



Vacancy for two PhD positions (4 years)
Forest & Nature Lab, Ghent University (Belgium)



Novel light regimes and drought effects on temperate forest plant biodiversity (CanopyChange)

[ERC Consolidator Grant project](#)

Project background

Tree canopies are one of the most recognizable features of forests, providing shelter from external influences to a myriad of species that live in the understorey. Canopy disturbances are now accelerating across European forests, and climate-change induced drought is a key driver. These disturbances are opening the canopy and exposing forest biodiversity to no-analog light regimes and drought – light and drought levels they have never been exposed to before. As the majority of forest plant species occur in the shade below tree canopies, the combination of altered light regimes and intensifying droughts can strongly impact forest biodiversity. However, the interactive effects of novel light regimes and drought on temperate forest biodiversity have never been investigated before. Since recent European droughts are unprecedented in the last two millennia, and this has initiated the largest pulse of forest disturbances in almost two centuries, the time to assess impacts on biodiversity is now. The overarching aim of CanopyChange is to quantify, understand and predict the impacts of no-analog light regimes and drought on below-canopy forest plant biodiversity. To address this challenging goal, cross-continental resurveyed vegetation plots, the first pan-European forest disturbance-drought experiment, and a pioneering canopy clipping mesocosm experiment will be combined with an interdisciplinary toolbox drawing from ecology, forestry, and climatology. These data will then feed into cutting-edge joint species distribution models to project European forest plant biodiversity responses to future climate and canopy change.

Here we advertise for two PhD positions. The first PhD position is focused on vegetation and forest structure resurveys across temperate European forests (WP1), while the second PhD position will focus on a forest disturbance-drought experiment which will be installed at several sites across Europe (WP2).

Research Environment

The successful candidate will be based, along with the rest of the CanopyChange team, at the Forest & Nature Lab (www.fornalab.ugent.be) of Ghent University, Belgium. ForNaLab consists of 30 staff members and is headed by professors Kris Verheyen, Lander Baeten, Jan Mertens and Pieter De Frenne. The research group is part of the Department of Environment at the Faculty of Bioscience Engineering, Ghent University (<https://www.ugent.be/bw/environment>).

The Forest & Nature Lab aims at understanding the interactions between the ecological processes, composition, and structure of terrestrial ecosystems, with a clear link to management and policy. ForNaLab is actively involved in numerous national and international projects and networks, including FLEUR (www.fleur.ugent.be), forestREplot (www.forestreplot.ugent.be), TreeDivNet (www.treedivnet.ugent.be), PASTFORWARD (<https://pastforward.ugent.be/>) and FORMICA (<https://formica.ugent.be/>).

How to apply

Please send us your CV, transcript of records, and a one-page cover letter explaining how you would approach the position to Pieter.DeFrenne@ugent.be by 17 April 2024 (all documents should be merged together into one single PDF file). You can also specify in which position (WP1, WP2, or both) you are most interested. The interviews with selected applicants will be organised in May 2024.

Your profile

- You have a Masters, or Honours, degree in Bioscience Engineering, Biology, Ecology or equivalent degree in Life or Mathematical Sciences with background in Ecology. Also candidates that will obtain their degree in the summer of 2024 are invited to apply.
- You have excellent study grades.
- You have a strong interest in forests, ecology, and climate change.
- You have good knowledge of both the biotic and abiotic components and processes in temperate forest ecosystems.
- You are highly motivated to perform scientific research that involves field work, quantitative data analyses as well as writing scientific publications.
- You are a team player with good communication skills, you like to write and discuss ideas. An excellent knowledge of the English language is required.
- You are highly motivated to work in a collaborative project with other PhD students, postdocs and technical assistants.

Our offer

- A PhD scholarship for four years, based at Ghent University in Belgium (full-time, scholarship salary following the legal salary scales).
- The preferable start date is 1 September 2024.
- Collaboration in a young and dynamic scientific team.
- The possibility to gain experience in doing scientific research, with many travelling opportunities and field work across Europe.
- The opportunity to obtain a PhD degree at Ghent University in a topical field of applied environmental sciences and climate change.

Additional information

For more information, please do not hesitate to contact Prof. Pieter De Frenne, via telephone at +32 9 264 90 36 or via email at Pieter.DeFrenne@UGent.be

More information on our work and research group is available at <http://www.fornalab.ugent.be>