

ZOJA MANČEK PÁLI

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SUMMARY

An experienced and detail-oriented First-Class Ecological and Environmental Sciences graduate, with a demonstrable interest in bryophytes, and a strong commitment to developing specialist skills in bryophyte identification, field ecology, and conservation. Proven experience in ecological survey techniques, meticulous microscopy, fine-scale pattern recognition, and robust data analysis. Eager to apply these skills to bryological research, contribute to understanding Scotland's unique botanical diversity, and gain hands-on experience with RBGE's herbarium and laboratory facilities. A self-motivated and highly organised individual with a demonstrated aptitude for independent learning, strong planning capabilities, and a passion for field-based research, particularly in remote Scottish environments. Enthusiastic about contributing to RBGE's work in taxonomy and macroecology, and actively participating in the bryological community.

EDUCATION

Bachelor of Science in Ecological and Environmental Sciences Sep 2020 - July 2024
University of Edinburgh

- Classification: First-Class (1:1) across all four years.
- Relevant Coursework: Evolution and Ecology of Plants, Green Planet, Plant Physiological Ecology, Ecological Measurement, Data Science, Field Ecology.
- Thesis: "Assessing invasion risk based on leaf trait similarity in Scotland: alien *Cotoneaster bullatus* compared to the invasive *Rhododendron ponticum*".
 - Conducted extensive field-based research, applying ecological survey and data collection methodologies.
 - Developed strong analytical and report writing skills through independent research.
 - Collaborated with Peter Brownless at the RBGE, collecting plant and environmental samples for the dissertation research project.

High School Diploma with Honours Sep 2017 - July 2020
QSI Ljubljana

- Classification achieved: 4.0 GPA (Graduated top of the class).
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EXPERIENCE

Laboratory Assistant, The University of Edinburgh March 2025 - May 2025

- Conducting precise sample preparation of soil cores, employing specialised root extraction techniques requiring fine manipulation skills and attention to detail.
- Operating EPSON scanner to capture high-resolution scans of root samples, ensuring optimal data quality for detailed morphological analysis and pattern recognition.
- Performing precise gravimetric measurements and meticulously maintaining the laboratory environment, ensuring compliance with safety regulations, and research quality standards.

Environmental Chemistry Intern, Jožef Stefan Institute June 2023 - August 2023

- Gained proficiency in preparing diverse environmental samples for advanced isotopic analysis (ICP-MS).
- Conducted mercury measurements using CV-AFS and CV-AAS techniques, adhering to stringent quality standards.
- Maintained laboratory environment, ensuring compliance with safety protocols.
- Supported HB4EU data preparation and distribution, contributing to a large-scale environmental monitoring project.

Artificial Intelligence Intern, Jožef Stefan Institute

June 2018 - August 2018

- Performed data cleaning and preprocessing of complex datasets.
 - Implemented advanced statistical methods for trend analysis, developing skills in pattern recognition.
 - Created compelling data visualisations to communicate findings effectively.
 - Applied machine learning techniques to prediction tasks, enhancing analytical capabilities.
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VOLUNTEERING

PhD Project Volunteering, University of Edinburgh

May 2024 - September 2024

- Proficiently identified invertebrates to species level using stereomicroscopes.
- Demonstrated a keen eye for detail, an aptitude for fine-scale pattern recognition, and the ability to manipulate minute structures under microscopy.

Tutor, Zveza Prijatelj Mladine

September 2019 - March 2020

- Provided academic assistance and mentorship to socioeconomically disadvantaged children.
 - Designed and conducted educational activities, enhancing communication and planning skills.
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FURTHER EXPERIENCE

Since November 2020

- Office Manager, Wordsmith.ai, Edinburgh (May 2025 - Present)
 - Bartender, Scrان Bistro, Edinburgh (Mar '24 - Feb '25)
 - Barista, Black Medicine Coffee, Edinburgh (Oct '22 - Feb '24)
 - Front of House, Gateway Cafe, Edinburgh (Mar '22 - Oct '22)
 - Bartender, Scotsman Hotel, Edinburgh (Sep '21 - Mar '22)
 - Sales Assistant, Stonoga Ecological Market, Kranj, Slovenia (Nov '20 - Apr '21)
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SKILLS

Bryology, Ecology & Fieldwork

- Strong Interest in Bryophytes & Enthusiasm to Learn
- Plant Identification
- Ecological Survey Techniques
- Field-Based Research (including in Scottish Highlands)
- Habitat Mapping
- Species Recording & Mapping
- Familiarity with Bryophyte Biology
- Knowledge of Natural History, Biological Classification & Ecology

Laboratory & Microscopy

- Microscopy (Stereo- and Compound)
- Aptitude for Fine-Scale Pattern Recognition
- Sample Preparation Techniques (Soil, Root, Environmental Samples)
- Spectrometric Analysis (ICP-MS)
- Spectroscopic Analysis (CV-AFS, CV-AAS)
- Laboratory Safety Protocols
- Measurement of Plant Physiological Parameters

Data Analysis, Reporting & Technical:

- Data Analysis (RStudio, Python)
 - Report Writing (Academic & Project-Based)
 - Data Visualisation Tools
 - Independent Research
 - Microsoft Office Suite (Word, Excel, Teams, Outlook – Desirable)
 - [Github](#)
 - Environmental Impact Assessment
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PERSONAL ATTRIBUTES

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| • Dedicated, with Strong Time-Management Skills | • Good Written & Spoken Communication Skills | • Collaboration & Interpersonal Skills |
| • Eye for Detail | • Analytical & Critical Thinking | • Eagerness for Continuous Learning & Skill Development |
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