Latticist on CO2

A demonstration of the **latticist** package

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November 2008

Introduction

The **latticist** package provides an exploratory visualisation application inside R. It is primarily an interface to the **lattice** graphics system, although it also produces displays from the **vcd** package for categorical data.

This document gives a demonstration of **latticist** applied to the `CO2` dataset, available in R's **datasets** package.

The data are from an experiment on the cold tolerance of a grass species. The CO_2 uptake of six plants from Quebec and six plants from Mississippi was measured at several levels of ambient CO_2 concentration. Half the plants of each type were chilled overnight before the experiment was conducted. – *from `?CO2`*
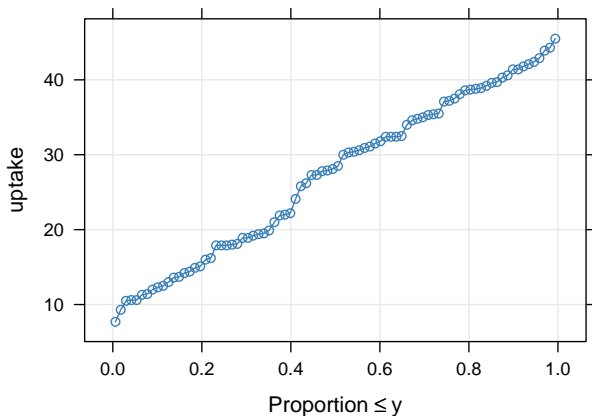
Initial display

```
> spec <- list()
> latticist(CO2, spec = spec)
marginal.plot(CO2, data = CO2, sub = list("N....
```
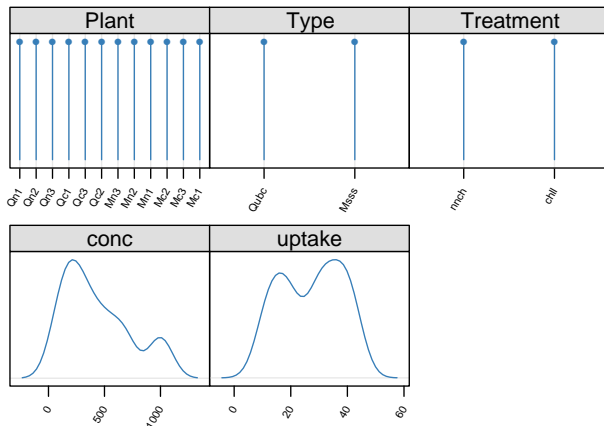
Set y variable

```
> spec$yvar <- "uptake"
qqmath(~uptake, data = CO2, main = "Distribu....
```
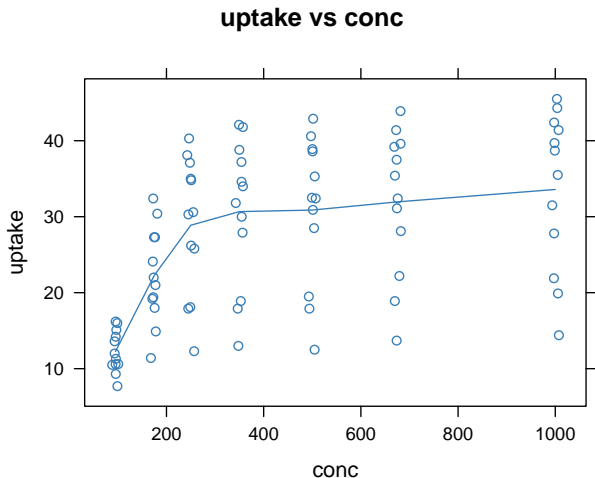
Distribution of uptake

Set x variable

```
> spec$xvar <- "conc"
xyplot(uptake ~ conc, data = CO2, main = "up....
```
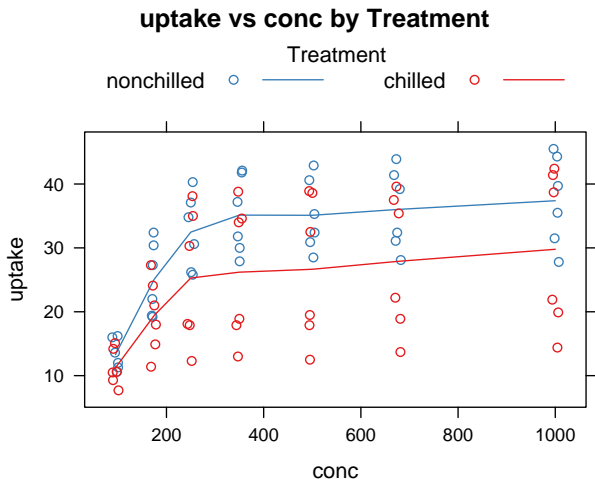
uptake vs conc

N = 84, 2008−11−11, R 2.8.0Patched

Set grouping variable

```
> spec$groups <- "Treatment"
xyplot(uptake ~ conc, data = CO2, groups = T....
```
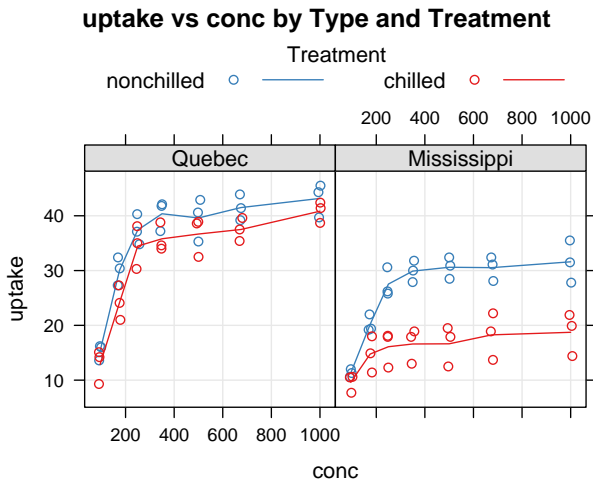

uptake vs conc by Treatment

Set conditioning variable

```
> spec$cond <- "Type"
xyplot(uptake ~ conc | Type, data = CO2, gro....
```


uptake vs conc by Type and Treatment

Each plant separately

```
> spec$cond <- "Plant"

xyplot(uptake ~ conc | Plant, data = CO2, gr....
```


uptake vs conc by Plant and Treatment

Details

The results in this document were obtained using R 2.8.0 with the packages **latticist** 0.9–41, **lattice** 0.17–15, and **latticeExtra** 0.5–4. R itself and all packages used are available from CRAN at `http://CRAN.R-project.org/`.

For an excellent introduction to and coverage of Lattice:

> Sarkar, Deepayan (2008). *Lattice: Multivariate Data Visualization with R*, Springer. `http://lmdvr.r-forge.r-project.org/`.