

DARWIN INITIATIVE

Lowland Wet Grasslands in the Czech Republic and Estonia - Implementing Sustainable Conservation

Annual Report March 1994 - April 1995
(Part 1)



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The report is in two parts. The format of the first part is based on the guidelines set out by the Department of the Environment and provides a summary of progress and a demonstration of how the objectives of the project are being achieved. The second part is in the form of supporting information and provides examples of some of these achievements.

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Cover photo shows the Kasari River and floodplain, West Estonia. This forms part of the Matsalu State Nature Reserve which was designated in 1957 and supports bird and plant populations of European significance.

1. Project aims, objectives and outline of original timetable

The aim of the project is to identify and document the biodiversity of the lowland wet grassland resource in the Czech Republic and Estonia in order to develop guidelines for the conservation of the resource at a European level. This will be achieved through the following objectives:

- a. The identification of the present status of lowland wet grasslands in the Czech Republic and Estonia, and factors responsible for their loss and survival.
- b. Assessment of biodiversity, with an emphasis on plants as indicators at key sites.
- c. The development of recommendations for conservation, management and restoration through research and domestic and international workshops.
- d. Publication of a manual for the conservation of European lowland wet grasslands and an informative/educational audio-visual pack.

The first year of the Darwin Project aimed to thoroughly prepare and establish the project in the Czech Republic and Estonia through a rigorous review of information available on lowland wet grasslands in the two countries in order to compile inventories. This was combined with two workshops to raise awareness, educate a range of academics and practitioners and begin to develop guidelines for the conservation of lowland wet grasslands.

Field research and analysis of collated data in year 2 (1995/96) will lead to dissemination of information at an international workshop and the publication of conservation guidelines in year 3 (1996/97).

2. Profile of project team and proportion of time funded by Darwin (in 1994/5)

UK	% of time funded
Dr Max Wade (Project manager)	6
Mr Chris Joyce (Research)	31
Mr David Evans (Finance)	8.5
Mrs Gill Giles (Administration)	16

Note: Miss Samantha Donn (Researcher) was also funded for 18% time for one quarter.

Estonia

Prof Jaan-Mati Punning (Director, Institute of Ecology, Tallinn)	5*
Mrs Elle Puurmann (Darwin Project Officer)	100
Mrs Laimi Truus (Darwin Project Officer)	75

Czech Republic

Dr Pavel Blažka (Head of Faculty of Biological Sciences, University of South Bohemia)	5*
Dr Karel Prach (Senior Lecturer)	10*
Mgr Jana Straškrabová (Darwin Project Officer)	100

* = Assistance provided from other funding.

Note: the % of time funded is related to salaries.

3. Progress and achievements

Note: Information supporting this section is presented in Part 2.

Considerable progress was achieved in the first year of the project. Specific aims of the Darwin Project in this first year were to encourage and establish dialogue between scientists and practitioners in order to develop the research aims and methodology for subsequent years, and to begin to describe and assess the lowland wet grassland resource in the Czech Republic and Estonia through the compilation of inventories. The workshops and inventories will highlight the research needed to develop the basis for the production of guidelines for conserving lowland wet grasslands.

3.1 Workshops

An international workshop (held in Loughborough) and two domestic courses (Tallinn and Hiiumaa, and České Budějovice) were highly successful. All three workshops achieved their aims by raising awareness of the value and conservation of lowland wet grassland and attracting a broad spectrum of interested parties, including nature conservation agencies, agriculturists, land managers, policy makers, consultants and planners. Networks co-ordinated by the Darwin Project Officers are now established in both countries. The workshops have also played an important role in the continuing education and professional development of the Darwin Project Officers, with all three participating in the Loughborough workshop and afterwards visiting examples of English lowland wet grasslands, and the Estonian Officers attending the Czech course and site excursion. In summary:

International workshop, Loughborough University, 14-15 December 1994

- attended by 75 delegates from eight European countries
- 22 papers and ten posters presented
- discussion session aiding the development of the Darwin project
- proceedings to be published in 1996
- an important step towards the production of the guidelines

Domestic workshop, Estonia, 1-3 September 1994

- 22 participants from the Institute of Ecology, Tartu Agricultural University, Estonian Fund for Nature, and Estonian Agricultural Academy, amongst others
- included presentations and discussion sessions
- excursion to representative floodplain and coastal grasslands included in the inventory.

Domestic workshop, Czech Republic, 13-14 February 1995

- attended by 65 delegates including participants from university biological and agricultural departments government agencies, museums, and nature reserve managers.
- 25 papers presented
- field visit to alluvial grasslands included in the inventory
- proceedings to be published in 1996 by Czech Institute for Nature Conservation.

3.2 Inventory

Research for the compilation of the inventories by the Darwin Project Officers is enabling the extent, distribution and biodiversity of the lowland wet grassland resource in the two countries to be assessed and documented for the first time. The inventories (including maps) are being compiled using accepted methodologies that are comparable with other similar European resource surveys e.g. use of CORINE. Preliminary results indicate that there has been significant lowland wet grassland habitat loss and degradation in the Czech Republic and Estonia since collectivisation in 1948. The main reasons for past losses are over-grazing and pollution due to intensive agriculture (collective farming), and river regulation. Current key threats in the two countries are eutrophication, changes in the agricultural economy and neglect, the latter often due to confusion over ownership and/or a lack of available finance for management.

It is estimated that areas supporting alluvial grasslands of national importance cover the Czech Republic only around 0.1% of the country (less than 10 000 ha). Many of these areas urgently require management, and some still receive no statutory protection. Many are only fragments of what used to be a more extensive habitat.

Natural grasslands cover only 6% of Estonia. Preliminary indications from the inventories are that little more than 13% of this is lowland wet grassland (ie. 10% floodplain and 3.4% coastal grassland). **The most diverse of these wet grasslands occupy around 15 000 ha, or 0.3% of the country.** Coastal grasslands are of international importance for their plant communities and avifauna, and 20% of the

plants listed in the Baltic Red Data Book are found in Estonian floodplain grasslands. Both types of grassland are suffering from a lack of management and pollution.

3.3 Research

The workshops and inventories have given foci for future research within the framework of the Darwin project. This research will underpin the development of guidelines for conserving the lowland wet grassland habitat and so will form an important component of the final output of the Darwin project, namely the manual and audio-visual educational material.

In 1995/96, as well as further fieldwork to complete the inventories, more intensive research will be undertaken targeted at key sites. This consists of three main investigations:

1. Quantification of land-use and vegetation changes in the Dyje alluvial grassland complex in South Moravia, Czech Republic, using remote sensing methods.

The Dyje river floodplain is designated as a RAMSAR site and exemplifies the history, status and problems facing lowland wet grasslands in the Czech Republic very well. The area has been strongly affected by land-use changes in the past, including those due to population migration, collective farming and river regulation. Interpretation of these changes on the vegetation will be undertaken by using a series of aerial photographs dating back to pre-collectivisation in 1948 in order to quantify the changes in floodplain grasslands.

2. An assessment of the biodiversity of coastal grasslands on Vormsi island, Estonia, and their sensitivity to changes in agricultural practices

Vormsi island is part of a Biosphere Reserve and supports extensive and diverse coastal grasslands. Research will investigate the hypothesis that vegetation pattern and diversity is related to the properties of soils, seawater and subsurface water, and will explore the relationship between this and past levels and changes in management.

3. A determination of the relationship between topography, biodiversity and soil properties of the River Vaike-Emajogi floodplain grasslands, Estonia.

The ancient valley of the River Vaike-Emajogi contains both managed and neglected grasslands. Field research will examine the relationships between the topography and soils of the floodplain and its vegetation, with particular reference to plant species diversity and productivity.

The output of these investigations will be critical to the development of the guidelines.

4. Monitoring and evaluation

Monitoring has been undertaken as set out in the original application. It has comprised three main parts:

- the Darwin Project Management Committee, the panel that manages the project in the UK, has met 11 times in the first year. (Minutes are held in the ICOLE office, and are available on request.)
- the Darwin Project Steering Group, which met on 9 November 1994 and consisted of the UK Darwin team and independent expert assessors from English Nature and the Royal Society for the Protection of Birds. It reviewed and evaluated project aims and methods, workshops and short courses, research topics, project output (e.g. the manual) and opportunities for further project development. (Minutes have been circulated to the Steering Group and the Czech and Estonian participants.)
- progress reviewed in a six monthly report (September 1994), which in particular developed the aims and methodology, and established the organisational structure of the project (this was circulated to the Steering Group and DoE).

In addition, the response to the international workshop held in Loughborough was evaluated by means of a questionnaire circulated to all delegates. Seventy eight % of delegates rated the workshop's relevance of the workshop to their needs as "very good/good", and 85% of participants gave the workshop an overall assessment of "very good/good".

Members of the British Darwin team have also monitored the project in the two countries, making five visits to the Czech Republic and two to Estonia between March 1994 and April 1995. Also, the whole team (i.e. including the Czech and Estonian Darwin Project Officers) has met twice during the period to compare and review progress.

4.1 Problems

Problems have been relatively few. A delay of several months in the appointment of the Czech Darwin Project Officer was due to an extensive search for a candidate of appropriate quality. Since the appointment was made in October 1994 progress has been good and it is anticipated that the situation will be recovered by September 1995. In Estonia, problems have centred on a lack of information for some of the grassland sites, although this will be rectified by additional field research in 1995.

5. Publicity

The Darwin Initiative and this project have enjoyed publicity at international, national and local levels. Examples include:

- | | |
|----------------|---|
| International: | Feature in 'Global Concerns' programme, BBC World Service
Article in ENACT magazine, published by English Nature with a circulation encompassing UK and Eire |
| National: | Announcement in Coastal Systems Newsletter, published by the Estonian Commission on Coastal Systems
Article in 'Ochrana Prirody', the Journal of the Czech Institute of Nature Conservation |
| Local: | Two articles in LUT News, the magazine of Loughborough University with a circulation of 3,300
BBC Radio Leicester interview
Article in Českobudějovické listy, the newspaper serving České Budějovice city and South Bohemia. |

Note: a selection of these are included in Part 2.

6 Summary of expenditure and management

Overall management and control of the Darwin Project is vested in Dr. Max Wade, Director of ICOLE. He is assisted by Mr. David Evans, who undertakes financial liaison with the overseas partners. Each overseas partner receives regular grant payments which must then be accounted for within the financial management system of the relevant Institute. All expenditure abroad must be shown in the same structure as for the original U.K. grant and all accounts are prepared and audited at the end of the financial year with a financial adviser independent of the overseas personnel listed in section 2. The Finance Office at Loughborough University co-ordinates overall auditing and allocations of expenditure amongst the three institutions.

For 1994-95 the expenditure was originally set at £38 802 with £25 345 to be received from the Darwin Initiative. This budget was subsequently amended to reflect the delayed start in the Czech Republic and the number of additional visits and research time required in 1995-96 as a result. The revised income and expenditure for 1994-95 is as follows:

- | | |
|--------------------------------|-----------|
| • Income from Darwin Grant | £19878.40 |
| • Total Expenditure on Project | £35183.00 |

Matching funding has been received from the following sources:

- (1) a research project on the Lužnice floodplain in the Czech Republic funded by Loughborough University

- (2) surpluses from the International Workshop held in Loughborough, December 1994
- (3) assistance from other academic and support staff in the Czech Republic and Estonia, including support for the two domestic workshops (see section 2 above).

A signed statement confirming this income and expenditure is being forwarded separately.

