



# Bulletin

## International association for landscape ecology

### GREETINGS FROM THE PRESIDENT

The last congress of Landscape Ecology organised by Gray Merriam in Ottawa still remains in our memories as a mark of the IALE dynamism, and this 10th volume of our bulletin underscores this dynamism. In 1992 the society will develop an intense activity. At least three meetings will be held to such important issues as the impact of climate and land use on landscapes (Corvallis, Oregon, USA), the future of Mediterranean landscapes (Montecatini, Italy) and cultural aspects of landscape (Prague, Czechoslovakia).

The Montecatini symposium will be of particular interest for our future activities. Some of the IALE working groups will plan their future activities at a special meeting. And at the same time the IALE task force on Redbooks will arrange a workshop and develop its organisation.

Besides these specific meetings of IALE, it is stimulating to see the British Ecological Society and the

American Society for Limnology and Oceanography announcing "Scale, patterns and processes" as a theme for their first joint symposium in April in Cork, Ireland. Moreover the reference to landscape ecology by the European Community in its programme on the environment, the recent development of landscape ecology in China, and the opening of a new IALE-branch in Vietnam are great promises for the future of our discipline.

The aims of the International Association for Landscape Ecology are the promotion of research approaches and the communication between scientists and planners. Our bulletin is an important tool to fulfil these objectives. Your comments and suggestions will be welcome for helping us to develop landscape ecology in the different parts of the world.

*H. Décamps*  
President of IALE

### POLITICS AND LANDSCAPE ECOLOGY

*IALE was founded 'to promote communication between scientists and planners and interdisciplinary scientific research', thus trying to ease not only the development of landscape ecology, but also the application of landscape ecology within society. But when we offer our knowledge to politics, we will necessarily be involved in the political process. Sometimes with serious institutional and personal consequences. How far to go? How to present our recommendations and at the same time ensure our integrity? Their are different opinions on this matter - linked to different experiences - as you can see from the articles on environmental policy and on the development of landscape ecology in Czechoslovakia, presented in this and the last Bulletin. We can all learn from these experiences to be better prepared for our role in the planning and realization of the future use of our landscapes.*

*The editor.*

### LANDSCAPE ECOLOGY AND THE POLITICAL GAME IN CZECHOSLOVAKIA.

In 1991, IALE passed through abrupt changes (IALE bulletin 3/1991). It especially opened up the possibility of spontaneous activities for middle- and eastern-European regions following the political changes. This took place in spite of all the troubles accompanying the economic transformation, and of the uncertainties of established institutions. Czechoslovakia was one of the founders of IALE in 1982 (Symposium in Piestany); and after nearly 10 years of existence during which Dr. Milan Ruzicka (Bratislava) was vice-president, a representative from Czechoslovakia, Dr. Václav Mejstřík chairman of the institute of landscape ecology, Cs. Acad. sci. (Ceske Budejovice) was elected. He was suggested by 5 participants from different Cs. institutions,

present at the Roskilde seminar of IALE May 1991. These facts are a reason to report briefly the history of landscape ecological activities in our country. Slovakia, the eastern part of the country, did not experience as deep a split in the society after the 1968 Soviet invasion as did the Czech republic, where there arose continuous and numerous opposition. Those persons were persecuted in many ways by the governing regime. Unfortunately, ecology also became a subject of political game, The Institute of Landscape Ecology of the Cs. Academy of sciences, founded in Prague, was included in "delimitation" - that is, dismembering the Academy and moving parts to the Austrian and German borders where all kind of activities were strictly con-

trolled and monitored. This delimitation was part of the strategy of the Communist Party in the 70's to immobilize a large part of the intelligentsia by removing them from Prague to the southern, northern and eastern part of the Czech part of Czechoslovakia. This was done because it was mostly the non-technical intelligentsia who had initiated political changes during the Prague Spring in 1968. Personnel changes seriously hindered the progressive development of the field of Landscape Ecology, whose most competent proponents either emigrated or survived in dispersed, specialized posts; some took part in IBP, MAB and so on. In this situation, the team working in geography and ecology of Slovak Academy of Sciences was successful, mainly

## NATURE CONSERVATION: RECONSTRUCTION OF FRAGMENTED ECOSYSTEMS, GLOBAL AND REGIONAL PERSPECTIVES

In October 1991, 35 ecologists, agricultural scientists, conservation managers, farmers and an Australian Federal politician spent a week in Tammin, a small town in the central wheatbelt of Western Australia, discussing ecology and the role of ecologists in restoring fragmented ecosystems. The workshop was organized by CSIRO Division of Wildlife and Ecology in Western Australia, Center for Conservation Biology at Stanford University and the Tammin Land Conservation District Committee (a local group of farmers formed to combat land degradation). Participants came from Australia, Canada, England, Finland, Norway, United States and Sweden. The workshop was designed to allow contributors to discuss their science and its relevance to redressing the enormous amount of ecological damage carried out by humanity in the name of development.

In keeping with the theme, the participants discussed global conservation issues as they relate to restoration ecology, then worked down to more regional problems with the extreme degradation of the southwestern Australian agricultural area providing some focus. A full day excursion was organized by the local farming community. It demonstrated what the landscape would have looked like before development for agriculture, how it is farmed now, what problems have developed as a result of clearing for agriculture and present farming practices, and solutions being developed to tackle some of these problems. The excursion proved to be very successful as international scientists came to appreciate practical problems of land care, and farmers came to appreciate scientists as people interested in solving practical problems.

The workshop defined reconstruction or restoration as the reestablishment of a system which emulates a healthy, natural, self-regulating system which is integrated into the ecological landscape in which it occurs. The aim is to restore as many ecosystem services as possible, as for example in using indigenous vegetation to restore the hydrological balance in the many

different regions which have been overcleared and which are being subjected to increasing soil salinity and at the same time planning revegetation to meet nature conservation objectives. The major impediment to restoration of ecosystems is the increasing demand being made on the planet by the rapidly increasing human population. The workshop was told that every ecosystem on Earth has been affected by human activities and increasing demands are leading to ecosystem collapse, as shown by increasing desertification, pollution of water supplies, etc.. With about 40% of the Earth's net primary production being used by only one species (*Homo sapiens*), there is little hope for reconstruction unless we halt our population increase, our rapidly rising demand on resources and practice conservation of energy.

In addition, climatic changes as a result of human activities and the uncertainty associated with modelling future changes in climate are likely to make it much more difficult to plan restoration activities. Before beginning restoration there should be a rigorous discussion of specific goals and expectations and the likely outcomes of alternative courses of action. When settling on a preferred course of action it will be necessary to understand how to measure success and how to put restoration activities in the context of climatic variability.

Restoration will not be possible unless the social and economic factors are favourable, and these must be included in the planning of restoration projects.

At the regional level, for restoration to be successful it is necessary to manage the whole landscape, not just isolated elements of it as is the common practice now. There is a need to carry out reconstruction now, not just talk about it. There was a widely held view among workshop participants that the longer we delay tackling ecosystem reconstruction, the less chance we have of being successful. Any reconstruction projects need to be guided by good science; unfortunately, in the past this has not been the case. Often the criteria for success or otherwise of restoration projects have been very unclear or nonexistent. Representatives of all ele-

ments of the original ecosystem need to be replaced in reconstructed ecosystems and ecologists must be more involved in establishing what the key elements were and how to incorporate them into reconstruction plans.

The need for ecologists and conservation biologists to make sure that their work is interpreted in such a way that it is incorporated into planning and action for ecosystem reconstruction was stressed throughout the workshop. The workshop identified the need for scientists to work directly with community groups involved in restoration projects. These projects are experimental in nature and should be properly monitored to ensure that we learn as much as possible from them and the results are produced in a form that others can use. In addition the need for ecologists and conservation biologists to become involved in communicating conservation problems and solutions to all parts of human society (school groups, university students, general public, politicians and other decision makers) was stressed by a number of participants at the workshop. They can do this by raising local awareness of global issues, by becoming involved in community based restoration projects, and by setting an example by reducing their impact on the planet and its resources. They can also press for changes in education such that ecology and conservation biology become compulsory subjects, along with language, for every school child and university student. They can also talk to any group about global and local conservation problems and learn to use the media as a useful means of broadcasting the conservation message and the need to undertake restoration now to erase the pressing global and regional conservation problems.

The proceedings of this workshop will be published in the Nature Conservation series by Surrey Beatty and Sons, NSW.

*Denis A. Saunders and Richard J. Hobbs*  
CSIRO, Division of Wildlife and Ecology, L.M.B. No.4 P.O. Midland Western Australia 6056



in management areas. To the great credit of its leader, Dr. M. Ruzicka, the international ecological symposia were regularly organized in Slovakia. Federalism, as approached by the then Czechoslovak president and chief of the Communist Party, G. Husak from Slovakia, eased the process of transfer to Slovakia of the periodic publication, *Quaestiones Geobiologicae*, which was originally edited by the Institute of Landscape Ecology Cs. Academy of Sciences, before its move from Prague. This fact enabled Dr. Ruzicka to create his own concept and to rename the modified journal "Ecology (CSSR)", which was edited in Slovakia. After 1989 he initiated a separate, new institute using the same name as we mentioned in the Czech republic - Institute of Landscape Ecology Cs. Academy of Sciences. Institutions of similar type also exist now in Ostrava, Usti nad Labem, and some other places. Ecological centres have arisen also at both old and newly founded universities in Czechoslovakia. It is not easy to distinguish, at this moment, what is of high or low quality.

An "emergency solution" for the bad state of Czechoslovak ecology in general was the spontaneous founding of the Ecological Section within the framework of Czechoslovak Biological Society. This interdisciplinary gathering with more than 1000 members began to play the role as "brain trust" regarding vari-

ous arbitrary decisions causing interferences in the landscape (e.g. state of disaster in the National park of the Krkonoše mountains, construction of the dam water system Gabčíkovo-nagyymaros, e.t.c.). The Ecological Section thus gradually became a force for political opposition and, therefore, it had stopped being a modern ecological scientific society. Following the "Gentle revolution" in 1989 many of the members of Ecological Section moved to new executive and legislative structures of our state (e.g. governmental ministers of republic or federal ministries and/or committees for the environment).

Still under the communist regime, in 1988, a new base for grouping of people interested in Landscape Ecology was started because the activities of the above mentioned Ecological Section had become too broad, unlimited and far from scientific. Under the circumstances it was, again, not a fully optimal solution: It was the founding of Section for Landscape Ecology (originally: Section for Landscape Ecological Botany) at the Czechoslovak Botanical Society. The Section aimed from the beginning to help to transfer knowledge from the lower research levels in ecology to the level of landscape, to supply members with information on landscape ecological knowledge and activities from abroad, and to integrate the environ-ecosystem investigations. In spite of its basis in natural sciences it also created a circle of co-workers from other fields (sociologists, lawyers, demographers, and experts from applied branches) who could participate efficiently in involving youth and in education in landscape ecology. The Section also organizes transdisciplinary meetings, seminars and excursions. It, for example, provoked the discussion between hydroecologists and terrestrial ecologists, arranged a seminar for students of Charles University on basic terms and questions of landscape ecology, and developed an interdisciplinary seminar on ecological ethics from which new suggestions of "ecological paragraphs" for the new federal constitutions arose. The Federal Minister for Environment, J. Vavrousek, appealed to members of the Section here to take part in the process of preparing materials for the Conference of Ministers of European countries for the environment (Dobruška, June 1991). The experts from the Section became authors of one of the three basic documents of this conference (Hu-

man Values and the Environmental Ethics for the 21st Century). Many of its members work as experts in advising organs of the Federal Committee of the Environment or Ministry of the Environment of the Czech republic.

In the near future it is probable that the previous Ecological Section Cs. Biological Society, will be replaced by an organization whose functional specifications, form and field activity will be decided by the general assembly voting on several alternatives. Independently the Section for Landscape Ecology Cs. Botanical Society will continue fulfilling its role and will coordinate its activities with many newly arising organizations. This is probably part of a new integrative process.

Eng. Vaclav Mejstrik, Dr.Sc., IALE vice-president (born 1928) was elected Director of the Institute of Landscape Ecology, Cs. Academy of Sciences in 1990. He was a lecturer at Agricultural University, worked at the Institute for Soil and Peat Research and the Environmental Ecology Institute. He was the president of the 2nd European Congress on Mycorrhizae (Prague) and acted in UNESCO structures and projects (SCOPE, MAB, COSPAR, IUFRO).

Dr. Hana Rambouskova PhD. (1953) was chosen by the vice-president as contact person for Czechoslovakia; she took part in the IALE activities from its origin. Besides some shorter visits to various countries, she worked in the Netherlands during her study stay and has many contacts with the IALE activists. At present she leads one of the divisions in the Institute of Applied Ecology in Kostelec nad Černými lesy near Prague. We believe that the new personnel situation and circumstances will help in maintaining the scientific character of the IALE activity in our region, and will improve quality in the practical sphere. We do not believe it necessary to publish information of more or less administrative or applied character here (e.g. the extensive federal project on care for the environment and/or ecological policy); we might better concentrate on the ecological processes accompanying deep changes in the landscape now that the "iron curtain" has been removed.

*Dr. Pavel Kovar & Eng. Jana Haskova  
Section for Landscape Ecology  
Czechoslovak Botanical Society*

**IALE - International Association for Landscape Ecology - was founded in 1982 to promote communication between scientists and planners and interdisciplinary scientific research. The IALE BULLETIN is distributed 4 times a year to the members of IALE.**  
IALE executive committee:  
Henri Decamps (France) President  
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Joan Iverson Nassauer (USA)  
E.R. Fuentes (Chile)  
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Vaclav Mejstrik (Czechoslovakia)  
Almo Farina (Italy)  
Jesper Brandt (Denmark)  
James F. Thorne (USA)  
IALE Bulletin Editor :  
Jesper Brandt  
Inst. Geography & Computer Science  
Roskilde University Center  
P.O.Box 260  
DK-4000 Roskilde, Denmark  
Tel: +46 75 77 11 ext. 2463  
Fax: +46 75 74 01  
E-mail: brandt@ruc.dk

## SHORT NEWS

**EUROPEAN CONGRESS 93**

The European congress of IALE 1993 will be held in Rennes, France 7 - 9 June 1993. The theme of the congress will be Agricultural landscapes in Europe.

Suggested topics:

- Agricultural activities and landscape
- Agricultural policy
- Biodiversity at landscape level
- Landscape history
- Aesthetics
- New hedgerow networks and openfields
- Interactions among social, productive and landscape dynamics
- New tools and methods for the study of landscapes
- Physical flows through the landscape
- Landuse conflicts at the urban/rural and rural/costal interfaces
- European view of tropical landscapes

For information please contact:

Sandrine Petit

Laboratoire d'évolution des Systèmes Naturels et modifiés, Campus de Beaulieu

Avenue du Général Leclerc

35042 Rennes cedex, France

Tel : (33) 99 28 61 45

Fax : (33) 99 38 15 71

**CULTURAL ASPECTS OF LANDSCAPE**

As previous announced the 2nd international conference "Cultural Aspects of Landscape" will take place in Czechoslovakia in september (see diary). The theme of the conference is "Human being and his functional problems in his environment" covering:

- The contemporary problems - the irrelevance of landscape ecology and human being.
- Landscape and urban architecture - aesthetical and functional values and human aspects
- Landscape and human being as seen from aspects of social sciences/sociology, psychology
- Philosophy, aesthetics, art and litterature and their contributions to human beings position in nature, landscape and environment
- Applied environmental sciences and the contemporary situation and the future of human being.

**NEW IALE SECTION**

A section of IALE has been set up in Vietnam, and an international seminar is under planning. A report on the development of landscape ecology in Vietnam will be presented in the next bulletin.

**ITC COURSES**

The International Institute for Aerospace Survey and Earth Science (ITC) offers Post-Graduate Diploma and MsC-Degree courses on Rural and Land Ecology Survey. The objective of the courses is to train participants in the survey, analysis and interpretation of vegetation and agricultural landuse in a landscapeecological context, using remote sensing and GIS, in support of natural resource management.

Further information: ITC student registration office, PO.Box 6, 7500 AA Enschede, The Netherlands, Phone 053-874444, Fax 053-874400.

**IALE AND UNCED**

IALE has been accredited as a NGO to United Nations Conference on Environment and Development. The accreditation is valid for the remaining Preperaton Conference and for the Earth Summit in Rio, Brazil, June 1992. Further information can be obtained from the Secretary-general.

## DIARY

Rio de Janeiro, Brazil 1-12 June 1992

UN conference on environment and development. Contact: UNCED secretariat, 4 ch. de Conches, 1213 Conches, Switzerland, Tel: (41-22) 789 1676.

Louvain la neuve, Belgium 29 June - 1 July 1992

Remote sensing and GIS integrated for the management of less favoured areas. EARSEL workshop. Contact: EARSEL secretariat, Mrs. M. Godefroy, B.P. 209, F92108 Boulogne-Billancourt, France.

Waterloo, Canada 9-14 August 1992

4th Annual Conference: Society for Ecological Restoration. Contact: Society for Ecological Restoration, 1207 Seminole Highway, Madison, Wisconsin, 53711 USA. Tel. +2629547

Washington D.C., USA 9-14 August 1992

International Geographical Union and Assembly. 27th international geographical congress: The global environment - what can we do? Contact: IGU congress secretariat, 17th and M streets, NW, Washington D.C. USA. Tel: (202) 828-6688

Tokyo, Japan 28 August - 3 September 1992

15th International Botanical Congress. Contact: M. Furuya, Frontier Research Programs, The Riken Inst., Wako City, 351-01, Japan

Marseille, France 7-11 September 1992

6th European Ecological Congress. Organiser by European Ecological Federation and Sociét'France d'Ecologie. Contact: Dr. D. Bellan Santini, Centre d' Oceanologie, Station Marine d'Edenoume, rue Batterie des Lions, 13007 Marseille, France. Fax: 33 91 04 16 35

Eger, Hungary 8-11 September 1992

Remote sensing for monitoring the changing geography of Europe. 12th symposium of EARSEL. Contact: EARSEL secretariat, Mrs. M. Godefroy, B.P. 209, F92108 Boulogne-Billancourt, France.

Svratka, Czechoslovakia 3-10 September 1992

2th international conference: Cultural aspects of landscape. Organized by Iale working group "Culture and landscape". Contact: Dr. Hanna Swouden-Svobodová, PObox 75020, 1007 AA Amsterdam, The Netherlands. Tel. (0) 20-66251421.

Palanga, Lithuania October 1992

International meeting: Landscape ecology and landscape planning. Contact: B. Vosylyte, Institute of Ecology, Akademijos St. 2, Vilnius, Lithuania. Tel: (+0122) 359263. Fax: (+0122) 359257

New Delhi, India November 1992

Mapping of environment and cartography. Organized by Indian National Cartographic Association. Contact: Majid Husain, Dep. of Geography, Jamia Millia Islamia, New Delhi 110025.