



Lukas Magee is an assistant professor of forest ecology in the School of Renewable Natural Resources at Louisiana State University working on understanding drivers of forest diversity in both temperate and tropical forests. He has broad interests in ecology, from applied ecology to theory and modelling.

Email: lmagee@agcenter.lsu.edu

19 March 2026
14h00 – 15h00

Salle 201, Bâtiment PS2, CIRAD-UMR AMAP, Boulevard de la Lironde
Visioconférence : [Teams link](#)

Legacies of dead trees determine species interactions in forest communities

presented by

Dr. Lukas J. Magee

Louisiana State University – USA

ABSTRACT:

When plants die, neighbours escape competition. Living conspecifics could disproportionately benefit because they are freed from negative intraspecific processes; however, if the negative effects of past neighbours persist, other species might be advantaged, and diversity might be maintained through ‘legacy effects.’ We have been examining tree legacy effects in large, mapped forests to determine 1) if antecedent communities drive forest dynamics and 2) how long tree legacies influence community assembly. We have found that the *per capita* interaction strength of dead tree neighbours exceeds that of living trees, and that density dependent effects emanating from dead trees appear to persist for up to 10 years or more after tree death. Over 75% of species we have examined show negative effects from dead tree (legacies) neighbours, compared to 67% by living trees. Preliminary evidence suggests that legacy effects appear consistently across tropical forests and temperate forests, but with no distinct mediating gradients (e.g., latitude, precipitation). The drivers of tree legacy effects remain a mystery.

KEY WORDS: Species interactions, density dependence, ecological legacies.

Invited and animated by:

David Bauman (UMR AMAP)

Type:

Research results and collaboration opportunities

Oral language:

English

Language of PPT:

English

Link to the Microsoft Teams meeting:

<https://teams.microsoft.com/meet/34580432785036?p=JCJl2wIm2ZFrcjjSHQ>

