

18-018

Enabling Montserrat to save the Critically Endangered mountain chicken



Durrell Wildlife Conservation Trust



DARWIN200

Submit by Monday 30 November 2009

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 17: STAGE 2

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required. Information to be extracted to the database is highlighted blue.

1. Name and address of organisation (NB: Notification of results will be by post)

Name: Durrell Wildlife Conservation Trust	Address: Les Augrès Manor, La Profonde Rue, Trinity, Jersey JE3 5BP, Channel Islands, United Kingdom.
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2. Project title (not exceeding 10 words)

Enabling Montserrat to save the Critically Endangered mountain chicken.

3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date:	Duration of project:			End date:	
Darwin funding requested	2010/11 £62,975	2011/12 £77,822	2012/2013 £71,025	2013/14 £20,662	Total £232,484

4. Define the purpose of the project (extracted from logframe)

Enabling Montserrat to save the Critically Endangered mountain chicken through a programme of research, re-introduction, strategic planning and awareness-raising.

5. Principals in project. Please provide a one page CV for each of these named individuals. You may copy and paste this table if you need to provide details of more than one overseas project partner.

Details	Project Leader	Other UK personnel (working more than 50% of their time on project)	Main project partner and co-ordinator in host country/ies
Surname	Morton		Gray
Forename (s)	Matthew		Gerard
Post held	Eastern Caribbean Manager		Director
Institution (if different to above)			Ministry of Agriculture, Trade, Land, Housing & Environment
Department			Department of Environment

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

Reference No	Project Leader	Title
17025	Dr Richard Young	Building evidence and capacity to conserve Hispaniola's endemic land mammals
EIDPO031	Dr H Glyn Young	Restoration of the mangrove finch in Isabela, Galapagos
15005	Dr H Glyn Young	Conservation of the Mangrove Finch (<i>Cactospiza heliobates</i>)
15038	Dr Carl Jones	Restoring Island Biodiversity: the Reintroduction of Endemic Mauritian Reptile Communities
15017	Dr John Fa	Implementing a Recovery Plan for the Critically Endangered Pygmy Hog in Assam
10004	Dr John Fa	Devising solutions to bushmeat exploitation in the Sanaga-Cross region, Africa

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 all the institutions involved including the UK/collaborative (where there are partners in addition to the applicant organisation) and host country partners that will be involved, and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of host country partners to be involved in the project. Please provide written evidence of partnerships. Please copy/delete boxes for more or fewer partnerships.

<p>Lead UK institution and website where available: Durrell Wildlife Conservation Trust (Durrell)</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): The Durrell Wildlife Conservation Trust (Durrell) was founded by author and naturalist Gerald Durrell in 1949. Its mission is to save species worldwide. It has a proven track in this area, notably in pulling back Mauritius Kestrel, Pink Pigeon and Echo Parakeet from the brink of extinction. Durrell staff work in threatened habitats around the world, and the organisation has established a worldwide reputation for its pioneering conservation techniques, with a particular focus on vulnerable communities of endemic animals. Durrell has supported conservation in Montserrat since 1998 when the Trust first engaged with conservation efforts for the mountain chicken and the Montserrat oriole. Durrell led the biodiversity assessments that formed part of the Centre Hills Darwin project (DI 14027) and led the development of the mountain chicken Species Action Plan. Durrell has also led efforts to breed mountain chickens in captivity and manages the European studbook for the species.</p> <p>Durrell is the lead partner in this project, with ultimate responsibility for project management and monitoring, and will coordinate field activities through the field manager who will be recruited and placed within the Montserrat Department of Environment. The project will be managed by Matthew Morton who is based in St. Lucia and works as Durrell's Eastern Caribbean Manager. He has extensive experience within the region and within Montserrat itself. Matthew will also draw on expertise within the Conservation and Herpetological Departments at Durrell's headquarters in Jersey.</p>
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<p>Lead host country Partner and website where available: Department of Environment, Ministry of Agriculture, Land, Housing and Environment. Montserrat.</p>	<p>Details (including roles and responsibilities and capacity to engage with the project): Mr Gerard Gray, Director of the Department of Environment (DOE; Ministry of Agriculture, Land, Housing & Environment, MALHE), will be the lead focal point within DOE for the project. DOE is responsible for all conservation activities within Montserrat and contacted Durrell when dead frogs were found on the island. Durrell and DOE have a close working relationship and DOE has provided considerable support and capacity for field work.</p> <p>The in-country project manager will be hosted by DOE and will support the further development of capacity within the institution. DOE will be responsible for providing field worker and logistical support in Montserrat. DOE will also play a key role in the steering committee for restoration efforts for the species, the development of the recovery plan and management of the reintroductions.</p>
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<p>Partner Name and website where available:</p> <p>Institute of Zoology, Zoological Society of London</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>ZSL are a founding partner of the consortium working to restore the mountain chicken. Through Andrew Cunningham and Trent Garner, they have studied the epidemiology of <i>Batrachochytrium dendrobatidis</i> and its effects in other species. They have worked closely with the mountain chicken in Dominica (DI 13032), where they established a captive breeding centre and chytrid management plan. The Herpetological Department at ZSL London Zoo currently holds 12 Montserrat mountain chickens and is a key member of the captive breeding programme. So far in efforts to restore the mountain chicken in Montserrat, ZSL have contributed expertise in study design, analysis of results and co-funding for the project. In this proposal, Andrew Cunningham is the focal point and ZSL will provide continued expert guidance, analytical resources in Dominica and London and the co-funding for laboratory work.</p>
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<p>Lead host country Partner and website where available:</p> <p>Montserrat Volcano Observatory www.montserratvolcanoobservatory.info</p>	<p>Details (including roles and responsibilities and capacity to engage with the project):</p> <p>The Montserrat Volcano Observatory (MVO) is a statutory body of the Government of Montserrat. The MVO monitors daily activity of the volcano, conducts research to improve understanding of volcanic and seismic activity in Montserrat and provides information to raise awareness and advise the island's population and decision-makers. Part of the monitoring conducted by MVO takes place in the South Soufriere Hills area of Montserrat, which is inside the Volcano exclusion zone. An MVO team enters the area via helicopter to collect data from seismic activity recorders. In the past Durrell has joined these trips to conduct brief surveys inside this isolated area of Montserrat, which will be the primary site for reintroduction of mountain chicken.</p> <p>Within the project MVO will provide guidance on the safety of access to the exclusion zone during the project with regard to volcanic activity and will provide places to project team members to visit the area during their routine monitoring trips.</p>
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9a. Have you consulted stakeholders not already mentioned above? Yes No

If yes, please give details:

Activities to restore the mountain chicken have been broadly consulted with a wide range of stakeholders. Communication efforts were started with the general public at the time of the initial incursion of the disease to explain the severity of the crisis and to implement public biosecurity measures. During the first trips and subsequent activities there has been close coordination with the Veterinary Services in Montserrat who have supplied expertise and equipment to the project. The project was also presented to the UK Governor's Office.

This project will make a key contribution to the efforts of a consortium of organisations that aim to restore the mountain chicken in its current and former range. The members of the consortium are the Governments of Montserrat and Dominica, Durrell Wildlife Conservation Trust, Zoological Society of London, North of England Zoological Society Chester Zoo and Parken Zoo (Sweden).

9b. Do you intend to consult other stakeholders? Yes No

If yes, please give details:

This project will work closely with efforts to restore the mountain chicken in Dominica. A Dominican representative will be invited to sit on the regional steering committee and the project would aim to

learn from the situation and challenges facing the mountain chicken in Dominica. Furthermore the Dominican authorities are part of the consortium that aims to restore the species and therefore would be involved in any restoration efforts.

9c. Have you had any (other) contact with the government not already stated? Yes No

If yes, please give details:

Durrell team members presented the restoration project and the current plight of the mountain chicken to the UK Governor, Mr Peter Waterworth, based in Montserrat, during the rescue mission that took place in May 2009.

9d. Is any liaison proposed with the CBD/CMS/CITES focal point in the host country? Yes No

If yes, please give details:

Although Montserrat is not a party to the CBD and acts through the UK, Mr Gerard Gray who is the primary focal point for the project is also the focal point for CITES, CMS and CBD matters, and will ensure interaction between this project and these Multilateral Environmental Agreements.

9e. Will your project support any work in the UK Overseas Territories? Yes No

If yes, please give brief details stating which Territory/ies will be involved.

Montserrat is one of the UK's Caribbean Overseas Territories and so this project aims to develop the capacity to restore a flagship species for the island.

PROJECT DETAILS

10. Please provide a Concept note (Max 1,000 words) (repeat from Stage 1, with changes highlighted)

The disease, chytridiomycosis (chytrid), caused by the fungus *Batrachochytrium dendrobatidis*, has been implicated in the decline/extinction of up to 200 species of frog which represents the most spectacular loss of species from a single disease in recorded history. The Global Amphibian Assessment (2004) and the Amphibian Conservation Action Plan (2007), identify the detection, treatment and management of chytrid as highest priorities for significantly reducing amphibian biodiversity loss (CBD Articles 6,7,8 (g,h) 12, 13, 14).

Once found on seven islands, the mountain chicken frog *Leptodactylus fallax* (Critically Endangered) is restricted to Montserrat and Dominica, where it has declined through historical habitat destruction and hunting. But the emergence of chytrid in 2002 in Dominica caused catastrophic declines of 80% within 18 months of being detected. Here, a Darwin project (13032) concentrated on disease containment and captive breeding. The Mountain Chicken Species Action Plan, (2007, OTEP funded) prioritised biosecurity at the ports of entry in Montserrat to stop chytrid. Despite these efforts, chytrid was discovered on Montserrat in February 2009. Emergency missions by **Durrell Wildlife Conservation Trust (Durrell)** and **Zoological Society of London (ZSL)** in March/April 2009 found losses were severe, with only one population in the upper reaches of a single watershed being disease-free. In May 2009, 50 frogs were rescued for an *ex-situ* captive breeding programme at Durrell (Jersey), ZSL (London), and Parken Zoo (Sweden). In July 2009, chytrid arrived in the last healthy mountain chicken population with the deaths of many frogs. Durrell and ZSL, alongside the **Montserrat Department of Environment (DOE)**, are currently conducting a field trial of the efficacy of an anti-fungal treatment in order to reduce mortality in the remaining population. For now, the immediate future of the species is uncertain with the most realistic hope being through captive-breeding and re-introduction.

This project will enable Montserrat to safeguard the future of the mountain chicken by: 1) establishing the evidence-base on mountain chicken and chytrid ecology in Montserrat; 2) developing a long-term restoration plan and steering committee, 3) **two releases** of >100 frogs to a chytrid-free area within Montserrat; and 4) generating pride and understanding among Montserratians in the restoration and communicate essential bio-security management information. A fulltime manager based at DoE will lead the project. Durrell will transfer skills and management in Montserrat; with ZSL providing disease management expertise from Dominica and the UK. The UK Partners will also work closely with the Dominican Forestry and Wildlife Division and Veterinary Services Division. This project will work in collaboration with a proposal presently submitted to the

Darwin initiative on disease management for Caribbean Herpetofauna.

The project will gather the evidence to design the restoration strategy. Seasonal persistence of chytrid in soil and vector species will be monitored, with swabs analysed in Dominica (DI 13032) and the UK (co-funded by ZSL). Population estimation methods will be developed to monitor the remaining population and later the post-release success. The remaining wild population will be surveyed and chytrid prevalence assessed in Dominica to assist in explaining disease patterns in Montserrat. Analysis of swabs from surviving frogs will show whether they are surviving in spite of chytrid. Supplementary data from field trials with anti-fungal treatment agents will be contributed from a collaborative project. A Montserratian research officer based within DoE will collect data which will contribute to an MSc.

A long-term restoration plan framework will be drafted early in the project (Yr 1) as a living document to guide implementation during the project and beyond. The plan will consider where frogs are bred, how and where they are introduced and management requirements required to maximise survival in the presence of chytrid. A first draft will be submitted to the regional steering committee by the end of year 1 to guide the trial reintroduction. This trial will provide essential data on behavioural responses to introduction, ability of frogs to thrive with invasive species, logistical constraints of monitoring introduction success etc. The plan will also include data from a feasibility study to review the potential of breeding frogs in Dominica (DI 13032). Project staff will visit the captive facilities and work with Dominican personnel. The steering committee will then gather evidence from international sources (e.g. IUCN Amphibian Specialist Group) to complete the plan through a participatory workshop at the end of the project. This plan will be published and presented at international meetings.

The project will trial the reintroduction of frogs bred in Europe in Yr 2 (during wet season) into the South Soufriere Hills, which were isolated by pyroclastic flow from the volcano. These lava fields are believed to act as a barrier to the movement of amphibians and therefore isolate the area from chytrid. Surveys will confirm: the area is chytrid-free, ideal numbers to introduce and the potential impacts of introduced predators. The team will collaborate with a DI Project to control feral livestock in the Centre Hills (EIDPO027). If conditions are appropriate we will reintroduce >100 captive-bred frogs to this area. Another release will take place in Yr 3. The long-term restoration plan will include components on adaptive management and monitoring for the reintroduced animals, control of introduced predators, and will establish an early warning system in case of disease outbreak.

The project's fourth output will change behaviour and attitude in Montserrat, by engaging with the national stakeholders identified within the Species Action Plan, e.g. general public, government departments. The campaign will create a sense of national pride in the protection of this species and address practices that may affect its survival such as hunting. Drawing on the Centre Hills project (DI 14027); materials, media work and schools presentations will focus on its fragility, cultural importance and protection. We will also provide important didactic materials on how to minimise the potential spread of the disease through human activities. The campaign's effectiveness will be assessed through surveys to identify message retention and behaviour change. These outputs will be incorporated into the final restoration strategy to help ensure long-term support for the restoration of the species.

11a. Is this a new initiative or a development of existing work (funded through any source)?

Please give details:

This is a discrete initiative building on the efforts carried out to date to protect and restore the mountain chicken in Montserrat. The project will form a major component of the Mountain Chicken Recovery Programme (MCRP). The MCRP is a collaboration between Durrell, ZSL, Chester Zoo, Parken Zoo and the Governments of Montserrat and Dominica to restore the mountain chicken throughout its range. This collaboration was established during 2009 in response to the dramatic loss of mountain chickens on Montserrat following the introduction of chytrid to the island. The collaboration is governed by MoU. Funding for different activities has been sought from various sources, however the activities within this proposal represent a discrete project that builds upon the

rescue efforts to date.

11b. Are you aware of any other individuals/organisations/Darwin Initiative projects carrying out similar work? Yes No

If yes, please give details explaining similarities and differences, and explaining how your work will be additional to this work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:

Durrell is identified as a UK Partner on a proposal being submitted by the Institute of Zoology (Zoological Society of London) to build regional capacity within the Lesser Antilles for herpetofauna conservation, with an emphasis on disease management and invasive species control.

Durrell and IoZ have collaborated on the conservation both *in situ* and *ex situ* of the mountain chicken frog for a number of years, including on the development of the mountain chicken action plan. In response to the introduction of chytrid to Montserrat and the resulting massive decline in mountain chicken numbers on the island, Durrell formed a more formal partnership with ZSL (of which IoZ is a part) to rescue this species in the wild. This has now developed into the Mountain Chicken Recovery Programme, which includes Durrell, ZSL, Chester Zoo, Parken Zoo and the governments of Montserrat and Dominica.

Both Durrell and IoZ have communicated closely on the development of these two proposals to make sure that they have additive effects for the conservation of amphibians in the Lesser Antilles. The IoZ proposal focuses primarily on the development of capacity at a national and regional level to address the problems that are affecting many species including the mountain chicken. We think the mountain chicken is an excellent case study and Montserrat urgently needs the expertise and training that this project would provide. Durrell's current proposal is focused on the urgent need for the restoration of a species that will soon disappear without our intervention. But just as the training and guidance developed through the IoZ project will support the restoration of the mountain chicken, we believe that the specific experience gained in Montserrat will contribute constructively to the general techniques developed for the Lesser Antilles.

Specific areas of collaboration between the projects would be the formation of the regional restoration steering committee and the training provided to Montserratian staff – both of which would be developed in conjunction with the IoZ project. IoZ and Andrew Cunningham, who is leading the IoZ proposal, is a UK partner for Durrell on this proposal and so there will be regular communication and meetings between Durrell and IoZ on both projects.

12. Please indicate which of the following biodiversity conventions your project will contribute to: -

At least one must be selected.

- Only indicate the conventions that your project is directly contributing to.

- No additional significance will be ascribed for projects that report contributions to more than one convention

Convention on Biological Diversity (CBD) Yes No

CITES Yes No

Convention on Migratory Species (CMS) Yes No

What problem is this project addressing and how was it identified? (150 words)

This project addresses the imminent extinction of the mountain chicken on Montserrat through the introduction of chytridiomycosis. This species is listed as Critically Endangered by IUCN and is isolated to two Caribbean islands, Montserrat and Dominica. The introduction of chytrid into Dominica, discovered in 2002, has all but removed the species from the island, and it is not known how many animals may remain. Since 1998, Durrell has supported DOE in a range of *in situ* and *ex situ* efforts to monitor and protect Montserrat mountain chickens, culminating in the 2007 Action Plan. As soon as DOE found dead frogs in the forests, they notified Durrell (February 2009) and since that time we have worked closely with partners to first rescue a number of frogs to create a separate bio-secure *ex situ* breeding programme which will supply offspring for reintroduction and second to develop a programme for the recovery of the species.

What will change as a result of this project? (150 words)

This project will positively change the chances of long-term survival of a Critically Endangered frog in one of the UK's OTs. It aims to halt the decline of the mountain chicken due to chytrid and to reintroduce frogs bred at a number of institutions to key chytrid-free sites on the island. To enable the reintroductions to take place, considerable research will be undertaken to establish the necessary evidence base for this relatively poorly known species and the ecology of chytrid on the island. This knowledge will feed directly into efforts to tackle the impacts of chytrid on amphibians worldwide, which has been identified as one of the leading causes of their decline. The level of capacity within the Montserrat Department of Environment will be increased through enhanced skills, increased collaboration with neighbouring islands and training for DOE staff on amphibian management and conservation.

Why is the project important for the conservation of biodiversity? (150 words)

The mountain chicken is the top endemic predator on the island of Montserrat. It is one of the largest frogs in the world and has a very special breeding system with extremely strong parental care of offspring. Added to the biological importance of the species, it also holds an important cultural place for both the islanders of Montserrat and Dominica. Therefore its loss would be a tragedy. We also believe that this project will also make a considerable contribution to international efforts to control and mitigate the impacts of chytrid on a large proportion of amphibian biodiversity. IoZ was able to culture the fungus on Montserrat and together with the field studies carried out in this project we will address the pathogenicity of the disease and how it impacts the mountain chicken.

How does this relate to one or more of the biodiversity conventions? (150 words)

This project will contribute directly to the realisation of the Convention of Biological Diversity and efforts to significantly reduce the rate of loss of biodiversity. Global efforts to save amphibians are set out in the Amphibian Conservation Action Plan (2007), which identifies the detection, treatment and management of chytrid as highest priorities. Within the CBD specific articles that this project will support include CBD Articles 6,7,8 (g,h) 12, 13, 14.

13. How will the results of the project be disseminated; how will the project be advertised as a Darwin project and in what ways will the Darwin name and logo be used? (max 200 words)

- The evidence base will be published through articles in peer-reviewed journals and reports made available online.
- General awareness-raising in both Montserrat, UK and globally will be carried out through various media, including public meetings, radio interviews, newspaper articles and a specially commissioned calypso to be played on Montserrat radio.
- All reports will contain the logos of the partner organisations and the Darwin logo, including a cover acknowledgement to Darwin as the donor.
- All press reports and press releases issued by project partners will acknowledge Darwin and the UK Government as the donor, although it is difficult to control what media outlets broadcast as a final product.
- Awareness raising products of this project will also carry the Darwin logo.

14. What will be the long term benefits of the project in the host country or region and have you identified any potential problems to achieving these benefits? (max 200 words)

This project will restore a flagship species for Montserrat and the Centre Hills Protected Area (EIDPO027 and DI14027). We will raise the profile of this species and use it as a positive example of how conservation can restore species and tackle global threats. Montserratians are already aware of the species and the limitations on access to the forests put in place by the Government of Montserrat once the disease was discovered. This project will inform people of activities being undertaken and their results. The research carried out will provide a useful contribution to global research efforts into mitigation and treatment of chytrid.

The main risks are the introduction of chytrid to the South Soufriere Hills and a major increase in volcanic activity on the island. We will develop a chytrid monitoring programme and a mitigation/contingency strategy to prevent or limit its entry to the area. To address the threats of volcanic activity, we will be in regular contact with MVO for information and guidance. Limitations on access to reintroduction sites are only likely for short periods; however a major increase in volcanic activity would require us to re-evaluate the introduction strategy and to identify alternative options.

15. State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave? (Max 200 words)

The project forms the first concrete actions that will initiate the long term restoration of mountain chickens. As well as establishing a viable introduced population of frogs to Montserrat, the objectives of the project are to establish the necessary evidence base, regional collaboration and national capacity to lead the management of the species in the long term. Durrell and the Mountain Chicken Recovery Programme have made a long term commitment to the restoration of the mountain chicken and will continue restoration activities after the Darwin Initiative investment in the project.

Training provided includes the development of the MSc student from Montserrat who will study the ecology of the disease. Furthermore key field staff from DOE will receive training at Durrell in Jersey and ZSL in London. Broader training will be developed with the IoZ DI proposal for regional herpetofauna capacity building in the Lesser Antilles. The MSc student will be carefully selected and will receive continuous supervision both from the field manager, the project leader Matthew Morton, and Richard Young, Durrell's conservation biologist. Should that person leave early, replacement students will be sought either from within Montserrat or externally. However this will not impact greatly the programme of introductions of frogs or training for technical staff.

16. If your project includes training and development, please indicate how you will assess the training needs in relation to the overall purpose of the project. Who are the target groups? How will the training be delivered? What skills and knowledge do you expect the beneficiaries to obtain. How will you measure training effectiveness. (max 300 words)

You should address each of these points.

Capacity within Montserrat and the Lesser Antilles to mitigate chytrid is generally low (see DI13032). DOE requested Durrell's assistance to address the incursion of chytrid into Montserrat in February 2009 and support the management needs for the species. General staff capacity is limited within DOE for this. Therefore the most important responses are to support an increase in staff capacity dedicated to managing mountain chicken populations infected with chytrid and more broadly expand the skills base of existing field staff.

The field manager running the project on the ground will be based within DOE and therefore will take on restoration management and provide ongoing training to DOE field staff. The project will support key skilled field staff to receive further training in technical skills for monitoring frogs, monitoring disease prevalence and collecting ecological data. A staff member within DOE will take part in the Diploma in Endangered Species Management (DESMAN) course at Durrell and then will receive detailed training in amphibian conservation within our Herpetological Department. To support the development of skills within Montserrat a special focus will be placed on hiring a local student to undertake an MSc and who will deliver a number of the research outputs of the project. Broader training will be integrated with the IoZ regional herpetofauna conservation capacity building proposal.

The MSc student and field staff will be continuously monitored throughout the project. Durrell has extensive experience running training programmes and courses in different regions of the world and so will ensure that skills are passed on and retained. A focus will be placed on the reinforcement of ongoing skills training through repeated exercises and informal evaluations. The Formal training provided in the DESMAN course will be tested through coursework and exams administered by the University of Kent.

LOGICAL FRAMEWORK

17. Please enter the details of your project onto the matrix using the note at Annex 3 of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes. (Use no smaller than Arial 10 pt)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.			
Sub-Goal: The probability of long-term survival of the Critically Endangered mountain chicken frog is significantly enhanced on the Caribbean island of Montserrat.	<ul style="list-style-type: none"> Mountain chickens reintroduced to Montserrat establish a self-sustaining population within 5 years of project completion. Management of the mountain chicken restoration plan continues to be led by regional partners through long-term within 3 years of project completion. 	<ul style="list-style-type: none"> CBD national biodiversity strategy reports. Montserrat DOE staff work plans. Scientific literature. Monitoring and evaluation reports 	
Purpose Enabling Montserrat to save the Critically Endangered mountain chicken through a programme of research, re-introduction, strategic planning and awareness-raising.	<ul style="list-style-type: none"> Evidence base documented to support the long term restoration of mountain chickens and the management of chytrid in Montserrat Long-term species restoration plan agreed. Trial re-introduction of mountain chickens completed Pride in the conservation of the species among Montserratians increased and public support for the species restoration strategy secured Regular collaboration between the necessary stakeholders underpins the restoration of the species 	<ul style="list-style-type: none"> Project annual reports Scientific literature Government ratified management plans Monitoring data from introduced animals collated annually in database Results presented to international bodies International media coverage Project partner website hit count Public awareness survey results 	<ul style="list-style-type: none"> No catastrophic eruptions of the Soufriere volcano during the lifespan of the project prevent safe access to reintroduction site(s) Reintroduction sites remain chytrid free
Outputs (add or delete rows as necessary) 1. The evidence base for the restoration of the mountain chicken and mitigation of the impacts of chytrid is established.	<ul style="list-style-type: none"> Research prioritisation exercise to identify key information gaps completed in Yr 1. Population estimation methodology developed for mountain chickens and used to generate estimates for Montserrat and Dominica by mid Year 2. Network of chytrid monitoring sites on Montserrat established by the end of Year 1. Database designed and used by Montserrat DOE and project partners At least one MSc by a Montserratian student on the environmental dynamics of amphibians as vectors for chytrid on Montserrat completed by end Year 2 	<ul style="list-style-type: none"> Minimum of three scientific papers by the end of Year 3. Monitoring manuals produced. Workshop meeting minutes. Project progress reports. IUCN specialist group materials and website. Project partner websites International meeting proceedings or publications 	<ul style="list-style-type: none"> MSc student available to implement studies Sufficient field staff available from Montserrat DOE and Veterinary services.

<p>2. Trial re-introduction of mountain chickens into Montserrat completed.</p>	<ul style="list-style-type: none"> • Two survey trips completed to identify primary re-introduction site within Montserrat in Year 1 and 2. • Presence/absence of chytrid and amphibians at target sites established. • Minimum of 100 adult mountain chickens introduced to primary location, targeted for the end of Year 2. • Introduced predator control programme implemented around release sites at the time of introduction and monitored annually. • Early warning monitoring plan for chytrid in the reintroduction site implemented with Montserrat DOE and Volcano Observatory teams. • Lessons learnt from trial re-introduction are documented and communicated by mid Y3. • A post-release frog monitoring scheme implemented and an adaptive management plan completed for the trial re-introduction by end of Year 3. 	<ul style="list-style-type: none"> • Trip reports. • Data logger records and recordings. • At least two articles peer reviewed scientific publications. • Re-introduction plan published. • Adaptive management plan. • Articles in international print and web media. • IUCN specialist group reports. 	<ul style="list-style-type: none"> • Strategic partnership established with the Volcano Observatory and maintained during lifespan of project enables helicopter access to volcano exclusion zone in Montserrat. • Chytrid-free areas identified in the project remain unaffected by disease. • The 50 founder frogs provide sufficient basis for a long term captive breeding programme.
<p>3. Long term restoration strategy for the mountain chicken established and agreed with regional partners.</p>	<ul style="list-style-type: none"> • International/regional re-introduction steering committee established by the end of Year 1. • Use of facilities on Dominica to breed frogs for re-introduction to Montserrat assessed by the end of Year 2. • Draft Restoration strategy prepared by the Steering Committee and agreed with all stakeholders by end Year 1 and continuously evaluated throughout project. • Strategy completed by end Year 3 and published • Sufficient capacity in place to manage species restoration in long term. 	<ul style="list-style-type: none"> • Restoration strategy document. • Annual progress reports. • Steering committee meeting reports • Evaluation mission report. • Training reports and manuals. • Montserrat staff member trained at Durrell and ZSL on captive management of mountain chickens. 	<ul style="list-style-type: none"> • Dominican authorities continue to support the captive facilities for the lifetime of the project. • Mountain chickens can be brought to the captive breeding facility
<p>4. The restoration of the mountain chicken is a source of national pride and benefits from long-term collaboration between national, regional and international partners.</p>	<ul style="list-style-type: none"> • Communication strategy developed for mountain chickens in Montserrat within Year 1. • Minimum of 200 posters produced profiling the species and highlighting core conservation areas by the end of Year 1. • A calypso on the mountain chicken crisis written and broadcast on Montserrat radio by end Year 1. • At least 5 presentations made to local schools during Year 2. • Awareness, attitudes and behaviours surveys shows increased understanding of the conservation value of the mountain chicken by Year 3. 	<ul style="list-style-type: none"> • Posters and pamphlets printed. • School visit reports. • Awareness survey results. • Communications strategy document printed. • Media reports, articles and TV transcripts. 	

Activities (details in workplan)

- 1.1 Establishment of project basis and staff in Montserrat
- 1.2 Research prioritisation exercise
- 1.3 Develop, test and implement population estimation method
- 1.4 Network of chytrid monitoring sites identified
- 1.5 Monitoring programme
- 2.1 Survey trips to candidate introduction sites
- 2.2 Development of predator control programmes
- 2.3 Development and approval of plans for trial introduction
- 2.4 Reintroduction of mountain chickens
- 2.5 Monitoring release success
- 2.6 Adaptive management plan for reintroduction and predator management
- 3.1 Formation and meeting of regional steering committee
- 3.2 Review of regional captive breeding opportunities
- 3.3 Training two Montserratian staff on DESMAN course
- 3.4 Development of long term restoration plan
- 4.1 Communication strategy completed
- 4.2 Communications materials produced – posters, calypso
- 4.3 Schools presentations
- 4.4 Behavioural and attitudes surveys and reporting

Monitoring activities:

- Indicator 1: Scientific delivery evaluated biannually by Durrell's and ZSL's Head of Conservation Programmes
- Indicator 2: Monitoring of increased skills/capacity of in-country conservationists/host-country project staff
- Indicator 3: Surveys of attitudes towards mountain chickens and the restoration efforts
- Indicator 4: Regional steering committee meeting minutes and reports

18. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project.

Activity	Months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1 Establishment of project basis and staff in Montserrat	2	X	X										
1.2 Research prioritisation exercise	4	X	X	X									
1.3 Develop, test and implement population estimation method	8		X	X	X				X				X
1.4 Network of chytrid monitoring sites identified	4		X	X									
1.5 Monitoring programme	15		X	X	X	X	X	X	X	X	X	X	X
2.1 Surveys trips to candidate introduction sites	6			X			X	X			X	X	
2.2 Development of predator control programmes	3		X	X									
2.3 Development and approval of plans for trial introduction	3				X	X							
2.4 Reintroduction of mountain chickens	4						X				X		
2.5 Monitoring release success	6							X	X	X	X	X	X
2.6 Adaptive management plan for released animals	3											X	X
3.1 Formation and meeting of regional steering committee	8		x	x			X	X			X	X	
3.2 Review of regional captive breeding opportunities	6					X	X	X					
3.3 Training two Montserratian staff on DESMAN course	6					X	X	X					
3.4 Development of long term restoration plan	6			X	X		X				X	X	X
4.1 Communication strategy completed	4			X	X								
4.2 Communications materials produced – posters, calypso	2			X	X		X	X					
4.3 Schools presentations	6			X			X				X		
4.4 Behavioural and attitudes surveys and reporting	3		X					X				X	

19. Please indicate which of the following Standard Measures you are likely to report against. You will not necessarily plan to cover all these Standard Measures in your project. Separate guidance on Standard Measures can be found at http://darwin.defra.gov.uk/resources/reporting/standard_measures/

Standard Measure No	Description	Tick if Relevant
1A	Number of people to submit thesis for PhD qualification (in host country)	
1B	Number of people to attain PhD qualification (in host country)	
2	Number of people to attain Masters qualification (MSc, MPhil etc)	√
3	Number of people to attain other qualifications (ie. Not outputs 1 or 2 above)	√
4A	Number of undergraduate students to receive training	√
4B	Number of training weeks to be provided	√
4C	Number of postgraduate students to receive training	
4D	Number of training weeks to be provided	√
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	√
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	√
6B	Number of training weeks to be provided	√
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country	√
8	Number of weeks to be spent by UK project staff on project work in the host country	√
9	Number of species/habitat management plans (or action plans) to be produced for Governments, public authorities, or other implementing agencies in the host country	√
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	
11A	Number of papers to be published in peer reviewed journals	√
11B	Number of papers to be submitted to peer reviewed journals	√
12A	Number of computer based databases to be established and handed over to host country	√
12B	Number of computer based databases to be enhanced and handed over to host country	
13A	Number of species reference collections to be established and handed over to host country(ies)	
13B	Number of species reference collections to be enhanced and handed over to host country(ies)	
14A	Number of conferences/seminars/ workshops to be organised to present/disseminate findings	√
14B	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	
15A	Number of national press releases in host country(ies)	√
15B	Number of local press releases in host country(ies)	√
15C	Number of national press releases in UK	√
15D	Number of local press releases in UK	
16A	Number of newsletters to be produced	√
16B	Estimated circulation of each newsletter in the host country(ies)	
16C	Estimated circulation of each newsletter in the UK	
17A	Number of dissemination networks to be established	√
17B	Number of dissemination networks to be enhanced/ extended	
18A	Number of national TV programmes/features in host country(ies)	√
18B	Number of national TV programmes/features in UK	
18C	Number of local TV programmes/features in host country(ies)	
18D	Number of local TV programmes/features in UK	
19A	Number of national radio interviews/features in host county(ies)	√
19B	Number of national radio interviews/features in UK	
19C	Number of local radio interviews/features in host country(ies)	√
19D	Number of local radio interviews/features in UK	
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	
22	Number of permanent field plots to be established during the project and continued after Darwin funding has ceased	√
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	√

PROJECT BASED MONITORING AND EVALUATION

20. 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.

Project monitoring will be maintained at several levels. Primary implementation will be through the project manager in Montserrat based within DOE. This person will be supervised and the project will be overseen by the project leader, Matthew Morton, from St Lucia. Matthew maintains regular communication with DOE and will make regular visits to Montserrat. He will also maintain regular communication with the project manager in country. The project will be part of Durrell's Conservation Programme and milestones and outputs will be incorporated within our project tracking methods overseen by the Head of Conservation for Durrell in Jersey (Indicator 1). The project leader will report to Durrell in Jersey on a monthly basis concerning both financial and activity aspects of the project. Capacity increases will be monitored through regular communication between the project team and management staff in Jersey including the Head of Training at Durrell's International Training Centre. The grades awarded within the DESMAN course and continual assessment of project staff during the project will also be used (Indicator 3).

Regular meetings will take place between the project manager and the host country partners to make sure that activities within Montserrat remain on track. The delivery of outputs will be evaluated regularly by the Head of Conservation in Jersey and all results will be published or made publically available as soon as possible. The results of the behavioural surveys will also provide an evaluation of the effectiveness of the awareness-raising efforts (Indicator 3). The project manager will also report to the regional steering committee that will meet bi-annually to monitor the restoration efforts (Indicator 4).

FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which will provide the Budget information for this application. Some of the questions below refer to the information in this spreadsheet.

NB: Please state all costs by financial year (April to March). Use current prices – and include anticipated inflation, as appropriate up to 3% per annum. The Darwin Initiative will not be able to agree increases in grants to cover inflation on UK costs once grants are awarded.

21. How is your organisation currently funded? (max 100 words)

Durrell is a non-profit organisation dedicated to saving species from extinction with a worldwide membership of >10,000. Its headquarters in Jersey has a conservation-oriented animal collection which is open to the paying public. It does not receive regular government funding, either from the States of Jersey or the UK, and depends on entrance fees to the animal collection, membership contributions, and restricted funding from different sources. Legacies make up a proportion of income, but additional funding is received from individuals, multilateral institutions, government bodies (Jersey States, UK-DEFRA, US-Fish and Wildlife), and non-government research institutions (IUCN, FFI, CI, The Royal Society).

22. Provide details of all confirmed funding sources identified in the Budget that will be put towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity. Please include any additional unconfirmed funding the project will attract to carry out addition work during or beyond the project lifetime. Indicate those funding sources which are confirmed.

Confirmed:

The Net Trust, based in Jersey, has confirmed £18,500 for 2010 to support a first mission into the South Soufriere Hills area of Montserrat. All project partners have matched at least 50% of the salary costs of the main individuals from their core funding (£59k in total). Durrell is matching £9k of the costs of institutional overheads and office maintenance/rental. ZSL is providing co-funding to a value of £29k to cover disease analysis costs in both Dominica and London, which will analyse all the swabs taken from frogs encountered in the wild.

As this project includes a significant component of captive breeding in European institutions, the

main holding institutions (Durrell, ZSL and Parken Zoo) are contributing significant staff time and consumable costs to breed individuals ready to be introduced. Durrell is providing £72k of staff time and costs over the three year period. This is based on the cost estimate that an individual mountain chicken costs £900 to maintain in captivity each year. Currently there are 12 adults and almost 40 juveniles in captivity.

Unconfirmed:

The Balcombe Trust is a regular donor for Durrell in the Caribbean, and provided £20k for the year 2009/2010 which covered many of the costs for field trials, necessary to establish the activities in the proposal. We aim to secure a similar amount in the following annual periods.

23. Please give details of any further funding resources (confirmed or unconfirmed) sought from the host country partner (s) or others for this project that are not already detailed in the Budget or Question 22. This will include donations in kind or un-costed support eg accommodation. (max 50 words per box)

Financial resources:

Funding in kind:

The Department of Environment provides continual assistance in managing activities, supporting field staff and providing facilities. This support has been essential to the success of activities to date.

FCO NOTIFICATIONS

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 the project's success in the Darwin competition in the host country.

Please indicate whether you have contacted the local UK embassy or High Commission directly to discuss security issues (see Guidance Notes) and attach any advice you have received from them.

Yes (no written advice)

Yes, advice attached

No

CERTIFICATION 2010/11

On behalf of the trustees* of

Durrell Wildlife Conservation Trust

(*delete as appropriate)

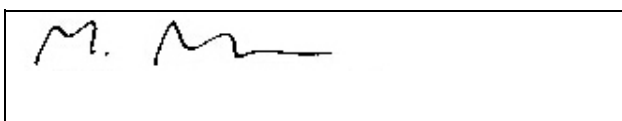
I apply for a grant of £62,975 in respect of expenditure to be incurred in the financial year ending 31 March 2011 on the activities specified in the above application.

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. (This form should be signed by an individual authorised by the lead UK institution to submit applications and sign contracts on their behalf.)

I enclose a copy of the organisation's most recent audited accounts and annual report, CVs for project principals and letters of support.

Name (block capitals)	MATTHEW MORTON
Position in the organisation	EASTERN CARIBBEAN MANAGER

Signed



Date:

30/11/09

Stage 2 Application - Checklist for submission

	Check
Have you provided actual start and end dates for your project?	Yes
Have you provided your budget based on UK government financial years ie 1 April – 31 March?	Yes
Have you checked that your budget is complete, correctly adds up and that you have included the correct final total on the top page of the application?	Yes
Is the concept note within 1,000 words?	Yes
Is the logframe no longer than 2 pages and have you highlighted any changes since Stage 1?	Yes
Has your application been signed by a suitably authorised individual? (clear electronic or scanned signatures are acceptable in the email, but a wet signature should be provided in the hard copy version)	Yes
Have you included a 1 page CV for the Project Leader, any other UK staff working 50%+ on this project, and for a main individual in each overseas partner organisation?	Yes
Have you included a letter of support from the main overseas partner organisations?	Yes
Have you checked with the FCO in the project country/ies and have you included any evidence of this?	No
Have you included a copy of your most recent annual report and accounts? An electronic link to a website is acceptable.	Yes
Have you read the Guidance Notes ?	Yes

Once you have answered Yes to the questions above, please submit the application, not later than midnight GMT on **Monday 30 November 2009** to Darwin-Applications@ltsi.co.uk using the application number (from your Stage 1 feedback letter) and the first few words of the project title **as the subject of your email**. However, if you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc). **In addition**, a signed hard copy of the application and any supporting documents not available electronically should be submitted to the Darwin Applications, c/o LTS International, Pentlands Science Park, Bush Loan, Penicuik EH26 0PL **postmarked** not later than **Tuesday 1 December 2009**.

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (ie name, contact details and location of project work) on the Darwin Initiative and Defra websites(details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Foreign and Commonwealth Office posts outside the United Kingdom, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.