

## WBP ACADEMIC/VOLUNTEER RESEARCH PROJECT PROPOSAL 29

<b>Project title:</b>	<b>Black Grouse in Wales: understanding the population trends</b>		
<b>Lead Organisation:</b>	<b>Game &amp; Wildlife Conservation Trust</b>	<b>Project leader:</b>	
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<b>Collaborating institutions:</b>	Natural Resources Wales, RSPB (phase (i) of project)		
<b>Location:</b>	NE Wales		
<b>Start date:</b>	Spring 2014	<b>Completion required by:</b>	Winter 2015
<b>Project rational/ What is the specific question being asked?</b>			
<p><b>Question/Aims:</b></p> <p>Welsh black grouse are now largely restricted to Ruabon Moor, in NE Wales. Here, males have increased 10-fold in response to management, in contrast to continued range retraction, and static or declining populations in much of the rest of its Welsh range. Therefore, although the species in Wales is ostensibly doing well, there is significant concern about us increasingly having all our black grouse 'eggs in one basket'. This project will i) conduct analyses of existing data to help determine the principal factors determining spatial and temporal variations in local increases in displaying males on Ruabon Moor. It will also ii) establish whether management to promote displaying males is also beneficial for females and their chicks through conducting sample brood counts. Finally iii) radio-tagging of individuals (young females will be the priority sex and age class), will determine dispersal capability and hence genetic connectivity with neighbouring moors. This in turn will identify those areas which should be prioritised for rolling out the full suite of management as currently implemented on Ruabon.</p>			
<b>Can this project be divided into more than one project? If yes, specify below.</b>			
Yes, components as numbered above			
<b>Scale of project?</b>	<b>Site-specific? Name site &amp; any designation.</b>	<b>Range of sites? Name sites &amp; any/ designation.</b>	<b>Suggested site/s/locations?</b>
		Ruabon / Llantysilio Mountains & Minera SSSI and Berwyn Moors SPA	
<b>Access to previous data/reports on site?</b>	Yes	<b>RA<sup>1</sup> attached</b>	To be provided as required
<b>Will logistics be managed by Lead Organization or Researcher?</b>	Researcher, in collaboration with GWCT		
<b>Opportunity for follow-on student placement<sup>2</sup> with Lead Organisation?</b>			<b>YES</b>

<sup>1</sup> RA: Risk Assessment for sites specified, or type of work to be undertaken as available from Lead/collaborating partners

<sup>2</sup> Please consider whether you are able to offer a work placement. This can be with lead/collaborating partners, or with a data end user e.g. Local Record Centre, Local Authority

<p><b>Training element/skills required (specify):</b>          Use of GIS and statistical software – skills required (although further statistical support can be given)          Survey techniques using pointer dogs – training available          Handling grouse and fitting radiotags – training available          Radiotracking – training available          Data analyses and report-writing – skills required</p>
<p><b>Expected deliverables (specify):</b>          Report (and manuscripts for publication where appropriate) presenting:</p> <ol style="list-style-type: none"> <li>1. Analysis of spatially explicit annual data on the distribution and abundance of male black grouse at their display grounds (leks) in relation to equivalent annual habitat data describing heather management and indices of predator control and weather.</li> <li>2. Correlative test of hypotheses generated from (1) by conducting sample counts of birds from managed and unmanaged areas of heather and looking at habitat use by a sample of radio-tagged individuals.</li> <li>3. An assessment of whether managed areas seemingly preferred by lekking males are also preferred by breeding female black grouse, assessed through sample searches for broods, and by other birds, such as golden plover and curlew, which also favour recently mowed, short vegetation.</li> <li>4. Quantification of dispersal distances and survival rates of a radio-tagged sample of yearling females, thereby helping to determine the degree of connectivity and suitability of neighbouring sites to Ruabon for recruitment and population recovery.</li> <li>5. Recommendations for further research, monitoring and advisory work resulting from this project.</li> </ol>
<p><b>Resources required/ resources available (specify):</b></p> <p>This project would require external funding, at an estimated cost of £40,000. These costs could be lower if aspects of work are undertaken by students.</p>
<p><b>Any special considerations? (specify):</b> Because of currently unsecured funding, this project is not tied to the dates stated and would remain a viable project proposal in future years, pending funding becoming available. Timings are also approximate and project scope could be expanded to create a valid PhD proposal.</p>

**Return completed form to:** [tracey.lovering@cyfoethnaturiolcymru.gov.uk](mailto:tracey.lovering@cyfoethnaturiolcymru.gov.uk) Tel: 01970 631177 / 07779 010580