

PROJECT TITLE: Disentangling landscape and climate effects on pollinator communities of saltmarshes to inform management solutions to enhance pollinator services in a changing climate

Project Science Theme: Climate Change and Risk

Project keywords: Conservation, Landscape Ecology, Ecosystem Services

Lead Institution: University of Bristol

Lead Supervisor: Lucy Alford, University of Bristol, School of Biological Sciences

Co-Supervisor: Sean Rands, University of Bristol, School of Biological Sciences

Co-Supervisor: Emma McKinley, Cardiff University, School of Earth and Environmental Sciences

Co-Supervisor: Rupert Perkins, Cardiff University, School of Earth and Environmental Sciences

Project Enquiries: lucy.alford@bristol.ac.uk

Webpage: functionalbiodiversity.weebly.com

Project aims and methods:

Coastal saltmarshes provide globally important ecosystem services including coastal protection, biodiversity conservation, carbon sequestration, and pollutant remediation amongst others. Alarming, saltmarshes have experienced rapid degradation in recent decades with over 50% of European saltmarsh habitat having been lost to coastal development alone. With saltmarsh degradation seriously threatening biodiversity, ecosystem service provision, and ecosystem resilience to future perturbations such as those brought about by climate change, efforts are underway to restore and protect saltmarshes to global change drivers. Central to this effort is interdisciplinary research to better understand how ecosystem services and function vary with marsh characteristics and environmental context. Focusing on the ecosystem service of pollination, the PhD project will adopt mixed method approaches and utilise marsh complexity gradients (e.g. grazed vs. non-grazed, eroding vs. accreting, natural vs. restored) to disentangle the relative effects of landscape structure and climatic conditions on key pollinator guilds and their impact on related ecosystem services in coastal saltmarshes.

From an applied point of view, understanding the impact of climate and landscape degradation on pollinator guilds will enable us to better inform integrated landscape management to support biodiversity health and ecosystem functionality, feed into saltmarsh restoration efforts, and ultimately enhance saltmarsh resilience for the future.

Useful recruitment links:

For information relating to the research project please contact the lead Supervisor via:

lucy.alford@bristol.ac.uk

Bristol NERC GW4+ DTP Prospectus:

<https://www.bristol.ac.uk/study/postgraduate/research/great-western-four-doctoral-training-partnership-nerc/>

How to apply to the University of Bristol:

<http://www.bristol.ac.uk/study/postgraduate/apply/>

The application deadline is Monday 13 January 2025 at 2359 GMT.