

Darwin Initiative: Half Year Report

(due 31 October 2009)

Project Ref. No.	EIDPS021: Lokesh Ratna Shakya
Project Title	A Comprehensive Documentation of the Orchids of Nepal
Country(ies)	Nepal
UK Organisation	Royal Botanic Garden Edinburgh
Collaborator(s)	Lokesh Shakya, Jeffrey Wood, Philip Cribb
Project Leader	Mark Watson
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Report No. (HYR 1/2/3/4)	1
Project website	www.floraofnepal.org/darwin

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

Work during the first 8 months of the project was in two phases, the first a 4-month period spent at RBGE, the second a 4-month study visit in London working on the collections and with orchid experts at the Natural History Museum, RBG Kew and Linnean Society of London.

Phase 1: Edinburgh (6th September to end of December 2009)

Initially there was a period of induction and training with the Flora of Nepal team at RBGE. This included the use of facilities (Herbarium, Library etc) and particularly in use of the Flora of Nepal Padme database. All Latin names and literature of the Nepalese orchid species were entered into the database - 370 currently accepted names and many more synonyms (ca. 1000 names in total). Research was undertaken on the 468 specimens of Nepalese orchids held in the RBGE Herbarium, including identification, morphological analysis and data entry of all the collection details. Full descriptions of 25 species not available from herbarium collections held in Nepal were produced. One new subspecies of *Peristylus superanthus* was characterised.

Phase 2: London (January to April)

Natural History Museum. Research and data capture was undertaken on the 989 Nepalese orchid specimens held in the herbarium (as above). Specimens of *Vanda*, *Zeuscine*, *Goodyera* and *Habenaria* were out on loan and so could not be consulted. Full descriptions were prepared for a further 22 species. Specimen annotations by past orchid specialists (P. Pradhan and Tuyama) were particularly useful in interpreting their species concepts. Types of a further 10 species not yet seen were studied. Two new species (*Bulbophyllum* and *Peristylus*) were characterised. Training was provided by NHM curation staff on use of their Herbarium, Library and other collections.

RBG Kew. Research and data capture was undertaken on the 371 Nepalese orchid specimens held in the General Herbarium (as above), and the many more voucher specimens from surrounding countries were consulted, including 98 Types of species now found in Nepal. Similarly 55 Nepalese orchid specimens in the Wallich Herbarium and 73 from the Lindley Herbarium were examined. Lindley is known as the 'Father of Orchidology' and his personal collections include Types of 45 Nepalese species. Full descriptions for a further 17 species were prepared. Training on the use of the Kew collections (herbaria and library) was provided by Kew staff. Very useful discussions were conducted with international orchid specialists at Kew, notably Dr Philip Cribb (co-author on Flora of Bhutan Orchidaceae volume), Dr Jeffrey

Wood (co-author for many genera in Flora of China Orchidaceae) and Capt. Dudley Clayton, monographer of *Coelogyne*. In particular these resulted in clarification for groups where the taxonomic classification was unclear and the decision to recognise a further three new species from Nepal.

Linnean Society of London. Research and data capture was undertaken on the 66 Nepalese orchid specimens and 34 paintings held in the archives of the Linnean Society (as above). These include the earliest scientific natural history collections from Nepal, those by Francis Buchanan in 1802-3, and later by Edward Gardner in 1817-1820. These historic and fascinating materials have not yet been comprehensively studied and will be treated in more depth following on from the Fellowship. Type specimens of 12 Nepalese orchids were consulted. Training was provided on handling and use of the archive materials at the Linnean Society was provided by the Library staff, as well as help in accessing the materials.

The first two phases of the Fellowship have been highly productive and have followed the projected timetable. In total 2122 specimens have been studied and included in the database, representing all available collections from Nepal at RBGE, RBGK, BM and LINN. Six species have been identified as new country records for Nepal, and a further five undescribed species have been characterised. The final phase of the Fellowship is back in Edinburgh and will include:

- Finalising the specimen data capture phase with inclusion of specimen data from the National Herbarium of Nepal (from records taken prior to the Fellowship).
- Checking and finalising the classification information in the database.
- Checking and formatting the written species descriptions - morphological data for all accepted Nepalese species have now been recorded, no specimens have been seen for ca. 20 previously recorded species and these are considered doubtful records.
- Checking and formatting the ecological, phenological and distributional data of all the species.
- Producing the online annotated checklist with full specimen data.

2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

There were no significant problems during the first half of the project. The only minor issue was that the one-year study visa started on the date of issue and so will expire on the 6th August, three weeks less than the full 12 months. The uncertain return date meant that a single air ticket was purchased, which will slightly increase the cost of international travel, but most importantly meant that we had to request a transfer of the remainder of the international travel budget into the second financial year. We are seeking a 3-week extension to the UK visa, but if this is not possible then we have contingency for Lokesh Shakya to complete his work when he returns to Nepal.

Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

The transfer of funds was discussed, agreed, and has happened

Discussed with LTS: **no/yes, in..... (month/yr)**

Formal change request submitted: **no/yes, in.....(month/yr)**

Received confirmation of change acceptance	no/yes in.....(month/yr)
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3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

No

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with LTS International directly.

Please send your **completed form by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk . The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message eg Subject: 14-075 Darwin Half Year Report**