Analysing effect of abiotic factors on standard deviaiton of random intercepts

Petra Guy

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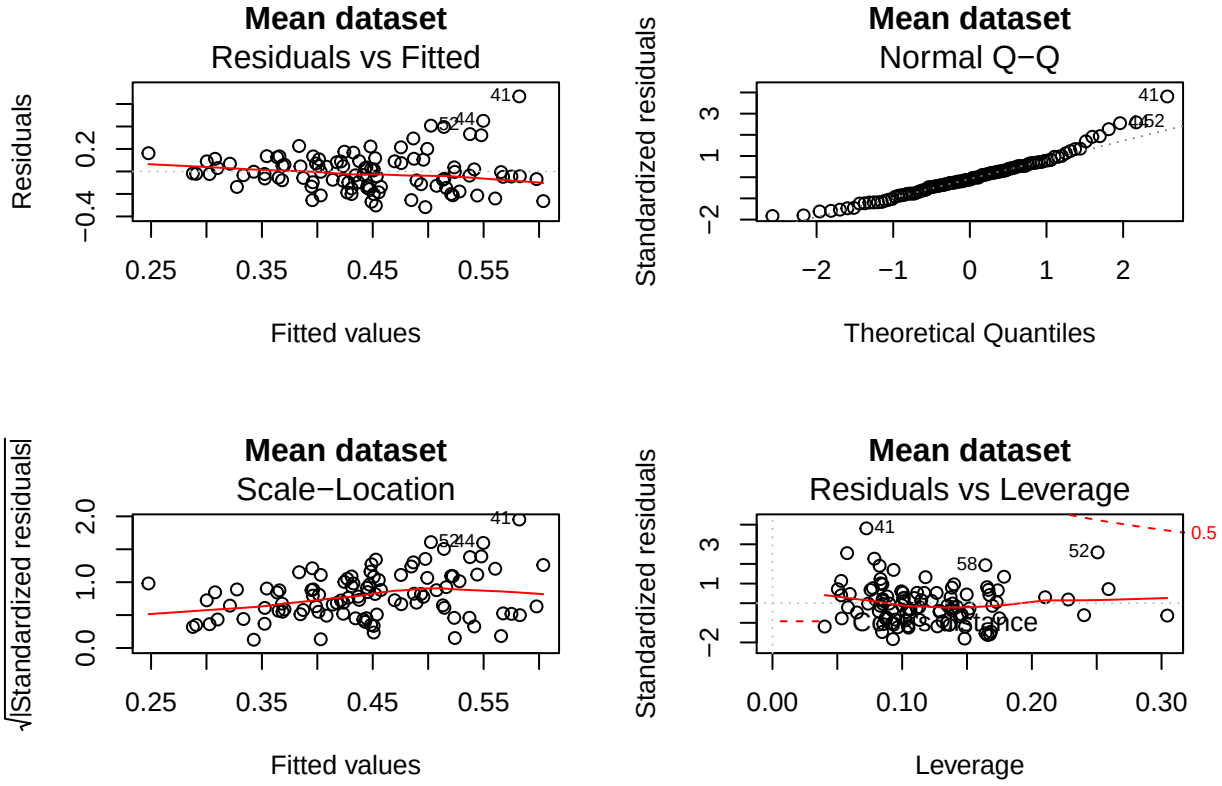
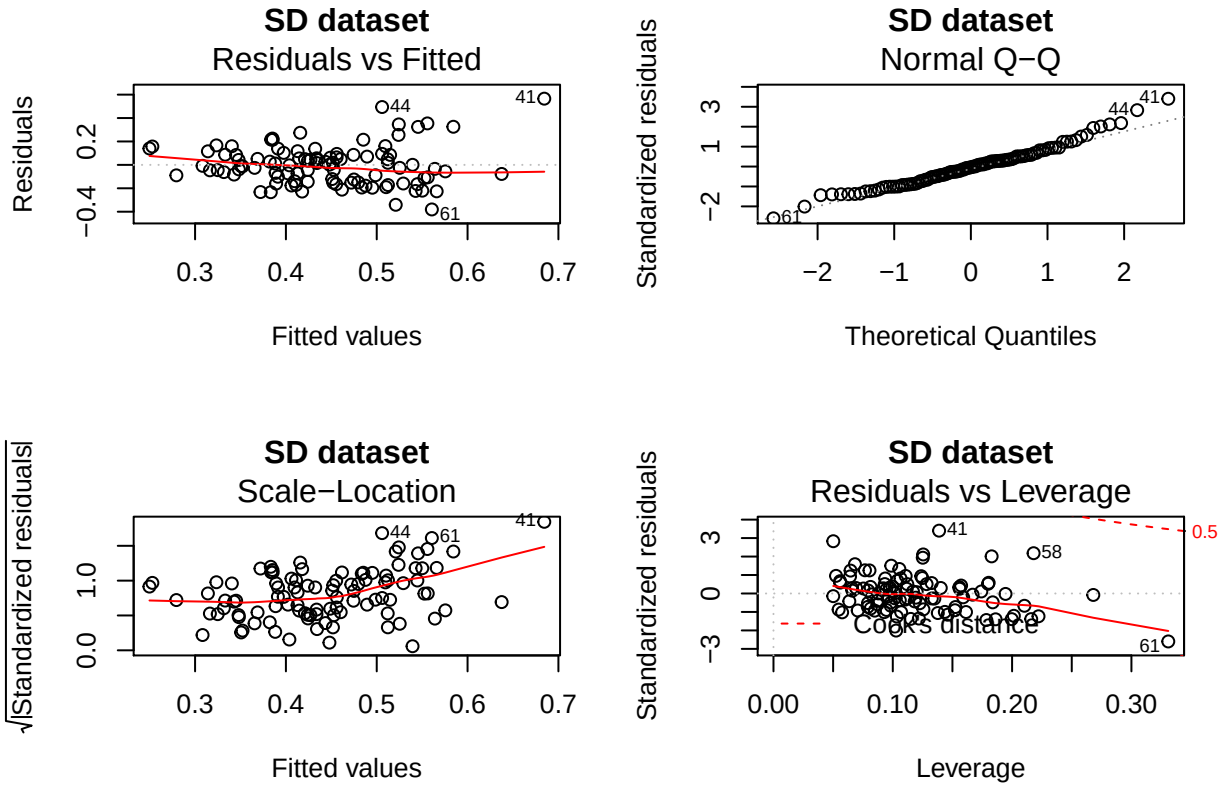
In this analysis the standard deviation of the random intercepts from the log/log linear mixed effects model used to fit species area curves across nets are modelled against the abiotic variables. The data is split in the same way, and outliers from area and PHI are removed.



The two site with the highest values of PHI had high leverage in this model and were therefore removed from the data in order to give normally distributed residuals, the plots above were created after these values were removed.



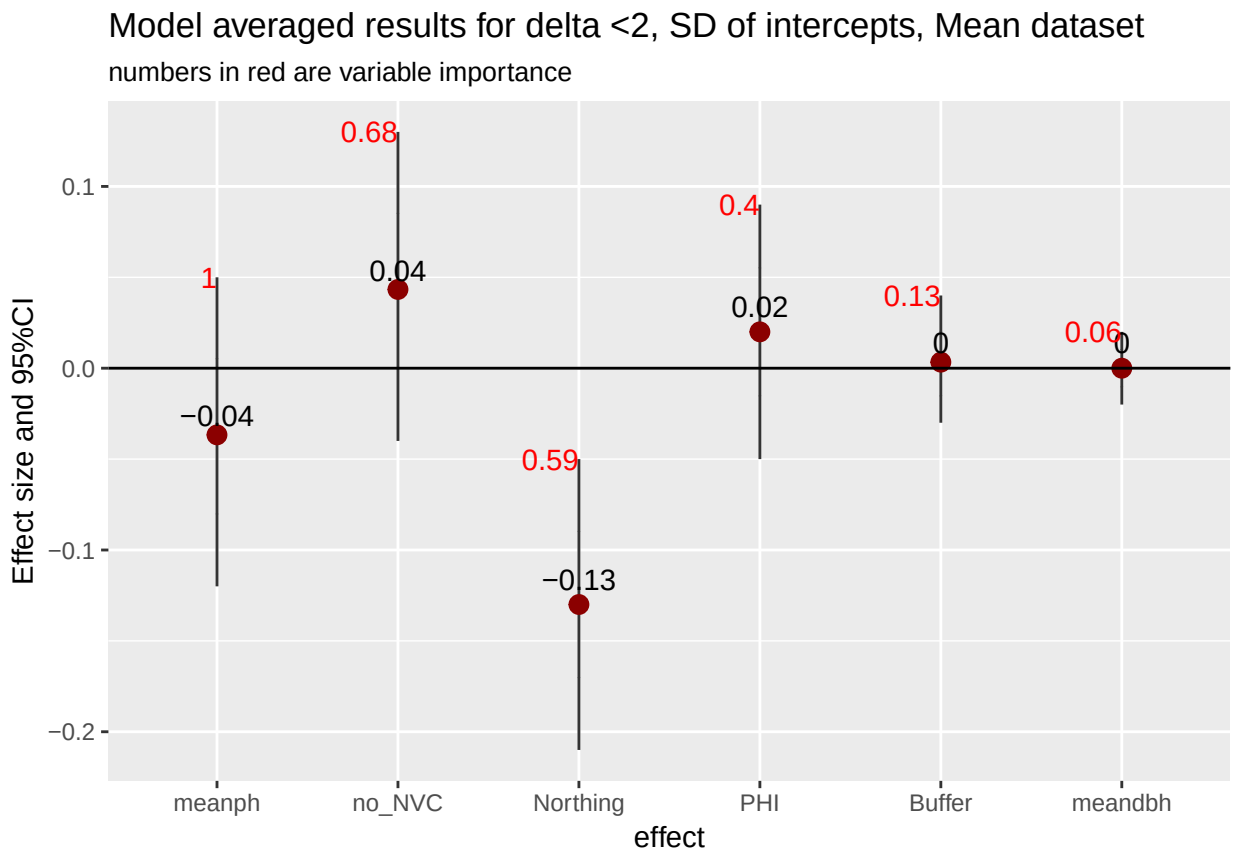

```
##   Northing        PHI    meandbh     meanph     Buffer    meanSOM
##   1.721261   1.219326   2.031493   1.356264   1.816954   1.158692
##    meanLBA     meanTD area_ratio     no_NVC     no_MSG
##   1.708121   1.955180   1.230977   1.292059   1.263801
```

The variance inflation factors in the mean dataset are low, suggesting that correlations between covariates are low and not likely to increase the variance of the paramater estimates.

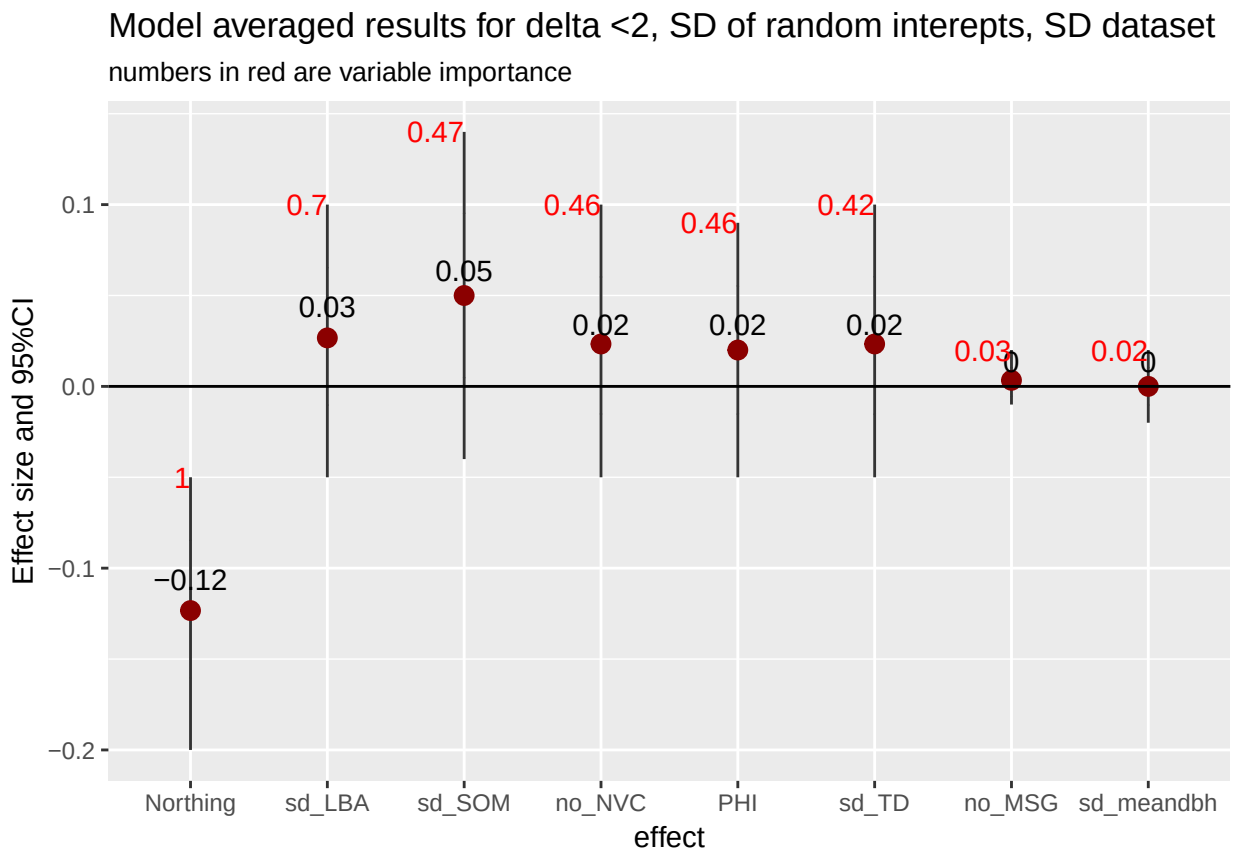
```
##   Northing        PHI     Buffer     no_MSG     no_NVC      sd_pH
##   1.713097   1.275714   1.860168   1.241747   1.277452   1.328220
##     sd_SOM     sd_LBA sd_meandbh      sd_TD area_ratio
##   1.412783   1.188175   1.521227   1.501602   1.257226
```

The variance inflation factors in the sd dataset are also low

The first twelve models from the mean dataset, which had a delta <2 were selected from the MuMin dredge funtion as the top model set.



The graph shows the averaged effect sizes of the model with delta < 2. We cannot say that of the variables in the model might have any effect on the standard deviation of the random intercepts



The Northing is the only variable which may effect the SD of random intercepts

Using the model for prediction