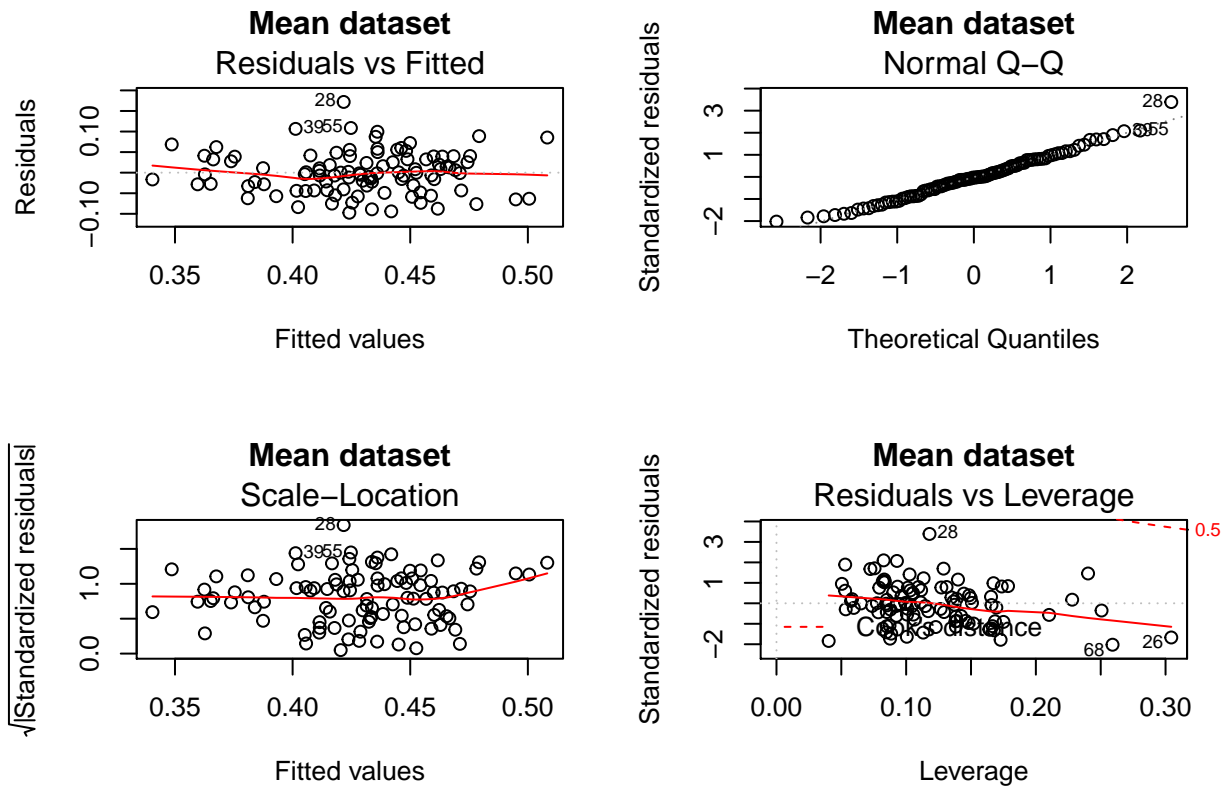


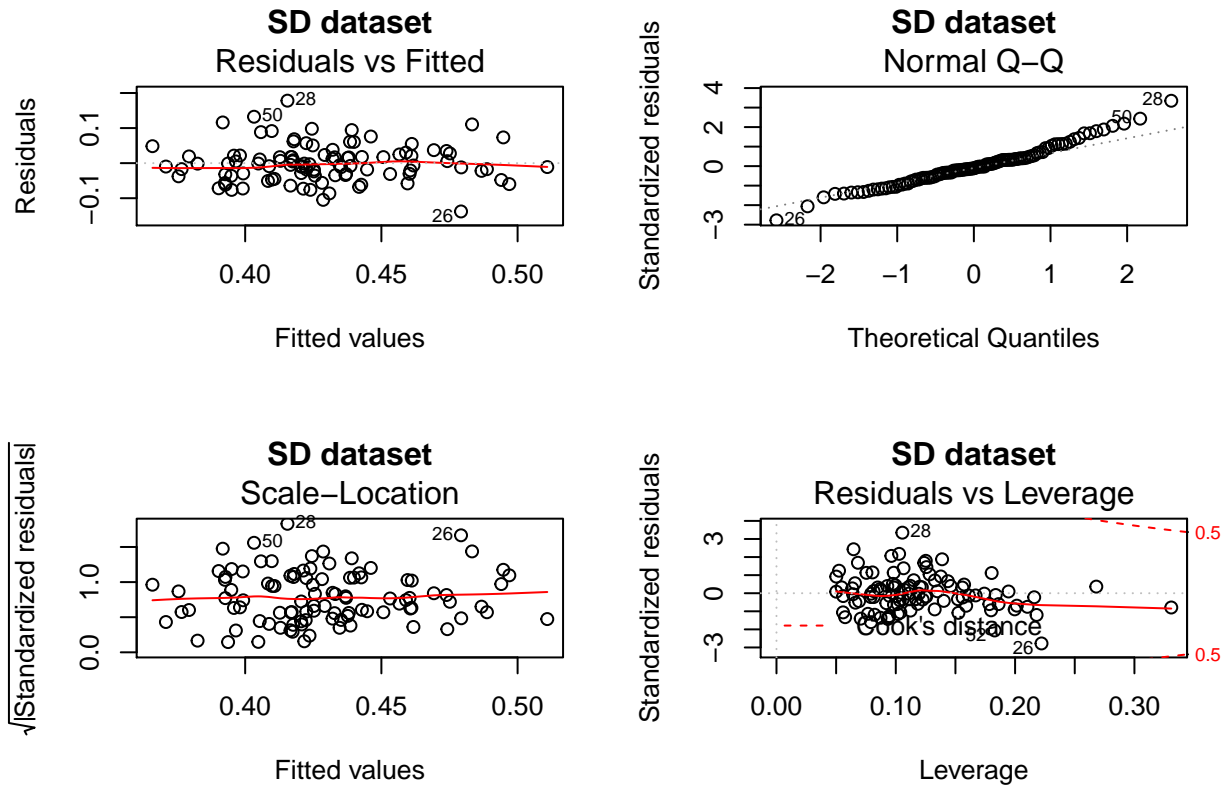
Analysng the effect of abiotic factors on Plot z

Petra Guy

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Species area curves were calculated at plot level, that is, the cumulative species count from an area of 200m^2 to 3200m^2 . The minimum and maximum curves were calculated and their average taken. A linear log/log fit was calucalted and the slope of this fit was extracted. That slope is fitted here against the abiotic variables.





```
## 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

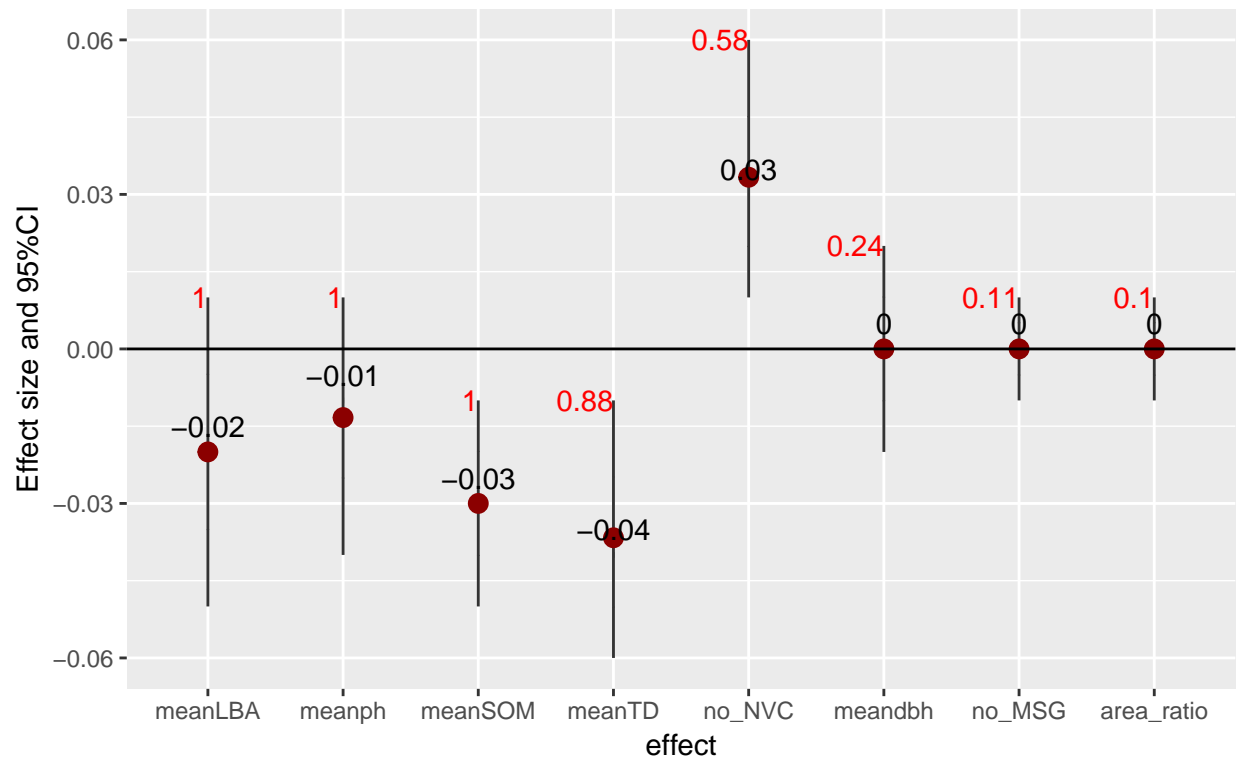
## Northing      PHI      Buffer      no_MSG      no_NVC      sd_pH
## 1.713097      1.275714      1.860168      1.241747      1.277452      1.328220
## sd_SOM      sd_LBA      sd_meandbh      sd_TD      area_ratio
## 1.412783      1.188175      1.521227      1.501602      1.257226
```

The variance inflation factors in the sd dataset are also low

The models which had a delta <2 were selected from the MuMin dredge function as the top model set.

Model averaged results for delta <2, Plot Zs, Mean dataset

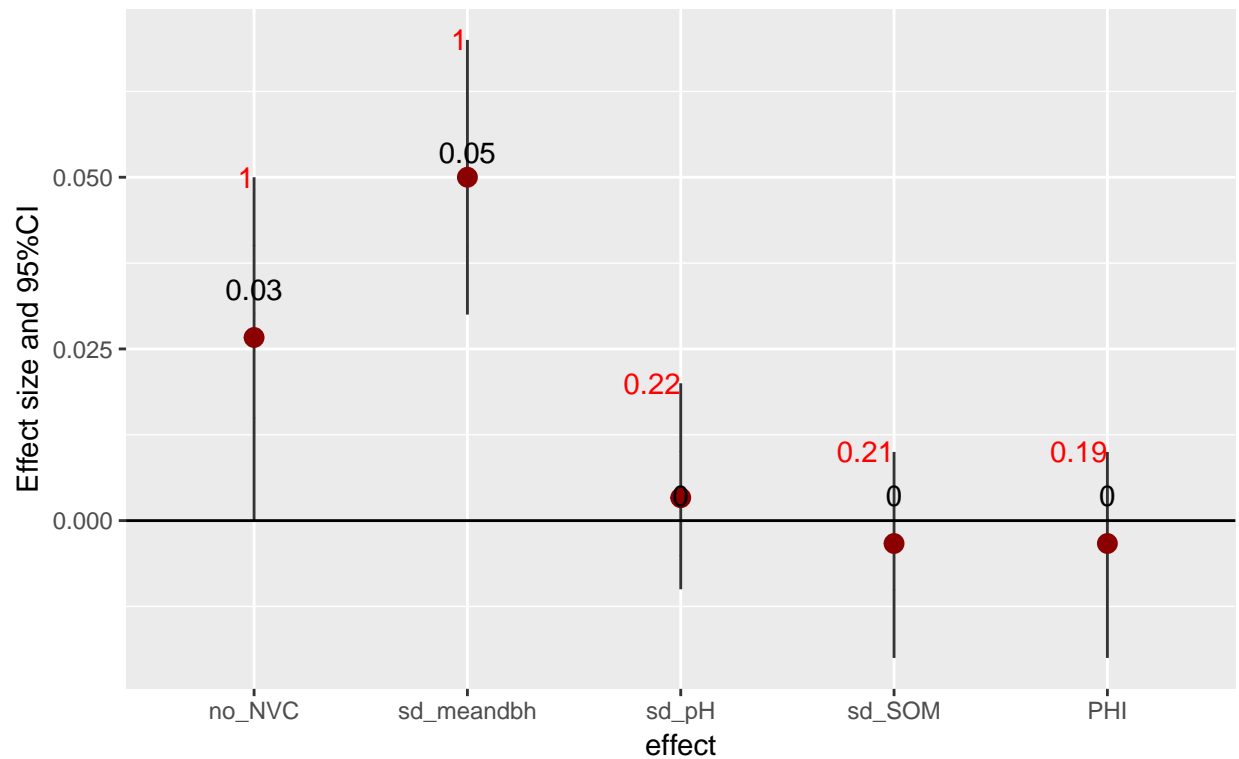
numbers in red are variable importance



The graph shows the averaged effect sizes of the model with delta < 2. Number of NVC codes, mean tree density and mean soil organic matter effect the plot level Z

Model averaged results for delta <2, Plot Zs, SD dataset

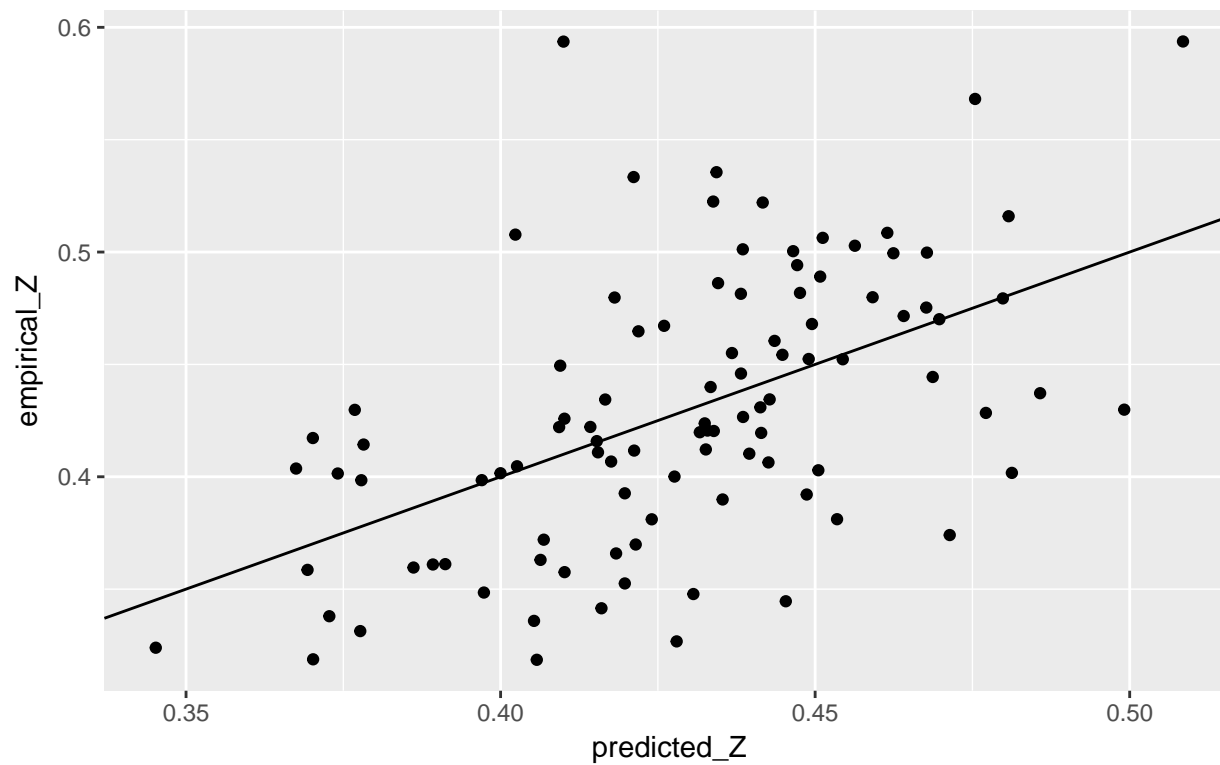
numbers in red are variable importance



In the sd dataset model the standard devaiiton of mean dbh has an effect. ##Using the model for prediction

Observed versus predicted data, mean dataset

R2 = 0.29



Observed versus predicted data, sd dataset

R2 = 0.23

