Darwin Initiative for the Survival of Species

Half Year Report Form

Project Title	Cross-border conservation strategies in the Altai Mountains Endemics (Russia, Mongolia, Kazakhstan)
Country	UK, Russia, Mongolia, Kazakhstan
Organisation	University of Sheffield in collaboration with Tomsk State University, Hovd branch of Mongolia State University and Altai Botanical Garden (Leninogorsk)
Project Ref. No.	162 / 11 / 025
Report date	31 October 2004

1. Outline progress over the last 6 months against the agreed baseline timetable for the project.

Key milestones for first 6-months of Year 3 (April 2004 – Sept. 2004):

June *1 months' fieldwork, including student training, completed, with participation of UK scientists for 2 weeks.*

a) Expedition to West Mongolia in June 2004 (14–32 days) to gather additional data on spatial distribution of endemic species and their habitats, with pooling of information and discussion / exchange of ideas on conservation issues. Participants: A. Pyak, A. Zverev, N. Schegoleva (Tomsk State University, Russia); A. Korolyuk, V. Cheremushkina, N. Makunina, V. Godin (Central Siberian Botanical Garden, Novosibirsk, Russia); S. Sheremetova (Kuzbasski Botanical Garden, Kemerovo, Russia); O. Maslova (Altai State University, Barnaul, Russia); V. Orlov (Central Siberian Botanical Garden, Kamlak, Altai Republic, Russia); D. Ouynchimeg, U. Myagmarjav (Hovd University, Mongolia); U. Beket (Altai Research Centre, Ulgij, Mongolia), S. Lhagvasuren (Institute of Botany, Ulan-Bator, Mongolia); S.C. Shaw (University of Sheffield, UK), B. Jones (Countryside Council for Wales, Bangor, UK)

b) One postgraduate student in botany (N. Schegoleva, Tomsk, Russia) and two undergraduate students in botany (D. Sarluu and G. Choserjav, Hovd, Mongolia) involved in the project from host countries received long-term field experience and training during the project field surveys.

Project outputs for first 6-months of Year 3 (April 2004–Sept. 2004):

June *UK staff in host country (2 weeks).*

S.C. Shaw & B. Jones joined the expedition in Mongol Altai (see above), and workshop at Hovd University on the problems of conservation of endemic plants of Mongolian Altai and approaches to conservation in the UK. The workshop was attended by representatives from UK, Russia and Mongolia (see above), joined by staff and students from Hovd University and representatives from the National Park "Har-Us-Nuur" (Hovd Aimag) and the National University of Mongolia (Ulan Bator).

Additional activities

A. UK staff in host country

J.G. Hodgson (University of Sheffield, UK) visited Tomsk State University in May (10 days) in particular to discuss data analysis and development of our understanding of the determinants of species rarity and distribution patterns. Discussions were held on setting up a twinning scheme between Tomsk & UK schools.

B. Collation of information and population of databases

a) The recorded localities within the three countries of about 70 species have now been identified from herbarium specimens, field expeditions and other information.

b) A complete inventory of herbarium samples of Altai endemic species (locations in Kazakhstan Altai) in the Herbarium of the Central Siberian Botanical Gardens (Novosibirsk) and in the Herbarium of Tomsk State University has been carried out. During this work all available samples of endemic species were examined, their correct taxonomic position specified, and herbarium labels for their entry into the database have been written out. The examination of herbarium specimens held at Botanical Institute in Ulan-Bator (locations in Mongolian Altai) has also been completed.

c) Ppopulation of the computer database (using MS Excel) has been continued.

d) Collection of information about protected areas in the Altai region (Russia, Kazakhstan and Mongolia) has been continued.

e) Work on the Altai GIS has continued (in the UK and Tomsk), and data analysis started using information from the Russian Altai as a trial.

C. Dissemination of information

Details of publications to date are appended (English summaries were omitted from previous reports).

No specific dissemination activities were planned for Year 3 (these were moved to 4th year), but the following have been achieved:

1. Information about the project was presented as follows:

- At the conference in Ulan-Ude "Problems of biodiversity conservation of Inner Asia" (Russia, September, 2004). Participant: A. Pyak (report "On the question of conservation of endemic plants of Altai"). Published as Pyak A.I. (2004). On the question of conservation of endemic plants of Altai. In: Proceedings of conference "Problems of biodiversity conservation of Inner Asia" (September 7–10, 2004, Ulan-Ude). Volume 1, Ulan Ude, 2004. pp.174–175.
- in Hovd University at the International workshop (09.06.2004);
- on the Hovd radio - short news report in local news (9/10 June 2004);
- in Mongolian newspapers («Hovdyn medee» - Hovd Aimag newspaper, and newspaper of Hovd University);

D. Field survey

Field expedition to Russian Altai (August 2004, 2 weeks), where additional data on spatial distribution of endemic species and their habitats was collected. Participants: A. Revushkin, A. Pyak, 1 postgraduate student and 6 undergraduate students of the Department of Botany, Tomsk State University.

E. Liaison with local authorities and Regional Ecological Committees.

Building on Year 2 key milestones, participating scientists met representatives from the following local, regional and national authorities:

a) Administration of the Ongudai Region of the Altai Republic (Deputy Head of Administration – Leonid N. Ukhonov)

b) Altai Branch of Central Siberian Botanical Gardens (settlement Kamlak in Shebalinski region, Altai Republic, Director – Vassily P. Orlov) and Natural-Economic park «Tchuja-Oozy» (settlement Inya in Ongudai Region, Altai Republic, Director - Ruslana A. Toptygina)

c) El-Kurultai (Regional Parliament) and Committee on Science and Education of the Altai Republic (Chairman of Committee – Vasili A. Tyudenev), Gorno-Altaisk, Altai Republic, Russia, continued;

d) Administration of the Kosh-Agach Region of the Altai Republic (Head of Administration Aulkhan Djatkambaev), continued;

e) Great Hural (National Mongolian Parliament, Ulaan-Bator), Dr. Nyamdavaa – member of the Hural and President of Hovd State University (Hovd, Mongolia);

f) The operation director of WWF in Mongolia (Haidav Dondog)

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

We have continued to experience some inconveniences in IT/communications due to problems with the main 'ECOS' computer server at Tomsk State University. This has hampered work on the web site in particular (and establishing web links between Sheffield and Tomsk), but we do not consider that this will have a major impact on the project.

It was unfortunate that during their visit to Mongolia UK staff were not able to meet local representatives of the local administration in Hovd, due to involvement in campaigning in the run-up to elections for the National Mongolian Parliament. However, our local project member (Dr Oyunchimeg) has kept Dr Nyamdavaa (member of the Great Hural and President of Hovd University) informed of project progress.

3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

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

Darwin Initiative for the Survival of Species

Project: 162 / 11 / 025

Cross-border conservation strategies for Altai Mountain endemics (Russia, Mongolia, Kazakhstan)

Details of publications

FROM ANNUAL REPORT, YEAR 1

Type * (e.g. journal paper, book, manual, CD)	Detail (e.g. title, authors, journal, year, pages)	Publishers (name, city)
Paper	*Pyak A.I. Taxonomic structure and endemic species of petrophyte flora of Russian Altai. In: Bulletin of Tomsk State University. Appendix, № 2. – Tomsk, 2002. p. 51-57 [In Russian]* The article provides an analysis of the taxonomical structure of the petrophyte flora of the Russian Altai; basic features of its species composition are also considered. Based on the analysis of geographical species distribution, the endemics of the Altai mountain country are selected and brief details of their ecological –geographical characteristics are given.	*Tomsk State University*
Paper	*Rydaya N.A. Study of endemic and sub-endemic flora of South-East Altai and North of Western Mongolia. In: Bulletin of Tomsk State University. Appendix, № 2. – Tomsk, 2002. p. 3-15. [In Russian]* A comprehensive study was undertaken of the endemic and sub-endemic plant species of a unique floristic zone, delimited by southeast part of Russian Altai, Northwest Mongolia and Southwest Tuva. The majority of these species are rare and require protection. 57 species and 2 sub-species of 35 vascular genera attributed to 16 families are listed as endemics and sub-endemics of South-Chuya – West Mongolian floristic region.	*Tomsk State University*
Paper	Pyak A.I. On the history of the flora of Russian Altai. In: “Problems of Botany of South Siberia and Mongolia”, Barnaul, 2002. [In Russian] On the basis of an analysis of features of the modern distribution of petrophytes of the Russian Altai in terms of their biology and ecology, an hypothesis of formation of vegetation of the region in late Cenozoic is proposed.	Altai State University
Paper	*Ebel A.L. Rare species of Draba genus in Russian and Mongolian Altai. In: “Problems of Botany of South Siberia and Mongolia”, Barnaul, 2002. [In Russian]* *[English abstract to be provided]*	*Altai State University*

Type * (e.g. journal paper, book, manual, CD)	**Detail (e.g. title, authors, journal, year, pages)**	**Publishers (name, city)**
Paper	*Ebel A.L. On the study of endemics of Kazakhstan Altai. In: "Study of vegetation of Kazakhtan and its protection" Almaty, 2003. [In Russian]* The article provides general information about endemic plants of the Altai. Brief taxonomical analysis is given; features of species distribution over three countries (Russia, Kazakhstan, Mongolia) are specified. Kazakhstan Altai hosts 39 Altai endemic species, among which are 13 endemic species of the Kazakhstan Altai. The five rarest endemics of the Kazakhstan Altai (*Limnas veresczaginii, Sterigmostemum schmakovii, Craniospermum subfloccosum, Galium krylovianum, Pyrethrum kelleri*) are considered in detail, with information on their distribution and relative connections. The necessity of the various forms of protection for Altai endemics is shown.	

FROM ANNUAL REPORT, YEAR 2

Type * *(e.g. journals, manual, CDs)*	*Detail (title, author, year)*	*Publishers (name, city)*
Conference proceedings *	*Ebel A.L. On the distribution of Draba mongolica Turcz. (Brassicaceae) in Southern Siberia and Mongolia. In: Natural conditions, history and culture of Western Mongolia and contiguous regions: Reports of the VI International scientific conference (September 18–22, 2003, Hovd, Mongolia). 2003. p. 122–123 [In Russian]* The specified data on distribution of the rarest species of *Draba* genus - *D. mongolica* - in the western part of the mountains of Southern Siberia are given. It is stated that within the limits of the Russian Altai the unique locality of this species is accurately known and it is likely that the species is absent from the Mongolian Altai (former records were erroneous). Data on features of ecology and relationships of *D. mongolica* are presented.	*Tomsk State University, Tomsk*
Conference proceedings *	*Ebel A.L. About some taxonomy problems of the South-Siberian representatives of the genus Draba (Brassicaceae). In: Botanical researches in Asian Russia: Materials of the XI congress of the Russian Botanical Society (August 18–22, 2003, Novosibirsk – Barnaul). Volume 1. 2003. p. 301–302 [In Russian]* There is a total of 20 species of genus *Draba* in the mountains of Southern Siberia, two of which are Altai endemics (*Draba czuensis* and *D. sapozhnikovii*). Some problematic issues of taxonomy of the genus are discussed and a proposal made for south Siberian species.	*"Azbuka", Barnaul*

Type * *(e.g. journals, manual, CDs)*	*Detail (title, author, year)*	*Publishers (name, city)*
Conference proceedings *	*Morenko M.O. Sketch on family Chenopodiaceae of Russian and Mongolian Altai. In: Botanical researches in Asian Russia: Materials of the XI congress of the Russian Botanical Society (August 18–22, 2003, Novosibirsk – Barnaul). Volume 1. 2003. p. 301–302 [In Russian]* The family Chenopodiaceae is represented in the flora of Russian and Mongolian Altai by 96 species from 26 genera. In the Russian Altai the main centre of diversity of Chenopodiaceae is the Chuya intermountain depression; in Mongolian Altai – it is the Dzungarian part. A significant part of Chenopodiaceae in the Altai flora are desert and desert-steppe species with Central Asian type of distribution. The ecological diversity of Chenopodiaceae in the Altai is not too large; the general evolutionary direction is xerophytization of species	*"Azbuka", Barnaul*
Conference proceedings *	*Oyunchimeg D. & Miagmarjav U. Flora of Hovd aimak (district) and its quantitative composition. In: Natural conditions, history and culture of Western Mongolia and contiguous regions: Reports of the VI International scientific conference (September 18–22, 2003, Hovd, Mongolia). 2003. p. 101–102 [In Russian]* Preliminary results of the inventory of the flora of higher vascular plants of Hovd aimag (Mongolia) are presented and their general analysis is carried out. A total of 993 species attributed to 357 genera and 86 families are taken into account.	*Tomsk State University, Tomsk*
Conference proceedings *	*Pyak A.I. On the protection of endemic plants of the Altai. In: Natural conditions, history and culture of Western Mongolia and contiguous regions: Reports of the VI International scientific conference (September 18–22, 2003, Hovd, Mongolia). 2003. p. 278 [In Russian]* The Altai-Sayan mountain country is one of the territories with a high level of biodiversity. In terms of preservation of endemic plant species, organization of small, well-bordered and easily surveyed territories with special security measures is most expedient here. In particular we apply this approach in intermountain depressions and valleys of the large rivers, where endemic taxa are richly represented.	*Tomsk State University, Tomsk*
Conference proceedings *	*Pyak A.I. The protection of rare and endemic petrophytes of Russian Altai. In: Materials of 2nd International Conference "Problems of Botany of Southern Siberia and Mongolia". 2003. pp. 80-81 [In Russian]* Designation of small, well-bordered and easily surveyed territories with special security measures is the most expedient way to preserve rare plants at the current stage of economic development. For protection of rare and endemic species of petrophyte complex of Russian Altai it is possible to offer many interesting sites for realization in practice of the proposed approach. So, for preservation of 13 endemic petrophytes, it is considered that organization of 6 small sites with special protection measures will be sufficient in Southeast and Central Altai.	*"Azbuka", Barnaul*

Type * *(e.g. journals, manual, CDs)*	*Detail (title, author, year)*	*Publishers (name, city)*
Journal	*Pyak A.I. A question of protection of rare and endemic petrophytes of Russian Altai. In: Bulletin of Tomsk State University. Appendix, № 8. – 2003. p. 176-178 [In Russian]* Results of the analysis of the distribution of rare and endemic petrophyte plants of the Russian Altai within the borders of existing reserves are presented. Information from the 'Red' Books (lists of endangered species) concerning the study area was also considered. Taking into account that no more than 25% of species can be found in reserves and some species are not included in the Red Book of the Russian Federation, 6 small sites with special protection measures and interesting in terms of organization, are suggested for designation.	*Tomsk State University, Tomsk*
Conference proceedings	*Rudaya N.A. Features of endemism of flora of Southeast Altai, Southwest Tuva and Northwest Mongolia. In: Botanical researches in Asian Russia: Materials of the XI congress of the Russian Botanical Society (August 18–22, 2003, Novosibirsk – Barnaul). Volume 1. 2003. p. 395–397 [In Russian]* A study of endemic and sub-endemic plant species limited in distribution to the southeast part of Russian Altai, Northwest Mongolia and Southwest Tuva was carried out. It is ascertained that this territory supports 60 endemics and sub-endemics (species and subspecies) from 35 genera and 16 families. The distribution of species over altitude zones and within regions as well as their relation to basic ecological factors is analysed	*"Azbuka", Barnaul*
Conference proceedings *	*Schegoleva N.V. The study of Ranunculus L. in the Altai-Sayan mountain region. In: Natural conditions, history and culture of Western Mongolia and contiguous regions: Reports of the VI International scientific conference (September 18–22, 2003, Hovd, Mongolia). 2003. p. 120–121 [In Russian]* The genus *Ranunculus* is widespread in non-tropical areas of the Northern hemisphere. It contains 550 species in total, and 40 species are represented in Altai-Sayan mountain country. Many of them are endemics of different levels; some are strict local endemics (*Ranunculus sajanensis, R. akkemensis, R. schichkinii and R. trautvetteranus*). Buttercups prefer to inhabit well drained and wetland habitats; some of them are amphibious and even water plants. The study of relationship of genus *Ranunculus* with similar genera (*Batrachium, Halerpestris, Oxygraphis*) will provide us with knowledge of genesis and distribution in this mountain country.	*Tomsk State University, Tomsk*

Type * *(e.g. journals, manual, CDs)*	*Detail (title, author, year)*	*Publishers (name, city)*
Conference proceedings *	*Zverev A.A. Use of Internet opportunities for realisation of a cross-border strategy for preservation of the biodiversity of the Altai Mountains. In: Natural conditions, history and culture of Western Mongolia and contiguous regions: Reports of the VI International scientific conference (September 18–22, 2003, Hovd, Mongolia). 2003. p. 273–274 [In Russian]* At the current stage of development of human society and high level of impacts on species and plant communities, effective preservation of the biodiversity of complex areas is only possible as a result of joint efforts of scientific and nature conservation institutions of adjoining countries. The effective sharing of information between representatives of different countries has a very important role. Within the scope of the Darwin Initiative Project “Cross-border conservation strategies in the Altai Mountains Endemics (Russia, Mongolia, Kazakhstan)”, we have set up a special WEB-site which contains information on 112 endemic and rare species, typical plant communities, species distributions and the main publications of the participants of the project. All information is available in English.	*Tomsk State University, Tomsk*