Darwin Initiative for the Survival of Species

Annual Report

1. Darwin Project Information

Project Ref. Number	*162/11/026*
Project Title	*Recovering Ukraine's Lost Steppe: a Unique Opportunity*
Country(ies)	*Ukraine*
UK Contractor	*Dr D.W. Minter*
Partner Organisation(s)	*Nikita Botanic Garden*
Darwin Grant Value	*£165,600*
Start/End dates	*April 2002 / March 2005*
Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)	*1 April 2003 to 31 March 2004, report number 4*
Project website	*http://www.cybertruffle.org.uk/darw2002/index.htm*
Author(s), date	*D.W. Minter, 2 May 2004* [*latest version*]

2. Project Background

Location. This project operates in Ukraine, particularly in Kiev, Crimea and southeast Ukraine. **Circumstances**. Current conditions in Ukraine's *agriculture* and *military* sectors provide a unique opportunity to recover steppe. *Agriculture*. Large areas (much originally steppe) lie derelict through economic stagnation and a declining but increasingly urbanized population. As part of Rio commitments, Ukraine's government favours restoration to natural landscapes: in Crimea alone, 37,000 ha are identified as suitable. *Military*. Training areas and other military lands are often important for nature. The UK Ministry of Defence routinely considers conservation when managing such areas, knowing its public relations value. Ukrainian military also has custody of many important natural landscapes, including large areas of steppe, but conservation is not a factor in their management. In September 2001, Ukrainian and UK Ministries of Defence signed a Memorandum of Understanding which, for the first time, included agreement to co-operate over ecology. **Problems addressed by project**. Steppe conservation; environmental conservation of military areas.

3. Project Purpose and Outputs

The **purpose** of this project is to increase steppe land in Ukraine by influencing the country's agriculture and military sectors. The "log-frame" from the original proposal is included in this Report (Appendix 1). It has not been changed. For steppe conservation, the project is working in Crimea (particularly Opuk Reserve in eastern Crimea), and Donetsk oblast (particularly the Khomutovskyi Steppe part of the Ukrainian Steppe Nature Reserve). Work with Ukraine's military sector is principally in Kiev. Specific **objectives** of this project are as follows:

- gather Ukrainian scientists with appropriate restoration skills.
- give them practical experience (on problem areas of existing reserves).
- accumulate suitable materials, including seeds and seedlings of steppe plants.
- pass those skills and resources to villagers with suitable land adjacent to reserves.
- empower villagers to maintain and extend recreated natural landscapes, and use them sustainably.

- establish links between Ukrainian biologists, Ukrainian military administrators, and suitable UK personnel, through study trips and seminars explaining the importance of nature conservation, and its public relations value.
- [if possible] formalize those links into a national Joint Advisory Panel where Ukrainian scientists can advise military administrators about conservation issues, helping disseminate that advice, perhaps through further local panels.

Planned **outputs** are as follows:

- restoration of reserves (particularly Opuk and Khomutovskyi Steppe).
- establishment of field plots on reserve and adjacent lands (Opuk).
- a new visitors' centre for Opuk.
- steppe plant seed banks in eastern Crimea and Nikita Botanic Garden (south central Crimea).
- village(s) prepared for sustainable tourism (Opuk).
- increased awareness of public relations value of conservation management on military land (Kiev).
- [if possible] establishment of a Joint Advisory Panel for Ukrainian scientists and military administrators (Kiev).

Over the last year, there have been no changes to the proposed outputs and no modifications of the proposed operational plan

4. Progress

Progress from the start of the project to the beginning of the current reporting period

Steppe Conservation. *General*. A book on steppe conservation was produced (in Ukrainian). *At Opuk*. Wells were restored with tests to ensure potable water quality, and are now functioning; drinking troughs (for animals), stone bowls (for humans), and the pipes supplying the reserve fire-fighting water tank were repaired; more than 5 tons of rubbish was removed from the reserve; a small building to shelter reserve staff and store equipment in a remote part of the reserve was repaired; a shelter for visitors near one well was repaired; a suitable building was identified, agreement was reached to use part of it as a visitors' centre, and plans were made for its restoration; field plots were established for monitoring, restoration and evaluation of treatments; villagers and local students were involved in the work; material for the proposed visitors' centre began to be collected; reserve leaflets and posters were prepared and printed; seeds of rare steppe plants were collected. *Seed banks*. Work on this part of the project was delayed through concerns about internal problems at Nikita (detailed in the previous annual report). *Ukrainian Steppe Nature Reserve* (*Khomutovskyi Steppe*). Conservation through grazing was strengthened so that the horse population (established by an earlier project) reached a sustainable level. **Environmental Conservation of Military Areas**. Contact was established with Col. V.V. Kovalevsky (Head of the Department of Ecological & Radiation Safety, Deputy Chief, Department of NBC Protection Troops, General Staff of Ukrainian Armed Forces), and preliminary informal meetings were made with him leading to agreements on priorities and plans for a Ukrainian military delegation to visit the UK; UK MOD conservation literature distributed to military readership in Ukraine and 24 other countries through the British Council's English for Peacekeepers scheme. **Other**. Achievements of earlier Darwin Initiative work in Ukraine were consolidated and significantly extended.

Progress During the Current Reporting Period (1 April 2003 to 31 March 2004)

For progress against the logical framework, see Annex 1. For detail, see the next section (on *Achievements of the Project During the Current Reporting Period*). Progress against the agreed baseline timetable was as follows:

- *April 2003*. *Key milestone*. Villagers start to provide accommodation for visitors. *Comment*. Slower progress in this area was predicted in last year's annual report, and that report stated that the project would instead concentrate on Balaclava as a first stage in development of green tourism. By late April 2003 preliminary agreement had been made to set up a first backpackers' hostel in Balaclava, and a location in Feodosia potentially suitable as a second backpackers' hostel had been identified. By November 2003 one household in the village nearest the reserve was starting to provide accommodation for visitors. By March 2004 the

backpackers' hostel in Balaclava, established with support from the Darwin Initiative, had opened.

- *April 2003*. *Key milestone*. Project senior participants use this accommodation during visit. *Comment*. In late April 2003 the Feodosia accommodation was in use by senior participants. By November 2003 senior participants in the project were beginning to use accommodation provided by the household in the reserve village. In January 2004 one senior participant used the Balaclava backpackers' hostel on a trial basis prior to its opening.
- *April 2003*. *Key milestone*. Feedback given on presentation of the products. *Comment*. Since starting to use accommodation in the reserve and the Balaclava backpackers' hostel, feedback has been given to the village household and to the hostel manager to improve the standard of accommodation being offered.
- *May 2003*. *Key milestone*. Second year clearance of reserve land designated for living collection of Crimean steppe plants takes place. *Comment*. Delays with establishing Seed Banks meant that although the first year's work in this area was sustained, it was not possible to increase the area. With Seed Banks now established, an increase is planned for the 2004 growing season.
- *May 2003*. *Key milestone*. Restoration of first area of non-reserve land begins (starting to deliver sustainable use of land). *Comment*. Part of the land ploughed for preparation of the 12 km long anti-fire belt was used for first efforts to restore non-reserve land. Again the delay in establishing Seed Banks had an adverse effect on this work and, again, an increase is planned for the 2004 growing season.
- *September 2003*. *Key milestone*. Field trip to reserve by mycologists from *14th Congress of European Mycology*; villagers gain real experience of providing accommodation for foreign visitors. *Comment*. Mycologists from the Congress visited Opuk reserve for a field trip, but did not stay overnight in the village. Instead they stayed in the simple accommodation in Feodosia identified as a suitable follow-up to the backpackers' hostel in Balaclava.
- *September 2003*. *Key milestone*. Five computers delivered by this point. *Comment*. By September 2003 this milestone had been not only achieved, but considerably exceeded.

Achievements During the Current Reporting Period (1 April 2003 to 31 March 2004)

Steppe Conservation at Opuk. Over the past 12 months, activities at Opuk have gathered momentum. The following bulleted points list the main areas where work has been carried out (further information can be supplied on request):

- *Work on the reserve*. 12 km of an anti-fire belt around the reserve was ploughed with participation of the Vityaz Collective Farm, and anti-fire equipment was purchased. Two new barriers to control access to the reserve by motor vehicles were set up together with about 150 concrete posts marking the border of the reserve, and an information board was set up on the reserve. Further work was also carried out clearing rubbish from the reserve, particularly on and near the beach, and around the wells and springs: a further 5 tons of rubbish was cleared by local people including "Green Patrol" students, taking the total removed through the project to 10 tons. Work continued during the second year of the project on the 28 monitoring experimental plots set up on the reserve (now marked by posts and boards), where a programme of biological monitoring is under way, and on the steppe plots outside, but adjacent or very close to the reserve, designated for experiments on steppe restoration. Of note are the plots for control of *Hyoscyamus niger* [black henbane, a noxious weed related to deadly-nightshade] (quarter 6) and *Elytrigia repens* [couch grass, a common weed] (quarter 8). Plans have been made for two nature trails (one long - 15 km, the other short - 10 km), including projected routes and descriptions of the areas crossed; at the time of writing work has begun constructing the trails (marking, grass cutting, viewpoints, rest-places etc.).
- *The reserve building at Opuk*. Work on repairing the building designated as a visitors' centre at that reserve is taking longer than originally anticipated, but goes well. Many roofing timbers have been replaced, and the whole building has been completely re-roofed, the outside walls repaired with new rendering and whitewashing where appropriate, and the chimney re-pointed. The entrance steps have been fully repaired, with a new concrete surround to the building, and the area around the building has been greened. At the end of September 2003 the building's window-frames, windows, door-frames, doors and interior were still in need of much work planned for spring 2004 (during winter the village is often cut-off). Work began again in late March and Dr Isikov reports that, at the time of writing, renovation of the interior progresses

rapidly, with repair and replacement of windows, window-frames, doors and door-frames, installation of suspended ceilings, and improved interior walls with new plastering and fibreboard.

- *Visitors' Centre exhibits*. Ten cabinets are being prepared for biological and other exhibits. Collection of materials for exhibiting have been made with the help of local people. 25 poster-sized photographic prints have also been prepared for the exhibition.
- *Publicity material*. The 500 colour posters and 500 leaflets printed at the end of the first year of the project were distributed to local people, tourists and to other destinations during the present reporting period.
- *Local involvement*. To keep local people informed and encourage their involvement, a noticeboard is being constructed near the reserve office, where information, announcements, collecting proposals and other aspects of the project's work will be posted. 3 small public workshops were held in the reserve during autumn 2003 and winter 2003-2004 about the role of the reserve and about participation of local people in nature protection.
- *Other people involved*. Delegates of the *XIV Congress of European Mycologists* (from 10 European countries and the USA) visited the reserve to study its fungi. This opportunity was used to obtain opinions from external and independent experts on various problems relating to steppe protection. An agreement was also reached on organization of practical ecological work in the reserve by students of *Donetsk National Univeristy*, *Kryvyi Rih Teachers' Training University* and the *Tauric National University*, and a programme for student work is now being developed.
- *Documentation of work*. About 200 "before & after" photographs were taken of a wide range of activities in the reserve.

Steppe Conservation on the Ukrainian Steppe Nature Reserve (Khomutovskyi Steppe). In line with the project's general objectives, work on this reserve (where Dr Heluta is managing grazing by 15 horses to control scrub encroachment) has not been so highly prioritized as at Opuk.

- *First half of year problematical*. Arrival of a new reserve director unfamiliar with the project's work and an unfortunate character clash between him and the previous director made it necessary to express diplomatic concerns to the National Academy of Sciences of Ukraine about potential developments in the first half of this reporting period: it was a pity to be spending time fighting a rearguard action here rather than making progress.
- *Second half of year better*. In October 2003 Dr Heluta visited the reserve to appraise the new director of our work and to make a full assessment. This visit resulted in sufficient changes for Dr Minter to regain confidence that suitable results were being obtained, and support for the grazing programme continued.
- *Long-term funding for work secured*. During winter 2003-2004, Dr Heluta prepared a proposal to a special commission of the Presidium of Ukraine's National Academy of Sciences for support of this part of our work, with the very satisfactory result that, in February-March 2004, the Academy agreed fully to take over long-term funding of the grazing project, real recognition of the value of the work, and evidence of increasing skill in project proposal writing by a Darwin team member. Dr Heluta will continue to supervise the grazing work, but from now on it will need no further support from the Darwin Initiative.

Identification of Other Possible Areas for Steppe Conservation. That success has encouraged this project to consider steppe conservation work in new areas.

- *Survey of Donetsk & Zaporizhzhya oblasts*. Dr Heluta and Dr Genov (the now retired director of the Ukrainian Steppe Nature Reserve investigated potential areas in Donetsk and Zaporizhzhya oblasts, and identified several localities with remnant virgin steppe plant communities at least theoretically appopriate to be included in Ukraine's network of protected sites. As a result, four areas were prioritized as suitable for further work. Two ("Bilokamyansky" in Telmanove district and the "Kalka River Steppe" comprising two plots in Volnovakha district) are sites which could be designated as "zakaznyks" (the Ukrainian equivalent of Sites of Special Scientific Interest), the third is a potential regional landscape park ("Granitnensky" in Starobesheve, Telmanove and Novoazovsk districts on the riversides of Kalmius river), and the last, an area of land used by the Novoazovsk Wind Farm, suitable for reconversion to steppe.
- *Selection of site for potential new "zakaznyk"* (*SSSI*). Following a review of those sites, the "Bilokamyansky" potential "zakaznyk" has been chosen. Agreement has now been reached

from the local authority, the local nature conservation office and one of the two land-owners, the second land-owner is currently being approached, and plans have been made to prepare the surveying and documentation necessary.

- *Survey begun of potential extension to Opuk Reserve*. Work has also begun surveying plants of Konchek Hill (near Lake Uzunlarskoye, the hill on the horizon in the poster of Opuk produced by this project). This area of steppe is the first priority for inclusion in the reserve.

Seed Banks. Work on this part of the project was delayed through concerns about internal problems at Nikita. Now, however, real progress is being made, and Dr Tykhonenko visited Crimea in March 2004 to review progress there of the seed bank work.

- *Seed gathering*. By the end of the 2003 season, Dr Isikov had gathered seeds of 35 species of steppe plants from a range of locations in southern and eastern Crimea. Initially that seed was stored partly by Dr Isikov, and partly at the “Raduga” medicinal plants farm. Steppe plant seeds were sown experimentally at the "Raduga" medicinal plants farm.
- *New Seed Banks established*. Dr Tykhonenko and Dr Isikov have established seed banks in Nikita and Karadag (like Opuk, Karadag is a reserve in eastern Crimea, but it is more accessible and with a better infrastructure). Establishment has included facilities for storing the seeds and their associated voucher (herbarium) specimens. Equipment for collecting, drying, preserving and storing seeds (including cold storage) has also been purchased. The 2003 seed collections are now stored in these banks.
- *Databases established*. Dr Tykhonenko has set up databases to store seed bank information, with the capability of producing labels. 150 species of steppe plants have been identified as priorities for seed collection, and information about seed characteristics of around 100 of those species has already been computerized.
- *Manual and collecting forms*. Dr Tykhonenko has located and visited about 50 internet sites dealing with seed banks and, using examples derived from those sites together with literature from the *Kew Millennium Seed Bank*, has prepared and translated into Ukrainian instructions for collecting and preservation, and devised custom forms to fill in for each collection.
- *Planning of further work*. As a result of experience gained in 2003, Dr Tykhonenko has planned much more extensive seed collecting for 2004, employing university students, and has organized a two-day workshop in Kiev in February 2004 to prepare 4 selected prospective student assistants. Plans have also been made to grow wild steppe plants locally near Opuk Reserve, and sites and local people suitable for this have been identified.

Sustainable tourism, first developments. This is another area where very good progress has been made.

- *Backpackers' hostel established in Balaclava*. A suitable building for a backpackers' hostel in Balaclava, western Crimea, was identified, and the hostel was established partly with Darwin Initiative support. Ms Kryvomaz visited Balaclava (5-9 January 2004) to assess progress in this work. The hostel opened in spring 2004, and work has begun on a website for the hostel.
- *Simple B&B style accommodation near Opuk*. The village nearest Opuk Reserve has now begun to provide accommodation for visitors, and that accommodation has been used by senior project participants. The village and the adjacent reserve were also visited by mycologists from the *XIV Congress of European Mycologists* (see below) as planned. The villagers are being helped with feedback from project senior participants in how to present their accommodation.
- *Possible buildings for backpackers' hostel identified near Opuk*. Discussions with villagers revealed further possibilities for accommodation, specifically the possibility of purchasing a small property to set up a backpackers' hostel. Three properties in the village were identified as potentially suitable. Again little progress was possible during the winter, and efforts have now been resumed to establish a small hostel within the village.
- *Participation in two British Council meetings on sustainable development*. Dr Minter and Dr Hayova participated in two British Council meetings on sustainable development, one in Balaclava, the other in Kiev. Balaclava had been selected as a venue partly to showcase work done by Dr Hayova and Dr Isikov through the present project and a DFID Small Environmental Projects Scheme project. Dr Hayova was, furthermore, involved in the planning of the Balaclava meeting (*Sustainable Development of Ukraine*, 9-10 October 2003).

- *Further funding obtained*. As a result of contacts established at those meetings, Dr Hayova, with assistance from Dr Minter, obtained further modest DEFRA funding to establish a Crimean South Coast Stakeholders Forum with additional work on setting up a small network of backpackers' hostels in Crimea, and preparing the way for a south Crimea coast path. That funding will now pick up much of the work on sustainable tourism started by the present project.

Experience of land-management for conservation. In May 2003, Dr Hayova stayed on after the Ukrainian military delegation's visit to the UK (described below) to see examples of land-management practices altered to support conservation. In late January 2004, she also made a short visit to the UK, including a day spent with the Secretary of the *Exe Estuary Stakeholders' Group*, and with the Manager of the *Southwest Coast Path* in Exeter. Accumulated experience from several years of visits, not all attributable to the present project, but a payoff of long-term collaboration, has meant that by the end of March 2004, Dr Isikov and Dr Hayova had, either individually or jointly, through various visits, seen examples of land-management practices altered to support conservation in the following locations (in addition to the UK MOD sites mentioned below): Aldershot (felling of conifer woodland to encourage woodlarks & nightjars), the Cornish coast (grazing regimes to prevent scrub encroachment, channelling of visitors to “honeypot” sites), the Dorset and Devon coasts (long-distance coast paths, establishment of UNESCO world-heritage site coasts, organization of stakeholder groups), Dartmoor, Exmoor and the North Yorks Moors (channelling of visitors to “honeypot” sites), the Inner and Outer Hebrides (islander buyouts, maintaining rubbish-free coasts, corncrake conservation, sustainable tourism in truly remote areas), Snowdonia National Park (prevention of erosion on paths), the Yorkshire Dales (preservation of flower meadows) etc. To this should be added the further experience of Dr Heluta, during an earlier Darwin Initiative project, of peat bog conservation work in northern Scotland.

Military. This aspect of the project made very good progress during the last year, the key indicator of success being a positive wish on the Ukrainian side (successfully realized) for such conservation work to be included in the Ukraine-UK MOD bilateral plans for 2004. This aspect of the project was covered in articles in two military publications, one being *Camouflage*, a popular glossy magazine on military matters. Military conservation work was supported with modest but carefully chosen donations of computing and photographic equipment and consumables (all, at least nominally) channelled through the *Ukrainian Society for Protection of Birds*. The following bulleted points highlight the main aspects of the year's work:

- *Meetings*. By late March 2004 at least ten meetings (varying from formal sessions and seminars to informal meetings) had been held with representatives from the General Staff of the Ukrainian Armed Forces and Ukraine’s National Institute of Strategic Research, at least seven of them during the current reporting period. An excellent level of goodwill and trust has been built.
- *Advisory Panel*. There is now agreement to invite key institutions and NGOs to send representatives to a meeting to be held before the end of June 2004 at which the establishment of the formal Advisory Panel will be considered.
- *UK study tour for Ukrainian military*. From 11 to 18 May 2003 a group of four Ukrainians made a study trip to the UK. These were: Dr A.B. Kachynsky (Head of the Department of Ecological Policy, National Institute of Strategic Research), Colonel V.V. Kovalevsky (Head of the Department of Ecological & Radiation Safety, Deputy Chief, Department of NBC Protection Troops, General Staff of Ukrainian Armed Forces), Dr V.P. Hayova (Senior Scientist, M.G. Kholodny Institute of Botany, Academy of Sciences) and Ms T.I. Kryvomaz (Director, Master Consulting). The study trip to the UK was led by Dr D.W. Minter with the prime objective of seeing examples of conservation on military land. Thanks to superb efforts by the UK MOD, the group visited the following sites: Salisbury Plain Training Area, Defence Estates Headquarters Farnham, Porton Down, a former Atomic Weapons Establishment Site in Cardiff, and the Sennybridge Training Area. To emphasize constructive re-use of redundant military sites, the group also visited the historic ships and the Royal Armories Museum, Fort Nelson (Portsmouth), and HMS Belfast.
- *Major Seminar*. The project participated in a major seminar *Current Issues in Military Ecology* organized by the Ukrainian MOD National Scientific Research Centre of Defence Technologies and Military Safety of Ukraine on 16-17 October 2003 making two presentations published (in Ukrainian) in its proceedings (Hayova, V.P. & Kovalevsky, V.V. "Some aspects of the British

system of military ecological safety", pp. 65-66; Kryvomaz, T.I. "British experience of developing ecological safety on military training areas", pp. 64-65).

- *Military Exhibition*. The project provided a stand (on the theme of the rôle of Ukraine's military in nature conservation, highlighting collaboration through the Darwin Initiative project) at *Protection Technologies 2003*, an international exhibition held in Kiev in 22-24 October 2003, and visited by very many people, including Mr David Pert, Environmental Attaché of the British Embassy in Kiev.

Other. In addition to scheduled activities, this Darwin Initiative project facilitated environmental and conservation work in many other areas, and achievements of earlier Darwin Initiative work in Ukraine were consolidated and significantly extended. For information, see Appendix 2.

Difficulties Encountered During the Year and Steps Taken to Overcome Them

Difficulties have been health problems, transfer of materials, communication and attitudes. The "war against terrorism" has also affected the project. On the positive side, working on a potentially sensitive topic with the military, the difficulties experienced by a different Darwin Initiative project in Sebastopol' a few years ago have not occurred.

- *War against terrorism*. This project involves liaising with military in two countries actively involved in the war against terrorism. Ukrainian military colleagues have naturally been pre-occupied with the war in Iraq and the Madrid bombings, particularly because the Department of Ecological & Radiation Safety, Department of NBC Protection Troops, General Staff of Ukrainian Armed Forces has been directly involved in work in Iraq. Things will not improve before the UK & USA governments' exit strategy for Iraq is implemented.
- *Health problems*. Dr Isikov has a major problem on the home front. His wife is suffering from cancer and has to travel in his company to Donetsk periodically for treatment. Her illness was known about a year ago, but even in April 2003 there was hope that she was in remission. While still possible, this now seems less likely. Although he is a dedicated, hard-working and enthusiastic scientist, his wife's illness has meant he has not been able this year to devote as much attention to the project as originally planned. Work in eastern Crimea is very dependent on him, but now, to provide Dr Isikov with relief, Dr Tykhonenko is carrying out much more of the Seed Bank work. Dr Minter's health problems have remained stable.
- *Transfer of materials*. It remains very difficult to get donated equipment from the UK to Ukraine. At present Dr Minter has about 20 computers plus various other items of equipment stockpiled and awaiting transportation. Col. Kovalevsky has begun to explore options through his military connexions.
- *Communication*. This difficulty manifests itself in different ways. On one level, misunderstandings are a normal aspect of work when peoples from such different cultural and linguistic backgrounds are collaborating. Patience, a recognition of the problem, and a sense of humour are always the best tools for overcoming such problems. When the project is affected by a misunderstanding between two external bodies, however, for example between people in an embassy and a ministry, the problem may be harder to circumvent. On another level, throughout this project there has been the difficulty of trying to maintain good communication between Dr Minter and Dr Isikov. Although both get on well and know each other well, the inadequacies of Dr Minter's colloquial Russian mean most messages have to be channelled through Dr Hayova who remains, therefore, the key Ukrainian participant of this project.
- *Attitudes*. Attitude is an emotive word, but its use here is not intended to be highly charged. In essence, a lot of the work of this project is about changing of attitudes. In trying to bring about changes within Ukraine, one frequently encounters the view that systems which have worked well in the UK will fail in Ukraine. The explanation usually given is that "Ukraine is not ready for this". When expressed by uneducated people with no knowledge of the UK, an explanation of ignorance carries some credence. Sometimes, however, the view may come from an educated person with good knowledge of conditions in both countries. This is more worrying: the project leader then needs real wisdom to identify practices which are truly inappropriate, and to avoid imposing them.

Project Design

The project design has not changed over the last year (in the previous year, a decision was made to divert efforts in establishing sustainable tourism from eastern Crimea to Balaclava, and this has worked well). Some exit strategies are already in effect: the National Academy of Sciences of Ukraine has taken over long-term funding of grazing for steppe conservation on the Ukrainian Steppe Nature Reserve; a new DEFRA project will continue work on sustainable tourism in Crimea; collaboration in environmental conservation has been included, at Ukraine's request, in Ukraine-UK MOD bilateral plans.

Workplan for Next Reporting Period

Up to the end of September 2004, the following summarized work is planned:

- *Opuk*. Dr Isikov plans to have the reserve building fully restored with one room ready to function as a museum [September]. Further mowing, combating *Hyoscyamus niger* on the reserve, with treatments using Round-up and further mowing outside the reserve, further ploughing, further monitoring of plant communities, seed collecting on and near the reserve, collection of more material for the museum, work by local people, continuing work on the new nature trails, and preparation of a small publication relating to the reserve are all planned by Dr Isikov. Dr Heluta hopes to visit the reserve for work with Dr Isikov [April]. Dr Minter plans to prepare an English language website for the reserve.
- *"Bilokamyansky" potential "zakaznyk"* (*SSSI*). Dr Heluta to visit the proposed new "zakaznyk" for discussions and negotiations with owners, local authorities, local nature conservation inspectors etc. [May], thereafter carrying out field work there at intermittent times throughout the summer, and supervising the formal survey of the land. By the end of the summer, he hopes to be preparing the papers necessary for creating the new "zakaznyk", with the target of presenting the papers to the appropriate bodies in early autumn.
- *Seed Banks*. Dr Tykhonenko plans to work with Dr Isikov in strengthening the seed banks in Nikita and Karadag, and in establishing two further seed banks, one in Opuk and another in Kiev [May-November]. He will organize another training workshop for seed-collectors [May], and has a target of acquiring seeds of 150 steppe species from Crimea [May-October], and a further 50 species from near Kiev [May-September], ensuring that all relevant information about these collections is keyboarded into the seed bank databases, and ensuring that the seeds are properly dried and stored, with duplicates distributed among the different banks. He expects to have the text for a website devoted to the seed banks ready by late July. With Dr Isikov, he plans to sow seeds of steppe plants in Crimea and near Kiev as a first attempt to bulk up the collections [April-June 2004].
- *Sustainable tourism*. Dr Isikov and Ms Kryvomaz plan to visit Opuk, Balaclava and other locations in south Crimean to gather information for the forthcoming website on sustainable tourism in the region. Dr Hayova will ensure remaining work on this topic by the present project dovetails with the new DEFRA project.
- *Military*. Col. Kovalevsky and Ms Kryvomaz plan to hold a meeting to establish the formal Advisory Group before the end of June. Dr Minter, Col. Kovalevsky and Ms Kryvomaz are trying to organize a visit to Crimea by a delegation from the UK MOD conservation team [September]. Col. Kovalevsky and Ms Kryvomaz are organizing a visit by selected Ukrainian biologists to a Ukrainian military training area. If successful, this will hopefully be followed by further visits.
- *Publicity*. Dr Minter and Dr Hayova are preparing websites for sustainable tourism in Crimea, and for Opuk and Khomutovskyi Steppe Reserves. Dr Heluta hopes to prepare text detailing his experiences of steppe regeneration for a web-site by autumn 2004. Dr Minter has been invited to speak at a 3 day meeting on UK-Ukraine scientific collaboration at the Embassy of Ukraine in London in late May 2004. Further scientific publications are planned, and negotiations are in hand to organize a conference in Poltava oblast jointly with the University of Poltava on integration of nature conservation and education, including significant inputs on conservation of virgin steppe and restoration of steppe in the forest-steppe zone of Poltava oblast.
- *Mycology*. It is important to ensure, throughout all of this work, that the scientific status of the team is not lost. Where compatible with the general work of the project and where work builds on results from earlier Darwin Initiative projects, this will be encouraged.

5. Actions taken in response to previous reviews (if applicable)

The review of last year's annual report was discussed in detail with Ukrainian collaborators. Taking their comments and opinions into account, a full response was made to all issues raised in the review. In preparing this year's report, a lot of care has been taken to separate activities strictly associated with the current project from those resulting from earlier projects or from projects arising as spin-offs from Darwin Initiative work.

6. Partnerships

Collaboration between the UK and host country partners over the last year has been very good. With over ten years of continuous work together, the "UK-Ukraine Darwin Team" is able to enjoy levels of goodwill and trust which permit it to function very productively.

The last 12 months have been exceptionally busy for the team, which has managed to combine activities for this, the flagship project, with all of the other activities which have been generated through ten years of continuous work together. During the last year, work on the present project has dovetailed with organizing the *XIV Congress of European Mycologists* (and its satellite meetings and excursions), establishing the *European Mycological Association*, completing a small Royal Society project, finishing a DFID project on environmental planning in Balaclava, developing a new DEFRA project on sustainable tourism in southern Crimea, and obtaining long-term support for the steppe conservation grazing herd of horses at Khomutovskyi Steppe. In addition, the project has been able to interact with other bodies, such as the *Exe Estuary Stakeholders' Forum*, the UK *Southwest Coastpath*, administered from Exeter, and the British Council in Kiev's work on sustainable development.

7. Impact and Sustainability

Impact. Articles about this project appeared in three popular publications, as follows:

- Цей Оасис Називаэться... Полігон [This Oasis is Called... a Military Training Area], a one-page article with colour photographs in Камуфлаж [*Camouflage*], p. 29, December 2003. [Камуфлаж is a widely distributed glossy monthly magazine dealing with military matters. It is, for example, regularly available to read on Air Ukraine International flights. The article gave an account of the Ukrainian military delegation's experiences in Britain during their visit under this project]
- Цей Оасис Називаэться... Полігон [This Oasis is Called... a Military Training Area], a half-page version of the same article with one half-tone photograph in Народна Армія [*National Army*], p. 11, 30 December 2003. [Народна Армія is a widely distributed tabloid newspaper dealing with military matters]
- С Рюкзаком за Спиной [With a Rucksack on your Back], a two page article with colour photographs in Корреспондент [*Correspondent*], pp. 26-27, 3 July 2003. [Корреспондент is a widely distributed glossy weekly magazine dealing with news and current affairs, with a similar style to Time or Newsweek. The article discussed this project's work on sustainable tourism, particularly in respect of the establishment of simple backpacker hostels in Crimea]

Sustainability. The project is certainly gathering Ukrainian scientists with an interest in steppe restoration and giving them skills in this work. Real rather than theoretical efforts to restore steppe are also proving to be a very valuable learning experience for all involved. For evidence of increasing interest and capacity for biodiversity resulting from this project, and for the already working exit strategy, see the section above on *Project Design*.

8. Post-Project Follow up Activities (max 300 words)

The team considers it premature to consider requesting Post Project Funding for this project in the forthcoming year.

9. Outputs, Outcomes and Dissemination

The outputs listed for 2003-2004 in Table C of this project's schedule are set out below. For further information on these outputs and for information on the many additional outputs, see *Achievements During the Current Reporting Period (1 April 2003 to 31 March 2004)* above. For an

analysis of outputs against the project's implementation timetable, see *Progress During the Current Reporting Period (1 April 2003 to 31 March 2004)* above.

- *May 2003*. *Output*. Study visit for Ukrainian group to UK to see examples of conservation on military land / farming practices altered to support conservation.. *Comment*. Fully and very successfully achieved.
- *June 2003*. *Output*. Fourth quarterly seminar in Kiev. *Comment*. Done.
- *June 2003*. *Output*. UK Project Leader to visit Ukraine for one week. *Comment*. Done.
- *June 2003*. *Output*. Reserve visitors' centre opens, promoting environmental education and awareness. *Comment*. Delayed. As stated in the previous report, more time than expected was needed to identify a suitable building, then repairs were necessary.
- *July 2003*. *Output*. Second year gathering of seeds and transplants; seed bank of Crimean steppe plants in Nikita enhanced; assistance to village with establishment of their own steppe seed collection (benefit sharing); second year sowing and planting to follow at times determined by steppe experts [sowing and planting of non-reserve land for first time]. *Comment*. Seeds gathered; seed bank establishment in Nikita delayed, but now back on track; village seed collection now planned for this growing season; sowing and planting on non-reserve land done.
- *September 2003*. *Output*. Fifth quarterly seminar in Kiev; second meeting of advisory panel in Kiev; presentations about adaptation of agricultural practice for sustainable tourism organized for villages adjacent to other reserves. *Comment*. Fifth seminar in Kiev done; setting up of advisory panel delayed (in the original proposal, timing of this component was always recognised to be flexible); presentations for villagers done in autumn 2003 and winter 2003-2004.
- *September 2003*. *Output*. UK Project Leader to visit Ukraine for three weeks. *Comment*. Done.
- *December 2003*. *Output*. Sixth quarterly seminar in Kiev. *Comment*. Done.
- *March 2004*. *Output*. Seventh quarterly seminar in Kiev; third meeting of advisory panel in Kiev. *Comment*. Seventh seminar in Kiev done; setting up of advisory panel delayed (in the original proposal, timing of this component was always recognised to be flexible).

Information about the project within Ukraine has been disseminated mainly through the three publications cited above in the section on *Impact and Sustainability*. After the end of the project, dissemination will be mainly through the internet. With the arrival of the server (see *Appendix 2. Achievements additional to scheduled activities. New internet server* below) the project's severe space limitation for websites has been removed, and the team is now dealing with a queue of draft websites which will begin to appear over the next year.

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

Code No.	Quantity	Description
4A	4	undergraduates trained for seed collection
4B	2	4 undergraduates × 2 days training = 8 days training
6A	4	Visit of Ukrainian military delegation to UK
6B	6	Visit of Ukrainian military delegation to UK
7	1	Guide to collecting seeds for seed banks
8	10	Dr Minter in Ukraine
10	3	3 CDs published (plus 4 associated websites)
12A	2	databases for the 2 seed banks established
13A	4	2 seed banks + 2 associated herbaria established
14A	10	Meetings / seminars with Col. Kovalevksy & colleagues
15A	3	3 articles in Ukrainian national newspapers or magazines
20	7000 estimate	books, CD disks, computers, digital camera, e-mail & internet

		access, ethernet switch plus network adapters, modem, oats for horses, paper, printer cartridges, printers, scanners, repair of buildings, repair of military equipment for environmental work
21	1	museum at Opuk (building work now nearing completion)
22	28	monitoring plots at Opuk reserve
23	4000 per annum	Long-term contribution by National Academy of Sciences of Ukraine to grazing conservation on Khomutovskyi Steppe Reserve

Table 2: Publications

The three publications listed below were compiled, edited and produced during the current reporting period, but the scientific work and data they represent was mostly done through Dr Minter's two earlier Darwin Initiative projects in Ukraine and the former Soviet Union.

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
CD	Mycology in Ukraine, a CD Commemorating the XIV Congress of European Mycologists, Katsiveli, Yalta, Crimea, 22-27 September 2003. Minter, D.W. [Ed.], 2003	PDMS Publishing, Isleworth	ISBN 0 9540169 5 5 [most of the information is also available directly on the internet: http://www.cybertruffle.org.uk/ukramaps/index.htm]	10 (nominal cost to cover production and post & packing)
CD	Electronic Distribution Maps of Georgian Fungi. Gvritishvili, M.N.; Hayova, V.P.; Kryvomaz, T.I.; Minter, D.W., 2003	PDMS Publishing, Isleworth	ISBN 0 9540169 6 3 [most of the information is also available directly on the internet: http://www.cybertruffle.org.uk/gruzmaps/index.htm]	10 (nominal cost to cover production and post & packing)
CD	Vorontsov's Who's Who in Biodiversity Sciences. Andrianova, T.V.; Bakloushinskaya, I.Yu.; Minter, D.W. [Eds], 2003	PDMS Publishing, Isleworth	ISBN 0 9540169 3 6	10 (nominal cost to cover production and post & packing)

10. Project Expenditure

Table 3: Project expenditure during the reporting period (DEFRA Financial Year 01 April to 31 March)

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance
Rent, rates, heating, overheads etc			
Office costs (e.g. postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment			
Others			
Salaries (specify)			
With CABI Bioscience (advance / claim being processed)			
TOTAL			

The figures in the above table are as received from the finance department of CABI Bioscience and are provisional. Variation in expenditure of more than 10% of the budget is not expected. Overspend is not expected.

11. Monitoring, Evaluation and Lessons

- *Monitoring*. Most monitoring is carried out by e-mail. E-mail contact between Dr Minter and Dr Hayova occurs several times each week. E-mail contact with other project participants is less frequent, but often more than once a week. Dr Hayova maintains contact with Dr Isikov in Crimea, and Ms Kryvomaz maintains contact with Col. Kovalevsky. On each visit to Ukraine, Dr Minter tries to see all participants except Dr Isikov who, being in Crimea, can only be seen on some visits. Every approximately three to six months Dr Minter reviews progress with each participant.
- *Evaluation*. Dr Minter cannot make frequent site visits to in Crimea (Opuk, Balaclava, seed banks etc.) and Donetsk oblast (Khomutovskyi Steppe Reserve), and therefore has to rely a lot on information received from Ukrainian colleagues. The fact that the National Academy of Sciences of Ukraine has taken over long-term support of grazing at Khomutovskyi Steppe, that the Ukrainian side has asked for conservation work to be included in Ukraine-UK MOD bilateral plans, that a backpackers' hostel has opened in Balaclava, that Dr Hayova has been successful in obtaining a new DEFRA project for sustainable development in Crimea, and that Dr Minter has been invited to speak at a three-day forum on UK-Ukraine scientific collaboration, to be held in May 2004 at the Embassy of Ukraine in London, all suggests that outcomes of the project really are contributing to the project's purpose. The successful staging of the *XIV Congress of European Mycologists*, and the establishment of the *European Mycological Association* are two further pieces of evidence that this scientific collaboration for biodiversity conservation is making real changes.
- *Lessons*. At the start of the project, the biggest single difficulty anticipated was to establish successful contact with Ukraine's MOD. In fact, after taking some time to make sure a good approach path was used, this stage proved not so problematic. Conversely, there were more problems with setting up Seed Banks (see previous reports). The delays in establishing Seed

Banks have affected several aspects of the project's timetable. Experience of these delays has resulted in much more time and effort being directed in this year's plans to correcting this imbalance. One of the issues which Ukrainian scientists in the team are having to face is the sheer cost per hectare, to realize real regeneration of steppe: it is a very expensive process. Similarly, the Ukrainian military is having to face the fact that clearing up environmentally damaged areas is also extremely expensive. Both jobs can take a long time, real progress with them will only occur when those with control of purse strings also recognize simultaneously the size and the necessity for such work. During the last year, the size and scope of the environmental work to be undertaken in the military sphere has also become clearer to the team: potentially every military site in Ukraine needs an integrated land management plan similar to those organized by the UK Defence Estates for their sites: potentially a huge task.

12. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum)

The team wishes to reserve comment on this item until next year.

■ **I agree for ECTF and the Darwin Secretariat to publish the content of this section**

In this section you have the chance to let us know about outstanding achievements of your project over the year that you consider worth highlighting to ECTF and the Darwin Secretariat. This could relate to achievements already mentioned in this report, on which you would like to expand further, or achievements that were in addition to the ones planned and deserve particular attention e.g. in terms of best practice. The idea is to use this section for various promotion and dissemination purposes, including e.g. publication in the Defra Annual Report, Darwin promotion material, or on the Darwin website. As we will not be able to ask projects on an individual basis for their consent to publish the content of this section, please note the above agreement clause.

Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2003/2004

Project summary	Measurable Indicators	Progress and Achievements April 2003-Mar 2004	Actions required/planned for next period
Goal*:* 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 • The conservation of biological diversity, • The sustainable use of its components, and • The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources			
Purpose Project purpose: To increase steppe land in Ukraine by influencing the country's agriculture and military sectors. **Agriculture**. The project will support Ukraine's policy of restoring derelict agricultural land. **Military**. The project will try to establish a Joint Advisory Panel of Ukrainian scientists and representatives from the Ukrainian armed forces to facilitate conservation management of suitable areas of military land.	**Agriculture**. Experts in place with skills and resources; work communicating those skills and supplying resources to local people begun. **Military**. Regular meetings of Joint Advisory Panel, ideas generated at those meetings put into practice in management of military areas.	**Agriculture**. Suitable Ukrainian scientists have been identified and are in place and gaining real expertise in steppe restoration, but the resources necessary to produce large scale results will certainly require extensive long-term funding. **Military**. Regular meetings and now agreement to form a Joint Advisory Panel. Willingness to consider implementing ideas generated at those meetings, but resources likely to be inadequate	**Agriculture**. Begin seeking resources necessary to continue steppe conservation work; strong emphasis strengthening seed banks by seed collection and planting; expand website. **Military**. Establishment of Joint Advisory Panel; visit to Ukraine by UK Defence Estates delegation; begin seeking resources necessary to continue work on environmental conservation on Ukrainian military land.
Outputs			
On and around Opuk and other reserves: restoration of reserves	On and around Opuk and other reserves: wells functioning, reserve with less rubbish.	All measurable indicators in the original log-frame for this output were achieved by the end of the first year of this project.	Continue to strengthen Opuk reserve; work to bring other areas of steppe in Crimea and Donetsk under protection
On and around Opuk and other reserves: establishment of field plots on the reserve and adjacent lands.	On and around Opuk and other reserves: field plots functioning.	Field plots established in the first year of the project continued to be monitored, but poor supply of seed hindered extension.	Intensify work on field plots with better supply of seed

On and around Opuk and other reserves: a new visitors' centre for Opuk.	On and around Opuk and other reserves: visitors' centre opened.	At Opuk, the buiilding suitable for a visitors' centre was extensively repaired and prepared for use.	Complete restoration of building; install exhibits; open visitors' centre
On and around Opuk and other reserves: steppe plant seed banks locally and in Nikita.	On and around Opuk and other reserves: seed banks in existence.	Seed banks have been established in Nikita and Karadag; equipment for collecting and preserving seeds has been bought and is in use; computerized databases have been set up to store associated information.	Strengthen seed banks in Nikita and Karadag; establish seed banks in Opuk and Kiev; complete expanded programme of seed collecting
On and around Opuk and other reserves: village(s) prepared for sustainable tourism.	On and around Opuk and other reserves: B&B hostel opened, websites functioning.	A backpackers' hostel has opened in Balaclava with Darwin Initiative support; draft texts have been prepared for promotional leaflets and a website, and those texts are being translated into English.	Finish website and promotional leaflets; disseminate information; add another hostel to network
In Kiev: increased awareness of public relations value of conservation management on military land.	In Kiev: Joint Advisory Panel established and meeting regularly.	Agreement has been reached to establish a Joint Advisory Panel.	Establish Joint Advisory Panel; organize visit to Ukraine by UK Defence Estates delegation
In Kiev: establishment of Joint Advisory Panel for Ukrainian scientists and military administrators.	In Kiev: Joint Advisory Panel established and meeting regularly.	Agreement has been reached to establish a Joint Advisory Panel.	Establish Joint Advisory Panel; organize visit to Ukraine by UK Defence Estates delegation

Note: Please do NOT expand rows to include activities since their completion and outcomes should be reported under the column on progress and achievements at output and purpose levels.

Appendix 1.

Project summary	Measurable indicators	Means of verification	Important assumptions
Goal *To assist countries rich in biodiversity but poor in resources with the conservation of biological diversity and implementation of the Biodiversity Convention*	Steppe land in Ukraine increases in area, quality of Ukrainian steppe land improved, Ukrainian government supports further work on restoration of steppe and other ecosystems, with local people sharing benefits.	Policy statements by the Ukrainian government, reports from Ukrainian and other NGOs and external observers, reports in quality press and suitable scientific publications outside Ukraine.	Political and socio-economic conditions in Ukraine continue to favour a policy sympathetic to biodiversity conservation. No reversion to obsessive military suspicion, no military errors making work in such areas difficult.
Purpose The objective of this project is to increase steppe land in Ukraine by influencing the country's agriculture and military sectors. Agriculture. The project will support Ukraine's policy of restoring derelict agricultural land. Military. The project will try to establish a Joint Advisory Panel of Ukrainian scientists and administrators to facilitate conservation management of military land.	**Agriculture**. Experts in place with skills and resources; work communicating those skills and supplying resources to local people begun. **Military**. Regular meetings of Joint Advisory Panel, ideas generated at those meetings put into practice in management of military areas.	**Agriculture**. Reports in scientific and popular publications, and evidence on the internet. **Military**. Minutes of meetings, feedback at Ministerial level.	**Agriculture**. Experts remain in country (do not emigrate, for example), and remain in jobs where their new skills can be used, Ukrainian governmental policy continues to support steppe restoration. **Military**. Receptive to new ideas, advisory panel regarded as a priority, information does reaches appropriate Ministers.
Outputs On and around Opuk and other reserves: restoration of reserves; establishment of field plots on the reserve and adjacent lands, a new visitors' centre for Opuk, steppe plant seed banks locally and in Nikita, village(s) prepared for sustainable tourism. In Kiev: increased awareness of public relations value of conservation management on military land; establishment of Joint Advisory Panel for Ukrainian scientists and military administrators.	On and around Opuk and other reserves: wells and field plots functioning, reserve with less rubbish, visitors' centre opened, seed banks in existence, B&B hostel opened, websites functioning. In Kiev: Joint Advisory Panel established and meeting regularly.	On and around Opuk and other reserves: video and photographic evidence, print-outs from websites, reports. In Kiev: reports, minutes of meetings.	On and around Opuk and other reserves: rubbish clearance does not constitute health hazard (eg asbestos), weedy areas can be cleared, sufficient seed stocks of steppe plants can be obtained, seeds and transplants will grow, weeds can be controlled, villagers and other local organizations willing to adapt to change. In Kiev: willingness to participate on part of military administrators.
Activities On and around Opuk and other reserves: restoration of wells, rubbish clearance, weed control, seed and plant collection and identification, sowing and transplanting on field plots, surveys, building renovation, preparation of an exhibition, accumulation of seeds in collections; preparation by villagers for tourists. In Kiev: study visits; seminars for military administrators.	On and around Opuk and other reserves: wells cleared of débris and producing clear freshwater, bags of rubbish removed from reserve, areas cleared of weeds, seeds and transplants collected and identified, seeds sown and planting carried out, surveys made, building renovated, exhibition prepared, collections established, B&B hostel set up. In Kiev: study visits made, seminars held.	On and around Opuk and other reserves: video and photographic evidence of well renovation, rubbish and weed clearance, of seed collection and planting, of building renovation and of new exhibition; reports and notes of these activities; advertisement of B&B hostel on internet. In Kiev: reports of study visits and seminars, minutes of meetings.	On and around Opuk and other reserves: rubbish clearance does not constitute health hazard (eg asbestos), weedy areas can be cleared, sufficient seed stocks of steppe plants can be obtained, seeds and transplants will grow, weeds can be controlled, villagers and other local organizations willing to adapt to change. In Kiev: interest in participation on the part of military administrators.

Appendix 2.

Achievements additional to scheduled activities. In addition to scheduled activities, this Darwin Initiative project facilitated environmental and conservation work in many other areas, and achievements of earlier Darwin Initiative work in Ukraine were consolidated and significantly extended. These include:

- *Delivery of equipment*. During the present reporting period alone, four second-hand laptop computers, three second-hand desktop computers, two new inkjet printers, one new scanner and one new digital camera were delivered to Ukraine for use by Colonel Kovalevsky, Dr Kachynsky, Dr Hayova, Ms Kryvomaz and others. This compares with a promise to deliver five computers in the whole period of the project up to now. Over ten year of more or less Darwin Initiative work by Dr Minter, over two hundred computers have been delivered for nature conservation work in Ukraine alone.
- *The XIV Congress of European Mycologists*. Held in Yalta, Crimea (September 2003) took a lot of the time of Dr Isikov, Dr Hayova, Dr Andrianova, Dr Heluta and Dr Minter, all of whom were on the Organizing Committee. Ms Kryvomaz was also involved in Congress work. The Congress, mentioned in the original proposal for this project although not strictly an output, was only possible because Darwin Initiative support over nearly ten years strengthened mycology in Ukraine sufficiently to make their hosting of it possible. The Congress was very successful, with over 140 participants from over 30 countries.
- *European Mycological Association*. A particularly significant outcome, filling a big hole in the world-wide infrastructure of mycology, was establishment of a new European Mycological Association. This new association is expected to represent mycology at a European level within the infrastructure of the International Mycological Association and the IUBS. Its establishment was welcomed by the International Mycological Association, the British Mycological Society and national mycological societies of several other European countries. Dr Minter was appointed its first President and Dr Andrianova its General Secretary, with the Vice-President coming from Austria and the Treasurer from Greece.
- *Electronic Publications*. Three CDs (Vorontsov's Who's Who, Electronic Distribution Maps of Georgian Fungi, and Mycology in Ukraine) published to coincide with the Congress were distributed at the Congress. All contained significant amounts of data generated during Dr Minter's current and two previous Darwin Initiative projects in the former Soviet Union.
- *New Internet Server*. A new internet server was set up early in 2004, partially with Darwin Initiative support (from the present project and Dr Minter's recently completed project on Biodiversity Conservation in Cuba), which very effectively removed the 50 megabyte space limit previously severely restricting Dr Minter's teams and at the same time greatly facilitating the process of presenting material on the internet. Already domain names strategic for the teams' work have been registered, and several large websites derived from Darwin Initiative project work have been created. These include internet versions of material from CDs already mentioned, Electronic Distribution Maps of Georgian Fungi (http://www.cybertruffle.org.uk/gruzmaps/index.htm), Electronic Distribution Maps of Ukrainian Fungi (http://www.cybertruffle.org.uk/ukramaps/index.htm), Lists of Potentially Rare, Endangered or Under-recorded Fungi in Ukraine (http://www.cybertruffle.org.uk/redlists/index.htm), Maps Showing Recording Coverage in Ukraine of Higher Fungal Ranks (http://www.cybertruffle.org.uk/lists/index.htm) and the draft website of the new European Mycological Association (http://www.euromould.org/index.htm). More sites are planned. In addition, free hosting of other suitable websites for colleagues in former Soviet Union countries has begun, for example the website for the new mycological journal Mycena produced in Belarus and Russia (http://www.mycena.org/index.htm).
- *Travel*. In addition to the visit to the UK by the Ukrainian Military Delegation, and Dr Hayova's other visits to the UK (described above), Dr D.W. Minter (Project Leader) visited Ukraine at least eight times during the reporting period, mostly to Kiev. In April and again in September 2003, however, Dr Minter also visited Opuk Reserve. In addition to his March 2004 visit to Nikita Botanic Garden, Dr Tykhonenko visited Opuk Reserve in June 2003 as part of an 8 day visit to Crimea. One other output, involving very modest amounts of Darwin project money (because largely funded from other sources) was participation by Ms Kryvomaz in a myxomycete workshop in the Great Smoky Mountains (USA) in July 2003.