

# Darwin Initiative – Final Report

(To be completed with reference to the Reporting Guidance Notes for Project Leaders  
(<http://darwin.defra.gov.uk/resources/reporting/>) -

it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

## Darwin project information

Project Reference	EIDP0039
Project Title	A Guide to the Cerrados of Eastern Bolivia
Host country(ies)	Bolivia
UK Contract Holder Institution	Department of Plant Sciences, University of Oxford, South Parks Road, Oxford,OX1 3RB
UK Partner Institution(s)	Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB
Host Country Partner Institution(s)	Museo de Historia Natural “Noel Kempff Mercado”, Av Irala 565, Santa Cruz, Bolivia; Fundación para la Conservación del Bosque Chiquitano (FCBC), Santa Cruz, Bolivia; Herbario Nacional de Bolivia, La Paz, Bolivia.
Darwin Grant Value	£31,221
Start/End dates of Project	01/09/2010-31/03/2011
Project Leader Name	Dr Robert Scotland
Project Website	<a href="http://www.darwincerradosdebolivia.org">www.darwincerradosdebolivia.org</a>
Report Author(s) and date	John R.I.Wood 31 May 2011

## 1 Project Background

This post-project followed on from the original project “Conservation of the Cerrados of Eastern Bolivia” (16-004) and worked with the same partners in the UK and Bolivia. The project was based in the Natural History Museum in Santa Cruz and its centre of focus was the Chiquitania region of eastern Bolivia. The purpose was to raise awareness of the plant diversity of the region’s cerrados by using photographs and data from the original project to produce a popular, colour-illustrated field guide for residents and visitors to the region. Additionally a teachers’ guide and in-service training activities for schools were offered. The field guide has been exceptionally well received.

## 2 Project support to the Convention on Biological Diversity (CBD)

The post-project aimed to raise public awareness of plant diversity at grass-roots level as well as at the level of the Bolivian government and non-government conservation organisations. This should give impetus and support to the implementation of conservation priorities in the project area

Although capacity building was not the main focus of the post project and no specific budget was allocated for this purpose, the post-project has continued to enhance the capacity of its partners in Bolivia, especially that of its principal partner, the Natural History Museum in Santa Cruz by active support of its staff in research activities and academic studies, facilitating Daniel Villarroel’s MA in Brasilia, by the promotion of international contacts for training and publication opportunities etc.

The post-project outline was presented to the Bolivian CBD focal point, Dirección General de Biodiversidad (DGB) and approved by the DGB in July 2010. Various contacts by telephone and letter took place during the life of the post-project and a final report was submitted in May 2011 together with an updated version of the report of the original report. Both are attached with this report. Relations with DGB have always been cordial but the DGB has tended to be benign but unresponsive.

The post-project has had no significant involvement with CMS or CITES.

### 3 Project Partnerships

The post-project developed out of the original project and involved the same partners in Bolivia and the UK. Oxford Plant Sciences was represented in Bolivia by John Wood who coordinated activities with the Bolivian lead partner, the Natural History Museum in Santa Cruz. The project office in Bolivia was based in the Museum. On the Bolivian side the post project was seen as a continuation of the original project but with more narrowly focussed aims. Thus the same project staff from the Museum and the National Herbarium in La Paz were employed and some activities from the previous project continued, in particular Daniel Villarroel continued with research for his thesis in his MA training programme with the Universidade de Brasília, support was offered towards research and publications initiated in the original project by the project team and updates of the project data base, specimen identification etc continued to be made. However throughout the post-project our focus was on the preparation of the field guide and support for school teachers in promoting biodiversity awareness.

All partners had eagerly sought to maintain the original project partnerships and this was especially the case with our Bolivian partners, all of whom saw benefits from the original project. This was particularly so with the lead Bolivian Institution who wished to maximise the achievements of the original project, strengthen their institutional capacity and promote biodiversity conservation within the Department of Santa Cruz. As our Bolivian partners tended to see the post-project as an extension of the original project no new MoU was prepared but The Museum was responsible for preparing the project outline for submission to the DGB for approval, basing this on the agreed post-project proposal submitted to Darwin. Principally for language reasons there has developed a division of labour in which the Museum has essentially prepared papers and reports for the Bolivian authorities whereas Oxford Plant Sciences has taken responsibility for reports in English.

All partners from the original continued working together. We had significant input from the FCBC in the preparation of the illustrated field guide as they provided important photographs for this. Through the Museum we were also able to access unusual plant photographs from a Smithsonian zoologist working with the Museum. At the UK end Kew was important for help with plant identification although the project team had developed considerable competence in this except at the level of complex, little-understood genera.

Our main difficulty in terms of partnership lay in the FCBC's inability to organise the promised TV spots during the life of the post-project. These might still be possible in the future but this would be outside the timescale of this report. The problem lay in the absence of the key staff member, combined with the FCBC's change of premises and pressures of time, which we faced during the post-project..

## 4 Project Achievements

### 4.1 Impact: achievement of positive impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

See 4.2 below. It is nearly impossible to evaluate the project's impact at this stage. The project has certainly raised awareness both of the cerrados in eastern Bolivia and of specific areas within them. Equally it is raised the capacity of its Bolivian partners, especially the Museum, to establish priorities for and provide scientific support for plant conservation

## 4.2 Outcomes: achievement of the project purpose and outcomes

Although it is difficult to unravel the potential impact of the post-project from that of the original project, the focus of the post-project has been on raising awareness of plant diversity in the cerrados of eastern Bolivia. It is hoped that both “La Guia DARWIN de las Plantas de los cerrados de la Chiquitania” and our activities with schools, environmental officers in the municipalities, park guards and landowners will have established that the cerrados, rather than other habitats are the top priority for conservation because of their greater plant diversity, higher rates of endemism and greater vulnerability to habitat change. At the very least our partners and Bolivian official organisations have information available for environmental and conservation planning. Capacity to assess plant diversity has also been enhanced. Equally there is greater awareness in key communities of the wealth of biodiversity in the areas they inhabit. One possible illustration of this was the civic protest in Robore in April this year against settlements in the Tucavaca Valley Reserve where the most critical area for conservation in eastern Bolivia is situated - the serranias of Santa Barbara-Santiago de Chiquitos. It is hoped that greater community knowledge of biodiversity will inform and strengthen their efforts to conserve key areas such as this.

## 4.3 Outputs (and activities)

The logical framework envisaged four outputs:

1. The production of a colour illustrated popular guide to the plants of the cerrados. This was successfully produced. It contains approximately 800 colour photographs and descriptions of over 600 plant species together with an introduction with information on cerrado habitats, where plants can be seen and how the guide can be used. 1000 copies were printed and sale and distribution is through the Bolivian lead partner, the Natural History Museum in Santa Cruz. Preparation of the book took longer than anticipated, both in terms of obtaining photographs, writing the descriptions and in design issues. As a consequence a no cost extension was requested and granted. The CDs were delivered to the printer in March but final delivery only took place in April. The final product has been very well received. In response to a suggestion sent by the Darwin Secretariat when the project proposal was accepted, the Guia DARWIN de las plantas de los cerrados de la Chiquitania is also available online at the project’s website [www.darwincerradosdebolivia.org](http://www.darwincerradosdebolivia.org)
2. The production of a teacher training guide to accompany the posters produced in the original project. This was prepared by October 2010 and distribution took place to schools in October and early November and in March-April. Large meetings took place in a number of centres but distribution, explanation and training was mostly to small groups of teachers. Coverage was excellent in four of the five provinces but was not completed in Angel Sandoval and responsibility here was passed to our Bolivian partners. Both posters and teachers guides were very well-received but at the time of writing it is difficult to know how well they are being used. One additional poster was prepared at the request of the San Matias ANMI (reserve). Clearly follow-up visits would be desirable by our project partners over the next year.
3. An unspecified number of TV spots to publicise biodiversity in the Chiquitania. This output was incorporated at the request of one of our Bolivian partners (FCBC), who undertook to organise and pay for this. In the event no spots were prepared for a variety of reasons, principally because the responsible person in the FCBC was not present but also because the FCBC had to move its premises and pressure on time to complete Outputs 1-2 meant that the project team was preoccupied with other matters.
4. A report for the DGB about the post-project’s activities and achievements. This was delivered in May together with copies of original project report with updated scientific information.

#### 4.4 Project standard measures and publications

These are given in Annex 4 and 5. An attempt has been made to provide only those standard measures and outputs relevant to the post-project but there is overlap with the original Darwin Project 16-004. In particular it should be noted:

1. Some training of project staff continued, particularly was this the case for Daniel Villarroel who was preparing publications and completing his thesis for his MA at the Universidade de Brasil, organised and funded under the original project. Although no further payments were made field work was focussed on gathering material of Myrtaceae to support this.
2. Research activities by project staff and associates continued and in particular field visits to obtain additional photos for the field guide also aimed to support research by Villarroel on Myrtaceae, Soto on Rubiaceae, Atahuachi & Hughes on Mimosa, Mendoza on Manihot and Wood on Ipomoea and Malvaceae. Publications in all these groups are advancing, some accepted, some submitted, some in preparation but these were treated in the report of the original project and are not provided in the list of publications here.
3. The project team and its associates are likely to maintain an informal network indefinitely. In any case they have agreed to meet together in Santa Cruz early in 2012 to finalise the checklist of the cerrados of Bolivia and see it through to publication.
4. Apart from the book (Guia Darwin de los Cerrados de la Chiquitania), no significant physical assets have been handed over as a result of the post-project. However all the physical assets of the original Darwin project (16-0004) remained under project management until the end of the post project, including the project vehicle, computers, cameras, books, microscopes etc. The current value of these is estimated at around £10,000 but the replacement value would be three times as much. A full inventory specifying all non-consumable items handed over at the end of project is available on request.

#### 4.5 Technical and Scientific achievements and co-operation

The post-project had narrow focussed aims but throughout its duration active support was given to members of the project team and project associates in their research activities. Although all of the papers mentioned below were initiated during the life of the original project, important progress has been made in the reporting period with the following:

Daniel Soto: Paper accepted for publication in Brittonia (describes two new species), second paper under revision (describes new species and provides checklist and key to *Borreria* in Bolivia)

Daniel Villarroel: Paper drafted for Novon, second paper drafted for Kew Bulletin; third paper in preparation. Papers describe about 5 new species, new records and rediscoveries of Myrtaceae. Output linked to MA studies. One paper (with Wood) awaiting publication in Kew Bulletin with new species of *Plantago*.

Paola Pozo: Paper accepted for publication in Kew Bulletin with a new species of *Calea*.

Moises Mendoza: Paper with three new species of *Manihot* accepted for Brittonia. Second paper with four new species near completion

Hibert Huaylla: Paper with new species of Iridaceae drafted.

Hughes & Atahuachi: Further material of *Mimosa* collected to expand draft paper

Wood has various papers under preparation in various stages from acceptance to drafting.

All these publications have been or will be submitted to peer-reviewed journals and indicate on-going field and herbarium studies derived from collections and field work made during the original project and followed up in the post project. As an example a collection of *Poecilanthe* was made in November 2007 and was identified as new by Dr Lewis (Kew) in 2009. During the post project visits were made to the site of the original collection to obtain fruiting material and photographs and to assess the size of the population and its conservation status. As a result

sufficient information is now available to go ahead with publication. We have numerous similar histories.

#### **4.6 Capacity building**

The original Darwin project (16-004) significantly increased the capacity of our lead partner in Bolivia for further plant diversity work and also benefitted our other Bolivian partners. The post-project continued in its support, particularly by enhancing and increasing the data base, bank of photographs and collections of accurately named plant specimens. Additionally experience in research, book production, liaison with the public etc. strengthened the professional capacity of team members from the Museum and La Paz.

All proceeds from the sale of the Guia DARWIN de las plantas de los cerrados de la Chiquitania were assigned to the Museum. These amount to the equivalent of about £9000 over the next year or two as it seems that the book will sell quickly. This money is designed to help with petty cash for running the herbarium and for travel costs/small projects related to plant diversity.

All project equipment including the project vehicle, computers, microscopes, field equipment etc were also passed to the Museum and should also enhance its capacity but this is really a consequence of the original project.

Oxford Plant Sciences has also gained from the experience of this project, particularly in its capacity for project design and management.

#### **4.7 Sustainability and Legacy**

With reference to the post-project the most enduring achievement is likely to be the greater awareness of the rich plant diversity of the cerrados of eastern Bolivia. Hopefully this will result in a more focussed, better-informed and enduring approach to their conservation.

The Guia DARWIN de las plantas de los cerrados de la Chiquitania should help all interested in the plants of the region to learn about the flora and develop a strong motivation to conserve it. It should provide a useful model for similar semi-popular publications on the biodiversity of Bolivia, which are accessible to a broader public. Most publications at present are very academic and inaccessible so restricting knowledge to biologists and researchers only.

The post-project has continued building on many aspects of the original project from the collection and naming of plant specimens, the development of the data base and bank of photographs, the development of proactive links with individuals, communities, municipalities and environmental organisations in the Chiquitania, the training of project staff to on-going research into biodiversity. All of these activities will leave an enduring legacy for our Bolivian partners.

All project resources of any significance have been left with our Bolivian partners, principally the Natural Museum in Santa Cruz. More uncertain is the future of project staff. None have permanent posts, one of the underlying problems for biodiversity work in Bolivia being the lack of permanent employment in this field. In practice the project team will find opportunities in other biodiversity projects or secure work as part-time university teachers or a position in an NGO or go on to further studies. One of the team (Paola Pozo) will probably do a PhD in the United States. Experience in the project is likely to open employment doors for the project team but their future is not assured.

### **5 Lessons learned, dissemination and communication**

Referring only to the post-project, the obvious positive lesson is that there is plenty of capacity amongst Bolivian biologists to produce attractive popular works but that some catalyst, such as a Darwin project, is needed to galvanise this capacity into effective action. A more negative lesson is that we were over-optimistic on the time-scale needed to plan, organise, write and produce our principal outputs in terms of the popular guide and teacher training. In the event six months was needed instead of the originally envisaged 3-4 months. It is also difficult to keep both institutions and individuals focussed on project outcomes although the Natural Museum was excellent in this respect.

Much of the post-project activities were focussed on dissemination activities, but in the specific case of “The guía DARWIN de las plantas de los cerrados de la Chiquitania”, this was launched through television, a press release and a public meeting. The target audience were the public in general in Santa Cruz Department but in practice those who attended the public meeting were mostly people involved in biological or conservation work

The principal role of the FCBC in the design of the original project and of the post-project is to continue to disseminate the project’s results in collaboration with the Museum and in particular to make use of the project’s results in strategic planning with stakeholders in the Chiquitania and to continue educational activities initiated by the project.

## **5.1 Darwin identity**

The Darwin name and logo was used in all our products, specifically in our popular field guide (Guía DARWIN de las plantas de los cerrados de la Chiquitania), teacher training guide and in our reports to the Bolivian authorities. All publications making use of project information, photos etc or those in which the project team participates are asked to acknowledge the Darwin Initiative.

We suggested possible Darwin funding opportunities to the Museum (with Kew) and to the Faculty of Agriculture in Sucre (with the Natural History Museum in London); both these initiatives are being explored by both sides.

The Darwin Initiative project had a clear identity and was generally known as the “Darwin Cerrado Project” within the biodiversity/conservation world in Bolivia. To the wider public (TV audience, newspaper readers) the Darwin name may carry little meaning except a loose connection with the UK.

## **6 Monitoring and evaluation**

The post-project requested a no-cost extension from 31 December 2010 to the 31 March 2011. This was agreed in November 2010. No other changes to the project design were requested. As noted in Annex 1 and 4.3 above the TV spots were not actually delivered.

The post-project design is very simple and monitoring is essentially carried out by examination of the final products. On-going monitoring of progress was done by measuring progress against a timeline, thus when it became clear that the field guide would not be completed for delivery to the printers in time to allow printing before the Christmas shut-down, the no-cost extension was requested from the Darwin secretariat. In a similar way a careful record was kept of where posters and teachers guides were distributed and where meetings with teachers were held. At the end of the post-project this information was passed to our partners in Santa Cruz so they could plug any gaps over the next few months (document available on request).

It is clear that a weakness of the M & E system and its design in the logframe is that many aspects of both the original project and the post-project cannot be evaluated until some considerable time, perhaps two years, after the end of the project. It is probably an intrinsic weakness of the M & E system that it can only take place during the project’s life. A note about this problem is included in the accompanying e-mail to the Darwin secretariat.

No formal internal or external evaluation of the project’s work has taken place during the project period.

### **6.1 Actions taken in response to annual report reviews**

Not applicable

## **7 Finance and administration**

### **7.1 Project expenditure**

Grant expenditure was approximately as follows but this is difficult to calculate exactly as we were operating in three different currencies with fluctuating exchange rates and hidden bank charges. The final sum claimed by Oxford may differ slightly from these figures.

Overheads claimed by Oxford: £

UK (Wood's) salary & insurance: £

Wood's international travel and visa expenses: £

Bolivian salaries and insurance: (4 x £ basic salaries for project team members: additional sums paid for part time work in Feb-March 2011 and insurance (approx. £), plus misc. technician fees for specimen mounting, art work, web site).

Book production costs: £

Office expenses: £

Local travel, accommodation, car maintenance costs: £

Bank charges; £

Total: £

Total grant value: £

### **7.2 Additional funds or in-kind contributions secured**

The post-project secured £500 additional funds from the Bentham Moxon trust (Kew) for field work and teacher training/promotional work in March-April 2011. Additionally John Wood was paid salaries by Oxford Plant Sciences with funds from the International Hotel Group in the February to April 2011 period amounting to about £XXX , essentially a retainer to keep him on the payroll before the start of a new unrelated project in summer 2011.

The Museum in Santa Cruz provided water, electricity, telephone services as well as office space and all payments related to the launch of the Guia DARWIN de las plantas de los cerrados de la Chiquitania. Photographs and staff time were provided by the FCBC during a field trip/park guard training/publicity meeting in November 2011.

### **7.3 Value of DI funding**

Without DI funding there would have been no link between the two lead partners and although one UK partner (Kew) has maintained links with two Bolivian partners over some 15 years, they have been minimal and with sufficient funding only to carry out some field work over the years and a small "post-project" (value 10K) to an earlier Darwin Project 11-010. Bolivian institutions do not themselves have funds to develop projects and need to seek funding from international partners to carry out projects, this being true for both university-based organisations such as the Museum and for NGOs such as the FCBC – this dependence on external funding, even at the level of the DGB, is a weakness of all biodiversity/conservation work and projects in Bolivia. Sources of external funding for biodiversity work are very limited and DI, UNEP/GEF, Danida, the EU and Missouri Botanical Garden (principally collection-focussed) have been the main sources of funding in the past ten years. DI has, therefore, been an almost essential catalyst for biodiversity research and conservation work within the host country and the value of the UK government's support has been recognised by institutions, individuals and the press in Bolivia. There is nothing quite like the Darwin Initiative funded by other richer countries.

## Annex 1 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements April 2007 - March 2008	Actions required/planned for next period
<p><b>Goal:</b> 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</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>		Too early to say	(do not fill not applicable)
<p><b>Purpose</b></p> <p>Raise awareness of the plant diversity of the cerrados of eastern Bolivia</p>	<p>Volume of sales of field guide</p> <p>Inclusion of plant diversity/conservation information in tourist literature, municipal plans and propaganda</p> <p>Attitude of landowners, local communities and community leaders</p>	<p>The original project (16-004) and the post-project continue to raise awareness of plant diversity in the cerrados both amongst the general public and more particularly among conservation organisations. It is expected that the post project will significantly increase knowledge of the cerrado plant diversity</p>	<p>Post project finished officially on 31/03/2011. It is hoped and expected that our two Santa Cruz-based partners will continue to raise awareness of plant diversity in the cerrados, from sales of the field guide, support for school teachers, awareness activities with park guards, discussions with municipalities, landowners, communities etc.</p>
<p><b>Output 1</b></p> <p><b>A popular field guide to the flowers of the cerrados of Bolivia</b></p>	<p><b>Existence of book</b></p> <p><b>Contents, accuracy and appeal of book</b></p>	<p>Book was successfully completed. Initial responses have been very positive from a wide range of users. Sales are reported to be good. The indicators for this output and subsequent ones are all objective and easily verifiable</p>	
<p>Activity 1.1</p> <p><b>Selection of pictures/species to be featured in field guide</b></p>		<p>Pictures were selected in September-October 2010. Important gaps were identified. Around 800 photographs in all were used</p>	



Activity 1.2 Field visits to supplement pictures where necessary		Field visits took place in September-December 2011 to obtain photos of a range of species to be included
Activity 1.3 Preparation of accompanying text		Text completed in October-December 2010 by project team
Activity 1.4 <b>Production of guide</b>		Final revision of proofs, indexing etc carried out in February-early March. Delivered to printers in March with page-proofing etc. leading to delivery near end of April.
Activity 1.5 <b>Launch in Santa Cruz</b>		Formal launch took place on 27 April 2011. TV interview to support launch also took place (DVD of interview submitted)
<b>Output 2.</b> Teachers guide for posters produced by earlier project	<b>Existence of teachers' guides</b> <b>Use of posters for educational activities</b>	Teacher's guide submitted with this report
Activity 2.1. <b>Preparation of teachers' notes for posters</b>		Teachers guide prepared in early October 2010.
Activity 2.2. <b>School visits/teacher training meetings in conjunction with 1.2 and October festivals in Bolivia</b>		Meetings with teachers to present guide and posters carried in most schools of Chiquitania region (Full list detailed in report to Bolivian government, which is attached).
<b>Output 3.</b> Television publicity "spots"		TV spots not carried out as partner failed to be able to arrange these at least within time scale available
<b>Planning of TV spots</b>		
Activity 3.2. <b>Recording of spots</b>		
<b>Output 4.</b> Brief report for Bolivian authorities	<b>Existence of report</b>	Report completed with help of two members of project team and delivered to Bolivian government. Comments and feedback awaited at time of writing. Updated version of original results also delivered.
Activity 4.1. <b>Preparation of report</b>		

## Annex 2 Project's final logframe, including criteria and indicators

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Goal:</b> <b>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.</b>			
<b>Sub-Goal:</b> <b>Conserve plant diversity in the cerrados of eastern Bolivia</b>	<b>Slowdown/stoppage of destruction of cerrado habitat in eastern Bolivia</b>  <b>Wider public support/mobilisation for protected areas and species</b>	<b>Comparison of aerial/satellite photographs after significant time lapse</b>  <b>Newspaper reports</b>	
<b>Purpose</b> <b>Raise awareness of the plant diversity of the cerrados of eastern Bolivia</b>	<b>Volume of sales of field guide</b>  <b>Inclusion of plant diversity/conservation information in tourist literature, municipal plans and propaganda</b>  <b>Attitude of landowners, local communities and community leaders</b>	<b>Sales figures</b>  <b>Examination of literature, documentation etc</b>  <b>Response of interested parties to conservation initiatives/land use issues</b>	<b>Availability of original project team</b>  <b>Continued collaboration with contacts throughout Chiquitano region</b>
<b>Outputs</b> <b>1. A popular field guide to the flowers of the cerrados of Bolivia</b>	<b>Existence of book</b>  <b>Contents, accuracy and appeal of book</b>	<b>Examination of book</b>  <b>Reports by users of the book</b>	<b>Capacity of project team to complete task within a tight schedule</b>

<b>2. Teachers guide for posters produced by earlier project</b>	<b>Existence of teachers' guides Use of posters for educational activities</b>	<b>Reports by teachers and students</b>	<b>School authorities allow access to education staff and institutions</b>
<b>3. Television publicity "spots"</b>	<b>Number of "spots" Number of times shown</b>	<b>Viewing figures (if available) Comments from viewers</b>	
<b>4. A brief report for Bolivian authorities</b>	<b>Existence of report</b>	<b>Comments from government</b>	

**Activities (details in workplan)**

**1.1 Selection of pictures/species to be featured in field guide**

**1.2 Field visits to supplement pictures where necessary**

**1.3 Preparation of accompanying text**

**1.4 Production of guide**

**1.5 Launch in Santa Cruz**

**2.1 Preparation of teachers' notes for posters**

**2.2 School visits/teacher training meetings in conjunction with 1.2 and October festivals in Bolivia**

**3.1 Planning of TV spots**

**3.2 Recording of spots**

**4.1 Preparation of report**

**Monitoring activities:**

**Indicator 1 Completion of guide and teachers' notes according to implementation timetable.**

**Indicator 2 Independent assessment of quality of products.**

**Indicator 3 sales figures (after end of project follow-up)**

**Indicator 4 Use in schools of posters for educational projects (after end of project follow-up)**

## Annex 3 Project contribution to Articles under the CBD

### Project Contribution to Articles under the Convention on Biological Diversity

Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use		Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	20	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation		Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation		Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity		Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures		Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.
12. Research and Training	40	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness	30	Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts		Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources		Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair and equitable way of results and benefits.

<b>Article No./Title</b>	<b>Project %</b>	<b>Article Description</b>
16. Access to and Transfer of Technology		Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information		Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
19. Bio-safety Protocol		Countries shall take legislative, administrative or policy measures to provide for the effective participation in biotechnological research activities and to ensure all practicable measures to promote and advance priority access on a fair and equitable basis, especially where they provide the genetic resources for such research.
Other Contribution	10	Smaller contributions (eg of 5%) or less should be summed and included here.
Total %	100%	Check % = total 100

## Annex 4 Standard Measures

Code	Description	Totals (plus additional detail as required)
<b>Training Measures</b>		
1a	Number of people to submit PhD thesis	
1b	Number of PhD qualifications obtained	
2	Number of Masters qualifications obtained	See 4.4
3	Number of other qualifications obtained	
4a	Number of undergraduate students receiving training	
4b	Number of training weeks provided to undergraduate students	
4c	Number of postgraduate students receiving training (not 1-3 above)	
4d	Number of training weeks for postgraduate students	
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification( ie not categories 1-4 above)	
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	About 60 Bolivian school teachers (approx. 30 hours total) About 5 park guards (approx. 2 days)
6b	Number of training weeks not leading to formal qualification	See 4.4
7	Number of types of training materials produced for use by host country(s)	1 guide for use by school teachers
<b>Research Measures</b>		
8	Number of weeks spent by UK project staff on project work in host country(s)	20
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	1 final report +report of original project with updated scientific information)
10	Number of formal documents produced to assist work related to species identification, classification and recording.	One popular field guide (see publications)
11a	Number of papers published or accepted for publication in peer reviewed journals	See 4.4
11b	Number of papers published or accepted for publication elsewhere	
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	
12b	Number of computer-based databases	Data base at Santa Cruz and La

<b>Code</b>	<b>Description</b>	<b>Totals (plus additional detail as required)</b>
	enhanced (containing species/genetic information) and handed over to host country	Paz left from original Darwin project significantly enhanced
13a	Number of species reference collections established and handed over to host country(s)	600
13b	Number of species reference collections enhanced and handed over to host country(s)	Difficult to estimate – perhaps 200
<b>Dissemination Measures</b>		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	1 (Organised and funded by Museum for publicising project results)
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	
15a	Number of national press releases or publicity articles in host country(s)	
15b	Number of local press releases or publicity articles in host country(s)	1 Newspaper report
15c	Number of national press releases or publicity articles in UK	
15d	Number of local press releases or publicity articles in UK	
16a	Number of issues of newsletters produced in the host country(s)	1 in host country 1 in UK
16b	Estimated circulation of each newsletter in the host country(s)	1000
16c	Estimated circulation of each newsletter in the UK	1000
17a	Number of dissemination networks established	
17b	Number of dissemination networks enhanced or extended	See 4.4 above
18a	Number of national TV programmes/features in host country(s)	1 (DVD delivered)
18b	Number of national TV programme/features in the UK	
18c	Number of local TV programme/features in host country	
18d	Number of local TV programme features in the UK	
19a	Number of national radio interviews/features in host country(s)	
19b	Number of national radio interviews/features in the UK	
19c	Number of local radio interviews/features in host country (s)	

<b>Code</b>	<b>Description</b>	<b>Totals (plus additional detail as required)</b>
19d	Number of local radio interviews/features in the UK	
<b>Physical Measures</b>		
20	Estimated value (£s) of physical assets handed over to host country(s)	£9000 of books, plus vehicle, all equipment/books etc from original project (Total £10,000 approx at current value) See 4.4
21	Number of permanent educational/training/research facilities or organisation established	
22	Number of permanent field plots established	
23	Value of additional resources raised for project	£1000
<b>Other Measures used by the project and not currently including in DI standard measures</b>		
	Photo bank	Photo bank left in Santa Cruz and La Paz circa 5000 mostly named plant photos; 300 habitat photos



## Annex 5 Publications

Type * (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
BOOK*	LA Guia DARWIN de las plantas de los cerrados de la Chiquitania – J.R.I.Wood (ed) 2011	Museo de Historia Natural “Noel Kempff Mercado”, Santa Cruz  ISBN 978- 99954-2-036-9	Museo de Historia Natural “Noel Kempff Mercado”, casilla 2489, Av. Irala 565, Santa Cruz, Bolivia. Also available free online at <a href="http://www.darwincerradosdebolivia.org">www.darwincerradosdebolivia.org</a>	£9

## Annex 6 Darwin Contacts

Ref No	EIDP0039
Project Title	A guide to the Cerrados of Eastern Bolivia
<b>UK Leader Details</b>	
Name	Dr Robert W.Scotland
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<b>Partner 1</b>	
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<b>Partner 2</b>	
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<b>Partner 2</b>	
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