

PhD position advertised to research how bee foraging performance and colony fitness are affected by stressors in fragmented rural landscapes' Supervisors: Dr Richard Gill (r.gill@imperial.ac.uk)

), Dr Samraat Pawar (Life Sciences) Location: Department of Life Sciences, Imperial College London, Silwood Park campus

Deadline: 18th January 2016

Increased agricultural practices have resulted in the clearance and fragmentation of many natural habitats posing potential challenges to wildlife such as insect pollinators. For eusocial bees (e.g. honeybees & bumblebees), who provide a crucial pollination service, increased floral habitat patchiness may increase foraging demands making it significantly more difficult to sustain the colony's energetic requirements. It is thus important we consider how environmental stressors set limits on bee foraging performance and how bees are able to cope with such pressures. For further details, how to apply and eligibility please go to: [https://workspace.imperial.ac.uk/grantham/Public/SSCP%20DTP/DTP%20projects%=](https://workspace.imperial.ac.uk/grantham/Public/SSCP%20DTP/DTP%20projects%=202016/LS_Gill_2016.pdf)

[202016/LS_Gill_2016.pdf](https://workspace.imperial.ac.uk/grantham/Public/SSCP%20DTP/DTP%20projects%=202016/LS_Gill_2016.pdf)

But in brief, the studentship will investigate what specific behavioural mechanisms are being affected by stress factors associated with agricultural practices and the knock-on effects this has to colony functioning and fitness. The research project will provide the PhD student with a number of benefits: i) it will integrate a number of critical interdisciplinary skills including controlled experiments and modelling; ii) it crosses a number of scientific fields such as behavioural ecology, evolutionary and theoretical biology; iii) the research is of high impact and will result in quality publications as well as results that can inform end users and policy makers; and iv) the student will join a productive, diverse and social research group. Imperial College is a world leading university; Life Science dept. was placed top of the UK universities for research intensity in the Research Excellence Framework, and placed 6th best dept. in the world in the Times Higher Education 2015. The student will be based at Silwood Park which has an internationally renowned community of researchers, excellent facilities for the project, and the GCEE initiative has invested significantly into ensuring world leading research addressing important global issues. Selected references: Raine & Gill 2015 Nature N&V Gill & Raine 2014 Functional Ecology (doi:10.1111/1365-2435.12292) Bryden, Gill et al. 2013 Ecology Letters (doi:10.1111/ele.12188) Gill et al. 2012 Nature (doi:10.1038/nature11585) Pawar et al. 2012 Nature (doi:10.1038/nature11131) Gill & Hammond 2011 Proc. Roy. Soc. B Gill et al. 2009 Proc. Roy. Soc. B