

**Avoidance, competition and predation in nest box breeding communities
(BUTLER_UBIO15EE): Norwich, United Kingdom**

Shortlisted applicants will be invited to an interview day on either Thursday 12 or Friday 13 February 2015. This project has been shortlisted for funding from the EnvEast NERC Doctoral Training Partnership. Successful candidates who meet RCUK's eligibility criteria will be awarded a NERC studentship. In most cases, UK and EU nationals who have been resident in the UK for 3 years are eligible for a full award. The stipend for 2014/15 was Â£13,863 p.a. For further information, please visit www.enveast.ac.uk ..

Description

Production intensification across Europe has led to a wide-scale reduction in nest site availability for cavity nesting birds and this has been implicated in recent population declines of many species. Obligate or facultative cavity-nesting species regularly adopt artificial nest sites and their provision is therefore widely used as a conservation tool to release populations from nest site limitation. However, artificial nest boxes often have high levels of non-target occupancy, potentially imposing both direct and indirect costs to individuals of the target species. Effective conservation management requires that the implications of these costs are traded-off against the intended benefits so that, if necessary, appropriate mitigation action can be undertaken but they remain poorly understood.

This project will investigate avoidance, competition and predation costs associated with non-target species occupancy within nest box communities. Specifically, it focuses on communities associated nest box schemes provided to support European Roller *Coracias garrulus* populations. The Roller is a globally Near Threatened species for which nest boxes have been provided and widely adopted in a number of countries across southern and Eastern Europe as part of its conservation management. Using a combination of observational and experimental field work at study sites in France and Latvia and laboratory analyses of feather samples to determine diet-based isotopic signatures at UEA, the student will define the dominance hierarchy within each nest box community, determine its influence on the spatial and temporal structuring of Roller breeding attempts and explore the consequences for subsequent productivity. These results will be translated into recommendations for the design, positioning and management of nest boxes to improve their conservation value accordingly.

Interested students should have a keen interest in avian conservation ecology, with experience of spatial modeling and familiarity with computer packages such as R and GIS software an advantage. The project will be co-supervised by Dr Aldina Franco (School of Environmental Sciences, UEA) and the student will be integrated into an active, multidisciplinary community of researchers and PhD students.