

Darwin Fellowship - Final Report

(Please check guidance for submission deadlines, max 6 pages.)

Darwin Project Ref No.	EIDPS029
Darwin Project Title	17-012 Belize large-mammal corridor project
Name of Darwin Fellow	Said Manuel Gutierrez
UK Organisation	University of Southampton
Your Organisation	University of Exeter, University of Belize Environmental Research Institute (ERI)
Your role in your Organisation	MSc Student at University of Exeter, Darwin Wildlife Biologist at the Environmental Research Institute
Start/end date of Fellowship	1 September 2012 to 30 September 2013
Location	University of Exeter, Cornwall Campus, Penryn Cornwall TR10 9EZ
Darwin Fellowship funding (£)	£ XXX
Type of work (e.g. research, training, other, please specify)	MSc Conservation and Biodiversity
Main contact in UK Organisation	Dr. Patrick Doncaster
Author(s), date	Said Gutierrez, 15 October 2013

1. Background

- *Briefly describe your involvement in the Darwin project before the start of your fellowship.*

I worked as the Darwin Junior Wildlife Biologist at the ERI on Darwin project #17-012. I worked closely with the project coordinators, receiving training and working to achieve the goals of the project. I was involved in collection and management of field data to investigate movement patterns and estimate density of mammal species using large-scale camera trapping, live trapping, sign surveys, radio telemetry, spatial analysis (GIS) and mark-recapture analysis. I was directly responsible for the telemetry in the field, working with field assistants from the local communities within the corridor, and with national and international interns. I was also responsible for maintaining the telemetry database, analysis of telemetry data and organising the field team. I represented the ERI and the Darwin project at various national meetings and workshops.

- *Describe aim and objectives of the Fellowship, and programme of work.*

The Darwin Fellowship was awarded to undertake formal postgraduate study through an MSc in Conservation and Biodiversity at the University of Exeter. This compliments the

practical training in field work, data management and analysis that I have received during the Darwin Initiative Belize large-mammal corridor project. The combination of practical training on the Darwin project and the theoretical and analytical training in conservation science offered by the MSc will ensure that I return to Belize as a well-trained scientist, ready to work with the Environmental Research Institute, and to enact the legacy of the Darwin project.

- *Briefly describe the roles of the UK and Fellow's institutions.*

The Centre for Biological Sciences at the University of Southampton aims to advance biological knowledge by research, communicate biological understanding through learning, and apply biological know-how for the benefit of society. The Centre hosted the Belize Large-Mammal Corridor Project (Darwin 17-012). Project leader Dr C. P. Doncaster provides advice on the fellowship research project during the study programme at University of Exeter, and has extended the access to all Southampton electronic resources. These include electronic journals, Web of Science, JStor, and many other search tools and archives for global scholarship. This collaboration between Fellow and host institution will continue throughout the rest of the fellowship time.

The ERI of the University of Belize aims to build national capacity for effective management, sustainable use and conservation of Belize's natural resources. The Darwin Initiative Belize large-mammal corridor project is a model to build capacity in Belize. Young Belizeans with aptitude and motivation receive hands-on training in ecological research and applied conservation to foster a next generation of in-country experts. Having the Darwin Fellow further his education at the postgraduate level will strengthen the institutional capacity of the ERI and assist in upholding the mission and vision of the institute. The ERI has been supporting and will continue to support the Darwin Fellow in his pursuit of higher education and professional development and the institute will benefit greatly from newly acquired knowledge to impart to the greater cause of conservation in Belize.

- *If you have undertaken a formal course of training, please provide a brief explanation of the course and a link to the course website if available.*

The Fellowship was granted to pursue a one year Masters Programme in Conservation and Biodiversity at the University of Exeter at the Penryn Campus in Cornwall. The Programme focuses on conservation issues and addresses the needs for the better management of biodiversity in the developing world. Module courses are aimed at professional development and capacity building of students. Development of writing skills and communication of scientific work is an important component of these modules. Research projects are aimed at promoting and building capacity in the areas of ecological research for conservation initiatives. These projects are implemented around the world especially in countries rich in

biodiversity but poor in resources and capacity. Details of the Programme can be found on the University of Exeter's website by visiting <http://biosciences.exeter.ac.uk/cec/postgraduate/conservation/>

2. Achievements

- *Summarise the work undertaken during your Fellowship. What were the main activities undertaken. Highlight any work undertaken but not originally planned and explain why this happened. Highlight any problems encountered and how they were overcome.*

The MSc in Conservation and Biodiversity included the following modules:

Key Skills (BIOM 4005), Ecological Census Techniques (BIOM 4021), Approaches in Evolutionary and Behavioural Ecology (BIOM 4018), Africa Field Course (BIOM 4015), Quantitative Biology (BIOM 4010) and the MSc research project (BIOM 4009). All course modules have been completed with a total 180 credits earned for the MSc in Conservation and Biodiversity. The satisfactory completion of all course modules has been a significant personal and professional achievement for me. I have been awarded an MSc in Conservation and Biodiversity with Merit.

- *What have been the main achievements of your fellowship? Key documents should be annexed to this report.*

The most important achievement of my fellowship is the Merit award for my degree. It proved to be a challenge for me and I proved to be able to perform beyond my own expectations. Official Certificate of the award is pending and will be issued at Graduation which is scheduled for July 2014. A letter from the University of Exeter specifying dates of commencement and completion including award issued, can be found annexed to this report. Official transcripts have been posted to my current address in Belize and a scanned copy of the transcript will be forwarded as soon as I am in receipt of the official document.

3. Outcomes, lessons and Impact

- *Do you feel that the work undertaken during your Fellowship has improved skills that are relevant and important for your work in your organisation? How are you planning to apply those skills in future work?*

In addition to attaining an award of merit, I am confident that my skills in scientific writing and reporting have been greatly improved. Not only have these skill improved but there is a great wealth of knowledge that I gathered throughout the year. New skills in experimental designs

and data analysis for ecological research will be my best asset at the ERI. As a wildlife biologist it will be essential to apply knowledge in scientific writing and reporting at the ERI. These skills will help to further ecological research and lead to publications that will stem from the ERI and the original Darwin Project.

- *What arrangements have been made for your future involvement, what more could be done, what discussions have taken place with your original employer to ensure that your new skills are utilised?*

Upon return to the ERI, ecological research projects will be implemented with much of the work under my supervision. Furthermore, I will be involved in the Natural Resource Management Program at the University of Belize as a lecturer. Within the program I will be involved in leading field courses in wildlife ecology, conservation and management.

- *Has the Fellowship helped to improve your capacity to solve practical problems related to the sustainable use and/or conservation of biodiversity in your country?*

Through this fellowship I have managed to develop my professional skills and gather a wealth of new knowledge which adds to the capacity of a growing environmental and conservation community in Belize. Although small, Belize as a country faces great challenges for conservation which can be addressed by implementing sound social and scientific approaches to alleviate the issues at hand. I will join the network of professionals in conservation with the aim of continuing to grow the ecological knowledge of Belize and assist in any way possible to steer conservation initiatives in the right direction.

- *Have you had the opportunity to make contacts with other UK biodiversity institutions, intergovernmental organisations, NGOs or the private sector during your fellowship? Will these contacts be useful for your future work, and how are you planning to maintain them?*

As graduate of the University of Exeter I have and will maintain contact with the Centre for Ecology and Conservation which promotes ecological research for conservation around the world. Fellows and Professors at the Centre were mentors throughout my Fellowship and I am grateful for all their help. Dr Patrick Doncaster from the University of Southampton will always be a great mentor and professional colleague and will certainly work together in the future. Through the initiative of one of our professors at the University I was fortunate to visit and learn about the work of Fauna and Flora International (FFI) around the world as well as the more relevant work being implemented in Belize. I now have a wider network of contacts within Belize and the UK as well. Through FFI I now have support for scientific writing through the editing team from the journal Oryx.