

Gurney's Pitta research and conservation in Thailand and Myanmar

Final Report of Darwin Project 162/13/030

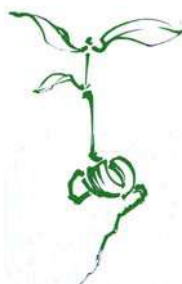


Submitted in January 2009 by



The Royal Society for the Protection of Birds

in partnership with



ENQUIRIES CONCERNING THIS REPORT

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Cover photograph: Male Gurney's Pitta *Pitta gurneyi*, Krabi, Thailand (©Kanit Khanikul)

Attached to this report:

Attachment 1: Scientific paper on comparison of biodiversity in forest and plantations (published in *Bird Conservation International*)

Attachment 2: Scientific paper on results of surveys and ecological research in Thailand and Myanmar (in press in *Bird Conservation International*)

Attachment 3: Scientific paper on the vascular flora of the Emerald Pool Area (in press in *Journal of Maejo University*)

Attachment 4: Database of plant species (forms an annex to Attachment 3)

Attachment 5: Forest Restoration Strategy for southern Thailand (English version, also available in Thai)

Attachment 6: Powerpoint presentation given by UK Project Leader to the Oriental Bird Club annual meeting, Cambridge 2008, containing photographs of the project

Darwin Initiative – Final Report

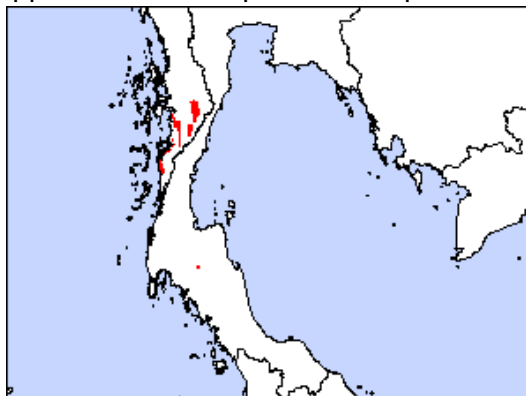
(To be completed with reference to the Reporting Guidance Notes for Project Leaders (<http://darwin.defra.gov.uk/resources/reporting/>) - it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Darwin project information

Project Reference	162/13/030
Project Title	Gurney's Pitta research and conservation in Thailand and Myanmar
Host country(ies)	Thailand and Myanmar
UK Contract Holder Institution	RSPB
UK Partner Institution(s)	RSPB, Durham Wildlife Conservation Trust
Host Country Partner Institution(s)	Thailand: Bird Conservation Society of Thailand (BCST), Forest Restoration Research Unit at Chiang Mai University (FORRU), National Parks, Wildlife and Plant Conservation Department; Myanmar: Biodiversity and Nature Conservation Association (BANCA), BirdLife International Indochina Programme
Darwin Grant Value	£109,992
Start/End dates of Project	Jan 2005 to Sept 2008 (including agreed 6-month no-cost extension)
Project Leader Name	Dr Paul F. Donald
Project Website	http://www.bcst.or.th/project/gp/pitta.htm
Report Author(s) and date	Dr Paul F. Donald, December 2008

1 Project Background

Gurney's Pitta is an endangered bird endemic to the Thai/Burmese peninsula (see map). It occurs at a single site in Thailand, where forest loss to oil palm was driving it towards extinction, and more widely in Myanmar, where it was rediscovered in 2003. The project has provided technical support to efforts to protect the species. Scientific research has clarified its



numbers, distribution and ecology in both countries. Research and training, and the establishment of a tree nursery and experimental reforestation plots, have given conservationists in Thailand the capacity to implement the reforestation strategy also developed by the project.

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

By focusing on an endangered species in one of the world's most threatened habitats, and by providing benefits and resources to local people to undertake forest restoration, the project meets many of the objectives of the CBD, which are to protect the planet's biodiversity and to ensure sustainable use and equitable sharing of its components. The free provision to local people by the project's nursery of seedlings of over 100 native tree species ensures the equitable sharing of this genetic resource. Specifically, the project contributes towards a number of CBD articles, in particular articles 7, 8 and 12 (see Annex 3), but also to articles 10,

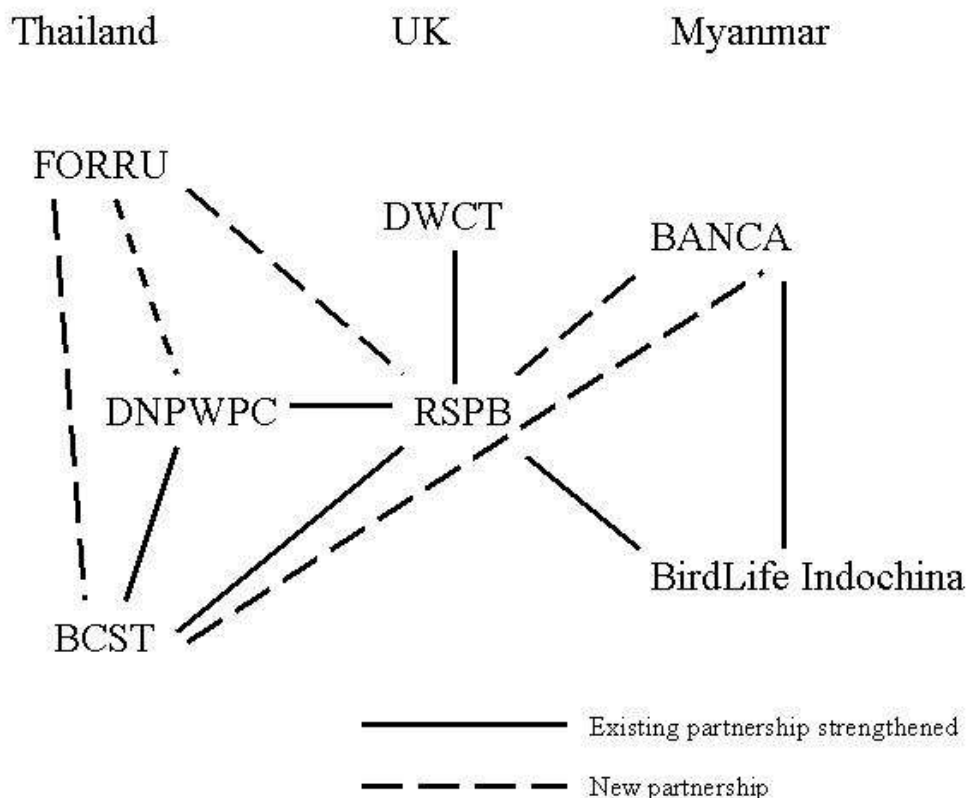
13, 14, 15, 16, 17 and 18. In aiming to restore as well as to protect lowland Sundaic forest, and in developing forest restoration methods that are already being adopted, the project has addressed the Thematic Programme on Forest Biodiversity. In stabilising the population of Gurney's Pitta after decades of severe decline, the project has made an important contribution to the 2010 target to reduce the rate of biodiversity loss. The project's contribution to assisting the host countries to build their capacity to undertake work that will contribute to CBD articles, particularly article 12, and to the Cross-cutting Theme on Technology Transfer and Cooperation is detailed in Section 4.6.

Interaction with host country CBD Focal Points has been made difficult by the fact that there is, or has been, considerable doubt in both countries about who the Focal Point is. In Thailand, responsibility has finally rested with the Office of National Environmental and Policy Planning, with whom BCST have held a number of meetings.

Gurney's Pitta is not a migrant, nor is it significantly traded, so the project has no implications for CMS or CITES.

3 Project Partnerships

The project built upon existing partnerships, particularly between RSPB and BCST in Thailand, but also built and strengthened new partnerships. The following diagram illustrates the development of partnerships within the project:



The existing partnership between RSPB, DNPWPC and BCST has been greatly strengthened by the new partnerships of each with FORRU, bringing expertise in forest restoration to a collaboration that had hitherto relied solely on forest protection to prevent the extinction of Gurney's Pitta in southern Thailand. The new relationship between RSPB and FORRU has brought additional benefits outside the project, since as a direct result of the current project, FORRU are now partners in another RSPB-led Darwin Initiative project in Sumatra. It is likely that this relationship will develop further as RSPB expands its work in SE Asia. The relationship

between BCST, and NGO, and the Government's statutory conservation agencies, particularly DNPWPC and local forest authorities, is particularly important. Prior to this project, relations between the statutory conservation agencies and NGOs were rather poor but the project has greatly strengthened relations between the two to the extent that BCST and local forest authorities have recently co-funded the construction of an interpretive centre to build upon the excellent response to the project by many sections of the local community. Furthermore, there have been exchanges of staff between the two organisations, and staff paid by BCST have been seconded to work within DNPWPC. BCST regard the greatly improved relationship with the statutory conservation agencies as one of the most important outcomes of the project.

As well as building and strengthening links between the project partners, new partnerships have formed through the project. For example, the University of Wailailuk now uses the project site as a field resource for their research on forest restoration, and indeed students from Wailailuk University now work closely with tree nursery staff. Relationships between all project partners in Thailand and local forest protection teams and local communities have also been strengthened, and local schools and a local teacher training college use the tree nursery as an educational resource. Visits have been made by tree nursery staff to local schools to teach pupils about how to grow trees. RSPB and BCST are in the process of extending their partnership into new areas, such as developing and supporting conservation work in the Inner Gulf of Thailand. Another important new link supported by the project was the collaboration, for the first time, of Burmese and Thai researchers.

As a result of this project, RSPB now works closely with the Oriental Bird Club (OBC), and international group of ornithologists, conservationists and researchers that is administered from the UK and directs conservation efforts in the oriental region. This collaboration resulted in OBC agreeing to continue funding of the tree nursery and forest restoration in southern Thailand for one year after the end of Darwin funding in April 2008. Further collaboration is planned between the two organisations.

The project stemmed from an MoU signed in 2002 between RSPB, BCST and the Department of National Parks in Thailand. The need for the project was recognised at a multi-stakeholder workshop in 2003 at which a Species Recovery Plan was prepared and adopted. Thus, all project partners in Thailand, and other stakeholder groups, were involved in developing the actions undertaken by the project. The need for survey work in Myanmar was identified by BANCA and BirdLife Indonesia. In-country decisions were made by in-country partners after discussion with the UK project leader.

There have been no particular challenges to the relationships between partners, which have been positive and constructive throughout.

4 Project Achievements

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

As the project aimed to provide a framework for the conservation of a threatened forest bird in SE Asia through increased knowledge and capacity, rather than attempting to bring about significant changes in its status, the impacts (as defined by DI) of this project are not necessarily relevant in assessing its success. However, some significant impacts have been brought about. The unwritten goal of the project, and the stated aim of the Species Recovery Plan it sought to support, was to bring about a favourable change in the conservation status of Gurney's Pitta in both Myanmar and Thailand and the restoration of its lowland forest habitats. This has partly been achieved, as the discovery that the species is more widespread and numerous in Myanmar than previously thoughts may result in its IUCN threat status being down-listed. Furthermore, the results of the project have contributed to a significant decline in forest loss in the species' tiny range in southern Thailand and to a limited degree of forest restoration there, with concomitant benefits for other threatened lowland Sundaic forest

species. The tree nursery is currently producing thousands of saplings of native forest species each year that are all being used in formal or informal replanting projects. This has extended to providing trees for forest restoration plots elsewhere in southern Thailand. For example, in 2007, 10,000 saplings were provided by the nursery were taken for planting to Khlong Phaya Wildlife Sanctuary, famous for its tapir population. There has also been an unexpected degree of social impact. As stated elsewhere, the tree nursery in Thailand has been extensively used as an educational resource by local schools and a local university. The saplings provided free of charge to local communities by the nursery are a useful resource for local communities. A number of local people have been employed in various capacities, with three people employed to run the nursery and larger numbers of people being employed casually to undertake replanting. Furthermore, as a direct result of heightened interest in the local community, the local forest protection authorities established a community centre and a community forest project. The latter provided limited financial support to local people wishing to plant native trees, for example to celebrate the Queen of Thailand's birthday, made available to them by the project's tree nursery. The development of forest restoration methods specific to the highly threatened lowland Sundaic forests is likely to have considerable future impact, and is already proving useful in other parts of SE Asia.

4.2 Outcomes: achievement of the project purpose and outcomes

The purpose of the project was to establish a framework for the effective conservation of Gurney's Pitta in Thailand and Myanmar and to initiate key strategic conservation activities. The indicators for this were that (1) all actions in the Gurney's Pitta Species Recovery Plan (GPSRP) in Thailand requiring external (UK) technical expertise were initiated by the end of the project and (2) that a GPSRP would be produced and implemented in Myanmar and funding sought to support it.

In Thailand, the project sought to generate the information and technical expertise necessary to support the technical elements of the species recovery plan developed and agreed by a wide range of stakeholders at a workshop in Thailand in 2003. These included better knowledge of the species' numbers, distribution and ecology in Thailand and improved knowledge and capacity building in forest restoration. Up until this time, forest protection had depended entirely on the prevention of forest loss and not upon the restoration of degraded or cleared forest. The project sought to redress this by firstly making forest protection more effective by targeting patrols at areas of forest of key importance for Gurney's Pitta and second by undertaking the research and capacity building necessary to restore forest. All these aims have been met. There is now a number of Thai researchers from a local Department of National Parks research station working on Gurney's Pitta, undertaking full surveys of the species every two years. This information is being fed into a GIS forest management and land use system developed by the project and in daily use by the local forest protection authorities. A number of local forest protection staff and local villagers have been training in forest restoration methods, a tree nursery has been established, detailed phenological data of local native forest tree species have been collected and seed and leaf collections established. Several experimental forest restoration plots have been established. A forest restoration strategy for the area has been produced and a local university and local schools are using the nursery and restoration plots for education purposes. As a result of improved forest protection, current rates of forest loss are at a long-term low and the species' population has finally been stabilised for the first time since its rediscovery in 1986. This has been helped by intensive guarding of a number of nests, increasing the small number of young birds produced each year.

In Myanmar, three full field surveys have been carried out in the south of the country, often under extremely difficult physical and political conditions. Unfortunately, the data from one survey were lost (see below) but the data collected have revealed a great deal and have been written up for the scientific press. Training of research staff has included visits by a Burmese researcher to Thailand to work with Thai researchers.

The purpose has therefore been largely achieved, in that the indicator for progress in Thailand has been fully met (even exceeded) and that information necessary for the preparation of a GPSRP in Myanmar has now been collected. The indicator for progress in Myanmar has not been met, since massive social and political upheaval, including civil unrest and a major humanitarian disaster, has created severe problems in working in that country and it has not proved possible to produce a recovery plan. However, since the results of the research successfully undertaken there have shown the species to be more widespread and numerous than previously thought, and since plans to extend the proposed Lenya National Park (currently awaiting the signing of a MoU) are likely to be sufficient to ensure the species' long-term survival, an action plan no longer appears necessary.

4.3 Outputs (and activities)

Output 1: Knowledge of GP numbers, distribution and ecological needs across its range is provided to GP stakeholders

Output fully achieved. Intensive research in both countries has resulted in the most reliable estimates of the species' numbers and distribution ever published, and in the most detailed investigation of the species' ecology ever undertaken. The results show the tiny population of 15-20 pairs in southern Thailand to be stable but also suggest that nesting success is very low due to high predation by snakes. In Myanmar the species has been found to be more numerous and widespread than initially thought. Results from both countries show that the species is able to tolerate, and perhaps even benefit from, a low level of forest disturbance but is extremely vulnerable to forest loss. All these results are now in press in peer-reviewed journals and have been made available to all stakeholders. A copy of these papers is attached to this report. A major problem encountered was the loss of a whole field season's data in Myanmar, when the researcher appointed to undertake the work firstly tried to hold the data ransom for a large sum of money and then absconded with the data and field equipment. However, BANCA did very well in finding and training other researchers and thanks to a 6-month no-cost extension to the project from Darwin, the desired two field seasons of data were collected.

Output 2: Measures to prevent the extinction of Gurney's Pitta in Thailand are in place

Output fully achieved. This output was included because it was feared that the Thai population would fall to dangerously low levels before conservation efforts could be put in place. However, the targeted forest protection developed by the project prevented this, and while a number of measures were put in place (e.g. captive breeding and holding pens were constructed), population monitoring showed that they were not needed as the population never fell below 5 pairs.

Output 3: A strategy for Gurney's Pitta habitat restoration across the species' former range in southern Thailand is developed and agreed

Output fully achieved. The strategy built upon the research undertaken by FORRU and local forest protection staff and the lessons learned from the experimental plots established. A copy of the strategy document is attached to this report.

Output 4: Conservation strategy for key sites in Myanmar is produced

Output not achieved. Because of difficulties in working with the Burmese authorities, increased by civil unrest during the project period and a major humanitarian disaster, it was not feasible to organise a planning workshop, though the data required for such a workshop are available. However, because the species has proved to be more widespread and numerous than previously thought, it is arguable that a recovery plan is unnecessary. Current efforts to extend the proposed Lenya National Park, the boundaries of which are based upon data collected by the project, would if successful be sufficient to protect a high proportion of the species' population in Myanmar.

Output 5: Capacity of Thai and Myanmar conservationists to undertake further conservation is increased

Output achieved. In Thailand, a larger number of researchers have been involved in the project than was originally thought, as the Research Section of the Department of National Parks recognised this project as a good way to get staff trained, and so have invested considerable staff time on it. Through a mixture of formal and experiential training, field researchers have become proficient at undertaking bird surveys and finding and guarding nests, as well as gaining experience in more sophisticated field research techniques such as radio telemetry and ringing. Again due to wider than expected interest, a larger than expected number of local forest protection staff and local people have received formal training in plant propagation and forest restoration techniques and the area is now used as a study site and educational resource by local schools and a local university. This training has taken place both on site and at FORRU's base at Chiang Mai University in the north of Thailand, giving many trainees the opportunity to visit this area and to work in a university environment for the first time. The tree nursery supplies thousands of saplings for replanting each year to both statutory conservation authorities and local conservation initiatives. An interpretive centre has been built, funded jointly by Thai NGOs and Government, to further these activities. In Myanmar, significant capacity has been built though within a smaller number of researchers. With hindsight, the indicator for this output was not a realistic one, though new projects (such as the interpretive centre and the involvement of Wailailuk University) have started in Thailand before the end of the current project.

A general problem with all work in Thailand was the difficulty in obtaining the official permission required to do almost anything, though greatly improved relations with DNPWPC and local forest staff eased this somewhat. A further problem was in the retention of trained forest staff, one of whom left the project after receiving intensive training at Chiang Mai University. This was addressed by providing lower-level training to a larger number of staff and including local people in the training.

4.4 Project standard measures and publications

See Annex 4 and Annex 5

4.5 Technical and Scientific achievements and co-operation

Technical and scientific cooperation was central to this project. Full details of the research methods and results can be found in the peer-reviewed documents attached to this report, brief details are provided here.

1. Bird research

- 1.1 Thailand: Research on Gurney's Pitta in southern Thailand had three main aims; i. to assess and regularly monitor the species' population and distribution, ii. to assess the species' breeding success and iii to assess the species' habitat requirements and compare them to those of the species in Myanmar. All research fieldwork was undertaken by researchers of BCST and the DNPWPC, working in collaboration, and was supported by formal and experiential training delivered by RSPB staff through two formal workshops and a number of field visits. The population was fully surveyed in 2005 and 2007, with a partial survey of key areas in 2006 and 2008. The population was estimated at 15-20 pairs, widely scattered around the Khlong Thom basin. A number of nests were found and closely monitored, showing snake predation to be a serious threat. Intensive habitat mapping showed the species is associated with secondary growth below 150m asl. Research on the bird faunas of the plantations that are currently replacing forests show them to be depauperate compared with those in even degraded forest. This research has been widely cited as a rare example of a quantitative assessment of what happens when forest is replaced by plantation agriculture.
- 1.2 Myanmar: Three field expeditions were undertaken to southern Myanmar to collect data on the species' distribution, numbers and habitat associations. Fieldwork was undertaken by researchers working for BANCA with formal and experiential training provided by staff of RSPB and BirdLife Indochina Programme. Unfortunately, data were available for only two seasons (see 4.3). Vocal playback was used to elicit responses from birds and state-of-the-art maximum entropy models used to generate maps of distribution. The species was found to be more widespread and numerous than previously thought, with a total population of probably over 30,000 pairs. As in Thailand, the species showed an affinity for disturbed or secondary forest, though was unable to persist in the face of total forest loss.
- 1.3 Comparing results from Myanmar and Thailand: Statistical analyses of habitat data showed the species to be occupying very different forest types in Myanmar and Thailand, the latter being far more disturbed. This suggests that the species is capable of persisting along a wider spectrum of forest disturbance than previously thought.

2. Research to support forest restoration, Thailand

Extensive study has been made by FORRU, local forestry staff and students of Wailailuk University of the trees of the lowland forest in the remaining range of Gurney's Pitta in southern Thailand, including the identity of species and their flowering and fruiting phenologies. Over 180 species of tree have been identified and reference and voucher collections made of leaves and seeds. Phenology trails have been established and over 200 trees individually labelled. Detailed measurements of sapling growth rates have been made in the tree nursery to identify potential keystone species for forest restoration, and field visits have established the identity of trees capable of regenerating in deforested areas. Three different forest restoration methods have been trialled and closely monitored at experimental plots; accelerated natural regeneration, replanting with keystone species and direct seeding. All three show potential for wider forest restoration. A technical guide to forest restoration methods in the area has been produced (see Annex 7).

4.6 Capacity building

Capacity building has been an extremely important element of the project, and indeed one of the project's outputs relates specifically to enhancing the capacity of researchers in Thailand and Myanmar.

Formal training: In Feb 2005, two RSPB researchers led an intensive training workshop at Khao Yai National Park for 10 Thai conservation scientists working in the NGO and Government sectors. During the 4-day workshop, delegates received training in advanced field

methods, such as radio tracking, nest monitoring and ringing, and in advanced methodologies, such as survey design and statistical analysis of productivity and survival. Following the workshop, delegates spent between a week and three weeks in the National Park putting many of these methods into practice. All delegates received training materials for future reference. A number of these delegates later contributed to research on Gurney's Pitta in southern Thailand and others are now undertaking research in other parts of Thailand using the experience gained. In 2005, local forestry staff visited Chiang Mai University to receive intensive training in plant propagation and reforestation techniques. Subsequent follow-up visits by FORRU staff to southern Thailand in 2005 and 2006 provided training in tree identification, phenology trail establishment, reference collections and tree nursery methods. Two local people have been trained and employed by the project in Thailand to undertake bird surveys and assist with forest restoration. In Myanmar, field researchers received formal training in bird survey and habitat recording methods, which they then successfully put into practice in the field.

Experiential training: Two visits were made to southern Thailand by the RSPB Project Leader each year and on each visit, supervisory visits were made to the researchers to discuss progress and address problems. A similar level of supervision was provided by FORRU to people engaged in running the tree nursery and forest restoration. Burmese field staff were also supported remotely throughout the project and supervisory visits made.

Other capacity building: In 2005, RSPB staff organised and facilitated a 3-day strategic planning workshop for the project partner in Myanmar, BANCA. This was attended by all BANCA staff and Council and aimed to help the organisation plan its future direction, in particular in how to achieve the best outcome from the two Darwin projects (including this one) that it was engaged in. Areas covered by the workshop included setting the organisation's strategic aims, discussing membership and income and identifying opportunities. At the same time, detailed discussions were held with research staff on bird survey and census methods. Other capacity building has included the teaching of local school children and college and students about the basis of forest ecology, protection and restoration. For example, 14 undergraduate students from the Wailailuk University Conservation Club received on-site training in the collection of phenology data, and 100 students of the nearby Rajabhat Teacher Training College took part in training in the running of a tree nursery. More than 600 local school children visited the tree nursery on Children's Day in 2006.

4.7 Sustainability and Legacy

Perhaps the most enduring element of the project is the greater cooperation between Thai researchers and conservationists working for NGOs and those in the statutory agencies, and the resulting transfer of expertise and capacity into existing conservation efforts at the project site in southern Thailand and elsewhere. The legacy of this is already apparent in the sharing of staff management between BCST and DNPWPC, who are now regularly undertaking monitoring of Gurney's Pitta using methods developed by the project. The results of this work are now routinely fed into the GIS-based land cover tool developed by the project and which guides forest protection efforts. Because forest restoration to date has been undertaken by local communities, it is likely that the relatively small areas restored so far will be safe from future encroachment. It appears likely, therefore, that the future of the small Thai population of Gurney's Pitta has been measurably improved by the project. A further strong legacy lies in the production of technical capacity to restore Sundaic lowland forest, perhaps the most threatened ecosystem on earth. A major worry is the future of the tree nursery and its carefully trained staff. Costs for maintaining this were provided in 2008/9 by Oriental Bird Club and efforts are underway to try to maintain the nursery for another two years to allow it to achieve its aims to restore a larger area of forest. A Darwin Post-Project has been submitted to support this. Without this support, it is likely that the tree nursery will close, though some of the trained staff will still be in place as they are employed by the local forest protection agencies. NGO researchers employed and trained by the project have already been offered longer employment by statutory conservation bodies in Thailand and in Myanmar. As BCST is an RSPB focal country, institutional support and capacity will continue to be provided by RSPB, ensuring that

the legacy of the project is increased. Similarly, support to BANCA will be continued through the BirdLife Indochina Programme.

5 Lessons learned, dissemination and communication

Perhaps the key lesson from this, though one that has been learned elsewhere, is that building endemic capacity and helping to forge in-country collaborations is a far more effective way of doing conservation than parachuting Western expertise into countries poor in resources. The project has been an excellent example of this, and the conservation benefits have increased as UK input has gradually reduced over the life of the project. A further lesson has been that actions undertaken by local communities are more sustainable than actions undertaken by outside authority. Previous efforts to save Gurney's Pitta in Thailand were led largely by outside agencies with little role by local agencies or communities, as a result of which they achieved limited success.

Gurney's Pitta is something of a *cause celebre* in Asian conservation and so the project has commanded wide attention; before its rediscovery in Myanmar, it was thought to be almost beyond saving. The species therefore has a very high profile, and indeed was the focus of the 2005 British Birdfair, attended by thousands of people, at which event the project was given prominence (see Annex 8). Updates on the project have featured regularly in the Bulletin of the Oriental Bird Club, the stock source of information on the region's birds. A lengthy talk on the project was given by the UK project leader to the OBC annual meeting in the UK in 2008, in which the prominent role of Darwin support was highlighted. A television film about the species and efforts to save it was made in Thailand in 2008 and broadcast nationally. The written results of the project will be published in the peer-reviewed literature and copies sent to a wide range of stakeholders. Articles on the species have appeared in the BirdLife magazine, which is read by BirdLife Partners worldwide. It is hoped that future dissemination of the project's successes will attract funding to implement the forest restoration strategy developed for the species in southern Thailand.

5.1 Darwin identity

Project staff have been keen to promote the Darwin Initiative image in all project outputs. The Darwin logo is clear on all project outputs, and is prominently displayed on the tree nursery in southern Thailand. As a result, the Initiative now has higher profile in the focal countries than previously, particularly within the Thai Department of National Parks, which has been a direct beneficiary of the project. Close personal links with staff in the UK Embassies in Thailand and Myanmar have helped to raise the profile of the Initiative among UK diplomatic staff.

Collaborations built during the current project have led to a successful application to Darwin for work elsewhere (see Section 3). The current Darwin project forms part of a wider conservation initiative on this species and its lowland forest home, including particularly efforts to designate and extend the proposed Lenya National Park in southern Myanmar and socioeconomic incentives in southern Thailand. However, work funded by this project has formed such a high proportion of work on this species over the last few years that the Darwin project and other efforts to save the species are now seen by most stakeholders as synonymous. The contribution of Darwin to the conservation of Gurney's Pitta has been highlighted in numerous articles and during presentations at the 2005 British Birdfair, which attracted thousands of visitors. Additionally, the Thai Birdfair in Bangkok in 2007 featured the project and the Darwin logo was prominently displayed. This event attracted considerable press and television coverage in Thailand.

6 Monitoring and evaluation

There were no changes to the logframe during the life of the project. The indicators developed at the start of the project were largely effective, although with hindsight changes should have been made to some of the indicators when it became clear that, largely due to civil unrest and humanitarian problems in Myanmar, a species recovery plan workshop there would be impractical and difficult to organise. Similarly, it was decided that a revision of the existing species recovery plan in Thailand was unnecessary, since although many of the actions listed in it were completed by the current project, insufficient progress had been made on the non-technical parts of the plan to warrant immediate revision. This again was not reflected in the generation of new indicators. In the first year of the project, a full survey of the species was undertaken in southern Thailand to generate baseline information against which future trends could be monitored. Furthermore, satellite imagery was used to assess the extent of forest cover there and so allow future monitoring of forest loss.

The M&E protocol generally worked well, and frequent visits by RSPB staff to Thailand and Myanmar, both project funded and undertaken as part of RSPB's other ongoing commitments to the BirdLife partners there, ensured that all project partners were kept updated of progress and that the UK project leader was able to monitor implementation. With hindsight, the major problem encountered during the project, the loss of a season's data in Myanmar, might have been avoided by more intensive M&E, although the event was unforeseen by either the Burmese partners or the UK project leader. As well as regular Darwin reporting, the project was annually reviewed internally by RSPB peers during annual staff appraisals.

6.1 Actions taken in response to annual report reviews

No major issues were raised by reviewers throughout the project, and all minor points were addressed. We are not aware of any outstanding issues relating to comments raised by external reviewers during the project. All reviews were circulated to project partners.

7 Finance and administration

7.1 Project expenditure

<u>Agreed revised grant for each year</u>	2004/5 Grant	2005/6 Grant	2006/7 Grant	2007/08 Grant
Staff costs				
Rent, rates, heating, lighting, cleaning				
Postage, telephone, stationery				
Travel and subsistence				
Printing				
Conferences, seminars etc				
Capital items				
Others: Currency change costs				
Total				

*includes £3151 carried over from previous FY

Total spent (claimed) for each year

	2004/5 Spend	2005/6 Spend	2006/7 Spend	2007/08 Spend
Staff costs				
Rent, rates, heating, lighting, cleaning				
Postage, telephone, stationery				
Travel and subsistence				
Printing				
Conferences, seminars etc				
Capital items				
Others: Currency change costs				

Total

The budget did not change from the original Stage 2 application, except that a small amount of money (£3151) was carried over between the financial years 2004/5 and 2005/6, with permission from Darwin. Capital items comprised largely the purchase of a field vehicle for Myanmar. All salary costs claimed from Darwin were used to support project staff in SE Asia, as outlined in the original proposal. This included ecological research staff in Thailand and Myanmar and tree nursery and forest official staff in Thailand.

7.2 Additional funds or in-kind contributions secured

All matching funding outlined in the original budget was provided by project partners. In addition, the project received a major boost when the 2005 British Birdfair chose as its focus the conservation of Gurney's Pitta and its lowland forest habitats. Most of the £200,000 raised was allotted to the establishment of Lenya National Park in southern Myanmar (still on hold pending the signing of an MoU). A small proportion (£10,000) has gone to community development work in southern Thailand, and also funded the purchase of a project vehicle (£12,000). In addition, £10,000 was provided by the Oriental Bird Club to keep the tree nursery running and nursery staff employed for one year after the cessation of Darwin funding in April 2008. Thus £32,000 of additional external funding has been found to support the project in southern Thailand. In addition, the local government office has contributed £2500 towards the cost of building the interpretive centre. We also managed to obtain two top-end GPS units, capable of working in tall forest, from the manufacturers (Garmin) free of charge.

7.3 Value of DI funding

In the absence of DI funding, very little (perhaps none) of the work described in this report would have been accomplished, as no alternative funding was available.

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

Project summary	Measurable Indicators	Progress and Achievements	Actions required/planned for next period
<p>Goal: 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"> • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources 		<p>Apart from the many benefits to the conservation of Gurney's Pitta, an endangered species, generated by the project, a number of wider benefits to biodiversity have accrued. First, the project has greatly strengthened relations between NGOs and government in Thailand. Second, the work on reforestation in southern Thailand is of great importance, since this is one of the few areas where efforts are ongoing to restore Sundaic lowland forest. The research and capacity building in forest restoration in southern Thailand, and the wide use made by the local community of the tree nursery, have implications for the conservation of Sundaic forest and its many threatened species in southern Thailand and elsewhere. Already the lessons learned and relationships built by the project are being used to promote forest restoration in Sumatra.</p>	<p>(do not fill not applicable)</p>
<p>Purpose A framework for the conservation of Gurney's Pitta established and strategic conservation measures implemented in Thailand and Myanmar</p>	<p>All activities in Gurney's Pitta Species Recovery Plan in Thailand requiring external expertise initiated by end of project</p>	<p>Completed. All scientific and technical objectives relating to the species' population, distribution, habitat use and conservation status in Thailand and Myanmar completed, and all technical aspects of forest restoration in</p>	<p>It is necessary to continue the work of the tree nursery and forest restoration staff in southern Thailand, as the local forestry authority has identified a number of areas where forest restoration could take place. A Post-Project has been submitted to Darwin to support this</p>

	<p>Project proposals developed and submitted for all activities in Species Recovery Plan in Myanmar</p>	<p>southern Thailand completed</p> <p>Not completed. Due to severe civil unrest and the humanitarian crisis brought on by Tropical Storm Nargis, a SAP has not yet been completed for Myanmar, and although this could still be done it is debateable whether a SAP is now necessary, since the work has shown the species to be more numerous and widespread than originally thought. However, the results of the work in Myanmar have been fed into other ongoing conservation initiatives, particularly a revision to the boundaries of the proposed Lenya National Park for which funding is available as soon as an MoU is signed with the Burmese authorities.</p>	<p>work. It will also be necessary to undertake periodic surveys of Gurney's Pitta in southern Thailand to monitor the effectiveness of ongoing conservation measures.</p> <p>A further survey of Gurney's Pitta in southern Myanmar is required to clarify the altitudinal and latitudinal limits of the species' range, and so to estimate population size. A Post-Project has been submitted to Darwin to support this work. Efforts will continue to sign an MoU with the Burmese authorities to designate Lenya National Park and its lowland extension, which will contain much of the Gurney's Pitta population, thus ensuring the species' long-term survival.</p>
<p>Output 1. Knowledge of GP numbers, distribution and ecological needs across its range is provided to GP stakeholders</p>	<p>Gurney's Pitta stakeholders have access to recent research results by end of Year 3</p>	<p>Completed. All research actions completed and the results have already been made available to all project partners. Scientific results have been published or are in press in international peer-reviewed journals.</p>	
<p>Activity 1.1 Assess extent and types of lowland forest in Myanmar</p>			<p>Completed – see Section 4.5. Results in press in scientific paper</p>
<p>Activity 1.2 Develop survey protocol for Myanmar</p>			<p>Completed – see Section 4.5</p>

Activity 1.3 Surveys of Gurney's Pitta in Myanmar		Completed – see Section 4.5. Initial survey undertaken in Feb-Jul 2006, data lost, repeated in Feb-June 2007 and 2008, results in press in scientific paper
Activity 1.4 Comparison of habitat types in Myanmar and Thailand		Completed – see Section 4.5. Results in press in scientific paper
Activity 1.5 Assessment and quantification of threats and opportunities in Myanmar		Completed – results in press
Activity 1.6 Surveys throughout KNC region		Completed, surveys undertaken each year. Results in press in scientific paper
Activity 1.7 Assessment of biodiversity value of agricultural forest alternatives		Completed, paper published in scientific journal in 2006
Activity 1.8 Research into breeding success at KNC		Completed – see Section 4.5. Results in press in scientific paper
Activity 1.9 Research into habitat use, movements and feeding ecology at KNC		Completed – see Section 4.5. Results in press in scientific paper
Activity 1.10 Design and implement GP and habitat monitoring protocol in both countries		Completed
Output 2. Measures to prevent the extinction of Gurney's Pitta in Thailand are in place	Population in S Thailand does not fall below 5 males and 5 females	(report general progress and appropriateness of indicator)
Activity 2.1 Establishment of worm farm at KNC		Established in 2006, but birds found not to respond to provided food, so discontinued. Will be restarted if captive breeding occurs
Activity 2.2 Intensive guarding of nests at KNC		Started in 2005, continued in 2006-2008. Five nests successfully guarded to successful outcome. Results in press in scientific paper
Activity 2.3 Provide advice to forest patrols to protect most important areas		Ongoing throughout project. Extremely successful at reducing loss of key forest.
Activity 2.4 Design and publish species management protocol		Not done as captive breeding deemed unnecessary
Activity 2.5 Workshop to update GP recovery plan in Thailand		Not done, see Section 6
Output 3. A strategy for Gurney's Pitta habitat restoration across the species' former range in southern Thailand is developed and agreed	Restoration projects that are part of the strategy are submitted to funders by end Yr 2	

Activity 3.1 Compile list of indigenous tree species in GP habitat	Completed, see attached database
Activity 3.2 Recruit and train local field team	Completed
Activity 3.3 Phenology, seed collection, ecological monitoring	Completed, phenology trail established, seed and leaf collections established, monitoring of experimental plots ongoing
Activity 3.4 Establish, populate and maintain tree nursery	Completed, nursery producing >10,000 tree per year
Activity 3.5 Planting field plots and monitoring	Completed, 4 experimental plots established and monitoring ongoing
Activity 3.6 Follow up on-site training	Completed
Activity 3.7 Develop lowland forest restoration strategy	Completed, see Annex 7
Output 4. Conservation strategy for key sites in Myanmar is produced	Species Recovery Plan for Myanmar produced, agreed and published by end Yr 3
Activity 4.1 Results of 1.1 and 1.3 used to identify key sites for GP in Myanmar	Completed – results in press
Activity 4.2 SAP workshop held and SAP produced	Not done, see Section 4.3
Activity 4.3 Site monitoring protocol developed	Completed – baseline data collected
Output 5. Capacity of Thai and Myanmar conservationists to undertake further conservation is increased	New research and management projects developed and undertaken by end Yr 1 (in Thailand) or end Yr 3 (Myanmar)
Activity 5.1 Training of ornithologists in Myanmar in census and survey methods	Completed
Activity 5.2 Production of project proposals to ensure project sustainability	Completed, Darwin Post-Project application submitted and £10,000 raised from OBC to continue forest restoration work in 2008/9
Activity 5.3 Review of remaining training needs	Ongoing through RSPB's institutional support to BCST

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

As above – the logframe has not changed during the project

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	20	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	50	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		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

Article No./Title	Project %	Article Description
		and equitable way of results and benefits.
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)
Training Measures		
1a	Number of people to submit PhD thesis	0, though the forest restoration element of the project is now supporting a PhD thesis by a student at Walailuk University
1b	Number of PhD qualifications obtained	
2	Number of Masters qualifications obtained	
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)	32 (12 Thai conservation scientists, 20 MSc students from Walailuk University)
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)	17 (7 Thai forest staff, 10 Thai and Burmese researchers)
6a	Number of people receiving other forms of short-term education/training (ie not categories 1-5 above)	12 (workshop for 10 Thai forest staff, field training visits with 2 Burmese researchers)
6b	Number of training weeks not leading to formal qualification	
7	Number of types of training materials produced for use by host country(s)	2 (coursework material from training workshops)
Research Measures		
8	Number of weeks spent by UK project staff on project work in host country(s)	18.5
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 (see Annex 7)
10	Number of formal documents produced to assist work related to species identification, classification and recording.	2
11a	Number of papers published or accepted for publication in peer reviewed journals	3
11b	Number of papers published or accepted for publication elsewhere	

Code	Description	Totals (plus additional detail as required)
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	3
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country	
13a	Number of species reference collections established and handed over to host country(s)	1
13b	Number of species reference collections enhanced and handed over to host country(s)	
Dissemination Measures		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	1
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	4
15a	Number of national press releases or publicity articles in host country(s)	3
15b	Number of local press releases or publicity articles in host country(s)	
15c	Number of national press releases or publicity articles in UK	
15d	Number of local press releases or publicity articles in UK	1
16a	Number of issues of newsletters produced in the host country(s)	
16b	Estimated circulation of each newsletter in the host country(s)	
16c	Estimated circulation of each newsletter in the UK	
17a	Number of dissemination networks established	1
17b	Number of dissemination networks enhanced or extended	
18a	Number of national TV programmes/features in host country(s)	2
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)	

Code	Description	Totals (plus additional detail as required)
19b	Number of national radio interviews/features in the UK	
19c	Number of local radio interviews/features in host country (s)	
19d	Number of local radio interviews/features in the UK	
Physical Measures		
20	Estimated value (£s) of physical assets handed over to host country(s)	£13,700
21	Number of permanent educational/training/research facilities or organisation established	3 (tree nursery, community centre, interpretive centre, all Thailand)
22	Number of permanent field plots established	6 (4 forest restoration plots, Thailand, 1 phenology trail, Thailand, 1 permanent forest monitoring plot, Thailand)
23	Value of additional resources raised for project	£107,000 (£75,000 from project partners, £22,000 from British Birdfair, £10,000 from OBC)
Other Measures used by the project and not currently including in DI standard measures		

Annex 5 Publications

This table does not include two scientific papers that are currently in press (attached to this report) or a report in Thai submitted to the National Research Council of Thailand (not publicly available).

Type * (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Journal paper*	Aratrakorn, S., Thunhikorn, S. and Donald, P.F. (2006). Changes in bird communities following conversion of lowland forest to oil palm and rubber plantations	Cambridge University Press	http://www.birdlife.org/publications/bci/index.html	

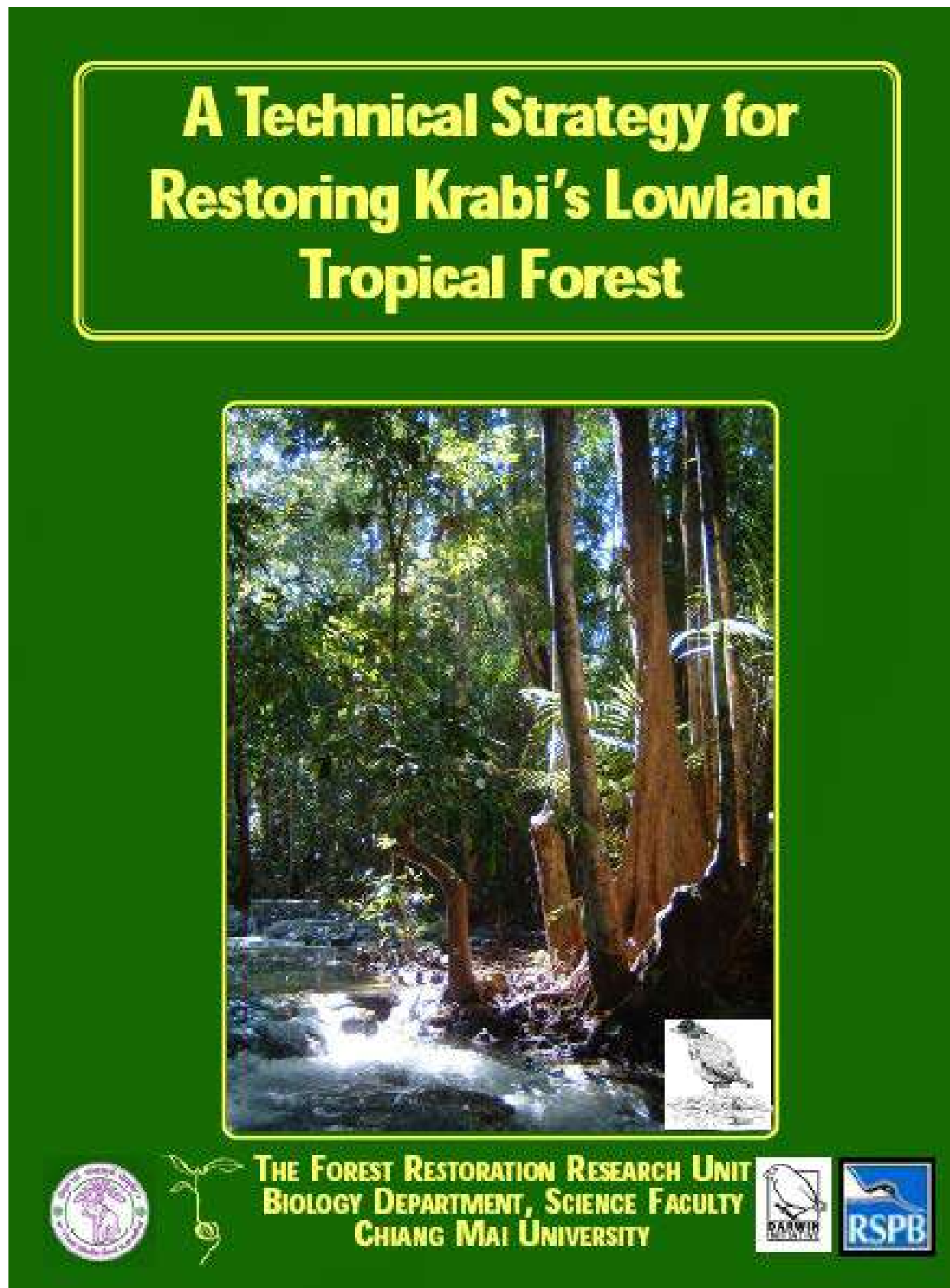
	in southern Thailand. <i>Bird Conservation International</i> , 16 : 71-82.			
Manual*	Stephen Elliott, Cherdasak Kuaraksa, Panitnard Tunjai, Taweesak Polchoo, Theerasak Kongho, & Juthamart Thongtao (2008) <i>A Technical Strategy for Restoring Krabi's Lowland Tropical Rain Forest</i> . FORRU, Chiang Mai University.	Forest Restoration Research Unit, Chiang Mai University	http://www.forru.org/FORRUEng_Website/Pages/enghome.htm	

Annex 6 Darwin Contacts

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Annex 7: Front cover of technical strategy



Annex 8. Poster for the 2005 British Birdfair



RSPB **Birdfair** **the wildlife TRUSTS**
LEICESTERSHIRE AND RUTLAND
THE BRITISH BIRDWATCHING FAIR
2005

Illustration of Gurney's pittas by Robert Gilmer

Raising money for BirdLife's project: 'Helping save Gurney's pittas and their forest home'
Anglian Water Birdwatching Centre, Egleton Nature Reserve, Rutland Water
Friday 19 to Sunday 21 August 2005 9 am-5.30 pm daily, adults £10, children FREE.
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