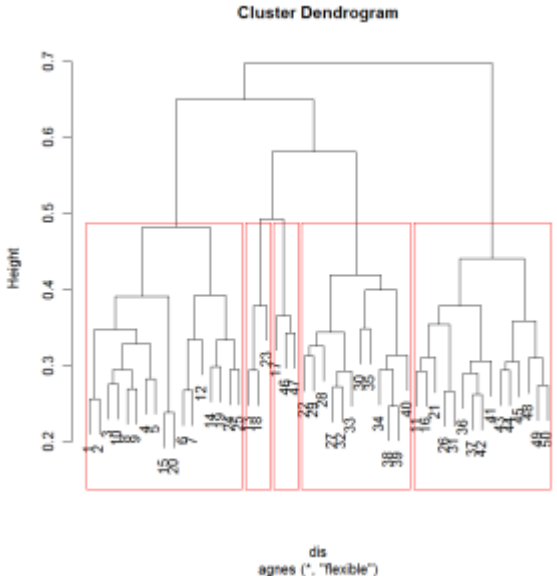
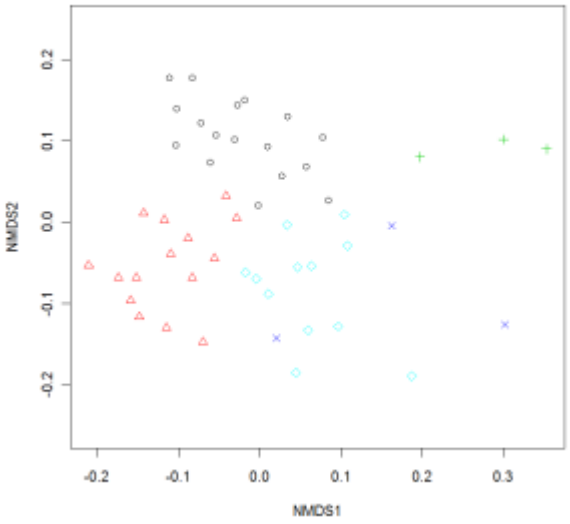
Permanent forest plot at Barro Colorado Island

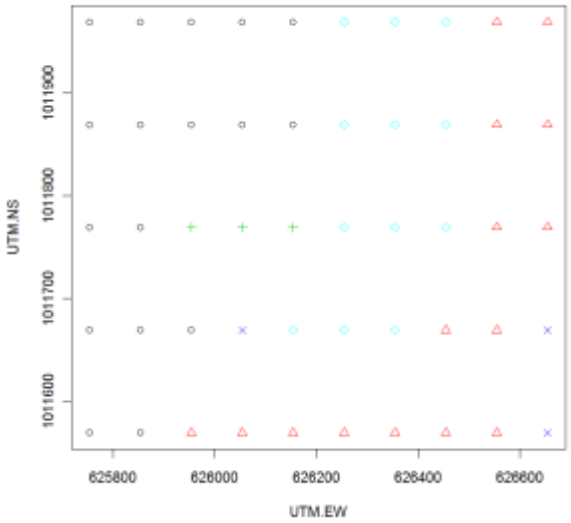
Use species data from permanent tropical forest plot in Barro Colorado Island and analyse it in the following way:

1. original data are counts of individuals per plot - transform them (use logarithmic transformation)
2. calculate distance matrix using Bray-Curtis measure
3. classify the plots by numerical classification (use matrix of Bray-Curtis distances and *beta flexible* cluster algorithm)
4. draw resulting dendrogram and draw boxes around 5 clusters
5. calculate NMDS on transformed data
6. draw NMDS ordination diagram, where individual plots will be classified by different colours and symbols according to the result of classification (5 clusters)
7. draw the scatterplot, where individual plots will be distributed according to their real geographical position in the field (the coordinates could be found in `BCI.env` file - variables `UTM.NS` for latitude and `UTM.EW` for longitude); color and symbol of the plots should again respect the classification into 5 clusters

The solution should look somehow like this:







Hints: You need these libraries: `vegan`, `BiodiversityR` and `cluster`!

1. `log (x+1)` or `log1p (x)`
2. `vegdist`
3. `agnes` (for details about *beta flexible* method refer to agnes (library cluster) and `?agnes`
4. `as.hclust`, `plot`, `rect.hclust`
5. `metaMDS`
6. `ordiplot`, `points` (arguments `col` and `pch`), `cutree`
7. `plot`, coordinates: x = `BCI.env$UTM.EW`, y = `BCI.env$UTM.NS`

Solution

From:
https://anadat-r.davidzeleny.net/ - **Analysis of community ecology data in R**

Permanent link:
https://anadat-r.davidzeleny.net/doku.php/en:mix:bci-perm-plot

Last update: **2022/04/14 07:41**