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## DARWIN INITIATIVE

### APPLICATION FOR DARWIN FELLOWSHIP PROGRAMME 2007

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please note the additional information requirements (CVs and letters of support as detailed in the Guidance for Applicants). Whilst this form is to be submitted by the host institution the proposed Fellow should be fully involved in development of the proposal. Please keep to word limits as specified and do not use a font size smaller than Arial 11pt for main text, Arial 10pt for financials.

**Submit by Friday 16 March 2007**

#### 1. Contact Details

<i>Ref. (Defra/ECTF only):</i>
<b>Name and address of UK applicant organisation (results will be sent to the postal address provided here)</b> Royal Botanic Garden Edinburgh, 20a Inverleith Row, Edinburgh, EH3 5LR

#### 2. Darwin Fellow. A one page CV must be enclosed.

<b>Name and official address of proposed Darwin Fellow</b> Mr Ram Chandra Poudel Ethnobotanical Society of Nepal (ESON) c/o Tribhuvan University, Central Department of Botany Kirtipur Kathmandu Nepal. Email: URL: <a href="http://www.eson.org.np">www.eson.org.np</a>
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#### 3. Summary of proposed Fellowship (no more than 100 words)

To greatly extend the technical and scientific capacity of Darwin Fellow Ram Chandra Poudel in plant biodiversity conservation. He will obtain Edinburgh's internationally renowned MSc degree on <i>Plant Biodiversity and Taxonomy</i> , based at RBGE and Edinburgh University. This will include a research thesis revising a significant plant group which will also contribute to the Flora of Nepal. Collaboration with Himalayan experts at Aberdeen University will extend the training in ethnobotany. Mr Poudel is already experienced in training others and the benefits of this fellowship will be disseminated to other Nepalese botanists via targeted training activities and an active research programme.
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**4. Principals in Project. Please give the details of the individuals from the UK host organisations (and other institutions if relevant) who would be directly involved in supervising/working with the Darwin Fellow. A 1 page CV on each must be enclosed.**

Details	Main UK expert	Other UK expert	Other UK expert
Surname	Watson	Pendry	Tuladhar-Douglas
Forename(s)	Mark Francis	Colin Alistair	Will
Post held	Flora of Nepal Coordinator	Flora of Nepal Researcher	Director for Scottish Centre for Himalayan Studies
Institution (if different to above)			University of Aberdeen
Department	Major Floras	Major Floras	Anthropology of Religion
Telephone			
Fax			
Email			

**5. Describe briefly the aims, activities and achievements of the UK applicant organisation. (Large institutions please note that this should describe your unit or department) (150 words)**

RBGE's mission statement is 'to explore and explain the world of plants'. It has an international reputation as a centre for excellence in plant taxonomy, molecular systematics and biodiversity science based on its rich herbarium, living collections, library and archives. RBGE has wide-ranging education activities which include PhD, MSc, BSc, HND courses as well diverse public education programmes.

RBGE contributes to many Flora projects worldwide, and coordinated the recently completed European Garden Flora (2000), Flora of Bhutan (2002) and Ethnoflora of the Socotra Archipelago (2004). The Floras Group manages the Flora of Nepal in collaboration with the University of Tokyo and Tribhuvan University and the Department of Plant Resources in Kathmandu. The Group is developing innovative biodiversity informatics tools to aid compilation of Floras and has an active fieldwork schedule. In addition to the Nepal project RBGE has successfully undertaken Darwin projects in Bhutan, Vietnam, Turkey, Laos, Peru and Chile.

**6. Describe briefly the aims, activities and achievements of the proposed Darwin Fellow's organisation. (Large institutions please note that this should describe your unit or department) (150 words)**

The aim of ESON is to maximize the benefits from Nepal's rich biodiversity through research, conservation and sustainable developments. ESON conducts national and international workshops, research, training, and community participatory projects on sustainable utilization and conservation of plant biodiversity. The current projects are "*Community-based conservation and sustainable utilization of medicinal plants in Rasuwa, Himalaya*" supported by Plantlife International, UK and "*Plant Biodiversity Inventory, Identification of Hotspots, and Conservation strategies for Threatened Species and Habitats in Kanchenjunga-Singalila Ridge, Eastern Nepal*", supported by Critical Ecosystem Partnership Fund, USA. ESON provides support for the MSc course taught by the Central Department of Botany at Tribhuvan University.

ESON's main achievements are the publication of three books; preparation of plant databases, a national report on important medicinal plants and plant areas, case studies of community based projects and the development of a robust network of national and international research institutions, individual experts and donor agencies.

**7. Describe briefly the proposed Fellow's current role within their organisation and link to a Darwin project. (150)**

In ESON, Mr. Poudel is currently employed as Coordinator on both the Rasuwa and Kanchenjunga projects, carrying out inventories of medicinal plants, identification of plant biodiversity hotspots, conducting ethnobotanical studies, market survey of high value plants, developing conservation strategies for threatened species and habitats and running training workshops. In addition Mr. Poudel is responsible for ICT issues and maintaining and developing the ESON / Tribhuvan University, Central Department of Botany's Flora of Nepal database and medicinal and aromatic plants database. He was heavily involved in preparing the application for the Kanchenjunga project.

Mr Poudel was one of sixteen Darwin Scholars during Project 162/12/030 'Building Capacity for Plant Biodiversity, Inventory and Conservation in Nepal'. He participated fully in all the activities of the Project and was one of the prize winners. After the Darwin project, Mr Poudel is regularly involved in the collection of plants and preparation of additional flora accounts for Flora of Nepal Project.

**8. Provide a concept note on the Darwin Fellowship. This should include:**

- a clear outline of the aim and objectives of the Fellowship
- the programme of work, including key milestones through the duration of the Fellowship and their timing
- the role of the UK applicant organisation, and others where relevant (including contacts)
- where appropriate, how the Fellowship will contribute towards sustainable development or sustainable livelihoods

**Aim** The aim of the Fellowship will be to give the highest quality training in biodiversity research through the **MSc in The Biodiversity and Taxonomy of Plants** based at RBGE and awarded by the University of Edinburgh. This course has been rated world class and the very best of its kind by a recent education review of the RBGE.

**Course programme** The course equips students with a wide knowledge of plant diversity and its investigation, combined with instruction in the methods of pure and applied taxonomy. Training covers traditional and molecular approaches, and consists of formal instruction, practical work, essays, research projects and tutorials covering:

- the functions and philosophy of taxonomy
- evolution and biodiversity of the major plant groups
- elements and origins of biodiversity
- plant geography and biodiversity
- nomenclature of wild and cultivated plants
- cladistics and phylogenetic analysis
- morphology and evolutionary developmental genetics
- use and scope of molecular taxonomic methods
- production and use of floras and monographs
- use of computers in handling and processing data
- population genetics and conservation
- field research and plant collecting
- curation of living collections, herbaria and libraries
- managing and funding taxonomic institutes
- public services and public relations
- funding taxonomic projects.

There are also workshops or training sessions on the practical aspects of identification, cytology, plant – parasite interactions, pollination ecology, molecular methods, herbarium techniques, and bibliographic methodology. Visits to other plant research institutions are arranged. Fieldwork is carried out during a fourteen-day field course in a tropical country, currently Belize during January.

**Course structure and key milestones** The course lasts twelve months and involves two terms of lectures, practicals, workshops and investigations followed by a four-month research project. For this Fellowship this will be an account for Volume 7 of the Flora of Nepal. The key milestones will be the successful completion of examinations at the end of each term (December 2007 and April 2008) and submission of the thesis at the end of the course (September 2008).

**Role of RBGE** The course is based at RBGE with some sessions taught at the University. The course organizer at the University is Dr Chris Jeffree of the Institute of Molecular Plant Science. RBGE will administer all aspects of the Fellowship.

**Role of University of Aberdeen** Dr Will Tuladhar-Douglas will provide one week of training in ethnographic research methodology.

**Contribution towards sustainable development.** The Fellowship will contribute directly to completion of the Flora of Nepal which has been identified as a priority in the Government of Nepal's 10th Five-Year Plan (2002) and the National Biodiversity Strategy (2002). The Fellowship will indirectly contribute to sustainable development by increasing the capacity of ESON to carry out its activities in Nepal and giving training in the techniques of biodiversity research which can be passed on in training programmes in Nepal. Nepal is faced with a generation gap in highly qualified botanists, with many botanists recently retired or nearing retirement. Mr Poudel is one of the highly motivated bright young botanists emerging in Nepal and the boost the MSc will give him will benefit Nepal in the long term.

**9. Legacy. Provide information on how the Darwin Fellow will utilise, promote and disseminate the benefits of the Fellowship on return to his/her home country. Will a strategy be developed during the Fellowship to ensure this is achieved? (200 words)**

The Fellowship will greatly improve Mr Poudel's capacity to carry out all aspects of plant biodiversity documentation, assessment, conservation, and sustainable utilization work with ESON and its partner organizations. He will disseminate the benefits of the Fellowship to other Nepalese botanists via appropriately targeted training sessions (workshops, lectures, project supervision and joint research). In particular, ESON staff will be trained in modern methods of ethnoecological field research (semi-structured interviews, sampling, free listing, plant walks, data interpretation and analysis, equitable sharing of benefits etc). Mr Poudel will also work with staff of the National Herbarium (KATH) and others engaged on the production of Flora Nepal accounts and use the recently established Flora of Nepal office at KATH. Training materials from the RBGE MSc course will be used to train MSc students at Tribhuvan University in modern systematics methods and to help update the course. Mr Poudel will be able to use his ICT skills to revise ESON's existing Medicinal and Aromatic Plants database to improve user access and interoperability. The previous Darwin project developed a highly successful working network for disseminating such benefits, and this will be an important component of the strategy to achieve long-term success.

**10. How will the Fellowship assist the Fellow's organisation and/or local communities and/or home country in working towards the objectives (or implementation) of the Convention on Biological Diversity? References to the Convention should be specific, for example, by referring to articles, cross-cutting or thematic issues<sup>1</sup>. (200 words)**

The Fellowship will develop Mr Poudel's skills in biodiversity documentation, assessment, conservation and exchange of information. The lack of trained manpower to carry out biodiversity conservation projects continues to be a problem in this small, but biodiversity-rich country, large parts of which are still under explored and where biodiversity remains at risk of degradation or over exploitation.

Mr Poudel's role in ESON contributes to the objectives of the CDB through identification and monitoring of plant resources used by local communities (Article 7), *in-situ* and *ex situ* conservation of those resources (Article 8), promoting the sustainable use of those resources by communities (Article 10) and minimizing and monitoring potential threats to those resources (Article 14). Mr Poudel's continuing assistance on the Himalayan Network of Protected Plant Areas being developed by ESON contributes to Article 5. His programmes with KATH and TU-CDB will train herbarium staff and students (Article 12) and facilitate the exchange of information (Article 17), while the community awareness and advocacy programmes will fulfil Article 13.

**11. What collaboration has there been with the Darwin Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within his/her own country. (200 words)**

Mr Poudel was identified during the Darwin Project as one of the Scholars who would make the most out of UK-based training, and since the end of the Project has been active in writing this and other proposals. He works closely with the RBGE's Floras group in and has collected material for other researchers at RBGE. Following the completion of the Darwin Project Mr Poudel proactively took on the co-authorship of the Magnoliaceae for inclusion in the first published volume of Flora of Nepal, and has developed a productive partnership with his co-author Ms Yumiko Baba. Mr Poudel and Prof Krishna Shrestha (Darwin in country co-ordinator) have been in regular liaison in developing this proposal, discussing goals and preparing information.

Throughout the MSc training at RBGE Mr Poudel will work closely with the Floras group and especially during his 4-month research project which will contribute directly to the Flora of Nepal. He will receive ethnoecological training at the University of Aberdeen, one of RBGE's partner institutions in the Scottish Centre for Himalayan Research. This training will be helpful in scoping many ethnographic action projects needed for the documentation, assessment, sustainable utilization and conservation of high value resources of the Himalayas.

<sup>1</sup> Refer to the Guidance Notes for Applicants for further information

**12. Provide details of the Darwin Initiative project (including the reference number) that the proposed Fellow was associated with, including his/her role in that project and any ongoing involvement. (200 words)**

Mr Poudel was one of the sixteen Darwin Scholars involved in the training during Project 162/12/030 'Building Capacity for Plant Biodiversity, Inventory and Conservation in Nepal'.

Mr Poudel was a keen and enthusiastic trainee in the project and attended three 2-week training workshops in Kathmandu, a 3-week training expedition to Everest National Park and a 3-week UK study visit which included his personal research project and additional work on the Annotated Checklist of the Flowering Plants of Nepal database. His personal research project involved writing taxonomic revisions of 3 genera of Labiatae for Volume 7 of the Flora of Nepal. These accounts were successfully completed within time and comprise 21 species. Mr Poudel was awarded a Runners-Up prize for the high standard of his submitted work.

Mr Poudel has continued his taxonomic studies in his own time and is currently co-authoring an account of the 13 species of the Magnoliaceae for Volume 3 of the Flora and has undertaken additional field research.

**13. Duration of the Fellowship: what are the intended start and finish dates?**

15 September 2007 – 5 September 2008

**14. Where will the Darwin Fellow be based? Please be specific with organisational details and dates (where more than one location). (200 words)**

Mr Poudel will be based at RBGE from September 2007 to September 2008 apart from 1 week in April 2008 which he will spend in Aberdeen learning ethnoecological field research methods.

**15. Financial Aspects. Please use UK Government Financial Years ie April 2007 – March 2008 etc)**

<b>Fellow payment</b>				
	07/08	08/09	2007/08	2008/09
London: £1200/month	Number of months		£	£
UK (outside London): £1000/month	7	5	£	£
Overseas location £ /month*	Number of months		£	£
<b>Host Organisations' costs</b>				
	07/08	08/09	2007/08	2008/09
UK: £300/month	Number of months		£	£
Overseas location: £ /month*	Number of months			£
<b>A. Total Fellow &amp; Host Organisation Costs</b>				

\* Figures available from Margaret Okot on 0207 082 8430

<b>Actual travel costs (Return journey to Fellowship location)</b>		
	2007/08	2008/09
Return airfare. (Kathmandu – London Qatar Airways, London Edinburgh BA)	£	£
Travel to/from airports. (Kathmandu taxi, Edinburgh bus)	£	£
Visas etc. Nepal departure tax and UK visa (total NRP 8500)	£	£
<b>B. Total Fellowship Travel Costs (Actual costs up to £2000 will be paid)</b>	£	£

<b>Actual travel costs 'Additional Travel'</b>		
<b>Specify purpose. Maximum £500 within country of Fellowship location, £1500 for international travel.</b>		
	2007/08	2008/09
Airfares <i>Details</i> Return train ticket Edinburgh - Aberdeen	£	£
Subsistence <i>Details (including number of days)</i> 4 nights B&B and evening meal @ £35 per night <i>Contact Defra for rates Rates not available at time of application</i>	£	£
Travel to/from airports. <i>Details</i>	£	£
Visas etc.	£	£
<b>C. Total (Other travel) costs</b>	£	£

<b>D. ACADEMIC FEES</b>	2007/08	2008/09
<i>Details</i> Edinburgh University overseas fees £13200 / fieldtrip £800 / research fee £800 / Aberdeen University ethnobotanical training £500	£	£

<b>TOTAL FELLOWSHIP COSTS (A + B + C + D)</b>	<b>£</b>	<b>£</b>
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**16. Other sources of funding: provide details and amounts**

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**FCO NOTIFICATION**

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise details of the Darwin Fellowship and the resultant work in the UK or the Darwin Fellow's home country

## CERTIFICATION

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

I enclose CVs for project principals and letters of support as requested in the Guidance Notes.

<b>Name (block capitals)</b>	Dr Mark Watson
<b>Position in the organisation</b>	Co-ordinator of Major Floras Programme

Signed



Date:

16 March 2007

Please return completed form to The Edinburgh Centre for Tropical Forests (ECTF) by 16 March 2007 (to arrive by midnight) by email to [darwin-applications@ectf-ed.org.uk](mailto:darwin-applications@ectf-ed.org.uk). A hard copy of the full application should also be sent to ECTF, Darwin Applications Unit, Pentlands Science Park, Bush Loan, Penicuik, Edinburgh EH26 OPH and should be postmarked 16 March 2007.