



**UNIVERSITY
OF ABERDEEN**



Darwin Initiative for the Survival of Species

Annual Report

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April 2002

Contractor: Prof. Paul Racey

Project leader: Dr Richard Jenkins

1. Darwin Project Information

Project title: **Conservation and management of Malagasy Microchiroptera and their habitats**

Country: Madagascar

Contractor: Prof. Paul Racey

Project Ref. no: 162/10/024

Grant value: £145,125

Start/Finishing dates: December 01/12/01 to 30/11/04

Reporting period: December 01/12/01 to 31/3/02

2. Project Background

The project is located in Madagascar and based in the capital, Antananarivo. Fieldwork will be undertaken in rainforest in the east of the island and in the limestone regions of the north and west.

Despite comprising approximately 25% of Madagascar's mammalian diversity, bats have only recently featured on the conservation agenda. Previous studies have concentrated on the three species of fruit bat, but little effort has been devoted to the c. 27 species of insectivorous bat, of which approximately 55% are endemic to Madagascar. Bats are strongly associated with forests, and the well-documented deforestation in Madagascar has threatened bats. Furthermore, pilot studies in cave roost sites have revealed increasing amounts of disturbance from tourists.

Insectivorous bats have traditionally been perceived as difficult animals to study, but a recent University of Aberdeen study used electronic bat detectors to help identify and count bats. Malagasy students will be trained in these, and other bat survey techniques, to improve the capacity for Malagasy scientists to operate long-term bat-monitoring projects.

We aim to combine the bat expertise from the University of Aberdeen with the eagerness to learn more about bats in the University of Antananarivo. The collaboration will result in (1) a wider understanding of the importance of Madagascar's bats both nationally and internationally, (2) a team of trained Malagasy bat workers and (3) recommendations for bat-friendly methods of sustaining eco-tourism in popular cave nature reserves.

We aim to focus on species surveys in rainforest reserves to provide information to compliment the management of these protected areas. Studies in cave systems that are frequented by tourists will contribute to the sensitive management of these fragile habitats by advising guides and providing visitors with education resources.

3. Project Objectives

- Survey insectivorous bats in protected areas of the eastern rainforests and in limestone regions using advanced bat detectors, mist nets and harp traps.
- Train Malagasy graduates in these techniques that will then be extended to other protected areas and used to establish longer term monitoring programmes.
- Incorporate the conservation requirements of bats into management plans for individual protected areas.
- Establish a national database of bat biodiversity and produce a national action plan for the conservation of insectivorous bats.
- Carry out a programme of environmental education in limestone cave areas to encourage bat friendly practices and sustainable ecotourism.
- Evaluate the ecological services provided by bats in controlling insect pests as leverage for their incorporation into national conservation agendas.

No formal modifications have been made to the original log framework (attached as Appendix) However, as the project start date only allows for two wet and three dry seasons, which is one less wet season than originally planned, it is likely that the total number of protected areas visited maybe less than the originally planned 17. Actual selection of study sites will be achieved with close cooperation from Malagasy NGOs (e.g. WWF) and government departments.

4. Progress

The project has undergone slippage from the original scheduled start date of September 1st and the project commenced on December 1st 2001. Further delays have been experienced since December because of the continuing political problems in Madagascar. A general strike resulted in the closure of all airports, banks and government ministries and prevented the project leader from travelling to Madagascar in mid-February as planned.

Revised timetable

April 1st to September 30th 2002

Month/s	Activities
April-May	1 Establish project office in Antananarivo 2 Meet NGOs and the relevant reserve management, government and university departments to discuss project, select students and finalise the list of study sites 3 Apply for research and residency permits 4 Meet students and devise individual research projects 5 Appoint and begin training two Malagasy assistants 6 Issue inaugural newsletter and arrange interview for national TV & radio
June-August	7 Bat surveys and training in Ankarana Special Reserve
September	8 Progress report preparation 9 Supervision of Malagasy student theses 10 Establish bat database

5. Project Expenditure

Amount awarded Year 1: £53,625

Item	Budget	Expenditure
Salary (R Jenkins)		
Rents, rates, etc		
Office costs:		
Capital items/equipment		
Others		
	travel	
	miscellaneous	
	subsistence	
Total		

6. Authors

Dr Richard Jenkins

Prof. Paul Racey

01 April 2002

Appendix - Logical framework.

Project summary	Measurable indicators	Means of verification	Important assumptions
<p>Goal</p> <p>To assist Madagascar with the conservation of Microchiropteran bats and implementation of the Biodiversity Convention with respect to bats</p>	<p>Bat populations are maintained at present levels</p>	<p>Long term monitoring of bat populations</p>	<p>Some external involvement may be required to sustain long-term monitoring</p>
<p>Purpose</p> <ul style="list-style-type: none"> ◆ To get Microchiropteran bats onto the Conservation agenda in Madagascar and to keep them there 	<ul style="list-style-type: none"> ◆ Bats receiving similar priority to lemurs in National Conservation Plans ◆ Darwin Trainees working in government departments and NGOs 	<ul style="list-style-type: none"> ◆ Publications of Ministry of Eaux et Forêts (MEF) and ANGAP 	<p>Continued commitment of senior staff of MEF and ANGAP to bat conservation</p>
<p>Outputs</p> <ul style="list-style-type: none"> ◆ National Action Plan for the conservation of Microchiropteran bats ◆ National Database for Microchiropteran bats ◆ Bat management plans for individual protected areas ◆ Brochures for tour guides and tourists in cave areas ◆ Malagasy graduates trained to continue surveys and maintain databases 	<ul style="list-style-type: none"> ◆ Publication and dissemination of National Action Plan ◆ Publication of revised management plans for protected areas ◆ Graduation of Trainees with DéA 	<ul style="list-style-type: none"> ◆ Publications of MEF & ANGAP ◆ Publication of Park Management plans 	<ul style="list-style-type: none"> ◆ MEF and ANGAP will accept recommendations of the Action Plan. ◆ Park directors will accept bat management plans
<p>Activities</p> <ul style="list-style-type: none"> ◆ Survey insectivorous bats in protected areas (mainly eastern rainforests) using advanced methodology. ◆ Train Malagasy graduates in construction and use of harp traps, in use of mist nets and in use of time expansion bat detectors. ◆ Carry out a programme of environmental education in limestone cave areas to encourage bat-friendly and sustainable ecotourism. ◆ Evaluate the ecological services performed by insectivorous bats in the control of insect pests and train Malagasy in the relevant research techniques 	<p>Key inputs:</p> <ul style="list-style-type: none"> ◆ Finance Year 1 53,625 Year 2 46,000 Year 3 45,500 ◆ Time by UK and Malagasy personnel 	<ul style="list-style-type: none"> ◆ Expenditure will be verified by detailed financial accounts. ◆ Time will be verified by monthly reports from Madagascar detailing activities of project personnel. ◆ Annual reports will detail results of surveys. ◆ Brochures will be prepared for tour guides and tourists ◆ Publications in international conservation journals 	<ul style="list-style-type: none"> ◆ Bats are trappable, nettable and detectable (already verified) ◆ Trainees will be forthcoming (as they have been in the past) ◆ Tourist guides and tourists will heed management advice (they have eagerly sought it in the past) ◆ Bats eat insect pests