



## Darwin Initiative Annual Report



Department  
for Environment  
Food & Rural Affairs

**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, excluding annexes*

**Submission Deadline: 30 April**

### Darwin Project Information

Project Reference	19-002
Project Title	A cutting-EDGE approach to saving Seychelles' evolutionarily distinct biodiversity.
Host Country/ies	Seychelles
Contract Holder Institution	Durrell Institute of Conservation and Ecology- University of Kent
Partner institutions	Government of Seychelles Ministry of Environment and Energy; Seychelles National Parks Authority; Seychelles Islands Foundation; Natural History Museum of Seychelles; Wildlife Clubs of Seychelles; Island Conservation Society; Nature Protection Trust of Seychelles; Zoological Society of London-EDGE of existence programme; Natural History Museum-London; Professor Paul Racey (independent bat specialist)
Darwin Grant Value	£256,085
Start/end dates of project	01 October 2012/30 September 2015
Reporting period (eg Apr 2013 – Mar 2014) and number (eg Annual Report 1, 2, 3)	April 2013 - March 2014, Annual Report 2.
Project Leader name	Dr. Jim Groombridge
Project website	<a href="http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html">http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html</a>
Report author(s) and date	This report was compiled by the Project Officer Dr Rachel Bristol contributions from the Project Leader Dr Jim Groombridge, the Project Fellows -Sylvanna Antat, James Mougall, Diana Renaud, Terance Payet, Charles Morel and Berthilde Belle (progress reports), UK partners ZSL (Rebecca Short, Dr Nisha Owen) and DICE (Helen Meredith and Dr Jim Groombridge (trip reports) and Terence Vel and Dr Michele Martin (workshop report). April 2014.

## 1. Project Rationale

**PRIORITISING SPECIES FOR CONSERVATION.** Our understanding of the Earth's biodiversity has begun to recognise the global and taxonomic significance of evolutionarily distinct species and their high conservation value. With ancient evolutionary origins, these 'biological treasures' not only represent the '*last of their kind*' but are often extremely rare, raising the stakes for their successful recovery. Saving these species is a major challenge because;

(i) their biology, taxonomy and habitat requirements are often poorly-known and under-studied, limiting options for their recovery until appropriate in-country capacity is developed and basic knowledge gaps are filled;

- (ii) they often go unnoticed by the global conservation community, struggling to compete for resources against more charismatic 'flagship species'.
- (iii) they seldom cluster together geographically to form a convenient focus, but instead are scattered worldwide as 'high-priority' species in dire conservation need.

Together, extreme rarity, evolutionary uniqueness and data-deficiency make it difficult for global policy-makers to allocate resources to conserve these species.

**EDGE SPECIES:** ZSL developed the *EDGE* Programme in 2007, using a scientifically robust method to identify and prioritise Evolutionarily Distinct Globally Endangered (*EDGE*) species. Using the latest DNA-based phylogenies to estimate evolutionary distinctiveness and evaluate it alongside IUCN threat status, ZSL identified top priority '*EDGE*' species for many taxa, including mammals, amphibians, birds and reef-building corals. *EDGE* has been presented to the IUCN World Conservation Congress and CBD COP 10, and is a globally accepted prioritisation tool for biodiversity conservation, paving the way for nations to recognise and target their *EDGE* species as a priority.

**SEYCHELLES – an *EDGE*-zone:** Most *EDGE* species are scattered globally. Remarkably, the Seychelles islands in the Indian Ocean are home to no less than 12 currently recognised *EDGE* species, such as the *Sooglossus* frogs (amongst the World's smallest, most ancient frogs), the black parrot, Cooper's black caecilian (an ancient limbless amphibian lineage) and the sheath-tailed bat (one of the world's rarest species with <100 survivors) (see Fig.1/Table1). Consequently, the Seychelles islands form a natural '*EDGE*-zone'. Whilst posing a heavy burden on the Government of Seychelles to fulfil its CBD obligations, this also presents a remarkable opportunity to deliver resources and training to conserve 12 *EDGE* species in a single location.



Fig. 1: 4 of the 12 Seychelles *EDGE* species

**IN-COUNTRY CHALLENGES:** To fulfil their commitment to the CBD, the Government of Seychelles' Ministry of Environment is tasked with saving these species, some predicted to be only a decade from extinction. However, the Ministry has identified two major obstacles to recovering their *EDGE* species and has sought our help.

(i) The Seychelles' population of c.88,000 people, and the absence of university-level training opportunities in conservation biology (until the opening of a university in 2011) makes it difficult for Government to recruit, train and capacity-build for conservation amongst the local workforce.

(ii) This deficiency in local professional expertise makes conserving *EDGE* species doubly difficult, because each *EDGE* species requires specialist approaches.

**Table 1: *EDGE* species endemic to Seychelles**

Sheath-tailed bat ( <i>Coleura seychellensis</i> ):	1 <i>EDGE</i> sp
Seychelles black parrot ( <i>Coracopsis barklyi</i> ):	1 <i>EDGE</i> sp
Sooglossid frogs ( <i>Sooglossus/Sechellophryne</i> spp.):	4 <i>EDGE</i> sp
Cooper's black caecilian ( <i>Praslinia cooperi</i> ):	1 <i>EDGE</i> sp
Corals ( <i>Anomastrea irregularis</i> ; <i>Horastrea indica</i> ; <i>Parasimplastrea sheppardi</i> ; <i>Catalaphyllia jardinei</i> ; <i>Physogyra lichensteini</i> ):	5 <i>EDGE</i> sp
<b>TOTAL <i>EDGE</i> species:</b>	<b>12</b>

**SOLUTION & OBJECTIVES:** A DICE-led Darwin project (with UK partners ZSL, NHM, Independent UK bat consultant, and six Seychelles organisations) is uniquely-placed to overcome these obstacles, by providing specialist support to develop earmarked local biologists as *EDGE* Species Fellows. Five Seychelles personnel have been identified, some of whom are already embedded within the Ministry or local NGOs. Each has demonstrated potential to become such a 'species champion', but lacks specialist training and resources. With Darwin support, each *EDGE* Fellow will receive in-country training by UK partners, tailored specifically to their respective *EDGE* species' requirements. Training and development of these Seychelles *EDGE* Fellows will be overseen by a full-time salaried Project Officer who will supervise the in-country conservation work and coordinate training by UK partners through field visits, exchanges and training workshops during the 3 years.

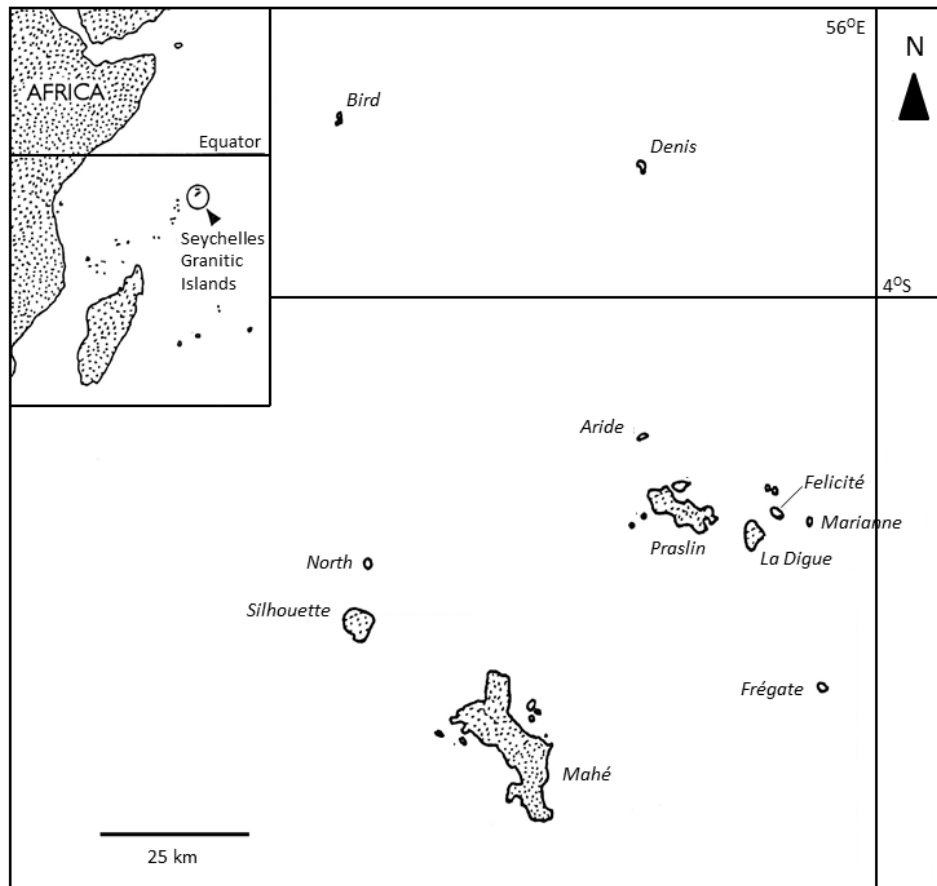


Fig 2. Map of the Seychelles granitic islands where all Seychelles EDGE species are located.

## 2. Project Partnerships

The project officer (PO), on behalf of the project leader, meets regularly with all host country partners to discuss project direction and progress and any issues. The PO and host country partners have found that it is far more effective to have individual meetings between PO and each host country project partner rather than group meetings as it has proven very difficult to get all project partners free at the same time for meetings and it enables us to discuss in more detail partner specific activities etc.. The PO holds regular individual meetings with each host country partner in order to self-monitor project progress, detect any potential issues and to plan ahead. Additionally host partner group emails are regularly sent around to all local partners to keep everyone in the loop about upcoming activities and project progress and we have a project Dropbox folder where project documents, workshop presentations, relevant literature etc is uploaded. The Dropbox folder is shared with all project partners and fellows. This management structure is working well and will continue.

Partnerships were all based on demand stemming from the host country. The project was planned in collaboration with the host country partners/organisations in response to a call (initially from the Seychelles Government-Ministry of Environment) for help with conservation of Seychelles EDGE species. A scoping grant to ZSL/DICE from the Darwin Initiative enabled a workshop in Seychelles (held in November 2010) which discussed conservation of the EDGE species in Seychelles and identified the actions considered priorities for each species by the host country. These priority actions are the basis of this current Darwin Initiative project. The host country project partners are organisations (government and NGO's) who work in the conservation sector and are best placed to lead on the conservation of the particular EDGE species. The UK project partners were then hand-picked for their expertise in the Seychelles EDGE taxa.

The initial challenges of coordinating such a large number of partners (12), alignment of our project time-frame ( and accompanying annual budget) to the ZSL EDGE fellowship programme timeframe for our 3 project fellows who are also following ZSL EDGE fellowships) and local partner cash-flow problems due

to the lengthy process for them to receive project funds, are all either now satisfactorily managed or have been resolved and we have not come across any new major challenges during the past year.

### **3. Project Progress**

Our project started in October 2012 and therefore falls across 4 financial and reporting years. In order to report sensibly relating to project timeframe, Year 2 refers to activities scheduled for months 7-18 of the project i.e. from April 2013 - March 2014, the current reporting period. The project has followed a logical framework (Annex 2) and project progress is reported against the projects logic. The progress of activities is reported under the output to which they relate.

#### **3.1 Progress in carrying out project activities**

##### **Output 1. Improved local capacity to research, monitor and manage Seychelles EDGE species.**

*Activities scheduled for Year 2: 1.2 personally tailored training programmes for each EDGE fellow designed (yr1&2) and implemented (ongoing); 1.3 Bi-annual training workshops x2; 1.4 -1x 3week trip for each EDGE Fellow to appropriate UK partner institution for UK based training (yr2).*

All 6 of our project fellows are undertaking tailor-made training programmes with input from the project leader (PL), the project officer (PO), the relevant UK project partner/expert and the fellows themselves, in order to maximise the usefulness and impact of the training for each of them.

Diana Renaud (sheath-tailed bat fellow) and James Mougil (Sooglossid frog fellow) are both following the Zoological Society of London (ZSL) EDGE of Existence fellowships and therefore attended a 1-month long 'conservation tools' training course specially designed for the ZSL EDGE Fellows in Kenya in November 2013. The training course is designed to provide the fellows with the skill-set they need to successfully complete their EDGE fellowship projects (projects designed to work towards saving their particular EDGE species). Additionally James and Diana both benefited from project visits from ZSL Conservation Biologist Dr Nisha Owen. Nisha went over their project plans with them and helped to iron out any issues, then went into the field to advise on the field work methodologies that Diana and James are using (see annex 4 ZSL trip report).

Sylvanna Antat, our project EDGE corals fellow, is also following a ZSL EDGE fellowship. She began her fellowship one year before Diana and James, as she was identified as our EDGE corals fellow before our project started. She attended her ZSL EDGE of Existence 'conservation tools' training course in October 2012. The ZSL EDGE corals coordinator Rebecca Short went into the field with Sylvanna and her diving fieldwork team to see first-hand how Sylvanna's EDGE coral surveying is going and also spent one-on-one time with Sylvanna discussing analysis of her data and producing survival blueprint for EDGE corals in Seychelles (see annex 4).

Charles Morel and Berthilde Belle our project caecilian fellows both went to the Natural History Museum in London (NHM) for a 3 week training trip in November 2013. Caecilian experts based at the NHM, Dr David Gower and Dr Mark Wilkinson, had prepared a training timetable for them involving training in caecilian identification, biology and life history, caecilian captive management and also specimen curation and museum display design as Charles and Berthilde work at the Seychelles Natural History Museum (SNHM). The NHM-UCL project caecilian experts spent 8 weeks in Seychelles January-March 2014 to undertake further caecilian distribution surveys on several islands, to collect samples for genetics work, to work with Charles and Berthilde, and to run a caecilian workshop. Our Caecilian fellows (particularly Charles) spent a lot of time in the field with them receiving ongoing training. Berthilde is concentrating more on the social survey and education and awareness aspects of their caecilian work and has received help and input from questionnaire survey design experts Dr Freya St John and Dr Assaf Schwartz both from DICE University of Kent to design a robust social survey questionnaire to assess local knowledge and attitude towards caecilians.

Our black parrot fellow Terance Payet went to Mauritius to work with the Mauritius Wildlife (MWF) Echo-parakeet recovery team for 3 weeks in October 2013. MWF has an impressive record of recovering critically endangered bird species from very low numbers including the Mauritius echo-parakeet from less than 20 individuals in the early 1990's to over 500 individuals currently. We and Terence himself believe that the practical field technique-based training he received from MWF was more relevant for him and his

work to conserve to Seychelles black parrot than any training we could have planned for him at a UK institution. Terance has also benefited from one-on-one time with Helen Meredith (DICE) to design a social survey questionnaire with the aim of assessing Praslinois attitudes towards black parrots in order to inform future education and awareness activities.

During year 2 we ran six project training workshops. In addition to our project fellows, we extended workshop invitations to all relevant government and non-government organisations, the University of Seychelles Environmental Science students and to other individuals who work in conservation in the Seychelles in order to maximise the impact of the training workshops. Workshops were well attended with generally 20-25 participants per workshop.

Workshop 1: Full day 'Education and Awareness Campaign planning workshop for EDGE species' led by local education and awareness campaign experts Dr Michele Martin (CEO of local NGO Sustainability for Seychelles) and Mr Terence Vel (Co-ordinator of local NGO Wildlife Clubs of Seychelles) on 08 July 2013. Workshop participation was limited to the project fellows and people within their organisation who will be helping with education and awareness activities. The workshop aimed to help fellows (and their organisations) to develop an effective education and awareness campaign for their respective EDGE species. The facilitators lead participants through the logical steps of planning an effective education and awareness campaign including what do we want to achieve, who is your target audience, and identifying desired behaviour changes. See annex 6 for workshop report.

Workshop 2: Full day (21 November 2013) Black Parrot workshop facilitated by project leader Dr Jim Groombridge (Durrell Institute of Conservation and Ecology, University of Kent) and hosted by local partner Seychelles Islands Foundation (SIF) at the Vallee de Mai visitors centre on Praslin (see annex 7 for workshop report). The workshop covered evolutionary change and extinction; small population genetics and disease using a case study of the Mauritius echo-parakeet; the role of supplementary feeding in the recovery of the Mauritius echo-parakeet; Seychelles black parrot (BP) genetics update covering recent research findings on the evolutionary distinctiveness of the BP; and a presentation project BP fellow Terance Payet about SIF research and monitoring and what they have learned about the species diet, breeding biology and threats. This was followed by a field-training exercise in the Vallee de Mai led by Terance and SIF co-workers demonstrating some of the field techniques they use to monitor the BP.

Workshop 3: Half day BP workshop facilitated by Dr Jim Groombridge at the University of Seychelles campus at Anse Royale, Mahé Island (19 November 2013). This workshop covered the same materials as the workshop on Praslin but enabled project partner staff and fellows based on Mahé (the main island) to attend and learn more about parrot conservation. Additionally due to a special request by the head of programme for the Environmental Science BSc, Jim presented a shorter version of the workshop on (18 November 2013) to some of the University of Seychelles Environmental science degree students who were unable to attend the workshop proper due to other commitments.

Workshop 4: Three day workshop (17-19 February 2014) facilitated by Zoological Society of London staff Dr. Nisha Owen (EDGE conservation biologist) and Rebecca Short (EDGE corals coordinator). This workshop covered three topics that our EDGE corals fellow Sylvanna Antat identified as useful for her and also for her colleagues at Seychelles National Parks Authority (SNPA) and therefore likely useful for other people in Seychelles working in marine conservation too. Day one covered coral biology, ecology and coral reefs; coral reef economic values, ecosystem services, threats and ways to mitigate; and coral reef monitoring techniques. Day 2 covered social science and social survey techniques (including a practical session) and Day 3 covered ecological monitoring including project planning and design, fieldwork principles and data collection, introduction to analysis and sampling, and ecological surveys (see annex 4). Sylvanna also gave a presentation on her EDGE corals project work.

Workshop 5: Two day caecilian workshop led by NHM-London caecilian experts Dr Mark Wilkinson and Dr David Gower, systematist and evolutionary biologist Dr Julia Day from University College London (UCL) and caecilian PhD student Simon Maddock (20-21 February 2014). This workshop, attended by 26 people, covered caecilian biology, life history and taxonomy; the importance of islands in biology; caecilian fieldwork and ecological study methods; the history, diversity and distribution of Seychelles caecilians and what remains unknown; caecilian conservation; a practical lab session on identification of Seychelles caecilians using both live and pickled specimens; genetic diversity of Seychelles caecilians and exciting recent developments in caecilian biology. A field trip was also planned but had to be cancelled due to torrential rain. Following a special request for the caecilian workshop to be repeated on Praslin a ½ day condensed version of this workshop as run on Praslin on 03/03/14 to ensure people from Praslin and La Digue who were unable to make it to Mahé did not miss out. I have received feedback from several participants on the Mahé caecilian workshop and from the manager of the SIF Vallee de Mai centre that the caecilian workshops were excellent, both highly informative and interesting.

Workshop 6: Helen Meredith DICE. Helen ran a ½ day workshop (5/3/14) with our 3 project amphibian fellows and Natural History Museum staff. Helen covered raising awareness of amphibians, use of monitoring and evaluation techniques in conservation programmes and an introduction to the Conservation Excellence Model (see annex 8)

Training provided to local project fellows was not limited to workshops; additional one-on-one training was provided to fellows from the relevant UK partner experts during their project trips to (see for example annexes 4 & 8).

Training activities have been undertaken in the manner and timeframe planned. We have again exceeded our target of training workshops for the year (we planned to run 4 workshops but in fact ran 6).

## **Output 2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.**

*Activities scheduled for Year 2:*

**Frogs:** 2.1 sooglossid frog surveys undertaken (yr1&2); 2.5 Precautionary disease monitoring for sooglossid frogs (yr2);

**Caecilians:** 2.7 develop caecilian survey methodology with NHML experts (yr1&2); caecilian distribution surveys conducted on all relevant islands (yr2&3);

**Black parrots:** 2.12 Black parrot survey to determine population size (Yr2&3); 2.13 research black parrot breeding ecology including limiting factors (yr2&3); 2.14 provide support to SIF (existing project) ring-necked parakeet eradication on Mahé (as required- yr1&2); 2.15 Confirm status of Seychelles black parrot species through molecular genetic work (yr1&2); 2.16 Undertake disease screening for Psittacine beak and feather disease (PBFD) in the black parrot (yr 2&3); 2.17 utilise the existing black parrot species action plan as guiding document, produce annual work programmes, implement and report (ongoing)

**Sheath-tailed bats:** 2.18 utilise the existing sheath-tailed bat species action plan as guiding document, produce annual work programmes, implement and report (ongoing); 2.20 Surveys to locate further bat roosts (yr2&3); 2.21 evaluate the role of barn owls in the decline of the bat (ongoing); 2.22 surveys to locate new feeding/activity areas (ongoing); 2.23 regular roost counts to monitor numbers (ongoing)

**Corals:** 2.24 Build a network of local and international coral experts to advise on conservation actions for EDGE corals in Seychelles (yr1&2); 2.25 Develop a conservation action plan for EGE coral species (yr2).

**All EDGE species:** Annual progress reports for each EGE species based on work programmes developed from Species Conservation Action Plans (ongoing).

In order to implement the many different activities for each EDGE species under this project, each of our project fellows have their own projects and accompanying work-programmes (designed in year 1 with help from the PO and their respective UK partner expert mentor, and in the case of the 3 fellows also following ZSL EDGE fellowships- input from the ZSL EDGE of existence team also) which they are implementing. Their draft projects were annexed to last year's annual report.

### **Sooglossid frogs**

During this reporting period sooglossid frog survey and monitoring methods have been revised and tested in the field. We have worked through some confusion over the calls of *Sooglossus thomasseti* (some previous researchers say they call frequently and have surveyed them by counting calls, while other researchers have noted they call very rarely). We have found they call only very rarely and suspect some previous research may have mistaken variation in *Sooglossus sechellensis* calls for 2 different species. To avoid confusion, we are surveying *S. thomasseti* visually (the largest and easiest of the Sooglossid frogs to see) and the other species by calls. James Mougat (project Sooglossid frog fellow) has also refined his project plan post ZSL conservation tools training course, and after discussion with the PO and ZSL conservation biologist, as his survey plan was very ambitious. James is currently part way through undertaking distribution and abundance surveys within National Parks. We have completed PCR analysis of over 100 swabs from sooglossid frogs covering all 4 species and all 3 islands where they occur and all were negative for *Batrachochytrium dendrobatidis* ('Bd' or 'Chytrid'). See annex 9 for a progress report from James.

### **Caecilians**

During this report period we have undertaken caecilian surveys at different altitudes and locations on Mahé, Praslin, La Digue, Silhouette and Felicite islands. More samples have been collect during this

reporting year for molecular genetic confirmation of species present and relationships between species. Caecilian project fellow Charles Morel has designed a caecilian identification guide for Seychelles caecilians which we use to ID specimens encountered during surveying (see annex 10b). Lab work and analysis is underway at NHM-London and initial molecular phylogenetic trees have been run with a partial dataset (from samples collected in year 1). Over 130 caecilians of several species and from several different islands have been tested for *Bd* 'chytrid' fungus presence (using PCR technique) and all were negative for *Bd*. Additionally (extra activity not listed in project document) a caecilian survey questionnaire has been designed by caecilian project fellow Berthilde Belle with input and guidance from questionnaire survey experts Dr Freya St John and Dr Assaf Schwartz at DICE, University of Kent (see annex 5). The survey intends to provide information on knowledge, attitude, beliefs and behaviour of Seychellois (locals) towards caecilians which will be used to inform future education and awareness activities and also to potentially provide information for our distribution mapping. Berthilde has trialled the survey on a small group of locals and is now starting the survey proper which will cover all districts on the main island Mahé. Berthilde has also designed and printed information leaflets about caecilians to give out to survey participants after each interview.

### **Black parrot**

Black parrot breeding ecology was monitored at all known nests during the breeding season from October 2013-March 2014 by Terance Payet and his assistant Patrick Woods at SIF. Additionally research to determine factors limiting breeding success is underway. To determine whether food is a factor limiting breeding success, monthly phenology monitoring of 23 plant species that black parrots was undertaken throughout the year. All active nests were checked regularly using a baby monitor to determine whether they fledged successfully or failed. If a nest failed the contents were retrieved and assessed to determine cause (eg rat depredation, starvation, infertile eggs etc). The status of the Seychelles black parrot species has been investigated in the PL's genetics lab during this project reporting period using molecular phylogenetic techniques and a manuscript has been submitted to the *Conservation Genetics* for publication. In summary this research found that Seychelles black parrots should be considered a full species as they are genetically quite diverged and basal to other *Coracopsis* taxa (species and subspecies). **NEWSFLASH – on 28<sup>th</sup> April 2014 BirdLife International officially recognised the Seychelles black parrot as a full species citing the recent molecular genetic work as instrumental in this taxonomic change** see (<http://www.birdlife.org/globally-threatened-bird-forums/2014/04/black-parrot-coracopsis-nigra-is-being-split-request-for-information-on-c-sibilans-and-list-c-barklyi-as-vulnerable/>). Although outside the reporting period of this annual report it is significant and exciting news worthy of mentioning. Samples collected for *Psittacine* beak and feather disease (Pbfd) screening during last reporting period have been analysed during this reporting period using PCR techniques in the PL's genetics lab at DICE, University of Kent and all samples returned negative results. A ring-necked parakeet eradication on Mahé (not part of this project- an existing SIF project) is now underway and we are prepared to provide support to SIF with this eradication as and when required however as yet our assistance has not been necessary. A black parrot point count survey across the entire BP range was undertaken in 2011 by SIF staff and estimated the population size at 520-900 individuals (95%CI) (Reuleaux *et al.* 2013). Point counts at fixed sites are scheduled to be undertaken by black parrot fellow Terance Payet over the next few months and will be used to monitor population trends against the 2011 survey. (See black parrot season report in annex 11).

### **Sheath-tailed bat (STB)**

During this reporting period we have conducted bat roost emergence counts every 2 months. The total number of bats counted emerging from the four known roosts of this species in the most recent count in March 2014 was 63 (cf. 61 in March 2013). Numbers have been fairly stable though the year but we did notice a definite increase in the number of bats emerging from the Cap Ternay roost in February and March (c.27 cf c.17 previously) which could be newly flying juveniles as the STB breeding season is thought to be October-March. Additionally in March 2014 a noticeably smaller and slower flying bat was observed at the dan Zil roost which we believe is probably a juvenile.

During all roost emergence counts we monitor for signs barn owl presence/disturbance/depredation when the bats exit the cave and via call play-back of barn owl calls after the bats have left the area. To date we have not noted any barn owls near roosts. We are controlling rats at all known roosts through the use of permanent poison bait stations.

During this reporting year the PO has drafted legislation designed to be attached as an amendment to the existing Wild Animals and Birds Protection Act and this along with other STB documents and information supplied to both the Director General of Wildlife, Enforcement and Permits and to the Ministry of Environment Legal Officer, have been submitted to the Attorney General for him to write new legislation to protect the bat and its roosts. However we are disappointed at the slowness and lack of

transparency in this process and note that the STB is still not legally protected. The PO has reiterated her and this project's offer of help in any way to facilitate/speed up this process, however despite being assured that the bat, their roosts and the immediate surrounding area will be legally protected by the end of 2013, they are still completely unprotected. The PO, Prof Paul Racey (project UK bat expert) and the Director of Global Programmes at Bat Conservation International (BCI) have discussed pressuring/encouraging Seychelles government at the highest level to legally protect the bat ASAP. During year 3 of the project we will endeavour take this higher and meet with the Minister for Environment and the President in an effort to ensure the bats are given the legal protection they deserve ASAP. Surveys to locate further roosts are scheduled for year 2-3 of the project are underway. Diana, the PO and other Ministry of Environment staff spent 4 nights on Praslin Island searching areas where STB have been recorded historically and areas with no road or path access as these are the likely areas bats could have remained undetected. No bats were seen or heard in 4 nights of searching on Praslin. We have located an area at Beoliere (west Mahé) where we are regularly encountering bats in the very early evening and have started trying to back-track, however as yet we have not located any new roost. We are a little behind our original project schedule regarding searching for new roosts, however we are confident we will complete this activity in a timely manner and well within the project timeframe.

Additionally Diana has designed and piloted a questionnaire survey which aims to assess Seychellois current knowledge of sheath-tailed bats in order to inform her education and awareness activities. She will complete the questionnaire survey in year 3. See annex 12 for Diana's annual progress report.

### **EDGE Coral species**

Our Coral EDGE fellow Sylvanna has worked with project partner ZSL coral experts with input and guidance from other international coral experts on her study design. During year 2 she has completed survey dives at selected sites around Mahé, St Anne, North, Denis, Curisuse, Praslin, La Digue and Silhouette islands both inside and outside marine protected areas (MPAs) in order to (i) map distributions of Seychelles EDGE corals and (ii) to compare distributions and abundances of EDGE corals within and outside MPAs. She will use her survey data to answer whether current MPAs are adequately protecting EDGE corals found in Seychelles. She and team have two more dive sites to complete surveying (scheduled to be completed in April and May of 2014) and then she will be analysing her findings and drafting recommendations for the protection of EDGE corals in Seychelles and producing a Survival Blue print/SAP for Seychelles EDGE corals (see annex 13 for Sylvanna's annual progress report).

### **All EDGE species**

Annual progress reports have been produced by all our project fellows summarising the work undertaken and progress they have made over the past year (annexes 9-13).

EDGE species research, monitoring and management activities have generally been undertaken in the manner and timeframe planned. Several activities are a little behind schedule for example STB roost searches and Sooglossid frog surveys, due to the timing of the ZSL conservation tools training course that had to be attended and passed before their project plans could be finalised, however we are ahead on other project activities under this output for example caecilian genetic studies and research into sooglossid frog ecology, and overall progress is to schedule and we fully anticipate to complete the all activities under this output within the project timeframe.

## **Output 3. Research information about EDGE species produced and disseminated**

*No activities scheduled for year 2*

## **Output 4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.**

*Activities scheduled for year 2: 4.1 Displays produced and installed in SNHM and Vallee de Mai Visitors Centres on each of the EDGE species (yr2&3); 4.2 Education and Awareness Leaflets designed, produced and disseminated amongst local Seychelles communities for all Seychelles EDGE species, tailored to each EDGE species and target audiences (ongoing); 4.3 national radio coverage x2; 4.4 national TV coverage x1; 4.5 national newspaper article x2; 4.6 information boards designed, produced and installed at trail entrances with information about EDGE species likely to occur in the area (yr2); 4.8 contribute blogs to ZSL edge of existence blog; dedicated project webpage on DICE website (ongoing); 4.9 project blog (Facebook) set up where EDGE fellows regularly blog (ongoing)*



During this reporting period two displays (one about this project and the other about Seychelles EDGE species) have been produced and installed in the Seychelles Natural History Museum (see annex 14). These displays are mobile and so can be used by project partners whenever they have cause. During the past year they have been exhibited at the 3 day National Day Expo in Eco Village in June which was visited by thousands of Seychellois, and also the displays toured Mahé, Praslin and La Digue with our Corals fellow Sylvanna Antat's cartoon competition and EDGE corals exhibition in October 2013. Displays about EDGE species found in the Vallee de Mai have been designed and are awaiting printing. These displays will be installed in the Vallee De Mai visitors' centre which is the most visited tourist attraction in Seychelles.

2 newspaper articles have featured in the Seychelles Nation about this project during this reporting year; one covering the EDGE corals exhibition and cartoon competition opening in October 2013 and one about caecilians in September 2013 (see annex 15 and 10).

Our project has been on National television (SBC) twice during this project year – the cartoon competition prize giving and exhibition opening, and our black parrot workshop on Praslin were both shown on National TV News. We are currently filming and producing 5 short documentary style SPOTs about EDGE species to play on National Television to sensitise the general public about our EDGE species and a longer documentary covering all the EDGE species and including extra information about this project (see annex 19 for concept outline).

Our 3 fellows following the ZSL EDGE of existence fellowships regularly blog on the ZSL edge of existence website <http://www.edgeofexistence.org/edgeblog/> Our project has a webpage on the DICE, University of Kent website [http://www.kent.ac.uk/sac/research/projects/jg\\_biodiversity.html](http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html) and we are on Facebook (Edge Seychelles) where our fellows regularly post information, images and updates about project activities.

Additionally a second special edition of Mediz, the SNPA newsletter covering to this EDGE corals project in was produced in March 2014 (see annex 16). This edition of Mediz was written by Sylvanna Antat our EDGE corals fellow.

We have designed a project logo and printed Ti-shirts with both the Darwin Initiative logo, our project logo and a strapline "Saving species on the EDGE" on them and have distributed them to our project fellows and project partners (see annex 17).

Two educational leaflets have been produced during this reporting year, one about Seychelles EDGE corals and one about corals and CITES listings (see annex 18).

An additional educational activity that is not included in our project log frame is snorkelling activities for schoolchildren. Corals fellow Sylvanna Antat and her colleagues at SNPA have been running school holiday programmes for the past year (which will continue due to great interest and demand) with the objective of creating an interest, an improved knowledge and awareness in EDGE corals, coral reef ecosystems and coral reef survey. They have been teaching school children to snorkel and then taking them snorkelling on the coral reef. Prior to snorkelling on the reef they give presentations to the school children about the importance and fragility of coral reef ecosystems.

Terence Payet our black parrot fellow has given several presentations about black parrots to primary and secondary school children on Praslin Island. These presentations educate Praslin children about black parrot behaviour, habitat, diet and breeding biology and are very well received.

EDGE species education, awareness and outreach activities are to date being achieved in the manner and timeframe planned.

### **3.2 Progress towards project outputs**

We are now exactly ½ way through this project and to date overall progress towards achievement of project outputs is good and on schedule and we fully anticipate achieving project outputs by project close in September 2015. The Project is continually overseen by the Project Officer and the Project Leader using the logical framework and the output indicators to measure our success at achieving project outputs. Output level assumptions still hold true.

### **3.3 Progress towards the project Purpose/Outcome**

To date we believe that we have made significant progress towards our project purpose to provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE species endemic to Seychelles. We are providing investment, technical expertise and targeted training in conservation, ecology and

taxonomy through both our series of training workshops to the wider Seychelles conservation community and also through one-on-one mentoring and training of our project fellows. We (PO, PL and UK expert mentors) have certainly noted a significant increase in knowledge and research, monitoring and management capabilities particularly of our six project fellows. Further down the line we are confident this will translate into improvement of the conservation status of our EDGE species. We are confident that by the end of the project in September 2015 we will likely achieve our Purpose. Project level assumptions still hold true and the indicators are adequate for measuring outcomes.

### **3.4 Goal/ Impact: achievement of positive impact on biodiversity and poverty alleviation**

The project goal is: Effective contribution in support of the implementation of the objectives of the CBD, the CITES and the CMS, as well as related targets set by countries rich in biodiversity but constrained in resources. Our project sub-goal is: Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD Thematic Programme on Island Biodiversity. Our project is to date contributing to this higher goal by providing up-to-date information on status, threats and best practice mitigation for all of our EDGE species (see section 3.1 of this report and project fellow progress reports in annexes 9-13).

The main pillar of the Seychelles economy is eco-tourism, with over 40% of the national workforce estimated to be directly or indirectly working in tourism-generated employment, while currently the local in-country capacity to protect the environment and the biodiversity that the country relies on for income generation and poverty alleviation is limited. Our project is certainly contributing to human development and welfare in Seychelles by providing the skill sets necessary for the conservation and sustainable management of 12 Seychelles EDGE species and other threatened endemic biodiversity, to a group of local conservation practitioners. This will ensure the Seychelles has the skills in-house to conserve and sustainably manage the biodiversity upon which the Seychelles economy and sustainable development is increasingly reliant.

## **4. Project support to the Conventions (CBD, CMS and/or CITES)**

This project supports Seychelles to meet its objectives to the CBD. The Seychelles National Biodiversity Strategy Action Plan (NBSAP), produced to fulfil Seychelles responsibility to the CBD, has instigated several national policies. Our Darwin project supports two key NBSAP strategies, (a) the *Seychelles Strategy for Sustainable Development*, and (b) the *Public Sector Investment Programme*, by providing support for employment in conservation in order to carry out species-based conservation activities and associated field management work. This project supports five major Goals of the Seychelles National Biodiversity Strategy Action Plan NBSAP:

**(i) support general measures for conservation and sustainable use [Goal 1] (supports Article 6 of the CBD):** the project supports Policy Objective (PO) 1.2 'establish or strengthen capacity in the Ministry of Environment, other government organisations, NGO and private sector for the conservation of biodiversity' by providing extensive capacity building, support and funding to local staff in the form of project EDGE Fellows;

**(ii) strengthen identification and monitoring of biodiversity [Goal2] (supports Article 7 of the CBD):** the project supports PO 2.2 to 'monitor key components of biological diversity, gather priority data and establish a reporting mechanism' by researching identification, monitoring and reporting best practices for our EDGE species with world-class project partner experts and implementing via local project EDGE fellows;

**(iii) increase in-situ conservation of biodiversity [Goal 3] (supports Article 8 of the CBD):** the project supports PO 3.1 to 'improve knowledge of appropriate classification and develop where necessary management plans', PO 3.6 to 'promote the recovery of threatened species through the development and implementation of plans, special projects or other management strategies' by direct conservation action via work by the local EDGE Fellows and production and implementation of species conservation action plans, and PO 3.12 to 'consolidate, harmonise and/or revise legislation for the protection of threatened species and sensitive ecosystems' through working on policy regarding urgent protection of bat roosts and surrounds;

**(iv) improve biodiversity related research and training [Goal 7] (supports Article 12, 17 and 18 of the CBD):** the project supports PO 7.1 to 'strengthen scientific and technical education and training', PO 7.2 to 'encourage and promote research' and PO 7.3 to 'seek international cooperation in the use of advances in research and technology in developing methods' by training and supporting six EDGE Fellows in conservation via partnerships with world-class institutions;

**(v) augment public education and awareness of biodiversity [Goal 8] (supports article 13 of the CBD):** the project supports PO 8.1 to 'promote public understanding of the importance of, and measures required to conserve biological diversity', by engaging the public in the work by the local EDGE Fellows; PO 8.2 to 'seek local and international co-operation to strengthen capacity for public awareness programs', by instilling active partnerships between three UK organisations (DICE, ZSL, NHM,) and an

independent UK bat expert, and eight Seychelles partners; and [PO 8.3](#) to 'facilitate access to and exchange of information', through worldwide promotion of information and awareness of Seychelles' 12 EDGE species (via ZSLs popular EDGE website, the DICE website and other institutional visitor outlets.)

The national focal point for the CBD in the Seychelles is Mr Ronley Fanchette, Director of Conservation Section, Ministry of Environment, the main host country partner on this project. He is also the line manager of our Sheath-tailed bat fellow Diana Renaud. Consequently Mr. Fanchette is closely involved with this project and up-to-date on project activities and achievements. Additionally the PO has had several meetings with Ronley over the past 12 months to discuss project activities and progress in general, and to discuss the Sheath-tailed bat fellow's work programme. Additionally Mr Fanchette is part of the project email group who are regularly kept up-to-date on project activities by the PO.

## **5. Project support to poverty alleviation**

This project is working for poverty alleviation by supporting and developing capacity within the host country workforce to be able to conserve Seychelles unique biodiversity, the pillar of the Seychelles tourism industry, the mainstay of the Seychelles economy, and the key to continued poverty alleviation and sustainable development in Seychelles.

## **6. Monitoring, evaluation and lessons**

The project is continually overseen by the PL and the PO using the logical framework and agreed outputs and milestones for guidance. The PL and PO have regular Skype calls to discuss the project implementation. In project year 1 the PO organised quarterly meetings with host country partners (head of partner organisations), however it was quickly acknowledged by the PO and host country partners that it was difficult to arrange a date and time that all partners could attend (we have 8 host country partners) and also unnecessary for effective project planning, monitoring and evaluation, so we revised our self-monitoring schedule to one annual meeting with all host country partners together, and regular meetings between the PO and each host country partner individually in order to plan, manage and self-monitor progress of that particular partner. The PO also has regular discussions with the project fellows to monitor their progress, plan activities, and provide advice and guidance. In these ways the project is continually monitored and evaluated internally. This revised planning, monitoring and evaluation framework appears to be working well.

We can demonstrate that our outputs and activities are contributing to project purpose because our logframe is constructed in such a way that by undertaking our project activities, our outputs are achieved and through achieving our outputs we achieve our purpose. The PO and PL monitor our measurable indicators to ensure we are on track and achieving our outputs in a timely manner. To date we can confidently say that we are part way to achieving our purpose of providing investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE species endemic to the Seychelles: we have provided significant investment (>£90,000 in this reporting year), significant technical expertise and targeted training (in the form of our UK partner experts contributions to both the training and capacity development of our project fellows and also to the development of methodologies for monitoring, surveying and managing our EDGE species). We have achieved a significant increase in knowledge of some of our EDGE species; for example caecilians and EDGE corals and black parrots during this reporting period.

## **7. Actions taken in response to previous reviews (if applicable)**

We have responded to two of three questions raised in the review of last year's annual report in our ½ year report as requested. In response to the third question "for future it would be useful to start thinking what lateral thinking links to socio-economic development of the work being done e.g. effects on crops, bio-pest-control?": we believe that our project is offering good value for money as it stands. We are providing 3 years of individual targeted training in EDGE species research, monitoring, management and conservation techniques from world experts to 6 project EDGE fellows and the resources to implement priority research and management actions. In fact are doing much more than just this: through education and awareness activities such as (i) the school children coral reef education and snorkelling activities, and (ii) the 5 short documentaries that we are currently producing, one on each EDGE species and one longer documentary about this project and all the EDGE species combined, which will be played on National Television prime time, we are sensitising the Seychelles population about the importance of conserving our unique biodiversity. This project does link to socio-economic development through providing the capacity in-country to conserve Seychelles unique biodiversity upon which the country heavily relies for sustainable development. Nearer the end of the project (year3&4) when we work on our

species action plans for amphibians we will be thinking and linking with bio-security agencies and national bio-security plans as 'chytrid' fungus a potentially devastating threat to frogs particularly, is not yet in Seychelles, so mitigation measures need to be brainstormed.

## **8. Other comments on progress not covered elsewhere**

We have nothing further to report here that has not already been discussed elsewhere in this report. We do not see this project facing any particular risks.

## **9. Sustainability**

Efforts made during this reporting period to promote the work include 2 national newspaper articles and 2 national television news coverage on work undertaken by this project, a Nature Live presentation at the Natural History Museum in London led by Dr David Gower and assisted by our project caecilian fellows Charles Moreland Berthilde Belle while they were on training at NHM-London (that was also filmed and viewable for some months on the NHM-London website), and 6 widely publicised and well attended workshops. Certainly amongst the workshop participants, particularly the university students there is evidence for a growing realisation amongst them that Seychelles biodiversity is impressive and unique and that there are real opportunities for them for work in biodiversity conservation in Seychelles when they finish their studies. Amongst our 6 project fellows the PO, the PL and the UK partner exerts have all noted a real increase in knowledge, confidence and capability of the fellows over the past year to conserve their EDGE species.

There is a strong exit strategy in place in this project. All six of our project fellows are employed within conservation NGO's or government departments in permanent posts therefore they will continue to work in the conservation sector after completion of this project. As a result of this project they will have increased capacity to implement their work to a higher standard. Additionally all 12 Seychelles EDGE species are priority species for the respective host country partner organisations who have expressed a long term desire and commitment to continue working to conserve these EDGE species post project completion. It was the host country Ministry of Environment and partners themselves who asked for assistance to conserve Seychelles EDGE species- which resulted in this project's development. Partnerships formed between host country and UK partners are likely to be maintained post project completion due to common interest and will evolve as host partners needs change, providing lasting benefits to the Seychelles conservation community.

Due to the strong exit strategy of this project we believe it is very likely that the project outputs, outcomes and impacts will be sustained.

## **10. Darwin Identity**

The Darwin Initiative logo is displayed and the Darwin Initiative acknowledged on all printed materials (displays, leaflets etc) that are produced under this project. The Darwin Initiative logo is displayed and the Darwin Initiative acknowledged at all our well-publicised and attended workshops. Our project t-shirts have the Darwin Initiative logo printed prominently on the sleeve. The Darwin Initiative was included in a recent report on potential financial mechanisms for funding biodiversity conservation in Seychelles. The Darwin Initiative support is always recognised as a distinct project with a clear identity. If all the conservation agencies and organisations in Seychelles did not already have a good understanding of what the Darwin Initiative is before this project – they certainly do now as we tell them at every opportunity. We are currently in the middle of filming and producing short documentary style SPOTS featuring our EDGE fellows and in Creole (the local language) to play on national TV right between the news and News-Extra programme at 8:30pm. Each spot (one on each species) will be aired several times and the Darwin Initiative logo and their role in financing this project will be included in all these SPOTS. National television (SBC) is watched regularly (daily) by over 85% of the population, particularly around national news time in the evening (data collected during a previous Darwin Initiative funded project 15009 to conserve Seychelles paradise flycatchers) therefore we expect to reach the majority of Seychellois to see our SPOTS.

## 11. Project Expenditure

Table 1 project expenditure during the reporting period (1 April 2013 – 31 March 2014)

Current Year's Costs	2013/14 Grant (£)	2013/14 Total actual Darwin Costs (£)	Variance %	Comments (please explain any variance )
Staff costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Consultancy Costs (see section 8)				
Other Costs (see section 8)				
Total				

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

We have chosen not to fill in this section this year but we will willingly do so later on in the project.

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2013-2014

Project summary	Measurable Indicators	Progress and Achievements April 2013 - March 2014 (referred to as year 2)	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>			
<p><b>Sub-Goal:</b> Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD thematic programme on Island Biodiversity.</p>	<p>Ground surveys and monitoring reports contain information detailing (i) status of populations of Seychelles EDGE species, and/or (ii) conservation management actions that are in place to mitigate against identified threats.</p>	<p>Good progress on obtaining, through research and survey work, the data necessary to compile status reports and to identify threats and appropriate mitigation actions to enable good management and conservation of Seychelles EDGE species</p>	
<p><b>Purpose</b> To provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE (<i>Evolutionarily Distinct Globally Endangered</i>) species endemic to the Seychelles.</p>	<p>Comprehensive training programmes tailored to each EDGE Fellow, each led by appropriate UK partners.</p> <p>Increased local EDGE Fellows' skills, knowledge and competence in all aspects of their EDGE species' conservation management and field activities.</p> <p>Increased understanding of priority management actions, threats and mitigations for each EDGE species.</p> <p>Conservation status of each EDGE species known and maximised through field research and targeted management activities.</p>	<p>Comprehensive training programmes have been designed for each EDGE fellow and training is in full swing and noted by PL, PO and UK partner experts to have increased EDGE fellows' knowledge, competence and ability to implement EDGE species conservation actions.</p> <p>Increased knowledge and understanding of all EDGE species as a result of project work to date.</p> <p>Increased conservation status of the black parrot (now officially recognised as a full species)</p>	<p><i>Four training workshops led by UK experts on Seychelles EDGE species held in Seychelles for fellows and wider Seychelles conservation community</i></p> <p><i>Implementation of priority conservation monitoring and management activities for each EDGE species led by project fellows continues</i></p> <p><i>EDGE species TV documentaries completed and aired on Seychelles National television.</i></p>
<p>Output 1. Improved local capacity to research, monitor and manage</p>	<p>1a. Five EDGE Fellows trained in surveying, monitoring, and</p>	<p>Fellow training is progressing well – all project fellows attended specially tailored training courses overseas led by UK partner organisations (except the Black</p>	

<p>Seychelles EDGE species.</p>	<p>management best practices for their allocated EDGE species by end of Year 3.</p> <p>1b. Five EDGE Fellows embedded in local NGO's and/or government leading conservation programmes for their EDGE species.</p> <p>1c. Five EDGE Fellows trained in conservation leadership skills through DICE-based training course.</p>	<p>parrot fellow who received training at the Mauritius Wildlife Foundation as they could provide the training Terence most needs to develop his capacity.</p> <p>We are providing training to a much larger group of Seychelles conservation community that just our project fellows through our project workshop series.</p> <p>Our fellows are embedded in NGO's and government and are leading conservation programmes for their particular EDGE species.</p> <p>Indicators remain appropriate</p>
<p>Activity 1.1 EDGE Fellows Identified</p>		<p>All project EDGE species Fellows were identified in yr1.</p>
<p>Activity 1.2 Personally tailored training programmes designed and implemented for each EDGE Fellow, designed by PL, PO and UK partner experts (with input from EDGE Fellow) to maximise training uptake and benefit for EDGE fellow and target EDGE species needs</p>		<p>Individual training programmes have been finalised for each fellow and are in full swing.</p> <p><i>Training programmes will continue through-out project</i></p>
<p>Activity 1.3 Bi-annual training workshops for EDGE Fellows and potentially the wider Seychelles conservation community as appropriate led by UK partner experts</p>		<p>Six training workshops have been run during this reporting period –project EDGE Fellows attended as well as between 15 and 25 other participants from Seychelles conservation community. Workshops were on caecilians, EDGE corals and coral reefs, social science in conservation, ecological monitoring, black parrots and designing effective education and awareness campaigns for EDGE species</p> <p><i>4 training workshops led by UK partners are planned for year 3 and a workshop about reporting and report writing led by the PO.</i></p>
<p>Activity 1.4 1x 3 week trip for each EDGE Fellow to appropriate UK partner institution for UK based training</p>		<p>Our Sheath-tailed bat fellow Diana Renaud and our Sooglossid frogs fellow James Mougall both attended and passed a ZSL EDGE fellowship conservation tools training course in Kenya in November 2013 as part of their training for their EDGE species fellowships.</p> <p>Caecilian fellows Charles Morel and Berthilde Belle visited NHM-London for 3 weeks training in caecilian taxonomy and identification, research methods, specimen curation, museum display design and production, caecilian captive management (London Zoo), and social questionnaire survey design (DICE)</p> <p>Black parrot fellow Terence Payet visited Mauritius Wildlife Foundation in Mauritius (MWF) where he received training in field methods for monitoring, researching and actively managing critically endangered parrots under the expert guidance of the MWF echo-parakeet recovery team.</p>

		<i>Sylvanna Antat our EDGE corals fellow will attend a 2 week Conservation Leadership training course at ZSL in September 2014. Note this is an extra activity not in the original project plan.</i>
<b>Output 2.</b> Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.	<p>2a. Species Action Plans and accompanying work programmes detailing priority actions and best practice for each EDGE species, agreed by all stakeholders.</p> <p>2b. Species Action Plans and accompanying work programmes and priority actions for each EDGE species implemented by appropriate government and NGO bodies, and led by respective EDGE Fellows under the guidance of UK project partners (ongoing).</p>	<p>Each EDGE fellow completed their own project work plan and has been concentrating on implementation.</p> <p><i>Implementation of work programme activities will continue throughout year 3.</i></p> <p><i>Species Action Plans will be completed near the end of the project (year 4 in order to enable our project work to inform the action plans.</i></p> <p>Indicators remain appropriate.</p>
<b><u>Amphibians (Sooglossid frogs and caecilians)</u></b>		
Activity 2.1. Sooglossid frog distribution surveys undertaken on the main islands		<p>Distribution surveys are underway on the 3 islands sooglossid frogs occur (Mahé, Praslin and Silhouette)</p> <p><i>Distribution surveys continue in year 3</i></p>
Activity 2.2. Sooglossid frog ecology researched and potential effects of climate change explored		<p>Research into the habitat preferences of the 3 of the 4 sooglossid frog species is underway.</p> <p><i>This activity is scheduled for year 3.</i></p>
Activity 2.3. Sooglossid frog Species Conservation Action Plans drafted, finalised and agreed		<i>Action plans will be drafted nearer the end of this project (yr4) when we have more knowledge and information (collected under this project) to base the Action Plan on.</i>
Activity 2.4. Investigate potential of captive-breeding for conservation of sooglossids in partnership with Amphibian Ark		<i>This activity is planned for year 4 but we will work on this during year 3</i>
Activity 2.5. Precautionary disease monitoring for sooglossid frogs and caecilians undertaken, especially for 'chytrid'		PCR analysis of over 100 swabs from sooglossid frogs covering all 4 species and all 3 islands where they occur and over 130 swabs from caecilians covering all species and a range of islands where they occur were all negative for <i>Batrachochytrium dendrobatidis</i> ('Bd' or 'Chytrid').
Activity 2.6. Research yellow crazy ant ecology, dynamics and methods of control, to understand their threat to sooglossid frog and caecilian populations;		<i>This activity is scheduled for year 3</i>
Activity 2.7. Develop caecilian survey methodology with NHML experts		Survey methodology developed and trialled in Seychelles with NHM experts and project caecilian fellows in year 1



Activity 2.8. Caecilian distribution surveys conducted on all relevant islands	Surveys undertaken across Mahé, Praslin, La Digue, Silhouette and Felicite islands.  <i>Further surveying will continue throughout year 3.</i>
Activity 2.9. Genetics studies on the caecilians to clarify species present	Sample collection completed and genetic studies underway. <i>Genetic studies to be completed during year 3</i>
Activity 2.10. Investigation into potential and real threats to caecilians and recommended mitigation actions	<i>This activity is scheduled for years 3&amp;4</i>
Activity 2.11. Caecilian Species Conservation Action Plans developed, finalised and agreed by relevant stakeholders	<i>Action plans will be drafted nearer the end of this project in year 4 once we have the results of the work we are undertaking under this project to base the action plan on.</i>
<b><u>Black parrot</u></b>	<i>Scheduled for project year 3</i>
Activity 2.12. Black parrot repeat survey in 2014 to determine population size	
Activity 2.13. Continued research into black parrot breeding ecology including limiting factors	<i>Underway-ongoing throughout project during breeding season (October-March)</i>
Activity 2.14. Provide support to SIF (existing project) ring-necked parakeet eradication on Mahé	Ring-necked parakeet eradication is underway but has not yet required additional help from this project
Activity 2.15. Confirm status of Seychelles black parrot species through molecular genetics work	Completed-manuscript submitted to Conservation Genetics. Seychelles black parrot (BP) not considered a full species.
Activity 2.16. Undertake screening for Psittacine beak and feather disease (Pbfd) in the black parrot population	Screening completed- no Pbfd detected in the black parrot population
Activity 2.17 Utilise existing Seychelles black parrot Species Conservation Action Plan as guiding document, produce annual workprogrammes, implement and report and assist with development of next Action Plan in 2013	Black Parrot project fellow's work-programme is based on priority actions within the existing black parrot action plan which includes monitoring breeding success, determining causes of nest failure, and monitoring black parrot food availability. <i>Fellow (Terence Payet) project plan and work programme implementation ongoing throughout the project</i>
<b><u>Sheath-tailed bat</u></b>	
Activity 2.18 Utilise the existing Seychelles sheath-tailed bat Conservation Action Plan as guiding document, agree annual work programmes, implement and report	Project and work-programme finalised for STB Fellow Diana Renaud based on priority actions within the existing action plan (SAP) and implementation is underway. <i>Project and work programme implementation ongoing throughout project.</i>
Activity 2.19 Work with Seychelles government to produce guiding document to mitigate impact of hotels and any other developments near sheath-tailed bat roosts	PO has drafted legislation to protect the bat which has been forwarded to the Attorney General by the Ministry of Environment legal officer. Discussions between PO, Prof Paul Racey and Bat Conservation International about pressuring/encouraging Seychelles government at the highest level to legally protect the bat ASAP. <i>Increase pressure on high government officials to legally protect the bat as a</i>

		<i>highest priority.</i>
Activity 2.20 Surveys to locate any further sheath-tailed bat roosts on Mahé and Silhouette, and re-check historical roosts on Praslin		Surveyed historical roost location and surrounds on Praslin –no bats detected. Surveys to locate additional roosts on Mahé and Silhouette underway. <i>Continue searching for further STB roosts on Mahé and Silhouette – this activity will continue throughout the project as it is a priority action and is very time consuming</i>
Activity 2.21 Evaluate role of barn owls in the decline of the sheath-tailed bat (ongoing –to coincide with roost counts and all bat surveys)		This activity is underway <i>Activity will continue throughout project</i>
Activity 2.22 Bat surveys to locate new bat feeding/activity areas		<i>This activity ongoing throughout year 2, 3&amp;4 in conjunction with roost searches. No longer considered high priority action however</i>
Activity 2.23 Regular roost counts to monitor numbers		Roost emergence counts undertaken every 2 months at all known roosts. <i>Ongoing throughout project</i>
<b><u>Coral species</u></b> Activity 2.24 Build a network of local and international experts to advise on conservation actions for priority EDGE corals in the Seychelles		Underway. Project Coral EDGE Fellow Sylvanna Antat is working with local and international coral experts who helped her design her EDGE fellowship project and work-programme and who provide advice and assistance throughout implementation. <i>Activity is ongoing through year 3.</i>
Activity 2.25 Develop a single Conservation Action Plan for EDGE coral species in Seychelles		<i>Species action plan will be drafted towards the end of this project once we have results from research and monitoring of EDGE corals planned under this project.</i>
Activity 2.26 Begin implementing priority actions determined by coral network and resulting Species Conservation Action Plan (SAP)		Priority research, monitoring and education and awareness activities are fully underway. Sylvanna and team have almost completed mapping EDGE coral distribution in the granitic Seychelles, almost completed surveying EDGE corals distribution, abundance and sizes inside versus outside Marine Protected Areas in the granitic Seychelles, educational activities such as presentations to schools, snorkelling activities with school children, a coral reef cartoon competition and exhibition and producing leaflets about EDGE corals undertaken. <i>Implementation of priority actions continues in year 3 including EDGE corals SAP</i>
<b><u>All EDGE species</u></b> Activity 2.27 Annual progress reports for each EDGE species based on work programmes developed from Species Conservation Action Plans		Annual reports have been written by each EDGE fellow detailing progress against their work programme. The 3 EDGE fellows following ZSL EDGE fellowships have to write brief monthly progress reports to ZSL and to avoid over burdening them with reporting- they use the same reports for this project. <i>Ongoing throughout the project.</i>
<b>Output 3.</b> Research information about EDGE species produced and disseminated.	3. Knowledge increased regarding the conservation importance, knowledge base, gaps and needs of Seychelles EDGE species by Year 3.	We are at information and data collection stage of the project and publication and dissemination of research results is scheduled for year 4. Indicator remains appropriate

Activity 3.1. 2-3 peer reviewed publications resulting directly from this DI projects work	<i>Publications are scheduled for year 4</i>
<b>Output 4.</b> Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.	<p>4a. Awareness of Seychelles citizens about the uniqueness, vulnerability and management actions necessary for recovery of EDGE species has increased, including an awareness of what the local public can do to help.</p> <p>4b. Evidence of project-based activities that have promoted development of a CEPA (Communication, Education and Public Awareness) strategy for Seychelles' EDGE species.</p> <p>Activities already undertaken including EDGE species displays that are on permanent display at the Natural History Museum, a project stall at the 3-day national day expo eco-village displaying fact sheets about each of our EDGE species and banner displays about our project and EDGE species, the EDGE corals exhibition that toured 3 islands and newspaper article about caecilians have all contributed to increasing awareness of Seychelles citizens about the uniqueness, vulnerability and management necessary for recovery of EDGE species EDGE species.</p> <p>Further awareness raising activities planned across years 3&amp;4 including airing of documentaries about EDGE species and this project on national TV, and education and awareness activities planned by each EDGE fellow will ensure increased awareness of Seychelles citizens about our EDGE species</p> <p>Indicator remains appropriate</p>
Activity 4.1 Displays produced and installed in SNHM and Vallee de Mai Visitors Centres on each of the EDGE species	<p>Two portable displays have been produced and are on display at the Seyhcelles Natural History Museum (SNHM).</p> <p><i>Displays for the Vallee de Mai are being produced currently and are scheduled to be completed early in year 3.</i></p> <p><i>An interactive display on soogossid frogs will be produced and displayed in the SNHM in year 4.</i></p>
Activity 4.2 Education and Awareness Leaflets designed, produced and disseminated amongst local Seychelles communities for all Seychelles EDGE species, tailored to each EDGE species and target audiences	<p>Each EDGE Fellow has an education and awareness component in their project and accompanying work- programme.</p> <p>EDGE corals leaflets have been produced and disseminated.</p> <p><i>Leaflets about sheath-tailed bats, caecilians and black parrots are scheduled for year 3.</i></p>
Activity 4.3 6x Seychelles National Radio programmes/interviews about EDGE species and this DI project	<p>We have not recorded any radio programmes yet.</p> <p><i>2 x radio programmes are scheduled for year 3.</i></p>
Activity 4.4 3x Seychelles National TV coverage of this project and EDGE species	<p>2x national TV news coverage of project activities (Prize giving for cartoon competition and opening of EDGE corals exhibition in October 2013, and Black parrot workshop on Praslin in November 2013.)</p> <p><i>We are currently producing documentaries on Seychelles EDGE species and this project for airing on national Television in year 3 (and for use by project partners as they want).</i></p>

Activity 4.5 6x Seychelles National Newspaper articles about the DI project and Seychelles EDGE species	2 newspaper articles run in the Seychelles Nation in September and October 2013. <i>2 x newspaper coverage of the project is scheduled for year 3</i>
Activity 4.6 Information boards designed, produced and installed at trail entrances with information about EDGE species likely to occur in the area	<i>3 info boards on sooglossid frogs will be produced and installed at the start of nature trails on Mahe and Silhouette where sooglossids can be found in year 4.</i>
Activity 4.7 T-shirts and postcards produced for each EDGE species for project staff uniform and for sale and distribution at partner visitor centres	Ti-shirts have been printed with a project logo that we designed specifically for the project, the Darwin Initiative logo and a strap line.
Activity 4.8 Each EDGE Fellow will have a webpage on the ZSL EDGE of Existence website, they will contribute to the EDGE blog, and the project will have a dedicated webpage on the DICE website	Project webpage on DICE website <a href="http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html">http://www.kent.ac.uk/sac/research/projects/jg_biodiversity.html</a>  ZSL EDGE fellows regularly contribute to ZSL EDGE of Existence blog <a href="http://www.edgeofexistence.org/edgeblog/">http://www.edgeofexistence.org/edgeblog/</a>
Activity 4.9 Project blog set up where all 5 EDGE Fellows regularly blog about their work and findings	We are on Facebook (Edge Seychelles) where we regularly paste updates and news.

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b></p> <p>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.</p>			
<p><b>Sub-Goal:</b></p> <p>Seychelles EDGE species are well managed and conserved, enabling Seychelles to meet its obligations to the CBD and to contribute positively to the CBD Thematic Programme on Island Biodiversity.</p>	<p>Ground surveys and monitoring reports contain information detailing (i) status of populations of Seychelles EDGE species, and/or</p> <p>(ii) conservation management actions that are in place to mitigate against identified threats.</p>	<p>Species Action Plan implementation progress reports.</p> <p>Field monitoring reports.</p> <p>Seychelles National Reports to the CBD.</p>	
<p><b>Purpose:</b></p> <p>To provide investment, technical expertise and targeted training in conservation, ecology and taxonomy to improve knowledge, management and conservation status of the 12 EDGE (<i>Evolutionarily Distinct Globally Endangered</i>) species endemic to the Seychelles.</p>	<p>Comprehensive training programmes tailored to each EDGE Fellow, each led by appropriate UK partners.</p> <p>Increased local EDGE Fellows' skills, knowledge and competence in all aspects of their EDGE species' conservation management and field activities.</p> <p>Increased understanding of priority management actions, threats and mitigations for each EDGE species.</p> <p>Conservation status of each EDGE species known and maximised through field research and targeted management activities.</p>	<p>EDGE Fellow training reports from UK project partners leading capacity building training of local EDGE Fellows.</p> <p>On-the-job assessment of skills and knowledge acquired through training.</p> <p>Project Annual reports.</p> <p>Individual EDGE species status reports.</p> <p>Species Action Plan implementation progress reports.</p>	<p>No adverse climatic/stochastic events (cyclones, coral bleaching events) preventing timely completion of this project.</p> <p>Continued stability and support of the Seychelles government.</p>
<p><b>Outputs:</b></p> <p>1. Improved local capacity to research, monitor and manage Seychelles EDGE species.</p>	<p>1a. Five EDGE Fellows trained in surveying, monitoring, and management best practices for their allocated EDGE species by end of Year 3.</p> <p>1b. Five EDGE Fellows embedded in local NGO's and/or government leading conservation programmes for their EDGE species.</p> <p>1c. Five EDGE Fellows trained in conservation leadership skills through DICE-based training course.</p>	<p>1a. Training programme reports from UK partners confirming acquisition of new skills.</p> <p>1b. Letters from respective employers confirming continued employment of EDGE Fellows post project.</p> <p>1c. Certificates of attendance by EDGE Fellows on ZSL/DICE training course in</p>	<p>Trained staff (EDGE Fellows) remain with local partners throughout and after the project, to continue using the skills gained and to train others in those skills.</p>

		conservation leadership.	
2. Best practice research, best practice monitoring and best practice adaptive management researched, agreed by all stakeholders and implemented for each EDGE species.	2a. Species Action Plans and accompanying work programmes detailing priority actions and best practice for each EDGE species, agreed by all stakeholders. 2b. Species Action Plans and accompanying work programmes and priority actions for each EDGE species implemented by appropriate government and NGO bodies, and led by respective EDGE Fellows under the guidance of UK project partners (ongoing).	2a. Endorsed management plan.  2b. Species Action Plan implementation progress reports.	All government and NGO organisations tasked with protecting EDGE species continue to collaborate and coordinate efforts.
3. Research information about EDGE species produced and disseminated.	3. Knowledge increased regarding the conservation importance, knowledge base, gaps and needs of Seychelles EDGE species by Year 3.	3. 2-3 peer-reviewed publications resulting directly from this project's work.	The international scientific community continue to regard EDGE species as an important global conservation priority.  Editors accept papers for publication.
4. Education, Awareness and Outreach programme increases local knowledge of EDGE species status and their needs.	4a. Awareness of Seychelles citizens about the uniqueness, vulnerability and management actions necessary for recovery of EDGE species has increased, including an awareness of what the local public can do to help. 4b. Evidence of project-based activities that have promoted development of a CEPA (Communication, Education and Public Awareness) strategy for Seychelles' EDGE species.	4. 3x Seychelles national TV coverage. 6x Seychelles national radio interviews. 6x Seychelles national news-paper articles.  Production of leaflets, T-shirts, posters and postcards for each EDGE species disseminated to local communities and tourism industry stakeholders.	Local communities are receptive to awareness campaigns.
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p><b><u>Project management, monitoring and reporting activities</u></b></p> <p><b>0.1</b> Establishment of MOU(s) /agreements between project partners as appropriate; <b>0.2</b> Project steering group set-up and provide ongoing guidance; <b>0.3</b> Integrate and coordinate conservation initiatives of different organisations in Seychelles working with EDGE species; <b>0.4</b> Project Annual Reports submitted to DI; <b>0.5</b> Project Final Report submitted to DI</p> <p><b>1.1</b> EDGE Fellows Identified; <b>1.2</b> Personally tailored training programmes designed and implemented for each EDGE Fellow, designed by PL, PO and UK partner experts (with input from EDGE Fellow) to maximise training uptake and benefit for EDGE fellow and target EDGE species needs; <b>1.3</b> Bi-annual training workshops for EDGE Fellows and potentially the wider Seychelles conservation community as appropriate led by UK partner experts; <b>1.4</b> 1x 3 week trip for each EDGE Fellow to appropriate UK partner institution for UK based training</p>			

### **Amphibians (Sooglossid frogs and caecilians)**

**2.1** Sooglossid frog distribution surveys undertaken on the main islands; **2.2** Sooglossid frog ecology researched and potential effects of climate change explored; **2.3** Sooglossid frog Species Conservation Action Plans drafted, finalised and agreed; **2.4** Investigate potential of captive-breeding for conservation of sooglossids in partnership with Amphibian Ark; **2.5** Precautionary disease monitoring for sooglossid frogs and caecilians undertaken, especially for 'chytrid'; **2.6** Research yellow crazy ant ecology, dynamics and methods of control, to understand their threat to sooglossid frog and caecilian populations; **2.7** Develop caecilian survey methodology with NHML experts; **2.8** Caecilian distribution surveys conducted on all relevant islands; **2.9** Genetics studies on the caecilians to clarify species present; **2.10** Investigation into potential and real threats to caecilians and recommended mitigation actions; **2.11** Caecilian Species Conservation Action Plans developed, finalised and agreed by relevant stakeholders

### **Black parrot**

**2.12** Black parrot repeat survey in 2014 to determine population size; **2.13** Continued research into black parrot breeding ecology including limiting factors; **2.14** Provide support to SIF (existing project) ring-necked parakeet eradication on Mahé; **2.15** Confirm status of Seychelles black parrot species through molecular genetics work; **2.16** Undertake screening for Psittacine beak and feather disease (Pbfd) in the black parrot population; **2.17** Utilise existing Seychelles black parrot Species Conservation Action Plan as guiding document, produce annual workprogrammes, implement and report and assist with development of next Action Plan in 2013

### **Sheath-tailed bat**

**2.18** Utilise the existing Seychelles sheath-tailed bat Conservation Action Plan as guiding document, agree annual work programmes, implement and report; **2.19** Work with Seychelles government to produce guiding document to mitigate impact of hotels and any other developments near sheath-tailed bat roosts; **2.20** Surveys to locate any further sheath-tailed bat roosts on Mahe and Silhouette, and re-check historical roosts on Praslin ; **2.21** Evaluate role of barn owls in the decline of the sheath-tailed bat (ongoing –to coincide with roost counts and all bat surveys); **2.22** Bat surveys to locate new bat feeding/activity areas; **2.23** Regular roost counts to monitor numbers

### **Coral species**

**2.24** Build a network of local and international experts to advise on conservation actions for priority EDGE corals in the Seychelles; **2.25** Develop a single Conservation Action Plan for EDGE coral species in Seychelles; **2.26** Begin implementing priority actions determined by coral network and resulting Species Conservation Action Plan.

### **All EDGE species**

**2.27** Annual progress reports for each EDGE species based on work programmes developed from Species Conservation Action Plans

**3.1** 2-3 peer reviewed publications resulting directly from this DI projects work

**4.1** Displays produced and installed in SNHM and Vallee de Mai Visitors Centres on each of the EDGE species; **4.2** Education and Awareness Leaflets designed, produced and disseminated amongst local Seychelles communities for all Seychelles EDGE species, tailored to each EDGE species and target audiences ; **4.3** 6x Seychelles National Radio programmes/interviews about EDGE species and this DI project; **4.4** 3x Seychelles National TV coverage of this project and EDGE species; **4.5** 6x Seychelles National Newspaper articles about the DI project and Seychelles EDGE species; **4.6** Information boards designed, produced and installed at trail entrances with information about EDGE species likely to occur in the area; **4.7** T-shirts and postcards produced for each EDGE species for project staff uniform and for sale and distribution at partner visitor centres; **4.8** Each EDGE Fellow will have a webpage on the ZSL EDGE of Existence website, they will contribute to the EDGE blog, and the project will have a dedicated webpage on the DICE website; **4.9** Project blog set up where all 5 EDGE Fellows regularly blog about their work and findings.

## Annex 3 Standard Measures

**Table 1 Project Standard Output Measures**

Code number	Description	Yr 1 total	Yr 2 total	Yr 3 total	Yr 4 total	Total to date	Number planned for the reporting period	Total planned during the project
2	Number of people to attain Masters qualification (MSc, MPhil etc)	0	0					2
4C	Number of postgraduate students to receive training	0	0					1
4D	Number of training weeks to be provided	1.5						6
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	0	0					5
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	20	20					4
6B	Number of training weeks to be provided	1	1.5					10
7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country	0	0					5
8	Number of weeks to be spent by UK project staff on project work in the host country	5.5	14					20
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	0	0					3
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	0	0					1
11B	Number of papers to be submitted to peer reviewed journals	0	1					2-3
13A	Number of species reference collections to be <b>established</b> and handed over to host country(ies)	0	0					1
14A	Number of conferences/seminars/workshops to be <b>organised</b> to present/disseminate findings	0	0					1
14B	Number of conferences/seminars/workshops <b>attended</b> at which findings from Darwin project work will be presented/disseminated.	0	0					1
15A	Number of national press releases in host country(ies)	1	2					6
16A	Number of newsletters to be produced	1	1*					1
16B	Estimated circulation of each		?					50,000



	newsletter in the host country(ies)							(website/blog)
16C	Estimated circulation of each newsletter in the UK							100,000 (website/blog)
18A	Number of national TV programmes/features in host country(ies)	0	2					3
19A	Number of national radio interviews/features in host county(ies)	0	0					6
19D	Number of local radio interviews/features in UK	0	0					1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	5,950	0					5,950
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	<b>£24,864</b>	<b>£119,454</b>					<b>£340,666</b>

**Table 2 Publications**

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £