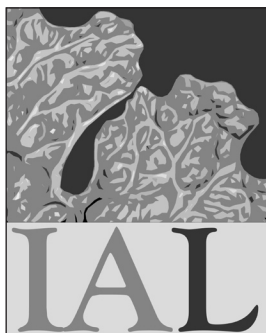


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The opinions expressed in the *Newsletter* are not necessarily those held by the International Association for Lichenology

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 IAL6 Symposium (Asilomar, California (U.S.A.), 2008) are listed below, and will serve until 2012.

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ASSOCIATION NEWS

IAL Awards 2010

Invitation for Nominations

The IAL plans to make awards of the Acharius Medal and the Mason Hale Award at the IXth International Mycological Congress in Edinburgh in 2010. For information regarding previous recipients of these awards, please consult: <http://www.lichenology.org/>.

Acharius Award

The Acharius medal is awarded for outstanding contributions to lichenology over the career of an individual. One or two medals can be awarded at the IMC meeting in Edinburgh. Nomination should be sent no later than 31 January 2010 to Thorsten Lumbsch (tlumbsch@fieldmuseum.org).

Mason Hale Award

This award is granted to recognise excellence in research by young lichenologists for outstanding work resulting from doctoral dissertations or similar studies. The submission of work(s) for consideration must be made by a person other than that being proposed. The selection process will be in two stages. The first stage submission should be accompanied by: (a) a copy of the title page and abstract either of the thesis or published work(s); (b) a statement from the person making the nomination; and (c) supported by letters of support from not less than two other lichenologists based in different countries from that of the person being nominated sent directly to the Chair of the Committee. In the second stage, candidates short-listed by the Committee will be required to send hard copies or pdfs of the nominated work(s) to each member of the Committee appointed by the IAL. First-stage nominations should be sent directly by e-mail to the Chair of the Committee, Professor D. L. Hawksworth CBE (d.hawksworth@nhm.ac.uk) to arrive not later than 31 January 2010.

New members

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The 9th International Mycological Congress (IMC9: the Biology of Fungi) will be hosted by the British Mycological Society in Edinburgh, Scotland, 1-6 August 2010. The Congress will be held in the outstanding venues of the Edinburgh International Conference Centre and the Usher Hall in the centre of the city.

Scientific Programme

The scientific programme will be divided into five themes that will be given more-or-less equal weighting although many of the Symposia will be inter-thematic. All the themes will contain applied topics.

The scientific themes and the chairs of the organizing committees for each of these themes are as follows:

Cell Biology, biochemistry and physiology

Chair: Prof. Gero Steinberg

Environment, ecology and interactions

Chair: Prof. Lynne Boddy

Evolution, biodiversity and systematics

Chair: Prof. Pedro Crous

Fungal pathogenesis and disease control

Chair: Prof. Alistair Brown

Genomics, genetics and molecular biology

Chair: Dr. Paul Dyer

IMC 9 Symposia

Ascomycete systematics

Basidiomycete biodiversity, ecology and mechanisms of host interaction

Beyond sequence – applied genomics and industrial mycology

Biocontrol with fungi

Cell biology of infection

Comparative evolutionary genomics and the Fungal Tree of Life

Cryptic species and speciation

Cytoskeleton and motors

Ecology of invasive and threatened species

Emerging fungal diseases and potential pandemics

Endocytosis and exocytosis

Environmental sensing and responses

Exploitation of fungi: biofuels and beyond

Evolutionary adaptation of fungal pathogens to their human host

Evolutionary genetics of sex in fungi

Fungal barcoding

Fungal effectors and host manipulation

Fungal epigenetics

Fungal interactions with microbes

Fungal recycling matters: from enzymes to communities

Fungal RNA-regulatory processes

Fungal Tree of life: linking genomics to physiology and morphology

Fungi and global change 1: nitrogen enrichment and land use change.**Fungi and global change 2: climate change responses**

Future strategies for the control of fungal diseases

Genomics of fungal-plant symbioses

Hyphal networks: mechanisms, ecology and modelling

Living on the edge: fungi at extremes**Origin and co-evolution of lichen and mycorrhizal fungi with plants**

Population genetics: from single cell to community

Programmed cell death and autophagy

Revealing true fungal diversity - metagenomics

Rhythmic fungal biology

Rusts: taxonomy, host specificity and geographical distribution

Secondary metabolism

Secret world of endophytes

Signalling and development

Stress responses, fungal development and pathogenicity

Systems biology: functional genomics to molecular networks and systems

The dynamic fungal cell

The emergence of resistance to antifungal drugs

The fungal nucleus

The fungal-plant interface in mycorrhizal and lichen associations

Tropical mycology

200th anniversary of the hypha

Symposia printed in bold are planned to include lichenological contributions and might be co-convened by a lichenologist.

Special Interest Group meetings

Most of the following Special Interest Group meetings will be held on Sunday, 1 August 2010 prior to the IMC9 Opening Ceremony

Anaerobic fungi: Neocallimastigomycota
Basidiomycete genomics
Bioluminescent fungi: their biology and use as experimental tools
Cryptic species: diversity, commercial importance, and conservation
Dothideomycete genomics
Ecological role of hyphal structures in interactions between Basidiomycota and other organisms
Education in mycology
Filamentous fungi as model systems in eukaryotic cell biology
Food mycology
Fungal eisosomes
Fungal nomenclature
Fungal photobiology
Fungi as model systems for disease
Fungi, insects and people - Complex and changing interactions
Fusarium
Gene expression in fungi
Gene knock-out and knock-down technologies for fungi: the molecular tool box
Genomes of pathogenic tree fungi; emerging trends
Genomic methods in fungal community ecology
Geomycology
Imaging technologies for fungi
Individuality: from single cells to single hyphae
Industrial mycology
Mathematical modeling of fungal growth and function
Modelling fungal colonies and communities
Molecular diagnostics of fungi/novel techniques in detection of fungi from environment
Mycology in Africa: successes and challenges in a developing continent
Platform fungi for low molecular metabolite formation
Post-genomic approaches to understanding interactions between fungi and their environment
Teaching mycology

IAL Pre-conference Excursion:**Lichens on the Atlantic West Coast of Scotland**

Details of this pre-conference excursion which will take place Saturday 24 - Saturday 31 July, 2010 are now listed on the field trips page. Booking is available on a first come, first served basis.

Big exhibition on Fungi at RBGE

The Royal Botanic Gardens at Edinburgh (RBGE) in collaboration with the British Mycological Society (BMS) will put on a large exhibition on fungal biology which will run from July-November 2010. It should be the biggest exhibition in Edinburgh in 2010 and it is predicted that it will be seen by ~ 400,000 visitors. It is planned to hold receptions at the exhibition during IMC9.

The following speakers will give plenary lectures at IMC9:

John **Taylor** (UC Berkeley, USA) – keynote lecture

Alastair **Fitter** of York University will give a plenary presentation on *Nutritional and evolutionary ecology of mycorrhizal fungi*.

Joseph **Heitman**, James B. Duke Professor in the Department of Molecular Genetics and Microbiology at Duke University, and director of the Center for Microbial Pathogenesis and the University Program in Genetics and Genomics will give a plenary presentation on *Microbial pathogens in the fungal kingdom*.

David **Hibbett** (Clark University, USA); Nancy **Keller** (UW Madison, USA); Gero **Steinberg** (Exeter University, UK) and Nick **Talbot** (Exeter University, UK).

Online registration is now open for IMC9. The deadline for early booking is 5 February 2010 but delegates are advised to book by 31 December 2009 to avoid increases in UK VAT effective from 1 January.

NEWS

100th volume of *Bibliotheca Lichenologica*

The launch of the 100th volume of *Bibliotheca Lichenologica*, entitled ‘Diversity of Lichenology – Anniversary Volume’, was celebrated in Sweden on 13–17 October 2009 by the editors, Arne Thell, Mark Seaward and Tassilo Feuerer, and three of the major contributors, Ingvar Kärnefelt, Tiina Randlane and Andres Saag. The book contains 512 pages and 18 chapters written by 37 authors from 13 countries; these include recent developments in taxonomy, phylogenetic analyses, floristic studies and ecology, as well as newly described taxa, keys to the identification of *Usnea*, details of analytical work, and a personal review of some past and present contributors to lichenology. On 14 October, Mark Seaward gave an interesting and entertaining lecture on “The role of lichens in shaping our world” at the Biological Museums in Lund. The actual book launch was held in Acharius’s house, courtesy of its current owners, in the beautiful lakeside town of Vadstena on 15 October. After a magnificent dinner (including specialties from Lake Vättern), in the room which originally housed Acharius’s collections, Ingvar Kärnefelt gave an illustrated and informative presentation on Acharius. Those present greatly appreciated the hospitality provided by the owners of the house, Göran Söderström and Axel Unnerbäck, and lichenologists generally owe them a great debt of gratitude for maintaining it so sympathetically in a style commensurate with its past history.



Participants in front of Acharius’s house (left to right): Andres Saag (Tartu), Tiina Randlane (Tartu), Mark Seaward (Bradford), Tassilo Feuerer (Hamburg), Kerstin Eichhorst (Hamburg), Ingvar Kärnefelt (Lund) and Arne Thell (Lund).

New Literature

BAYERISCHE AKADEMIE DER WISSENSCHAFTEN (ed.) (2009): Ökologische Rolle der Flechten (Rundgespräche der Kommission für Ökologie 36). – München: Verlag Dr. Friedrich Pfeil. 190 pages. Paperback. ISBN: 978-3-89937-096-6, ISSN 0938-5851 Price: 30,00 Euro.

On 13 October 2008, the Bavarian Academy of Sciences invited 10 speakers and about 60 other guests for a round-table meeting on the *Ecological Role of Lichens* (see the report by L. Kappen in this issue). The volume under review has been published by the organizers Dr. A. Beck (Munich) and Prof. O. Lange (Würzburg), together with Dr. C. Deigele (Bavarian Academy). The range of the invited presentations attempted to highlight the various aspects of lichen ecology, starting with more general topics such as *Lichens and their position in the system of fungi* (A. Beck & D. Peršoh) and *Lichens: ecological aspects of the relationship between fungi and algae* (R. Honegger). The following presentations are more specialised with *Lichens in arctic, antarctic and alpine ecosystems* (A. Green) and the *Function of lichens in biological crusts* (B. Büdel); then contributions related to the ecology of chemical compounds with *Lichens and pollutants* (M. Hauck) and the *Ecological functions of lichen compounds* (Y. Gauslaa); other topics covered are *The role of lichens as food resources for animals, especially Lepidoptera*. (H. Segerer), *Ecology and physiology of lichens growing on bark* (M. Lakatos, B. Hartard & C. Máguas) *Lichens: Bioindicators of environmental changes* (C. Scheidegger), and finally *Lichens on monuments: Indicators and mediators between monument and nature conservation* (R. & U. G. Drewello). All presentations were followed by discussions by participants, which are also published in this volume. Contributions are in German with short English summaries except the papers by Green and Gauslaa.

Particular attention should be drawn to two papers presented by authors who are not lichen specialists. A. H. Segerer, a zoologist from the Munich Zoological State Collection, gives an overview of lichens as food, but from a lepidopterologist's point of view explains that lichenivory is to be found in various unrelated groups of butterflies. He also states that field observations of caterpillars feeding on lichens are still very scarce. Suprisingly the author uses the term lichenovory (instead of lichenivory), a spelling mistake which according to web searches has never been used before. In the discussion R. Honegger pointed out that invertebrates feeding on lichens could also be of importance for distributing lichens because living fungal and algal cells have been found in the excrements of these animals. R. & U. G. Drewello present new results on the influence and importance of lichens for the conservation of monuments. They clearly show that the ideally expected results of various cleaning methods cannot be achieved because it is impossible to completely remove all microbiological growth from stone surfaces despite the fact that every cleaning method is connected without some loss of the monument itself which is against the goal of monument protection. In their long-time studies on sandstone and limestone in northern Bavaria they found that lichen growth is actually protective of the stone surfaces due to the consolidating effect of the microflora.

The authors, editors and publishers are to be thanked for a valuable volume which brings to light some new aspects in lichen ecology – and, last but not least, for being very quick in publishing the results.

The Editor

ETAYO, J. & L. G. SANCHO (2008): Hongos liquenícolas del Sur de Sudamérica, especialmente de Isla Navarino (Chile). – Bibliotheca Lichenologica 98. – J. Cramer in Gebr. Borntraeger Verlagsbuchhandlung, Berlin & Stuttgart. 302 pages, 132 figures. Paperback. ISBN 978-3-443-58077-3, ISSN 1436-1698. Price: 74.00 Euro.

According to the 9th edition of the *Dictionary of Fungi* (2001) about 300 genera and 1000 species of lichenicolous fungi were recognized at that time. Unfortunately the 10th edition (2008) only repeats these figures which have to be higher if the basic estimation is correct. The difficulties with updating these figures become very clear with publications like this new volume in the *Bibliotheca Lichenologica* series. From a comparably small study area, the authors found 696 parasitized lichen samples, representing 240 taxa of lichenicolous fungi. In the present volume, 189 species of them are reported, 60 of which are described as new to science. Comparable figures are available also from a previous study by Javier Etayo in Colombia (*Bibliotheca Lichenologica* 84, 2002).

The field work for the present study was undertaken during January and February 2005 in southern Chile and Argentina, but mainly on the Island of Navarino (Chile). After an introduction, the descriptions of all the new taxa and a list of other records (all of which, needless to say, are new to the area) fill the main part of the book. All the new taxa are illustrated by drawings and/or photographs. Six new genera are proposed here: *Atronectria* Etayo, *Macrographa* Etayo, *Pseudostigmidium* Etayo, *Sarcoexcipula* Etayo, *Umbilithecium* Etayo and *Umushamyces* Etayo. Furthermore 7 new combinations are made and the genus *Kalaallia* is proposed as a synonym of *Opegrapha*. The new species are described in the genera *Arthonia* (3), *Bachmanniomyces*, *Capronia* (2), *Carbonea*, *Chalara*, *Corticifraga*, *Corticiruptor*, *Dactylospora*, *Diederimyces*, *Endococcus* (4), *Leptosphaeria*, *Lichenochora*, *Lichenopeltella*, *Merismatium*, *Microsphaeropsis*, *Minutoexcipula*, *Muellerella*, *Nanostictis*, *Nectriopsis*, *Neobarya*, *Niesslia*, *Odontotrema*, *Phaeosporobolus*, *Phoma*, *Plectocarpon*, *Polycoccum*, *Pronectria* (3), *Protothelenella*, *Pseudostigmidium* (4), *Rhagadostoma*, *Sclerococcum*, *Scoliciosporum*, *Skyttea*, *Sphaerellothecium*, *Stigmidium* (2), *Taeniolella*, *Toninia*, *Trichonectria*, *Unguiculariopsis* (2), *Xenonectriella* (3) and the remaining in the 5 new genera.

In the introduction the authors discuss some problems of co-evolution of lichens and lichenicolous fungi, and especially the various hypotheses for the particular species-richness of Peltigerales. For the single host *Nephroma antarcticum* they report 26 lichenicolous fungi, 11 of which are newly described. Taking into account the entire

distribution range of the host, they estimate over 30 lichenicolous fungi for this unique host.

This volume provides a major step forward for the study of lichenicolous fungi in general and for the non-tropical parts of the southern hemisphere in particular. The huge number of taxonomic novelties makes it a must for all serious taxonomists of lichenicolous fungi.

The Editor

FLORA OF AUSTRALIA (2009): Volume 57, Lichens 5. – Canberra & Melbourne: ABRS & CSIRO Publishing. – 687 pages. Hardback ISBN: 978-0-643-09664-6. Price: 180.00 AU\$, Paperback ISBN: 978-0-643-09664-6. Price: 140.00 AU\$.

Earlier lichen volumes within the *Flora of Australia* were published in 1992, 1994, 2001 and 2004. The 5th volume, edited by P. M. McCarthy (Canberra), is by far the most extensive of all lichen treatments, but the taxonomic coverage is heterogenous according to the manuscripts available; but this is no real problem since a list of the families and genera published in all five volumes is given at the end of the book. The present volume contains accounts of taxa by A. Aptroot (Soest), A. W. Archer (Sydney), J. A. Elix (Canberra), G. Kantvilas (Hobart), S. Louwhoff (Traralgon South), H. T. Lumbsch (Chicago), A. Mangold (Berlin) and the editor himself.

Complete or partial accounts of 21 families are provided, which include 654 species in 78 genera. Major groups treated include Ostropales with Graphidaceae (A. W. Archer) and Thelotremataceae (A. Mangold, J. A. Elix & H. T. Lumbsch), and Pyrenulales with Celotheliaceae, Pyrenulaceae and Requinellaceae (all by A. Aptroot). The outline of this volume follows the former ones. There are 64 colour photographs on 16 pages and 100s of black and white photographs complementing the descriptions of taxa. Small distribution maps for all included species are given at the end of the book

The genus *Schizotrema* Mangold & Lumbsch (Thelotremataceae) is described as new to science together with 27 new species in the genera *Chapsa* (6), *Distopyrenis*, *Graphis*, *Myriotrema* (2), *Ocellularia* (6) *Platythecium*, *Schizotrema* (2), *Strigula* (2), *Thelotrema* (5) and *Topeliopsis*; 36 new combinations are also proposed. They are all listed in a valuable appendix, together with the lectotypifications.

The number of species and infra-specific taxa treated in all five lichen volumes has now reached 1822. The editors, authors and publishers are to be congratulated on this achievement. It is to be hoped that the remaining taxa will follow soon and we shall see this important opus completed. The quality of printing and binding is up to the high standard of former volumes.

The Editor

GAYA, E. (2009): Taxonomical revision of the *Caloplaca saxicola* group (Teloschistaceae, lichen-forming Ascomycota). – Bibliotheca Lichenologica 101. – J. Cramer in Gebr. Borntraeger Verlagsbuchhandlung, Berlin & Stuttgart. 191 pages, 2 figures, 3 tables, 37 plates. Paperback. ISBN 978-3-443-58080-3, ISSN 1436-1698. Price: 73.00 Euro.

Caloplaca, a genus which was never monographed, is now too large (with over 1000 published names) to be treated by a single worker. However, several taxonomists have studied it during the last decades, as a result of which it has been shown that the traditional genus is not monophyletic and furthermore species with effigurate thalli (traditionally called *Gasparrinia*-group) are also heterogenous. The author of this work has studied a core group of 14 taxa, the *Caloplaca saxicola*-group, which was found to be monophyletic. Treatment of this core group, together with 10 closely related species, is based on anatomical and morphological characters only; no chemical or molecular data are presented. Every taxon receives a full description and is illustrated by line drawings and colour photographs. Two new species, *C. arnoldiiconfusa* Gaya & Nav.-Ros. (from Austria, Germany, Switzerland, Macedonia and Montenegro) and *C. pseudofulgensia* Gaya & Nav.-Ros. (from France, Austria, Germany, Slovakia, Sweden and Switzerland) are described, as well as three new subspecies for *C. arnoldii*, namely *clauzadeana* Gaya (from France), *nana* Gaya (from Spain and Austria) and *obliterata* Gaya (from many European countries). The new name *C. rouxii* Gaya, Nav.-Ros. & Llimona is introduced for the former *Lichen minutum* Hoffm. (non *L. minutum* L.) which is raised to species rank.

Some critical remarks have to be made regarding inconsistencies in the citation of localities, exsiccati and literature references. The number of incorrect spellings of localities is very high (e.g. p. 84 “Gurtaler Alpen“ and 5 lines below “Gurktaler Alpen“) and their assignment to provinces is sometimes wrong (e.g. p. 79 “bei Köllme“ to Saxony instead of Sachsen-Anhalt, “..., bei Hoppingen im Ries“ to Saxony instead of Bavaria). The references Santesson (1970b) in *Vorträge aus dem Gesamtgebiet der Botanik N.F. 4* and Steiner & Hauschild (1970) in *Deutsche Botanische Gesellschaft, Neue Folge 4* are from the same publication. The question remains why is the author not using standards like BPH-2 to avoid such mistakes?

However, the monograph is a step forward to a better knowledge of *Caloplaca*, but let us hope that the suggested taxonomy will remain stable in the light of future molecular studies.

The Editor

SMITH, C. W., A. APTROOT, B. J. COPPINS, A. FLETCHER, O. L. GILBERT, P. W. JAMES & P. A. WOLSELEY (2009): The Lichens of Great Britain and Ireland. – London: The British Lichen Society. – ix + 1046 pages. Hardback ISBN 978-0-9540418-8-5, Price: 65£ (45 £ for BLS members).

In 1992 The Natural History Museum published in association with The British Lichen Society *The Lichen Flora of Great Britain and Ireland*, a landmark publication

at that time which is widely used by lichen taxonomists throughout Europe, and indeed further away. Now, 17 years later, the BLS has published a new volume with a slightly different title which is in fact a second, revised and much enlarged edition of the former. Therefore the new magnum opus might be best reviewed by comparing it with what I will call here the first edition, which is also done by the notes on the back cover of the book.

The necessity for a new edition becomes clear simply by the number of 386 new species recorded over the years from within the boundaries of the flora, an amazing number when taking into account that the British Isles were also at the time of publication rightly regarded as one of the lichenologically best known regions in the world. As a result, the number of pages has increased considerably from 710 to 1046. In general the outline of the treatments is unchanged except that genera and species are now in a strictly alphabetical order which is in my opinion an advantage especially in large genera. One of the much welcomed new features is the citation of illustrations, especially colour photographs, from other reference works for almost every species. The number of synonyms has increased according to taxonomic changes over the last two decades but is still limited in respect of older names. According to the introduction all names used in the first edition are cross-referenced and included in the text and in the index. The introduction has been enlarged, but the glossary has little changed and unfortunately a few shortcomings have crept in: e.g. *acrogenous* and *acicular* are not in alphabetical order and *allanthoid* and *biseriate* are missing completely despite that the former being illustrated and used in figure 3q. There are 49 figures most of them reused from the first edition.

The number of contributors is 51 and it is of course an enormous task to edit such a work, but I cannot avoid noting that the number of mistakes in the list of references is rather high (e.g. Julich instead of Jülich and standing between James and Jørgensen; wrong reference for Jørgensen (1990) as it cites *Op. bot. Soc. bot. Lund* 45 which is the reference for Jørgensen (1978) - the correct one is *Lichenologist* 22: 213-217).

No taxonomic novelties are proposed here because all necessary changes have been previously published in *The Lichenologist*. The nomenclature adopted here is somewhat conservative in order to avoid too many changes, especially in families or genera where the taxonomy seems to be unsettled (e.g. *Buellia* s. lat.).

To conclude, everybody who was happy to work with the first edition should try to get this new version soon. It is the best one can get for determining lichens in northwestern Europe and it will also be of great value for people working far beyond. It is certainly *the culmination of lichen studies at this time* (text on the back cover) in respect to floristic work in the British Isles. It compares well with other recently finished floras as *The Lichen Flora of the Greater Sonoran Desert Region* (see ILN 41(2): 20-21) or the *Flora of New Zealand Lichens* (see ILN 41(1): 9-10).

The Editor

WIRTH, V. (2008): Rote Liste und Artenverzeichnis der Flechten Baden-Württembergs. (Naturschutz-Praxis Artenschutz 13) – 64 pages. Karlsruhe: LUBW Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg. Paperback. Price: 9.00 Euro (Available from bibliothek@lubw.bwl.de or free download under www.lubw.baden-wuerttemberg.de)

Southwestern Germany with the state of Baden-Württemberg is lichenologically one of the richest and also best-known parts of the whole country, mainly due to more than 30 years of work by V. Wirth who was also the first author of a Red List of the Lichens of Germany (at that time only Western Germany). Surprisingly, over all the years a formal red list for the state of Baden-Württemberg has never been published, although all other German states had a list, often already in second editions. Nevertheless many species in the floras and atlases of the area had also information on threats or extinctions.

Now this small booklet lists not only all lichenized and lichenicolous fungi from Baden-Württemberg in a table together with a their red-list-category but also presents for every taxon information on recent frequency, long- and short-time distribution trends, special risks and occurrence at protected sites. These treatments of data are in accordance with the new edition of the Red List of German Lichens which is in preparation. The methodology is explained in detail with 14 examples from various categories of threat. All texts and tables are in German but half of the booklet consists of the checklist and red list which can be used without a special knowledge of German. All the information is also available at the web.

The Editor

PERSONALIA

Louise Lindblom (Bergen) started a post as full-time senior technician at The Natural History Collections (DNS), Bergen Museum, University of Bergen in Norway. She is working in the joint DNA laboratory of DNS and Department of biology (BIO). The post encompasses maintaining the lab and administration, in addition to work with DNA methods in research projects managed by the scientists at the department. The research at DNS involves mainly systematics and palaeobiology in a wide spectre of organism groups, for example, aquatic insects, angiosperms, fish, lichens, and molluscs. Bergen Museum is actively cooperating in The Barcoding of Life Consortium.

Change of Addresses

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REPORTS

NINA SERGEEVNA GOLUBKOVA

28 January 1932 - 24 August 2009



The outstanding Russian lichenologist Nina Sergeevna Golubkova passed away on 24 August 2009 in St Petersburg after a long and painful illness. Born on 28 January 1932 in Leningrad (nowadays St Petersburg), she graduated from the Leningrad State University in 1955 and joined the Komarov Botanical Institute of the Russian Academy of Sciences where she worked until 2008. Her instructors were the famous soviet lichenologists Vsevolod Pavlovich Savich and Alfred Nikolaevich Oxner. In 1962, under the supervision of Savich, Nina Golubkova successfully defended her PhD thesis on *The lichen flora of the Moscow region*. This work

laid down foundations of the Lichen Handbook of the Central Part of European USSR published in 1966, one of the most popular Russian handbooks for a many years. In 1983 she prepared her second dissertation *Florogenetic analyses of Mongolia lichens* for her doctorate.

She carried out lichenological expeditions in various regions of European Russia, Caucasus and Middle Asia, and extensively worked on the material collected on the first Soviet Antarctic expeditions. In 1970-1974 she took part at the Joint Soviet-Mongolian biological expedition to Mongolia., the results of which were presented in *Conspectus of lichen flora of the Mongolian Republic* (1981) and *Analysis of the lichen flora of Mongolia* (1983). The material she collected during this work supplemented herbarium LE (Komarov Botanical Expedition RAS).

She mainly worked on the taxonomy and floristics of lichens. She made a significant contribution to the study of Asian lichens, having published the first most comprehensive list (c. 800 species) of Mongolian lichens; she described c. 30 species from Mongolia and Eastern Pamir Plateau, among them *Acarospora frigidodeserticola*, *A. fulva*, *Catapyrenium altimontanum*, *Sporastatia subasiatica*, *Squamarina pamirica* and *Toninia gobica*. The main part of her work dealt with acarosporoid lichens. She described a number of *Acarospora* species, and her monograph on the family Acarosporaceae (1988) was a fundamental work on taxonomy of this group. Five volumes of *The Handbook of Russia Lichens* were published with Nina Golubkova as the chief editor and one of the principal authors; more than 20 sections on various lichen genera were written by her in four of the volumes. Over the years of active work, she published about 150 works and for more

than 20 years she was the head of the Laboratory of Lichenology and Bryology at the Komarov Botanical Institute of the Russian Academy of Sciences. During last months of her activity at the Laboratory she has initiated the long-term programme for the Lichen Flora of Russia, which she regarded at the natural development of *The Handbook of Russian Lichens*, the last and most important work of her life.

Besides her work as a researcher, Nina Golubkova was also a fine teacher. Many colleagues and students gained from her not only considerable botanical knowledge, but also an unequalled kindness and warmth. About 30 Russian lichenologists have prepared and defended their PhD thesis under her tactful guidance. Undoubtedly she is one of the founders of the Russian Lichenological School. Moreover, she devoted time for civic activities. For 15 years she was secretary of the All-USSR (Russian) Botanical Society and for many years she served on the editorial board of *Novosti Systematiki Nizshikh Rasteniy*. In 2000, the International Association for Lichenology awarded her the Acharius Medal for outstanding contributions to lichenology.

With the death of Nina Golubkova, the lichenological circle has lost not only a prominent researcher, but also a kind teacher and a true friend.

Mikhail Andreev, St. Petersburg

Lichen ecology meeting at Munich

On 13 October 2008, the commission for ecology of the Bavarian Academy of Sciences sponsored a *Rundgespräch* on the *Ecological Role of Lichens* in its venerable rooms attached to the Royal Bavarian Residence. Inaugurated by Prof. Hubert Ziegler (Munich) and Prof. Otto Ludwig Lange (Würzburg), and supported by the curator of the Munich lichen herbarium, Andreas Beck, this proved to be a most profitable symposium for lichenologists with an excellent selection of state of the art presentations, some of the highlights noted below.

As an *hors d'oeuvre*, Andreas Beck briefly reviewed the principles of lichenisation according to our present understanding, referring in particular to molecular patterns of the genotypes of the various myco- and photo- bionts. It is still amazing how many *Trebouxia* strains exist and that genotypes can be identical over several continents but on the other hand can vary within small geographical areas. In her presentation about *Ecological aspects between fungus and alga* Rosemarie Honegger (Zürich) emphasized the multiple benefits of the photobionts living embedded in the various structures of the mycobiont. Her impressive LTSE microscopical images illustrate to what extent fungal structures and products are encapsulating the algal cells which then appear more like organs than individual partners. In addition, she referred to elegant portrayals of cellular cavitation in the mycobiont hyphae when they are desiccated or frozen. Her suggestion of a mutual relationship between equivalent symbiotic partners was less convincing but was supported by the existence of large genetic diversity among photobiont taxa, e.g. *Trebouxia*, as presented by Beck; hopefully somebody will find evidence of a microevolution by genetic differentiation inside

the thallus over a sequence of lichen generations (“*endothalline evolution*”), since we know that isolation causes adaptive radiation.

The next two presentations illustrated the most successful, but quite “miserable” life of those lichens under extreme environmental conditions. Allan Green (Madrid & Hamilton) referring to “*Arctic, Antarctic and alpine environments*” *inter alia* showed us that in continental Antarctica *Umbilicaria* thalli hydrated by melted snow do not suffer from photoinhibition although exposed to full sunshine. However, in general, the many measurements on lichens in Antarctica demonstrate that photosynthetic production is low because of the limited periods of activity and the fact that optimum photosynthetic rates are rarely or never reached. Since pressure of competitors is relatively low, the strategy of slowly growing lichens remains successful. However, this may be dramatically disturbed eventually by global or regional warming effects. A contrasting geographical example of lichen existence was given by Burkhard Büdel (Kaiserslautern) dealing with *Function of lichens in biological crusts: desert soils and tropical inselbergs* who demonstrated that epi- and endo- lithic lichens and cyanobacteria colonize almost every open rock. Depending on the amount of rainfall in a subtropical and tropical region, inselbergs and rock outcrops appear either black due to the abundance of crustose biota, or red due to iron oxidation under more arid conditions, not excluding a rich biotic diversity on the surface and within rocks. Soil crusts with an enormously rich diversity of taxa and life forms are a dominant phenomenon in the tropics and also occur in most other climatic regions. The ultimate challenge in this research is to investigate to what extent lichens have the potential of existing or at least of surviving in extraterrestrial environmental conditions. Recent records of survival of lichen thalli that were exposed to extraterrestrial space by Sancho and co-workers confirm the enormous resistance of some (dry and inactive) lichen taxa.

By contrast, lichens can be exposed to extremely detrimental conditions on our planet, particularly in industrial areas. Referring to *Lichens and environmental pollution*, Markus Hauck (Göttingen) demonstrated the well known and strong evidence of the impact of SO₂ and the spontaneous recovery of lichen vegetation subsequent to a reduction of this pollutant. He also showed his interesting results on the capacity of lichens to accumulate metal ions either in terms of trophic demands or as a protecting mechanism. In addition, he emphasized the critical role of the proton concentration in the substrate, which is induced by pollutants but significantly depends also on the chemistry of the phorophyte bark.

Two more papers dealt with the ecophysiological significance of secondary compounds of the lichen thallus. Yngvar Gauslaa, (Ås, near Oslo) provided evidence of the photo-protective role of some lichen substances, parietin in particular and demonstrated his experiments showing the role of lichen substances in protecting against grazing animals. From a zoological point of view, Andreas Segerer (Munich) illustrated *The importance of lichens for vertebrates and invertebrates, Lepidoptera in particular*. The trophic aspect may appear to be dominant in the case of reindeer grazing, but has a more marginal or specialized role for other vertebrates, as is the

case with most invertebrates. However, there are striking examples of the role of lichens in mimicry as for instance the “sack” of Psychides, elegantly decorated with lichen fragments, or the snail-shell on which the animal cultivates a dense lichen community.

A different, and lichenologically innovative aspect was presented by Michael Lakatos (Kaiserslautern) who is investigating whether lichens can monitor the history of CO₂ levels in the environment and also the variation of moisture relations by analysing the contents of stable isotopes (¹³C, ¹⁸O). He showed promising results describing the mode of ion uptake and storage and calculating model parameters for the calibration.

The last two papers dealt more with practical aspects of lichens in their environment. Christoph Scheidegger (Birmensdorf) explained the multiple and difficult approaches of estimating a lichen species or the lichen vegetation as indicator of events or changes in the landscape. The interaction of different environmental factors and changes during periods of decades may generate different situations for the preservation, recovery or establishment of lichen species. In practice, a linear causality is rare and solely the presence or absence of one particular species is not very indicative. A pleasing complementary contribution was given by Rainer Drewello (Bamberg), a specialist on monument and architecture conservation, who learnt to understand the role of lichens from practical experience. He vividly described the controversial viewpoints between monument curators and nature conservationists considering for example the fortification of a castle, where the walls were overgrown with plant assemblages of ecological niches and habitats. The nature conservationists would insist on leaving the walls and stone surfaces untouched. Monument curators, however, want to stabilize and clean the walls and consequently tend to remove every living causing biodeterioration. He convinced the audience of the goal of the monument protectionists, but also demonstrated the futility of fighting against lichens, mosses and microorganisms. He realized the protective role of lichens covering the surface of an artefact and demonstrated on the other hand the amount of demolition of the rock surface due to cleaning procedures. Evidently, this presentation raised a vivid discussion in the audience which included quite a number of non-lichenologists.

Even after such an extended and concentrated series of presentations over the course of a whole day a fruitful final discussion kept more than 70 participants active and engaged until the end of the sessions. The contributions and discussions are published in Vol. 36 of the series “Rundgespräche der Kommission für Ökologie”, Bayer. Akademie der Wissenschaften.

Ludger Kappen, Kiel & Dassel

Editorial remark:

For details of this volume and a review see page 10 in this issue.

Ingvar Kärnefelt 65 years - a birthday tribute

On the 11th of August, prof. Ingvar Kärnefelts 65th birthday was celebrated with an issue of *The Lichenologist* as a tribute, including contributions from all of his lichenological PhD students at Lund University in Sweden. During the day, we presented our contributions and recent scientific work, followed by dinner in the evening. The issue begins with a presentation of Ingvars lichenological activities, with taxonomic work on cetrarioid lichens and within the family Teloschistaceae. He has also played an active role in IAL, organizing IAL2 in Hemmeslöv, Sweden and serving as the president 1992–96. He has supervised eight PhD students in lichenology and is now the head of the Biological Museums in Lund. The introduction is followed by a historical overview of lichenology in Lund. This overview, written by Patrik Frödén, includes early contributions from naturalists and botanists, such as Anders Jahan Retzius, Erik Acharius and Elias Fries, as well as recent lichenological works by Ove Almborn, Hans Runemark, Ingvar himself and his PhD students. Ulf Arup and Elin Åkelius present a taxonomic revision, based on morphometry and DNA-analyses, of *Caloplaca herbidella* and *C. furfuracea*. The taxa are shown to be separate species, and the closely allied *C. coralliza* is also described as new to science. Stefan Ekman describes *Bacidia rosellizans* as new to science, a species from restricted localities in North America and northern Europe. It is closely allied to *B. rosella*, but differs in minor morphological and anatomical characters and occurs on more acid bark. Arne Thell and coworkers present a phylogeny of the cetrarioid lichens. *Allocetraria*, *Cetraria* s.str., *Cetrariella* and *Vulpicida* form a strongly supported clade, while *Cetraria* s.lat., *Flavocetraria* and *Tuckermannopsis* are polyphyletic. Martin Westberg, Patrik Frödén and Mats Wedin present a monograph of the South American genus *Placomaronea*, including a phylogeny of Candelariaceae based on molecular data. Three new species, among others *P. kaernefeltii*, are described and the genus is also shown to occur in southern Africa. Louise Lindblom discusses the effect of sample sizes in recording haplotypes of *Xanthoria parietina*, both within and among populations. She points at the importance of pilot studies to determine the appropriate sample sizes in such studies. Lars Fröberg, Mats Niklasson, Heidi Paltto, Tommy Knutsson and Thomas Johansson have studied the lichen diversity of the dwarf shrub *Helianthemum oelandicum*, which occurs in calcareous grasslands on the Baltic island of Öland. Phorophyte age was determined by ring counting and was correlated with lichen species number in living phorophytes. Furthermore, dead phorophytes hosted significantly more lichen species than living ones. Jan-Eric Mattsson, Anne-Charlotte Hansson and Louise Lindblom studied the genetic variation of *Hypogymnia physodes* and *H. tubulosa* in localities around the Baltic Sea. Haplotypes of *H. physodes* did not show any differences in phorophyte preferences. However, a network pattern of *H. physodes* was revealed by a statistical parsimony analyse, indicating recombination within the ITS region of this primarily clonally reproducing species. Håkan Lättman and coworkers (including his supervisor J.-E. Mattson) present an estimation of generation time of 25–30 years in *Cliostomum corrugatum*, determined by measures of sizes of thalli and ascomata.

Ulf Arup (acting co-editor), Stefan Ekman, Lars Fröberg, Patrik Frödén, Tommy Knutsson, Håkan Lättman, Louise Lindblom, Jan-Eric Mattsson, Arne Thell and Martin Westberg.



Ingvar with his PhD students in the Botanical Garden, outside the Botanical Museum, in Lund. From left to right: Lars Fröberg, Ingvar Kärnefelt, Ulf Arup, Patrik Frödén, Louise Lindblom, Jan-Eric Mattsson, Stefan Ekman, Martin Westberg and Arne Thell.

Epiphytic cyanolichen communities in sub-boreal spruce forests of British Columbia

Cyanolichens (lichens capable of nitrogen fixation) are an important component of canopy ecosystems in interior B.C. forests. With biomass $>1300\text{kg/ha}$, cyanolichens provide a source of fixed-nitrogen for forest functioning. While cyanolichen abundance generally increases with moisture and forest age, my research shows a strong association with *Populus* species that facilitates the expansion of cyanolichen species into regions beyond this fundamental niche. Climatic, biotic and chemical factors are explored as potential contributors to the marked cyanolichen-*Populus* association. The potential role of cyanolichens to forest nutrient cycling is also explored by measuring the rates of nutrient release through decomposition and leaching. These data are combined with annual growth and mortality rates to more accurately quantify the contribution of cyanolichen-N to the N-limited sub-boreal forests.

Jocelyn Campbell is a PhD student at the University of British Columbia. Upon completing her doctorate, Jocelyn plans to stay in B.C. to pursue a career in forest ecosystem research.

The 6th International Symbiosis Congress and the Symbiosis Journal

The Sixth International Symbiosis Congress was held from the 9th to 15th August, 2009 at the University of Wisconsin, Madison, USA. Madison is a state capital and the University has some 35,000 students and lies adjacent to the larger of the city's two lakes which is some 6 km wide and over 10 km long, so views were spectacular. The congress was attended by over 300 people from 20 different countries.

The diversity of the presented papers was both astonishing and captivating; the themes were Evolution, Metabolic Aspects of Symbioses, Host-Symbiont Interfaces, Ecology and Focus Sessions. The last included The Human Microbiome, Threats to Earth Systems (including Restoration Ecology), Agents of Dependence (from viruses to organelles) and Symbiosis Education. With such a wide spectrum of subjects it is not surprising that there were only five papers on lichens and these were: Identification of a Polyketide Synthase in *Cladonia grayi* (Armaleo et al.), Isotopologue Profiling in Lichens (Beck et al.), Pre-contact Interactions of the Mycobiont of *Fulgensia bracteata* (Meesen & Ott), The Biology of the Amphiatlantic Lichen *Degelia plumbea* (Richardson et al.) and Metabolic Diversity of lichen-Forming Fungi (Stocker-Wörgötter). However there were about a dozen lichenologists at the Congress.

There were 128 posters, in two poster sessions, illustrating every conceivable symbiosis from those in the deep sea, to a wonderful variety of insect microbial symbioses to those found in the terrestrial communities of the tropics. Four posters focused on lichens. DNA Methylation in *Cladonia grayi* (McDonald et al.), The Phylogenetic Breadth of Eukaryotic Algae in Lichens (Nelson et al.), Species-Specific and Non-Specific Algae in Relation to Mycobiont Growth (Sill et al.) and Experimental Studies on Lichenized Trentepohliales (Hametner and Stocker-Wörgötter).

It was fascinating to realize the parallels and differences between the various symbioses. Everyone got new ideas from the approaches and techniques that were employed to study other systems. We came to recognize that symbiosis, in its broadest sense, is of key importance in every world ecosystem and every community whether natural or anthropogenic. The threats posed by climate change and habitat degradation became evident to all participants during the congress.

The discussions during the congress were lively and the social events most enjoyable and well organized. At the congress banquet, the outgoing ISS president, Dr Douglas Zook, who has led the society for the past 9 years, was presented with a framed original painting and an enthusiastic vote of thanks was given to the Congress Organizers led by Dr Heidi Goodrich-Blair. The incoming President is Dr Russell (Rusty) Rodriques whose area of interest includes fungal endophytes, invasive species, abiotic stress and climate change. The next congress will be held at the Jagiellonian University, Krakow, Poland, in the summer of 2012 and if it matches the 6th and previous congresses in terms of both intellectual stimulation and enjoyment, IAL members would be well advised to take advantage of early



registration. This will ensure an opportunity of participating as the 7th congress will be in such a historic city of outstanding beauty.

The other news is that publication of the journal *Symbiosis*, which is associated with the *International Symbiosis Society*, has recently been taken over by Springer. The journal publishes nine issues per year with papers on every type of symbiosis. There are regular issues containing contributed papers, each issue beginning with a review and special issues on a theme. For example, there is a forthcoming one on the *Frankia* symbiosis and others published recently include Nitrogen Fixation, the Nematode-Bacterial Symbiosis and the Fig-Wasp symbiosis. There will be a special volume devoted to the proceedings of the latest ISS Congress. The change to Springer will mean that the journal *Symbiosis* will soon be available both in hard copy and on the web, so more *Symbiosis* will be more widely available.

David H. S. Richardson, Halifax

Young lichenologists' workshop in Vácrátót, Hungary, 17–20 April 2009

The “Young lichenologists' workshop in Hungary” organized by Edit Farkas and Katalin Veres (Research group “Taxonomy and ecology of lichens” of IEB HAS, Vácrátót) was suggested by the latter organizer whose idea was influenced by her former experiences during similar meetings held for young ecologists – partly organized by the ecologists of the Institute of Ecology and Botany of the Hungarian Academy of Sciences, Vácrátót. The workshop was supported by the Hungarian Scientific Research Fund (OTKA T047160) and Olympus Hungary Ltd, as well as the Institute. The most important aim was to establish personal contacts between young lichenologists of nearby countries and to increase their communication abilities, especially in English, via presentations, discussions and informal conversations.

Various fields of lichenology were represented. Very interesting presentations were provided on air pollution in Bratislava, protected lichen species in Hungary, floristical work from the Padurea Craiului Mountains (Romania) and from Borská lowland (Slovakia), on foliicolous lichens from Bolivia, lichenicolous fungi and scientometric analysis of lichenological literature. A poster session was also held, where we could see the results of investigations on the genera *Porpidia* and *Stereocaulon*, lichen diversity on birch, and secondary metabolites in *Hypogymnia physodes*.

Information and abstracts with an address list of the participants are available at the homepage of the Institute:

<http://www.obki.hu/munkatarsak/FarkaE/Abstracts.pdf>

Photographs can be found at the Hungarian lichenological homepage:

http://www.lichen.hu/Photo_gallery.html



Participants came from Poland, Slovakia, Romania and Hungary. Participants were also invited from Austria, Czech Republic, Germany, Italy, Montenegro, Serbia and Turkey, but the lack of financial support and unforeseen coincidence with other meetings and study trips didn't allow the participation of all lichenologists originally intended. However, the remaining participants considered the workshop enjoyable and profitable as quoted below.

Edit Farkas and Katalin Veres

Views of participants:

"First I want to thank you – all the Hungarian team involved – for the organization of the Young lichenologists' workshop... The theme was well chosen, the presentations had a high scientific level and the discussions were both useful and interesting. It was a good occasion to meet young and senior specialists and to establish valuable contacts. Also the place of our meeting – the Botanical Garden in Vácrátót – was delightful. In conclusion, I appreciate very much the effort of the organizers and the quality of the meeting." (Florin Crisan)

"Young lichenologists' workshop in Hungary was very well organized and very useful for me to find some new contacts for my future work, but I would like to meet also some young lichenologists from other surrounding countries, for example Austria, Germany, Czech Republic...." (Alica Dingova)

"I believe that – similarly to the cooperation between the partners of the lichen association – the knowledge and experience of the older lichenologists together with the enthusiasm, energy and new information carried by the younger generation also form a symbiotic relation." (Edit Farkas)

"I would like to express my warm appreciation for your valuable idea of the Young lichenologists' workshop... I am impressed by both the perfect organization and the pleasant atmosphere of the meeting, which encourages for lively scientific discussions. I am sure the main aim of the workshop was fulfilled. The friendly contacts established or the experience attained by younger lichenologists will fructify during the nearest future. I am looking forward to your further such interesting initiatives like this one." (Adam Flakus)

"Browsing through the website with the files and pictures from Vácrátót I have nothing to say but – how pleasant the meeting was! The young lichenologists "sensu stricto" enjoyed the opportunity to present the outputs of their work and to establish new contacts. I was really glad to meet the people from the region – thinking of the work I plan in the Carpathians if the funds will be available. Organizers were happy how well organized and behaved visitors we were It was great to see how Edit materialized the idea which was just discussed last year in Asilomar during IAL6. Big thanks go to you!" (Anna Guttova)

"The Young lichenologists' workshop was very useful for us and it was a great pleasure to present our posters. This meeting made it possible to know better the morphological and ecological variability of many lichen taxa. A very important

part of the visit was to meet other young scientists. We think we learnt a lot from them, we could exchange information and opinions about many interesting taxa. Moreover the place where we could work was very nice. The Botanical Garden was beautiful. Thanks Edit and Kata for the wonderful meeting.” (Agnieszka Jabłońska and Magdalena Oset)

“First of all, the Young lichenologists’ workshop in Hungary (Vácrátót) was an excellent opportunity of training how to present the results of the studies in front of the public. The second important thing was the chance of meeting lichenologists from other countries and establishing contact with them.” (Agnieszka Kowalewska)

“As a young lichenologist, I am very thankful for this great opportunity to show my research to my young colleagues and I hope it will continue in the future.” (Katalin Molnár)

“The Young lichenologists’ workshop was the first scientific meeting I participated in. It was very interesting and very useful for me, especially that I could learn other people who are also interested in the same narrow field of science: lichenology.” (Julianna Németh)

“The workshop was very useful, a great opportunity to meet another lichenologist, have discussions in several themes, and practice my English and presentation technique. I would like to meet the participants another time, at the next Young Lichenologists’ Workshop.” (Nóra Varga)

“Before the workshop I did not think that organizing even such a small meeting needs that much work and attention.” (Katalin Veres)

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: Volker John, Kaiserslauterer Str. 86, D-67098 Bad Dürkheim, Germany, e-mail: volkerjohn@t-online.de, web page: www.blam-hp.eu

- 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 7, FI-00014 Helsinki University, Finland. Info: Teuvo Ahti, phone: (+358)-9-19124459, fax (+358)-9-19124456, e-mail: teuvo.ahiti@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)-209-59009, 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 Scienze 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 Siena, phone: (+39)-0577-232869, fax: (+39)-0577-232896, 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, Shimoshinjo-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). Hiromi Miyawaki, Secretary of LSJ, Faculty Culture and Education, Saga University, (B1 Honjo machi, Saga-shi, 840-8502 Japan, fax: (+81)-952-28-8310, e-mail: miyawakh@cc.saga-u.ac.jp, web page: <http://home.hiroshima-u.ac.jp/lichen/>
- The Netherlands:** Dutch Bryological & Lichenological Society (Bryologische + Lichenologische Werkgroep, BLWG). Info: Dick Kerkhof, e-mail: info@blwg.nl, 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, e-mail: 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/elcn/

South America: Grupo Latino Americano de Liqueólogos (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, e-mail: 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, 14 842 23 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 Liqueología (SEL). Info: Ana Rosa Burgaz, Dpto, Biología Vegetal I, Fac. CC. Biológicas, Universidad Complutense, E-28040-Madrid. Phone (+34) 1 394 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, 750 07 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

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