fennoscandian_pollen

Pollen records from the Fennoscandian Holocene

The following scripts can be used to combine and analyse three kinds of datasets, land-cover class (LCC, representing vegetation types), Summed Probability Distributions (SPD, a proxy for human population size) and temperature (representing climate and its change through time). Two kinds of results can be produced. First, the effect sizes from the Granger causality test indicate which LCCs were statistically correlated with which predictor (SPD or climate). Second, the change points from the mcp analysis identify significant changes through time within each dataset.
The file called "LCC_familynames.Rda" shows all the pollen data that later got grouped in the different LCCs.

Usage

Run the scripts and load the files that you find within the branch final-scripts in the following order.

1. load file LCC.csv
2. load file p3k14c_original.csv
4. run script archaeological_data.R
5. run script SPD.R
6. load file Temp12k_v1_0_0.RData
7. run script Climatic_data.R
8. run script make_climate_lists.R
9. run script all_lat_long_grids.R
10. run script model_testing.R
11. run script smoothing.R
12. run script cross_validation.R
13. run script commonality_analysis.R
14. run script grangercausality.R
15. TO PLOT: run script final_plots.R