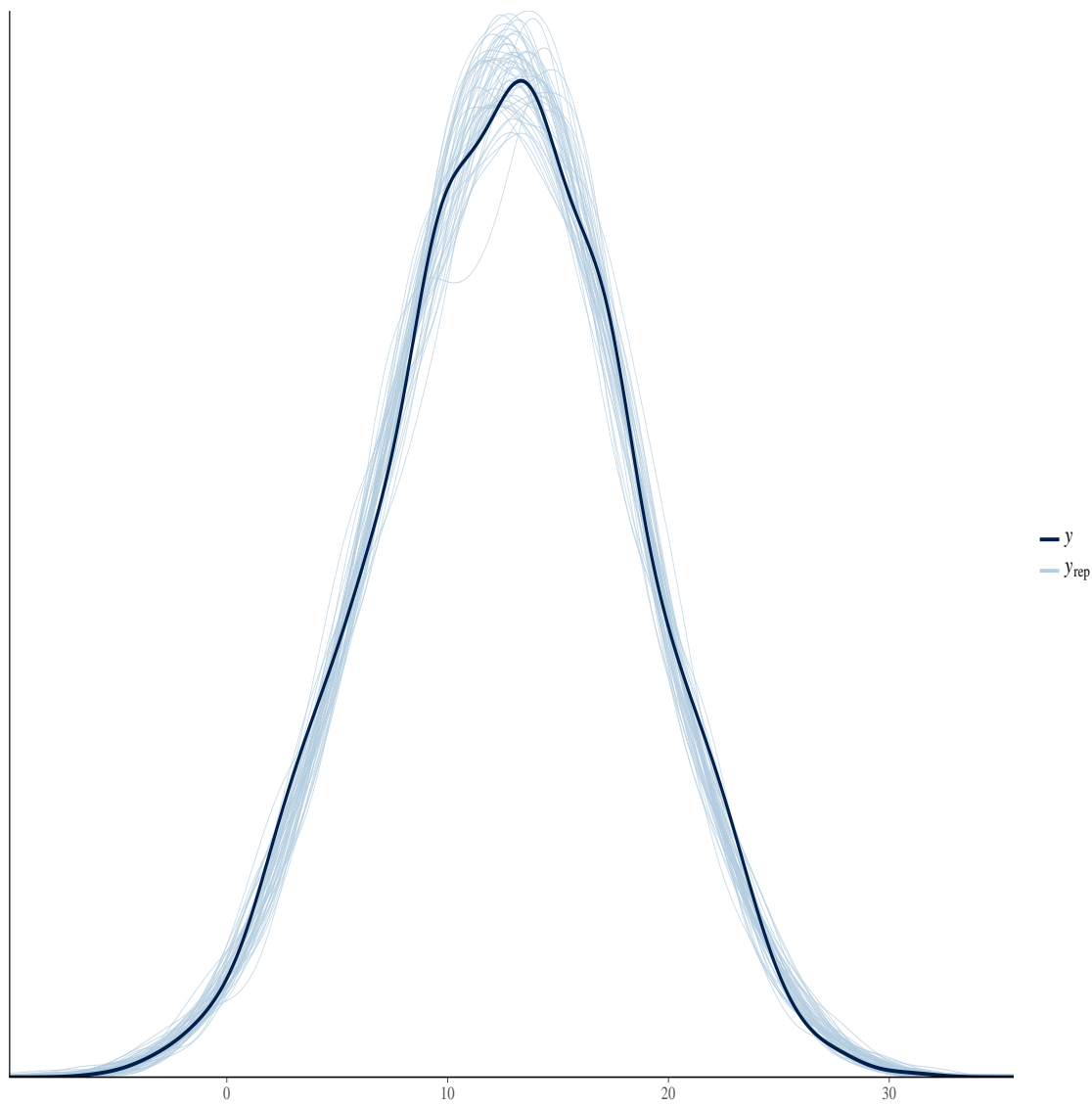


Figure 2: Posterior predictive checks for model $\text{bvol} \sim \text{doy} + (\text{doy} \mid \text{sp})$ on fake data

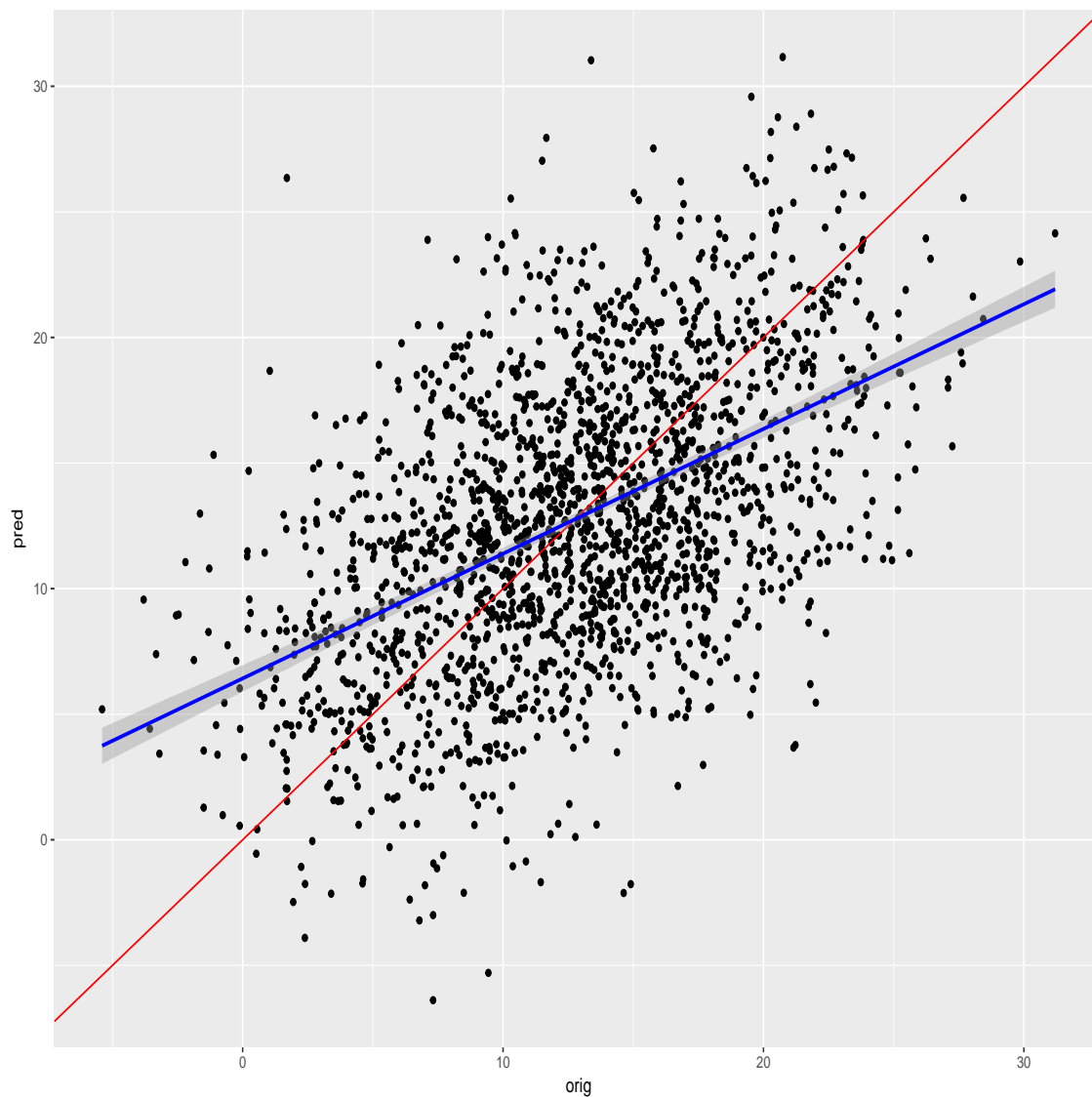


Figure 3: Predicted vs. original values for fake data. The red line represents the 1:1 line which would represent perfect prediction. The blue line is the actual slope, demonstration some deviation

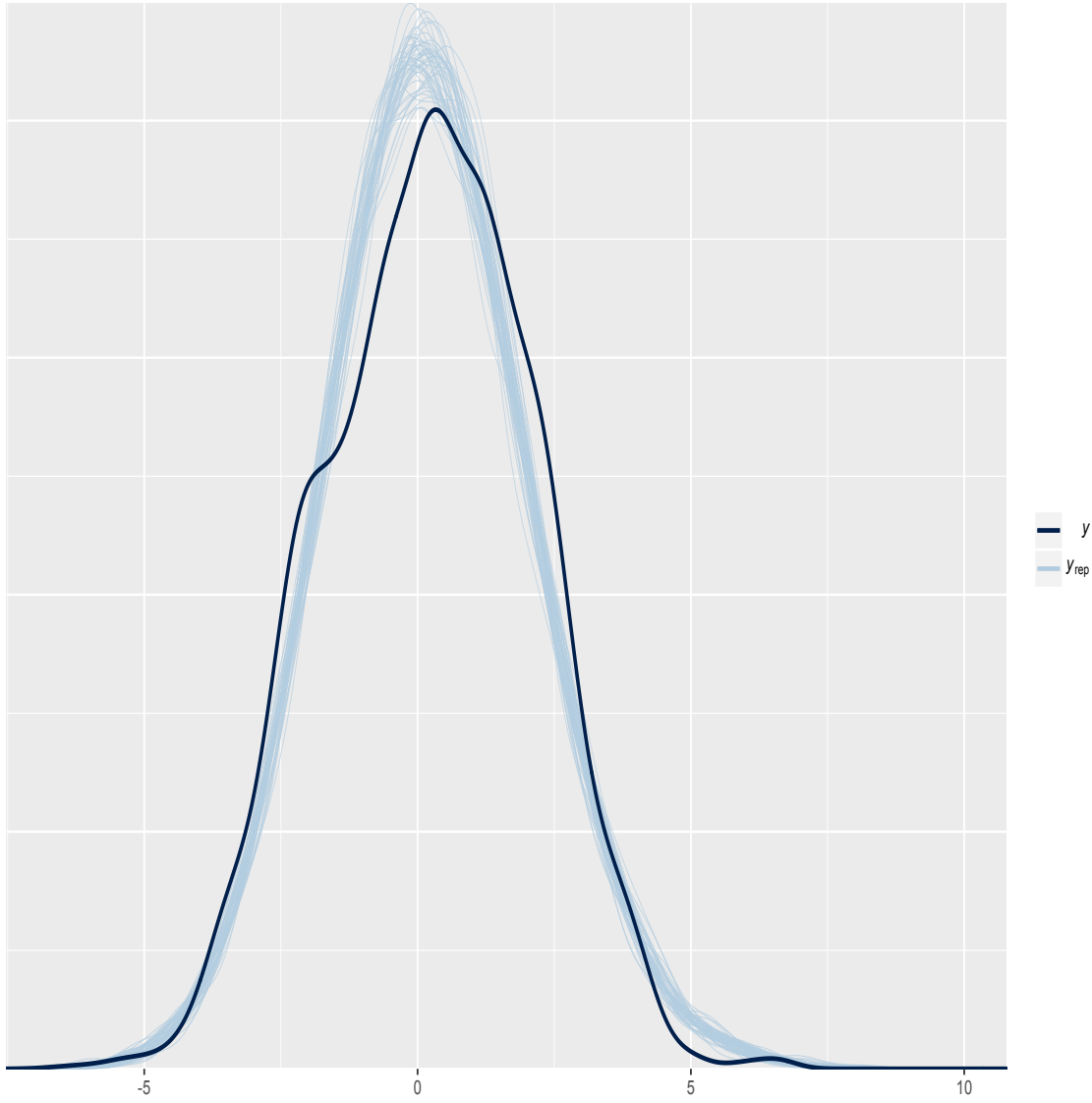


Figure 4: Posterior predictive checks for model $\text{bvol} \sim \text{doy} + (\text{doy} \mid \text{sp})$ on real data