

## PhD Postgraduate Research Opportunity

- Ref:** P892
- Project Title:** Biodiversity conservation and restoration in the Wild Nephin Ballycroy National Park (WNB-NP)
- Funding:** This Cullen Scholarship (Grant-Aid Agreement No. CS/20/001) is carried out with the support of the Marine Institute and funded under the Marine Research Programme 2014-2020 by the Irish Government.
- Description:** Applications are invited for a 4-year PhD position in the Marine and Freshwater Research Centre at Galway-Mayo Institute of Technology, based at our Galway campus.

The proposed objectives of the PhD are to:

- Assess baseline terrestrial and aquatic flora and fauna within WNB-NP against which future restoration actions can be measured
- Evaluate important interactions between aquatic and terrestrial environments which define the wilderness area,
- Engage local communities through public outreach initiatives, and
- Provide a strong scientific bases for nature conservation and biodiversity enhancement activities within the wilderness area.

Wild Nephin Ballycroy National Park (WNB-NP) is a large open expanse of predominantly active Atlantic blanket bog and mountainous terrain located along the vastly uninhabited and unspoilt Wild Atlantic Way in county Mayo, Ireland. Many of the habitats found within the 15 600 hectares (ha) include priority habitats (active blanket bog, fens and flushes, wet and alpine heaths, natural dystrophic and oligotrophic ponds and lakes, streams and rivers, & acidic grasslands) and species (Greenland White-fronted geese (*Anser albifrons*), Otters (*Lutra lutra*), Salmon (*Salmo salar*)) protected under the EU Habitats Directive and birds (Golden Plover (*Pluvialis apricaria*) and Merlin (*Falco columbarius*)) protected under the EU Birds Directives (NPWS 2017). WNB-NP also forms part of the Owenduff/Nephin Beg Special Area of Conservation (000534) (SAC) and Special Protection Area (004098) (SPA) providing safe refuge for rare and threatened species and habitats (NPWS 2017).

Over the last decade, WNB-NP has incorporated 4,000 ha of state-owned forestry (predominantly lodgepole pine (*Pinus contorta*) and Sitka spruce (*Picea sitchensis*)) resulting in the first opportunity in Ireland to rewild these plantation areas into mixed woodland, peatland and associated aquatic habitats with the long-term goal of creating one of the largest wilderness areas in Europe.

Much of the original Ballycroy NP (11 000 ha) is likely to be classified as wild lands with medium wilderness quality, whereas newly incorporated lands in the Nephin Beg Mountain range, an area highlighted for conversion to wilderness, could be deemed as intensive use, due to the large proportion of the area covered in commercial forestry (4 600 ha) and encroachment by invasive species (for example *Rhododendron ponticum*), indicating a highly modified, human landscape where wilderness quality does not exist. Bridging the gap between these adjacent areas (not wild to medium wilderness) is a complex and challenging task, requiring a strong scientific evidence base for decision making, and will require a long-term commitment from all stakeholders if the goals of wilderness areas are to be achieved and realised in WNB-NP.

A key objective of this Cullen PhD fellowship is to implement ecological restoration techniques which will provide ecological functioning benefits for habitats and species in particularly salmonids within the WNB-NP. This solutions-based approach best fits the short- and medium- term goals of WNB-NP ensuring the longer-term objective of rewilding this wilderness area is achieved.

### **Minimum Requirements and Qualifications**

- An Honours Degree (minimum 2.2, but 2.1 or higher is desirable) in environmental science, freshwater ecology, agricultural science, botany or related ecological restoration disciplines at the commencement date of the project. An MSc or equivalent experience in a relevant discipline would be desirable.
- Experience of aquatic fieldwork is required.
- Good organisational and management skills.
- Ability to work as part of a large, inter-disciplinary team.
- Good interpersonal, oral and written communication skills.
- Full clean driver's license.

### **Desirable Requirements**

- Vegetation and habitat identification skills for peatland ecosystems and woodlands along with ecological mapping experience.
- Experience using GIS and Earth Observation data and tools.
- Macroinvertebrate and freshwater fish identification skills.
- Previous experience sampling freshwater fish and/or an in-depth knowledge of freshwater fish ecology would be beneficial. Experience of eDNA fieldwork and laboratory analyses would be advantageous.
- Working knowledge of statistics and experience of multi-variate analysis.
- Knowledge and keen interest in the biodiversity, ecological conservation and restoration of peatland ecosystems and associated species.
- Experience of contributing towards scientific outreach initiatives.

**Project Duration:** 48 months

## Conditions

- €16,000 Stipend per annum.
- Postgraduate fees for EU students will be covered by the project.
- In addition, any necessary travel and material costs incurred during the project will be covered.
- The student will be based at the Marine and Freshwater Research Centre, GMIT and will also have access to facilities at the Marine Institute headquarters in Galway and in Newport, Co Mayo.

**Please Note:** Candidates from outside the EU are eligible to apply but may be expected to provide evidence of sources of additional funds to cover excesses associated with Non-EU fees.

If either English or Irish is not the applicant's first language, a certificate of language ability in either language is required. IELTS level 6.0 or equivalent is mandatory for those presenting with English as a foreign language.

**Project Start Date:** April 2021

**Application Closing Date:** 12 noon, Thursday 28<sup>th</sup> January 2021

Applicants should submit their:

- Curriculum Vitae (to include 2 referees)
- a copy of transcript of results and
- a one-page Personal Statement to: [ResearchOffice@gmit.ie](mailto:ResearchOffice@gmit.ie)

***Applications must be submitted to the Research Office e-mail address only. Please ensure all documents are emailed as a single Word or PDF file.***

The Personal Statement should not exceed 1 page and should explain:

- How you meet the requirements of the position
- Why you would like to pursue this PhD research programme

For further information on the project please contact: Dr Heather Lally (GMIT) at [heather.lally@gmit.ie](mailto:heather.lally@gmit.ie) or Dr Conor Graham at [conor.graham@gmit.ie](mailto:conor.graham@gmit.ie)

## Data Protection Statement

GMIT takes very seriously its legal obligations as set out in the General Data Protection Regulation 2016/679 (GDPR) and the Irish Data Protection Act 2018 to safeguard and protect your personal information in our possession. The personal information which you disclose to us in this form will only be used to assess your suitability; administer and register you for this scholarship. We will not keep your personal information for any longer than is necessary for those stated purposes. **For more details, please refer to GMIT's Student Privacy Statement:** <http://www.gmit.ie/general/student-privacy-statement>