



Submit by 21 January 2005

DARWIN INITIATIVE APPLICATION FOR GRANT ROUND 13 COMPETITION:STAGE 2

Please read the Guidance Notes before completing this form. Applications will be considered on the basis of information submitted on this form and you should give a full answer to each question. Please do not cross-refer to information in separate documents except where invited on this form. The space provided indicates the level of detail required. Please do not reduce the font size below 11pt or alter the paragraph spacing. Keep within word limits.

1. Name and address of organisation

Name: University of Aberdeen	Address: School of Biological Sciences, University of Aberdeen, Aberdeen, AB24 2TZ
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2. Project title (not exceeding 10 words)

Conservation of Small Vertebrates in Tsingy Bemaraha National Park, Madagascar
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3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date:	October 2005	Duration of project: September 2008			
Darwin funding requested	Total	2005/06	2006/07	2007/08	2008/09
	£ 161.1k	£ 44.4k	£ 39.9k	£55.1k	£21.7k

4. Define the purpose of the project in line with the logical framework

<ul style="list-style-type: none"> To conserve the endemic small vertebrates of Tsingy Bemaraha National Park (TBNP) To design, test and implement a new small vertebrate conservation monitoring programme To build the capacity of TBNP staff and guides to effectively monitor priority species To conduct field research projects with Malagasy masters students in TBNP, and two other Tsingy protected areas, to provide new information as a basis for species action plans and setting conservation priorities To develop the capacity of TBNP as an ecotourism provider through education and awareness initiatives of guides

5. Principals in project. Please provide a one page CV for each of these named individuals

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)	Main project partner or co-ordinator in host country
Surname	Racey	Jenkins	Ravelomanantsoa
Forename (s)	Paul Adrian	Richard	Hery Lala
Post held	Regius Professor of Natural History	Honorary Research Fellow	Director of Park
Institution	University of Aberdeen	University of Aberdeen	Programme Bemaraha-ANGAP
Department	Biological Sciences	Biological Sciences	Animal Biology

6. Has your organisation received funding under the Darwin Initiative before? If so, give details

The Role of Fruit Bats in Maintaining Biodiversity in Madagascar (#162/07/027); The Conservation of Malagasy Microchiropterans and their Habitats (#162/10/024); Conservation of Wetlands and Associated Biodiversity in Northern Zambia (#162/13/001)

7. IF YOU ANSWERED NO TO QUESTION 6 describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims (50 words)

Activities (50 words)

Achievements (50 words)

8. Please list the overseas partners that will be involved in their project and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. What steps have been taken to ensure the benefits of the project will continue despite any staff changes in these organisations? Please provide written evidence of partnerships.

Madagascar National Parks Service (ANGAP) is responsible for the conservation of Madagascar's protected areas.

Programme Bemaraha will be the main implementing authority for management and monitoring recommendations. It will provide the structure within which the project will operate, allocating appropriate staff time and resources and providing logistical support (e.g. radio contact, storage, occasional vehicle use).

Department of Animal Biology, University of Antananarivo (DBA) will be our main national host-country partner responsible for selection and supervision of Darwin Trainees. This department is also the CITES authority for Madagascar.

WWF-Madagascar will collaborate on this project to improve the ecotourism capacity of TBNP and on taxonomy of small vertebrates

Department of Water and Forests, Ministry of the Environment (DEF). Provision of research permits; collaboration on CITES and trade of TBNP's endemic reptiles.

Birdlife International Madagascar Programme. Collaborative research and training on TBNP's endemic birds.

University of Toliara and School of Agronomy, University of Antananarivo. Selection and supervision of Darwin Trainees

9. What other consultation or co-operation will take place or has taken place already with other stakeholders such as local communities? Please include details of any contact with the government not already provided.

This project was conceived through discussions with TBNP senior management staff during 2003 and at a small workshop in July 2004. This project has the full cooperation of the TBNP staff and their ideas expressed during consultation form the basis of the proposal. In addition to the support of the park director, we have involved the project leaders from the education, ecotourism and monitoring teams, and have expressed a willingness and enthusiasm to collaborate on the project. Our meeting with TBNP's conservation education team in particular produced ideas for initiatives that should be undertaken outside of the protected area to widen the tangible benefit of the park to the local community and to include them in conservation activities. In this context we will also work with the government's education representative in the areas (Chef CISCO). In depth discussions with four of the TBNP's 18 guides resulted in direct requests to provide them with more information and training so that they can enhance the ecotouristic experience for the parks growing number of visitors.

PROJECT DETAILS

10. Is this a new initiative or a development of existing work (funded through any source?) Are you aware of any other individuals/organisations carrying out similar work, or of any completed or existing Darwin Initiative projects relevant to your work? If so, please give details explaining similarities and differences and showing how results of your work will be additional to any similar work and what attempts have/will be made to co-operate with and learn lessons from such work for mutual benefits.

This project is a new initiative developed from microchiropteran surveys conducted in TBNP during a previous Darwin project. None of the previous 7 Darwin Initiative projects in Madagascar have aimed to raise the institutional capacity of a protected area's management team. The Darwin chameleon project (DICE '96/'97) developed methods to be used in this project and its former trainees will be contacted for the post of Darwin Herpetologist. Similarly, former Darwin Trainees on two bat conservation projects will be encouraged to apply for the post of Darwin Bat Specialist. This will be a distinctive project because it will not be restricted to a single taxonomic group and will integrate Malagasy guide and student training into research projects that will provide information for species/habitat management and tourist/guide brochures.

11. How will the project assist the host country in its implementation of the Convention on Biological Diversity? Please make reference to the relevant article(s) of the CBD thematic programmes and/or cross-cutting themes (see Annex C for list and worked example) and rank the relevance of the project to these by indicating percentages. Is any liaison proposed with the CBD national focal point in the host country? Further information about the CBD can be found on the Darwin website or CBD website.

Article 6: development of conservation plans for small vertebrate species and cave-karst habitats [6a 5%] & integrating vertebrate conservation into training, research and education programmes [6b 5%]

Article 7: field surveys to identify priority species, monitoring and sampling of endemics [7a 8%], particularly those identified as threatened in 7a [7b 10%] & identify and quantify threats [7c 7%]

Article 8: develop specific guidelines for the management of key species and habitats [8b 5%], conservation action, education and research to safe-guard threatened small vertebrates [8d 10%] & assessing the impact of live-animal collection and forest degradation [8i 5%]

Article 10: recommendations on wise-practice tourism in sensitive areas and habitats [10b 5%]

Article 12: Malagasy reserve guides and students trained in field research and monitoring [12a 10%] & conservation research aimed at addressing priority issues for small vertebrate conservation [12b 10%]

Article 13: educating tour guides and tourists, permanent information boards and media coverage [13a 10%] & collaborating with ANGAP and WWF on environmental education [13b 5%]

Article 18: scientific cooperation between leading Malagasy and UK scientists [13b 5%]

12. How does the work meet a clearly identifiable biodiversity need or priority defined by the host country? Please indicate how this work will fit in with National Biodiversity Strategies or Environmental Action Plans, if applicable.

This project follows the priorities set out in TBNP's *Plan de Recherche sur la Biodiversité dans le Complexe d'Aires Protégées Tsingy de Bemaraha*. The existing monitoring programme is not scientifically rigorous and does not provide the park with the information needed to manage threatened species. TBNP is becoming increasingly popular with ecotourists, many of whom leave overwhelmed by the tsingy scenery, but dissatisfied by the quality and quantity of wildlife information provided by the park and its guides. TBNP has unparalleled levels of local endemism in Madagascar and increasing rates of forest degradation. The project was identified by the park's management team and developed by Racey and Jenkins. TBNP is listed in ANGAP's strategic plan as a site of exceptional biodiversity and ecotourism potential. This project will assist ANGAP in meeting its goals in (i) optimizing the network through research and ecological monitoring (ii) promoting ecotourism for sustainable development (iii) conducting in-depth follow-on studies to inventories (iv) promoting TBNP nationally and internationally

13. If relevant, please explain how the work will contribute to sustainable livelihoods in the host country.

TBNP and the associated ecotourist industry is a major regional employer and their continued prosperity depends on making the site a major international attraction for ecotourists. This project will contribute to this by (i) raising the profile of the park nationally and internationally (ii) directly and indirectly providing positive accounts of TBNP for guide books (e.g. Bradt, Lonely Planet) (iii) enhancing the visitor experience by training guides and providing resources, leading to positive word-of-mouth feedback by tourists (iv) recommending additional circuits/activities for tourists.

14. What will be the impact of the work, and how will this be achieved? Please include details of how the results of the project will be disseminated and put into effect to achieve this impact.

This project will determine the impact of unsustainable activities on endemic small vertebrates (e.g. fire, collection, forest loss & tour visits) and provide recommendations and action plans, based on data collected in a collaborative research and training programme with 7 host-country partners, for conservation action that can be realistically achieved using the park's resources. The project will raise the capacity of the park as a major regional ecotourism provider and its guides will follow a training programme that includes participation in field surveys and classroom teaching to build their capacity as ecotourist hosts. The project will take the lead in protected area conservation monitoring in Madagascar by revising, testing and implementing a new monitoring system that is based on simplicity, indicator species surveys and conservation priorities. Results will be disseminated locally to schools (posters, talks), regionally/nationally to government (reports, presentations) and internationally through papers and conferences.

15. How will the work leave a lasting legacy in the host country or region?

Protected Areas in Madagascar rely heavily on ecotourism for revenue but the level of training given to guides is minimal. This project will train TBNP's guides in the natural history of the park and give them the skills and knowledge needed to better host and guide visitors, and to train future generations of guides. This education and awareness programme could act as a model for the two other Tsingy reserves in Madagascar. The new monitoring system will assist the park in meeting its statutory obligations for biodiversity protection and give it the ability to detect change in the populations of endemic species. Guides will be fully integrated into the monitoring and able to maintain it without long-term input from visiting scientists. By training 4 Malagasy DEA students in a wide range of scientific disciplines we will provide government, ANGAP and other NGOs with the skills base need to tackle small vertebrate conservation issues in the future.

16. Please give details of a clear exit strategy and state what steps have been taken to identify and address potential problems in achieving impact and legacy.

This project aims to avoid the problems experienced by previous Darwin projects in Madagascar by avoiding short-term taxon-specific training programmes that leave a glut of biologists in the job market at the same time, all of whom are trained in the same taxon. Projects on birds, chameleons, rats and bats will be used to teach ecological techniques and conservation theory, but with no expectation that the students will pursue their specific subject as a career. Crucially, we will build the capacity of the TBNP team to effectively monitor, conserve and manage the park's resources using scientifically based criteria and recommendations. Knowledge accrued by guides during the project will be disseminated to visitors for years to come.

17. How will the project be advertised as a Darwin project and in what ways would the Darwin name and logo be used?

We will use the Darwin logo in the traditional ways; it will feature on all posters, clothing, action plans and educational materials. The Darwin name will feature prominently in all outputs. We will launch an innovative 'Darwin Competition' that encourages schools to participate in conservation events with a prize for the winning school (materials for building repair). The area was devastated by a cyclone in 2004 and park conservation efforts should occur in tandem with the development of local infrastructure and livelihoods.

18. Will the project include training and development? Please indicate who the trainees will be and criteria for selection and that the level and content of training will be. How many will be involved, and from which countries? How will you measure the effectiveness of the training and will those trained then be able to train others? Where appropriate give the length and dates (if known) of any training course. How will trainee outcomes be monitored after the end of the training?

All of TBNP's 18 guides, who escort tourists and conduct biodiversity monitoring, will be included. Guides will participate in field surveys and outdoor training sessions to learn about small vertebrates, and attend evening classes provided by Darwin Assistants to learn about national conservation issues, species ecology and research results. Three ANGAP staff will follow a more advanced training programme to include, GIS, data management and analysis for the new monitoring protocol. Four Malagasy Darwin Trainees will conduct the research part of their masters (DEA) degree and receive expert training and supervision in the field and office. Darwin Assistants will learn how to write scientific papers, prepare funding proposals and manage budgets. Additional courses on computing, English and project management will be made available.

LOGICAL FRAMEWORK

19. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>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</p> <ul style="list-style-type: none"> • the conservation of biological diversity, • the sustainable use of its components, and • the fair and equitable sharing of benefits arising out of the utilisation of genetic resources 			
<p>Purpose To conserve the small vertebrates of Tsingy Bemaraha National Park by training Malagasy students and guides in fieldwork surveys, leading to the implementation of a new monitoring program, prioritised conservation action and sustainable tourism activities</p>	<p>Ecological monitoring programme tested and running by yr 3</p> <p>Levels of tourism controlled in sensitive habitats/caves by yr 2</p> <p>Improved ability of tour guides to educate park visitors</p> <p>Most threatened species identified (yr 2) and conservation action implemented (yr 3)</p>	<p>Field surveys, data collection and student theses</p> <p>Questionnaires to tourists at start and end of project</p> <p>Data quality checks after field phase</p> <p>Malagasy supervisors' visits</p>	<p>TBNP continues to receive in-country funds to support core-activities</p> <p>Guides attend classes and field workshops</p> <p>Park staff are made available</p> <p>Availability of students and teachers</p>
<p>Outputs</p> <ol style="list-style-type: none"> 1 Ecological monitoring programme implemented 2 Action plans for small vertebrates 3 Informed & trained guides (18) 4 Malagasy students trained 5 Education programme for guides 6 Simple key to endemic reptiles 7 ANGAP senior conservation staff trained in GIS and data analysis 8 Media coverage 9 Project website 	<ol style="list-style-type: none"> 1 Data collection 2 Monitoring manual 3 Papers (4) submitted 4 Action plans published 5 Students graduate 6 Guide book published 7 Malagasy supervisors visit 8 Attendance at training sessions and courses 9 TV and radio broadcasts 	<p>Copies of all reports, databases, photographs, thesis, papers, certificates, recordings and articles sent to Darwin</p>	<p>Park management receptive to recommendations and make appropriate improvements to undertake interventions as required</p>
<p>Activities</p> <p>Tour guide education programme</p> <p>ANGAP conservation staff and Malagasy student training programme</p> <p>Field test followed by implementation of monitoring protocol</p> <p>Surveys of two other Tsingy sites</p> <p>Annual workshops</p> <p>Publicity and dissemination</p>		<p>Activity Milestones (Summary of Project Implementation Timetable)</p> <p>Project launch, team recruitment and first stakeholder workshop (Yr1) Field research and training projects, January-March and July-October, (Yrs 1 & 2)</p> <p>Stakeholder workshops November 2005, 2006 & 2007 and August 2008</p> <p>Schools environmental education project (yrs 1 & 2)</p> <p>Surveys of two other Tsingy protected areas (yr 3)</p> <p>Radio and TV broadcast, TBNP newsletters, poster and published documents (all years)</p>	

This logical framework has one significant change since the Stage 1 application. We have removed the establishment of a new conservation NGO as a project objective because we have been invited by the Darwin Initiative to apply for a post-project award for that purpose.

20. Provide a project implementation timetable that shows the key milestones in project activities.

Project implementation timetable		
Date	Financial year	Key milestones
	Apr-Mar 2005/6 Apr-Mar 2006/7 Apr-Mar 2007/8	
October 05 November 05 December 05 January 06 March 06	Apr-Mar 2005/6	Appoint 4 Darwin Assistants Project planning workshop Recruit 2 Darwin Trainees Wet season field work (guide & student training) commences; design new monitoring Wet season field work ends Commence classroom based training (guides)
April 06 June 06 July 06 August 06 October 06 November 06 December 06 January 07 March 07	Apr-Mar 2006/7	Recruit 2 Darwin Trainees Classroom based training (guides), presentations Dry season field work (guide & student training) commences Environmental education in schools Dry season field work ends Stakeholder workshop Training courses attended in Antananarivo Wet season field work commences (guide & student training); field test new monitoring Wet season field work ends
June 07 July 07 October 07 November 07 April 08 August 08	Apr-Mar 2007/8	'Darwin Environment Prize' awards announce Dry season work commences; implement new monitoring Dry season field work ends Stakeholder workshop Survey Namoroka and Montagne Francaise tsingy sites Stakeholder workshop

21. Set out the project's measurable outputs using the separate list of output measures.

PROJECT OUTPUTS		
Year/Month	Standard output number (see standard output list)	Description (include numbers of people involved, publications produced, days/weeks etc.)
05/10-08/04	2	4 Diplomes d'études Approfondies, equivalent to UK 1 year MSc) graduates from host-country universities
05/10-08/04	3	3 senior TBNP staff, 3 Darwin Assistants and 4 Darwin Trainees qualified in GIS-ArcView (2 wks) and GPS-MapSource (1 wk)
05/10-08/04	6A	18 TBNP guides and 4 Darwin Trainees trained in field techniques. Guides to also receive classroom teaching.
05/10-08/04	6B	Training during the course of 18 field months and 10 months based in an office.
05/10-08/04	7	4 colour posters produced by Darwin Trainees
05/09-08/08	8	6,7,10, & 5 mo (FY 1,2,3,4) by post-doctoral biologist with expertise in chameleon, bird and small mammal ecology (Jenkins)
08/01	9	12 weeks by Paul Racey
07/01		4 species/habitat management plans
08/03	10	1 ecological monitoring plan prepared
05/09-08/08	11A & 11B	2 : brochures to assist field identification of CITES species and cave bats
05/09-08/08	12A	4 papers published, 2 submitted in peer reviewed journals
05/09-08/08	14A	1 monitoring database to be established
07/05-08/048	14B	4 stakeholder seminars
05/09-08/08	15A	2 international conferences attended by Darwin Assistants
05/09-08/08	18A	3 press releases
05/09-08/08	19A & 19C	4 national TV features and 1 documentary
05/09-08/08	20	2 national and 4 local broadcasts
	22	£12k of field survey equipment
08/06	23	6 caves to be monitored annually for bats and rodents
		In-kind contributions include staff time (host-country partners and Racey). Use of a 6-year old (ex-Darwin Initiative) Landrover defender and approximately £3k of survey equipment from previous Darwin projects by Aberdeen and DICE/IUCN.
		£32k raised already from the BP Conservation Programme

MONITORING AND EVALUATION

22. Describe, referring to the Indicators in the Logical Framework, how the progress of the project will be monitored and evaluated, including towards delivery of its outputs and in terms of achieving its overall purpose. This should be during the lifetime of the project and at its conclusion. Please include information on how host country partners will be included in the monitoring and evaluation.

In addition to following Darwin Initiative reporting guidelines, project progress will be reported by the Darwin Tsingy Team and evaluated by ANGAP and other host country partners during annual stakeholder meetings. Annual stakeholder meetings in November will also allow Professor Racey to assess the project during his annual, *separately funded*, visit to Madagascar.

TBNP guides will be invited to sit a multi-response test before the project commences to provide a baseline to compare progress against and to highlight particular subjects that need to be included in the training programme.

Field visits by Malagasy academics to support and supervise their DEA students will provide an opportunity for the scope, nature and duration of the training to be evaluated.