

Stochasticity and Evolution in Food Webs

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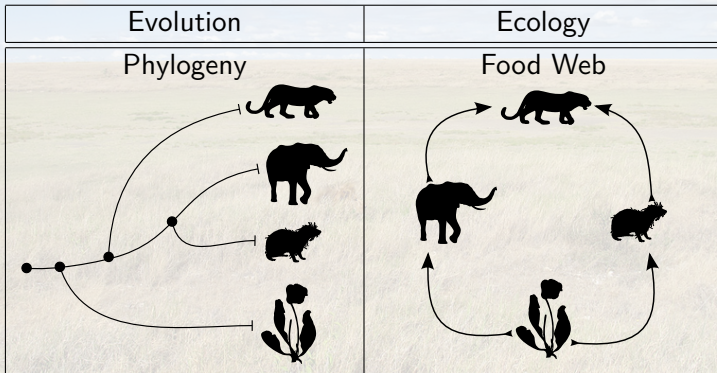
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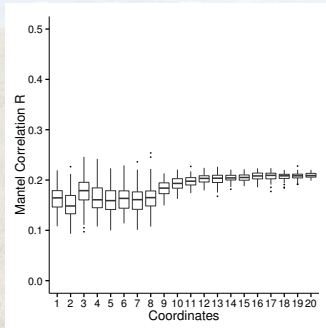
Granada Seminar June 16, 2015

species ARE related

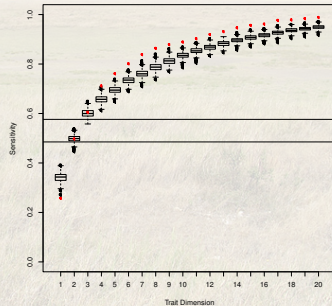


Evolution in/of Ecology

The backbones of a food web exhibits an Evolutionary signal.

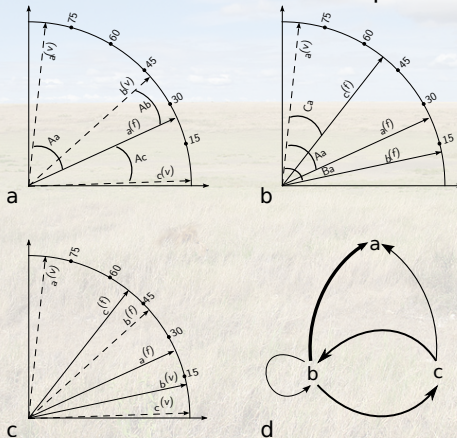


Phylogenetic signal

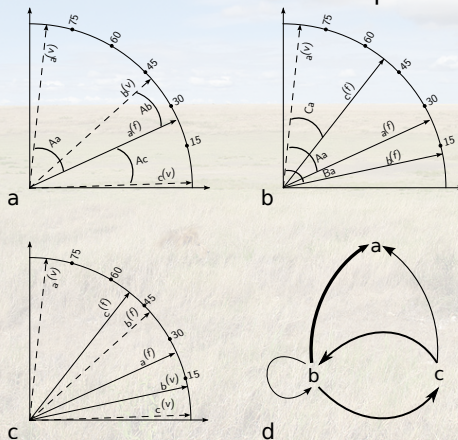


Model sensitivity

• Random Dot Product Graphs



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• Expected vs. Observed trait distribution

$$\text{vcv}(\mathbb{T}|\tau, \text{model}) \text{ vs. } \text{vcv}(\mathbb{T})$$

More questions (than answers)

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p-values anybody?

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- What about the null model?

Although species evolve and diversify in a complex network of species interactions, current models of diversification typically ignore species interactions. [These models] do not allow analysing the effect of species interactions on diversification.

Hélène Morlon - Ecology Letters (2014) 17: 508-525

(Not a) Conclusion

Spoiler: An ecological informed model of species evolution maybe is (almost) there.

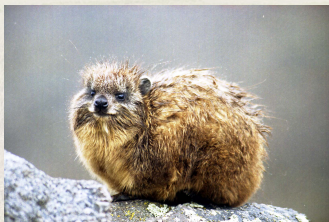
I am looking at you, Ornstein and Uhlenbeck ...

Thanks!

Joint work with Daniel B. Stouffer (University of Canterbury)

Many thanks to Mike Steel; Carey Priebe; A. Mooers', D.B. Stouffer's & J. Tylianakis' lab; ...

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By the way, I'm looking for a postdoc.
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