

# Assessing the role of fungus-mediated plant-soil feedbacks during secondary succession of tropical forests

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Secondary forests are increasingly prominent features in tropical landscapes and the importance for the restoration of the original hyperdiverse mature forests they replace is widely recognized. None-the-less, we still poorly understand the mechanisms that drive secondary succession of tropical forests, especially the potentially important plant-fungal interactions (pathogenic and symbiotic).



This studentship offers a unique possibility to study and understand the novel idea that soil born fungi drive successional species turnover in tropical forests and to bridge a gap in fundamental understanding of tropical forest recovery. We will use a unique combination of large manipulative shade house experiments and observational field observations along a chronosequence of tropical rain forest to assess how soil-born fungi influence the recruitment success of tropical tree species during succession.

A key aspect will be to evaluate the relative importance of functional similarity (life history) versus phylogenetic similarity (relatedness) of successional tree species in this process. A multidisciplinary training programme is central to this studentship and the student will develop skills in a range of experimental and observational ecological methods, as well as laboratory techniques and advanced statistical analyses and modelling. As this project has the potential to lead several high impact publications it will be a formidable opportunity to develop a research career. All field components of this studentship will be carried out at and in collaboration with the Smithsonian Tropical Research Institute (STRI) in Panama.

Applicants should hold a minimum of a UK Honours Degree at 2:1 level or equivalent in subjects such as Forest Ecology, Forestry, Biology or Natural Sciences.

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Wed 28 September 2016