

Ondřej Mottl

I am an Assistant Professor of Plant Ecology and Head of the Laboratory of Quantitative Ecology at Charles University in Prague, Czech Republic. I am a quantitative ecologist studying long-term biodiversity dynamics across large spatial and temporal scales. My work integrates fossil-pollen archives, contemporary vegetation, functional traits, climate data, and quantitative modelling to understand ecological memory, biodiversity change, human impacts, and climate-change responses. I lead open and reproducible data-integration and software-development workflows in R.

Research identifiers: [ORCID 0000-0002-9796-5081](#) | [Scopus ID 57209659764](#) | [ResearcherID AAC-7606-2019](#)

Education

PhD in Entomology | 11/2019

University of South Bohemia | České Budějovice, Czech Republic

Thesis awarded by dean's prize entitled "*Spatial structure and community dynamics of arboreal ants in a tropical rainforest*"

MSc in Zoology | 6/2015

University of South Bohemia | České Budějovice, Czech Republic

Thesis awarded the Dean's Prize, entitled "*Structure and dynamics of arboreal ant communities along successional gradient in a mountain tropical forest of New Guinea*"

BSc in Biology | 6/2013

University of South Bohemia | České Budějovice, Czech Republic

Thesis entitled "*Detection of UV-fluorescent-marked prey in the guts of predators and scavengers, dynamics of scavenging in a model experiment*"

Professional experience

11/2023 - present

Department of Botany, Faculty of Science, Charles University, Prague, Czech Republic

Assistant Professor of Plant Ecology

7/2025 - present

Faculty of Science, Charles University, Prague, Czech Republic

Member of the Charles University team in the ERC Synergy project *MEMELAND: Molecular Ecology of Medieval European Landscapes* (101166850).

6/2025 - present

Faculty of Science, Charles University, Prague, Czech Republic

Principal Investigator of the Charles University PRIMUS project *Functional Vegetation Paleoecology* (PRIMUS/25/SCI/002).

6/2025 - 12/2025

Parental leave

2024 - present

Charles University Research Centre

Member of the Charles University Research Centre programme UNCE/24/SCI/006.

6/2023 - present

Center for Theoretical Sciences, Charles University, Prague, Czech Republic

Principal Investigator of the GAČR Postdoc Individual Fellowship - Incoming project *BIODYNAMICS* (23-06386I).

9/2022 - 6/2023

Parental leave

2/2020 - 6/2023

Department of Biological Sciences, University of Bergen, Norway

Postdoc at ERC project (PI: Prof. H.J.B. Birks) entitled “*Humans on planet Earth (HOPE)*”

7/2015 - 12/2019

Department of Ecology, Institute of Entomology, Czech Republic

PhD researcher funded by several individual grants.

Major collaboration

2024 - present

[Open Palaeoecological Data \(PalaeOpen\)](#)

Steering Committee member and co-leader of Working Group 3, Data Storage and Management.

Present

[International Association for Vegetation Science](#)

Steering Committee member of the [Historical Vegetation Ecology Working Group](#).

2022 - present

Past Global Changes

Committee member of [Planetary Boundaries Working Group](#) led by Prof. Lindsey Gillson

2022 - present

Department of Biological Sciences, University of Bergen, Norway

Adviser of [The Past, Present and Future of Alpine Biomes Worldwide](#) led by Dr. Suzette Flantua

Institutional responsibilities

Department of Botany, Faculty of Science, Charles University, CZ

- 2024 - present: Head of the [Laboratory of Quantitative Ecology](#)
 - 2024 - present: [Graduate Student Advisor](#)
 - 2023 - present: Faculty member
 - 2023 - present: Organiser of the Internal Seminar
 - Founding member and leader of Working Group 3, [Junior Faculty](#)
 - Member of the scientific board, Czexpats in Science PI Forum
 - [Open Science Champion](#)
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Department of Biological Sciences, University of Bergen, Norway

- 2022 - 2023 Member of a PhD Hiring Committee

Fellowships

6/2023 - present

Center for Theoretical Sciences, Charles University, Prague, Czech Republic

Awarded personal GACR Postdoc Individual Fellowship - Incoming

2018

Institute of Entomology, Czech Academy of Science, České Budějovice, Czech Republic

IBERA scholarship

2017 (2 months)

Smithsonian Institution Conservation and Research Center, Virginia, USA

Smithsonian Fellowship

Other work experiences

2019 (6 weeks)

Nditam, Cameroon, Africa

Leading field sampling of arboreal ants on an ERC project (PI: Prof. V. Novotny) entitled “*Ecological determinants of tropical-temperate trends in insect diversity*”

2017 - 2019 (6 weeks)

Brussels, Belgium

Main data analytics at Mobility Plus project (PIs: Dr P. Klimes and Dr M. Leponce)

2018 (2 months)

EuCFACE - WSU, Australia

Field experiments on tri-trophic interactions on ERC project (PI: Dr K. Sam) entitled “*Why is the world green: testing top-down control of plant-herbivore food webs by experiments with birds, bats and ants*”

2016 (6 months)

Binatang research centre, Papua New Guinea

Leading field project focused on arboreal ant ecology

Invited presentations to conferences

2026

Estimating Vegetation Change from Fossil Pollen to Planetary Boundaries: A Global, Long-Term Synthesis Using Big Data

Symposium of the International Biogeography Society, Aarhus, Denmark

2022

Quantifying rates of vegetation change over the last 18,000 years

Keynote lecture, Conference of the Czech Society for Ecology, Brno, Czech Republic

2022

FOSSILPOL: The workflow to process global palaeoecological pollen data

European Pollen Database Open Science Meeting

Teaching

2024 - present

Current teaching at the Department of Botany, Faculty of Science, Charles University, Czech Republic:

Course guarantor and organiser:

- [SPROuT - Science Powered through Reproducibility, Openness, and Teamwork](#)
- [Statistics in Biology and Design of Ecological Experiments](#)
- [CodeFest - Innovating Together for a Better University Environment](#)
- [Science School on Quantitative Ecology](#)

Member of the teaching team:

- [Seminar for PhD Students](#)
- [Diploma Thesis Seminar \(Geobotany\) II](#)

See [my current teaching activities](#) for more details.

2021 - 2023

Department of Biological Sciences, University of Bergen, Norway

- Course organiser of *OSW: Reproducibility in science*
- Course co-organiser of *Community Ecology*

Supervision

2024 - present

Department of Botany, Faculty of Science, Charles University, Czech Republic

- Two PhD researchers: Bryan Novio (STARS, since 2024) and Natálie Hanusová (PRIMUS, since 2025)
- One bachelor thesis completed in 2025

See [Laboratory of Quantitative Ecology](#) for more details about team members

2016 - 2019

Department of Zoology, Faculty of Science, University of South Bohemia, Czech Republic

- 1 bachelor student

Organisation of scientific meeting

2024 - present

Science School on Quantitative Ecology

- Co-founder and main co-organiser of the annual Czech-German school
 - Alternates between Germany and the Czech Republic
 - Supported through three funding rounds
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2024

Quantitative Ecology Special Interest Group meeting

- Main organiser
 - Prague, Czech Republic
 - ~15 participants
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2023

RoC for geochemistry and XRF data workshop

- Co-organiser and presenter
 - Oeschger Centre for Climate Change Research, Switzerland
 - ~20 participants
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2023

Palaeoecology and Sustainability

- Main co-organiser and presenter
 - Meeting by Planetary Boundaries Working Group, Rome, Italy
 - ~15 participants
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2022

Conference of the Czech Society for Ecology

- Co-organiser (part of the Rising Star program) and presenter
 - Brno, CZ
 - ~300-500 participants
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2023

APD R-Ratepol workshop

- Co-organiser and presenter
 - Workshop by African Pollen Database Council
 - online
 - ~35 participants
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2021

Data Manipulation & Statistical Analysis in Palaeoecology

- Co-organiser and presenter
- Seminar by Palaeoecology Special Interest Group BES
- online
- ~50 participants

Reviewing activities

2023 - present

GAUK Evaluator, Charles University, Czech Republic

2019 - present

Reviewer for international journals including Nature Communications, Global Ecology and Biogeography, Global Change Biology, Ecology Letters, Anthropocene, and Biotropica.

Software development

I lead or contribute to open ecological data infrastructure and R software:

- [VegVault](#) - an integrated global palaeo- and neo-vegetation database with functional traits and abiotic drivers
- [{vaultkeepr}](#) - an R interface for reproducible access to VegVault
- [RRatepol](#)
- [RFossilpol](#)
- [REcopol](#)
- [RUtilpol](#)
- [taxospace](#)