# INTERNATIONAL LICHENOLOGICAL 

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## Official publication of the International Association for Lichenology

## Editor:

P. SCHOLZ

Paetzstraße 37, D-04435 Schkeuditz, Germany
flechten.scholz@gmx.de, phone (+49) 3420469880
Editorial Board:
M.R.D. SEAWARD (Bradford), H. SIPMAN (Berlin),
R. STORDEUR (Halle)

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## INTERNATIONAL ASSOCIATION FOR LICHENOLOGY

The International Association for Lichenology (IAL) promotes the study and conservation of lichens. It organizes symposia, field trips, and distributes a biannual newsletter. There is a listserver that enables on-line discussion of topics of interest. Webpages devoted to lichenology are also maintained by members of the Association. People wishing to renew their membership or become members of IAL are requested to send their subscription (one payment of 40 USD for 2005-2008) to either Treasurers.
The International Lichenological Newsletter is the official publication of IAL. It is issued twice a year (July and December) in English. The Newsletter is also available on the Internet. The Newsletter is divided into four main sections: 1) Association news: official information concerning the Association, such as minutes of Council meetings, proposals of Constitutional changes, new members, changes of addresses, etc. 2) News: information about lichenologists, institutional projects, herbaria, requests of collaboration, announcements of meetings, book reviews, etc. 3) Reports: reports of past activities, short lectures, obituaries, short historical novelties, etc. 4) Reviews: presentation of recent progress and other topics of interest in lichenology with optional discussion. When the material exceeds the available space, the Editor will prepare a summary, on prior agreement with the contributors.
Any information intended for publication should reach the Editor on or before June 15 and November 15 for inclusion in the July and December issues, respectively.

IAL affairs are directed by an Executive Council elected during the last General Meeting. Council members elected at the IAL5 Symposium (Tartu, Estonia, 2004) are listed below, and will serve until 2008.

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## ASSOCIATION NEWS

## Changes of address

Kristina Articus, Department of Pharmacognosy and Mycology, 2 Av. du Professeur Léon Bernard, F-35043 Rennes Cedex, France, e-mail: Kristina.articus@univrennes1.fr
William Brenneman, 761 W. Fir Court, Louisville, Colorado 80027, USA, 303 6668579

Imke Schmitt, Leibniz Institute for Natural Product Research and Infection Biology, Hans-Knoell-Institute, Beutenberg Str. 11a, D-07745 Jena, Germany, Tel. +49-(0)3641-656711, Fax +49-(0)3641-656705, e-mail: imke.schmitt@hki-jena.de

## NEWS

## New Literature:

Dalby, D. H. [Kery] \& Dalby, C. 2005. Shetland Lichens. - Shetland Amenity Trust: Garthpool (Lerwick, Shetland). 120 pages. ISBN 095432463 3. Price: GBP 12 (GBP 15 incl. postage) available from: sbrc@zetnet.co.uk
The Shetland Islands, situated in the centre of a triangle between Scotland, Norway and the Faroe Islands, are a remote group of rocky islands in the northern Atlantic. They not only offer plenty of substrates for epilithic and epigaeous lichens, but also possess a good number of corticolous and lignicolous habitats. So the lichen flora is rich and diverse yielding 465 accepted species, a figure not provided in the book.
The book is written for the student rather than the expert, starting with a general introduction to lichens ( 25 pages) followed by a detailed explanation of Shetland lichen habitats ( 15 pages) and a overview of lichen ecology which also includes anthropogenic influences (10 pages). The use of lichens as dye stuff and the problems of lichen conservation are discussed briefly, and after a short chapter on the history of lichen studies in Shetland the main part of the book is formed by an annotated lichen list. The nomenclature is based on the Lichen Flora of Great Britain and Ireland (Purvis et al. 1992) but names used in the more recent checklists of the British Isles are given as synonyms and are cross-referenced. The distribution is given by abbreviations for the various islands of the group, but there is no map where the reader can find where those islands are situated since the single map included (p.56) gives only an overview of the lichen collecting or recording sites without any names.
Unfortunately this is not the only shortcoming. In the chapter on the history the user would certainly expect to be provided with a more or less complete overview for an area where the number of available studies is rather limited, but a number of papers dealing exclusively with Shetland lichens are neither mentioned here nor given in the
list of references; for example, Hawksworth \& Seaward's well-known Lichenology in the British Isles 1568-1975 is missing, which is a great disadvantage since there is a valuable listing of papers for the Shetlands up to that time including a number of additions to the present book. Furthermore, the Dictionary of Fungi referred to is the $8^{\text {th }}$ edition (1995) instead of the more recent one from 2001, and the fascicles of the Lichen Atlas of the British Isles issued by the British Lichen Society (BLS) (1995-2001) are not given where as the much older Provisional Atlas ... $(1984,1985)$ is cited. This is surprising because the BLS mapping scheme is said to be a major source of data (p. 57).
The illustrations especially the drawings are superb, showing once more the high standard of the professional artist Claire Dalby. The book will certainly be able to serve its main purpose as introduction for beginners, but more carefully editing could have improved its value for all users.

## The Editor

## Divakar, P. K. \& Upreti, D. K. 2005. Parmelioid lichens in India (A revisionary

 study). - Bishen Singh Mahendra Pal Singh: Dehra Dun (India). 488 pages. ISBN 81-211-0389-4. Price: US \$ 95.00.This is a full length monograph of the parmelioid lichens of India. After the introduction, which also includes a historic account, a key to 22 accepted genera is given. These are the following genera with species numbers in brackets ( +1 numbers are treated in the addendum only): Arctoparmelia (1), Bulbothrix (7), Canomaculina (29), Canoparmelia (9), Everniastrum (5+1), Flavoparmelia (1), Flavopunctelia (3), Hypotrachyna (35+1), Melanelia (15+1), Myelochroa (11), Neofuscelia (2), Parmelia (10), Parmelina (4), Parmelinella (4), Parmelinopsis (8), Parmotrema (46), Pleurosticta (1), Punctelia (4), Relicina (2), Relicinopsis (3), Rimelia (2), Xanthoparmelia $(13+1)$. Every species is described in detail and is illustrated by a colour photograph. In addition, so-called chromatographic profiles are given for each genus, namely colour scans of TLC plates for all treated species using one solvent system (in most cases solvent system A). Furthermore, a distribution map for every species is presented.

Bringing together all this information is doubtless an enormous task and a big step forward for Indian lichenology. How quickly the knowledge is growing is seen by the necessity for an addendum of four species.
Few criticisms should be noted. The photographs are in most cases of acceptable quality having in mind that they were taken from herbarium material, but they mostly provide sufficient details to compare general appearance and special structures. In a number of cases they are the only available illustrations. However, the colour often appears too brown and might be misleading and in few cases the image is not in focus which seems to be partly a result of the printing process. Unfortunately the distribution maps are too generalised, since they often have one record in a state where several localities are listed in the text.

Nevertheless, the authors and publisher have achieved a true flora of parmelioid lichens of India which will certainly be of great help for the study of this group in India. It hopefully will provoke a lot of additional information on the distribution of the species within India as many species might be found in other Indian states as well, especially as the number of records from some states is still very low. No question that it should be available in every major lichenological library.

The Editor

Frisch, A.; Kalb, K. \& Grube, M. 2006. Contributions towards a new systematics of the lichen family Thelotremataceae. - Bibliotheca Lichenologica 92. - J. Cramer in Gebr. Borntraeger Verlagsbuchhandlung: Berlin \& Stuttgart. 556 pages. ISBN 3-443-58071-8. Price: 88 Euro.

The new volume in this prestigious series consist of three parts: The lichen family Thelotremataceae in Africa by A. Frisch (pp. 3-370), A monograph of Thelotremataceae with a complex structure of the columella by A. Frisch \& K. Kalb (pp. 371-516) and Molecular phylogeny of the Thelotremataceae by A. Frisch, K. Kalb \& M. Grube (pp. 517-539).

The first and major part is based on the PhD thesis of the first author of all 3 papers.
A new genus classification of the Thelotremataceae is presented which became necessary because Myriotrema, Ocellularia and Thelotrema (sensu Hale) were found to be heterogeneous. 19 genera are now accepted for the family including the resurrection of Chapsa A. Massal., Leptotrema Mont., Leucodecton A. Massal. and Stegobolus Mont., the validation of Ampliotrema Kalb and the newly described genera Acanthotrema A. Frisch, Gyrotrema A. Frisch, Melanotrema A. Frisch and Redingeria A. Frisch. Unfortunately two groups of uncertain generic affiliation remain, the Thelotrema glaucopallens- and the Ocellularia clandestina-group.

The revision is based on some 1300 collections by the author from Cameroon and Tanzania and about 120 additional specimens obtained from public herbaria. 38 of the formerly recorded 73 taxa from Africa are accepted as valid species, but some had to be excluded from the family. 17 species are described as new to science (in parts one and two) and a further 47 species are recorded for the first time from Africa. In all, 94 species are presently known from the continent. All these species are described and illustrated in detail and keys to genera and species are given. Checklists for Thelotremataceae in the African countries based on verified names and some reliable, more recent literature sources are presented in an appendix. This is an enormous step forward in the knowledge of African crustose lichens independent from the acceptance of all the taxonomic changes which can only be proofed by time and deeper knowledge. In the final paper of this collection, the authors reinforce their classical taxonomy with molecular methods, obtaining new sequence data for 46 species of Thelotremataceae, representing 13 out of the 19 accepted genera and the uncertain Thelotrema glaucopallens- and Ocellularia clandestina-groups. The
results of the Bayesian analysis of mitochondrial 16 S rDNA gene data are in fairly good congruence with the proposed new classification scheme.

The volume is concluded by a taxonomic index for all three contributions together. A minor criticism might be that not all authors are cited according to the widely accepted index of authors of fungal names (e.g. "Dodge" instead of "C. W. Dodge" or "Massal." instead of "A. Massal.") or that the names in appendix 2 "Excluded or dubious names" are not completely in alphabetical order, but these are rather unimportant points compared to the huge work presented with these contributions. Clearly, this book belongs in every taxonomic lichen library. It is the most important contribution to African lichenology since Swinscow \& Krogs Macrolichens of East Africa published in 1988.

The Editor

Holien, H. \& Tønsberg, T. 2006. Norsk lavflora. - Tapir akademisk forlag: Trondheim. 224 pages. ISBN 8251919789 . Price 395 NOK (www.tapirforlag.no).
This new lichen flora for Norway is the first one in Norwegian covering all groups of lichens in one book and it is the first one illustrating all the species included with colour photographs. These colour photographs, mostly $7 \times 13 \mathrm{~cm}$, are the most important feature of the book and nearly all of them are in high quality showing the important characters of the species and have the true colour which is so important for visual determination. Some 330 species are covered; they are arranged in systematic order in two sections, fruticose and foliose in the first, and crustose in the second. The selected species include common and rarer species, mostly epiphytes, but omitting some of the most common species, especially from anthropogenic habitats as mortar. It is not a real beginners book, but it has the usual general introduction about lichen morphology, reproduction, ecology and distribution (including 5 selected maps), followed by notes on red lists, lichen collecting and biomonitoring. I personally like the idea of presenting the differences in the bark ecology of the main trees in a diagram with little silhouettes between axes for bark from poor to rich in nutrients on one hand and from rough to smooth on the other. There are no keys, which seems to be a wise decision since the selected species form only a small part of the flora.
Because of the high quality of the illustrations and the interesting selection of species it will be of great help for all people with a honest interest in Scandinavian lichens and can also provide a reference outside this area.

The Editor

McCarthy, P. M. \& Malcolm, W. M. 2004. Key to the genera of Australian macrolichens. (Flora of Australia Supplementary Series 23). - Australian Biological Resources Study: Canberra. VIII \& 63 pages. ISBN 0642568340 . Price not indicated. Available fromABRS@deh.gov.au.

This small but very valuable booklet is the logical addition to the already available keys for apothecial crusts (Lumbsch et al. 2001, volume 11 in this series) and the crustose pyrenocarpous lichens of Australia (McCarthy 2001, in volume 58A of the main flora). It covers all 135 genera of Australian macrolichens in three separate keys for fruticose, foliose and squamulose genera with special emphasis on macroscopic characters wherever possible. Two-thirds of the genera are illustrated by high quality photographs, mainly by Bill Malcolm and Jack Elix, provided on 12 pages, 9 photographs on each. To be on the safe side, some mainly crustose genera with few squamulose representatives are also included (e.g. Acarospora). In addition to the morphological descriptions, the main habitats and the distribution in the Australian provinces are given, followed by the most important literature sources. The bibliography runs to over 6 pages, and a 3-page glossary is provided.
The authors and publishers are to be thanked for this useful work which will be an indispensable tool for any lichen taxonomist dealing with southern hemisphere collections.

The Editor

Pope, R. 2005. Lichens above treeline. A hiker's guide to alpine zone lichens of the northeastern United States. - University Press of New England: Hanover \& London. 70 pages. ISBN 1-58465-402-3. Price: US\$ 19.95.

Lichens are the most striking features of vegetation in alpine zones of high mountains in most parts of the world and even those hikers and alpinists who do not recognise lichens in lower mountain belts are well aware of them in high altitudes. It is somewhat surprising that this small booklet is the first of its kind.
Its declared aim is to introduce the hiker and nature lover to the lichens of the highest mountains in the northeastern parts of the United States by means of describing and illustrating 52 of the most abundant and most attractive species of the area and secondly by 8 short essays called Special Topics ranging from Lichens as Food and

## Human Uses of Lichens to Lichen Substances and Lichens and Radioactivity.

All the selected species are illustrated by high quality colour photographs. As well as the main photograph of each species, most have smaller ones for important diagnostic features. With the help of these illustrations and the good descriptions, which also mention related species and how to distinguish them, everybody should be able to find and recognise the selected species in the field.

This book should serve as appetizer for amateurs leading to more serious studies of lichens as it gives a clear introduction to the subject and will almost certainly allow successful first determinations. Author and publisher are to be congratulated for such a useful and well thought over booklet for beginners.

Schiefelbein, U. 2006. Ökologische und naturschutzfachliche Aspekte der Flechtenflora des Landkreises Uecker-Randow (Mecklenburg-Vorpommern). -Archiv naturwissenschaftlicher Dissertationen, Band. 16. 216 pages. Martina Galunder-Verlag, Nümbrecht. ISBN 3-89909-061-6. Price: 49 Euro. Available from: Martina Galunder-Verlag, Alte Ziegelei, D-51588 Nürmbrecht-Elsenroth. E.mail: www.martina-galunder-verlag.de/news.htm.
This PhD thesis includes an assessment of the lichen flora of a lowland area in NE Germany and puts the case for the conservation value of some of its lichens. The thinly populated region is shaped by the glaciers of the Ice Age and consists of low-hilly to flat, mostly sandy, areas covered by a mosaic of agricultural fields and afforestations. Lichens occur mainly on roadside or otherwise isolated trees, on walls and concrete, on poor sandy soil and on erratic blocks. For the 302 species encountered, distribution maps based on the German grid system (Messtischblatt) are presented, together with habitat characteristics, frequency and references. This information is used in a discussion of hemeroby, ecological indicator value and conservation needs. Of particular interest is the large section which argues the need for conservation based on phytogeography; world distribution and current frequencies of ten species are assessed in order to determine the significance of the local populations for the survival of the species.
H. J. M. Sipman

Sociedad Española de Liquenología 2004. Flora Liquenológica Ibérica. Ostropales, Gyalectales. - Murcia 48 pages. ISSN 1696-0521.

This is the second part of the forthcoming series Flora Liquenológica Ibérica which started in 2003 with the treatment of the Peltigerales by A. R. Burgaz \& I. Martínez. The new issue contains Graphidaceae by R. Carballal \& M. E. López de Silanes, Solorinellaceae by López de Silanes and Gyalectaceae by the following authors for the different genera: Bryophagus by G. Paz Bermúdez; Belonia \& Ramonia by López de Silanes; Cryptolechia, Dimerella \& Pachyphiale by J. Álvarez and Gyalecta by López de Silanes \& Álvarez.

The following genera (species numbers in brackets) are treated: Glyphis (1), Graphina (1), Graphis (2), Phaeographina (1), Phaeographis (4), Gyalidea (3), Belonia (2), Bryophagus (1), Cryptolechia (1), Dimerella (3), Gyalecta (8), Pachyphiale (2), Ramonia (2) [in order of the families and in alphabetical order within families].

It is a full length flora with keys and extended descriptions of all treated taxa. Illustrations from other sources are cited and 9 plates with line drawings of diagnostically important features of 19 species are added. The distribution is explained and listed by the abbreviations of provinces, for which a map is provided in the introduction. Minor mistakes noted include the author citation of Gyalecta leucaspis which has to be "(Kremp. ex A. Massal.) Zahlbr." or only "(A. Masal.) Zahlbr." as it is also given in the cited basionym "Secoliga leucaspis A. Massal." and
some typographical errors (e.g. "Phachyphiale" on title or the numbering of species in the treatment of Gyalidea).

Nevertheless, this series provides a major step towards a lichen flora of the Iberian Peninsula with a number of forthcoming issues already in preparation.

The Editor

## St.Clair, L. L. \& Seaward, M. R. D. (Eds.) 2004. Biodeterioration of stone surfaces - Lichens and biofilms as weathering agents of rocks and cultural

 heritage. - Kluwer Academic Publishers: Dordrecht, Boston, London. Hardcover, xviii + 292 pages. ISBN 1-4020-2803-2. Price 105,93 Euro.The present volume is based on contributions from a Biodeterioration Symposium held in Albuquerque, New Mexico in August 2001. A major aim was to bring together various aspects of the subject for the first time in a single volume and to present an up-to-date overview of the problems involved. In 14 chapters, 26 authors from six countries span a range of topics from Lichens as subversive agents of biodeterioration (M.R.D. Seaward) to the question Lichens on Wyoming sandstone: do they cause damage? (C. Chari \& R. Cossio). In the first cited work it is shown that Dirina massiliensis f. sorediata and other lichens can produce calcium oxalate on a variety of substrata (even on acid stone) which result in thick coatings of this substance which formerly had often not been attributed to lichen growth. In the second work, the authors demonstrate that on Wyoming sandstone supporting petroglyphs, lichen growth does not cause clear damage and the question of the advisability of removing the lichens from the rock surface is raised. These two and many other examples discussed, including Maya temples in Belize and artefacts in India, show how different the situations can be and that there is no way to simple solutions. In many cases removal appears not to be a good choice and experimental work with consolidant solutions in combination with biocides showed good results on nearly pure limestone in the subtropical climate of Belize. The questions involved are obviously as diverse as the people who have to deal with the problem. The "normal" lichenologist is therefore confronted with a lot of complex questions as soon he/she is asked for solutions. This volume offers considerable help in such cases and it opens the horizon. The last chapter Lichens and monuments: an analytical bibliography (R. Piervittori, O. Salvadori \& M.R.D. Seaward) is of special value because the literature on this subject is widely dispersed in archaeological, botanical, chemical and historical journals and in many specialised reports. The bibliography lists some 660 papers and includes an analytical index to nine different topics. Somewhat questionable to the reviewer is the necessity for prolonged literature lists in the chapter on Lichens and biodeterioration of stonework: the Italian experience (R. Piervittori), since all these papers are listed in the general bibliography referred to above.

To summarize - a book of high scientific standard in good printing quality is offered which has to be consulted in questions of lichen biodeterioration and therefore should not be missing in major lichen libraries. Unfortunately the high price might prevent some potential buyers from purchasing the volume.

The Editor

## The Herbarium 'Des Abbayes'

The lichen collection of Henri Robert Nicollon des Abbayes (1898-1974) in Rennes, France, is now again accessible to the public. The collection comprises ca. 13000 specimens, focussing on lichens from Brittany and on the genus Cladonia. It also includes a fairly large library of lichenological literature and the exsiccata of des Abbayes, Almborn, Claudel, Harmand, Havaas, Köfaragó-Gyelnik, Larbalestier, Leighton, Lichenotheca Polonica, Magnusson, Malbranche, Mougeot, Museo Hist. Natur. Vindobonensi, Nádvornik, Poelt \& Steiner, Rabenhorst, Tavares, Vězda, and Weber. The collection will be accessible on the internet in near future; however, it is currently possible to borrow material. Loan requests should be addressed to Kristina Articus (Kristina.articus@univ-rennes1.fr).

Kristina Articus, Rennes

## Saskatchewan Lichen Checklists

The website www.biodiversity.sk.ca/Docs/lichens.pdf was posted on May 9. 2005 and contains an overall Provincial lichen checklist showing growth form and ecozone distribution, or listed by growth form and ecozone exclusively. In addition the list provides an Ecological Overview of Saskatchewan emphasizing lichens.

A total of 494 lichens supposed to occur in the Province are listed. Updates will be provided from time to time.

Bernard de Vries, Emerald Park, Saskatchewan

## Personalia

In September 2005 Kristina Articus joined the research group "Lichen substances and photo protection" at Rennes University 1, France, with Prof Joel Boustie as head of the department (http://www.eaSLP.univ-rennes1.fr). Kristina is responsible for the herbarium "Des Abbayes" associated with the Dept. of Pharmacognosy \& Mycology in Rennes.

In 2004 Kristina received a grant from NorFA which enabled her to give a course series in lichenology at Uppsala University and to start a network among young lichenologists. The courses were given in cooperation with Mats Wedin (2004, lichen taxonomy and anatomy) and Jan-Eric Mattsson (2006, Molecular studies in lichenology) and addressed to PhD students in lichenology in the Nordic and Baltic countries. In 2004 Kristina defended her thesis "Phylogenetic studies in Usnea and allied Genera" at the Dept. of Systematic Botany, Uppsala University, Sweden with Philippe Clerc as opponent. Leif Tibell was her supervisor and Mats Wedin and JanEric Mattsson the co-supervisors.

Louise Lindblom finished her four-year engagement as a postdoctoral fellow at the Dept. of Biology, University of Bergen, Norway on 31 May 2006. A couple of additional publications from the research project are to be completed with Stefan Ekman. Louise accepted a half-time employment for six months at Bergen Museum, University of Bergen, starting 1 June 2006.

Imke Schmitt (Jena) is continuing her postdoctoral studies at the Leibniz Institute for Natural Product Research and Infection Biology. Together with Christian Hertweck she is working on functional analyses of polyketide genes in ascomycetes.

Harrie Sipman, while identifying the lichen samples from Euboia, Greece, is taking macrophotographs for the website http://www.bgbm.fu-berlin.de/sipman/ Zschackia/AegeanLichens/genuslist.htm. It is also intended to include a full series of illustrations of the lichen species in the Aegean region of Greece. Uncertain identifications are also included to document taxonomic problems and suggestions/ corrections/comments will be much appreciated.

## REPORTS

## Parshuram Patwardhan



Dr Parshuram Patwardhan, one of the pioneer lichenologists in India, who belonged to the Agharkar Research Institute (ARI), Pune, India, passed away on 15 May 2006 at the age of 71 .

The ARI was developed in the early 1970s as another centre for research on lichens in India as a result with the extensive exploration of South-Western Ghats of India by Dr Patwardhan under the PL-480 funds (USA). Subsequently, under various sponsored research projects, he made a significant continuing contribution to lichenology through his exploration of the lichen mycobiota of India and its island dependencies

During his visits to the Smithsonian Institution in Washington and the BM in London, Dr Patwardhan developed friendly relations with several lichenologists. His association and friendship with Dr Mason E. Hale is well known and his contacts with lichenologists worldwide through extensive correspondence and exchange of lichen literature and lichen specimens have contributed greatly to the development of lichenological studies in the ARI and India. We are grateful to him for depositing his personal collection of lichen literature for the future use of the next generation of lichenologists working in the Department of Mycology at ARI.

Under the leadership and able guidance of Dr Patwardhan the ARI has made a substantial contribution to Indian lichenology, playing a significant role in furthering taxonomic investigations, particularly of microlichens. We are grateful to him for his most useful accounts of several difficult genera, contributing in a major way to our understanding of many difficult microlichen genera. He also had a strong interest in botanical literature.

Dr Patwardhan was a deeply committed lichenologist, well known to many of us. He was a thoughtful, extremely kind, helpful and happy colleague to have in the Mycology Department. He will also be remembered for his beautiful handwriting.

He was particularly happy to see younger generations of students growing around him, even after his retirement in 1995 when tragically he lost his vision due to brain tumor and he had to stop his work. He had always been interested in our work and progress and enjoyed long discussions with us by phone. Despite being twice operated upon to remove his tumor, he fortunately retained an excellent memory: his ability to quote chapter, names of authors, and date of publication of the earlier literature was astounding.

Although one more link in the chain of international lichenology is broken, he leaves behind a very rich legacy for us to remember and appreciate. We all have a store of fond memories of him to keep his presence and his contribution to lichenology fresh in our minds.

His passing away is a great loss to the lichen world. His contributions were indeed important, and his impact on Indian lichenology will be felt for generations to come. His major contributions to Indian lichenology will ensure that his name will never be forgotten.

## Francis Rose

## 29 September 1921 - 15 July 2006

Francis Rose, affectionately referred to as "Frose" by close colleagues, was surely the most outstanding British field "botanist" of the 20th century. The only forbears with similar field skills in the UK were William Borrer (1781-1862) and Edward Morell Holmes (1843-1930). By his 30s he had a formidable knowledge of vascular plants and bryophytes. He got "Dougal" Swinscow (1917-1992) into bryophytes in the 1950s, but in the mid1960s Dougal then managed to turn Francis' attention to lichens. And Francis took them up with a vengeance, scouring the nation and making numerous discoveries of rare species. He used early botanical guides and map interpretation skills to identify sites of potential interest, in the process rediscovering species not recorded in them for a century or more. He had a "nose" for which sites would be rich, and if they felt "right" for a particular species he would pronounce "it must be around here somewhere" and search-and-search until it was found - which it almost invariably was - or dark. In Peter James he found a mentor to help with the identification of the numerous sterile crusts his keen eye recognized as distinct in the field but seemed to have no names; many were new to science and subsequently described by Brian Coppins and Peter James.
His heart was in the field, and he would be away from home for extended periods, seem almost oblivious of the weather, and use all available daylight - striking matches to illuminate bark crevices as the light faded. Trophies were crammed into empty tobacco tins and thrust into bulging field-jacket pockets, often to be opened with a flourish before colleagues in badly-lit bars the same evening. When the British Lichen Society (BLS)'s mapping scheme was getting into gear, he had his own sheaf of maps he would pull out to see if those present could add any extra dots. If you planned to meet Francis at some venue, he would regularly be several hours late, having stopped at various sites that looked interesting on the way. He scribbled his observations in an endless series of notebooks, which would always include vascular plants and bryophytes as well as lichens, even if you thought he was just focussing on lichens. The Mapping Cards for the BLS's scheme he completed were always heavily annotated as to the number and species of trees on which species occurred. Then there were the 'phone calls late at night to update colleagues on his recent discoveries, and lengthy hand-written letters including species lists which I and many others treasure. He did not get on with microscopes or typewriters, and several of his major papers had to be typed-up from handwritten manuscripts - I learned a great deal in the process.
As to his lichenological achievements, the key elements of the Hawksworth \& Rose (1970) paper linking lichen assemblages with mean winter sulphur dioxide levels were hatched together in a car journey back south following an extensive lichenological excursion through northern England in 1969 (Rose et al. 1970). The depth of his recording in his beloved Hampshire and the Sussex Weald has yet to be surpassed, as a glance at the numbers of "spots" on his Wealden maps indicates (Rose
1973), and his studies in the New Forest with Peter James set a new standard for investigations on particular sites (Rose \& James 1974). His extraordinary amount of field-work enabled him to correlate woodland histories with the lichen communities present, and to their use as indicators of ecological continuity (Rose 1974, 1976, 1992; Harding \& Rose 1986). Sites that had good assemblages of old forest indicator lichens proved to also be rich in invertebrates and other organisms, but the lichens could be assessed much more quickly and this led to the acceptance of lichens as a criterion for the selection of sites as Sites of Special Scientific Interest (SSSIs) in the UK. Francis was very much interested in phytosociology, and contributed much new data to the survey of lichen communities in the British Isles (James et al. 1977). His broad perspectives on changes in lichens through time are reflected in a series of contributions on this theme (Hawksworth et al. 1973, 1974; Coppins et al. 2001).

In addition he helped revise Alvin's (1977) delightful little lichen text, and produced several field guides to plants, of which his Wild Flower Key (Rose 1981) is much acclaimed and with a new edition expected in 2006. His account of the Hampshire flora including lichens (Brewis et al. 1996) is exceptionally detailed and recognized as one of the best county floras to have been produced in Britain,. He was much sought after as a consultant by agencies such as then Nature Conservancy Council (later English Nature), preparing endless detailed reports that led to many sites obtaining legally protected status (reports he prepared up to 1976 are included in Hawksworth \& Seaward 1977). Francis held different posts in the University of London from 1949-81, latterly as Reader in Biogeography at King's College, but his home was always his real place of work, his study with every surface piled high with books, papers and specimens. He is probably unique in being made an Honorary Member of the Botanical Society of the British Isles, British Bryological Society, and British Lichen Society. He was appointed Member of the Order of the British Empire (MBE) in 2000, and in 2003 the Francis Rose Nature Reserve at Wakehurst Place in Sussex was inaugurated in his honour.

He was always weather-tanned, tweed-jacketed, ready for the field, modest and unassuming, ever keen to share information, and pipe to hand, as eloquently described by Swinscow (1989). And an inspiration to others, counting David Bellamy and Brian Coppins amongst his protégés. Francis was a very special person, whom I feel privileged to have known and been able to collaborate with since 1968. He will be sorely missed, especially by his wife Wendy and their four children, but his legacy will live on through all who use lichens as indicators of ancient woodlands, and through the sites he was able to protect.

David L. Hawksworth, Madrid

## References:

Alvin, K. L. (1977): The Observer's Book of Lichens. London: Frederick Warne, 188 p.
Brewis, A., Boman, P. \& Rose, F. (1996): The Flora of Hampshire. Colchester: Harley Books, 386 p.
Coppins, B. J., Hawksworth, D. L. \& Rose, F, (2001) Lichens. In: The Changing Wildlife of Great Britain and Ireland (D. L. Hawksworth, ed.): 126-147. London: Taylor \& Francis.

Harding, P. T. \& Rose, F. (1986): Pasture-woodlands in Lowland Britain. Huntington: Institute of Terrestrial Ecology, 89 p.
Hawksworth, D. L., Coppins, B. J. \& Rose, F. (1974): Changes in the British lichen flora. In: The Changing Flora and Flora of Britain (D. L. Hawksworth, ed.): 47-78. London: Academic Press.
Hawksworth, D. L. \& Rose, F. (1970): Qualitative scale for estimating sulphur dioxide air pollution in England and Wales using epiphytic lichens. Nature 227: 145-148.
Hawksworth, D. L., Rose, F. \& Coppins, B. J. (1973): Changes in the lichen flora of England and Wales attributable to pollution of the air by sulphur dioxide. In: Air Pollution and Lichens (B. W. Ferry, M. S. Baddeley \& D. L. Hawksworth, eds): 330-367. London: Athlone Press of the University of London.
Hawksworth, D. L. \& Seaward, M. R. D. (1977): Lichenology in the British Isles 1568-1975: an historical and bibliographical survey. Richmond: Richmond Publishing, ix +231 p.
James, P. W., Hawksworth, D. L. \& Rose, F. (1977): Lichen communities in the British Isles: a preliminary conspectus. In: Lichen Ecology (M. R. D. Seaward, ed.): 295-413. London: Academic Press.
Rose, F. (1973): Detailed mapping in south-east England. In: Air Pollution and Lichens (B. W. Ferry, M. S. Baddeley \& D. L. Hawksworth, eds): 77-88. London: Athlone Press of the University of London.
Rose, F. (1974): The epiphytes of oak. In: The British Oak: its history and natural history (M. G. Morris \& F. H. Perring, eds): 250-373. Faringdon: E. W. Classey.
Rose, F. (1976): Lichenological indicators of age and environmental continuity in woodlands. In: Lichenology: progress and problems (D. H. Brown, D. H. Hawksworth \& R. H. Bailey, eds): 279-307. London: Academic Press.
Rose, F. (1981): The Wild Flower Key: a guide to plant identification in the field, with and without flowers. London: Frederick Warne, 480 p.
Rose, F. (1992): Temperate forest management: its effects on bryophyte and lichen floras and habitats. In: Bryophytes and Lichens in a Changing Environment (J. W. Bates \& A. M. Farmer, eds): 211233. Oxford: Clarendon Press.

Rose, F., Hawksworth, D. L. \& Coppins, B. J. (1970): A lichenological excursion through the north of England. Naturalist 95: 49-55.
Rose, F. \& James, P. W. (1974): Regional studies on the British lichen flora I. The corticolous and lignicolous species of the New Forest, Hampshire. Lichenologist 6: 1-72.
Swinscow, T. D. V. (11989): Reap a Destiny: divagations of a Taoist. London: British Medical Journal Memoir Club, 334 p.

## Lichen course 'Molecular studies in lichenology' from the students' perspective

During 28 May-3 June 2006, 15 postgraduate students of the Nordic and Baltic countries gathered on the island Lidingö (Stockholm) to discuss molecular studies in lichenology. The PhD course had three main goals: 1. to give the students an insight in different research projects based on molecular data 2 . to give students the possibility to meet established researchers in person, and 3. to form a network among young lichenologists in the Nordic and Baltic countries. The course was funded by the Nordic Research Council (NorFA) and was organised by Kristina Articus and Jan-Eric Mattsson.

We were glad to meet the following lecturers talking on various topics:
Torbjørg Bjelland (Norway) - Rock art and lichens: conflict between cultural and natural heritage.

Ana Crespo (Spain) - Systematic and nomenclatural implications of phylogenetic results based on molecular analyses. Some decisions focused at species and genus level.

Rosmarie Honegger (Switzerland) - Mating systems in lichen-forming ascomycetes: what can they tell us about systematics and evolution?

Louise Lindblom (Norway) - (1) Genetic variation and population structure.
(2) Female lichenologists in Sweden - rare but strong.

Christian Printzen (Germany) - How to distinguish lichen species: molecular and classical approaches.
Imke Schmitt (Germany) - Discovering diversity using molecular markers. Phylogeny and secondary chemistry of lichen-forming fungi.

Elfie Stocker-Wörgötter (Austria) - (1) Applied microbiology for studying lichens and lichen bionts in-vitro.
(2) Secondary metabolites in cultured mycobionts and transcription of PKS genes.

The students were: Hilde Ely Aastrup (Norway), Nadia Alexeeva (Russia), Johan Asplund (Norway), Chitra Bahadur Baniya (Norway/Nepal), Kasper Berthelsen (Denmark), Rakel Blaalid (Norway), Åsa Dahlkild (Sweden), Ekaterina Kuznetsova (Russia), Filip Högnabba (Finland), Håkan Lättman (Sweden), Alexandra Robeck (Sweden), Lauri Saag (Estonia), Ave Suija (Estonia), Tiiu Tõrra (Estonia), Kjersti Wannebo Nilsen (Norway).

We, the students, presented our research projects as well and got positive feedback and constructive commands on our work. The network will continue in the form of a webpage with a discussion forum. It was very fruitful for us, young lichenologists, to meet in a course focussing on our subject. Often we are under-represented at our home departments and it might be difficult to meet people in the same field. This course gave us the chance to discuss our problems in a relaxed way (no supervisors around) and to get very useful advice on our problems; also the lecturers cast light on their topics from more personal viewpoint including their careers in lichenology.

This had stronger encouraging effect compared to often waterproof and highly sophisticated congress presentations.

It felt good to address difficulties in a larger group and since some of those might be quite common, we would like to summarize some questions and problems here:

How to standardize sampling methods in the field?
What to do when nature behaves differently than the theory predicts?
How to get correct sequences out from the lichens? How to define an individual?
How to find taxonomically meaningful characters?
The evaluation of morphological characters is difficult if their ontogeny is unknown.
Must we always accept taxonomical changes as soon as they are made? In nature conservation, etc. a more stable system is needed.
Should we use new and "hip" phylogeny methods (e.g. Bayesian) or those, we feel most secure with (e.g. parsimony)?
Statistical methods are often difficult to learn within the short time of a master thesis.
Writing the papers is sometimes harder than the research itself.
It is often difficult to choose the right journal for publishing our results.
Sometimes even supervisor(s) can be quite difficult to deal with.
In addition, a few personal impressions from the students:
Working with traditional floristic studies, we need to follow the development of molecular methods because the most part of modern taxonomy relies on molecular data. Every time we have to make a choice either to agree with new taxonomical changes or to be consistent with conservative point of view. We are happy if morphological, ecological or geographical characters, which help a lot in determination of species, also support these changes.

On the other hand, data on a population's molecular heterogeneity gives us better understanding of the term "biodiversity", that should be the main aim of floristic investigations.
The course week in Lidingö was nice and provided me with new knowledge and experiences. The subjects covered during the lectures gave a broad perspective of lichenology as many interesting approaches were presented - there are more than phylogenies and taxonomy.

Discussing problems is always interesting as everyone has his/her unique experiences. Many problems are shared among most of the students, while some problems have been encountered by very few but it is good to be aware of all kinds of difficulties that can occur. Discussions did not always give straight answers, however, they always gave new ideas about solutions. The lecturers who have more experience than the students provided good advice.
To hear that well-known lichenologists have also encountered problems which they have managed to solve during their careers increases the self-confidence and gives us motivation to continue researching.

Finally, we would like to thank Kristina and Jan-Eric for organizing the course and all the teachers for giving inspiring lectures and creating a supportive atmosphere. Hopefully there will be more lichen networking and courses of this kind in the future!

The Students

## BLS field meeting, Spain, May 2006

The British Lichen Society's field meeting in Mataelpino, Sierra de Guadarrama, Madrid, Spain during 7-14 May 2006 was attended by 20 people: Ann Allen, Barbara Benfield, Ishpi Blatchley, Robin \& Ann Crump, Simon Davey, Margaret Earle, Brian \& Fiona Gale and Barbara Hilton from Britain, Steen N. Christensen and Inge Knudsen from Denmark and Peter Scholz from Germany. Spanish participants were Arturo Arguello, Violeta Atienza and David Hawksworth, with Ana Rosa Burgaz, Ana Crespo, Zuzana Ferencova and Leo Sancho joining part of the time. The meeting was organized by David Hawksworth in co-operation with the field meeting secretary Simon Davey. The selection of localities took the party through a great variety of biotopes during the week.

The meeting was well organized and all the practical matters ran smoothly. Patricia and David Hawksworth - with a little help from their friends - catered the delicious and handy lunches for the field trips. Thus the participants were left to enjoy the scenery of the Spanish mountains and to concentrate on the lichens.

The first day Ana Rosa Burgaz gave an introductory talk on the lichens of the Madrid area. This was followed by a short walk in the village of Mataelpino to an old grassland with scattered trees of Fraxinus angustifolius and Quercus pyrenaica and boulders and outcrops of granite. Among the finds Collema furfuraceum, Parmelia


Leo Sancho explains about the biotope, La Peñalara.


Lunch at Los Porrones.
barrenoae and Parmelina carporrhizans may be mentioned. The second locality this day, Los Porrones at El Boalo, was a granite mountainside with tomillares (garigue) dominated by Cistus spp. and Lavandula stoechas. The granitic outcrops harboured a number of Umbilicaria species and terricolous lichens included Cladonia iberica. During the lunch break we could admire the griffon vultures circling above.

The second day, which was guided by Ana Crespo, included a gypsum outcrop near the town of Torrelaguna and a calcareous grassland near the village of Tamajon. The gypsum locality had a rich terricolous flora including species of Catapyrenium, Diploschistes, Diplotomma, Fulgensia, Psora, Squamarina and Toninia. When most participants had their noses to the ground a megaphone clattered through the air from down slope. A police car and two officers were spotted. It turned out that workers of the nearby gypsum mine were going to blast the mountain. The party had to take cover behind a large lorry. While waiting for the blast someone mentioned the prospect of the lorry being turned over by the pressure. After the explosion the pursuit of lichens were resumed. Besides lichens the mountainside had interesting flowering plants including a large population of flowering Fritillaria hispanica. The calcareous rocks near Tamajon had a flora of mainly crustaceous lichens. Much attention was, however, paid to populations of Ophrys lutea, $O$. speculum and $O$. sphegodes which were much photographed.
On the third day, guided by Violeta Atienza, we visited Silla de Felipe II near El Escorial. After an introduction to the area by Violeta granite outcrops and Quercus pyrenaica and Fraxinus angustifolius trees in the forest were scrutinized for lichens. On the rocks Lobaria scrobiculata and a Leptochidium (not albociliatum)
were found. The trees had a rich flora including Koerberia biformis, Leptogium teretiusculum and L. subtile. After lunch, the mountain La Barranca was visited; on its lower slopes in open Quercus pyrenaica woodland Parmelia barrenoae was found in large quantities and higher up a Pinus sylvestris forest harboured a luxuriant Pseudevernion including Hypogymnia farinacea and on granite boulders and outcrops Parmelia serrana was common.

The fourth day was devoted to a single locality: La Peñalara ( 2430 m ), the highest summit in the Sierra de Guadarrama. Leo Sancho who had made ecophysiological studies on the mountain, was our guide. From the main road Land Rovers took us up as far as a narrow track allowed; not all were happy about the loose gravel and fallen rocks which seemed to concentrate on the track where it was most narrow and the slope was steepest. As we walked on the slopes above the tree limit, griffon vultures were seen circling. The granite outcrops had a number of Umbilicaria species and a lot of Brodoa atrofusca, B. intestiniformis and Pseudephebe pubescens. Cornicularia normoerica was occasionally seen and a bird perch rock harboured Ramalina capitata, R. polymorpha and Rhizoplaca melanophthalma. Gagea guadarramica and other mountain flowers also caught our attention.

The fifth day we spent walking along Rio Lozoya in a valley with mixed forest of Salix sp., Quercus pyrenaica and Pinus sp. Fuscopannaria mediterranea, Parmelia barrenoae, Lobaria pulmonaria and L. scrobiculata were among the encountered lichens.

The sixth day we visited two places at La Pedritza. At Picos de la Higuera, granite rock outcrops in open tomillares dominated by Cistus ladaniferus were studied. Dimelaena oreina was seen on these rocks and Cyphelium notarisii on a dead stump of Pinus. The second stop was at Canto Cochina. Along the river in a Pinus sylvestris forest lichens were studied mainly on Salix sp. at the river bank.

The excursions were skilfully led by the guides mentioned and by David Hawksworth on the other days - and I am sure that we all returned with a greater insight in the lichen floras of the habitats visited and knowledge of species that previously were unknown to many of us. Thanks are also due to Patricia and David Hawksworth for their great hospitality and sumptuous dinners at their home in Mataelpino.

Steen N. Christensen, Copenhagen

## REVIEWS

## Lichenological Journals: 4. Clementeana and Lichen Physiology and Biochemistry - two lichen journals from Spain <br> P. Scholz

Since 1994, the Spanish Lichenological Society published a small journal Clementeana, Boletín de la Sociedad Espanola de Liquenología (SEL). The journal is named in honour of Simón de Rojas Clemente y Rubio (1777-1827) regarded as the founder father of Spanish lichenology. Ramalina clementeana Llimona \& R. G. Werner is named after him and a drawing of this lichen is on every cover. It is unfortunate that the journal is not widely known outside Spain since it includes more then society news. N. L. Hladun has been its editor from the beginning and it is published in Barcelona. Starting with number 3, all issues are also available as pdf-files from the homepage of the society (www.ucm.es/info/seliquen) where most recent information is also available. As well as society news and personalia, bibliographies for the Iberian Peninsula and lists of published theses (doctoral as well as lower degrees) dealing with lichenology from 1990 onwards. Reports from congresses, symposia and excursions, together with a few smaller scientific contributions and book reviews are also included. Another important features include keys for the Iberian Peninsula and a major contribution (by X. Llimona) on the history of Spanish lichenology. Issue 6 differs from all others by publishing the abstracts of the first national workshop for lichenology ("Jornadas Nacionales de Liquenología") held in Ezcaray (6-9 September 2004).
The published issues are as follows:

| $1(1994) 40$ pages | $5(2004) 41$ pages |
| :--- | :--- |
| $2(1995) 14$ pages | $6(2004) 18$ pages |
| $3(1997) 20$ pages | $7(2005) 41$ pages |
| $4(1999) 30$ pages | $8(2006) 25$ pages |

For bibliographic reasons it should be remembered that a second Spanish journal devoted to lichenology was published in 1986 under the title Lichen Physiology and Biochemistry, but only appeared as one issue of 69 pages. It was planned as a quarterly international journal published by the Department of Plant Physiology of the University Complutense in Madrid. The five papers of the first and only issue are all of physiological or biochemical and no taxonomic novelties or floristic records are presented.

Editorial Remark
Since several smaller lichenological journals have appeared irregularly and are often difficult to cite, or rarely to be found even in large libraries, it is recommended that detailed lists together with some historical remarks, as provided above, are featured for other journals in forthcoming issues of the IAL Newsletter and therefore contributions to this subject are invited.

## Back issues of TLN

The following back issues of ILN are still available: $9(1), 9(2), 10(1), 10(2), 11(1)$, $11(2), 12(1), 12(2), 13(1), 13(2), 14(1), 14(2), 15(1), 15(2), 16(1), 16(2), 17(1)$, 20(1) and further issues. Photocopies are available of: vol. 1(1), 1(2+supp.), 1(3), $2(1), 3(2), 6(2), 7(1-2), 8(1-2)$. Two indexes are also available: Index to vol. $1-8$, Index to vol. 9-13.

According to a resolution of the IAL Executive Council, published in ILN 16(1), April 1983, the following charges will be levied for back issues of ILN: Vol. 1: 0.25 USD per issue ( 3 per volume); vol. 2-8: 0.50 USD per issue ( 2 per volume); vol. 9-13: 1.00 USD per issue ( 2 per volume); vol. 14-17: 1.50 USD per issue ( 2 per volume). Back issues from vol. 20-29 are available for 1.00 USD each (3 per volume). The Indexes are free. New members will only receive free copies of the numbers constituting the volume issued for the calendar year in which they join IAL.

Orders for vols. 1-29 should be sent to H. Sipman, Botanischer Garten \& Botanisches Museum, Königin-Luise-Straße 6-8, D-14195 Berlin, Germany, fax: (+49)-3084172949, e-mail: hsipman@bgbm.org. For later issues contact the Editor.

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## List of Societies

Australasia: Australasian Association for Lichenology. Info: W. M. Malcolm, Box 320, Nelson, New Zealand. Phone \& fax: (+64) 3-545-1660, e-mail: nancym@clear.net.nz
Brazil: Grupo Brasileiro de Liquenólogos (GBL). Info: Marcelo P. Marcelli, Instituto de Botânica, Seção de Micologia e Liquenologia, Caixa Postal 4005, São Paulo - SP, Brazil 01061-970. Fax: (+55)-11-6191-2238, phone: (+55)-11-5584-6304 (inst.), 218-5209 (home), e-mail: mmarcelli@sti.com.br
Central Europe: Bryologisch-lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM). Contact: Felix Schumm, Mozartstr. 9, D-73117 Wangen, Germany, email: fschumm@online.de, web page: www.BLAM-ev.de
Czech Republic: Bryological and Lichenological Section of the Czech Botanical Society. Info: Jiří Liška, Institute of Botany, Academy of Sciences of the Czech Republic, CS-252 43 Pruhonice, Czech Republic, e-mail: liska@ibot.cas.cz, web page: botanika.bf.jcu.cz/BLS/english/index.html
Finland: Lichen Section, Societas Mycologica Fennica. C/o: Botanical Museum (Lichenology), P.O. Box 47, FIN-00014 Univ. Helsinki, Finland. Info: Teuvo Ahti, phone: (+358)-9-7084782, fax: (+358)-9-7084830, e-mail: teuvo. ahti@helsinki.fi
France: Association Française de Lichénologie (AFL). Info: Damien Cuny, Laboratoire de Botanique, Faculté de Pharmacie, 3, rue du Professeur Laguesse, BP 83, 59006 Lille Cedex. Phone (+3)-209-64040 poste 4289, fax (+3)-20959009, e-mail: damien.cuny@wanadoo.fr, web page: perso.orange.fr/floragis/ AFL/en/index.htm
Great Britain: The British Lichen Society (BLS). C/o: Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, UK. Info: Pat Wolseley, phone: (+44)-20-7942-5617, fax: (+44)-20-7942-5529, e-mail: bls@nhm.ac.uk, web page: www.theBLS.org.uk
Italy: Società Lichenologica Italiana (SLI). C/o: Museo Regionale di Scienze Naturali di Torino, v. Giolitti, 36, I - 10125 Torino. Info: Stefano Loppi, Dipartimento di Science Ambientali "G. Saratti", Sezione di Ecologia e Sistematica Animale e Vegetale, Unità di Ricerca di Lichenologia, Università degli Studi di Siena, Via P.A. Mattioli 4, I-53100 Sienna, phone: (+39)-0577-232869, fax: (+39)-0577232896, e-mail: loppi@unisi.it, web page: http://dbiodbs.univ.trieste.it/sli/ home.html
Japan: The Japanese Society for Lichenology (JSL). Info: Yoshikazu Yamamoto, Secretary of JSL, Akita Prefectural University, Shimoshinjyo-nakano, Akita, 010-0195 Japan, fax (+81)-18-872-1678, e-mail: yyamamoto@akita-pu.ac.jp, web page: www.lichen.akita-pu.ac.jp/jsl/index.php?ml_lang=en Lichenological Society of Japan (LSJ). Nobuo Hamada, Secretary of LSJ, Osaka City Institute of Environmental Sciences, Tojo 8-34, Tennoji, Osaka 543-0026, Japan, e-mail: MXI00715@nifty.com, web page: home.hiroshima-u.ac.jp/ lichen/lsj-e.html

The Netherlands: Dutch Bryological \& Lichenological Society (Bryologische + Lichenologische Werkgroep, BLWG). Info: Dick Kerkhof, e-mail: info@blwg. $n l$, web page: www.blwg.nl
Nordic Countries: Nordic Lichen Society (Nordisk Lichenologisk Förening, NLF). Info: Ulrik Søchting, Dept. of Mycology, Botanical Institute, Ø. Farimagsgade 2D, DK-1353 Copenhagen; phone: (+45)-3532-2313, fax: (+45)-3532-2321, email: ulriks@bot.ku.dk,web page: www.uib.no/bot/nlf/index_NLF.htm
North America: American Bryological and Lichenological Society, Inc. (ABLS). Info: Dr. Robert S. Egan, Department of Biology, University of Nebraska at Omaha, Omaha, NE 68182-0040; e-mail: regan@mail.unomaha.edu, web page: www.abls.org or www.avalon.unomaha.edu/~abls
North America, Northwest: Northwest Lichenologists (NWL). Info: Bruce McCune, 1840 NE Seavy Avenue, Corvallis, Oregon 97330 USA. E-mail: Bruce.McCune@science.oregonstate.edu, web page: www.nwlichens.org (To get on the e-mail list, follow the links from <www.nwlichens.org>
North America, California: The California Lichen Society (CALS). P.O. Box 472, Fairfax, CA 94930, U.S.A. Info: Janet Doell, e-mail: rdoell@sbcglobal.net, web page: ucjeps.herb.berkeley.edu/rlmoe/cals.html
North America, East: Eastern Lichen Network. Info: Marian Glenn, fax: (+1) 973-761-9772, e-mail: glennmar@shu.edu, web page: www.nybg.org/bsci/lichens/eln/
South America: Grupo Latino Americano de Liquenólogos (GLAL). Info: Susana Calvelo, Centro Regional Universitario Bariloche, Universidad Nacional del Comahue, Bariloche- 8400, Río Negro, Argentina; phone: (+54) 944-23374 or 28505, fax: 62215 or 22111, e-mail: scalvelo@crub.uncoma.edu.ar
Poland: Lichenological Section of the Polish Botanical Society. (Polskie Towarzystwo Botaniczne). C/o: Krystyna Czyzewska, Department of Algology and Mycology, University of Lodz, Banacha 12/16, 90-237 Lodz, Poland, email: czyzew@biol.uni.lodz.pl; Info: Urszula Bielczyk, Institute of Botany, Polish Academy of Sciences, Lubicz 46, 31-512 Krakow, Poland, phone: (+48) 12-4241768, fax: (+48) 12-4219790, e-mail: bielczyk@ib-pan.krakow.pl
Slovakia: Slovak Botanical Society - Lichenological Working Group, c/o Institute of Botany, Slovak Academy of Sciences, Dubravska cesta, 1484223 Bratislava, Slovakia. Info: Anna Guttova, phone: 07-59412501, fax: 07-54771948, e-mail: botugutt@savba.savba.sk,web page: www.botanika.sk
Spain: Sociedad Española de Liquenologia (SEL). Info: Ana Rosa Burgaz, Dpto, Biologia Vegetal I, Fac. CC. Biologicas, Universidad Complutense, E-28040Madrid. Phone (+34) 1394 5042, fax: (+34) 1 3945034, e-mail: arburgaz@bio. ucm.es, web page: www.ucm.es/info/seliquen
Sweden: Svensk Lichenologisk Förening (SLF). Info: Per Johansson, Inst. f. Naturvårdsbiologi, SLU, Box 7002, 75007 Uppsala, Sweden. Email: Per. Johansson@nvb.slu.se
Switzerland: Association Suisse de Bryologie et Lichénologie (BRYOLICH). Info: Silvia Stofer, WSL, Zuercherstrasse 111, CH-8093 Birmensdorf. E-mail: stofer@wsl.ch, web page: www.bryolich.ch

Turkey: Club of Turkish Lichenologists (TLT). C/o: Ayşen Türk, Anadolu University, Dept. of Biology, TR-26470 Eskișehir, Turkey. E-mail: aturk@anadolu.edu.tr Info: Attilâ Yıldız, Ankara University, Dept. of Biology, TR-06100 BeşevlerTandoğan/Ankara. Phone: (+90)-3122126720, fax: $(+90)-3122232395$, e-mail: ayildiz@science.ankara.edu.tr

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