**Research Experience Placement (REP) Scheme 2024**

**Supervisor Project Proforma**

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| **Project title:** | Creating biodiverse forest for the future |
| **Host Institution:** | University of Leicester |
| **Project supervisor (name, department):** | Moya Burns, Genetics and Genome Biology |
| **Project enquiries (supervisor email):** | mlb40@leicester.ac.uk |
| **Co-Supervisor, if any (name, department):** |  |
| **Proposed start date:** | 1st July |
| **Project description** (max 700 words, 1-2 figures may be included): |
| For the past 25 years the National Forest Company has undertaken an ambitious afforestation project covering 200 square miles across parts of Derbyshire, Leicestershire and Staffordshire.  This project has changed the landscape of the east midlands and is now at a critical stage. Young forest plantations are unable to harbour many of the species associated with deadwood features which are accumulated by mature forest over hundreds of years. However, there are methods by which the dead wood features of young forest plantations can be enhanced via a process known as “veteranisation”. The REMEDY (REstoring Multi-functioning Ecosystems via Deadwood enrichment in Young plantations) experiment will explore how best to enhance the dead wood features of young forest plantations, beginning in 2025. However, before the experiment begins baseline data to establish the current composition of dead wood associated species in the National Forest will be undertaken over the summer of 2024 (April to September 2024). This project will involve assessing the impact of dead wood availability and forest plantation age on the insect communities of the National Forest. This placement offers the opportunity to develop field survey skills, insect curation skills, community ecology data analysis skills and the opportunity to work with the National Forest Company as a collaborative partner.The activities which could be undertaken are:* + Conducting forest structural surveys
	+ Processing insect trapping samples (field-based)
	+ Curating and identifying insect samples (lab-based).
	+ Exploring insect community composition analysis in relation to deadwood features (e.g. PCA analysis).
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| **Project timeline:** |
| July 1st – 15th: Field work conducting forest structural surveys and collecting insect specimens.July 15th- 6th August: Processing and identifying insect specimens.August 6th- 10th: Community ecology data analysis and report writing. |
| **Candidate requirements:** |
| * Enthusiasm and interest in forest creation, especially with respect to insect biodiversity.
* Willingness to undertake fieldwork which could involve being outside in inclement weather, carrying heavy equipment and walking considerable distances.
* Willingness to use/learn R for community data analysis.
* Attention to detail required for laboratory processing of insect samples.
* Report-writing skills
* Driving license and access to own car would be an advantage, but lack of this is not a bar to taking up this placement.
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| **Background reading and references:** |
| <https://www.nationalforest.org/about/our-history>Doerfler, I., Cadotte, M.W., Weisser, W.W., Müller, J., Gossner, M.M., Heibl, C., Bässler, C., Thorn, S. and Seibold, S., 2020. Restoration‐oriented forest management affects community assembly patterns of deadwood‐dependent organisms. *Journal of Applied Ecology*, *57*(12), pp.2429-2440.Zumr, V., Nakládal, O., Gallo, J. and Remeš, J., 2024. Deadwood position matters: Diversity and biomass of saproxylic beetles in a temperate beech forest. *Forest Ecosystems*, p.100174. |

**To be completed by institutional CENTA PoC**

I confirm that:

* The host institution takes responsibility for selecting a suitable undergraduate student and ensuring eligibility (see NERC REP student eligibility requirements above) and confirming their eligibility using the UKRI criteria listed under the NERC REP student eligibility criteria
* This REP project falls within the NERC remit and is of suitable quality
* Appropriate supervisory arrangements are in place
* The student recruited to undertake this placement will have a PhD student mentor from the DTP/CDT
* The application processes used will be inclusive and accessible
* Reasonable adjustments will be made for students that need them whilst undertaking placements
* The placement will be carried out in accordance with all applicable ethical, legal and regulatory requirements including but not limited to relevant provisions of the General Data Protection Regulation, the Data Protection Act 2018, the Bribery Act 2010, the Fraud Act 2006, the Equality Act 2010 and the Modern Slavery Act 2015
* The host organisation takes responsibility for identification, protection and exploitation of any intellectual property rights arising from the work
* All facilities, agreements about access and collaborations necessary for the work will be obtained before the work commences and can be ensured through the period of the work
* All costs awarded by NERC for the REPs will be used and accounted for appropriately
* A report of the project by the student will be submitted no later than one week after the end date of the placement or Friday 27th September 2024, whichever falls first.

Signed: THPHarvey

Date: 26 April 2024

Position: Deputy point of contact for CENTA, University of Leicester