



DARWIN INITIATIVE

APPLICATION FOR DARWIN FELLOWSHIP PROGRAMME 2006

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please note the additional information requirements (CVs and letters of support as detailed in the Guidance for Applicants). Whilst this form is to be submitted by the host institution the proposed Fellow should be fully involved in development of the proposal.

Submit by 10 March 2006

1. Contact Details

<i>Ref. (Defra/ECTF only):</i>
Name and address of UK applicant organisation The Natural History Museum Cromwell Road London SW7 5BD

2. Darwin Fellow. A one page CV must be enclosed.

Name and official address of proposed Darwin Fellow Mr. Saoud MOTALA Mauritian Wildlife Foundation Grannum Road, Vacoas MAURITIUS
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3. Summary of proposed Fellowship (no more than 100 words)

<p>The purpose of the proposed fellowship is to develop an open-access web-based taxonomic information facility for one of the most speciose and highly endemic, thus conservation-relevant insect groups for a whole country, the beetles of Mauritius. This web facility would allow species identification and also make available baseline data on species distribution, economic importance and literature resources. This will transform the scientific results of the current Darwin project "Rediscovering the neglected insects of the Mascarenes – building in-country capacity" into a sustainable resource for local and international researchers and conservationists. It will be the first web resource of a complete illustrated beetle fauna at country level on an up-to-date taxonomic basis and might serve as a model case for similar, larger-scale projects.</p>

4. Principals in Project. Please give the details of the individuals from the UK host organisations (and other institutions if relevant) who would be directly involved in supervising/working with the Darwin Fellow. A 1 page CV on each must be enclosed.

Details	Main UK expert	Other UK expert	Other UK expert	Other UK expert
Surname	Krell	Donovan		
Forename(s)	Frank	Sarah		
Post held	Division Head/ Researcher	Post doctoral research fellow		
Institution (if different to above)		Plymouth University		
Department	Entomology	Biological Sciences		
Telephone				
Fax				
Email				

5. Describe briefly the aims, activities and achievements of the UK applicant organisation. (Large institutions please note that this should describe your unit or department)

The Natural History Museum, London, is one of the international leaders in undertaking biodiversity research at the highest level, as well as maintaining and developing the most comprehensive natural history collections in the world. The Department of Entomology is a major department within the Museum, producing over 100 scientific papers in peer-reviewed journals each year, and is involved in a range of consultancies from single identifications to collection infrastructure and biodiversity conservation projects. We cooperate with a large global network of experts and are involved in most ongoing taxonomic and systematic revisions. We have experts in several major beetle groups (Staphylinidae, Scarabaeidae, Curculionidae, Coccinellidae, etc.) and are involved with leading positions in major European and global research infrastructure initiatives (GBIF, EDIT, ZooBank).

6. Describe briefly the aims, activities and achievements of the proposed Darwin Fellow's organisation. (Large institutions please note that this should describe your unit or department)

The Mauritian Wildlife Foundation (MWF) is a local non-profit NGO with a mission statement to save the endangered native fauna and flora from extinction.

MWF runs a number of conservation projects on native birds such as the echo parakeet, pink pigeon and a number of passerine species. The organization has also developed expertise in the restoration of invaded offshore islets and has an ongoing restoration projects on Round Island and Îls aux Aigrettes. MWF has developed ecotourism activities on one of the restored islets and the organization is also pioneering a series of new projects on the conservation of rare plants and endemic insects on Mauritius.

MWF has a successful track record of conservation achievements in the past such as the restoration project of the Mauritius Kestrel which is internationally acclaimed. The organization has also served as a training ground for numerous well-established as well as budding conservationists around the world.

7. Describe briefly the proposed Fellow's current role within their organisation and link to a Darwin project.

Saoud Motala has been employed as Biodiversity Coordinator within MWF since October 2004.

He has been coordinating two projects: (1) "Information system for optimized data management to increase the efficacy of biodiversity conservation efforts in Mauritius and Rodrigues" funded by the Mauritius Research Council and (2) "Rediscovering the neglected insects of the Mascarenes – building in-country capacity" funded by the Darwin Initiative.

His day-to-day tasks are to ensure the smooth running of the projects on the ground and include: project implementation, reporting to and liaising with the various stakeholders and supervision of research staff on each project.

In addition, Saoud is also in charge of the information and documentation section of the organization.

8. Provide a concept note on the Darwin Fellowship. This should include:

- a clear outline of the aim and objectives of the Fellowship
- the programme of work, including key milestones through the duration of the Fellowship and their timing
- the role of the UK applicant organisation, and others where relevant (including contacts)
- where appropriate, how the Fellowship will contribute towards sustainable development or sustainable livelihoods

For Mauritius entomologists, working in a biodiversity hotspot, the major problem is species identification, which is essential for decisions about conservation priorities, diagnosis of invasive alien organisms, cost-efficient pest control, and the production of internationally competitive research papers. As identified by GTI/CBD, "A key element in capacity building is development of reference collections." Instead of establishing from scratch an expensive to maintain infrastructure in the country for a specimen based reference collection, the proposed Fellowship will realize the novel and innovative concept of a complete and taxonomically up-to-date virtual reference collection, available for free on the web. With 1032 species, beetles are the most speciose insect order in Mauritius with high endemism and economic importance.

We will establish a web-catalogue for the complete Mauritius beetle fauna on a sound taxonomic basis with species pages containing:

- photographs;
- literature references;
- ecological and economic information and
- identification advices.

This is possible because the most complete collection of Mauritius beetles was donated to The Natural History Museum in 1972. Additional species are in the Muséum National d'Histoire Naturelle in Paris and available for study via a remote high-resolution photo microscope to be installed in the first half of 2006, and to a minor extend in other Museums in Europe. The specimens collected in the Darwin Project will complement the database which we believe will be represent the beetle fauna of Mauritius almost completely.

UK expert Frank Krell is a beetle taxonomist and ecologist with long experience and a comprehensive knowledge of Coleoptera as a whole, and of the relevant literature. He will work closely with the Darwin Fellow and will be responsible for the taxonomic soundness of the web presentations. His network of international collaborators would help him to resolve taxonomic problems possibly emerging during the Darwin Fellowship. Darwin Fellow Saoud Motala is a keen naturalist with a sound entomological and IT knowledge. If necessary, the departmental cyber-taxonomist will assist with the web presentations.

Schedule and Milestones:

November 2006: Catalogue of Mauritius beetle species updated; depositories of specimens traced (mainly London and Paris).

April 2007: All species available in London photographed using NHM synoptics equipment; species web-pages prepared. Complete identification of beetle specimens arising from the current Darwin project.

June 2007: All additional species available in Paris photographed by means of a remote photo-microscope; remaining species ordered for study in London.

August 2007: Species pages completed; proofing.

September 2007: Beetles of Mauritius online.

As legacy of the Fellowship, the beetles - by far most diverse animal order of Mauritius - will be accessible to biodiversity and conservation research within the country without the need for expensive consultation of foreign experts. Crop pests, beneficial species and alien invasives can be identified immediately in Mauritius. The accessibility of the beetle fauna will trigger conservation efforts, monitoring and will raise the profile of insects in education and research in the country.

9. Legacy. Provide information on how the Darwin Fellow will utilise, promote and disseminate the benefits of the Fellowship on return to his/her home country. Will a strategy be developed during the Fellowship to ensure this is achieved?

The Darwin fellow will gain expertise in the identification of endemic and invasive beetles on Mauritius that have been collected from the current Darwin Initiative project. The proposed fellow has already created an essential first step for insect conservation in Mauritius by raising awareness of the importance of this neglected group locally. Using the skills developed in the U.K, he will be able to build on this foundation to allow for practical conservation work to be initiated in Mauritius.

The Fellow will also gain experiences in two crucial fields of biodiversity research where expertise in Mauritius is missing: collection-based work (from curation to digital imaging), and in taxonomy (from literature searches to web-based presentation of results). After the fellowship he will be able to serve as a consultant and trainer for local institutes involved in the conservation and documentation of biodiversity.

The fellow has a track-record in sharing his knowledge through training workshops. He will transmit his taxonomic experience gained with staff from the various stakeholders, including government, parastatal and private institutions, who are participating in the currently ongoing Darwin project.

Furthermore, information will be disseminated in the form of scientific publications which will result from the fellow's work in the U.K. The beetle catalogue that will be developed will be available on the web and will benefit the students and budding conservation scientists both in Mauritius and at the international level.

10. How will the Fellowship assist the Fellow's organisation and/or local communities and/or home country in working towards the objectives (or implementation) of the Convention on Biological Diversity? References to the Convention should be specific, for example, by referring to articles, cross-cutting or thematic issues¹.

In a biodiversity-rich country with insects representing the majority of the diversity, a complete reference of the endemic and invasive species as a functional identification tool is a prerequisite for implementing CBD requirements such as capacity building/training programmes for taxonomy, in-situ conservation and sustainable use of biodiversity. Therefore, the project will both enable and provide an incentive for the country to implement the CBD effectively.

The Fellowship applies the following CBD Articles:

7. Identification and monitoring of biodiversity components of conservation value and prioritisation of components requiring urgent conservation.

9. Identification of species, if any, for which ex-situ conservation is needed.

13. Understanding the importance of the conservation of insect biodiversity through information for university syllabuses, the media and other stakeholders.

17. Information provided in organized and accessible forms.

18. International technical and scientific collaboration reinforced through interaction between project partners.

Project aims are in line with Mauritius' NBSAP, which emphasizes the importance of '*devising a comprehensive database for taxa that have not yet been studied or have been studied to a limited extent*'.

11. What collaboration has there been with the Darwin Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within his/her own country.

Saoud Motala is project co-ordinator in the Darwin Project 'Rediscovering neglected insects of Mauritius: building in-country capacity' which has been led by UK Expert Dr Sarah Donovan of Plymouth University. He has been trained at The Natural History Museum and has received an MSc with distinction from the joint Masters Course 'Advanced Methods in Taxonomy and Biodiversity' of The Natural History Museum and Imperial College in which UK Expert Dr Frank Krell is one of the teachers and who also supervised his MSc project. During this course, Saoud conducted a successful proof of concept test of the proposed fellowship project by compiling a catalogue of the Mauritian ground beetles present in the NHM collection. In the current Darwin project, Saoud is responsible for the coordination of the sampling programme and processing and identification of the samples, and also for preparing manuscripts on the scientific results. Two papers, co-authored by him and UK Experts Krell and Donovan, are submitted.

¹ Refer to the Guidance Notes for Applicants for further information

12. Provide details of the Darwin Initiative project that the proposed Fellow was associated with, including his/her role in that project and any ongoing involvement.

The proposed fellow is currently coordinating a Darwin funded project entitled "Rediscovering the neglected insects of the Mascarenes – building in-country capacity".

Past activities that Saoud has been involved with include fieldwork at seven designated sites both in Mauritius and Rodrigues using a range of quantitative sampling techniques, aimed at assessing the effectiveness of conservation management areas for invertebrates. He has also trained a research assistant in sampling, sorting and identification of collected specimens. Saoud has already given two radio interviews on the project.

Future activities scheduled this year will include: (1) the creation of a database and a web page to promote the dissemination of the information gathered to public and the scientific community, (2) the organization of two workshops (one involving University students and the other involving the local insect conservation stakeholders) and (3) write up of an insect conservation strategy as a legacy of the project.

Saoud successfully coordinated a DI funded project entitled "An information system to facilitate the conservation management of endemic birds in the Mascarenes" from 2000 – 2003 which involved the setting up of three databases on the priority bird conservation programmes in Mauritius training of local and expatriate staff on its use.

13. Duration of the Fellowship: what are the intended start and finish dates?

One year (01 October 2006 to 30 September 2007)

14. Where will the Darwin Fellow be based? Please be specific with organisational details and dates (where more than one location).

The Darwin Fellow will be based in the Department of Entomology, The Natural History Museum, London for the whole duration of the Fellowship.

15. Financial Aspects.

Fellow payment			
London: £1200/month	Number of months 12	2006/7 £	2007/8 £
UK (outside London): £1000/month	Number of months	£	£
Overseas location £ /month*	Number of months	£	£
Host Organisations' costs			
UK: £300/month	Number of months 12	2006/7 £	2007/8 £
Overseas location: £ /month*	Number of months		£
A. Total Fellow & Host Organisation Costs		£	£

* Figures available from Margaret Okot on 0207 082 8430

Actual travel costs (Return journey to Fellowship location)		
Return airfare. <i>Details</i> Mauritius – London annual	2006/7 £	2007/8 £
Travel to/from airports. <i>Details</i> tube fare	£	£
Visas etc. <i>Details</i> Visa	£	£
B. Total Fellowship Travel Costs (Actual costs up to £2000 will be paid)	£	£

Actual travel costs 'Other Travel'		
Specify purpose. Maximum £500 within country of Fellowship location, £1500 for international travel.		
Airfares <i>Details</i>	2006/7 £	2007/8 £
Subsistence <i>Details (including number of days)</i> <i>Contact Defra for rates</i>	£	£
Travel to/from airports. <i>Details</i>	£	£
Visas etc. <i>Details</i>	£	£
C. Total (Other travel) costs	£	£

D. ACADEMIC FEES <i>Details</i>	2006/7 £	2007/8 £
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TOTAL FELLOWSHIP COSTS (A + B + C + D)	£	£
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16. Other sources of funding: provide details and amounts

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FCO NOTIFICATION

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise details of the Darwin Fellowship and the resultant work in the UK or the Darwin Fellow's home country

CERTIFICATION

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

I enclose CVs for project principals and letters of support as requested in the Guidance Notes.

Name (block capitals)	Quentin Wheeler
Position in the organisation	Keeper of Entomology

Signed

Date:

10 March 2006

Please return completed form to The Edinburgh Centre for Tropical Forests (ECTF) by 10 March 2006 by email to darwin-applications@ectf-ed.org.uk. A hard copy of the full application should also be sent to ECTF, Darwin Applications Unit, Pentlands Science Park, Bush Loan, Penicuik, Edinburgh EH26 OPH.