



Darwin Initiative Annual Report



DARWIN200

Important note:

Submission deadline 30 April 2012

1. Darwin Project Information

Project Ref Number	18-002
Project Title	Enhancing taxonomic capacity to underpin tropical biodiversity conservation (SE Asia)
Country(ies)	Thailand, Cambodia, and Lao PDR
UK Contract Holder Institution	Harrison Institute
Host country Partner Institution(s)	Prince of Songkla University, Thailand
Other Partner Institution(s)	Royal University of Phnom Penh, Cambodia; National University of Laos, Lao PDR
Darwin Grant Value	£189,895
Start/End dates of Project	April, 2010-October, 2013
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 April, 2011-31 March, 2012
Project Leader Name	Paul Bates
Project website	http://www.harrison-institute.org/research/CRM_R3_Darwin_taxonomic%20network.html
Author(s) and main contributors, date	Paul Bates and Harrison team, UK; Dr Chutamas Satasook, Thailand; Dr Neil Furey, Cambodia

2. Project Background:

The project seeks to address the shortage of taxonomic capacity in mainland SE Asia by developing:

- the Prince of Songkla University (**PSU**), Hat Yai, Thailand (7°00'N 100°28'E) as a national and international centre of excellence in taxonomic research and training in Old World tropical biodiversity. This is to be achieved by (1) training two staff members to PhD level and one student to MSc level (in taxonomic research methods of mammals and birds); (2) facilitating international collaboration for other staff members working on the taxonomy of different faunal groups (mammals, birds, amphibians); (3) hosting international training workshops and conferences; (4) promoting field research; (5) enhancing research collections and (6) providing an extensive digital library of taxonomic/ecological papers and books in pdf format.
- regional taxonomic capacity in two collaborating institutions, the Royal University of Phnom Penh (**RUPP**) in Cambodia (11°35'N 104°55'E) and the National University of Laos (**NUoL**) in Lao PDR (17°59'N 102°38'E) by (1) training one member of staff from each institution to PhD level and additionally one student from NUoL to MSc level; (2) encouraging other staff/students of RUPP and NUoL to participate in Darwin field studies and training workshops (birds and mammals); (3) developing regional and international academic linkages; (4) enhancing research collections and (5) providing access to digital libraries of taxonomic/biodiversity publications

- networking - (1) developing an international on-line taxonomic network, the Afro-Asian Taxonomic Network, http://www.harrison-institute.org/afro_asian/ which links institutions and individuals working on aspects of taxonomy in mainland SE Asia with experts and other students worldwide; (2) participation of Darwin staff and students in the Southeast Asian Bat Conservation and Research Unit (SEABCRU) <http://www.seabcru.org/>.



Dr Nikky Thomas (left) of the Harrison Institute who is the supervisor of Darwin student, Mr Ith Saveng, of the Royal University of Phnom Penh, Cambodia. Ith Saveng is studying for his PhD at the Prince of Songkla University, Thailand.

3. Project Partnerships

The Harrison Institute is the lead institution in the UK. It has a close and longstanding relationship with the Prince of Songkla University (PSU), Thailand, which is the lead institution in SE Asia.

Harrison Institute (**HI**) management structure: there are four staff members working on the project:

- Dr Paul Bates is the project co-ordinator and is responsible for all aspects of the project, especially those relating to project design, the supervision of students, and ensuring that tasks are completed on time
- Dr Nikky Thomas is an academic supervisor of the students and a researcher
- Mr Malcolm Pearch's primary role is the administration of the project but is also involved in some aspects of the research
- Ms Beatrix Lanzinger is compiling the digital library, which currently includes 2535 pdfs

Prince of Songkla University (**PSU**) management structure:

- Dr Chutamas Satasook, Dean of Science and Director of the Natural History Museum is the coordinator of the project (budget and over-all supervision) at PSU
- Dr Sara Bumrungsri is responsible for the co-supervision of three PhD and four MSc students at PSU.

- Dr Swen Renner at the University of Ulm is responsible for the supervision of the fourth PhD student, Ms Ariya Dejtaradol, who is partly based in Germany for training and academic supervision and partly in SE Asia for field research.

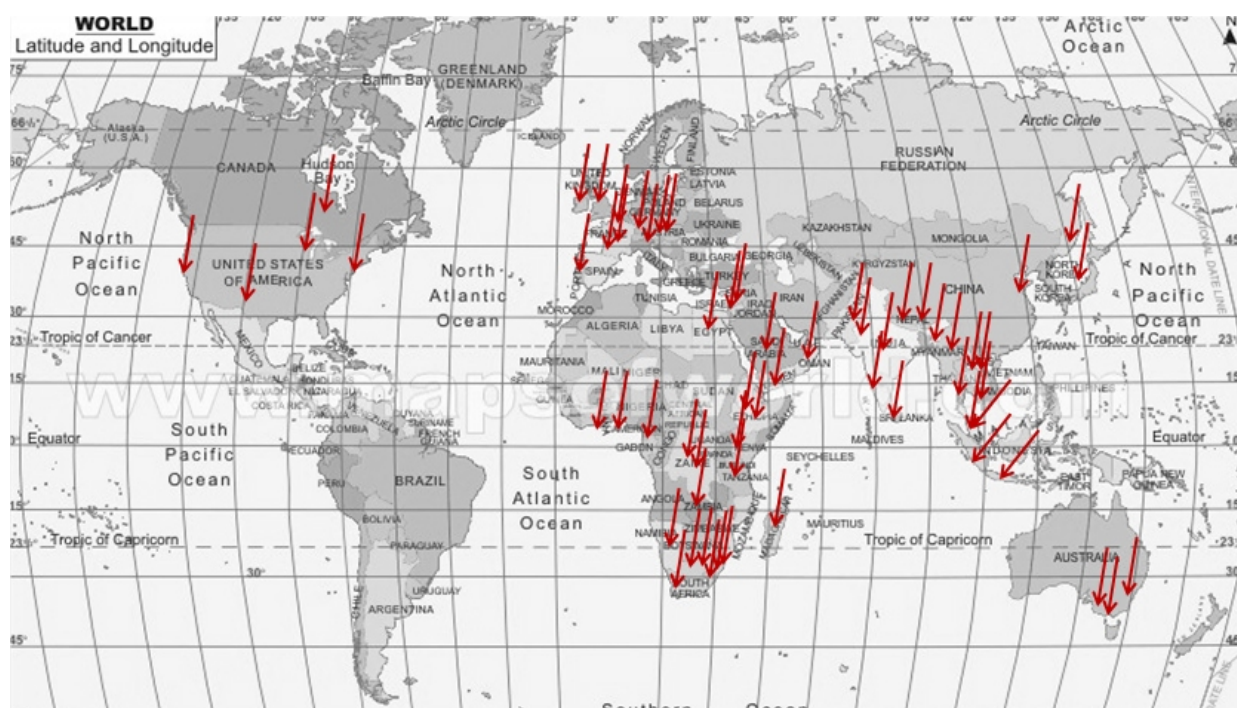


The Darwin student team, from left to right: Christopher Imakando (Zambia, MSc); Ngagyel Tenzin (Bhutan, MSc); Ith Saveng (Cambodia, PhD); Paul Bates (UK, supervisor); Ms Ariya Dejtaradol (Thailand, PhD), Sara Bumrungsri (Thailand, Supervisor); Ms Uraiporn Pimsai (Thailand, MSc); Pipat Soisook (Thailand, PhD); Bounsavane Douangboubpha (Lao PDR, PhD) Daosavanh Sanamxay (Lao PDR, MSc).

Currently, outputs of this partnership include:

- Training and co-supervision of three PhD students at PSU in aspects of SE Asian bat taxonomy, namely:
 - Mr Pipat Soisook from PSU, Thailand <http://www.harrison-institute.org/research/PipatSoisook.html>
 - Mr Ith Saveng from RUPP, Cambodia <http://www.harrison-institute.org/research/IthSaveng.html>
 - Mr Bounsavane Douangboubpha from NUoL, Lao PDR <http://www.harrison-institute.org/research/BounsavaneDouangboubpha.html>
- Co-supervision of one PhD student studying bird taxonomy at the University of Ulm, Germany with field work in SE Asia, namely:
 - Ms Ariya Dejtaradol, from PSU, Thailand <http://www.harrison-institute.org/research/AriyaDejtaradol.html>
- Training and co-supervision of four MSc students in taxonomy, three of whom (Mr Tenzin, Mr Sanamxay, and Mr Imakando joined during the period 2011-2012:
 - Ms Uraiporn Pimsai from Thailand (murid rodent taxonomy) <http://www.harrison-institute.org/research/UraipornPimsai.html>
 - Mr Ngagyel Tenzin from Bhutan (squirrel taxonomy) <http://www.harrison-institute.org/research/Ngagyel%20Tenzin.html>
 - Mr Daosavanh Sanamxay from Loa PDR (squirrel taxonomy) <http://www.harrison-institute.org/research/Daosavanh%20Sanamxay.html>
 - Mr Christopher Imakando from Zambia (murid rodent taxonomy) <http://www.harrison-institute.org/research/Christopher%20Imakando.html>
- Co-hosting international workshops, two of which took place in 2011-12 namely:
 - Training in the statistics package 'R', followed by practical training in bird taxonomy research techniques (November-December, 2011)
 - bat echolocation and the use of acoustic lures (February, 2012)

- Co-authoring and publishing 16 scientific papers (12 published in 2011-2012) and 3 editorials (for details see Table 2)
- Co-writing the Afro-Asian Taxonomic Network website www.harrison-institute.org/afro_asian/index.html which now includes over 150 members from 46 countries



Geographical representation of the 150+ members from 46 countries of the Harrison Institute's Afro-Asian Taxonomic Network - www.harrison-institute.org/afro_asian/index.html

Royal University of Phnom Penh (**RUPP**)

Management structure:

- Dr Neil Furey of Fauna & Flora International (FFI Cambodia) co-supervises Ith Saveng, the PhD student from RUPP. Neil also co-ordinates field work in Cambodia and provides a link with senior members of the academic staff of RUPP.

Outputs of the partnership with RUPP include:

- Training at PSU of one PhD student, Ith Saveng, for details see above
- Short-term training of one MSc, Mr Chinn Sophea, in bird taxonomy at PSU
- Co-authoring and publishing 3 scientific papers (2010-2012) in international journals

National University of Laos (**NUoL**)

Management structure:

A visit was made to NUoL in June, 2011 and discussions were held about further co-operation with the University.

Outputs of the partnership with NUoL include:

- Training at PSU of one PhD student, Bounsavane Douangboubpha, for details see above
- Training at PSU one MSc student, Mr Daosavanh Sanamxay, who joined in June, 2011, for details see above

- Co-authoring and publishing five scientific papers (2010-2012) in international journals.



Bounsavane Douangboubpha is a lecturer at the National University of Laos where he is establishing a zoological reference collection (see above). He is also a Darwin PhD student enrolled at the Prince of Songkla University, Thailand and has published 5 papers, 4 as first author including the description of a new species of bat from Myanmar.

In general, the management structure works well. It relies on personal contact (primarily visits to SE Asia by Paul Bates, Nikky Thomas, Beatrix Lanzinger, and Malcolm Pearch), telephone conversations and e-mail.

The project has developed enhanced links. These include:

- In the UK with the Natural History Museum, Tring
- In the UK, with Greenwich University – for example developing genetic/taxonomic projects

- In the USA with Texas Tech University which runs SEABCRU (SE Asian Bat Conservation & Research Unit). This is a 5 year project, which includes as one of its four priority areas the taxonomy of SE Asian bat species - this project, which is supported by the National Science Foundation, commenced in March, 2011 <http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=1051363> - it included Darwin staff and students in its workshop in Indonesia in June 2011
- In Hungary with the Hungarian Natural History Museum for collaborative research on bats (hosted the visit of two Darwin students, Pipat Soisook and Ith Saveng) and also collaborating in the study of amphibian taxonomy for which a grant was recently awarded to PSU, Harrison Institute, and Hungarian Natural History Museum for a joint project on the amphibian fauna of Tarutao Island, Thailand
- In Poland, for training with the Museum and Institute of Zoology, Polish Academy of Sciences (on-going)
- In Vietnam for joint publications and research with IEBR (on-going)
- In Cambodia, with Fauna & Flora International (Darwin projects 14-037 and EIDPO028) and the Critical Ecosystems Partnership Fund for co-developing taxonomic capacity within the Royal University of Phnom Penh
- In Myanmar, with the University of Mandalay to promote trans-border taxonomic research and training – currently working on two joint publications (one submitted) with the University staff.

The project has a link with the Thailand CBD focal point, Dr Sirikul Bunpapong, and is supporting Thailand, Cambodia, and Lao PDR to meet their commitments to the CBD by teaching skills directly relevant to Articles 7, 12, 13, 17, and 18 and the Global Taxonomy Initiative of the CBD.

4. Project progress/ 4.1 Progress in carrying out project activities

Output 1 – the development of the Prince of Songkla University (PSU) as a centre for taxonomic training. This has proceeded per schedule and with many additional outputs and activities.

Indicator 1 (all activities as planned) - All four PhD students and four additional MSc students (who were not in the original Darwin proposal) have:

- (1) finalised their research topics and appointed local and international supervisors
- (2) collated literature and have gathered data in the field (in Cambodia, Lao PDR, and Thailand) and in Museum collections (Germany, Hungary, Thailand, and UK)
- (3) have taken part in training programmes in field, laboratory and museum techniques in Cambodia, Germany, Thailand, and the UK
- (4) have their own dedicated websites (for listings see above) which can be accessed through www.harrison-institute.org/research/CRM_R3_Darwin_taxonomic%20network.html and which list details about their work, publications, attendance of international workshops.



In addition to work on the taxonomy of mammals and birds the Darwin Initiative project is helping to facilitate amphibian research by bringing together the team from the Prince of Songkla University, led by Dr Sansareeya Wangkulangkul (bottom right), with Dr Judit Voros (top left) of the Hungarian Natural History Museum.

Indicator 2 (activities considerably exceed plans) - Darwin project staff and students have already published

- (1) seven taxonomic papers in international journals with Darwin students as first author
- (2) have contributed as co-authors to nine additional scientific papers
- (3) in addition, Paul Bates, the project co-ordinator, has written one editorial and two articles outlining (*inter alia*) the aims and scope of the Darwin project.

Indicator 3 (activities as planned) - PSU hosted 4 international workshops relating to the Darwin project, including two in 2011-2012, namely:

- (1) A training workshop on the statistical package 'R', followed by an international workshop on bird taxonomy with five delegates from

Cambodia, Germany, and Thailand - detailed training was provided by Dr Swen Renner of the University of Ulm in field techniques with particular reference to: bird netting, data recording, specimen preparation, recording and analysing bird calls. Outputs will feature in the PhD of Ms Ariya Dejtaradol and the MSc of Mr Chinn Sophea from Cambodia.

(2) an international workshop with 12 delegates from Cambodia, Germany, Japan, Lao PDR, Thailand and UK on bat acoustics, with particular reference to the use of acoustic lures – outputs will be included the PhD studies of Mr Pipat Soisook and Mr Bounsavane Douangboubpha. February, 2012.

(3) in addition, the Harrison Institute together with PSU are co-organising and participating in the International South Asian Acoustics Workshop in April, 2012 <http://www.harrison-institute.org/research/South%20Asian%20Acoustics%20Workshop.html>

(4) and PSU, Harrison Institute, and Ulm University will be hosting the First International SE Asian Ornithological Congress, which will be held in Phuket, Thailand in November, 2012 <http://www.harrison-institute.org/IOCSEA/index.html>

Indicator 4 (size of library already exceeds plans) - A digital library of taxonomic papers and books for PSU, NUoL and RUPP is being compiled at the Harrison Institute and as of the 5 April included 2535 pdfs.

Output 2 – developing a SE Asian Taxonomic Network

Indicator 1 (scope of Network considerably exceeds plans) – in January, 2011 we launched a website 'Afro-Asian Taxonomic Network' www.harrison-institute.org/afro_asian/index.html . It



Website for the forthcoming International Ornithological Congress which is being developed by the Darwin project to promote bird research in SE Asia.



In November, 2011, Dr Swen Renner from the University of Ulm organised a training workshop at the Prince of Songkla University in the statistical package 'R' – here is seen with Daosavanh Sanaxmay (Darwin MSc student from Lao PDR), Ms Tuanjit Sritongchuy (PhD student from Thailand) and Ngagyel Tenzin (Darwin MSc student from Bhutan). This workshop was followed by field training in bird research techniques.

is primarily targeted at a new generation of taxonomists working in the Old World tropics.

Amongst other things it includes:

(1) an interactive '*Forum*' for discussion (2) a list of workshops and conferences that may be of interest to taxonomists in the region; (3) a membership list of taxonomists to promote collaboration www.harrison-institute.org/afro_asian/network_members.html – it currently has over 150 members from 46 countries – in addition a *Facebook* page to promote dialogue about taxonomy is available at www.facebook.com/pages/Harrison-Institute-Centre-for-Biodiversity-Research/193357067346886

Indicator 2 (activity on target but being monitored) – an MoU is now in place, at University level, between PSU and NUoL. National political tensions have affected the proposed MoU between PSU and the Royal University of Phnom Penh this has not affected the running of the project.

Indicator 3 (activities as planned) – student exchanges currently include:

(1) two PhD students, one from Cambodia and one from Lao PDR, currently conducting their PhDs in PSU, Thailand; one student from Thailand currently carrying out her PhD in Germany/SE Asia

(2) field surveys, including Thai, Lao, Cambodian (and Myanmar) students have been carried out in Thailand



Presentations involving Darwin students and staff were made at the 2nd International South-East Asian Bat Conference in Bogor, Indonesia by Pipat Soisook (2nd left), Sara Bumrungsri (3rd left), Bounsavane Douangboubpha (4th left) and Paul Bates (6th left) seen here with colleagues from Cambodia, USA, UK, Vietnam and Nepal.

Indicator 4 (activities greatly exceeding plans) – as outlined above, two international workshops have been hosted and 16 scientific papers and one editorial published in international journals and two articles published in Public Service Review

Indicator 5 (activities greatly exceeding plans) – during the year presentations about aspects of the Darwin project have been made in Indonesia, Swaziland, Thailand, and United Kingdom (for details see Annex 3).

Output 3 – outreach to the conservation community

Indicator 1 (activities as planned) – representatives of the conservation community have been invited to join the forthcoming acoustics workshop in South Asia in April 2012, the amphibian field research training programme in Tarutao Island in October, 2012 and to participate in the forthcoming international bird conference in Phuket in November, 2012.

Indicator 2 (not originally planned) – as noted above, two articles were published in 2010-11 Public Service Review (this has a target audience of senior political figures, such as the Secretary of State for the Environment and senior UK and foreign academics). An editorial stressing the importance of taxonomy for conservation planning was published in the Cambodian Journal of Natural History.

4.2 Progress towards Project Outputs

The second year progress towards meeting the project's outputs are outlined in 3.1 above. Most of the indicators are quantifiable and indicate that the first year progress towards project outputs are either currently being met or exceeded. All assumptions currently hold true.

4.3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 2 Total	Number planned for this reporting period	Total planned from application
1A	Pipat Soisook (Thai), Ms Ariya Dejtardol (Thai), Bounsavane Douangboubpha (Lao) & Ith Saveng (Cambodia) to submit thesis for PhD qualification at the end of the project – for details (and individual websites) see www.harrison-institute.org/research/CRM_R3_Darwin_taxonomic%20network.html	4	4	4
1B	Number of people to attain PhD qualification (in host country) (see above)	4	4	4
2	Four students, Ms Pimsai, Mr Sanaxmay, Mr Tenzin, Mr Imakando to attain Masters qualification (MSc) – for details (and individual websites) see www.harrison-institute.org/research/CRM_R3_Darwin_taxonomic%20network.html	4	0	0
4A	Number of undergraduate students to receive (detailed) training – in addition, a number of undergraduates have already attended our workshops hosted at PSU	3	0	2
4B	Number of training weeks to be provided	On-going	0	20
4C	Five postgraduate students to receive detailed training –others have attended our two workshops	20	4	4
4D	Number of training weeks to be provided – this is an ongoing process- starting in April, 2010 and ending in October, 2013	52	52	150+
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above) -	0	0	5
6B	Number of training weeks to be provided	0	0	3

7	Number of (ie different types - not volume - of material produced) training materials to be produced for use by host country -	1	1	1
8	Number of weeks to be spent by UK project staff on project work in the host country	12	12	27
10	Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording	0	0	3
11A	Taxonomic collaborative papers already published this year by Darwin students and staff in peer reviewed journals	11	0	4
11B	Taxonomic papers submitted this year by Darwin students and staff to peer reviewed journals	2	0	0
12A	Taxonomic pdf Library is being compiled (currently with 2535 papers and books); regular updates will be given to host country institutions during the project	1	1	1
12B	Museum catalogues of specimens held in host country collections (Prince of Songkla University) to be enhanced during the project	1	1	3
13A	Species reference collections in the National University of Laos to be established	1	1	1
13B	Species reference collections in the Prince of Songkla University and Royal University of Phnom Penh to be enhanced	2	2	2
14A	International conferences/seminars/workshops to be organised to present/disseminate findings	3	2	6
14B	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/disseminated.	3	1	3
15A	Number of national press releases in host country(ies)	0	0	3

15C	No national press releases in UK but two articles published in Public Service Review	0	0	1
16A	There are 2 websites for the project – one about the project <i>per se</i> www.harrison-institute.org/research/CRM_R3_Darwin_taxonomic%20network.html and one concerning the taxonomic network www.harrison-institute.org/afro_asian/index.html	2	2	2
16B	Estimated circulation of the websites in the host country(ies) – I am not sure - is it possible to distinguish 'hits' from the world as opposed to the UK?	?	?	?
16C	Estimated circulation of the websites in the UK	?	?	?
17A	The 2 websites together with the publications (papers, reports and editorials) are the primary dissemination networks to be established	2+	2+	2+
18C	Number of local TV programmes/features in host country(ies)	0	0	2
19A	Number of national radio interviews/features in host county(ies)	0	0	2
19C	Number of local radio interviews/features in host country(ies)	0	0	1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	2850 (£)	2850 (£)	6320 (£)
21	The taxonomic facilities at the Prince of Songkla University and Royal University of Phnom Penh are to be enhanced. They are to be established at the National University of Laos – this is an on-going process of the project	3	3	3
23	In addition, to substantial contributions in kind from the Harrison Institute and the Prince of Songkla University, during the 2 nd year, the Darwin received additional grants from – Darwin project staff and students are part of a \$499,362 grant entitled <i>RCN SEABCRU: the SE Asian Bat Conservation Research Unit</i> which was awarded on 25 March, 2011 by the National Science Foundation, USA (worth approx £2500 to	36273 (£) in kind Plus grants of £9234	36273 (£)	131079 (£)

	Darwin project in 2011-12); additional grants towards research were received from the Systematics Association (£734) and the Rufford Foundation (£6000)			
New - Project specific measures				

Table 2 Publications

Type (eg journals, manual, CDs)	Detail (title, author, year), city	Available from Cost £
	Second Year Authors who are members of the Darwin project (staff and students) are highlighted in bold.	
Journal Taxonomic Paper 2 nd Year	Douangboubpha, B., D. Sanamxay , V. Xayaphet, S. Bumrungsri, and P.J.J. Bates . 2012. First record of <i>Sphaerias blanfordi</i> (Chiroptera: Pteropodidae) from Lao PDR. Tropical Natural History, 12(1): 117-122.	Harrison Institute Free for personal use
Journal Taxonomic Paper 2 nd Year	Hughes, A.C., C. Satasook, P.J.J. Bates, P. Soisook , T. Sritongchuay, G. Jones, and S. Bumrungsri . 2011. Using echolocation calls to identify Thai bat species: Vespertilionidae, Emballonuridae, Nycteridae and Megadermatidae. Acta Chiropterologica, 13(2): 447-455.	As above
Journal Taxonomic Paper 2 nd Year	Ith, S. , G. Csorba, P.J.J. Bates , N.M. Furey. 2011. Confirmation of seven bat species for Cambodia. Cambodian Journal of Natural History, 2011(2): 93-103.	As above
Journal Taxonomic Paper 2 nd Year	Thong, V.D., S.J. Puechmaille, A. Denzinger, C. Dietz, G. Csorba, P.J.J. Bates , E.C. Teeling, and H-U. Schnitzler. 2012. A new species of <i>Hipposideros</i> (Chiroptera: Hipposideridae) from Vietnam. Journal of Mammalogy, 93(1): 1-11	As above
Journal Taxonomic Paper 2 nd Year	Douangboubpha, B., S. Bumrungsri, C. Satasook, P. Soisook , Si Si Hla Bu, B. Aul, D.L. Harrison, M. Pearch, N.M. Thomas, and P.J.J. Bates . 2011. A new species of small <i>Hipposideros</i> (Chiroptera: Hipposideridae) from Myanmar and a revaluation of the taxon <i>H. nicobarulae</i> Miller, 1902 from the Nicobar Islands. Acta Chiropterologica, 13(1): 61-78	As above
Journal Taxonomic Paper 2 nd Year	Hughes, A. C., C. Satasook, P. J. J. Bates, S. Bumrungsri , and Gareth Jones. 2011. Explaining the causes of the zoogeographic transition around the Isthmus of Kra: using bats as a case study. Journal of Biogeography, 2011: 1-11.	As above
Journal Taxonomic Paper 2 nd Year	Ith, S., P. Soisook, S. Bumrungsri , T. Kingston, S.J. Puechmaille, M.J. Struebig, Si Si Hla Bu, V.D. Thong, N.M. Furey, N.M. Thomas, and P.J.J. Bates . 2011. A taxonomic review of <i>Rhinolophus coelophyllus</i> Peters 1867 and <i>R. shameli</i> Tate 1943 (Chiroptera: Rhinolophidae) in continental Southeast Asia. Acta Chiropterologica, 13(1): 41-59.	As above
Journal Taxonomic Paper 2 nd Year	Kingsada, P., B. Douangboubpha, S. Ith , N. Furey, P. Soisook, S. Bumrungsri, C. Satasook , V.D. Thong, G. Csorba, D. Harrison, M. Pearch, P. Bates, N. Thomas . 2011. A checklist of bats from Cambodia, including the first record of the intermediate horseshoe bat <i>Rhinolophus affinis</i> (Chiroptera: Rhinolophidae), with additional information from Thailand and Vietnam. Cambodian Journal of Natural History, 2011(1): 49-59.	As above

Journal Taxonomic Paper 2 nd Year	Phommexay, P., C. Satasook, P. Bates, M. Pearch, S. Bumrungsri . 2011. The impact of rubber plantations on the diversity and activity of understorey insectivorous bats in southern Thailand. <i>Biodiversity Conservation</i> , 20:1441–1456.	As above
Journal Taxonomic Paper 2 nd Year	Puechmaille, S., M. Ar Gouilh, P. Piyapan, M. Yokubol, Khin Mie Mie, P.J. Bates, C. Satasook , Tin Nwe, Si Si Hla Bu, I. J. Mackie, E. J. Petit and E. C. Teeling. The evolution of sensory divergence in the context of limited gene flow in the bumblebee bat. <i>Nature Communications</i> , DOI: 10.1038/ncomms1582.	As above
Journal Taxonomic Paper 2 nd Year	Thong, V.D., C. Dietz, A. Denzinger, P.J.J. Bates , N.M. Furey, G. Csorba, G. Hoye, L.D. Thuy, and H.-U. Schnitzler. 2011. Further records of <i>Murina tiensa</i> from Vietnam with first information on its echolocation calls. <i>Hystrix – Italian Journal of Mammalogy</i> , 22(1): 129-138.	As above
Journal Taxonomic Paper 2 nd Year	Thong, V.D., S.J. Puechmaille, A. Denzinger, P.J.J. Bates , C. Dietz, G. Csorba, P. Soisook , E.C. Teeling, S. Matsumura, N.M. Furey and H-U. Schnitzler. 2012. Systematics of the <i>Hipposideros turpis</i> complex and a description of a new subspecies from Vietnam. <i>Mammal Review</i> , DOI: 10.1111/j.1365-2907.2011.00202.x	As above
	First Year	
Journal Taxonomic Paper 1st Year	Douangboubpha, B., S. Bumrungsri, P. Soisook, C. Satasook, N. M. Thomas, and P.J.J. Bates . 2010. A taxonomic review of the <i>Hipposideros bicolor</i> species complex and <i>H. Pomona</i> (Chiroptera: Hipposideridae) in Thailand. <i>Acta Chiropterologica</i> , 12(2): 415-438. (Warsaw)	As above
Journal Taxonomic Paper 1st Year	Douangboubpha, B., S. Bumrungsri, P. Soisook , S.W. Murray, S.J. Puechmaille, C. Satasook , D.L. Harrison, and P.J.J. Bates . 2010. A taxonomic review of <i>Hipposideros halophyllus</i> , with additional information on <i>H. ater</i> and <i>H. cineraceus</i> (Chiroptera: Hipposideridae) from Thailand and Myanmar. <i>Acta Chiropterologica</i> , 12(1): 29–50.	As above
Journal Taxonomic Paper 1st Year	Soisook, P. , P. Niyomwan, M. Srikrachang, T. Srithongchuay, and P.J.J. Bates . 2010. Discovery of <i>Rhinolophus beddomei</i> (Chiroptera: Rhinolophidae) from Thailand with a brief comparison to other related taxa. <i>Tropical Natural History</i> 10(1): 67-79. (Bangkok, Thailand)	As above
Journal Taxonomic Paper 1st Year	Hughes, A. C., C. Satasook, P.J.J. Bates, P. Soisook , T. Sritongchuay, G. Jones, and S. Bumrungsri . 2010. Echolocation call analysis and presence-only modelling as conservation monitoring tools for rhinolophoid bats in Thailand. <i>Acta Chiropterologica</i> , 12(2): 311-327.	As above
Journal Taxonomic Paper 1st Year	Bates, P.J.J. (2010) Taxonomy and conservation go hand in hand (editorial). <i>Cambodian Journal of Natural History</i> , 2010(2): 83-85. Phnom Penh.	As above
Journal Taxonomic Paper 1st Year	Bates, P.J.J. 2010. A tropical discussion. <i>Public Service Review, UK Science and Technology</i> , 1: 115	As above
Journal Taxonomic Paper 1st Year	Bates, P.J.J. 2010. The science of understanding and describing the diversity of nature. <i>Public Service Review, UK Science and Technology</i> , 1: 116.	As above
	Authors who are members of the Darwin project (staff and students) are highlighted in bold.	

4.4 Progress towards the project purpose and outcomes

The purpose of the project is to enhance taxonomic capacity in SE Asia by developing a university-based, taxonomic training centre of international standard in Thailand and a regional taxonomic network with collaborating institutions in Cambodia and Lao PDR. The assumptions hold true and we feel we have made good progress in the current year towards this objective.

In mammal taxonomy, we have:

- 3 PhD students (Thai, Lao, Cambodian) and 4 MSc students (Bhutan, Lao, Thai, and Zambian) based at PSU in Thailand
- increased the geographical scope of the project by promoting collaboration of SE Asia taxonomists with those from elsewhere in the Old World tropics:
 - South Asia – Bhutan, India, Nepal, Sri Lanka, Pakistan
 - Africa – Zambia



- **Incr** Dr Nikky Thomas of the Harrison Institute discussing murid rodent taxonomy with MSc student Christopher Imakando from Zambia; **eas** right: Darwin PhD student Pipat Soisook from Thailand (on the right) discussing squirrel taxonomy with MSc student Ngagyel Tenzin from Bhutan. **ed**

the taxonomic scope through the addition of 4 MSc students studying rodent taxonomy (in addition to the 3 PhD students studying bat taxonomy)

- integrated the 3 PhD students in SEABCURU (an international forum for the exchange of information on bat research and taxonomy) <http://www.seabcru.org/>
- integrated the PhD students in the international taxonomic network, including national research collections worldwide
- hosted two international workshops and participated in two international conferences.

In bird taxonomy, we have:

- one PhD student (Thai) studying at Ulm University, Germany with field work in Thailand
- hosted two international workshops on aspects of bird taxonomy and ecology at PSU
- provided additional training for a student from Cambodia
- will be hosting the 1st International SE Asian Ornithological Congress <http://www.harrison-institute.org/IOCSEA/index.html> in Phuket, Thailand in November, 2012.

In amphibian taxonomy, we have:

- enhanced the technical capacity of the amphibian research team at PSU by promoting collaboration with international scientists from the Hungarian Natural History Museum
- helped the amphibian team secure an international grant from the Rufford Foundation to fund research in Tarutao Island, Thailand
- promoted links with other researchers and students in Southern and SE Asia and in the West.

The Afro-Asian Taxonomic Network http://www.harrison-institute.org/afro_asian/ devised and hosted by the Harrison Institute currently has over 150 members and promotes taxonomy not just in SE Asia but throughout the Old World tropics

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

This is not a conservation project *per se*. However, the project is aimed at developing taxonomic capacity in the biodiversity rich tropics in order to provide national centres of biodiversity expertise, which can assist governments and conservation NGOs meet their obligations to the CBD by helping to:

- (1) identify, describe, and document the biodiversity of the ecosystems
- (2) support the work of conservationists by advising on species and site-based conservation priorities
- (3) monitor biodiversity loss from the impacts of climate change, habitat fragmentation, spread of invasive alien species
- (4) assist with the enforcement of CITES
- (5) support environmental impact assessments
- (6) assist with the dissemination of biodiversity information and public outreach programmes.

5. Monitoring, evaluation and lessons

Project activities and outcomes are monitored against the project timetable (Section 18 of the application). In addition, many of the outcomes are quantifiable and/or tangible assets. These include published taxonomic papers, articles and editorial, which together with presentations, including those for theses defence, are indicative of the progress and activities of Darwin staff and students. Websites are quantifiable and the quality can be assessed through the response of users. Workshops are quantifiable both in terms of numbers and in terms of numbers of presenters and attendees; field studies are quantifiable and the quality can be assessed in terms of useful data collected; and the taxonomic library is quantifiable in terms of numbers of pdfs. No major changes to M&E process are currently planned.

During the first year there were no unexpected major lessons learned. As always, such a project requires total commitment and the constant encouragement of all participants.

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

There were no reviews received from the first year report.

7. Other comments on progress not covered elsewhere

The project is being carried out essentially as it was designed in the application. However, within the existing structure of the project, we have expanded the outputs, so for example instead of setting up a membership list for the Taxonomic Network which will include only SE Asian taxonomists we have also included taxonomists from throughout the Old World tropics (for detailed reasoning see the first year report).

We have also increased the number of postgraduate students involved and the scope of the taxonomic groups covered to include rodents and amphibians.

Currently the project does not face any particular risks.

8. Sustainability

The profile of the project within SE Asian biodiversity community has been promoted by inviting key members of the scientific and conservation communities of SE Asia and the West to take part in workshops hosted in Thailand. We have also promoted the concepts in Africa with presentations made in Zambia and in Swaziland to an international conference. In April, 2012 we are presenting some of the work of the project at an acoustics workshop, we are co-hosting in India and later in November, 2012 at an international bird conference, which we are co-hosting in Thailand.

We feel that sustainability is a strong aspect of the project.

All four PhD students are staff members of their respective universities (with guaranteed employment on completion of their studies) and are developing strong mutually supporting academic, research and training links. Two of the MSc students also have employment with their respective university systems.

Through the project, the PSU has already made many useful links with other organisations concerned with taxonomy and biodiversity, including (as outlined above) Texas Tech University, USA and the University of Ulm, Germany and has, or is in the process of, applying for extra funding for additional project work. In addition, PSU and RUPP and NUoL have developed links with other supporting organisations such as the Hungarian Natural History Museum and RUPP with Conservation International and Fauna & Flora International.

The Harrison Institute has a long term commitment to work with all three host countries organisations in SE Asia and has been doing so since 2005. On the completion of the Darwin further work will continue with a range of other grants. However, irrespective of this, project members will have developed sufficient skills and additional national and international scientific linkages to maintain and expand their taxonomic research and training.

9. Dissemination

Dissemination activities within SE Asia took place at

- (1) by hosting two international workshops hosted at PSU in Thailand
- (2) through promoting the forthcoming 1st International SE Asian Ornithological Congress which will take place in Phuket, Thailand
- (3) by involving a wide range of different taxa in the project (mammals, birds, amphibians)

However, the primary thrust of the project is international not national – taxonomy for SE Asia linking up with South Asia, Africa, the West. Most of our dissemination activities are aimed at these audiences and include:

- (1) international conferences – for example participating in the 2nd SE Asian International Bat Conference in Indonesia in June, 2011 and one at the 11th African Small Mammal Conference in Swaziland in July, 2012
- (2) through open access websites, including that for the Afro-Asian Taxonomic Network.

Currently, target audiences are the scientific and conservation communities. It is anticipated that there will be an on-going process of taxonomic research and training in future years with the Harrison Institute and other collaborating institutions, leading to further dissemination activities.

10. Project Expenditure

Table 3 Project expenditure during the reporting period (Defra Financial Year 1 April 2010 to 31 March 2011)

Item	Budget PA – Project application BA – Budget amendment (BA approved on 06.02.2012).	Expenditure	Variance
STAFF COSTS Salaries (specify by individual) Paul Bates (a) Nikky Hammond (b) Beatrix Lanzinger (c) Bounsavane Douangboubpha (d)	(c)		
OVERHEAD COSTS Overhead costs (U.K.) (a) Overhead costs (host countries) (b)	(a)		
TRAVEL & SUBSISTENCE Travel & subsistence (U.K.) (a) Travel & subsistence (host countries) (b)	(a)		
OPERATING COSTS Operating costs (host countries)			
CAPITAL EQUIPMENT Capital equipment (host countries)			
OTHER COSTS Other costs (host countries)			
TOTAL			
Sum received to date			
Sum outstanding			

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

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

The project has broken the mould of parochial or nationally-centred science in SE Asia. Its ethos is to promote international collaboration with trans-national/trans-continental studies. It is proud of the spirit of co-operation it has engendered amongst sections of the scientific community in SE Asia, who are not only working with colleagues from within their region but also from the Indian Subcontinent and Africa. It offers an optimistic future for taxonomic research in the Old World tropics.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2011-12

Project summary	Measurable Indicators	Progress and Achievements April 2011 - March 2011	Actions required/planned for next period
<p>Goal: <i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</i></p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>		<p><i>We have drawn on UK expertise and worked extensively with local partners in SE Asia. We have built in-country capacity to help provide national (and international) centres of biodiversity expertise that will facilitate governments to fulfil their obligations to the CBD, CITES and IUCN initiatives</i></p>	<p><i>(do not fill not applicable)</i></p>
<p>Purpose To enhance taxonomic capacity in SE Asia by developing a university-based, taxonomic training centre of international standard in Thailand and a regional taxonomic network with collaborating institutions in Cambodia and Lao PDR</p>	<p>PSU, RUPP and NUoL have:</p> <p>Qualified staff (PhD is a minimum requirement of university regulations) to:</p> <p>(1) supervise future MSc/PhD students in taxonomy</p> <p>(2) teach a taxonomic training course to under-/postgraduates</p> <p>(3) conduct taxonomic research.</p> <p>Functional and utilised research collections and libraries for taxonomic studies</p>	<p>4 students from Thailand, Lao PDR, Cambodia are conducting taxonomic PhDs; 4 students are conducting a taxonomic MSc research</p> <p>Research collections have been enhanced in PSU and RUPP and established in NUoL</p> <p>Darwin students and staff have published 16 taxonomic papers in international journals</p> <p>Digital libraries being utilised by staff and students</p>	<p>Darwin students continue their PhD research</p> <p>Further field studies are carried out by Darwin students</p> <p>Further papers are published by the Darwin team</p> <p>The digital library is expanded to include more pdf papers and books</p>

Project summary	Measurable Indicators	Progress and Achievements April 2011 - March 2011	Actions required/planned for next period
Output 1. A centre for taxonomic training and research based in the Natural History Museum and Department of Biology, Prince of Songkla University (PSU).	PSU to become an international centre for taxonomic research and training	During the year, PSU has not only trained its own students in taxonomy but also those from Lao, Cambodia, Bhutan, and Zambia. In addition, it is part of a NSF grant (\$499,362) administered by Texas Tech University, USA and is working with the University of Ulm, Germany and the Hungarian Natural History Museum (amongst others) on a range of projects relating to the taxonomy of mammals, birds and amphibians	
Activity 1. Training for under- and post-graduates, especially four trainees (staff members of PSU, RUPP, & NUoL) to conduct taxonomic PhDs (to be completed in 2013) and four trainees for taxonomic MSc studies (also to be completed in 2013)		Currently 4 students from Thailand, Lao PDR, Cambodia are conducting taxonomic PhDs; four students are conducting taxonomic MScs – good progress. Undergraduates have attended training workshops at PSU.	
Activity 1.2 Four taxonomic publications.		Darwin students and staff have already published 16 taxonomic papers in international journals - originally, a target of 4 was set for the 3 year period	
Activity 1.3 PSU to host training workshops on field, laboratory, and museum techniques (& ethical collecting policy) open to all students.		Two training workshops hosted by PSU – open to all students with international expert contributors	
Activity 1.4 PSU to host an international conference on SE Asian taxonomy and zoogeography open to all.		PSU planning to host the First International SE Asian Ornithological Congress. To be held in Phuket in November, 2012, it will include taxonomy and phylobiogeography	
Activity 1.5 Enhanced taxonomic libraries and research collections.		Research collections enhanced in PSU and RUPP and established in NUoL; digital library currently comprises 2535 pdfs	
Output 2. A SE Asian Taxonomic Network including PSU in Thailand, RUPP in Cambodia and NUoL in Lao PDR (to be subsequently expanded throughout the region).	Network members work in collaboration for training and research	An academic network is being developed in SE Asia with PhD students from Cambodia and Lao PDR being trained in Thailand. This network also includes staff and students from elsewhere in Asia and Africa. Workshops, publications, and field studies are collaborative and multi-national	
Activity 2.1. MoUs and protocols supporting: student exchanges for training and research; trans-boundary field studies and specimen loans; joint hosting of workshops and conferences; joint publications in international journals.		An MoU has been signed at university level between PSU and NUoL. Students from Cambodia and Lao are being trained in PSU, Thailand; joint field studies conducted and specimens loaned between institutions; 16 publications have been produced all of which are multi-authored and multi-national	

Project summary	Measurable Indicators	Progress and Achievements April 2011 - March 2011	Actions required/planned for next period
Activity 2.2. Website for the Afro-Asian Taxonomic Network hosted by HI with contact details; project information and future research & training opportunities		The Taxonomic Network is available at www.harrison-institute.org/afro_asian/index.html - most members are currently from SE/southern Asia and the West, its current membership is over 150 from 46 countries.	
Output 3. A preliminary outreach programme which includes: Designing Museum exhibits that explain the role of taxonomy. Training staff from National Parks and conservation NGOs in workshops and field studies.	The role of taxonomy is explained to other members of the scientific/conservation community and to the public	Further emphasis has been placed during the year on including the conservation community in training workshops that we have organised and spoken about our project to national and international audiences that include conservationists. We have also written articles for publications that are targeted at political, conservation and scientific decision makers.	
Activity 3.1. Exhibits about taxonomy and taxonomists made for permanent and temporary display at the Natural History Museum of PSU.		This is scheduled for the last year of the project.	
Activity 3.2. Increased capacity in the conservation community		Conservationists have participated in our training workshops. Presentations have been made to the SE Asian conservation community.	

Annex 2 Project's full current logframe

<p>Goal: (Some minor amendments to the Logical Framework have been made in response to DI recommendations at Stage 1)</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>Sub-Goal:</p> <p>To enhance taxonomic capacity in SE Asia - so that there is sufficient local expertise to</p> <ul style="list-style-type: none"> • identify and document the region's biodiversity • advise on conservation priorities • monitor the effects of environmental change • assist with the enforcement of CITES • support environmental impact assessments. 	<p>Government Departments and conservation NGOs use locally trained SE Asian taxonomists to help:</p> <ul style="list-style-type: none"> • inform and educate about the diversity of life in SE Asia • update biodiversity databases such as the IUCN Red List and SE Asian Mammal Databank • select priority species/sites for conservation funding • monitor biodiversity loss for initiatives such as IUCN Countdown 2010 • provide data for the Convention on Migratory Species and other initiatives • assist with legislation underpinning CITES 	<p>SE Asian taxonomists are on the advisory boards of and/or list of contributors to:</p> <ul style="list-style-type: none"> • outreach programmes concerned with wildlife conservation in SE Asia • IUCN Red List and SAMD • CEPF Indo-China, assisting with setting priorities and project selection • Ministry of Forestry and National Parks, and associated NGOs monitoring biodiversity • Customs and Excise with respect to the enforcement of CITES 	
<p>Purpose</p> <p>To enhance taxonomic capacity in SE Asia by developing a university-based, taxonomic training centre of international standard in Thailand and a</p>	<p>PSU, RUPP and NUoL have:</p> <ul style="list-style-type: none"> • Qualified staff (PhD is a minimum requirement of university regulations) to: (1) supervise future MSc/PhD 	<p>Students complete their PhD studies and are awarded postgraduate degrees.</p> <p>Research collections are of</p>	<p>Students and staff remain committed to conducting taxonomic/biodiversity research.</p> <p>PSU and RUPP continue to fund their</p>

<p>regional taxonomic network with collaborating institutions in Cambodia and Lao PDR</p>	<p>students in taxonomy (2) teach a taxonomic training course to under-/postgraduates (3) conduct taxonomic research</p> <ul style="list-style-type: none"> • Functional and utilised research collections and libraries for taxonomic studies 	<p>international importance and referred to in external publications.</p> <p>Network members publish in international journals.</p>	<p>respective Natural History Museums.</p>
<p>Outputs</p> <p>1. A centre for taxonomic training and research based in the Natural History Museum and Department of Biology, Prince of Songkla University (PSU).</p>	<p>Training for under- and post-graduates, especially four trainees (staff members of PSU, RUPP, & NUoL) to conduct taxonomic PhDs (to be completed in 2013)</p> <p>Four taxonomic publications.</p> <p>PSU to host training workshops on field, laboratory, and museum techniques (& ethical collecting policy) open to all students.</p> <p>PSU to host an international conference on SE Asian taxonomy and zoogeography open to all.</p> <p>Enhanced taxonomic libraries and research collections.</p>	<p>Students enrol for further taxonomic training. PhD graduates become</p> <ul style="list-style-type: none"> • national focal points within the Taxonomic Network. <p>They continue to develop their respective taxonomic careers as:</p> <ul style="list-style-type: none"> • curators in the Natural History Museums of PSU, Thailand and RUPP, Cambodia • lecturers and postgraduate supervisors at PSU and NUoL. <p>Network pdf library and zoological collections used by an expanding group of young taxonomists.</p> <p>Collaborative taxonomic papers published by Network members in international journals..</p>	<p>Current levels of enthusiasm and support for learning taxonomy and carrying out taxonomic research are maintained within the university system of SE Asia.</p>
<p>2. A SE Asian Taxonomic</p>	<p>MoUs and protocols supporting:</p>	<p>There is an exchange of students</p>	<p>Deans of Science and Heads of Biology</p>

<p>Network including PSU in Thailand, RUPP in Cambodia and NUoL in Lao PDR (to be subsequently expanded throughout the region).</p>	<ul style="list-style-type: none"> • student exchanges for training and research • trans-boundary field studies and specimen loans • joint hosting of workshops and conferences • joint publications in international journals. <p>Website for SE Asian Taxonomic Network hosted by HI with</p> <ul style="list-style-type: none"> • contact details • project information and future research & training opportunities 	<p>between members of the network.</p> <p>There are trans-boundary field studies, workshops and research, the outputs of which are published in international journals.</p> <p>The website is accessed by a wide variety of end-users – taxonomists, ecologists, conservationists.</p>	<p>Departments maintain their commitment to:</p> <ul style="list-style-type: none"> • supporting taxonomy/biodiversity research • positioning their institutions as centres of excellence in biodiversity studies • collaborating in trans-national studies and training programmes.
<p>3. A preliminary outreach programme which includes:</p> <ul style="list-style-type: none"> • Designing Museum exhibits that explain the role of taxonomy. • Training staff from National Parks and conservation NGOs in workshops and field studies. 	<p>Exhibits about taxonomy and taxonomists made for permanent and temporary display at the Natural History Museum of PSU.</p> <p>Increased capacity in the conservation community.</p>	<p>Exhibits will be counted, photographed and archived.</p> <p>Increased interaction between the academic and conservation communities.</p>	<p>PSU continues to fund the Natural History Museum.</p> <p>National Park and NGO staff maintain their interest in developing new skills in biodiversity identification and monitoring.</p>

Annex 2 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

Taxonomic publications listed at http://www.harrison-institute.org/publications/2005_present.html are available on request from the Harrison Institute – contact taxonomic-library@hotmail.co.uk

CVs of the 4 PhD and 4 MSc students including information on publications, workshops attended and presentations made are available at:

Mr Pipat Soisook <http://www.harrison-institute.org/research/PipatSoisook.html>

Ms Ariya Dejtardol <http://www.harrison-institute.org/research/AriyaDejtardol.html>

Mr Bounsavane Douangboubpha <http://www.harrison-institute.org/research/BounsavaneDouangboubpha.html>

Mr Saveng Ith <http://www.harrison-institute.org/research/IthSaveng.html>

Ms Uraiporn Pimsai <http://www.harrison-institute.org/research/UraipornPimsai.html>

Mr Ngagyel Tenzin from Bhutan (squirrel taxonomy) <http://www.harrison-institute.org/research/Ngagyel%20Tenzin.html>

Mr Daosavanh Sanamxay from Loa PDR (squirrel taxonomy) <http://www.harrison-institute.org/research/Daosavanh%20Sanamxay.html>

Mr Christopher Imakando from Zambia (murid rodent taxonomy) <http://www.harrison-institute.org/research/Christopher%20Imakando.html>

Presentations featuring Darwin staff and students to the scientific and conservation communities

At the 2nd International SE Bat Conference, Indonesia, June, 2011.

Bates, Paul J. J. et.al. Enhancing taxonomic capacity to underpin biodiversity conservation in Southeast Asia.
Douangboubpha, Bounsavane, Phokham Latthachack, Phetphoumin Paphaphanh, Kolakoth Phommalin, Souphab. Primary survey of bat diversity, habitats and threats in Vangvieng District, Vientiane Province, Laos.

Furey, Neil, **Ith Saveng, Paul J. J. Bates** and Gabor Csorba. Cambodian bat research: past and present.

Hughes, Alice C., **Chutamas Satasook, Pipat Soisook, Paul J.J. Bates, Sara Bumrungsri** and Gareth Jones. The potential effects of environmental changes on the diversity and distributions of Southeast Asian bats.

Phommexay, Phansamai, **Chutamas Satasook, Paul Bates, Malcolm Pearch** and **Sara Bumrungsri.** The impact of rubber plantations on the diversity and activity of understory insectivorous bats in southern Thailand.

Soisook, Pipat, Chutamas Satasook, Sara Bumrungsri, Gabor Csorba, Neil M. Furey and Paul J. J. Bates. A review of *Murina* in mainland SE Asia.

Thong, Vu Dinh, Annette Denzinger, Paul J.J. Bates, Christian Dietz, Sebastien J. Puechmaille, Gabor Csorba, Pipat Soisook, Sumiko Matsumura, Wu Yi, Neil M. Furey, Emma C. Teeling. Systematics and echolocation of rhinolophoid bats in Vietnam.

At the 11th African Small Mammal Symposium, Swaziland, July, 2011

Bates, Paul. Enhancing taxonomic capacity to underpin biodiversity conservation

At Kent Bat Group, UK, January, 2012

Bates, Paul. Science without borders the future bat research in the Old World tropics.

At Surrey Bat Group, UK, March, 2012

Thomas, Nikky. Assessing bat species numbers in the Indo-Burma Biodiversity

At University of Greenwich, UK, February, 2012

Thomas, Nikky. How many bat species are there in SE Asia? Using DNA to find out

Checklist for submission

	Check
Is the report less than 5MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	yes
Is your report more than 5MB? If so, please advise Darwin-Projects@ltsi.co.uk that the report will be send by post on CD, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	yes
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	No, but happy do so, if required
Have you involved your partners in preparation of the report and named the main contributors	yes
Have you completed the Project Expenditure table fully?	yes
Do not include claim forms or other communications with this report.	