

Community Ecology with GLLVMs





BertvanderVeen / IRSAE2020GLLMworkshop

Code Issues Pull requests Actions Projects Wiki Security Insights

master 1 branch 0 tags Go to file Add file Code

JenniNiku Add files via upload c962cce 1 hour ago 15 commits

Code Change structure of the repo and add 2 scripts 2 hours ago

Slides Add files via upload 1 hour ago

README.md Update README.md 6 hours ago

gllvmpackage.R Add files via upload 1 hour ago

lib.bib Readme and some refs 5 days ago

README.md

Analysing multivariate ecological data with Generalized Linear Latent Variable Models

Thanks for participating, and welcome to this workshop on the `gllvm` R-package.

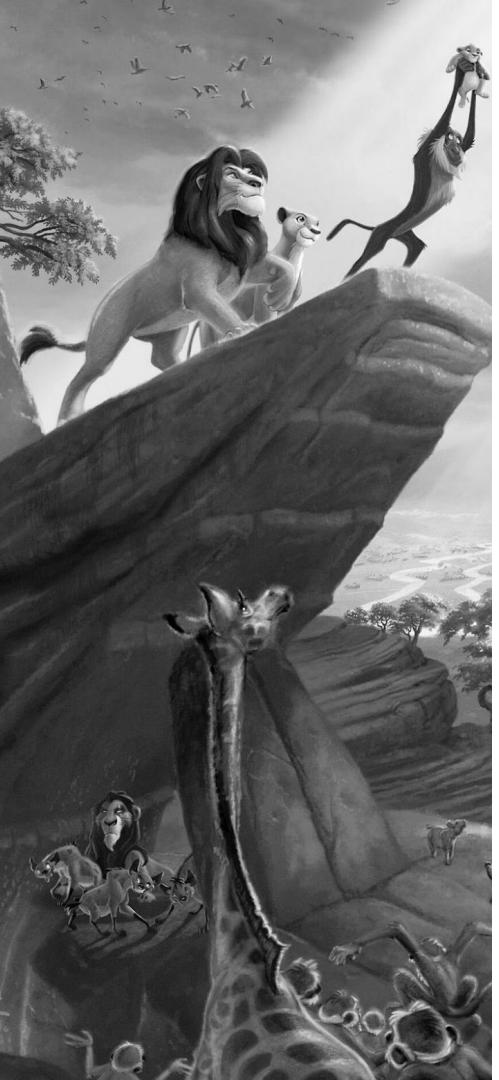
About GLLVM Workshop material for 2021 Readme

Releases No releases published

Packages No packages published

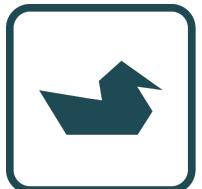
Contributors BertvanderVeen BertvdV JenniNiku Jenni Niku

<https://github.com/BertvanderVeen/IRSAE2021GLLMworkshop>



NTNU

Norwegian University of
Science and Technology



Ducky





When to use these models?

Variable choice

Species associations



Quick Sidenote:
SPECIES ASSOCIATIONS!!!



When to use GLLVMs?





When to use GLLVMs?





What variables do you have?





Using 'Proxies'

A covariate like elevation is often a proxy for other covariates

Are you looking at direct effects of the environment?

Or are you trying to explain as much variation as possible....



Using 'Proxies'

A covariate like elevation is often a proxy for other covariates

Are you looking at direct effects of the environment?

Or are you trying to explain as much variation as possible....

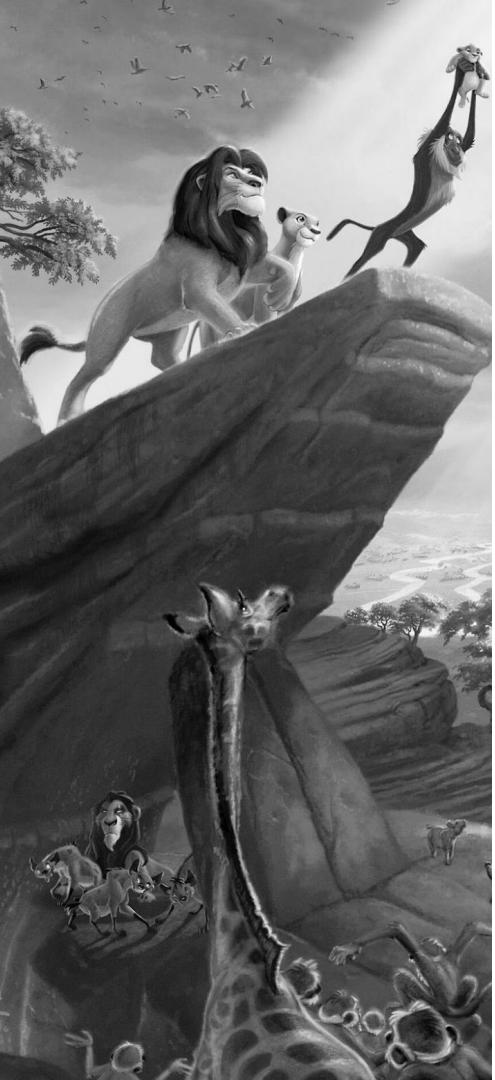


Using 'Proxies'

A covariate like elevation is often a proxy for other covariates

Are you looking at direct effects of the environment?

Or are you trying to explain as much variation as possible....



Using ‘Proxies’

A proxy is somewhat similar to a latent variable

Don't want to overestimate the strength of species associations



Collinear covariates

Often environmental covariates will be highly collinear

Do both covariates have reasonably independent impacts on the environment?



Using Collinear Covariates

We don't want latent variables that clearly correspond to measurable covariates



ECOGRAPHY

A JOURNAL OF SPACE AND TIME IN ECOLOGY

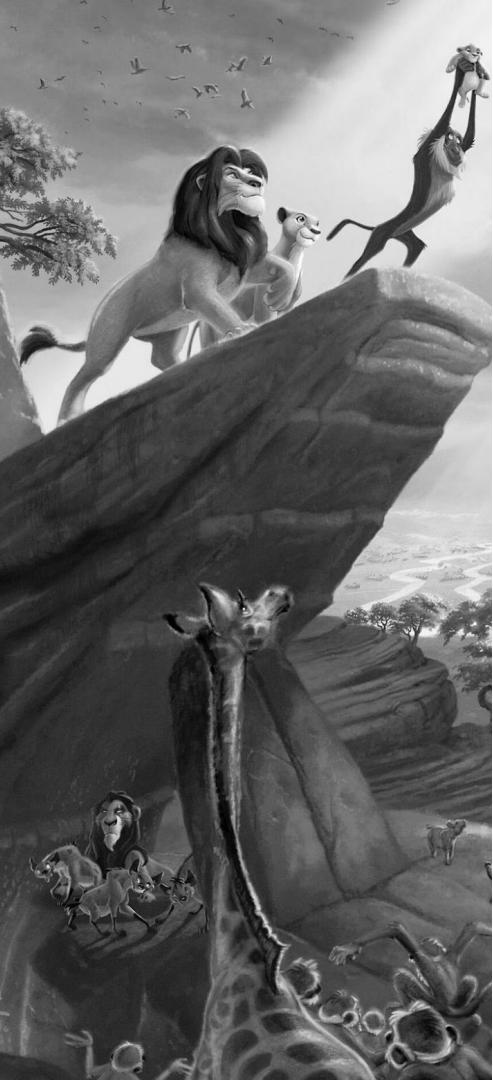
Research and Editors Choice | Free Access |

Disentangling biotic interactions, environmental filters, and dispersal limitation as drivers of species co-occurrence

Manuela D'Amen , Heidi K. Mod, Nicholas J. Gotelli, Antoine Guisan

First published: 23 October 2017 | <https://doi.org/10.1111/ecog.03148> | Citations: 33





Breakout Session!!

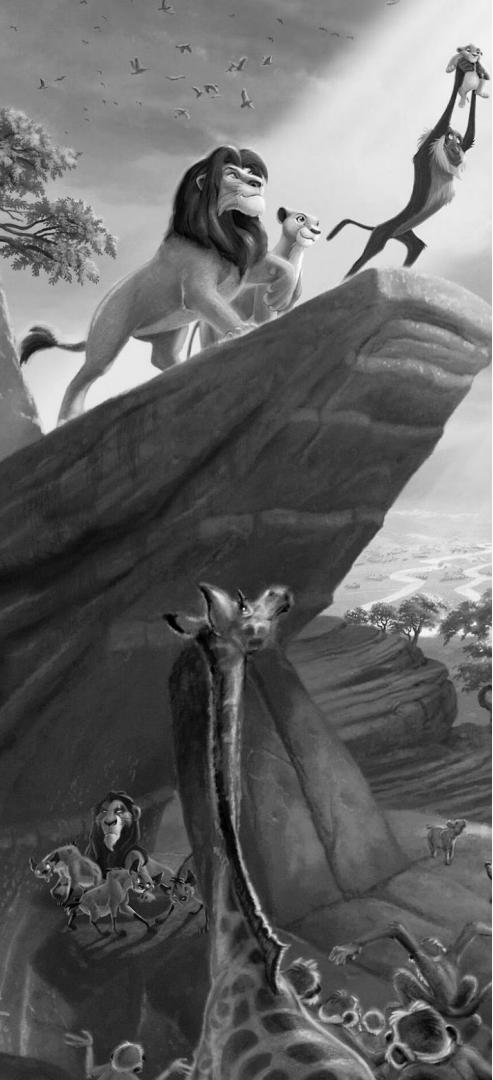


Associations vs. Interactions

Correlation vs. Causation

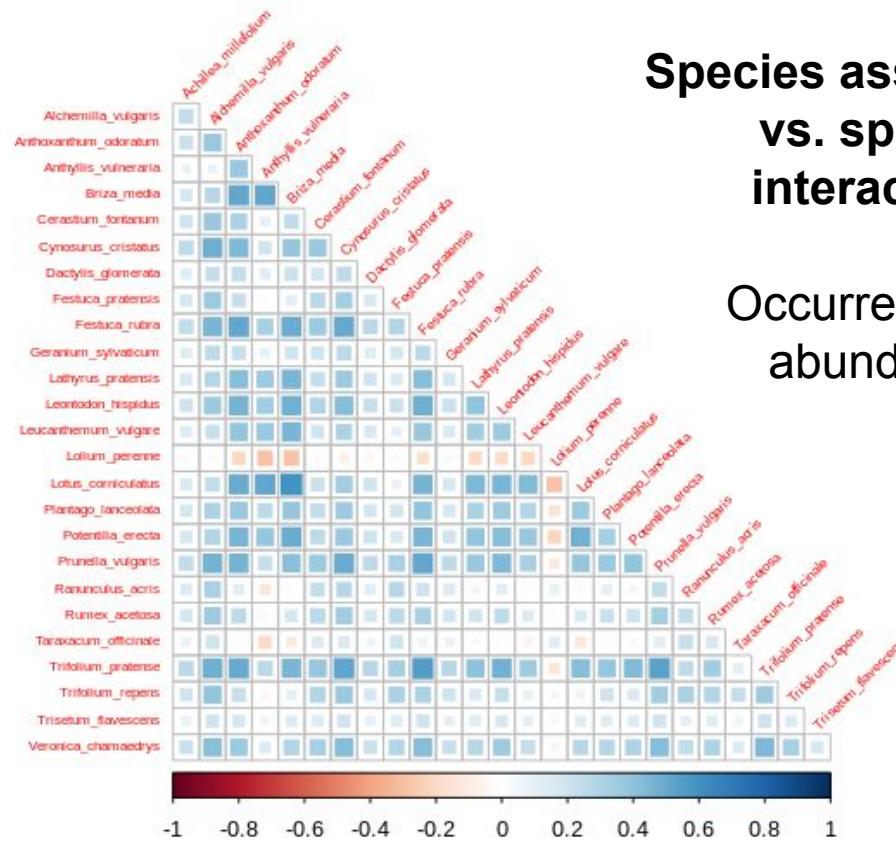
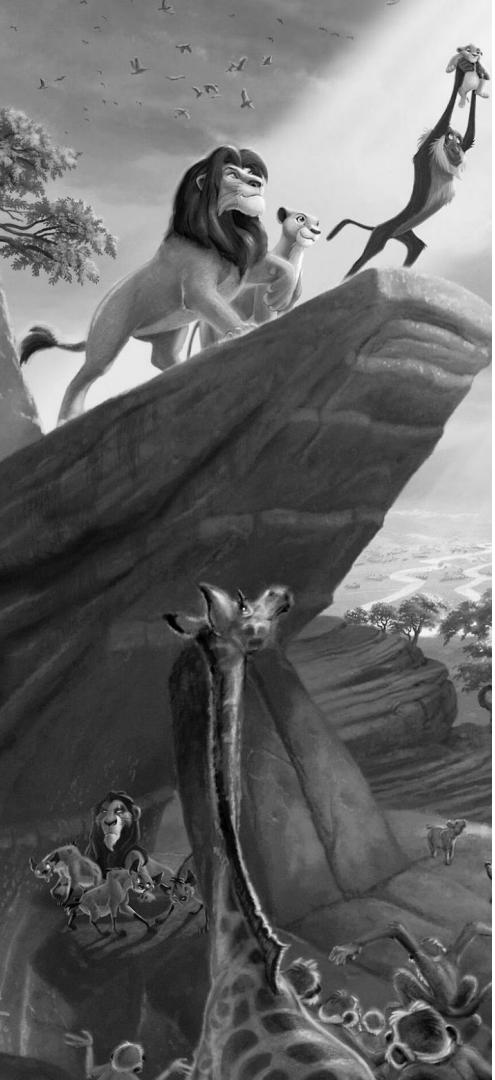
Estimating interaction credit for trophic
rewilding in tropical forests

Emma-Liina Marjakangas^{1,†}, Luísa Genes^{2,†}, Mathias M. Pires^{3,†}, Fernando A. S. Fernandez², Renato A. F. de Lima⁴, Alexandre A. de Oliveira⁴, Otso Ovaskainen^{1,5}, Alexandra S. Pires⁶, Paulo I. Prado⁴ and Mauro Galetti⁷



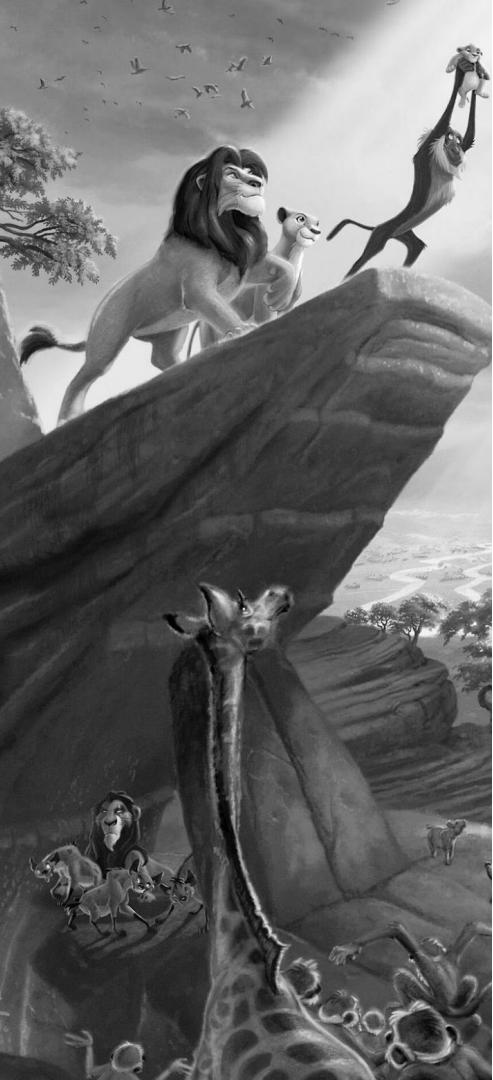
Species associations vs. species interactions





Species associations vs. species interactions

Occurrence vs.
abundance



Stats Corner



[@sastoudt](#)



[@BigDrFishBoi](#)
sam@ducky.eco