CWM-RDA and RLQ ordination methods

Example: using RLQ and fourth corner on the aravo dataset (Dray et al.)

The R code for use of `rlq` and `fourthcorner` functions is in the Supplement of Dray et al. (2014).

Example: using RLQ and fourth corner on the Vltava dataset

```
load (url
('https://raw.githubusercontent.com/zdealveindy/anadat-
r/master/data/vltava.RData'))

# fourthcorner analysis

spe <- log1p (vltava$herbs$spe)
env <- vltava$env[, c(1:4, 11:13)]
traits <- vltava$herbs$traits

library (ade4)

traits.na <- na.omit (traits)
traits.na$plant.height <- log10 (traits.na$plant.height)
traits.na$seed.weight <- log10 (traits.na$seed.weight)
select.species <- rownames (traits) %in% rownames (traits.na)
spe.na <- spe[,select.species]



fc <- fourthcorner (tabR = env, tabL = spe[,select.species], tabQ =
traits[select.species,], p.adjust.method.G = 'none', p.adjust.method.D = 'none')

plot (fc, alpha = 0.1, stat = "D2")


library (weimea)
cwm <- cwm (com = spe, traits = traits)
cwm_reg <- test_cwm (cwm = cwm, env = env, test = 'max')
fourth <- test_fourth (cwm = cwm, env = env, test = 'max')

plot (cwm_reg)
plot (fourth)

## RLQ analysis
dudiL <- dudi.coa (spe.na, scannf = FALSE)
dudiR <- dudi.pca (env, scannf = FALSE, row.w = dudiL$lw)
dudiQ <- dudi.pca (traits.na, scannf = FALSE, row.w = dudiL$cw)
vlt.rlq <- rlq (dudiR = dudiR, dudiL = dudiL, dudiQ = dudiQ, scannf = FALSE)
```

```
plot (vlt.rlq)
```

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