Séminaire / Seminar AMAP





Camille is currently a PhD student at UMR AMAP – CNRS, Montpellier, France. Working on the role of intraspecific variability in species coexistence, she is interested in proposing a renewed look on intraspecific variability in community dynamics models using data analyses and principally modelling approaches.

Email: camillegirardtercieux@gmail.com

16 DEC 2022 14h00 - 18h00 Salle 9, Bâtiment 36, Campus Triolet de l'Université de Montpellier, Place Eugène Bataillon **Zoom** : <u>https://umontpellier-fr.zoom.us/j/99901926443</u>

Soutenance de thèse

Revisiting the role of intraspecific variability in species coexistence: modelling approaches and insights from forest data

presented by Camille GIRARD-TERCIEUX UMR AMAP – CNRS, Montpellier, France

<u>ABSTRACT</u>

To answer the question "how do many species that require the same resources manage to coexist?", intraspecific variability (IV, the differences between individuals of the same species) has been taken into account. In mathematical models simulating species dynamics, IV is often represented as a random noise around the species mean, without structure in space or time. This PhD thesis examines the nature and structure of IV, how it is accounted for in ecology, particularly in models, and its consequences for species coexistence. We illustrate how IV can arise from environmental variation. We show that IV is spatially structured and that the way in which it is represented impacts the results of models. We propose a method to include the structure of IV and its consequences for coexistence in models, which would improve predictions on biodiversity.

<u>Jury:</u>

Sean McMAHON, Smithsonian Environmental Research Center (Rapporteur) Björn REINEKING, INRAE (Rapporteur) Aude VALADE, CIRAD (Examinatrice) Raphaël PÉLISSIER, IRD (Directeur de thèse) Isabelle MARÉCHAUX, INRAE (Co-encadrante de thèse, invitée) Ghislain VIEILLEDENT, CIRAD (Co-encadrant de thèse, invité)

<u>KEY WORDS (5 max)</u>

intraspecific variability; coexistence theory; theoretical models; data analysis

Invited and animated by: <u>Type:</u> <u>Oral language:</u> <u>Language of PPT:</u>

PhD thesis defense english english

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