Darwin Initiative

Annual Report

1. Darwin Project Information

Project Ref. Number	*14-039*
Project Title	*Large-scale habitat mapping and local conservation initiatives for Jerdon's courser, India*
Country(ies)	*India*
UK Contractor	*CAER, University of Reading*
Partner Organisation(s)	*Bombay Natural History Society, India* *RSPB, U.K*
Darwin Grant Value	*£163,443*
Start/End dates	*1st July 2005 for 3 years*
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	*1stJuly 2005 to 30 April 2006* *Report No. 1*
Project website	*n/a*
Author(s), date	*Jeganathan Panchapakesan and Ken Norris*

2. Project Background

- Briefly describe the location and circumstances of the project and the problem that the project aims to address.

*Jerdon's courser (*Rhinoptilus bitorquatus*) is one of the 13 most endangered of India's 170 globally threatened or near-threatened bird species. As a result, it is of global conservation importance. Jerdon's courser is listed under Schedule 1 of the Indian Wildlife Protection Act, and is, therefore, given high conservation priority by the Indian Central and State Governments. This resulted in the establishment of protected areas in areas where the birds have been or were formerly recorded by the Andhra Pradesh Forestry Department. Today, the major threat to the persistence of Jerdon's courser is the loss and degradation of scrub forest within which it lives, due to development pressure (e.g. irrigation schemes), habitat conversion to agriculture, and the inappropriate use/management of remaining scrub forest. Jerdon's courser is considered as a priority species under the National Wildlife Action Plan (2002-2016) of the Government of India. The plan states that it will "identify suitable alternative homes for single isolated populations such as Jerdon's courser [and several other species], and manage the same as protected areas effectively".*

This project is a development of a previous Darwin funded project (162/9/018). The original project focused on ecological studies relating to habitat selection and population monitoring. Present project builds on this work and it focuses on developing the analytical tools to identify and map suitable habitats over large-scales and use this information to underpin local conservation initiatives.

3. Project Purpose and Outputs

- State the purpose and outputs of the project. Please include your project logical framework as an appendix and report achievements and progress against it (or, if applicable, against the latest version of the logframe).

Project purpose: *To build the information-base, supporting tools and capacity among researchers, local Government officials and local communities to identify and protect sites important for the critically endangered Jerdon's courser in Andhra Pradesh, India.*

Outputs:

(1) Imagery analysis completed giving estimates of habitat loss, threats and potentially new areas supporting birds.

(2) Partner organisations able to assess and monitor the long-term status of Jerdon's courser and its habitat.

(3) Plans for site designation in place for appropriate areas.

(4) Community Conservation Areas in place.

(5) Monitoring and management manual published and distributed.

(6) Dissemination workshops.

(7) Publications and presentations.

Log-frame is appended.

- Have the outputs or proposed operational plan been modified over the last year, for what reason, and have these changes been approved by the Darwin Secretariat? (Please note that any intended modifications should be discussed with the Secretariat directly rather than making suggestions in this report).

Not significantly (see Annex 1). The field team has been heavily involved in work that is additional to the main outputs of the project. This has involved ingoing discussions about the routing of an irrigation canal that originally posed a severe threat to the scrub habitat supporting Jerdon's courser. These commitments have not altered the outputs, but development of the local conservation initiatives within the current reporting period has been slower than we would have otherwise hoped. Having said this, we are still on track to deliver our outputs in this regard against the timetable outlined in our original proposal.

4. Progress

- Please provide a brief history of the project to the beginning of this reporting period. (1 para)

This reporting period is the first of the current project. However, the current project is an extension of a previous one (162/9/018). This previous project ended in 2005 and was primarily aimed at developing some of the underlying ecological knowledge necessary to more effectively describe the distribution of the Jerdon's courser population, understand its habitat requirements, and plan more effective management. The work plan of the current project, and work undertaking during this reporting period, builds on these previous studies.

Summarise progress over the last year against the agreed baseline timetable for the period and the logical framework (complete Annex 1). Explain differences including any slippage or additional outputs and activities.

Satellite imagery analysis: *Activity milestones achieved. A field visit will take place at the end of April 2005 to obtain ground-truthing data.*

Field research programme: *The monitoring of existing sites has been undertaken but at a lower level than we originally planned. There are two reasons for this: (1) the additional work associated with irrigation canal route (see below) and (2) some preliminary radio-tracking work. We left radio-tracking studies out of our proposal for the current project because of concerns about the granting of permission. However, late last year we received approval form the State and Indian Governments to trap and radio-track two birds. This followed a series of field demonstrations and workshops in late 2005. Since permission was granted some attempts have been made to trap birds without success before the irrigation canal issue surfaced.*

Site designation: *No milestones in the current reporting period, although some progress has been made (see Annex 1).*

Community Conservation Areas (CCAs): *No formal milestones this reporting period, although ongoing discussions have been delayed by the irrigation canal issue.*

Manual development: *No milestones this reporting period.*

Workshops: *We took a decision to delay the planned workshop for September 2005. This was in part due to the granting of the radio-tracking permission, but then further delayed by the irrigation canal issue. We plan now to hold this workshop in September 2006 and use it to report on the radio-tracking, canal issue and future project plans.*

Publicity material: *The project has achieved considerable publicity through the canal issue. This has generated press coverage in India and in the UK through the work of BNHS and RSPB. Articles associated with the irrigation canal are appended to this report. In addition, the project has been discussed at two academic seminars in the UK, and at one talk for the general public.*

- Provide an account of the project's achievements during the last year. This should include concise discussion on methodologies and approaches by the project (e.g. research, training, planning, assessment, monitoring) and their consequences and impacts as well as results. Please **summarise** content on methodologies and approaches, and, if necessary, provide more detailed information in appendices (this may include cross-references to attached publications).

The main achievement of the project this year is its work with respect to the irrigation canal. Two articles are attached to this report that give details. Briefly, it was discovered that work was underway to construct an irrigation canal that would have caused the loss of scrub habitat in areas known to hold Jerdon's courser. BNHS, aided by RSPB, campaigned to have the canal re-routed. This eventually went before the Indian courts who ruled that a compromise route should be agreed. This discussion is now taking place and the field team are hosting site visits to formulate a plan to present back to the court. Although this wasn't an original activity for the project, without the project it is quite possible that resultant habitat loss could have caused the extinction of Jerdon's courser. This issue is still politically quite sensitive in India, but we will be able to provide a more complete description over the next reporting period. Until this we would request that no UK-based publicity is given to this work without consultation with the project team.

The project has identified a number of approaches that can be used to analyse satellite images more effectively to identify scrub habitats. These have built on previous work, and are now due to be ground-truthed in the field. Our approach has been to start with a simple land-use/land cover classification, and refine the

classification system used by adding a digital topographic model and the temporal analysis of a series of images.

The UK partners provided training in India on radio-tracking methods, and participated in field-based workshops, led by BNHS staff, that demonstrated these techniques to Indian officials. This was a highly successful exercise because it resulted in permission to undertake radio-tracking work, but also because it has built on BNHS' reputation.

- Discuss any significant difficulties encountered during the year and steps taken to overcome them.

None other than the need to react to developments locally that are described elsewhere in this report in the context of the irrigation canal. This is only a difficulty in the sense that it detracts from time that could otherwise be devoted to the project activities, but it was clearly a very high short-term priority for BNHS.

- Has the design of the project been enhanced over the last year, e.g. refining methods, indicators for measuring achievements, exit strategy?

Not to any great extent.

- Present a timetable (workplan) for the next reporting period.

This will follow the timetable outlined in our original proposal with the exception that we will hold a dissemination and planning workshop in autumn 2006.

5. Actions taken in response to previous reviews (if applicable)

- Have you responded to issues raised in the review of your last year's annual report? Have you discussed the review with your collaborators? Briefly describe what actions have been taken as a result of recommendations from last year's review.

Not applicable.

6. Partnerships

- Describe collaboration between UK and host country partner(s) over the last year. Are there difficulties or unforeseen problems or advantages of these relationships?

The relationship between the UK partners and BNHS have never been better. When the previous project started it was largely led by the UK partners, but the current project has considerably more, and increasing, local impetus. It is now a project led largely by BNHS with technical input and support from the UK partners. We anticipate no difficulties, and see the increasing role of BNHS in Jerdon's courser conservation as a very positive step towards building a long-term legacy for the project.

- Has the project been able to collaborate with similar projects (Darwin or other) in the host country or other regions, or establish new links with / between local or international organisations involved in biodiversity conservation?

The main collaboration in India has been between BNHS and the Andhra Pradesh Forestry Department (APFD). This relationship has been developed during the previous project and is now functioning very well. The local conservation work is evidence of this, and BNHS and APFD were heavily involved in the irrigation canal issue, and radio-tracking demonstration and subsequent plans.

7. Impact and Sustainability

- Discuss the profile of the project within the country and what efforts have been made during the year to promote the work. What evidence is there for increasing

interest and capacity for biodiversity resulting from the project? Is there a satisfactory exit strategy for the project in place?

The project has arguably never had such high profile as it has had during the irrigation canal discussions. The fact that conservation interests have been incorporated into this kind of development planning is evidence of an increasing interest and capacity for conservation in India. This was based on information generated by the Darwin project, and partnerships developed within it. We are still a few years aware from an exit from this project, but the gradual transfer of project direction and responsibilities to BNHS suggests that prospects for a sustainable legacy are very good.

8. Outputs, Outcomes and Dissemination

- Explain differences in actual outputs against those agreed in the initial 'Project Implementation Timetable' and the 'Project Outputs Schedule', i.e. what outputs were not or only partly achieved? Were additional outputs achieved?

We anticipate achieving all the original project outputs. Additionally, we have achieved a number of research, training, dissemination and reporting outputs with respect to the irrigation canal and radio-tracking work.

- Provide details of dissemination activities in the host country during the year, including information on target audiences. Will dissemination activities be continued by the host country when the project finishes, and how will this be funded and implemented?

As described elsewhere, this has been led by BNHS particularly in the context of the canal issue. The fact that BNHS is leading this work suggests that dissemination activities will continue after the project as part of BNHS' ongoing conservation work in India.

- Please expand and complete Table 1. **Quantify** project outputs over the last year using the coding and format from the Darwin Initiative Standard Output Measures (see website for details) and give a brief description. Please list and report on appropriate Code Nos. only. The level of detail required is specified in the Guidance notes on Output Definitions, which accompanies the List of Standard Output Measures. Only the summarised totals after the end of your project will be recorded on the Darwin project database from your final report (the totals below will help you to keep track on a yearly basis).

Table 1. Project Outputs (According to Standard Output Measures)

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
5	Research Fellows involved in the project[1]	1				
6A, B	Training associated with the project field methods[2]	>10 people for 1-2 days each				
8	UK staff in India	2 person weeks				
14A, B	Workshops, etc organised and attended	1 field workshop was organised for the radio-				

		tracking work, >2 attended that featured project work
15A, B, C	Press releases and coverage	Irrigation canal issue was covered by the Indian press and by the BBC (3 stories in total)
18C	TV coverage in India	Irrigation canal issue covered by local TV (1 news item)
23	Fund raising	£34,867

1. *We originally intended the satellite imagery work to be undertaken by an Indian MSc student but she was offered and started a UK PhD programme in October 2005. We obtained permission from the Secretariat to change this post into a UK-based post-doc instead, which we did.*
2. *We originally intended for an APFD staff member to spend 8 weeks with the field team. Instead field workshops and meetings to discuss the project with respect to the irrigation canal have involved training and dissemination activities to a broader range of Government officials for shorter periods of time.*

- In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website Publications Database. Mark (*) all publications and other material that you have included with this report.

Table 2: Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Survey Report*	Jeganathan, P., Rahmani, A.R., & Green, R.E. (2005) Construction of Telugu-Ganga Canal in and around two protected areas in Cuddapah District, Andhra Pradesh, India. Immediate threat to the world population of the critically endangered Jerdon's Courser *Rhinoptilus bitorquatus.*	Bombay Natural History Society, Mumbai, India.	www.bnhs.org	

Newsletter	Jeganathan, P., (2005). Telugu-Ganga Canal construction in Jerdon's Courser habitat. *Mistnet*. Oct-Dec. Vol.6. No.4.	IBCN/BNHS, Mumbai, India.	Director, BNHS
Magazine*	Jeganathan, P., (2005). The Canal and the Courser. *Hornbill*.	BNHS, Mumbai, India.	Director, BNHS
Bulletin	Jeganathan, P., (2006). Jerdon's Courser Habitat Under Threat. *Pitta*. Vol.3.No.2. February 2006.	Birdwatcher's Society of Andhra Pradesh, Hyderabad, India.	Director, BNHS
Magazine*	Jeganathan, P & Rahmani, A.R. (2006). Digging a grave for the Jerdon's Courser. *Sanctuary Asia*. Vol.XXVI No.2. Pp.34-37.	Sanctuary Asia, Mumbai, India.	Director, BNHS

9. Project Expenditure

- Please expand and complete Table 3.

Table 3: Project expenditure <u>during the reporting period</u> (Defra Financial Year 01 April to 31 March)

- Highlight any recently agreed changes to the budget and explain any variation in expenditure where this is +/- 10% of the budget.

10. Monitoring, Evaluation and Lessons

- Discuss methods employed to monitor and evaluate the project this year. How can you demonstrate that the outputs and outcomes of the project actually contribute to the project purpose? i.e. what are the indicators of achievements (both qualitative and quantitative) and how are you measuring these?

Our methods are outlined in Sections 18 and 22 of our original proposal and we have followed these during the reporting period. Although this project is new, the outputs and outcomes of the project, plus those from the previous project, are already making a contribution to the project purpose. The irrigation canal issue provides direct evidence. The information-base *developed by the project was used by* researchers *from BNHS and* Government officials *to* identify *and* protect *(from habitat loss arising from canal construction)* sites important for Jerdon's courser*.*

- What lessons have you learned from this year's work, and can you build this learning into future plans?

There are no obviously new lessons. The UK partners have now worked in India for a number of years, and the project team has learnt how to develop and maintain the collaborative relationships necessary to sustain effective conservation work. Collaboration is the key to this project and its legacy, and this is currently working well. We understand the need to maintain existing relationships through participation and effective communication.

11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum)

■ I agree for ECTF and the Darwin Secretariat to publish the content of this section

In this section you have the chance to let us know about outstanding achievements of your project over the year that you consider worth highlighting to ECTF and the Darwin Secretariat. This could relate to achievements already mentioned in this report, on which you would like to expand further, or achievements that were in addition to the ones planned and deserve particular attention e.g. in terms of best practice. The idea is to use this section for various promotion and dissemination purposes, including e.g. publication in the Defra Annual Report, Darwin promotion material, or on the Darwin website. As we will not be able to ask projects on an individual basis for their consent to publish the content of this section, please note the above agreement clause.

At some future point we may wish to publicise the canal irrigation work supported by this project as a significant achievement in the sense that Darwin can legitimately claim to have contributed to saving a particular threatened species from imminent extinction. However, as stated above this issue is still not concluded and too politically sensitive to publicise at the present time.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2005/2006

Project summary	Measurable Indicators	Progress and Achievements April 2005-Mar 2006	Actions required/planned for next period
Goal*:* To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources			
Purpose *(insert original project purpose statement)* *To build the information-base, supporting tools and capacity among researchers, local Government officials and local communities to identify and protect sites important for the critically endangered Jerdon's courser in Andhra Pradesh, India.*	*(insert original purpose level indicators)* *New knowledge on the spatial location of potentially suitable habitats, threats to the remaining habitat and the locations of new sites supporting birds used for the identification, designation and management of key sites.* *Effective management of existing areas.* *Establishment of new protected areas.*	*(report impacts and achievements resulting from the project against purpose indicators – if any)* *The canal irrigation issue shows that the project has established 'effective management of existing (protected) areas' and thus has already contributed directly to the project purpose. Details are given in Section 10.*	*(report any lessons learned resulting from the project & highlight key actions planning for next period)* *Effective collaborative relationships between UK partners, BNHS and Indian State and National Government is the key.* *Project dissemination and planning workshop in autumn 2006 to continue to maintain and build these relationships.*
Outputs			
(insert original outputs – one per line)	*(insert original output level indicators)*	*(report completed activities and outcomes that contribute toward outputs and indicators)*	*(report any lessons learned resulting from the project & highlight key actions planning for next period)*

(1) Imagery analysis completed giving estimates of habitat loss, threats and potentially new areas supporting birds.	*(1) Report on new areas drafted. Minimum of 1 Indian student trained in satellite imagery analysis.*	*Images and preliminary analysis done. Ground-truthing fieldwork imminent. Training not done as this work is no longer done by Indian student*	*As outlined in the original workplan*
(2) Partner organisations able to assess and monitor the long-term status of Jerdon's courser and its habitat.	*(2) Minimum of 1 BNHS staff member and 1 APFD staff member trained in monitoring and management methods.*	*On going training of BNHS staff member (main author of this report). Training and dissemination to Government officials conducted in the field in relation to radio-tracking and irrigation canal*	*As outlined in the original workplan*
(3) Plans for site designation in place for appropriate areas.	*(3) Discussions on new sites for designation initiated.*	*Discussions on site designation with respect to the irrigation canal have been initiated and are currently ongoing*	*As outlined in the original workplan*
(4) Community Conservation Areas in place.	*(4) CCAs developed in at least 2 areas not covered by existing protected areas.*	*Plans initiated prior to this project are still ongoing.*	*As outlined in the original workplan*
(5) Monitoring and management manual published and distributed.	*(5) Manual drafted and reviewed, publication date established, 50 copies produced/distributed.*	*No activities undertaken on this yet*	*As outlined in the original workplan*
(6) Dissemination workshops.	*(6) Three workshops planned, timetabled and conducted.*	*Field workshops held with respect to radio-tracking and irrigation canal. Project workshop for September 2005 delayed until autumn 2006.*	*As outlined in the original workplan*
(7) Publications and presentations.	*(7) Six seminars, 3 press releases, 3 popular articles, 3 papers.*	*Media coverage and general articles/reports, etc put together for canal issue. Work covered in academic seminars in the UK. A*	*As outlined in the original workplan*

		paper on habitat loss has been submitted but not yet accepted.	

Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.