TO FIND

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Background:
Question:
Approach:
Key results:
Conclusion

Keywords: metacommunity ecology, neutral theory, species sorting, patch dynamics, spatial networks, dispersal

I. INTRODUCTION

- Contribution of neutral theory to ecology: the recognition of the importance of dispersal in structuring communities. The provision of a
- Gave roots and motivation for the metacommunity concepts. Present the different perspectives.
- Objective of the paper - Already several reviews of neutral theory in the literature - We will use this opportunity to explore in more details the contribution of neutral theory to our understanding of metacommunities
- We will pay a particular attention to recent developments at the crossroad of network theory
- Move from a perspective where dispersal is either global or spatially explicity (e.g. over a lattice), and spatial constant, to a perspective focusing on the variance of dispersal.
- More specifically, the objective of the paper is to use neutral theory to better reveal the importance of landscape network structure on the distribution of diversity. - Referred as a "spatial contingency" - Relevance to limnology
- Structure: - Start with a review of the main approaches to describe spatial networks and studies investigating them - Then we describe three simple toy models of metacommunity dynamics, taking this opportunity to review their assumptions and functioning. - R scripts for the toy models and all simulations conducted for this paper are provided as supplementary materiel. - We then conduct simple simulations of these models to reveal the impact of spatial network structure on diversity distribution. - We conclude with a discussion on the operationally of the framework.

II. NETWORK REPRESENTATION OF LANDSCAPES

of the metric; Column 2: Definition metrics.

III. MODEL DESCRIPTION

General introduction to the section

A. Patch dynamics

blabla

B. Neutral dynamics

C. Species sorting and mass effect

blabla
blabla

IV. RESULTS

A. Alpha diversity

B. Beta diversity

V. CONCLUSION