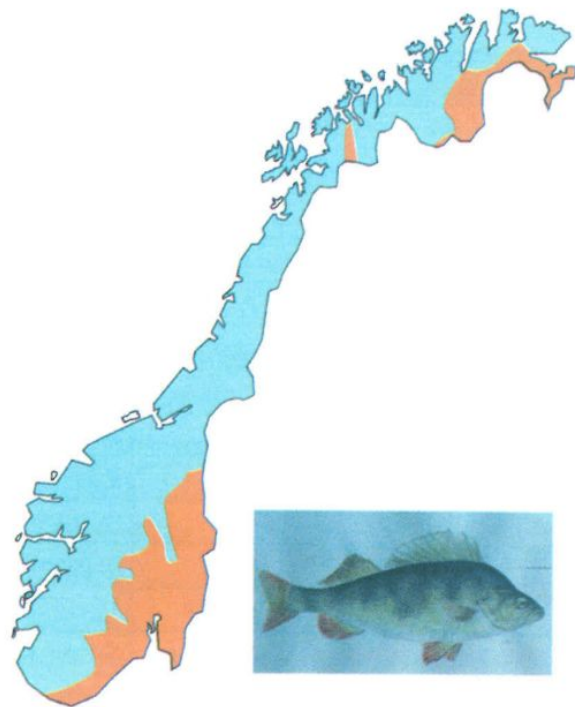




# Community Ecology with GLLVMs (Day Two)



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Variable choice

Species associations



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## 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





## 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'

Don't want to overestimate the effects of species associations

A proxy is very similar to a latent variable



## Breakout Suggestions

What other sort of variables would serve as proxies to account for variation?

If your model fit doesn't improve with the addition of latent variables, what does that mean?

What's the difference between species associations and species interactions?



## Associations vs. Interactions

Correlation vs. Causation

### Estimating interaction credit for trophic rewilding in tropical forests

Emma-Liina Marjakangas<sup>1,†</sup>, Luísa Genes<sup>2,†</sup>, Mathias M. Pires<sup>3,†</sup>, Fernando A. S. Fernandez<sup>2</sup>, Renato A. F. de Lima<sup>4</sup>, Alexandre A. de Oliveira<sup>4</sup>, Otso Ovaskainen<sup>1,5</sup>, Alexandra S. Pires<sup>6</sup>, Paulo I. Prado<sup>4</sup> and Mauro Galetti<sup>7</sup>





## Species associations vs. species interactions





## Species associations vs. species interactions

Occurrence vs.  
abundance

