## **Darwin Initiative: Half Year Report**

(due 31 October 2009)

Project Ref. No. 17-012

Project Title Belize large-mammal corridor project

Country(ies) Belize

UK Organisation University of Southampton School of Biological SciencesCollaborator(s) Panthera, University of Belize, Belize Forestry Department

Project Leader C. P. Doncaster

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**Project website** http://darwin.defra.gov.uk/project/17012/

http://www.belizewildliferesearch.com/index\_files/Page972.htm

## 1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project.

The project held its first Workshop at the Belize Forest Department (11/9/2009), hosted by Forest Department coordinator Mr Hanson, and attended by Project Leader Dr Doncaster, main project partner Dr Harmsen, and project consultant Dr Foster. We discussed options for visiting schools to promote wildlife law and potential for using retired police personnel to focus on prosecutions for wildlife offences. It was agreed to explore potential in Belize and UK to create markets for food products from sustainable farming the corridor area. A second Workshop was held at the University of Belize (14/9/2009), hosted by teaching coordinator Dr Kay, and attended by Drs Doncaster, Harmsen, Foster, Mr Hanson and project consultant Mr Figueroa. We discussed the activities summarised below.

Flights for aerial photography were conducted by Ms Kathy Zeller of Panthera in May-June. Despite wet-season clouds, photos are now collated for half the study area. Ms Zeller will complete the survey in the dry season (Feb 2010). A camera-trap grid has surveyed for individually identifiable species across an effective area of ~250 km² in the northwest of the proposed corridor area. We are now moving the grid SE to survey the region linking the two protected-area blocks in the eastern part of the study area. Initial results reveal much hunting activity in areas near human settlements during the dry season, declining in the wet season. Camera traps indicate a high density of jaguars and tapirs with signs of reproduction (photos and footprints of young accompanying adults), and lower levels of large game such as peccary than in protected areas. Data from a previous study have now been analysed to optimise the surveys for prey species that are not individually identifiable. These surveys are due to start in December-January, and we have already identified half of the transects and camera locations.

Mr Figueroa has been elected Senator, which gives the project direct access to government. Dr Harmsen, Mr Figueroa and Dr Alan Rabinowitz (Panthera) have met with the Minister of Agriculture (Mr Montero), the Minister of Natural Resources and the Environment (Mr Vega) and two area representatives within the proposed corridor (Mr Whits and Mr Hutchinson). They explored the willingness of government to put potentially crown land aside for conservation. This discussion is currently being pursued by Mr Figueroa in his Senator role.

The incorporation within the Darwin project of Mr Figueroa's PhD study has allowed us to bring forward the trapping efforts for jaguars, pumas and tapirs. Panthera is funding upgrade of VHF collars to GPS for jaguars and pumas, which will improve their data collection. At the time of writing, collars are functioning on one puma and two jaguars, one either side of the corridor-bisecting highway which will provide valuable data on the barrier effect of the highway.

Good contacts have been established with the Belize Livestock Producers Association (BLPA), with whose assistance we hope to work towards nationwide implementation of

mitigation measures to prevent or lower conflict between livestock and carnivores. The corridor study area has been given priority in the implementation of trials on farms.

Ownership of large land parcels within the proposed corridor area was known in advance but we did not know all the land owners for the smaller plots. Mr Hanson has now completed the database of land tenure and even identified incorrect records within the national database. We are beginning to contact all land owners to assess their willingness to preserve wildlife connectivity on their properties within a functional corridor.

We hired Arthuro Ramos as a full-time chief field assistant for the project. Mr Ramos lives locally and is highly respected by the community. As a special constable he has the right to arrest people committing wildlife offences. He is now fully trained in camera trapping and monitoring, and was present for the capture of one of the jaguars. Drs Harmsen and Foster taught the Wildlife Management course for the BSc in Natural Resource Management at the University of Belize. This allowed us to identify those suitable for further work within the Darwin Initiative. A 4-day field course was held to teach the students how to conduct questionnaires, after which they carried out large-scale interviews within communities in the corridor to assess levels of hunting, socio economic factors, and general attitudes towards wildlife.

Publicity and outputs for the Darwin Initiative project include:

- National television and radio appearances of Senator Figueroa, Mr Hanson and Dr Rabinowitz discussing wildlife issues and conflict between jaguars and livestock owners;
- Official launch of the Darwin Initiative project at the British High Commission;
- Development and launch of www.belizewildliferesearch.com featuring the Darwin project;
- Foster, R.J., Harmsen, B.J., ... and Doncaster, C.P. (In press) Food habits of sympatric jaguars and pumas across a gradient of human disturbance. *Journal of Zoology (London)*.

## 2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

Flash floods in August-September caused temporarily delays to trapping and some trap loss.

The appointment of a mammal monitoring coordinator requires completion of Belize University's standard advertising and selection process which will take until December-January. We have noted considerable interest in the post and we foresee no problem with filling it.

The Darwin Initiative Consortium Agreement was the first of its type to be run through Southampton University, with the result that it took until early September to obtain signatures of all parties. This delay has held back monies for ordering and purchasing project equipment.

Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?

The log-frame in the original submission was slightly modified on the recommendation of the LTS Portfolio Manager, in order to clarify outputs and synchronise numbering between log-frame and activities. The revision was accepted by Lesley Brown of LTS on 28/4/2009.

Discussed with the DI Secretariat: yes, in April 2009 (as above)

Changes to the project schedule/workplan: yes, in April 2009 (as above)

## 3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

The extreme low level of the pound at the start of the project lowered our purchasing power initially, but it has now recovered to the level used in the budget so is not currently an issue. We intend to delay purchasing a project vehicle until 2010 (budgeted at US\$7000), when we expect additional funding of US\$4000 from Panthera so that we can purchase a better quality vehicle. For now we have full use of the Panthera vehicle