

Zeitschrift: Bulletin of the Geobotanical Institute ETH
Herausgeber: Geobotanisches Institut, ETH Zürich, Stiftung Rübel
Band: 64 (1998)

Vereinsnachrichten: Annual report of the Geobotanical Institute ETH (1997)

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 11.01.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Annual report of the Geobotanical Institute ETH (1997)

PETER J. EDWARDS

Geobotanisches Institut ETH, Zürichbergstrasse 38, 8044 Zürich, Switzerland

1 Introduction

1997 was a busy year for the Geobotanical Institute. The institute was remarkably successful in attracting research grants, and several new projects commenced (section 3.3). Amongst these new grants were no fewer than four awarded to Egon Horak to study the basidiomycete flora in various parts of the world. Two of them were awarded by the National Science Foundation of the USA and are held jointly with colleagues from North America. Research in the Geobotanical Institute is increasingly interdisciplinary or transdisciplinary and involves collaboration with other institutes (see the Preface for a comment on this development). One example is the grant awarded to Peter Edwards and Cyrus Abivardi together with colleagues from the Institute of Plant Sciences at ETH and the Faculty of Agriculture in Tokyo University. It is funded under the umbrella of the Alliance for Global Sustainability – a research partnership between ETH, Tokyo University and the Massachusetts Institute of Technology. The grant was a “pump-primer” to develop longer term project concerned with sustainable management of cereal fields. As a result of all these new projects, the number of doctoral students in the Institute increased to 37. With this high level of activity, the laboratory facilities and technical services have been more than fully used.

It is pleasing to say that during 1997 the difficult accommodation problem at Zollikerstrasse was resolved. In July the group which had been housed in very cramped and simple conditions in the Kutscherhaus could move

into the Villa (Zollikerstrasse 137). Although this building does not have modern laboratory facilities, it is a fine old house set in the botanic gardens of the University of Zürich and provides a much more comfortable working environment. To celebrate this event, the Institute held a reception in the Villa in October.

A significant event for plant sciences in Zürich was the decision by the University of Zürich and ETH to establish a *Kompetenzzentrum Pflanzenwissenschaften*. The purpose of this new structure is to coordinate the teaching and research activities, and long-term planning of plant sciences in the two institutions. The first important decision of the Kompetenzzentrum was to appoint a visiting group of experts which came to Zürich in November. Their report sets out ideas about how the plant sciences in Zürich can develop in the future.

During 1997 Dr. Daniela Brada left the Institute to take up a permanent position in a laboratory of Organic Chemistry at ETH. Dr. Gerhard Eichenberger, formerly deputy director of WSL, joined the Institute with an *ad hominem* research position. He plans to develop a research programme aimed at understanding and improving the transfer of scientific knowledge from the research community to the public in general.

In the summer there was a successful excursion to the Engadin which was organised by Ladina Filli, Kaspar Pflugshaupt, Roger Stupf and Anna-Barbara Utelli, and attended by 37 members of the Institute.

2 Staff of the Institute

2.1 FOUNDATION BOARD

President

Prof. Dr. Hannes FLÜHLER

Vicepresident

Martin RÜBEL-FUCHS

Secretary

Armin SCHELBERT

Other members of the board

Daniel HUBER-DUMUID
Dr. Alexander RÜBEL
Prof. Dr. Franz SCHMITHÜSEN
Prof. Dr. Peter STAMP

2.2 STAFF

Director

Prof. Dr. Peter J. EDWARDS

Scientific members of staff (lecturer)*

*Dr. Cyrus ABIVARDI
*Dr. Matthias BALTISBERGER
Dr. Martin BAUERT
Dr. Gerhard EICHENBERGER
Alex GABRIEL
Andreina GERSTER
*Prof. Dr. Andreas GIGON
*Prof. Dr. Egon HORAK
Gisela HORAT
Dr. Christiane JACQUAT
*Prof. Dr. Frank KLÖTZLI
*Dr. Johannes KOLLMANN
Prof. Dr. Elias LANDOLT
Regula LANGENAUER
*PD Dr. Adrian LEUCHTMANN
*Dr. Dieter RAMSEIER
*Prof. Dr. Barbara A. ROY
*Dr. Peter RYSER
Bettina SCHERZ VRACKO
Dr. Thomas STEINGER

*Dr. Alex WIDMER

*Prof. Dr. Krystyna M. URBANSKA

External lecturers

Prof. Dr. Peter BOLLIGER
Dr. Hans-Ulrich FREY
Dr. Frank GRAF
Maja HALDEMANN
Dr. Andreas HASLER
Dr. Bertil KRÜSI
Dr. Urs KUHN
Dr. Fredy LEUTERT
Dr. Bernhard MERZ
Dr. Andreas PAPRITZ
Dr. Martin SCHÜTZ
PD Dr. Otto WILDI

Doctoral students (lecturer)*

Gérald ACHERMANN
Franziska ANDRES
Giovanni BERARDI
Marco BERNASCONI
*Bernhard BEYER
*Markus BICHSEL
Urs BLÖSCH
Ursula BOLLENS
Andreas BOSSHARD
Gian-Pietro CERLETTI
Manuela DI GIULIO
Yvonne EDWARDS-WIDMER
Marzio FATTORINI
Karl FLEISCHMANN
Daniel FREY
Andreas GRUNDMANN
Sabine GÜSEWELL
Otto HOLZGANG
Jörg IPSEN
Michael KELLER
Barbara KÖHLER
Gerrit MEIJER
Olivier MERMOD
Marco MORETTI
Nathalie MÜLLER

ANNUAL REPORT (1997)

Monika PFUNDER

Angelika RAIMANN

Neria RÖMER

Andrea SCHWAB

Sibylle STUDER

Karin ULLRICH

Anna-Barbara UTELLI

Helene WAGNER

Stefan WAHL

Gian-Reto WALTHER

Urs WEIBEL

Ralf ZIMMER

Martin LANDOLT

Stéphanie SCHÜRCH

Karin THIELE

Jutta WALTER

Richard ZWEIFEL

Computing system administrator

Kaspar PFLUGSHAUPT (Roger STUPF)

GIS assistant

Roger STUPF

Secretaries

Claudia HEINZE

Karin LEE

Katharina RENTSCH

Managing Editor Perspectives

Annegret PICKHARDT

Librarians

Liselotte KÖNIG

Regula LANGENAUER

Laboratory assistants

Dr. Daniela BRADA

Elke KARAUS

Rose TRACHSLER

Herbarium assistant

Annemarie TANNER

Technical assistants

Anita HEGI

Markus HOFBAUER

Stephan LOCHER

Karin REINHARD

Diploma students 1997

Urs AESCHLIMANN

Martin BRATTELER

Dominik BREM

Inez COLYN

Ladina FILLI

Fernande GÄCHTER

Andreina GERSTER

Beat HAUENSTEIN

Andreas HEINIMANN

Kathrin KOFLER

Andrea KÖNIG

Christian MARFURT

Danièle MARTINOLI

Katharina MERKEL

Raphael NEUBURGER

Kaspar PFLUGSHAUPT

Bert PIEST

Naomi PORRET

Bettina SCHMID

Samuel STAHEL

Thomas STÜDELI

Gabi TITGEMEYER

Mario VIELI

Gardener

Martin FOTSCH

Diploma students 1998

Ulrich FAIGLE

Rahel GESSLER

Sabine HERZOG

Kathrin MÄRKI

Garden assistants

Zorica EBEID
Raymonde METZGER

Site and building manager

René GRAF

Scientific visitors

Prof. Dr. Yoshinobu HOSHINO, Laboratory of Vegetation Management, Tokyo University of Agriculture and Technology, Japan (1.1.–13.2.97)

Ursula KORZENIAK, Botanical Institute, Polish Science Academy, Krakau, Poland (24.1.–24.3.97)

Dr. Kristjan ZOBEL, University Tartu, Estonia (30.5.–22.6.97)

Dr. Ulrich PEINTNER, Microbiological Institute, University Innsbruck, Austria (20.–24.6.97)

Prof. Dr. Johannes C.M. DEN NIJS, University of Amsterdam (1.–31.7.97)

V. GONZALES & F. ARENAS, University Alcala, Madrid (29.8.–7.9.97)

Liina EEK (BSc), Universität Tartu, Estonia (17.9.–13.10.97)

Dr. Robyn JACKSON, James Cook University of North Queensland, Australia (24.–31.10.97)

3 Research

3.1 OVERVIEW

The research of the Geobotanical Institute is focused on four main themes: plant ecology, plant evolution and systematics, mycology and archaeobotany; the main interests of the research groups are described in details below.

During 1997 several new research projects were commenced and eight new doctoral students joined the Institute. These include joint projects with the Federal Institute of Agro-

ecology and Agriculture (FAL) at Reckenholz and with the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) at Birmensdorf. The group of doctoral students increased significantly from 30 in 1996 to 37 in 1997. In addition, the Institute had a record number of 23 diploma students during 1997.

An important activity which was successfully repeated in January 1997 was the Institute's research conference at which doctoral students and diploma students presented their research plans and first results.

3.2 RESEARCH FIELDS

SECTION PLANT ECOLOGY

Group 1: Community and Ecosystem Ecology
(Prof. Dr. P.J. Edwards, Dr. C. Abivardi, Dr. J. Kollmann, Dr. P. Ryser)

- Ecosystems on a landscape level and GIS
- Agroecology
- Ecosystem processes: nutrient budgets, herbivory and other biotic interactions
- Ecology of seed dispersal
- Physiological and ecological characters of plants

Group 2: Plant Ecology and Conservation Biology

(Prof. Dr. A. Gigon, Dr. D. Ramseier)

- Ecological stability: concepts and case studies
- Competition, positive biotic interactions, and coexistence of plants
- Biodiversity and nature conservation

Group 3: Restoration Ecology

(Prof. Dr. K.M. Urbanska)

- Population processes and their relevance for restoration
- Primary and secondary safe sites above the timberline

- Seed dispersal and seedbanks in disturbed and undisturbed grassland above the timberline

Group 4: Vegetation Science

(Prof. Dr. F. Klötzli)

- Resilience and dynamics of nutrient-poor wetlands
- Patterns and processes of forest communities (including tropical forests)
- Succession on landslides
- Dynamics of tropical savannas

SECTION EVOLUTION AND SYSTEMATICS

Group 1: Evolutionary Ecology

(Prof. Dr. B.A. Roy)

- Which role play pathogens in structuring plant populations and communities?
- Is there a trade-off between resistance to pathogens and tolerance to physical stress?
- Investigation of hypotheses on coevolution between pathogens and hosts: the roles of host species, their distribution and ecology.

Group 2: Plant Systematics and Evolution

(Dr. M. Baltisberger, Prof. Dr. E. Landolt, Dr. A. Widmer)

- Speciation and population genetics in complex genera (*Ranunculus*, *Stachys*)
- Microevolution and genetic adaptation in a changing environment (*Draba*, *Erigeron*)
- Plant-pollinator interactions
- Monographic revision of the Lemnaceae
- Project Flora der Stadt Zürich

Group 3: Evolutionary Mycology

(Dr. A. Leuchtmann)

- Biodiversity and population biology of *Epichloë* and *Acremonium* grass endophytes
- Sexual systems of *Epichloë* species in the context of the evolution of symbioses between grasses and endophytes

Group 4: Systematic Mycology

(Prof. Dr. E. Horak)

- Plants and fungi (ectomycorrhiza, saprophytes) in various habitats of the northern and southern hemisphere
- Monographic revision of several genera of the Agaricales (*Crepidotus*, *Galerina*) and Boletales (*Boletellus*)

SECTION ARCHAEOBOTANY

(Dr. C. Jacquat)

- Investigation of fossil plants in archaeological excavations in Switzerland (history of agricultural grasslands and adventitious plants)

3.3 NEW RESEARCH PROJECTS 1997

(title; source of funding; research assistant(s); project leader)

- Ecological and agricultural implications of innovative systems for cereals; Alliance for Global Sustainability; P.J. Edwards & C. Abivardi.
- Influence of light and nutrient availability on competition, coexistence and diversity in experimental swards; ETHZ; P. Ryser jointly with K. Zobel & L. Eek (University Tartu, Estonia).
- Seed dispersal of fleshy-fruited species along forest edges – a link between landscape structure and genetic diversity of plant populations; ETHZ; J. Kollmann & B.A. Roy.
- Biodiversity and its disturbance by eutrophication in lake shore ecotones: processes, effects, restoration. Schweizerischer Nationalfonds; U. Bollens; F. Klötzli.
- Grenzlagen der Laurophyllierung in der Schweiz. Schweizerischer Nationalfonds; G.-R. Walther; F. Klötzli.
- An investigation of the evolution of mating systems in plants: the causes and consequences of inbreeding in *Aconitum*.

Schweizerischer Nationalfonds; A.-B. Utelli; B.A. Roy.

- Systematics and Ecology of *Entoloma* in the southern Appalachians (USA); Hesler Fund, University of Tennessee, Knoxville, TN (USA); E. Horak.
- Agaricales of the Hawaiian Islands: Entolomataceae, Cortinariaceae; USA NSF Project, DEB-93300874 (1996–1998), Part 1: *Entoloma*, *Galerina* and allied genera, <http://www.galerina.entropy.sfsu.edu/hawaiian/Agaricales.html>, Part 2: (in prep.); E. Horak.
- Basidiomycetes of the Greater Antilles: Entolomataceae, Cortinariaceae; USA NSF Project 94-66 (1996–2000). Monograph of *Pluteus* (Agaricales) (in prep.); E. Horak.
- Biodiversidad en el NW de Patagonia: Mycota (Agaricales, Boletales); Consejo Nacional de Investigaciones, Argentina, Proyecto 25852-97 (1997–1998); E. Horak.

Perspectives in Ecology, Evolution and Systematics – the launch of a new journal

Peter J. EDWARDS, Johannes KOLLMANN & Barbara A. ROY

Perspectives in Ecology, Evolution and Systematics is a new, international refereed journal which publishes reviews and monographs. It has been launched by the Rübel Foundation, a private trust associated with the Geobotanical Institute of the Swiss Federal Institute of Technology, in association with the publishing firm Gustav Fischer Verlag. We set out here how this journal came into being, and what we hope it will achieve.

HOW PERSPECTIVES CAME INTO BEING ...

In 1918, Eduard Rübel (1887–1960) established a private research institute (Geobotani-

sches Institut Stiftung Rübel) in Zürich to promote the study of geobotany (the name “geobotany” is widely used in continental Europe and encompasses plant ecology, vegetation history and plant geography). Eduard Rübel was one of the pioneers of geobotany in Europe and, together with his colleague Josias Braun Blanquet (1884–1980), he developed an approach which became known as the Zürich-Montpellier school of phytosociology (Braun-Blanquet worked in the Geobotanical Institute from 1915–1926 before moving to Montpellier). This “school” was enormously influential and dominated European plant ecology for several decades. In 1958, not long before Rübel’s death, the Institute was incorporated into the Swiss Federal Institute for Technology. However, the trust (Stiftung Rübel) continues to exist and manages funds which are used to support its publication activities.

The main publication of the Stiftung Rübel was the *Veröffentlichungen des Geobotanischen Institutes*. This was a series of monographic volumes of which over 120 have been published since the first issue in 1922. During this long publishing history many classic works in the field of geobotany have appeared by such authors as Rübel himself, Braun-Blanquet, Tüxen, Ellenberg, and Landolt.

The *Veröffentlichungen* is one of many similar series published by universities and private foundations in Europe. Despite its distinguished history, it is increasingly clear that “in-house” journals and monographs of this kind are becoming outmoded. Certainly, research published in this form has less impact than if it were published in one of the mainstream ecological journals. Rather than keep its publications in their traditional form simply for the sake of continuity, the Stiftung Rübel decided that it was necessary to adapt them to the changing needs of the scientific

community. For this reason, it was decided to discontinue the *Veröffentlichungen* and replace it with a new publication. The first issue of this new journal, *Perspectives in Ecology, Evolution and Systematics*, appeared in June 1998.

... AND WHAT WE HOPE IT WILL ACHIEVE

Twenty years ago scientific journals could be simply classified into two main kinds: there were those which presented the results of original scientific research, and there were those, the review journals, which aimed to present in a digested form the state of knowledge on a particular topic. Although this division still remains, it is interesting to see how journals have diversified in the last two decades. The boundaries between the original research article and the review have become much less sharp. Many journals have introduced new types of article which are aimed at presenting opinion or stimulating discussion. For example, the *Journal of Ecology* has introduced a Forum section and an Essay Review – the latter is significantly different in content from the traditional review, and presents much a more personal view of a selected theme. Similarly *Oikos* has Minireviews, Forum and Opinion pieces.

It seems that there is a real demand in the scientific community for more than plain facts, whether presented for the first time as original research, or in a digested form as reviews. With the enormous growth of research activity, readers need more guidance through the jungle of scientific literature. The mature opinions of respected scientists about the development of their subject are particularly valued. Sometimes such opinions have a dramatic effect upon scientific thinking and the future direction that a subject takes. A good example is the seminal paper of Gould & Lewontin (1979) – *The spandrels of San Marco and the Panglossian paradigm: a critique of the*

adaptationist programme. (*Proceedings of the Royal Society of London, B series*, 1979, 205, 581–598) – which deeply influenced the thinking of ecologists and evolutionary biologists.

This recognition of the need for mature, critical opinion is one of the impulses for *Perspectives in Ecology, Evolution and Systematics*. But what exactly do we mean by perspective? The dictionary definition is a good starting point. Amongst other definitions we find the following: “the ability to view things in just proportion”, “a prospect of the future”. In perspective is defined as “in just relationship, with the important and the unimportant things in their proper places”. These definitions capture exactly what we hope the new journal will achieve – to put our subject “in perspective”.

We believe that writing a review is itself a creative process. It is probably not possible to produce a neutral review, or if it is, then the result is likely to be very dull! Even the decision as to which material to include and which to exclude introduces a personal view about what is important. A good review organises old ideas and facts in a such a way that new relationships become evident and new directions for research are suggested: in other words, it puts things into perspective. The new journal aims to publish not only reviews – that is articles which review existing literature – but also monographic studies which include original data; however, even in the monographs we are looking for substantial articles which have a review quality about them.

Finally, a comment on style and quality: we aim to set the highest editorial standards for *Perspectives*. All articles will be subject to peer review, and will not be automatically accepted for publication, even if they were commissioned by the editors. We also aim to provide

a high level of editorial support for authors, and will take pains to ensure that articles are clear and well written. We are very conscious of the special needs of scientists whose first language is not English. As editors of a journal originating in central Europe, we feel a special responsibility in helping these scientists to publish their work in the most accessible form possible.

4 List of publications 1997

4.1 VERÖFFENTLICHUNGEN DES GEOBOTANISCHEN INSTITUTES ETH, STIFTUNG RÜBEL, ZÜRICH, 1997

Volume 128

Wilhelm, M. Wiesen und Weiden in der Stadt Zürich. Untersuchung zur Erhaltung und Förderung der Pflanzenvielfalt.

4.2 BULLETIN OF THE GEOBOTANICAL INSTITUTE ETH, 63 (1997)

Articles

Schlaepfer, F. Influence of management on cover and seed production of *Brachypodium pinnatum* (L.) Beauv. in calcareous grassland. 3–9.

Güsewell, S. & Klötzli, F. Measuring the abundance of *Phragmites communis* Trin. in wet meadows – a methodological investigation. 11–24.

Landolt, E. How do Lemaceae (duckweed family) survive dry conditions? 25–31.

Matzke-Hajek, G. Zur Evolution und Ausbreitung apomiktischer *Rubus*-Arten (Rosaceae) in Offenland-Ökosystemen. 33–44.

Grundmann, A. & Gillmann, D. Zur Vegetation unterschiedlich alter Blockschuttstandorte am Rossberg SZ. 45–67.

Research Projects and Notes

Edwards, P.J. & Ekins, J.R. Morphology of gorse (*Ulex europaeus* L.) and its consequences for browsing by ponies. 69–75.

Kollmann, J. & Schneider, B. Effects of landscape structure on seed dispersal of fleshy-fruited species along forest edges. 77–86.

Utelli, A.-B., Roy, B.A. & Baltisberger, M. Evolution of mating systems in plants: the causes and

consequences of inbreeding in *Aconitum lycoctonum* s.l. 87–93.

Diemer, M., Joshi, J., Körner, C., Schmid, B. & Spehn, E.. An experimental protocol to assess the effects of plant diversity on ecosystem functioning utilized in a European research network. 95–107.

Holderegger, R. Recent perspectives in conservation biology of rare plants. 109–116.

4.3 FURTHER PUBLICATIONS

A Publications in refereed journals

Arn, D., Gigon, A. & Gut, D. (1997) Zwiebelgeophyten in Rebbergen der Nordostschweiz: Artenschutz und naturnaher Weinbau. *Zeitschrift für Ökologie und Naturschutz*, 6, 65–74.

Bosshard, A. (1997) What does objectivity mean for analysis, valuation and implementation in agricultural landscape planning? A practical and epistemological approach to the search for sustainability in agriculture. *Agriculture, Ecosystems & Environment*, 63, 133–143.

Crawford, D.J., Landolt, E., Les, D.H. & Tepe, E. (1997) Allozyme variation and the taxonomy of *Wolffiella*. *Aquatic Botany*, 58, 43–54.

Gigon, A. (1997) Fluktuationen des Dekungsgrades und die Koexistenz von Pflanzenarten in Trespen-Halbtrockenrasen (Mesobromion). *Phytocoenologia*, 27, 275–287.

Hirose, T., Ackerly, D.D., Traw, M.B., Ramseier D. & Bazzaz, F.A. (1997) CO₂ elevation, canopy photosynthesis, and optimal leaf area index. *Ecology*, 78, 2339–2350.

Horak, E. & Miller, O.K. (1997) A new species of *Simocybe* from North America. *Mycotaxon*, 62, 225–229.

Kollmann, J. (1997) Hypotheses on the regeneration niche of fleshy-fruited species in natural forest gaps and edges in central Europe. *Verhandlungen der Gesellschaft für Ökologie*, 27, 85–91.

Kollmann, J. (1997) Schadfraß an Gehölzsamen auf Waldlichtungen und im Wald. *Forstwissenschaftliches Centralblatt*, 115, 113–123.

Kollmann, J. & Poschlod, P. (1997) Population processes at the scrub–grassland interface. *Phytocoenologia*, 27, 235–256.

Landolt, E. (1997) Beiträge zur Flora der Stadt Zürich. IV. Dicotyledonen 2 (Berberidaceae bis Rosaceae). *Botanica Helvetica*, 107, 29–50.

Landolt, E. (1997) Beiträge zur Flora der Stadt Zürich. V. Dicotyledonen 3 (Leguminosae bis Araliaceae). *Botanica Helvetica*, **107**, 171–194.

Landolt, E. (1997) Managing populations of rare wild plant species in Switzerland. *Bocconeia*, **7**, 227–232.

Les, D.H., Landolt, E. & Crawford, D.J. (1997) Systematics of the Lemnaceae (duckweeds): inferences from micromolecular and morphological data. *Plant Systematics and Evolution*, **204**, 161–177.

Malinowski, D., Leuchtmann, A., Schmidt, D. & Nösberger, J. (1997) Growth and water status in meadow fescue is affected by *Neotyphodium* und *Phialophora* species endophytes. *Agronomy Journal*, **89**, 673–678.

Malinowski, D., Leuchtmann, A., Schmidt, D. & Nösberger, J. (1997) Symbiosis with *Neotyphodium uncinatum* endophyte may increase the competitive ability of meadow fescue. *Agronomy Journal*, **89**, 833–839.

Moreno, G., Heykoop, M., Esteve-Raventos, F. & Horak, E. (1997) *Marasmiellus phaeomarasmioides* sp.n. (Tricholomataceae) from Spain. *Persoonia*, **16**, 405–411.

Ortega, A., Esteve-Raventos, F., Horak, E., & Moreno, G. (1997) Aportación al catálogo de los macromicetos del área potencial del *Abies pinsapo* en España. *Boletín Sociedad Micologica Madrid*, **21**, 219–249.

Roy, B.A. & Raguso, R. (1997) Olfactory versus visual cues in a floral mimicry system. *Oecologia*, **109**, 414–426.

Ryser, P., Verduyn, B. & Lambers, H. (1997) Phosphorus productivity and its components in three grass species with contrasting response to N and P supply. *New Phytologist*, **137**, 293–302.

Schardl, C.L., Leuchtmann, A., Chung, K.-R., Penny, D. & Siegel, M.R. (1997) Coevolution by common descent of fungal symbionts (*Epichloë* spp.) and grass hosts. *Molecular Biology and Evolution*, **14**, 133–143.

Schumacher, P., Weber, D.C., Hagger, C. & Dorn, S. (1997) Heritability of flight distances for *Cydia pomonella*. *Entomologia Experimentalis et Applicata*, **85**, 169–175.

Schumacher, P., Weyeneth, A., Weber, D.C. & Dorn, S. (1997) Long flights in *Cydia pomonella* L. (Lepidoptera: Torticidae) measured by a flight mill: influence of sex, mated status and age. *Physiological Entomology*, **22**, 149–160.

Steinger, T., Lavigne, C., Birrer, A., Groppe, K. & Schmid, B. (1997) Genetic variation in response to elevated CO₂ in three grassland perennials – a field experiment with two competition regimes. *Acta Oecologica*, **18**, 263–268.

Urbanska K.M. (1997) Restoration ecology research above the timberline: colonization of safety islands on a machine-graded alpine ski run. *Biodiversity and Conservation*, **6**, 1655–1670.

Urbanska, K.M., Hurka, H., Landolt, E., Neuffer, B. & Mummenhoff, K. (1997) Hybridization and evolution in *Cardamine* (Brassicaceae) at Urnerboden, Central Switzerland: biosystematic and molecular evidence. *Plant Systematics and Evolution*, **204**, 233–256.

B Publications in unrefereed journals and books

Arn, D., Gigon, A. & Gut, D. (1997) Bodenpflege-Massnahmen zur Erhaltung gefährdeter Zwiebelpflanzen in begrünten Rebbergen der Nordostschweiz. *Schweizerische Zeitschrift für Obst- und Weinbau*, **2**, 40–42.

Arn, D., Gigon, A. & Gut, D. (1997) Bodenpflege-Massnahmen zur Erhaltung gefährdeter Zwiebelgeophyten in begrünten Rebbergen der Nordschweiz. *Begrünung im Weinbau. XI. Kolloquium internationaler Arbeitskreis* (eds. Südtiroler Beratungsring für Obst- und Weinbau), pp. 94–98. Kaltern, Italien.

Bosshard, A. (1997) Blumenwiesen: Tips aus erster Hand. *Die Grüne*, **35**, 22–25.

Desjardin, D.E. & Horak, E. (1997) *Marasmius* and *Gloiocephala* in the South Pacific Region: Papua New Guinea, New Caledonia and New Zealand. *Bibliotheca Mycologica*, **168**, 1–152.

Edwards, P.J. (1997) Beitrag der Landwirtschaft für eine ökologische Kulturlandschaft: Grossbritannien – Problem erkannt, aber ... *Die Grüne*, **5**, 14–15.

Edwards, P.J. & Abivardi, C. (1997) Ecological engineering and sustainable development. *Restoration Ecology and Sustainable Development* (eds. K.M. Urbanska, N.R. Webb & P.J. Edwards), pp. 325–352. Cambridge University Press, Cambridge.

Edwards, P.J., Webb, N.R., Urbanska, K.M. & Bornkamm, R. (1997). Restoration: science, technology and society. *Restoration Ecology and Sustainable Development* (eds. K.M. Urbanska, N.R. Webb & P.J. Edwards), pp. 381–390. Cambridge University Press, Cambridge.

Edwards, Y. (1997) Life history of some *Chusquea* species in old-growth forest in Costa Rica. *The Bamboos* (ed. G.P. Chapman), pp. 17–31. Academic Press, San Diego CA.

Gigon, A. & Grimm, V. (1997) Stabilitätskonzepte in der Ökologie: Typologie und Checkliste für die Anwendung. *Handbuch der Umweltwissenschaften*. (eds. O. Fränzle, F. Müller & W. Schröder), pp. 1–19. Ecomed, Landsberg.

Gigon, A. (1997): Blaue Listen machen Mut. *Magazin Uni Zürich*, 3/97, *Bulletin ETHZ*, 267, p. 62.

Jacquat, Ch. (1997) *Fossile Samen erzählen... (oder... archäobotanische Forschung an der ETHZ)*. (Deutsche Übersetzung: O. Mermod) Broschüre; Tag der offenen Türen der Gruppe Archäobotanik des Geobotanischen Instituts ETHZ, July 1997.

Jacquat, Ch. (1997) *Les graines fossiles racontent... (ou... recherches archéobotaniques à l'EPFZ)*. Brochure distribuée à l'occasion de la «journée portes ouvertes» du groupe Archéobotanique de l'Institut de géobotanique. EPFZ, juillet 1997.

Klötzli, F. (1997) Zur Dynamik von Naturschutzgebieten in der Schweiz. *Internationaler Naturschutz* (ed. K.-H. Endmann), pp. 191–225. Springer, Berlin.

Klötzli, F. (1997) *Zur Entwicklung von Dauerflächen in der Lüneburger Heide*. Hamburger Wasserwerke GmbH.

Leuchtmann, A. & Clay, K. (1997) The population biology of grass endophytes. *The Mycota. Vol. V Part A: Plant Relationships* (eds. G. Carroll & P. Tudzynski), pp. 185–202. Springer, Berlin.

Leuchtmann, A. (1997) Ecological diversity in *Neotyphodium*-infected grasses as influenced by host and fungus characteristics. *Neotyphodium/Grass Interactions* (eds. C.W. Bacon & N. Hill), pp. 93–108. Plenum Press, New York.

Roy, B.A., Kirchner, J.W.K., Christian, C. & Rose, L. (1997) High disease incidence and disease tolerance in a Great Basin community. *Bulletin of the Ecological Society of America* (Suppl.), 78, 173.

Ullrich, K., Weibel, U. & Edwards, P.J. (1997) Management to enhance biodiversity in arable land and its significance at a landscape level. *Species Dispersal and Landuse Processes* (eds. A. Cooper & J. Power), pp. 335–338. Proceedings of the 6th Annual IALE Conference, Coleraine.

Urbanska, K.M. (1997) Reproductive behaviour of arctic/alpine plants and ecological restoration. *Disturbance and Recovery of Arctic Terrestrial Ecosystems – an Ecological Perspective* (ed. R.C.C.M. Crawford), pp. 481–501. Kluwer, Dordrecht.

Urbanska, K.M. (1997) Restoration ecology of the alpine and the arctic areas: are the classical concepts of niche and succession directly applicable? *Variation and Evolution in Arctic and Alpine Plants* (eds. L. Borgen & B.E. Jonsell), pp. 189–200. Opera Botanica 132, Copenhagen.

Urbanska, K.M. (1997) Safe sites – interface of plant population ecology and restoration ecology. *Restoration Ecology and Sustainable Development* (eds. K.M. Urbanska, N.R. Webb & P.J. Edwards), pp. 81–110. Cambridge University Press, Cambridge.

Urbanska, K.M. & Landolt, E. (1997) Pflanzenforschung für sinnvolle Renaturierungen. *Terra Grischuna*, 3/97, 26–29.

Urbanska, K.M., Webb, N.R. & Edwards, P.J. (1997) Why restoration? *Restoration Ecology and Sustainable Development* (eds. K.M. Urbanska, N.R. Webb & P.J. Edwards), pp. 3–7. Cambridge University Press, Cambridge.

Walther, G.-R. & Gillmann, D. (1997) Neue Pflanzen besiedeln Schweizer Wälder Langfristige Änderung der Artenzusammensetzung. *Neue Zürcher Zeitung*, 17 December 1997, p. 75.

Widmer, M. & Weibel, U. (1997) Ornithologische Beobachtungen aus der Region Schaffhausen 1994. *Mitteilungen der naturforschenden Gesellschaft Schaffhausen*, 42, 123–137.

Zimmer, R. (1997) Funde von Adventivarten im Güterhafen Kehlheim/Saal. *Hoppea*, 58, 411–422.

C Unpublished reports

Bosshard, A. & Klötzli, F. (1997) *Contributions à l'écologie, la protection et la gestion durable du Plateau d'Andohariana, RNI Andringitra, Madagascar*. WWF Madagascar, Februar 1997. 18 pp.

Bosshard, A. (1997) *Contributions à l'écologie, la valorisation et la protection de la végétation du RNI Andringitra, Madagascar*. WWF Madagascar, Februar 1997, 19 pp.