

# Darwin Initiative for the Survival of Species

## Half Year Report (due 31 October each year)

<b>Project Ref. No.</b>	162/11/012
<b>Project Title</b>	An integrated conservation programme for threatened endemic forest species in Chile
<b>Country(ies)</b>	Chile
<b>UK Organisation</b>	RBGE
<b>Collaborator(s)</b>	Universidad Austral de Chile (UACH)
<b>Report date</b>	27 October 2004
<b>Report No. (HYR 1/2/3/4)</b>	Half year report Year 3 (HYR 3)
<b>Project website</b>	<i>Under consideration</i>

### **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).**

In August 2004, the second Darwin scholar (Sr Darian Stark Schilling) successfully completed his MSc in Plant Taxonomy and Biodiversity at RBG Edinburgh. His thesis was a taxonomic revision of the Caribbean conifer genus *Podocarpus*, a group of taxonomically complex and highly threatened conifers. His revision incorporated the techniques that he had learnt during his training as a Darwin scholar as well as several other techniques in Scanning Electron Microscopy. His work is expected to result in at least 4 papers jointly written with his RBGE supervisors. His thesis received an RBGE special award in recognition of his outstanding research. Darian also completed a draft for the genetic aspects of the work that he undertook on the threatened Chilean endemic *Pitavia punctata* during the course of his Darwin training. This paper is currently being worked on by other project members and it is expected that it will be ready for submission before March 2005. Darian returned to Chile in September 2004 and will be taking part in the remaining project activities. RBGE staff are seeking funding for a PhD for him. Darian has also been involved with the Spanish translation of the 'help screens' for the living plants database BG-BASE that was installed in the Arboretum in September 2002. This work will give considerable help to the 20 users of the database in Argentina, Peru and Mexico. In July Paulina Hechenleitner travelled to Xalapa in Mexico to attend an international workshop on BG-Base. During that time she acted as co-trainer and translator for Dr Kerry Walter, the creator of BG-Base. She gave two presentations; the first was on the catalogue of the living collections in the arboretum in Valdivia that she had recently produced while the second was on the general work of the arboretum and the work of the Darwin Initiative.

The final Darwin Scholar (Srta Camilla Martinez) arrived at the RBGE on the 23<sup>rd</sup> of September. She is undertaking a genetic study of the threatened Chilean conifer *Prumnopitys andinus*. This species is the focus of one of the landowner agreements and restoration projects that the project negotiated in the first year. Her work will also include the preparation of a scientific paper relating to the genetic diversity and effects of fragmentation on the threatened endemic *Legrandia concinna*. In the first year of the project field surveys were carried out to verify reported localities for this species and to collect samples for DNA analysis. The analysis was carried out as part of the project's collaboration with the BIOCORES project and the ECOTONO research laboratory in Bariloche Argentina.

Considerable progress has been made on the production of a manual for the threatened plants of central and southern Chile. This will cover the identification, propagation and conservation of all threatened woody species in the project's target area. Species profiles have involved input from a wide range of international and national experts and it is generating considerable interest within Chile. It will be produced in Spanish with an English translation available as pdf files on the internet. The target date for publication is March 2005.

Negotiations for the Commercialisation and Benefit Sharing Agreement have taken a considerable amount of time and effort by all project members. In May, Martin Gardner and Dr David Rae, the RBGE's Director of Horticulture visited the Liss Forest nurseries to discuss the agreements. In June Martin also went to Chile for 1 week to meet with Chilean organisations involved in the implementation of the CBD to ensure that they were informed and supportive of the proposed agreements. Two presentations were given to CONAMA staff. He was accompanied by one of the Chilean project leaders (Cristian Echeverria) as well as by the projects field coordinator, Paulina Hechenleitner. In August, Prof. A. Lara and C. Echeverria visited the UK to meet with the nurseryman responsible for the commercialisation. They have also been continuing negotiations within Chile. Section 2 gives more details about progress on this important aspect of the project.

Important progress has been made with the sites under in-situ conservation agreements. Landowners have been permanently contracted to carry on with the implementation of the activities indicated in the managements plans. Inventory floristics were conducted in some of the sites to provide a baseline for further monitoring. Working meetings have been conducted with the timber company Forestal Bio-Bio to agree a list of activities and goal for the next six months.

The arboretum in Valdivia has continued its development as an ex-situ conservation, research and education centre for threatened plants from Central and southern Chile. Collections of important families and genera that contain threatened species and/or species which are difficult to identify are being developed. They include the families Myrtaceae, Escalloniaceae, Alstroemeriaceae and the Bromeliaceae. Three trainees are currently employed by the Project to assist the arboretum manager and project field coordinator (P Hechenleitner). It is expected that they will be taking part in the fieldwork with UK staff that is due to start in November 2004. These trainees have also been involved in ongoing work relating to the management agreements with private landowners. This work has included propagation and threatened species identification

training. Their work will be fully reported in the final report in April 2005. In June, Paulina Hechenleitner and the Project Coordinator Martin Gardner made visits to the National Botanical Garden at Viña del Mar and the new Botanical Garden of Chagual in Santiago in order to establish collaborative networking agreements with the Arboretum at UACH. Part of the agreement will involve the exchange of plant material of threatened species from continental Chile and the islands of Juan Fernandez.

Preparations are well underway for a final seminar due to be held on November 10<sup>th</sup> and 11<sup>th</sup>, at the start of the next UK visit. This seminar will provide an opportunity for the majority of the project staff to present the results of the project to a range of people from organisations such as CONAF, CONAMA, forestry companies, UACH students and staff and students from other research institutes. Originally both the final seminar and the final visit by UK staff had been planned for Feb-March 2005; this was brought forward due to clashes with other commitments and to allow more time for the publication of project outputs.

External finance is being sought for an additional seminar on the value and use of conservation genetics in March 2005. This is likely to involve key RBGE and Edinburgh University staff as well as the Chilean members of the Darwin Initiative.

Dissemination activities have increased in the last six months. Of particular note was the keynote presentation given in October by Martin Gardner at a seminar for the 200<sup>th</sup> anniversary of the RHS that was held at the Royal Geographical Society in London. His presentation focussed on the work of the project with an emphasis on the project's attempts to develop the commercialisation of plants as a way of supporting long term conservation in Chile. An article on the Darwin project in Chile was published by C. Echeverria in the El Mercurio, a national newspaper. Also, an interview on threatened plants in Chile and the patterns of deforestation was given by C. Echeverria to La Tercera. Both articles have raised the profile of the project and conservation in Chile.

**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.**

The benefit sharing and commercialisation agreements are progressing well but the amount of time and additional expense involved has been problematic. The visit by the Chilean leaders in August was not originally budgeted for; however, its importance to the progression of the discussions on the agreements was such that the project leaders decided that it should go ahead and that the costs should be met from budget savings and external sources. Extra expenses in the UK have had to be met from the RBGE's travel budget and the amount of fieldwork planned for the final visit by UK staff has been reduced. At this stage it is difficult to predict whether this will have any significant effect on the timetable or the projects outputs.

Potential conflicts between UK and EU legislation on Plant Breeder's Rights (PBRs) and various clauses within the CBD have been the focus of much discussion. PBRs have the advantage of providing the strongest protection of commercialised plants from

