NeutralLandscapes.jl: a library for efficient generation of neutral landscapes with temporal change

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Soon to be a paper, maybe. TK authors, MKB,VB,RS,TP

Introduction

Neutral landscapes are increasingly used in ecological and evolutionary studies over space to provide a null expectation .

As biodiversity science becomes increasingly concerned with temporal change and its consequences, its clear there is a gap generating neutral landscapes that change over time. In this ms we present how `NeutralLandscapes.jl` is orders of magnitudes faster than packages `nlmpy` (in python) or `NLMR` (in R). We then present a novel method for generating landscape change with prescribed levels of spatial and temporal autocorrelation, and demonstrate that it works

Software Overview

Fig 1: Recreation of the figure in `nlmpy` paper and the source

Comparison to `nlmpy` and `NLMR`

Fig 2: Benchmark comparison of all of methods in each of the three languages

Generating dynamic neutral landscapes

Discussion

References