

Darwin Initiative

Half Year Report (due 31 October each year)

PLEASE NOTE: Due to the increased number of reports expected in 2005, we will not be able to confirm receipt of reports but will contact you individually should any questions arise

Project Ref. No.	162-12-017
Project Title	Building capacity and determining disease threats to endemic Galapagos fauna
Country(ies)	UK, Ecuador
UK Organisation	Zoological Society of London, University of Leeds
Collaborator(s)	Galapagos National Park, University of Guayaquil
Report date	<i>October 2005</i>
Report No. (HYR 1/2/3/4)	<i>HYR-3</i>
Project website	<i>http://www.galapagoslab.org</i>

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

Institutional Capacity Building and Training

The milestones for capacity building and training continue to be met. The established training programmes continue according to schedule. In addition over the summer Dr. Simon Goodman conducted 5 half-day workshops in Galapagos on data analysis and statistics for project staff and students at the laboratory. At the end of September Marilyn Cruz went to visit the Dept of Veterinary Pathology, Western College of Veterinary Medicine at the University of Saskatchewan, Canada for a 2 month residency training in veterinary pathology. This training is being conducted in collaboration with staff from that department. Plans were also made for further workshops in wildlife anaesthesia, marine mammal pathology, use of ELISA assays, and phylogenetic analysis to be conducted in early 2006.

Research and disease monitoring programme

Our established research and monitoring programmes are on schedule and are now generating outputs for publication in international peer reviewed scientific journals (see below). We expect to complete major data sets on disease prevalence in tortoises and sea lions in early 2006. We now have mounting evidence from gross pathology and molecular analyses that mycoplasma infections may be responsible for mortality among wild tortoises on Santa Cruz island, and are currently investigating the cause of dermal tumours that we recently discovered to have high prevalence in tortoises on Santa Cruz. As far as we know this is the first report of such tumours in tortoises anywhere in the world and may constitute a significant finding. These studies are also having direct influences on conservation policy (see below).

Education and conservation awareness

Our education and awareness programmes with the Galapagos local community and stakeholders continue according to the anticipated schedule. In addition to regular visits to the laboratory by high school students we have taken two local high school students on as volunteers who assist with many aspects of the project. The undergraduate and masters students working in the lab will complete their projects next year. In October we held a major workshop for local stakeholders to discuss the implications of West Nile Virus (WNV) introduction to Galapagos and implementation of control measures. Earlier in the year our research on a WNV introduction risk assessment (see Kilpatrick et al.) led to changes being made to Ecuadorian law, requiring treatment of all transport to Galapagos to prevent the accidental transport of insect disease vectors. This workshop involved all community and conservation stakeholders in Galapagos and discussed the steps necessary to implement this new

legislation. The need for these control measures was unanimously agreed. At the time of writing the industrial contracts and equipment required to treat aircraft are in place, and the 'disinsection' treatment of aircraft flying to Galapagos is expected to commence shortly. This is a very significant and important conservation achievement since WNV was confirmed as being present in Columbia at the end of 2004, meaning it has either reached Ecuador already, or will do so in the next year. Eliminating the potential transport of mosquitoes on aircraft is the single most important measure in reducing the risk of WNV introduction to Galapagos (see Kilpatrick et al.).

Dissemination of results and reporting

The website continues to be updated and the following papers have been accepted or published:

Kilpatrick AM, P Daszak, SJ Goodman, H Rogg, LD Kramer, V Cedeño, and AA Cunningham. West Nile virus Threatens Galápagos through Tourism. *Conservation Biology* (In press).

Whiteman NK, SJ Goodman, BJ Sinclair, T Walsh, AA Cunningham, LD Kramer, and PG Parker (2005). Establishment of the avian disease vector *Culex quinquefasciatus* Say 1823 (Diptera: Culicidae) on the Galápagos Islands, Ecuador. *IBIS*, 147: 844-847.

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.

None to report

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

Not applicable

Discussed with the DI Secretariat: no/yes, in..... (month/yr)

Changes to the project schedule/workplan: no/yes, in.....(month/yr)

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

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with the Darwin Secretariat directly.

Please send your **completed form by 31 October each year per email** to Stefanie Halfmann, Darwin Initiative M&E Programme, stefanie.halfmann@ed.ac.uk. The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message.**