Bérince S. R. Hounsouvo

Ph. D Candidate, Forest sciences | Université Laval
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Education

Ph.D. in Forest Sciences 2023 - 2026
Department of wood and forest sciences, Université Laval, Québec Canada

Thesis: Selection of boreal woody species with lateral root architecture for technosol-based revegetation of acid mine drainage sites
Supervisor: Prof. Damase P. Khasa
Co supervisor: Prof. Antoine Karam

Master's degree, Forest Science and Techniques 2018 - 2020
Faculty of Agronomy, University of Parakou, (Benin)

Thesis: Effect of ectomycorrhizal inoculation and organic and mineral amendments on juvenile growth of nursery plants of *Afzelia africana*, *Pterocarpus erinaceus* & *Khaya senegalensis.*
Supervisor: Prof. Christine Ouinsavi

Bachelor's degree, Natural Resource Management 2014 - 2017
Faculty of Agronomy, University of Parakou, (Benin)

Thesis: Optimal sampling technique for plot-based biodiversity measurement in the Sudanian zone: the case of square and circular plots
Supervisor: Prof. Nourou S. Yorou

Additional Training

[1] *NSERC CREATE Program on Nature-Based Solutions for Ecosystem Restoration - NASER Summer School 2025 [in person]* . Université Laval, Quebec, Canada. From April 28 to May 09, 2025

[2] *Programming with R for data analysis [in person].* Université Laval, Québec, Canada.

[3] *Introduction to Unix Shell [online, UNX101].* Calcul Québec, Quebéc, Canada. February 2, 2024

[4] *Data analysis in bioinformatics: exploring computational biology [in person].* Université Laval, Quebec, Canada. From April 28 to May 09, 2025

Research Interests

- Forest ecophysiology
- Mycorrhizal symbioses
- Soil physics
- Restoration ecology
- Ecological modeling

Academic and Research Experiences

Doctoral Researcher in forest biology and soil sciences 2023–2026
Department of wood and forest sciences, Université Laval, Québec Canada.

- Develop literature reviews on our scientific knowledge of tree-soil and tree-fungi interactions.
- Design and carry out advanced experimental protocols in forestry and restoration practices.
- Build statistical and mathematical R models to analyze biological data in forest sciences.

Teaching Assistant. Winter 2025

Department of soils and agro-food engineering, Université Laval, Québec Canada

- Co-supervise a master's student in the design and implementation of a forest experiment
- Provide scientific guidance on experimental design and field data collection

Research Assistant in Forest Biology Winter 2024

Department of wood and forest sciences, Université Laval, Québec Canada.

- Assist a PhD candidate in designing a forest field experiment
- Participate in ECM (ectomycorrhizal) seedling inoculation

Research Assistant in Forest Biology 2021–2023

Forest Research and Studies Laboratory, University of Parakou, Parakou (Benin)

- Design and conduct forest experimentation projects
- Perform analysis of variance (ANOVA) and linear regression using R
- Write scientific and field mission reports

Research Assistant in Tropical Mycology 2017–2018

Research Unit in Tropical Mycology and Plant-Fungi-Soil Interactions, Parakou (Benin)

- Conduct surveys of macro-fungi in open forests and savannas
- Evaluate fungal diversity indices (α and β diversity) using R software
- Manage fungi specimens in the Mycological Herbarium collection at the University of Parakou

Leadership Experiences

One Young World Ambassador 2024–2025

One Young World, London Area, United Kingdom

- Exchange ideas, learn best practices, and collaborate with global leaders in conservation.

Co-founder & President 2021–2023

Environment Plan ONG, Benin, West Africa

- Definition of the vision and general policy of the NGO
- Elaboration and management of NGO's projects
- Management of work team and staff members

Publications

[1] Hounsouvo, Bérince S. R., Khasa Damase P., Karam Antoine and Lamhamedi Mohammed S. Tree root system on covers with capillary barrier effects preventing Acid mine drainage: a systematic review (*in preparation*).

[2] Hounsouvo, Bérince S. R., Orou Sourou Zouliatou, Ayena Jacques I. K., and Dramani Ramdan. Socio-Agronomic Determinants of Farmland Access in Vegetable Production Systems in Northern Benin: Evidence from Bassila. Agriculture and Human Values (*submitted*). https://doi.org/10.21203/rs.3.rs-6614725/v1

[3] Hounsouvo, BSR., Houehanou, TD, Gouwakinnou, GN, Hadonou, CJ, and Ounsavi, CAIN. (2022). Comparative Effect of Ectomycorrhizal Inoculation, Mineral and Organic Amendments and their Interactions on Juvenile Growth of Afzelia africana in the Nursery. Journal of Tropical Plant Physiology, 14(1), 1-12. 022):1-12 https://doi.org/10.56999/jtpp.2022.14.1.18

[4] Habakaramo M. P., Tchan K. I., Hegbe A. D. M. T., Abohoumbo G., Hounsouvo B. S. R., Tchemagnon O., Dramani R., and Yorou N. S. (2022). Sampling techniques for the optimal measurements of macromycetes

diversity in the Soudano-Guinean ecozone (West Africa). International Journal of Biodiversity and Conservation, 14(3), 128-138. https://doi.org/10.5897/IJBC2020.1404

Scientific Talks

Variation génétique de la croissance racinaire chez les plants d'épinette noire et de mélèze laricin. Colloque forestier 2025. L'office des producteurs de plants forestiers du Québec (OPPFQ)Quebec, Canada

Genetic Control and Repeatability of Root Growth in Seedlings of EPN and MEL, Two Species with Contrasting Strategies Along the Root Economics Spectrum. Interlab 2025. Institute of Integrative Biology and Systems, Université Laval, Quebec, Canada.

Awards and Grants

Completion Award, 37EXAD $6200. Faculty of Graduate and Postdoctoral Studies, Université Laval, 2024. CAD $6200.

Award for doctoral project preparation. Faculty of Graduate and Postdoctoral Studies, Université Laval, 2024. CAD $3000

Mentoring

Graduate project (co-advisor)

[1] Justine Daviault 2025. *Pratiques de revégétalisation des sites miniers générateurs de drainage minier acide au québec : acquis, opportunités et défis.* Master's degree, Université Laval, Québec, Canada.

[2] Osé Zoundoh 2020. *Effets de différentes doses d'amendements organique et minérale sur la croissance juvénile de Afzelia, khaya et Pterocarpus. Bachelor's degree,* Universitý of Parakou, Parakou, Benin