



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Mountain River Ecology, Faculty of Environment



Salary: Grade 7 (£39,355 – £46,735 p.a. depending on experience)

Reporting to: Lee Brown

Reference: ENVGE1269

Fixed term for up to 33 months to complete specific time limited work

Location: University of Leeds

We are open to discussing flexible working arrangements

Research Fellow in Mountain River Ecology, School of Geography, Faculty of Environment

Overview of the Role

Are you an ambitious researcher looking for your next challenge? Do you have an established background in river ecology, glacier-fed river ecosystem studies and water quality dynamics? Are you interested to explore the impacts of climate change on mountain river ecosystems, working with researchers and end-users in Nepal to create a standardised biomonitoring approach for high-elevation Himalayan rivers? Do you want to further your career in one of the UK's leading research-intensive universities?

We are looking for a highly-motivated postdoctoral researcher to join our group which is engaged in diverse aspects of research in river basins, with an emphasis on ecosystem dynamics. Working alongside both academic and non-academic partners in Nepal, you will take the day-to-day lead on a newly funded NERC Pushing the Frontiers project that aims to assess the effects of glacier retreat on aquatic biodiversity and river water quality in the Himalayas. This project will use a combination of field surveys, field experiments, microscopy identification of invertebrates/algae, molecular analysis of aquatic organisms, and statistical modelling, to build new understanding of how Himalayan glacier-fed river systems are structured and function. Specifically, the project will quantify the biodiversity of bacteria, fungi, algae and invertebrates in relation to environmental characteristics, manipulate water chemistry at selected locations to observe microbial community structural and functional responses, and build models to predict how Himalayan river biodiversity can be expected to change in coming decades.

You will join the multidisciplinary and diverse River Basin Processes and Management research group, working in our aquatic ecology team led by Professor Lee Brown, and collaborate with colleagues from the University of Essex, Cary Institute (USA), Kathmandu University and Tribhuvan University. You will benefit from collaborations (industry and academia), international fieldwork and conference attendance, and tailored skills training. You will be expected to develop the project ideas and lead fieldwork expeditions and laboratory analysis to meet the project's multiple aims.



You will have, or be close to completing, a PhD in Ecology or Biological Sciences or a closely related discipline, together with a strong background in river ecosystem science, microbial analysis and data analytics. You will also have a positive attitude to collaborative research and the drive to make a significant contribution to ensuring this ground-breaking project is a success. Experience working in high-mountain environments is required due to the need to lead expeditions to 5000m+ elevation. You will also have excellent organisational and communication skills, and the ability to work on your own initiative and as part of a team. You will be encouraged to develop your initiative and independence and will have to opportunity to undertake training and career development offered by the University of Leeds.

Main duties and responsibilities

- Planning fieldwork expeditions to Nepal, including collaboration with local researchers to identify specific sampling locations in multiple river systems spread across three national parks (Sagarmatha, Langtang, Annapurna);
- Generating and implementing independent and original research ideas and methods for measuring the impact of glacier loss on aquatic biodiversity in high-mountain rivers;
- Planning and executing appropriate experimental measurements to measure the effects of water quality dynamics on aquatic community structural and functional responses;
- Leading laboratory analyses for water quality measurements, quantifying microbial biofilm biodiversity and functioning using molecular ecology methods, and identifying organisms such as invertebrates using microscopic techniques;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals, and by presentation at national and international workshops and meetings;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;



- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

Qualifications and skills

Essential

- A PhD or near completion - i.e. the initial thesis needs to have been handed in at the point of application in Ecology, Biological Sciences or a closely allied discipline;
- A strong background, with significant field, laboratory and data-analytics experience, in river ecology, plus strong GIS skills to map river catchment characteristics;
- Experience in microscopic analysis of aquatic organisms, including algae and invertebrates;
- Experience in molecular ecology and metagenomics (e.g. amplicon based metataxonomics);
- Evidence of successful previous work in high-mountain aquatic environments, with evidence of positive engagement and successful collaboration with scientists from relevant overseas institutes;
- High-level data analysis skills (e.g. R, Python) for ecological statistical analysis, bioinformatics and ecological modelling;
- Ability to combine results from multiple approaches/studies/geographic locations to develop new insights in aquatic ecology;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- Excellent written and verbal communication skills including presentation skills with experience of communicating your research at national and international conferences;



- A developing track record of peer reviewed publications in international journals;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development;
- Willingness and ability to travel to Nepal for fieldwork.

Desirable

- Experience of working with institutes from the Himalayas region;
- Experience of designing and running experiments in aquatic ecosystems;
- Experience of working with non-academic users of aquatic science to develop societal impact;
- Use of sensors to collect contextual river environment data (e.g. temperature, water level, chemistry).

Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Please note that due to Home Office visa requirements, this role may only be suitable for first-time Skilled Worker visa applicants if they are eligible for salary concessions. For more information please visit: www.gov.uk/skilled-worker-visa

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: <https://www.gov.uk/global-talent>

Find out more about the [Faculty of Environment](#)

Find out more about the [School of Geography](#)

Find out more about our [Research and associated facilities](#)

Find out more about [equality](#) in the Faculty



Our University

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Environment has received a prestigious Athena SWAN silver award from [Advance HE](#), the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

Working at Leeds

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information.

