

# Darwin Initiative for the Survival of Species

## Half Year Report Form

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|-------------------------|--------------------------------------------------------------------|
| <b>Project Title</b>    | DNA banking, phylogeny and conservation of the South African flora |
| <b>Country</b>          | South Africa                                                       |
| <b>Organisation</b>     | Royal Botanic Gardens, Kew                                         |
| <b>Project Ref. No.</b> | 162/12/008                                                         |
| <b>Report date</b>      | 31 October 2004                                                    |

**1. Outline progress over the last 6 months 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 June G. Reeves and V. Savolainen attended the Evolution conference at Colorado State University and gave a presentation on *Genetic resources, systematics and the CBD: a plea for DNA banking* in a special symposium on *Systematics and the CBD*; this paper was subsequently published in *Science* (2004. 304:1445). In July, project partners attended a meeting in Zurich on *Recent radiations in the Cape flora*, and the Darwin Initiative project was presented and discussed. K. Oberlander (PhD student at Stellenbosch) spent one week at Kew as part of his training after this conference. A manual on DNA banking for biodiversity and conservation has been drafted (26 chapters) and Kew, SANBI and IUCN are currently negotiating joint publication. A workshop for this manual was hosted at Kirstenbosch and attended by 32 delegates, including A. Corthals (American Museum of Natural History, New York) and K. Davis (CBD unit, Kew). With regard to plant collection and DNA extractions: 571 new genera have been accessioned (collecting permits specifically for this project were obtained from provinces MPU, KZN, WP, EC, NC). The South African *Tree of life* project was initiated with the help of Felix Forest (smuts fellow) and Evan Arnold (intern from Chicago); a further 163 rbcL sequences have been produced. During October five students from the University of Western Cape attended a one-week course in molecular techniques hosted by the DNA bank at Kirstenbosch; in the future a one-day course on the CBD will complement these one-week courses on molecular techniques (query 3 in project review).

**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 effect the budget and timetable of project activities. Have any of these issues been discussed with the Department and if so, have changes been made to the original agreement?** The initial targets for the number of genera collected and sequenced are under revision and we anticipate that we will finally collect 800 genera and rbcL sequences (instead of 2000). These data will be sufficient to produce a South African *Tree of life* for conservation and bioprospecting: actual genetic diversity of genera per quarter of degree square (GIS SANBI database; collaboration with Mathieu Rouget and Felix Forest) will be calculated and compared to a null model of random generic distribution and maps of protected areas; guidelines for conservation priorities will be published based on these data (queries 1 and 2 in project review; full details to be provided in the April 2005 report).

**3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?** On 01/09/2004 the National Botanical Institute (NBI) became the South African National Biodiversity Institute (SANBI) constituted under the National Environmental Management Act No. 10 of 2004; however this change

should not affect significantly the present project on DNA banking, phylogeny and conservation.

Please send your **completed form by 31 October each year per email** to Stefanie Halfmann, Darwin Initiative M&E Project Manager, Email: [stefanie.halfmann@ed.ac.uk](mailto:stefanie.halfmann@ed.ac.uk)