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**16 DEC 2024**  
14h00 – 17h00

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## SOUTENANCE DE THESE

# The spatio-temporal dynamics of Marantaceae forests in central Africa

*presented by*

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### ABSTRACT

Tropical moist forests are threatened by global changes, leading to an increase in degraded forest areas. The Marantaceae forests, little-known yet widespread in central Africa, presents a degraded appearance due to their open canopy and lack of tree regeneration caused by a dense understory of giant herbs. This thesis investigates the mechanisms behind the persistence and expansion of these forests in northern Congo using diverse approaches from landscape scale to tree stand and individual scales, based on satellite images, field inventories, vegetation and soil sampling, genetic analyses and a planting experiment. The results show that Marantaceae forests are associated with fire and other disturbances. They maintain and expand thanks to giant herb extreme competitiveness and reproductive strategy. This thesis proposes ecological mechanisms explaining the Marantaceae forest dynamics and highlights the importance of monitoring them.

### KEY WORDS

tropical forests; Marantaceae; central Africa; ecosystem dynamics; fire; logging; reproductive strategies; plant interactions

### Type:

Thesis defense

### Oral language:

english

### Language of PPT:

english





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