A (brief) introduction to ordination and the vegan package

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Datasets

Demonstration: Salinization and Pestices

Szöcs, E., Kefford, B.J., Schäfer, R.B., 2012. Is there an interaction of the effects of salinity and pesticides on the community structure of macroinvertebrates? Science of the Total Environment 437, 121–126.

Demonstration: Salinization and Pestices

```
setwd('your/workingdirectory')


abu <- read.table('melbourneAbu.csv', sep = ';')
env <- read.table('melbourneEnv.csv', sep = ';')
```

Exercise: Doubs river fish communities

Unconstrained Ordination

Unconstrained Ordination

- Principal Components Analysis (PCA)
- Nonmetric Multidimensional Scaling (NMDS)

Your turn!

Load the doubs data.
Is there a downstream gradient?

Constrained Ordination

Constrained Ordination

- Redundany analysis (RDA)
- Transformation-based RDA
- Distance-based RDA
- Permutation Tests

Your turn!

Using the doubs data.

Permutation Tests

Your turn!

Using the doubs data.