

# 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**

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| <b>Project Ref. No.</b>         | 162/12/018   |
| <b>Project Title</b>            | Climate Change and Conservation of Galapagos Bird Species  |
| <b>Country(ies)</b>             | Ecuador  |
| <b>UK Organisation</b>          | University of Oxford   |
| <b>Collaborator(s)</b>          | Galapagos National Park Service (GNPS), Charles Darwin Foundation (CDF)  |
| <b>Report date</b>              | 23 October 2005  |
| <b>Report No. (HYR 1/2/3/4)</b> | HYR3   |
| <b>Project website</b>          | <a href="http://www.wildcru.org/research/es/galapagosbirds.htm">http://www.wildcru.org/research/es/galapagosbirds.htm</a> and see also <a href="http://www.wildcru.org/research/darwininitiative.htm">http://www.wildcru.org/research/darwininitiative.htm</a> |

### **Outline progress over the last 6 months (April – September 2005) against the agreed baseline timetable for the project.**

1. Ongoing data analyses continue, particularly on the effect of El Niño on penguins; the foraging behaviour, breeding biology, movements and dispersal of cormorants, and on the effects of predators, parasites and diseases on both penguins and cormorants. To assess the effect of climate change, bird demographic factors are correlated to climatic variables (sea temperature, sea level and precipitation).
2. Significant progress in the writing of thesis chapters and manuscripts for publication has been made. Chapters 1 and 2 are published, 3 and 4 are submitted, 5 and 6 are complete and ready to be submitted for publication. In total, the thesis is 60% complete and will be submitted in April 2006. (Please see previous Project Annual Report Number 2 of 30 April 2005 for reasons for the delay.)
3. Two manuscripts were accepted for publication: *Biological effects of El Niño on the Galápagos penguin* is to be published in *Biological Conservation*; and *Hematology, plasma chemistry, and serology of the Flightless Cormorant (Phalacrocorax harrisi) in the Galápagos Islands, Ecuador* is to be published in the journal of *Wildlife Diseases*.
4. As part of the dissemination of the project and with the aim of drawing national and international attention to the conservation status of the Galapagos Penguin and the Galapagos Marine Reserve, the PhD student of the Darwin team with two other renowned penguin biologists published an editorial in the journal *Science* “*Living laboratory in peril* (*Science* 308: 925; 13 May 2005)
5. Three technical reports were submitted to the Galapagos National Park Service on predation of feral cats on penguins, marking and relocation of penguins and cormorants and the annual census of penguins and cormorants.
6. As a joint collaboration between the Conservation Breeding Specialist Group (CBSG) and the Darwin team, significant progress has been made in the edition of the Population Viability Analysis (PVA) report for the conservation of the Galapagos Penguin. The edition is nearly completed and publication in English and Spanish is expected by December 2005. The PVA workshop was held in February 2005 (see annual report submitted to the DI in April 2005).

7. Due to the opportune presence of the Darwin Team on southern Isabela Island it was possible to record the predation of cats on penguins on that island. Subsequently, as a result of the recommendations of the Darwin Team, the Galapagos National Park Service initiated a campaign aimed at the control of feral cats from key penguin nesting areas.
8. Three Ecuadorian university students and 4 rangers were trained in ecological monitoring techniques and participated in monthly field trips to monitor penguins and cormorants at selected sites on Fernandina and Isabela islands
9. In addition to the monthly visits to monitor birds described above, three important boat trips were made to monitor environmental variables, birds and black rats on the Archipelago:
  - 1) 3-12 August 2005: download data from 20 fixed temperature loggers located at a depth of 10-20m
  - 2) 3-13 September 2005: annual census of penguin and cormorants
  - 3) 3-15 October 2005: monitoring and control of black rats
10. The project component on the foraging behaviour of penguins and cormorants, using GPS-TD and Preci-TD devices was completed in September 2005.
11. The GIS multilayered data base is continually updated as new results from the various project components become available.

**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.**

There have been no major problems in the last 6 months. After the events of political and social instability in 2004, which resulted in several types of conflicts and a rapid turnover of staff and directorship of the Galapagos National Park Service (GNPS), the conditions in the last 6 months at the GNPS and other Galapagos stakeholders associated with the project have become more stable. This stability has benefited project implementation including putting DI scientific recommendations into action (e.g. control of exotic predators and ecological monitoring).

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

No

**Discussed with the DI Secretariat:** No

**Changes to the project schedule/workplan:** No

**3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures? No**

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](mailto: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.**