

Software Applications for Vegetation Description and Analysis

Data Storage: Turboveg

Developed by Stephan Hennekens and co-workers in the Netherlands as a database tool for the Dutch vegetation classification project. The core of Turboveg is a species checklist for a certain area, e.g. Netherlands, USA, Switzerland, ... that facilitates data entry, taxonomic updates and releve comparisons. Optimal data export possibilities allow easy work with other vegetation software (see below). Turboveg is the standard releve storage database software for vegetation ecologist worldwide (except the US). The software is free for students.

Links and Literature:

- a. **Turboveg** Website: <http://www.synbiosys.alterra.nl/turboveg/>
- b. Hennekens, S.M. & J.H.J. Schaminee (2001). Turboveg, a comprehensive database management system for vegetation data. *Journal of Vegetation Science* 12: 589-591. (see Bio 475 postings)

Data Sorting and Analysis: Juice

Developed by Lubomir Tichý and co-workers in the Czech Republic. Optimal software for vegetation classification: sorting vegetation releves, creating synoptic tables and calculating vegetation statistics. Current version as of 2006/10/30 is Juice 6.4.21 (beta). It allows direct implementation of statistics software like PC-Ord and R into the table sorting process. Export of sorted tables into MS Word for publications. Juice is freeware.

Links and Literature:

- a. **Juice** Website: <http://www.sci.muni.cz/botany/juice/>
- b. Juice Manual: see Juice website or Bio 475 postings
- c. Tichý, L. (2002) JUICE, software for vegetation classification. *Journal of Vegetation Science* 13: 451-453. (see Bio 475 postings)

Statistical Data Analysis: PC-Ord

Very versatile software for the standard multivariate statistics of ecological data. PC-Ord is moderately expensive, but intuitive to use. However, a good background in multivariate statistics is needed to implement and interpret the statistics.

Links and Literature:

- a. **PC-Ord** Website: <http://www.digisys.net/~mjm/pcordwin.htm>

Statistical Data Analysis: R

The most powerful statistics software because of its great flexibility. R is freeware and the software code is readily accessible. Basic programming skills are needed but once obtained, R opens a vast field of possibilities from vegetation statistics to analysis of molecular data, GIS applications and advanced weather modelling.

Links and Literature:

- a. **R** Website: <http://www.r-project.org/>
- b. **R** 'vegan' package description, manual and tutorials by Jari Oksanen: <http://cc.oulu.fi/~jarioksa/softhelp/vegan.html>