

# Darwin Initiative for the Survival of Species

## Annual Report

### 1. Darwin Project Information

Project title	Empowering local people to manage the biodiversity of El Salvador
Country(ies)	El Salvador
Contractor	Department of Botany The Natural History Museum Cromwell Road London SW7 5BD
Project Reference No.	08/150
Grant Value	£119,854
Start/Finishing dates	May 1, 1999- March 31, 2002
Reporting period	May 2000- May 2001

### 2. Project Background

The need for this project has been identified through discussion and consultation in El Salvador with the principal agents responsible for producing and implementing the National Biodiversity Action Plan and the principle institutions involved in biodiversity issues in the country (See 2.10). In 1998 the Salvadoran Minister of the Environment called a working group meeting in San Salvador, (with 63 representatives from Government organisations, scientific institutions and the business sector), for NHM staff to present a draft of this Darwin proposal. The meeting generated very positive feedback and discussion, after which specific project objectives were identified.

The project objectives are designed around conservation priorities in El Salvador which aim to balance the country's ambitious economic reconstruction process with its obligations under the Convention on Biological Diversity (CBD). Coffee production has great potential for eliminating poverty in El Salvador and is targeted as highest priority for research support by the National Competitiveness Programme and the National Coordinator for Conservation strategy. This Darwin project will provide vital taxonomic training and identification tools to enable long term assessment and monitoring of biodiversity in the most important remaining forest assemblage in the country.

This project will assist El Salvador with its obligations under the CBD through strong, scientific collaboration between El Salvador and the UK. Working with the NHM is seen by our collaborators as having great potential to bridge politically sensitive divides between institutions that, as a result of the civil war, have not been working together in recent years. It will assist El Salvador in the implementation of Articles 6, 7, 8, 10, 12, 13, 16, 17 & 18 of the Convention on Biological Diversity; Articles 6, 7, 8 and 12 being of particular relevance

### 3. Project Objectives

1. **Training scientists as taxonomic specialists:** will include extensive fieldwork with world specialists on plants and insects from the NHM twice a year, covering different seasons and regions of coffee forest. Each Salvadorean scientist will spend a month in London working on collections at the NHM. The training will begin in May 1999, and run for all three years. Output measures: 5=6 scientists in full time employment, 6A=60 training course participants, 6B=24 weeks at NHM, 180 training weeks in El Salvador; 8=180.
2. **Training scientists to teach** the skills to assess and monitor forest diversity: will take place during field work in El Salvador, and whilst studying the collections in London. This teaching will begin in May 1999, and by 2001, Salvadorean scientists will run the annual training course/workshop. Output measures: 6A=6.
3. **Annual training course:** two weeks, starting in May 1999. Initially NHM staff will organise the course aimed at coffee farmers, resource managers, NGO workers policy makers and new scientists. Basic training will be in collection techniques; identifying and monitoring biodiversity in coffee forest. In 2000 it will be jointly run and in 2001 Salvadoran scientists run the course. Output measures: 6B=180 training weeks, 7=3, 17A=1.
4. **Identification guides:** will be produced during collecting trips by British and Salvadoran scientists and will be field tested in 2001/02 prior to their final publication and distribution in 2002. Output measures: 10=3.
5. **Project database:** will be collated from specimens collected during this project, and other readily available data (from BM & MO via Flora Mesoamericana Project). The data will be available via the internet as soon as possible and updated in El Salvador. It will feed directly into NBAP and other scientific projects e.g., FMP, MBC. Output measures: 12A=3, 13B=3, 11A=3, 11B=3, 20=12,000.
6. **Institutional capacity** will be improved through provision of capital items, training, and collaboration nationally and internationally. Output measures: 5=6, 10=3, 12A=3, 13B=3, 17A=1,
7. **Awareness of biodiversity issues** will be increased through the annual training course; project posters; talks and seminars in El Salvador, Mexico, USA, UK, the project web site, and peer reviewed scientific papers. Output measures: 11B=2, 14A=1, 14B=3, 15A=2, 15B=1, 16A=1, 16B=100, 16C=30, 17A=1, 18A=2, 19A=2.

### 4. Progress

Progress to date has been good. We have achieved most of our milestones and developed a number of useful new collaborations. Our entomological collections to date have included several undescribed species of pimpline wasp whose description will be published in El Salvador in 2002. The work shop, scheduled for the final quarter of the project, has been brought forward to October 2001 to coincide with the Annual Congress of the Sociedad Mesoamericana and evolved into a symposium with invited speakers from Mexico, Guatemala, Colombia and the USA. To this end the project has been awarded a grant from the IUCN Small Grants Programme (Sustainable Use) (awarded outside of period covered by this report). Our project web-pages are now in Spanish as well as English and receives ca 430 hits a month.

2000/2001	Agreed schedule	
June	20	arrival of collection storage cabinets in El Salvador. done December (16 full-sized cabinets).
July	6A/B	2 week annual training course "Monitoring Salvadoran Biodiversity" for coffee farmers, resource managers, NGO workers, policy makers and new scientists to train in collection techniques, identifying and monitoring biodiversity in shade coffee plantations. done (15 participants)
	8	third collecting trip done
December	11B	submit paper to refereed journal deferred to June with DI approval.
February	6A	training of Salvadoran scientists at the NHM done
	17A	Project newsletter produced done (updated web page on project website)
	13B	Further collections delivered to collaborating institutions done
March	10	first draft of identification guides. produced draft of layout done.
	7A	poster produced and distributed done
Ongoing	14B	conference presentation done 'Kew Winter Public Lecture series' November 17, 2000.

### Additional Outputs:

2000/2001		
December	14B	presentation at Worldbank project 'Café y biodiversidad' in December. Discussed project progress and preliminary results.

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### • Slippages:

2000/2001	Agreed schedule	
December	11B	submit paper to refereed journal. deferred to June with agreement of DI.
March	10	first draft of identification guides produced. First draft of design entry key produced, however full draft has slipped to September 2001 as a consequence of a greater number taxa than predicted in the tree and wasp field guides (ca 240 taxa in the tree guide) and ca 70 wasp species including several species new to science. However guides will be produced within the original deadline.

- Provide an account of the project's research, training, and/or technical work during the last year. This should include discussion on selection criteria for participants, research and training methodologies as well as results. Please **summarise** techniques and results and, if necessary, provide more detailed information in appendices (this may include cross-references to attached publications)

Trained 15 people on biodiversity training course. Candidates selected on their potential impact in biodiversity conservation. Therefore a wide range of background from a number GOs and NGOs. For methodologies please see the table below:

#### **Biodiversity Training Course Timetable**

<b>Day 1</b>	<p>introductions</p> <p>outline aims of course</p> <p>talk by national biodiversity adviser</p> <p>contribution of taxonomy to conservation initiatives</p> <p>identification keys: theory</p> <p>identification keys practical</p>
<b>Day 2</b>	<p>plant collecting techniques: why collect plants, the importance of duplicate collections, equipment needed, different approaches, dealing with collections prior to pressing</p> <p>insect collecting techniques: why collect insects and why Pimpline wasps in particular?, siting and using a malaise trap, storage of collections</p> <p>practical: siting and erection of a malaise trap</p>
<b>Day 3</b>	<p>preparation of plant specimens volume of material required, arrangement of specimens prior to drying, theory of drying, equipment required.</p> <p>how to identify ichneumonid wasps</p> <p>practical: sorting ichneumonids from wasp traps</p>
<b>Day 4</b>	<p>Field trip to Coffee farm to collect plants and visit existing traps</p> <p>Make up presses with plant collections and place in dryer</p>
<b>Day 5</b>	<p>identification of Pimpline wasps</p> <p>Practical: identification of Pimpline, collect samples from traps, sort out ichneumonidae, then identify Pimpline to species</p>
<b>Day 6</b>	free day
<b>Day 7</b>	free day
<b>Day 8</b>	<p>Biodiversity information resources: worldwide network of specialists, www resources, collections</p> <p>Fern identification using fieldguide, identify a number of collections from herbarium.</p> <p>Nomenclature and typification</p> <p>Practical: constructing character matrices for producing identification keys</p>
<b>Day 9</b>	<p>Visit to MNHES collections: molluscs, mammals, birds, insects, plants, fossils</p> <p>Visit to UES collection: plants, insects (Biologia and Agronomia)</p>

<b>Day 10</b>	Practical: constructing a character matrix for flowering plants Flowering plant characters Review course collections from dryer
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- Discuss any significant difficulties encountered during the year.
  1. We had hoped to take soil biodiversity samples from coffee farms and natural forest in January 2001. However our first day of field work coincided with a massive earthquake in which over 1500 people died and much of the country's infrastructure was damaged. This would have been an 'additional output' but has been deferred to December 2001.
  2. For the same reason as above the final training course has been deferred to March 2002.
  3. The increase in time allocated to project administration, time taken away from core project activity. A result of ECTF's unscheduled increase in the administrative input now required for reporting. This will have a direct impact on the project outputs and project leader.
- Has the design of the project been enhanced over the last year, e.g. refining methods, indicators for measuring achievements, exit strategies?  
Yes. Am negotiating with potential funders and UES to incorporate our annual training course into their undergraduate degree course.
- Present a timetable (workplan) for the next reporting period.

<b>SCHEDULE (AS AGREED)</b>		
<b>2001/2002</b>		
June	10	submit paper to Oryx
December	8	fourth collecting trip to measure soil biodiversity in coffee farms
October	8	fifth collecting trip (to uncollected forests)
	10	identification guides to be tested and refined
	14A	international workshop (Symposium)
February	10	identification guides published
	15A	press release announcing publication of identification guides.
	15B	local press release announcing publication of identification guides
	12A	database handed over to collaborating institutions

March	17A	web site handed over to collaborating institutions
	13B	further collections delivered to collaborating institutions
	7A	publish pull-out plant guide in national newspaper
	6A/B	2 week annual training course “Monitoring Salvadoran Biodiversity” for coffee farmers, resource managers, NGO workers, policy makers and new scientists to train in collection techniques, identifying and monitoring biodiversity in shade coffee plantations.
	11B	submit paper to refereed journal

## 5. Partnerships

- Describe collaboration between UK and host country partner(s) over the last year. Are there difficulties or unforeseen problems or advantages of these relationships? See answers to questionnaire submitted in April 2001.
- Has the project been able to collaborate with similar projects in the host country or establish new links with / between local or international organisations involved in biodiversity conservation?
  1. Have collaborated with the World Bank 'Biodiversidad y Café' project providing taxonomic support, in return they have distributed our posters to coffee farms working with their project.
  2. In addition am developing links with SalvaNATURA culminating in the joint organisation of a symposium this October in San Salvador.
  3. Through the symposium am developing links with research groups working on biodiversity in shade coffee farms in Costa Rica (Yvette Perfecto, Univ. of Michigan) and Mexico (Patricia Moguel, UNAM).

## 6. Impact and Sustainability

- Discuss the profile of the project within the country and what efforts have been made during the year to promote the work. What evidence is there for increasing interest and capacity for biodiversity resulting from the project? Are satisfactory exit strategies for the project in place?  
This project is currently in the last year of the project and this kind of analysis is probably best left to the final report at this stage.

## 7. Outputs, Outcomes and Dissemination

Agreed schedule	Quantity	
20	4597.71	16 full-sized herbarium cabinets made in country.
	2423.78	Entomological equipment (Winkler traps, malaise traps and entomological cases)
	314.17	Books
6A	15 participants	Biodiversity techniques training course.
6B	2 weeks	Biodiversity techniques training course.
8	13 weeks	2 collecting trips, training course, herbarium
11B	1	submit paper to refereed journal deferred to June with DI approval.
6A	2	
6B	8	training of Salvadoran scientists at the NHM
17A	1	project web pages updated.
13B	4	Further collections delivered to collaborating institutions. Herbarium and insect cabinets delivered. Extensive lobbying by project leader of UES Rector and Science Faculty Dean to improve resources, staff and space allocated to botanical collections. This has resulted in an additional member of staff being allocated and a larger room being set aside.
10	2	first draft of identification guides. produced draft of layout done.
7A	2	poster produced and distributed, biodiversity training course packs
14B	2	conference presentation 'Kew Winter Public Lecture series' November 17, 2000; Workshop of World Bank 'Cafe y biodiversidad' project, Escuela de Biología (UES) planning meeting for the future of their collections.

- Explain differences in actual outputs against those agreed in the initial 'Project Implementation Timetable' and the 'Project Outputs Schedule', i.e. what outputs

were not achieved or only partly achieved? Were additional outputs achieved?  
See slippages.

- Provide details of dissemination activities in the host country during the year. Will these activities be continued by the host country when the project finishes, and how will this be funded and implemented?

Web site has continuously updated lists of scientific and common names, duplicate (first sets) are sent out on a regular basis to relevant national collections.

## **8. Project Expenditure**

**Table 3: Project expenditure during the reporting period**

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Please see attached copy of final quarterly claim for the financial year 2000-2001.

- Variations in 'others' category due in part to displacement of some of the fieldwork and the visit of a Darwin scholar, direct consequences of the January earthquake. In addition there has been some delay in the submission and payment of printing costs by the suppliers and the NHM. This caused some transactions to fall outside of the reporting period.

## **9. Monitoring, Evaluation and Lessons**

Use of 6-monthly and annual reporting forms provided as agreed under project schedule in May 1999.

- Are there lessons that you learned from this years work and can you build this learning into future plans?

Not to spend too much time on unnecessary administration.

## **10. Author(s) / Date**

Alex Monro, June 5, 2001