



**Horticulture and education for conservation in  
Nezahat Gökyiğit Botanic Bahçesi,  
Istanbul, Turkey**

**Annual Report No. 1  
April 2005 – March 2006**

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**Funded by the Darwin Initiative for the Survival of Species**



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## 1. Darwin Project Information

<i>Project Ref. Number</i>	14-026
<i>Project Title</i>	Horticulture and education for conservation in Nezahat Gökyiğit Botanik Bahçesi, (Istanbul, Turkey)
<i>Country(ies)</i>	Turkey
<i>UK Contractor</i>	Royal Botanic Garden Edinburgh
<i>Partner Organisation(s)</i>	Nezahat Gökyiğit Botanik Bahçesi, (Istanbul, Turkey)
<i>Darwin Grant Value</i>	£132, 013
<i>Start/End dates</i>	1 April 2005 – 31 March 2008
<i>Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)</i>	<i>1 April 2005- 31 March 2006</i> <i>Annual Report No. 1</i>
<i>Project website</i>	
<i>Author(s), date</i>	<i>Dr David Rae and Prof Dr Adil Güner</i>

## 2. Project background

The project is based at Nezahat Gökyiğit Botanik Bahçesi (NGBB) which is located in the intersection of two motorways in eastern Istanbul. NGBB was established as a park in 1995 and was subsequently designated a botanic garden in 2003. The garden is therefore very young and, while the staff are very enthusiastic and innovative, they lack core skills in horticulture and education. Turkey has a large and important flora but with increasing development and few other botanic gardens or environmental NGOs there is real concern for its conservation. The primary purpose of NBBG is the conservation of Turkey's unique flora through education, research and direct, practical conservation (*in situ* and *ex situ*) techniques. To do that it needs skilled staff. Until the staff have the relevant experience and expertise the Garden will not be able to contribute to the objectives of the Convention on Biological Diversity (CBD). Likewise, until the Garden is attractive and functioning well it will not attract visitors, either local or tourist, and will not be able to inform people about biodiversity/conservation issues. Put simply the project aims to increase expertise in horticulture and education so that the Garden will eventually be able to play its part in conservation, education and research and therefore fulfil its responsibilities within the CBD.

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*Children learning about plants and nature at NGBB*

### **3. Project purpose and outputs**

The purpose of the project is to develop the horticultural and educational potential of NGBB so that it can contribute effectively to species conservation in Turkey. It will, of course, be some time before staff could start making a significant contribution to conservation but they will never do so until the basic building blocks and management procedures of running a modern botanic garden are put in place. This project will be delivered through a series of workshops, staff exchanges, hands-on practical work and field trips. It is very much being driven by local demand and it will equip staff with the training and knowledge necessary to start conserving plant species through horticultural techniques and education programmes. The idea is that, through these programmes of training, capacity building and technology transfer, the Garden will be able to contribute effectively to the objectives of the CBD, the Global Strategy for Plant Conservation (GSPC) and to sustainable development.

The project logical framework is shown in Appendix I along with notes on achievements and progress measured against it.

The outputs over the three year project have not changed but the operational plan for years one and two have been modified slightly- simply by swapping the timing of two

project elements. This was done purely to accommodate difficulties in personal diaries and was agreed by the Darwin Secretariat in a letter dated 24 January 2006. In retrospect (of writing the original proposal) I think it was probably also a slightly more efficient way of organising the project. All that has been changed is that a study visit that was due to be made in Year 2 was brought forward into Year 1 and a period of training that should have been undertaken in Year 1 was moved into Year 2. Over the life of the three year project it will not have any effect on outcomes or cost.

#### **4. Progress**

NGBB was established as a memorial park for the late Nezahat Gökyiğit by her husband Nihat Gökyiğit in 1995. He had the imaginative idea of transforming unused motorway curtilage land into an attractive landscape by planting trees and shrubs. This was very successful and caught the imagination of many people including one of Turkey's leading botanists Prof Dr Adil Güner. As the friendship between these two men increased so did the botanical content of the landscape and, in 2003, the park was declared a botanic garden. Through Prof Güner's acquaintance of botanists and horticulturists in other countries, especially Margaret Johnston of RBG Kew, small practical workshops were held, techniques defined and rudimentary buildings constructed. Paths and beds were laid out along with a pond, nursery area and a small glasshouse. As these physical entities were being constructed plans were being developed to create a modern, dynamic botanic garden capable of undertaking research and conservation and of being able to inform the public about conservation and environmental issues in Turkey. In 2003 Nihat Gökyiğit, Prof Güner and Margaret Johnson visited RBG Edinburgh and RBG Kew and presented their ideas and plans. As a result of this David Rae and Ian Hedge (from RBGE) and Nigel Taylor (from RBGK) visited NGBB and took part in a workshop along with botanists, landscape architects, horticulturists and others from Turkey. Having understood the need for practical help and the potential of the garden, along with appreciating the urgent conservation issues the vegetation of Turkey was facing the idea of creating a Darwin Project developed.

Progress over last year has been exactly as described in the application form except for the slight alteration described in the paragraph above. In June David Rae visited NBBB to finalise the timetable and discuss the finer details of the year 1 programme. He discussed each element with Prof Güner to ensure that both sides knew exactly what was happening, when, who would be involved, how and that all outputs were clear. This visit was very successful and every detail of the year 1 programme was finalised.

In September 2005 two staff from Edinburgh travelled to Turkey for the demonstration field trip with NGBB staff. An additional benefit was that two staff from the Forestry Commission in Britain were able to join the visit at their own expense and were therefore able to input their knowledge and expertise. Additionally, this created extra networking opportunities that have already been beneficial to NGBB. The demonstration field trip was highly successful and achieved everything expected of it. A full report appears in Appendix II but, in summary, groups of staff from NGBB were able to undertake a demonstration field trip with staff from RBGE and the Forestry Commission where they

saw, and practiced, specimen collection in the field- both herbarium and seed, along with all the techniques involved in recording, preparing, drying and storage.

Two horticultural staff from RBGE visited NGBB in October to give practical instruction in horticultural techniques and to help work on current projects. Again, this was highly successful and a lot was achieved. Their training manual appears in Appendix III and their report in Appendix IV.

Fiona Inches and Janette Latta visited NGBB in November 2005 to lead a series of plant records and databasing workshops. Their report appears in Appendix V.

In January 2006 Prof Dr Adil Güner visited the UK for the management visit that should have taken place in Year 2. As already explained this visit was swapped with the visit that two staff from NGBB should have made to RBGE for horticultural experience. A very full and detailed programme of visits and discussions was prepared for Dr Güner- both to meet staff in Edinburgh and also to visit other botanic gardens in Scotland so that he could discuss management issues with them. An additional benefit from this visit was that money was found in Turkey to fund Prof Dr Hayri Duman and Margaret Johnston to join the visit. A report of the visit can be found in Appendix VI.

In March 2006 two staff from RBGE visited NGBB to lead a series of propagation workshops. Training notes were prepared beforehand and everything that should have been achieved was achieved. The notes and a report appear in Appendix VII.

In March 2006 Dr Kerry Walter visited NGBB to install *BG-BASE*, the plant records database, and train staff in its use. Prof Güner had specifically asked for this database as he had seen it operating in other gardens and he was also becoming increasingly frustrated with the rather simple plant records database that he already had. A sophisticated plant records database, such as *BG-BASE*, is essential for managing a comprehensive collection such as that which NGBB aspires to. After installation Dr Walter spent the rest of his visit training the staff in its use. He reported back that the staff had 'taken' to the system very well, had enjoyed the training and appreciated the full range of functions that *BG-BASE* was able to offer.

Please note that the style and presentation of each report (which appear as appendices) is different as they have been written by those undertaking the visits and workshops and have not been altered or put into 'house style' by the authors. Likewise, the content and opinions expressed are those of the workshop/training leaders.

Finally, the purchase of nursery materials, including meteorological measuring equipment, was also completed within the period of Year 1.

The timetable for next year's work will be as follows:

May 2006      David Rae to visit NGBB to check on last year's work and finalise the timetable for this year's work

May 2006 Conservation and networking workshop at NGBB with staff and a few additional invitees from Turkey

June 2006 Two RBGE staff to NGBB for practical work and horticultural training

Aug/Sept 2006 Four staff from NGBB to RBGE for horticultural experience and training

Sept 2006 Education workshop at NGBB

Timings may change slightly but will be finalised during David Rae's visit in May. Even if timings change slightly outputs will be unaffected.

## **5 Actions taken in response to previous reviews.**

This report describes the first year of the project and therefore there are no previous reviews.

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*Aerial view of NGBB*



## **6. Partnerships**

It was an excellent opportunity for all when two staff from the Forestry Commission in the UK were able to join the demonstration expedition at the very start of the project. They paid their own expenses and were also able to make a considerable donation to the expedition which allowed more staff from NGBB to attend. Also, new networking opportunities have been created for staff at NBGG which have already been of benefit.

In January 2006, during Prof Adil Güner's visit to the UK, Prof Dr Heiri Dumann (from Ankara University) and Margaret Johnston (consultant to NGBB) were able to visit, also at their expense. This obviously made a much more worthwhile and enjoyable visit for Prof Güner as he was able to discuss and compare management issues at RBGE with those at NGBB with his two colleagues.

Unfortunately, there are few similar organisations or NGOs in Turkey with which to collaborate. Also, the project is new and still in its first year and so there has been little time to seek out other partners. However, as the project develops over the next two years we hope that there will be opportunities to collaborate with others. Indeed, one of the early elements of year 2 is a workshop to discuss conservation and networking issues. As well as staff from RBGE and NGBB there will be a few other Turkish invitees and it is very possible that valuable networking and collaborating opportunities will arise from this workshop.

## **7. Impact and sustainability**

The Garden is still very new and the Darwin project has only been running for one year and so its profile within Turkey is still quite low. However, the Garden's benefactor, Nihat Gökyiğit, is a famous environmentalist and philanthropist who uses every opportunity possible to inform politicians and others about the Garden and its future potential value to conservation, education and recreation. NGBB is, however, loathe to advertise their existence at present as they would be completely overwhelmed by visitors. Even now, without advertising, long queues of cars line up along the motorway at weekends eager to get in. Until better entrance and car parking facilities have been created (and work is starting on this soon) it would be dangerous (because of the motorway entrance into the Garden) to encourage more people to visit. However, when these facilities are in place the Garden will be more widely advertised to create greater impact.

It is very much hoped that collaboration between RBGE and NGBB will continue long after this particular project ceases. This Darwin funded project is part of an ongoing fruitful relationship between RBGE and Turkey and we intend to continue to collaborate effectively. The botany and biodiversity of south west Asia remains a priority area for Edinburgh and scientists and horticulturists are expected to continue to work in the region and continue to strengthen and develop the relationship between the two institutes for many years to come. In this respect therefore, there is no exit strategy, this project is just one new development in a continuing climate of cooperation and collaboration. That said,

an exit strategy from this particular project will be needed and will be discussed in more detail during this year's annual management visit by David Rae in May 2006.

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*NGBB staff repotting the bulb collection*

## **8. Outputs, Outcomes and Dissemination**

I believe that the project has gone well in the first reporting year and that actual outputs agree very well with the agreed outputs in the 'Project Implementation Timetable'. The only deviation from the agreed timetable and outputs was that Prof Güner came to the UK in Year 1 instead of Year 2 and the two staff from NGBB will come in Year 2 instead of Year 1. This deviation was agreed with the Darwin Secretariat as explained in section 3 paragraph 3.

Outputs in terms of activities, as opposed to exchange visits and projects, have included horticultural training and workshops, propagation training and workshops, botanic garden maintenance and construction, hands-on practical working, plants records workshops and database implementation and field work training and practice.

Dissemination activities in the host country have included: horticultural training and workshops to at least 8 staff, field work training and practice to at least 6 staff, plant

propagation training and workshops to 8 staff and plant records training to at least 8 staff. Information about the project has been disseminated to NGBB staff in general and to a number of academics and other professionals in Turkey. Where quantifiable against Standard Output Measures information on outputs for Year 1 has been shown in Table 1.

**Table 1. Project Outputs (According to Standard Output Measures)**

<b>Code No.</b>	<b>Description</b>	<b>Year 1 Total</b>	<b>Year 2 Total</b>	<b>Year 3 Total</b>	<b>Year 4 Total</b>	<b>TOTAL</b>
6A	Horticultural training	8 staff for 3 weeks				24 weeks
6A	Propagation & nursery training	8 staff for 2 weeks				16 weeks
6A & 13A	Field work training & enhancement of one collection	6 staff for 1 week each				6 weeks
6A & 12A	Database training & installation	6 staff for 3 weeks plus installation of one database				18 weeks & 1 database
20	Cost of database	£6,903				£6,903
20	Cost of nursery equipment	£5,000				£5,000
23	Resources raised from other sources	£26,830				£26,830

## 9. Project expenditure

Project expenditure is shown below in Table 2. Apart from the very small alteration described in section 3 paragraph 3 actual expenditure has been very close to the budget.

**Table 2: Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)**

- *Highlight any recently agreed changes to the budget and explain any variation in expenditure where this is +/- 10% of the budget.*



*Aerial view of NGBB*

## **10. Monitoring, evaluation and lessons**

A half day seminar was held at Edinburgh before the project started to brief all RBGE staff who would be involved in the project during Year 1. At that meeting the whole background and purpose of the project was explained and then each element of year 1 was described in detail. Once started progress has been monitored on a day-to-day basis by Prof Güner, Director of NGBB, who contacted David Rae at Edinburgh by e-mail if issues needed to be discussed. David Rae also got feedback on project work from RBGE staff as they returned from visits to Turkey. David Rae also briefed Edinburgh staff going out to Turkey in detail before departure to ensure they knew exactly what was required of them and how their part of the project fitted into the whole project. Prof Güner and David Rae were also able to discuss progress of the project during Prof Güner's visit to Edinburgh.

As a result of these meetings and discussions it was felt that monitoring and on-going evaluation was good and that any lessons that needed to be learnt were taken on board as we went along.

## **Conclusion**

The authors feel that the project has started well and that all elements of Year 1 have been well planned and well executed. Communication is good and the budget is on track. We both look forward to a successful Year 2.

**APPENDIX 1 - Report of progress and achievements against Logical Framework for Financial Year: 2005/2006**

<b>Project summary</b>	<b>Measurable Indicators</b>	<b>Progress and Achievements April 2005-Mar 2006</b>	<b>Actions required/planned for next period</b>
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ol style="list-style-type: none"> <li>2. The conservation of biological diversity,</li> <li>3. The sustainable use of its components, and</li> <li>4. The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ol>			
<p>Purpose To develop the horticultural and educational potential of NGBG so that it can contribute effectively to species conservation in Turkey. Through specialist training and institutional capacity building the staff will acquire the skills and knowledge necessary to develop the garden, conserve species and inform the public. In this way the NGBG will be able to contribute effectively to the aims of the CBD and to sustainable development.</p>	<ol style="list-style-type: none"> <li>i) Visually improved botanic garden landscape</li> <li>ii) Effective curation of the living collection</li> <li>iii) Successful conservation of plant species in conservation zones</li> <li>iv) Effective communication of biodiversity issues in Turkey to residents of Istanbul and visitors</li> <li>v) Appropriate environmental management of site</li> </ol>	<p>(report impacts and achievements resulting from the project against purpose indicators – if any)</p> <p>i and ii have made good progress during the year with practical work done on improving the botanic garden landscape through practical work and staff training. Curation improved through demonstration expedition and plant records workshops.</p>	<p>(report any lessons learned resulting from the project &amp; highlight key actions planning for next period)</p> <p>Key actions for next year are iii and iv</p>
<b>Outputs</b>		(report completed activities and outcomes that contribute toward outputs and indicators)	(report any lessons learned resulting from the project & highlight key actions planning for next period)
<p>Botanic Garden A botanic garden with a well curated collection of plants.</p>	<p>At least 6 staff given basic horticultural training. Number of plants in cultivation.</p>	<p>Horticulture training given to 6 staff at NGBB. Training of 2 staff at RBGE deferred to next year (with agreement from Darwin Secretariat)</p>	<p>Training to continue at NGBB and 4 staff to be given horticultural training at RBGE.</p>
<p>Nursery A functional nursery established with 2 trained staff.</p>	<p>Plants grown from seeds and cuttings survive and are grown in the Garden.</p>	<p>Propagation workshops given</p>	<p>Propagation, nursery and establishment training to continue next year</p>

Field trip Staff receive training in collection techniques, data sources and seed cleaning & storage. New plants enter the collection.	Number of new species in the collection, especially endangered species, increases.	New material has already entered the collection from the demonstration expedition. New material to continue to enter the collection and to be collected to internationally agreed standards	Introduction of new material, collected to international standards to continue (but not specifically as part of the Darwin project)
Database An accurate plant records database in place.	A minimum of 2 staff trained in BG-BASE and in data entry & management.	<i>BG-BASE</i> installed and six staff trained in its use.	An additional workshop, paid from non-Darwin funds, to be organised next year to continue the training
Education An Education Policy showing how to use the Garden for educational purposes.	A written Policy document resulting from a workshop describing the ways in which the Garden can be used for a variety of educational uses.	Not this year.	Workshop to take place next year. Policy document to follow on from the workshop.
Conservation A management plan for the three conservation zones.	The workshop will discuss management, survey and recording techniques so that progress over time can be measured.	Not this year.	A conservation and networking workshop to take place next year.
Interpretation An Interpretation Master Plan	A written Master Plan describing how best to implement an interpretation strategy in the Garden	Not this year.	Workshop and resulting master plan to take place in year 3.
Conference Small conference on CBD and GSPC issues in Turkey.	Attendance of about 50 key government, NGO and conservation staff from all over Turkey.	Not this year.	Conference to take place in year 3.

