

Darwin Initiative Annual Report

Important note:

To be completed with reference to the Reporting Guidance Notes for Project Leaders – it is expected that this report will be about 10 pages in length – Submission deadline 30 April 2007

Darwin Project Information

Project Ref Number	640/15/015
Project Title	Tools and training for fern conservation and monitoring, El Salvador
Country(ies)	El Salvador
UK Contract Holder Institution	The Natural History Museum
UK Partner Institution(s)	none
Host country Partner Institution(s)	Jardin Botánico La Laguna, Ministerio del Ambiente y Recursos Naturales (MARN), SalvaNatura
Darwin Grant Value	£108,940
Start/End dates of Project	1 July 2006
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 July 2006-31 March 2007
Project Leader Name	Sandra Knapp
Project website	Not applicable
Author(s), date	S. Knapp, M. Peña-Chocarro, J. Monterrosa, R. Escobar, J. Quezada

1. Project Background

This project builds upon two earlier successful Darwin Initiative projects undertaken with the Natural History Museum (NHM) and the Jardín Botánico La Laguna (LAGU) in El Salvador. The first of these (Empowering local people to manage the biodiversity of El Salvador, DI 162/8/150) developed taxonomic and managerial capacity by working with the biodiversity in shade coffee farms and publishing field guides to the trees, wasps and ferns of these agricultural habitats, and the second, a Darwin Scholarship, further developed the individual (J. Monterrosa) skills initiated in the shade coffee project. This project arose through discussions held with personnel

of LAGU and the Ministerio del Ambiente y Recursos Naturales (MARN) as to the suitability of ferns as a key non-vertebrate group to use in a nationwide monitoring scheme. In order to implement a monitoring scheme, a field guide to the ferns of El Salvador on a national level (rather than just those found in coffee farms) was deemed necessary. Ferns are already in the frame for conservation action, all tree ferns are controlled for export by MARN, and other taxa are known to be of conservation interest. During the course of the work undertaken by Monterrosa in the DI scholarship, 19 new records of ferns were discovered for El Salvador, bring the total number of fern taxa in the country to 381.

An integral part of the project planning was to use the funds (if any) generated from the sales of the fern field guide to support biodiversity related research by university students and other young people in El Salvador. The supposition that the guide will sell well is behind this objective – this is based on the popularity of previous field guides published in El Salvador from the coffee farm project, and the anticipated need for the guide on a regional basis. LAGU (a not-for-profit organisation) will manage this part of the project, and it will provide a lasting legacy.

2. Project Partnerships

This entire project was developed in partnership by the participating institutions, particularly NHM, LAGU and MARN. SalvaNatura was invited to participate in the project, especially in the training courses and network activities, but was not involved in the overall project design. The partnership has strengthened over the year, particularly during the workshops held in El Salvador during February 2007. Weekly phone conversations between NHM and LAGU personnel reinforce and strengthen the sense of working as a team towards common goals.

Dr. Jorge Quezada Diaz, one of the key project partners, is the CBD focal point for El Salvador, so the project is in constant contact with the CBD focal point. Other MARN personnel who participated in the first network meeting are continuing to work with LAGU personnel, so the in-country participant links are strengthening as the project continues.

3. Project progress

3.1 Progress in carrying out project activities

During the reporting year we carried out all planned project activities. A poster was presented by Knapp at the Latin American Botanical Congress in Santo Domingo, Dominican Republic about the project. There was considerable interest in the project and we made some important contacts with other fern and conservation specialists from Central America and the Caribbean at this event.

Two members of NHM staff travelled to El Salvador in February (a month later than planned) to run both the field guide planning workshop and the first conservation network meeting. These meetings were both successful and key decisions were made.

The Darwin Fellow travelled to the Field Museum in Chicago (where key Salvadorean collections are housed) and spent two weeks in the herbarium identifying and databasing fern collections. This has been important for him to work in an international institution and to make contacts there with other botanists interested in the flora of El Salvador. An initial assessment of the Salvadorean ferns at BM was undertaken and databasing has begun. With this, and the databases already held in LAGU, we will have a very complete dataset for fern diversity and distribution in the country. MARN has expressed the desire to host this information on their website both during the project lifetime and after project completion.

The collecting programme began in October 2006, and preliminary life zone indicator species were finalized at the field guide planning meeting. Following discussions with the monitoring network, these selections will continue to be revised and discussed as the project progresses in order to maximize their utility for monitoring purposes.

The first meeting of the monitoring network was convened in February 2007 and was attended by 17 people from the government, NGO and university sectors. The group agreed that such a network was extremely timely in El Salvador, and personnel from MARN offered to manage the network as part of the project activities, with more meetings than originally planned, and to continue to network after the project finished.

3.2 Progress towards Project Outputs

Collecting has begun for the project and some 200 new collections were made. Photographic records of approximately 50 taxa were also “collected” for use in the field guide (see below). Informal on-the-job training in digital photography and content management was provided while NHM staff were in El Salvador.

The trip to Chicago resulted in some 500 new database records for El Salvador; future work at NHM will add to this.

Good progress has been made towards the field guide in terms of format and structure. We made an initial selection of taxa to lump (due to difficulty in identification without specialised equipment) and have settled on approximately 300 taxa for inclusion. During the field work while NHM staff were in El Salvador we standardised our photographic techniques and data gathering protocols for the field guide. The key was begun, with an initial data matrix of characters completed for all taxa.

The first meeting of the monitoring network was held and was attended by 17 people from the government, university and NGO sectors in El Salvador. This meeting included a seminar about the work of the project, the ideas behind it, fern diversity in Central America in general, and also included a talk about the work of the Darwin Initiative and some of the things it does around the world. During the first meeting of the monitoring network it was decided by the group that a decision on the exact format of the monitoring sheet was premature at this time (Feb 2007) in the project work. Participants strongly felt that they needed to discuss monitoring more, and that the format for a fern monitoring protocol needed to be linked to the training courses, rather than the network meetings. Therefore, we will still work towards this output (a monitoring framework for ferns) at project end, but progress will be differently timed throughout the project.

3.3 Standard Output Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
Established codes						
6A	Number of people to receive training	1				
6B	Number of training weeks (training in digital photography and content management)	1.5				
8	Number of weeks by	4 person				

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
	UK staff in host country	weeks				
14A	Number of seminars organised where project work disseminated	1				
14B	Number of conferences etc. attended where work presented	1				
15A	Number of national press releases	1				
17A	Number of networks established	1				
New - Project specific measures						

Table 2 Publications

Type *	Detail	Publishers	Available from	Cost £
(eg journals, manual, CDs)	(title, author, year)	(name, city)	(eg contact address, website)	(if applicable)
No publications this reporting year				

3.4 Progress towards the project purpose and outcomes

We are making good initial progress towards the establishment of ferns as a monitor of biodiversity in El Salvador. We are assembling the tools, and have solid plans in place for future activities. The partnership is strong and is expanding; the fact that MARN has taken on the management of the conservation and monitoring network is especially welcome, as this will ensure its long-term stability and utility.

Our purpose level assumptions still hold, and our indicators are at the moment appropriate for the overall project purpose.

3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

At this early stage in the project, it is difficult to see any measurable change in biodiversity, sustainable use or equitable sharing of biodiversity benefits, but we feel that the enthusiasm with which the project and especially the monitoring network has been received augurs well for real impacts towards the end and after the project.

4. Monitoring, evaluation and lessons

Our project monitoring arises largely through close partnership and interaction of all project partners. We have a plan for how and when outcomes will be achieved, and milestones along this pathway are assessed at regular intervals. We quantitatively assess progress towards providing baseline data and tools by measuring finely divided outputs that contribute to the whole (i.e. number of database records, number of photographs taken, number of taxa described and treated for field guide).

Lessons learned from this year's work are similar to those from any project involving close collaboration and interaction with another outside group not initially involved in the project planning. Specifically, this refers to the energetic and enthusiastic discussions we had in the first network meeting where plans for the framework for fern monitoring were modified so the project fit more closely to what others in-country were doing. This modification will be taken through the project, and we will closely monitor other potential changes to plans in order to make the project more fit-for-purpose in El Salvador. In this respect, we are fortunate to have MARN as a partner.

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

Not applicable at this report.

6. Other comments on progress not covered elsewhere

We have made good progress in setting up the project, outlining a realistic and achievable chronogram and in establishing the partnership's working arrangement. This next year will see the real work of the project take off, with the training courses and the bulk of the work on the field guide taking place. We have an agreement from an independent fern expert (Prof. H. Schneider) to peer-review the descriptions and content for the field guide; something that is not often done in the publication and construction of such works.

7. Sustainability

The project is relatively high profile within the conservation and scientific community in El Salvador, but not with the public at large. We intend to increase our efforts to public understanding during the next year, in conjunction with the training courses, which will have more public appeal than workshops or planning meetings

8. Dissemination

One short article for the press was prepared during the NHM staff visit; this was not taken up by the national newspapers, but we will in future release information about key project activities through the Ministry (MARN) in order to maximise impact. Our next major activity is the training course, which is an ideal event to publicize ferns in El Salvador.

9. .

10. **OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

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

None to report to date.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p>Goal: <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>			<p><i>(do not fill not applicable)</i></p>
<p>Purpose: Provide the training, tools and baseline data necessary for the establishment of a biodiversity monitoring programme for ferns in El Salvador.</p>	<ol style="list-style-type: none"> 1. Framework for the monitoring of fern diversity in place by project end. 2. Capacity for monitoring of fern diversity in place by project end 3. Capacity for non-specialists to identify fern species in place. 4. Ferns species to serve as indicators of lifezone and habitat change selected and incorporated into monitoring framework. 5. Up-to-date baseline fern inventory data available to the National Biodiversity Inventory and 	<p>Good progress made towards capturing data from international collections of Salvadorean ferns; workshops held in El Salvador determined field guide format, scope and general design; network meeting for monitoring was well-attended and will meet regularly in future, MARN personnel will take the lead for this part of project, ensuring integration into national biodiversity strategy goals; key project participants agreed strategy for completion of training and monitoring manual and field guide and began work on guide contents.</p>	<p>First training course to be held in next reporting period; another one or two network meetings; collecting to continue.</p>

	National Report.		
Output 1. Monitoring manual and framework developed for other taxa	Manual and framework delivered to MARN; included in National Inventory Strategy	MARN already has a manual for the monitoring of vertebrate taxa (birds and mammals), so the utility of having another different manual for plants was discussed and plans made to integrate the two formats; inclusion in the National Inventory strategy will depend upon its revision by MARN as it has just been published.	
Activity 1.1 First network meeting held at LAGU		Network meeting held, 17 participants; purpose of network discussed extensively; meeting schedule decided; meetings to be held during next reporting period (approx. every 2-3 months); network activities to be managed by MARN, ensuring their continuity and fit for purpose	
Activity 1.2			
Output 2. Training courses for non-specialists in fern monitoring and identification	24-40 non-specialists trained	No training courses held in the reporting period; course for June-July 2007 planned and will be advertised in April or May	
Activity 2.1. none undertaken during this reporting period			
Output 3. Biological collections made and used to strengthen national taxonomic capacity	Duplicate sets collections deposited nationally and internationally	Collecting programme began with visits to various key areas for fern diversity; permits obtained for all project personnel	
Activity 3.1 Collecting undertaken throughout the reporting period (6 trips to various parts of the country)		Collecting has both entailed trips to places not previously visited and regions where species are known to occur; much of the collecting will be to obtain images for the field guides in the next collecting period	

Output 4. Database of ferns of El Salvador	Database handed over to MARN at project end.	Good progress made against this output indicator; database will be hosted on-line by MARN at project end.
Activity 4.1 Trip to Chicago (Field Museum) by Monterrosa		All pteridophyte collections at F identified and databased; database to be integrated with other datasets in next period
Activity 4.2 BM collections assessed		BM collections to be databased; integrated with other datasets
Output 5. Updated inventory with indicator species and preliminary conservation assessments	Inventory published in hard copy and online.	See Output 4 (MARN hosting of inventory post-project).
Activity 5.1 Inventory completed and submitted for publication (follow-on from Darwin Scholarship project)		The Darwin Fellow has completed the initial scientific paper with an inventory of El Salvadorean ferns (begun during his Darwin Scholarship), and 19 new country records have been discovered.
Activity 5.2 Indicator species identified for broad scale habitats in El Salvador		Indicator species identified in a preliminary way; will be refined using national vegetation classification in the next period and during the meetings of the monitoring network.
Output 6. Field guide to the ferns of El Salvador	2000 copies of the field guide printed.	Field guide format and design planned and agreed upon; data collection begun (photographs and localities).
Activity 6.1 Workshop to agree content and design; preliminary consultation with user groups		Design and scope of field guide decided (photographic, to include all taxa, with some lumped to help identification); consultation with NGO users as to usefulness of this approach – largely in agreement (some want something very outside the scope and financial limits of project).
Activity 6.2 Produce photographs, line drawings, prepare descriptions and		Field trip undertaken while NHM staff in El Salvador to begin assembling

keys		materials for guide (ca. 50 taxa photographed); preliminary key begun; work on descriptions allocated.
Output 7. Conservation work supported by sales of field guide	University student projects to be partially supported by sales.	Not relevant in this reporting period.
Activity 7.1 none undertaken		
Output 8. Network of national specialists, relevant NGOs and GOs	Network will have met at least 3 times; partners confirm intention to continue.	Network received enthusiastically, will reinforce MARN's plans; first network meeting held in LAGU.
Activity 8.1 First network meeting held in LAGU		
Activity 8.2 Second network meeting planned for April		
Output 9. Public awareness of plant (fern) diversity in El Salvador raised	Articles in the press, radio interviews, public lectures	This is a long term output – we will begin to work on this when the first training courses are held and more people are involved; no specific major activities carried out this reporting period.
Activity 9.1 Press release about project while NHM staff in El Salvador		Project summary sent to papers, little take up; new strategy needed for next activity leading to this output.

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal:</p> <p>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</p> <p>Provide the training, tools and baseline data necessary for the establishment of a biodiversity monitoring programme for ferns in El Salvador.</p>	<ol style="list-style-type: none"> 1. Framework for the monitoring of fern diversity in place by project end. 2. Capacity for monitoring of fern diversity in place by project end 3. Capacity for non-specialists to identify fern species in place. 4. Ferns species to serve as indicators of lifezone and habitat change selected and incorporated into monitoring framework. 5. Up-to-date baseline fern inventory data 	<ol style="list-style-type: none"> 1. Monitoring assessment forms and database available through MARN. 2. A user-friendly field guide to the ferns of El Salvador published. 3. List of trained non-specialist provided in project reports. 4. Indicators of disturbance and key life zones identified in field guide, national report and project reports. 5. Monitoring ferns identified as key activity in National Inventory Strategy; fern data and 	<p>Ferns represent a pragmatic choice of indicator organism in Central America.</p> <p>El Salvador retains taxonomic capacity for ferns resulting from previous Darwin awards.</p> <p>Developing a monitoring framework and capacity for ferns will act as a catalyst to the inventory of other groups.</p> <p>Capacity and tools for non-specialists generated in El Salvador will be important at regional level.</p> <p>MARN will undertake to develop a monitoring programme as stated in the National Biodiversity and National Inventory and Monitoring Strategies.</p>

	available to the National Biodiversity Inventory and National Report.	monitoring referenced in El Salvador's National Report to the CBD.	
Outputs			
Monitoring manual and framework; framework developed for other taxa.	Manual and framework delivered to MARN; included in National Inventory Strategy	Copy of manual and framework included in project final report.	MARN supports inventory as part of strategic activities; will use monitoring framework for other groups of plants and animals.
2 x training courses for 12-20 non-specialists in fern monitoring and identification.	24-40 non-specialists trained.	Individuals trained and their job titles to Darwin.	Training seen as essential to national strategy implementation; staff released; training using ferns is transferable.
Biological collections made and used to strengthen taxonomic capacity.	Duplicate sets collections deposited nationally and internationally.	Specimens collected cited in taxonomic works; duplicates distributed.	Current collecting regulations remain in place; collecting remains safe.
Database of ferns of El Salvador.	Database handed over to MARN at project end.	Copy of database sent to Darwin.	National Inventory and Monitoring Strategy requirements remain lifezone and species oriented.
Updated inventory with indicator species & preliminary conservation assessments.	Inventory published in hard copy and online.	Inventory included in field guide and published in peer-reviewed journal.	Indicator species identifiable from data collected; existing lifezone classification recognised.
Field guide to the ferns of El Salvador.	2000 copies of the field guide printed.	Copies supplied to DI and British Library.	Agreement reached; partners able to design guide.
Conservation work	University student	Darwin recognised in	Sales of the field guides will be strong; students interested in

supported by sales of field guide.	projects to be partially supported by sales.	theses; candidates detailed to Darwin.	participating.
Network of national specialist, relevant NGOs and GOs.	Network will have met at least 3 times; partners confirm intention to continue.	Participants and minutes of meetings sent to Darwin; joint expression of intent signed.	GOs & NGOs continue to work together to support national biodiversity inventory.
Public awareness of plant (fern) diversity of El Salvador raised.	Articles in the press, radio interviews, public lectures.	Copies to be included in project reports, web site interest monitored.	Salvadoran media will express strong interest.
Activities	Activity Milestones		Assumptions
Annotated database of ES ferns.	Yr 1. Inventory of fern collections nationally and internationally (Honduras); database; DI Fellow to visit Chicago (10/2006); Yrs 2-4. Updating of database.		Herbaria selected hold key collections.
Targeted plant collecting programme in-country.	Yrs 1-4. Collecting programme throughout El Salvador, targeting protected areas and fragments of natural vegetation (7/2008); all fern collections made as part of project labelled and distributed (9/2008).		All species found; permits remain in force; logistical support provided by MARN.
Lifeline indicators; preliminary conservation assessments.	Yr 1. Lifeline indicators selected using ecological data from database (11/2006). Yr 3. Preliminary conservation assessment for all Salvadoran ferns (12/2008).		Existing lifeline classification remains valid; indicator species identifiable; assessment possible.
Network establishment and strengthening..	Yr 1. Establishment of a group with government, NGO and academic representatives. (12/2006). Yrs 2-4. Group meets on a regular basis and with NHM staff when they are in-country.		Groups will agree; work together to implement BAP; commit to a future arrangement.
Monitoring format sheets for BAP.	Yr 1. Monitoring format for non-specialist use produced and agreed with MARN (12/2006)..		MARN support for monitoring continues.

Training in identification and monitoring	Yr 2. First training course for non-specialists in monitoring (6/2007). Yr 3. Second training course in identification and monitoring using draft guide (4/2008).	MARN sees training as essential to BAP implementation; staff released; training using ferns is relevant for other plant groups
Production of fern identification guide.	Yr 1. Workshop to agree design and layout; consultation with user groups (1/2007). Yr 1-2. Produce line drawings, amass images, prepare identification keys and descriptions (10/2008). Yr 3. Print 2000 copies of the guide (12/2008).	Agreement reached; participants enthusiastic; illustrators and printers still available; work proceeds on time.
Competition for student project on conservation.	Yr 4. Select first student project. (4/2009).	Students willing to participate; theses part of degree course.
Promote awareness of ES plant diversity.	Yrs 1-4. Press releases, public and university lectures. Yr 4. Public invited to final project workshop at La Laguna (5/2009).	Media coverage broad and noted by public.

Annex 3 No relevant this reporting period

Checklist for submission

	Check
Is the report less than 5MB? If so, please email to Darwin-Projects@ectf-ed.org.uk putting the project number in the Subject line.	yes
Is your report more than 5MB? If so, please advise Darwin-Projects@ectf-ed.org.uk that the report will be send by post on CD, putting the project number in the Subject line.	no
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	no
Have you completed the Project Expenditure table?	yes
Do not include claim forms or communications for Defra with this report.	OK then