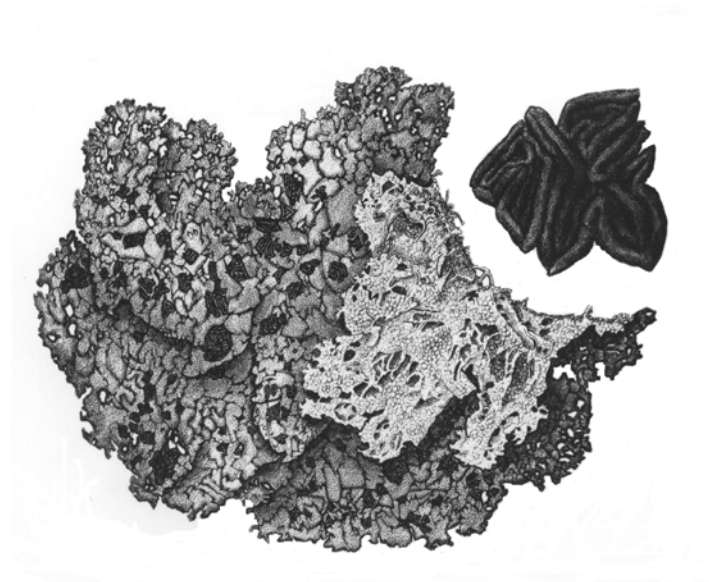


# INTERNATIONAL LICHENOLOGICAL NEWSLETTER

Vol. **48**, no. 2, Dec. 2015



Official publication of the  
**International Association for Lichenology**

**Editor:**

A. SUIJA

University of Tartu, Lai street 36-40, Tartu, EE51005, Estonia  
*ave.suija@ut.ee*, phone (+372) 7376 177

**Editorial Board:**

P. SCHOLZ (Schkeuditz) , M.R.D. SEAWARD (Bradford),  
ISSN: 0731 2830

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 listserv 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 2012-2016) 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 IAL7 Symposium (Bangkok, Thailand, 2012) are listed below, and will serve until 2016.

### IAL Council 2012-2016

**President:** Helge Thorsten Lumbsch, The Field Museum of Natural History, Department of Botany, 1400 S. Lake Shore Drive, Chicago, IL 60605-2496, USA. E-mail: [tlumbsch@fieldmuseum.org](mailto:tlumbsch@fieldmuseum.org)

**Vice President:** Mats Wedin, Swedish Museum of Natural History, Department of Cryptogamic Botany, P.O. Box 500 07, 104 05 Stockholm, Sweden. E-mail: [mats.wedin@nrm.se](mailto:mats.wedin@nrm.se)

**Secretary:** Sergio Pérez-Ortega, Real Jardín Botánico, CSIC, Madrid, Spain. E-mail: [sperezortega@rjb.csic.es](mailto:sperezortega@rjb.csic.es)

**Treasurer:** Volker Otte, Senckenberg Museum für Naturkunde Görlitz, PF 300 154, 02806 Görlitz, Germany. E-mail: [Volker.Otte@senckenberg.de](mailto:Volker.Otte@senckenberg.de)

**Assistant Treasurer:** Christian Printzen, Senckenberg Forschungsinstitut und Naturmuseum Frankfurt, Senckenberganlage 25, D-60325 Frankfurt am Main, Germany. E-mail: [cprintzen@senckenberg.de](mailto:cprintzen@senckenberg.de)

**Editor:** Ave Suija, Institute of Ecology and Earth Sciences, University of Tartu, Lai street 36-40, EE-51005, Tartu, Estonia. E-mail: [ave.suija@ut.ee](mailto:ave.suija@ut.ee)

**Members-at-Large:** Heidi Döring. – Jolanta Miadlikowska, Department of Biology, Duke University, Box 90338, Durham, NC 27708, USA. – Adriano Spielmann, Universidade Federal de Mato Grosso do Sul (UFMS), Centro de Ciências Biológicas e da Saúde, Departamento de Biologia, Laboratório de Botânica, Cidade Universitária, s/n, Caixa Postal 549, CEP 79070-900, Campo Grande, MS. Brazil. – Marko Hyvärinen, Finnish Museum of Natural History, PL 7 (Unioninkatu 44), 122 Helsingin Yliopisto, Helsinki, Finland.

## ASSOCIATION NEWS

### IAL general meeting, Bangkok, 5 August 2014

An IAL General Meeting held at IMC10 was chaired by H.T. Lumbsch (President). Council members attending: Mats Wedin (Vice President) and Heidi Döring (Member-at-Large).

**1. Opening** – The President welcomed all IAL members and guests.

**2. Election of Secretary for the meeting** – The President nominated H. Döring, which was accepted (all in favour).

**3. Additional items to add to the agenda** – The President presented the agenda for the meeting. He asked if the participants wished to add any item, but none was suggested.

**4. IAL membership status** – The President stated that only paid members of the IAL have the right to vote at the meeting. The quorum (10% of membership, 21 members) was considered as reached as more than 50 people were present.

**5. Update on next IAL meeting in Helsinki** – The President presented a brief update on preparation for the next IAL meeting and pointed out that a flyer for IAL8 was available for everyone to take away and to distribute.

**6. Proposed changes to constitution** – The changes suggested by Council were published in the most recent *IAL Newsletter* 47/1.

**6.1 Nomination and Election of Officers, Auditors and Nominating Committee (§7)** – M. Wedin presented the aim of the proposal to allow for methods of communication (e.g. e-mail) with members other than the *IAL Newsletter*. With no intention to change the format of the *IAL Newsletter*, this will enable Council to meet deadlines detailed in the constitution even if these do not coincide with the deadline of an *IAL Newsletter*. As no questions were raised, the proposal was put to the vote: **accepted**, no dissenting vote.

**6.2. Awards (§10)** – The President reported that responses by e-mail to the published proposal indicated potential for a controversial debate for some points in this paragraph but not others. He therefore proceeded by discussing each suggested change individually.

**6.2.1 Call for nomination** – M. Wedin explained the change had the same reason as in §7. No questions raised, the proposal was put to the vote: **accepted**, no dissenting vote.

**6.2.2 Sylvia Sharnoff Education Award and Margalith Galun Award** – The President explained these had been introduced by previous IAL Councils for an outstanding web page devoted to lichens and for outstanding student contributions at IAL meetings, respectively. The awards, however, were not formally introduced at an IAL General Meeting as required by the constitution. He suggested that this be rectified by including them in the constitution now and to affirm the awards made at previous meetings. No questions raised, the proposal was put to the vote: **accepted**, no dissenting vote.

**6.2.3 Dharani Awasthi Award** – The President suggested this award be given to a prominent young researcher from a tropical country as such candidates often face problems due to lack of resources and facilities. He considered it beneficial and motivating for them to have their

achievements recognized, and it seemed timely in view of the encouraging number of students in training due to recent developments in lichenology in tropical countries.

C. Scheidegger asked what the awards would entail. Answer: They are meant to boost the CV of the recipients by means of the certificate awarded to them, without a financial reward.

The restrictive formulations were disputed. Instead of ‘tropical countries’ G. Rambold suggested ‘remote or under-collected areas’, this was considered rather vague by others. G. Kantvilas remarked that developing countries elsewhere were facing similar problems but are excluded – concurred by others who wondered if ‘developing countries’ might be perceived as discriminatory. P. Dyer suggested ‘low income countries’, a term used by other societies and funding agencies.

In summary the President put a changed proposal to the vote, ‘The Dharani Awasthi award for a prominent young researcher working and living in a low income country, who has completed a Ph.D. within five years prior to the submission deadline’. This was accepted, no dissenting vote. *Action point*: Council to provide a list or link to a list of eligible countries each time when inviting nominations.

[Council note: Countries with low and middle income economies are listed by the OECD. These are to be considered as ‘low income countries’ in the sense of the award. See:

<http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf>]

**6.2.3 Aino Henssen Award** – The President suggested that this award be given to a prominent female researcher early in her career as gender equality is still an issue when comparing, for example, the ratio of female students to that of female professors. Such an award might improve chances of young female lichenologists when competing for posts. He reported that he received via e-mail support as well as objections from prominent lichenologists not attending the meeting. He reflected on his former supervisor, Aino Henssen who was throughout her career critically aware of the situation of women in science, and the current political gender equality discussion about in some countries.

Some female participants (L. Muggia, E. Gaya) expressed concern that this could be perceived as second-rate award due to exclusion of male competitors, and it was argued (T. Spribille) that all IAL awards should strive for equal numbers of male and female recipients. The latter was regarded as problematic as in most cases only a single award would be made at one time. It was noted that even though the nominating committee could ensure that a (equal) number of females will be considered (H. Döring, L. Muggia).

G. Rambold asked if this award would be distinguished from the Mason Hale Award other than by gender. Answer: Whereas the Mason Hale Award is for a Ph.D. thesis this one is intended for research conducted during the first years after a Ph.D. The discussion then focussed on support for early career lichenologists in general and eventually the President and M. Wedin suggested the gender reference might be deleted from the proposal. It was questioned if one might better introduce a fellowship with free IAL membership (T. Spribille) which was supported by the President as it would further distinguish this from the award for a young researcher from a low income country – others were opposed as they thought fellowships should entail some financial support.

The President closed the lively discussion for now and suggested that the decision be referred to the next General Meeting. C. Scheidegger responded that the proposal had been made and those present should have the chance to vote. Based on the debate the President put the proposal alongside two alternatives to the vote, which was accepted as the procedure to take this decision forward by all those present:

The original proposal. 'The Aino Henssen award for a prominent female researcher early in her career, who has completed her Ph.D. within five years prior to the submission deadline.'

1<sup>st</sup> alternative. 'The Aino Henssen fellowship for a prominent researcher early in the career, who has completed a Ph.D. within five years prior to the submission deadline.'

2<sup>nd</sup> alternative. 'The Aino Henssen award for a prominent researcher early in the career, who has completed a Ph.D. within five years prior to the submission deadline.'

Result of the vote: original – 13 in favour, 1<sup>st</sup> alternative – none in favour, 2<sup>nd</sup> alternative – 20 in favour, rejecting all options – none, abstentions – one. The award was established with one abstention, the **changed proposal (2<sup>nd</sup> alternative)** was **agreed** by the majority.

The President thanked all those present for participating, and closed the meeting.

## **International Association for Lichenology (IAL) Constitution**

(Approved at a General Meeting of the IAL at IMC10 in Bangkok, 5 August 2014)

**§ 1. Name** – The name of the Association is the International Association for Lichenology (IAL).

**§ 2. Goals** – The purpose of the IAL is to promote the understanding of lichens and lichenology world-wide. To achieve this, the IAL shall:

- a) encourage the study of lichens,
- b) advocate lichenological interests in the international arena,
- c) stimulate communication and discussion among those interested in lichens,
- d) organise symposia, field meetings, conferences, etc., and
- e) support the conservation of lichens.

The IAL is affiliated to the International Union of Biological Sciences (IUBS).

**§ 3. Membership** – Members of the IAL are those, whose dues have been paid. Any member who is more than two years in arrears in payment may be suspended by the Council.

**§ 4. Power to raise Money** – The IAL exists only for non-profit status. It has the power to raise money by dues or other means as approved by the Council, but only for scientific purposes, awards and the administration of the Society.

**§ 5. Dues** – Membership dues will be determined at the general meeting of the IAL, upon advice of the Council.

**§ 6. Officers, Auditors and Nominating Committee** – The elected Officers of the IAL are a President, a Vice-President, a Secretary, a Treasurer, an Assistant Treasurer, an Editor, the organizer of the next IAL Congress, and three Council members-at-large. These officers form the Council of the IAL. The Auditor and Vice-Auditor are elected non-Council members. The Nominating Committee is composed of three elected non-Council members, and they elect a secretary among themselves. The term for Officers, Auditors and Nominating Committee is four years. The maximum period for any Council Officer, Auditor and Nominating Committee member is two consecutive terms. Council Officers, with the sole exception of the Editor, cannot serve more than one consecutive term in the same position.

**§ 7. Nomination and election of Officers, Auditors and Nominating Committee** – The Nominating Committee must publish a call for nominations reaching the membership at least six months prior to the general meeting. Any member of the IAL may submit nominations or be nominated. Nominations, to be valid, need the written consent of the nominees, and need to reach the Nominating Committee at least two months prior to the general meeting. Nominations from the floor at general meetings are allowed only when no nominee for a given post is elected. Elections will be made by majority vote at the IAL general meeting. Voting will take place irrespective of the number of nominees for a post.

**§ 8. Duties of Officers and Auditor** – The Council administers the affairs and funds of IAL and shall meet or in other ways communicate as decided by the President or at the request by Council Officers. The Council must establish an Advisory Board including a representative selection of lichenologists worldwide, with special attention to local societies, which shall assist the Council in the transfer and dissemination of information. The Council nominates two representatives of the IAL to the IUBS. The Council may designate Committees that shall manage topics of particular relevance for lichenology. The Advisory Board and the Committees will last until the next Council takes over. The President, or in his absence the Vice-President, or any member of Council designated by the President, shall preside at all meetings of IAL and the Council. The Secretary shall keep minutes of meetings, and shall conduct correspondence as requested by Council. The council nominates two representatives of IAL in the IUBS. The Treasurer, or in her/his absence the Assistant Treasurer, shall keep an account of all receipts and expenditures and have a statement presented at general meetings and as requested by Council. The Assistant Treasurer shall assist the Treasurer as requested by the Council. The Editor shall prepare the International Lichenological Newsletter, whose content and format shall be at his/her discretion subject to review and recommendation of Council. The Council may temporarily fill positions vacated between elections. If less than seven elected members remain, a new Council must be elected at an additional general meeting. To be valid, decisions of Council – held by a majority vote – require that all Council members have been informed, and that at least six of them participated. The Auditor, assisted by the Vice-Auditor, will review the financial records of the IAL and present a report to the general meeting. In her/his absence, the Vice-Auditor will act as Auditor. The Nominating Committee is responsible for presenting a list of nominations to the general meeting.

**§ 9. General Meetings** – The IAL shall hold its general meeting at the IAL Congress, a major international congress covering all aspects of lichenology, to be organized every fourth year. Announcements of additional meetings must reach the membership at least six months in advance. Any member can address topics for discussion to the Secretary at least four months

prior to the general meeting, so that these will be disseminated to the Membership before the meeting. Additions to the agenda require a two-thirds majority of those present at the general meeting. Decisions will be taken by a majority vote. To be valid, a general meeting requires the participation of at least 10% of the membership.

**§ 10. Awards** – The initiation of IAL awards is decided by the general meeting. IAL award recipients are decided on by the Council. The IAL has currently the following six awards:

- 1) The Mason Hale Award recognising excellence in research by young lichenologists for outstanding work resulting from doctoral dissertations or similar studies.
- 2) The Acharius Medal recognising the life-work of distinguished lichenologists.
- 3) The Sylvia Sharnoff Education Award for an outstanding web page devoted to lichens.
- 4) The Dharani Awasthi Award for a prominent young researcher working and living in a low income country, who has completed a Ph.D. within five years prior to the submission deadline.
- 5) The Aino Henssen Award for a prominent researcher early in the career, who has completed a Ph.D. within five years prior to the submission deadline. For the above awards, a call for nominations must reach the membership at least six months in advance of the next general meeting.
- 6) The Margalith Galun Award for outstanding student contributions at an IAL meeting (best oral and poster presentations). These awards will be decided and presented by the Council at an IAL meeting.

**§ 11. Change of Constitutional Rules** – Changes in these rules may be made only upon approval by not less than two-thirds of the Members present at the general meeting. Proposals of changes must be sent to Secretary at least four months prior to the general meeting, so that they will be disseminated to the Membership before the meeting. No rule change shall be allowed which will change the non-profit status of the IAL.

**§ 12. Dissolution of the IAL** – A motion to dissolve the IAL must be approved by at least two-thirds of the whole Membership. If the IAL is dissolved, any funds remaining after all outstanding liabilities are discharged shall be used for scientific purposes in the field of lichenology as agreed by the last Council.

## **Invitation for Nominations for IAL awards in IAL8**

The IAL plans to make awards of the Acharius Medal, the Mason Hale Award, the Sylvia Sharnoff Award, and in addition Aino Henssen Award and Dharani Awasthi Award at IAL8 in Helsinki in August 2016. For information regarding previous recipients of Acharius Medal, the Mason Hale Award and the Sylvia Sharnoff Award, please consult: [www.lichenology.org/](http://www.lichenology.org/).

## **Erik Acharius Award**

The Acharius medal is awarded for outstanding contributions to lichenology over the career of an individual. Probably two medals will be awarded at the IAL meeting in Helsinki. Nomination should be sent no later than **15 March 2016** to Thorsten Lumbsch ([tlumbsch@fieldmuseum.org](mailto:tlumbsch@fieldmuseum.org)).

## **Mason Hale Award**

This award is granted to recognize 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.

Nominations should be sent directly by e-mail to the Chair of the Mason Hale Award Committee, Mats Wedin ([Mats.Wedin@nrm.se](mailto:Mats.Wedin@nrm.se)), to arrive not later than **28 February 2016**, and should include (a) a pdf(s) of the nominated thesis/work(s) AND (b) a justifying statement from the person making the nomination.

## **Sylvia Sharnoff Education Award**

Applications are now open for the Sylvia Sharnoff Education Award 2016, given in memory of Sylvia Duran Sharnoff, the renowned nature photographer and co-author of *Lichens of North America*. The award is made for an outstanding web-page produced by a school (elementary, secondary or high school excluding universities) dedicated to lichens. The winner will be announced at the IAL8 Congress in Helsinki in August 2016. Evaluation criteria include, but are not restricted to: aesthetic appeal, clarity, educational impact, scientific accuracy, usefulness including links to other web sources, and practicality for the targeted age group.

Any IAL member can suggest a site by sending an e-mail to Robert Lücking ([r.luecking@bgbm.org](mailto:r.luecking@bgbm.org)). Please send suggestions by **15 March 2016** including: a) the URL of the site, b) aims and purpose of the site, and c) brief details of the school including, if possible, a URL for the institution.

## **Aino Henssen Award**

Applications are now open for the Aino Henssen Award 2016, given in memory of Aino Henssen, a German lichenologist well-known for many contributions to lichenology, especially her pioneering studies on fruiting-body ontogeny. Aino Henssen has a strong track record of mentoring and supporting young lichenologists, many of whom later obtained permanent positions in academia. This award will be given to a prominent early career researcher in lichenology, who has who has completed a Ph.D. within up to usually five years of at the submission deadline. Candidates must be members of IAL, and must have made significant contributions to a field in lichenology during the 5-year evaluation period leading up to the deadline. The winner will be announced at each IAL Congress, with the first to be announced at the IAL8 Congress in Helsinki in August 2016. Evaluation criteria include, but



are not restricted to: scientific impact on the field, originality and novelty of the research, scientific output, and activities that promote broader a dissemination of results.

Any IAL member can nominate a candidate by sending an e-mail to Imke Schmitt ([imke.schmitt@senckenberg.de](mailto:imke.schmitt@senckenberg.de)). Deadline for nominations is **February 15, 2016**. Please send applications or nominations as a single PDF document including: a) cover letter addressing the significance of the completed and current research, b) current CV that includes a list of publications and other products that demonstrate the contribution of the candidate to lichenology, c) a letter of support.

## Dharani Awasthi Award

The application is now open for the Dharani Awasthi Award 2016, given in memory of Dharani Dhar Awasthi. This award is granted to recognise excellence in research by young lichenologist working and living in a low income country, who has completed his/her Ph.D. thesis within five years prior to the submission deadline i.e. 15th March 2016. The nomination for consideration must be made by a person other than that being proposed. The submission includes: i) a statement from the person making the nomination, ii) a copy of the Ph.D. thesis certificate with indication of the actual date of thesis publication/defended; and iii) recommendation letters from two other lichenologists based in different countries from that of the person being nominated (to be sent directly to the Chair of the Committee). Nominations and recommendation letters should be sent directly by email to the Chair of the Committee, Prof. Pradeep K. Divakar ([pdivakar@farm.ucm.es](mailto:pdivakar@farm.ucm.es)) and that arrive no later than **15th March 2016**.

## Travel grants for attending in Helsinki 2016

### British Lichen Society (BLS) travel grants

The British Lichen Society (BLS) has made available £10,000 to help its members attend IAL8. We envisage making 25-30 awards in the region of £300-£460 each. Applicants must be BLS members when the application is submitted.

To apply please provide the following: name, institution address, supervisor (if a student or a post-doc), email address, whether you intend to contribute to an IAL8 session (and if so, the title and authorship of the contribution, and whether it will be a talk or a poster), your itinerary and approximate cost.



Please send this information to Heidi Döring ([membership@britishlichensociety.org.uk](mailto:membership@britishlichensociety.org.uk)) before **15 March 2016**. It is hoped that results will be announced by **mid of April**.

Please note that applications for the BLS awards will be considered together with those for the IAL awards (which are for students only) and that applicants will not be considered for both. If you are a student and you are a member of the IAL, please state this in the application.

Awards will be made available to successful applicants either at the meeting (in Euro) or after the meeting by bank transfer.

[www.britishlichensociety.org.uk](http://www.britishlichensociety.org.uk)

## IAL travel grants



The International Association of Lichenologists (IAL) has made available €5,000 to help its student members attend IAL8. We hope to be able to make about 10-12 awards in the region of €360-€550. Applicants must be IAL members when the application is submitted.

To apply please provide the following: name, institution address, supervisor, email address, whether you intend to contribute to an IAL8 session (and if so, the title and authorship of the contribution, and whether it will be a talk or a poster), your itinerary and approximate cost.

Please send this information to Heidi Döring ([membership@britishlichensociety.org.uk](mailto:membership@britishlichensociety.org.uk)) before **15 March 2016**. It is hoped that results will be announced by **mid of April**.

Please note that applications for the IAL awards will be considered together with those for the BLS awards and applicants will not be considered for both. If you are a member of the BLS, please state this in the application.

Awards will be made available to successful applicants either at the meeting or after the meeting by bank transfer.

[www.lichenology.org](http://www.lichenology.org)

## Bid for IAL9 – 2020

I would like to propose Mexico City and the Instituto de Biología, UNAM as the venue for the IAL9 meeting in 2020.

Mexico, a multicultural and biodiverse country, offers to the visitor countless cultural and recreational options, and Mexico City mirrors that multifaceted character of the Mexican society. It is a mosaic of antique and colonial neighborhoods immersed in a large and modern metropolis with a numerous museums and cultural centers.

The National University of Mexico (UNAM), the most important and largest university in Latin America, is the leader in scientific and social research in the country, and has an impressive infrastructure, consisting of different campuses, serving almost 300,000 students, from high school to postgraduate. The main campus, with the central part declared World Heritage Site by UNESCO, harbors schools and research institutes, as well as a concert hall, theaters, cinemas, three museums and an ecological reserve.

The Instituto de Biología, UNAM is the center for the study of different aspects of Mexican biodiversity and the custodian of the national collections. It consists of the Botany and Zoology Departments, the Botanical Garden, two research stations, and two countryside units. It publishes several periodical publications, such as the *Revista Mexicana de Biodiversidad*. As part of its infrastructure a specialized library, a computer department and an auditorium with an approximate capacity for 400 persons, a videoconference room, and several smaller rooms for thematic sessions. The institute has organized international meetings such as the *Third International Barcode of Life Conference* of November 10–12, 2009.

*Maria Herrera-Campos, Mexico City*



## **The 8<sup>th</sup> IAL Symposium “Lichens in Deep Time”**

**Helsinki, Finland, 1–5 August 2016**

### **Second circular**

#### **WELCOME TO FINLAND**

The Finnish Museum of Natural History LUOMUS and its fellow organizers welcome the 8th IAL Symposium participants to Helsinki on 1–5 August 2016. The Symposium’s theme is *Lichens in Deep Time – From Evolution to Global Change*.

#### **TIMELINE**

**31st January 2016**, Submission of abstracts opens

**15th March 2016**, Submission of abstracts closes

**15th April 2016**, Early registration opens

**15th May 2016**, Late registration opens

#### **ABSTRACT SUBMISSION**

Submission of abstracts will take place online; all instructions are on the official website: [ial8.luomus.fi](http://ial8.luomus.fi).

## REGISTRATION FEES (VAT included)

Registration opens in April 2016 via the official website: [ial8.luomus.fi](http://ial8.luomus.fi).

CATEGORY	EARLY	STANDARD	LATE
Delegates	€380.00	€430.00	€490.00
Students	€230.00	€260.00	€290.00
Accompanying persons	€150.00		

Registration fees for delegates include coffee breaks and lunches, the social event on Monday and the Congress kit. Registration fees for accompanying persons include the social event on Monday and a special cultural programme in Helsinki.

## SOCIAL EVENTS

Monday: Welcome reception in the City Hall hosted by the City of Helsinki

Tuesday: IAL Dinner. The restaurant Saaristo offering Scandinavian flavours on Klippan Island. Price ca. €100.

## MID-SYMPOSIUM FIELD TRIP

Wednesday afternoon, August 3rd, trip to Suomenlinna or Vallisaari Sea Fortress. Price ca. €35.

## ACCOMMODATION & TRAVEL

Please, visit the [ial8.luomus.fi](http://ial8.luomus.fi) website frequently, as information will often be updated.

## LANGUAGE

The official language of the Congress is English.

## THE VENUE

The Main Building of the University of Helsinki.

## PRE-SYMPOSIUM EXCURSION

Southern Finnish Archipelago 27–31 July. Our southern foray will take you to the beautiful archipelago, where we will visit both acidic and calcareous areas. One special boat trip will take us to an island with a long military history, just recently opened for visits to the flora. We will prepare a spacious lab for you, and offer saunas and the free use of spa and other facilities. For a better idea of the venue site, you can search for images of “Kasnas Spa”. Price ca. €450.

## POST-SYMPOSIUM EXCURSION

Western Finnish Lapland 5–9 August. The excursion will be arranged at the Pallas-Yllästunturi National Park. First we will explore the lichen communities, including many calicioid and fruticose species, in old-growth forests located in the foothills of the fells. Then the expedition will be directed towards the rich lichen flora of the alpine-oroarctic zones where the genus *Rhizocarpon* is most prominent with its yellow saxicolous species. Furthermore, we will visit nice brooks and great gorges. Price ca. €700–900.

## LOCAL ORGANIZING TEAM

**Marko Hyvärinen** (chair), LUOMUS (Finnish Museum of Natural History), University of Helsinki; **Soili Stenroos**, LUOMUS, University of Helsinki; **Leena Myllys**, LUOMUS, University of Helsinki; **Annina Launis**, LUOMUS, University of Helsinki; **Sampsa Lommi**, LUOMUS, University of Helsinki; **Raquel Pino-Bodas**, LUOMUS, University of Helsinki; **Laura Hiisivuori**, LUOMUS, University of Helsinki; **Hanna Lindgren**, The Field Museum of Natural History; **Seppo Huhtinen**, Herbarium, University of Turku; **Juha Pykälä**, Finnish Environment Institute; **Jouko Rikkinen**, Department of Biological Sciences, University of Helsinki; **Jouni Aspi**, Department of Biology, University of Oulu

## SCIENTIFIC COMMITTEE

**Thorsten Lumbsch** (chair), The Field Museum of Natural History; **Marko Hyvärinen**, LUOMUS, University of Helsinki; **Leena Myllys**, LUOMUS, University of Helsinki; **Volker Otte**, Senckenberg Museum für Naturkunde Görlitz; **Sergio Pérez-Ortega**, Real Jardín Botánico, CSIC; **Juha Pykälä**, Finnish Environment Institute; **Jouko Rikkinen**, Department of Biological Sciences, University of Helsinki; **Soili Stenroos**, LUOMUS, University of Helsinki; **Ave Suija**, Institute of Ecology and Earth Sciences, University of Tartu; **Mats Wedin**, Swedish Museum of Natural History

## CONTACT INFORMATION

Botany Unit, Finnish Museum of Natural History, P.O. Box 7, FI-00014 University of Helsinki, Finland

e-mail: [ial8@helsinki.fi](mailto:ial8@helsinki.fi), web: [ial8.luomus.fi](http://ial8.luomus.fi)

Facebook: [mycologyteam](https://www.facebook.com/mycologyteam); Twitter: [MycologyTeam](https://twitter.com/MycologyTeam)

## PRELIMINARY PROGRAMME

[ial8.luomus.fi/wp-content/uploads/2014/09/IAL8-programme1\\_web.pdf](http://ial8.luomus.fi/wp-content/uploads/2014/09/IAL8-programme1_web.pdf)

## NEWS

### The California Lichen Society

*Promoting the appreciation, conservation, and study of California lichens*

*www.CaliforniaLichens.org*

#### Press Release

For Immediate Release: August 16, 2015

Contact:

Shelly Benson

President, California Lichen Society

*shelly.benson@yahoo.com*

707-479-6777



### Lace Lichen named the official California State lichen

#### California is first to designate a lichen as a state symbol

Governor Jerry Brown recently signed the bill designating lace lichen (*Ramalina menziesii*) as the California State Lichen. The law takes effect January 1, 2016, making California the first state to recognize a lichen as a state symbol. Lace lichen joins California's other symbols which include the California poppy (state flower) and the grizzly bear (state animal).

The California Lichen Society (CALs) was instrumental in getting the state lichen passed. Shelly Benson, CALs president, explained that lace lichen has three strong qualities that made it an ideal candidate. First, it is easy to recognize even by those not very well acquainted with lichens. Second, it is common throughout much of California—growing along the coast from the northern to the southern borders and up to 130 miles inland. Lastly, and most significantly, it is an amazingly beautiful lichen.

“I see this as an important step in increasing public awareness of lichens. Lichens are found all around us, growing on almost any surface and found in nearly every habitat; yet, they are overlooked by most people” said Benson. Lichens are composite entities—composed of two or more different organisms. In its simplest form, the lichen is made up of a fungus and an alga. These two partners live intertwined in a symbiotic relationship. The fungus provides a structural home that protects the algal cells. In return, the alga feeds the fungus by producing sugars through photosynthesis.

While small in stature, lichens play a big role in the ecosystem. With nearly 1,900 species of lichens in California, they contribute to our region's rich biological diversity. Lichens are known for their sensitivity to air pollution and climate, and are being used across California to monitor air quality and climate change. Lichens are an integral part of the living soil crusts that stabilize desert soils. Additionally, animals use lichens for food, nesting material, and



*Lace lichen (Ramalina menziesii). Photos: S. Sharnoff*

camouflage. Humans have found a number of uses for lichens as well. Possibly the most promising is in the area of medicine. Lichen extracts are being studied for their antibacterial properties.

Calling attention to lichens by recognizing one of them as the California State Lichen creates an opportunity for us to learn about and celebrate the things that make California special.

The mission of the California Lichen Society is to promote the appreciation, conservation, and study of California lichens. For more information and photos of the state lichen, visit [www.californialichens.org](http://www.californialichens.org).

## Lichens as a Tool for the Interpretation of Environmental Changes and Management

- CE3C 2016 Advanced Course -

<http://ecofun.fc.ul.pt/Activities/lichens-course>

**11–15 July 2016 | 4 days lectures and lab classes + one day field excursion**



This course aims at providing the participants with a basic knowledge of lichen biology and ecology, approaches to biomonitoring, data analysis and interpretation. This will allow participants to use lichens as a tool to interpret environmental conditions and to contribute to a scientific-based environmental management.

**Location:** Universidade de Lisboa, Faculdade de Ciências, Departamento de Biologia Vegetal

**Time schedule:** 9:00–12:30 and 14:00–17:30 (36h in total)

Lichens are amongst the most sensitive organisms to environmental changes at the ecosystem level. Some of the most important drivers of global change, such as climate, pollution and eutrophication, are factors to which lichen communities respond ecologically in only a few years and physiologically in few weeks. Therefore, by interpreting lichens useful information can be obtained regarding the status of the environment and its changes over time and space.



Since the 19th century, observations based on changes in lichen community composition and species frequency have been used for biomonitoring purposes. Currently, new approaches based on functional diversity and lichen physiological response are being developed. Functional diversity has a wide geographical applicability and high inter-comparison potential and it has proved to be better at predicting impacts at the ecosystem level than total diversity measures. Newly developed physiological methods allow us to assess lichen responses to the rapidly changing environmental conditions. Moreover, the link between physiological mechanisms, functional diversity and ecological impacts provides a credible basis for the development of environmental policies.

Six modules identify the main themes of the course, ranging from basic knowledge on lichen symbiosis to data collection and interpretation. The course will be organized into lectures, laboratory work, lichen identification and a one-day excursion to apply biomonitoring methods.

A brief description of the modules structure is given. The modules are sequential and thus attending all is mandatory.

**Module 1 (Lichen biology and ecology)** providing basic knowledge on lichen biology and their ecology:

- Introduction to lichen symbiosis, highlighting the role of each partner.
- The ecological role of lichens, including ecosystem functioning.
- From the deserts to the poles: strategies for lichen survival in extreme environments.
- Lichens in the context of global change: key features that make them excellent ecological indicators of air pollution and climate change.

**Module 2 (Systematic)** covers basic lichen structure and techniques needed for lichen determination (lab class) to provide students with basic skills on lichen identification:

- Morphology and anatomy: photobionts, growth forms, sexual and vegetative reproduction strategies.
- Determination methods based on morphological and chemical characteristics.
- Introduction to the commonest lichen genera, available floras and online keys.
- Identification of lichen specimens: macro- and microscopic characters (preparation and observation of samples); chemistry and determination keys.

**Module 3 (Ecophysiology)** focuses on modern approaches in lichen ecophysiology to assess the impact of environmental stress drivers on lichen functioning:

- Lichen physiological response to environmental changes.
- What should we measure? Selecting parameters to assess cause and/or effect of human-induced environmental disturbances.
- Case studies from laboratory and field.
- Integration of molecular, physiological and ecological techniques.

**Module 4 (Using lichen functional diversity: from topsoil to trees)** offers an overview on the use of lichen functional diversity as an indicator of global change drivers:

- Functional diversity, what does that mean? A review of definitions and components, including chemical and life-history traits.
- Why is functional diversity so important? The link to ecosystem functioning and the response to environmental changes.
- Case studies with biological soil crusts and epiphytic lichens.

**Module 5 (Biomonitoring)** provides an overview of the main methodological approaches using lichens as biomonitors:

- What to measure? Standard sampling methods based on biodiversity and bioaccumulation.
- How to measure? When to use transplants or *in situ* lichens in biomonitoring studies. When to use total diversity or functional diversity.
- Different problems ask for different approaches: case-studies of different environmental problems (in urban, natural and industrial areas) and the link with human health.

**Module 6 (Data analysis and interpretation)** provides students with basic ideas on how to analyze and interpret data collected according to previous modules:

- Theory and practical examples will be given.
- Emphasis on GIS interpretation of results in space.



**Excursion:** One-day field excursion to Mediterranean cork-oak woodlands to test the acquired knowledge on species, and to apply biomonitoring methods: the standard European method for air pollution and the method for biological soil crusts.

Number (min.–max.) students: 10–18

**Minimum requirements for attendance:** “Licenciatura” (bachelor) in Biology, Natural Sciences or related areas.

**Language:** English

**Fee:** Free for 1st year PhD students in doctoral programmes: Biology (FCUL), Biodiversity, Genetics and Evolution (UL; UP) and Biology and Ecology of Global Change (UL, UA); 20€ for PhD students from institutions of the PEERS network (Ce3C, CFE); 100€ for FCUL Master’s students and unemployed; 150€ for BTI, BI and other PhD students; 200€ for Professionals and post-doctorates.

**Deadline for applications:** 31 May 2016

**Application:** Candidates should send an application including a 1-page CV to: [lichenscourse@fc.ul.pt](mailto:lichenscourse@fc.ul.pt)

### **Infected *Parmeliaceae* collections welcome!**

We have been awarded a research grant by the Spanish Ministerio de Economía y Competitiva for a molecular phylogenetic study of lichenicolous fungi on *Parmeliaceae*: CGL2014-55542-P (“Relaciones filogenéticas entre especies fungicas mutulaistas: los *Ascomycota* liquenicolas en *Parmeliaceae*”), which runs to the end of 2017. We will be continuing to explore co-speciation and possible co-evolution events in the family, and are most anxious to receive fresh or recently collected (ideally within two years) material of infected lichens, fruticose as well as foliose, from anywhere in the world. Material need not be named, but we especially welcome fungi of genera only known from the family, and on previously unreported host lichens species. Of particular interest will be collections of *Abrothallus*, *Homostegia*, *Lichenocodium*, *Lichenostigma*, *Nesolechia*, *Phacopsis*, *Raesaenenia*, and *Stigmatidium*. Those sending us material will be acknowledged in our publications and provided with identifications. Specimens should be addressed to Prof. Victor Rico and Dr Zuzanna Ferencova at the address below. Do e-mail us if you have any questions, and thanks in advance for your kind co-operation!

*David L. Hawksworth, Victor Rico, and Zuzanna Ferencova*

*Departamento de Biología Vegetal, Facultad de Farmacia, Universidad Complutense de Madrid, Plaza Ramón y Cajal, 28040 Madrid, Spain; d.hawksworth@nhm.ac.uk or rico@ucm.es*

#### ***New members***

**Chaiwat Boonpeng**, e-mail: [chaiwat\\_u@hotmail.com](mailto:chaiwat_u@hotmail.com), Department of Biology, Faculty of Science, Ramkhamhaeng University, Bang Kapi, Bangkok, 10240, Thailand

**Jennifer Doering**, e-mail: [jendoering90@gmail.com](mailto:jendoering90@gmail.com), #210 - 88 Eric Street, Winnipeg Manitoba R2M4A7, Canada

**Beatriz Fernández-Marín**, e-mail: [beatriz.fernandezm@ehu.es](mailto:beatriz.fernandezm@ehu.es), Depto Biol. Vegetal y Ecología, Universidad del País Vasco, 48080 Bilbao, Vizcaya, Spain

**Alice Gerlach**, e-mail: [lolarennt@gmail.com](mailto:lolarennt@gmail.com), Rua Chile 895 202, Jardim Botânico, Porto Alegre – RS, 90670-140, Brazil

## REPORTS

### **Lichens as a Tool for Interpretation of Environmental Changes and Management**

**University of Lisbon (Portugal), 9–13 June 2015**

For the third year, the advanced training course “Lichens as a Tool for Interpretation of Environmental Changes and Management” was held at the Centre for Ecology, Evolution and Environmental Change (cE3c), ex Centre for Environmental Biology, at the Universidade de Lisboa (Portugal). This course was organized in association with the 7th International Workshop on Biomonitoring of Atmospheric Pollution held in Lisbon on 14–19 June, another international event of great interest for researchers operating in the field of environmental monitoring. The teaching team was composed by Cristina Máguas, Cristina Branquinho, Paula Matos, Silvana Munzi, Pedro Pinho and Laura Concostrina (Universidade de Lisboa, Portugal), Sofia Augusto (Universitat Rovira I Virgili, Spain) and Esteve Llop (Universitat de Barcelona, Spain). Participants (masters and doctorate students) came from Portugal, France, Italy, Spain, Turkey and Brazil, confirming the attractiveness of this topic at a global level.

Although historically monitoring methodologies are based on epiphytic lichens, being aware of the increasing attention given to biological soil crusts as monitoring tools, this year’s



*Photo: S. Munzi*

programme included case studies with terricolous lichens in the module “Using lichen functional diversity: from topsoil to trees” (see the programme at <http://ecofun.fc.ul.pt/Activities/lichens-course>).

As in the previous year, the one-day excursion was undertaken at “Companhia das Lezírias”, Samora Correia (<http://www.cl.pt/htmls/en/home.shtml>) in Mediterranean cork-oak woodlands to test the acquired knowledge on species identification, and to apply the two biomonitoring methods explained in the course: the standard European method for air pollution and the method for biological soil crusts. Furthermore, Nathalia Koch, one of the participants, showed another monitoring method that consists in tying tape or string around the tree trunks at different heights and record all the intercepted species. We so enjoyed such a nice sunny day in the field with the contribution of the famous Portuguese cream pies “pasteis de nata” (thank you Cristina Máguas!), that we decided to organize the next course again in June instead of January.



*Photo: S. Munzi*

We continue to be amazed by the stunning “personal projects” presented by the participants during the final workshop, where they show their understanding of the principles they have been exposed to during the course by illustrating their possible applications. The fourth course has already been announced and will be enriched with an extra lichenological excursion of three days after the course. We await your arrival!

Once again, our special thanks go to Claudia Oliveira and Inês Almeida (cE3c Secretariat) for their help in the organization.

*Silvana Munzi, Lisboa*

## **International Lichenological Excursion to Armenia**

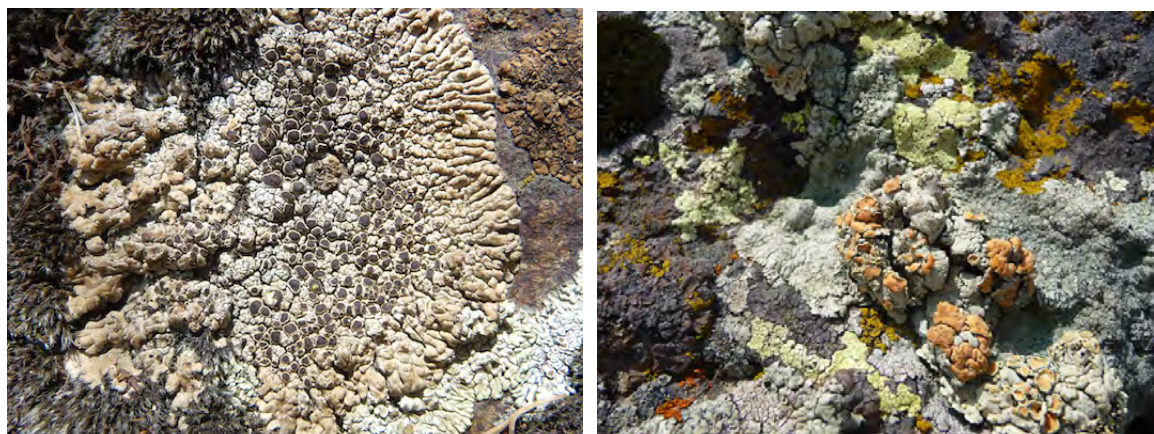
**15–24 June 2015, Armenia**

The Young Biologists Association (NGO) of Armenia organized an international lichenological excursion conducted by Arsen Gasparyan (President of NGO), within the framework of the Organization for the Phyto-Taxonomic Investigation of the (OPTIMA), coordinated by Ana Rosa Burgaz. The aim of the excursion was to study the lichen diversity of the Khosrov Forest State Reserve and also other areas in Armenia. The participants were experienced lichenologists from several European and USA research centres as well as some amateurs, mainly NGO students. Complementary to the scientific fieldwork, a training programme for about 30 undergraduate and graduate students was undertaken.

The Republic of Armenia occupies a total area of almost 30000 km<sup>2</sup> between the Black Sea and the Caspian Sea (38°50'–41°18'N and 43°27'–46°37'E). Khosrov Forest State Reserve (Ararat *marz*) was more intensively investigated, but the fieldwork was extended to several other *marzer* (Aragatsotn, Kotayk, Gegharkunik, Tavush, Syunik) and the region of Yerevan.

Armenia is a country with continental climate displaying very high winter-summer and day-night temperature differences. Due to its dramatic topography (altitudes ranging c. 400 to 4000 m), temperature and precipitation vary greatly at different sites, the average annual precipitation, for example, being 300–800(–1000) mm in the mountains and 150–200(–300) mm in the lowlands, with the maximum rainfall in spring. The vegetation ranges from semi-desert in the lowlands to alpine meadows in high mountains. Main biomes are (i) alpine meadows occupying areas at altitudes of 2700–3600 m, (ii) mountain steppes at 1400 to 1700 m, (iii) open forests mainly of *Juniperus* at 800 to 1300 m, (iv) deciduous forests in more humid regions but mainly confined to deep valleys, but severely devastated in still recent times, and (v) lower semi-desert territories at 400 to 800 m, the vegetation represented by phryganoid xerophytes (small shrubs) and nutrient rich communities (see Harutyunyan, S., Wiesmair, B. & Mayrhofer, H., 2011, *Herzogia* **24**(2): 265–296 for more details).

Lichen mycobiota in Armenia is relatively diverse in the localities visited and notably rich in saxicolous and/or terricolous habitats. The intrinsic interest of cataloguing the lichen mycobiota of Armenia is greatly increased by the fact that our hitherto knowledge of the biogeography and phylogeny of the Eurasian mycobiota will be significantly extended, particularly as the country is situated at a crossroad that could be key to the interpretation of the evolution of diversity of recent lineages of many biological groups. As a result of the excursion, several hundreds of diverse and interesting samples were collected by participants and certainly an updated lichen checklist of Armenia will be provided as a joint paper. Previous studies of the area and the work developed by Arsen Gasparyan were essential for the outcome of the excursion. Surely the success will be confirmed when samples are totally processed and identified and all data carefully analyzed. Additionally Arsen Gasparyan and his collaborators, Hripsime Atoyán, Vanuhi Hambardzumyan and Maria Antonosyan, prepared an excellently organized and balanced programme which allowed us sufficient time to discuss and plan new collaborative projects.



*Lobothallia alphoplaca* (left) Shatin, 1600 m (Vayots Dzor) and *Rhizoplaca chrysoleuca* (right) Aragat Mountains c. 2500 m (Aragatsotn). Photos: A. Crespo



*Haghartsin Monastery (Tavush province). Photo: A. Crespo*



*In Khosrov Forest State Reserve (Ararat). Around the table (left to right) Arsen Gasparyan, Pradeep K. Divakar, Thorsten Lumbsch, Hripsime Atoyan, Elena Araujo, Andre Aptroot, Jose Antonio Gómez, Maaike Vervoort, Ana Crespo, Victor J. Rico, outside left Volker Otte, outside right Ana Rosa Burgaz.*

Apart from scientific work, participants had the opportunity to share a complementary cultural programme mainly conducted by Sona Margaryan, including visits to museums, monasteries, and other monuments of exceptional quality. The beauty and exuberance of the blossoming vascular flora also provided intense pleasure for the senses. Last but not least, after having been able to work with such group of young Armenian scientists, participants have new data to understand why so many relevant scientists, artists, and businessmen are Armenian!

Ana Crespo

*Departamento de Biología Vegetal II, Facultad de Farmacia, Universidad Complutense de Madrid, Spain amcrespo@ucm.es*

## **The lichens at the 8<sup>th</sup> congress of the International Symbiosis Society**

The Universidade de Lisboa (Lisbon, Portugal) hosted the 8th Congress of the International Symbiosis Society (ISS) in July 2015. Devoted to the “Symbiotic lifestyle”, the Congress was characterized by a multidisciplinary approach, with eleven thematic sessions exploring the different aspects of the symbiotic lifestyle in different symbiotic systems, and eight focused sessions specifically presenting the current knowledge on a given symbiotic association. In this context, lichens and lichenologists were very much in evidence.

Although many in Portugal follow the Brazilian novelas (soap operas) on television, strong competition for these viewers was provided by the scientific session *Lichen Symbionts: Marriage, Divorce, and Domestic Partnership*. Lucia Muggia led off with her keynote introductory talk on symbiont association patterns, a theme that was central to most of the subsequent presentations. Ioana Brännström then broke our hearts with her lonely tale of apomictic *Thamnolia vermicularis*, followed by Ulrike Ruprecht’s provocative account of partner selection among lecideoid lichens in Antarctica. In *Stereocaulon*, a scandalous degree of promiscuity with respect to photobiont selection was reported by Lucie Vančurová, while from Ulla Kaasalainen we heard that among cyanolichens there exists a web of symbiont associations more complex than a synopsis of *Der Ring des Nibelungen*. After the coffee break, Anna Voytsekhovich described the great diversity of photobionts within a nature reserve in the Ukraine, and Jana Steinová correlated symbiont association patterns in *Cladonia* with mode of reproduction. From Arantxa Molins we heard a sordid account of multiple photobionts within single lichen thalli, and the possible connection to oxidative stress tolerance was reported by Myriam Catalá. Eva Barreno followed with a description of cephalodia development in *Lobaria*. As a finale to our otherwise down-to-earth session, Annette Brandt revealed what happens to lichens in outer space. Thirteen poster presentations completed the session.

Besides their own session, lichens colonized the thematic sessions “Establishment and maintenance of mutualism” (one oral and one poster presentation), “Symbiotic microbes – new frontiers in applied biotechnology” (one oral presentation), “Holobionts as players in ecological stress gradients” (one poster presentation), and “Connecting habitats” (one oral and one poster presentation).



Waiting for the 9th ISS Congress, when more of our precious lichens will be revealed, we'll keep the memory of the good science, the brilliant discussions with colleagues and the enjoyable conference dinner of the 8th one.

The book of abstracts of the 8th ISS Congress is still available at <http://iss-symbiosis.org/Resources/Documents/Abstract%20book.pdf>

*Silvana Munzi, Centre for Ecology, Evolution and Environmental Changes, Universidade de Lisboa, Portugal*

*William B. Sanders, Florida Gulf Coast University, USA*

## **Nordic Lichen Society Meeting in Steinkjer, Norway**

### **3–7 August 2015**

Thirty two persons from Norway, Sweden, Denmark, Finland, Estonia, Lithuania, Germany, Italy, Slovakia, Spain and Belarus participated in a very well organized meeting with four lectures and four days of excursions.

On the first evening, Einar Timdal introduced us to DNA barcoding and the Norwegian “species project”, NORBOL. Håkon Holien then talked about the boreal (spruce) rainforest and the “element of Trøndelag”, only found here on the European mainland. It is characterized by for example at least 200 days of precipitation per year, mild winters especially for the latitude, and no hot summers. On Tuesday evening, Tor Tønsberg gave an update on sorediate lichens and a related sequencing project in Norway. On Wednesday, Lucia Muggia gave a detailed description of the complicated lichen associated fungi in alpine communities, followed by the NLS general meeting organized by Håkon Holien, Mika Bendiksby, Reidar Haugan and Einar Timdal at which a positive future of *Graphis Scripta* was discussed.

The evenings before and after dinner, were usually spent in the well-equipped laboratory at the HINT University College in Steinkjer, exchanging ideas and making new friends, as well as analyzing collected specimens. Before registration and before dinner some of us spent time looking on lichens in the churchyards of Steinkjer and Egge churches. On a planted street tree close to the hotel we surprisingly found *Physcia leptalea* (to our knowledge only known from southern Norway), but no other species known to be imported with trees from other parts of Europe.

The excursions were to Mork (lat. 63.9653/ longit.12.1323), Dale NR, Flatanger area (64.4428/10.9652), Lake Vikvatnet (64.4448/10.7850), Nordstrømen (64.5037/10.7928), Snåsa with Bergsåsen (64.2525/12.4083), Bøla River (64.1461/11.9362) and Høyøya Island (64.0185/11.3498).

The first official excursion (4 August) was to **Mork copper mine** (worked from 1670 to 1786) close to the centre of Norway. On mossy boulders at 560 m above sea level we found the oceanic *Cladonia luteoalba*. The lichens in the mine area were very colourful mainly due to the rich iron content, with *Acarospora sinopica*, *Amygdalaria panaeola*, *Lecidea silacea*, *L. lithophila*, *L. lapicida*, *L. leucothallina* and *Miriquidica atrofulva*, the last species already



*Preparing sample for DNA barcoding. Photo: A. Niklasson*

recognized by the Norwegian lichenologist Sommerfelt (1794–1838) who worked close to this area. *Aspicilia myrinii*, *Porpidia ochrolemma*, *Rhizocarpon oederi*, *R. hochstetteri*, *Baeomyces placophyllus*, *Bellemeria subsorediza* were also found, and *Stereocaulon vesuvianum* was sampled for genetic sequencing, as well as some other sorediate species. Håkon Holien found *Tholurna dissimilis* on the top of an old but small spruce manured by birds on the mountain summit – a typical habitat for this species. On the walk back to the bus we passed the calcareous caves at Gaulstad.

On the excursion to **boreal rain forest** in the **Flatanger** area NW of Steinkjer on the second day it rained until lunch, which was the only rain during our visit – the absence of mosquitos was very much appreciated. First we drove through the landscape where the Swedish lichenologist Sten Ahlner visited by light motorbike in 1938, collecting data for his thesis “Utbredningstyper bland nordiska barrträdslavar” (1948). Gunnar Degelius also visited this region whilst studying oceanic lichens in Scandinavia. Håkon Holien, who was born close to some of Sten Ahlner’s localities of *Ramalina thrausta* along the road, was inspired by him and found several rare lichens as a schoolboy which inspired him to be a lichenologist! Unfortunately most of his old localities for *R. thrausta* have been destroyed by modern forestry practices resulting in plantations. First we visited **Dale NR** (Stordalen) with *Picea abies* and *Alnus incana*, where we found *Rinodina disjuncta* and *Arthothelium norvegicum*, both described by Tor Tønsberg, *Lobaria amplissima*, *L. scrobiculata*, *Pannaria rubiginosa*, *Degelia plumbea*, *Nephroma laevigatum*, *Platismatia norvegica*, the very beautiful *Pseudocyphellaria crocata*, *Lecanora cinereofusca*, *Hypogymnia vittata*, *Cliostomum leprosum*, *Cavernularia hultenii*, *Sticta fuliginosa*, *Gyalecta friesii* and finally *Ramalina*



*Miriquidica atrofulva* (upper left), *Rinodina disjuncta* (upper right), *Ramalina thrausta* (bottom left), *Tholurna dissimilis* (bottom right). Photos: A. Niklasson

*thrausta* with its ebony coloured, diagnostic hooked branch tips with soralia, separating it from it from the common *Alectoria sarmentosa*. At lunchtime we had red-throated loon and redpoll circling above us and probably very hungry barn swallows. We then visited the area between the two lakes **Vikvatnet and Floanvatnet** where we experienced an abundance of freshly wet and beautiful *Lobaria virens*, *Pectenium (Degelia) plumbeum*, *Pannaria rubiginosa* and the red listed *Pectenium (Degelia) cyanoloma* and *Fuscopannaria ignobilis* on exposed *Populus tremula*. On the way home we checked the coastal rocks at **Nordstrømen** with *Cornicularia normoerica* and the northern element *Siphula ceratites*, while sea eagles circled over us.

The third day was spent on **Bergsåsen at Snåsa**, east of the deep lake Snåsavatnet a cut off fiord. It has a rich pine forest and is known for a very rich orchid flora. Actually it was difficult walking on the slope without touching an *Epipactis atrorubens* still flowering. The leaf of *Cypripedium calceolus* was easy to recognize, and *Dryas octopetala* was found in several patches together with *Gymnocarpium robertianum*. Many small schistose rocks were examined by different groups now and then signaled by hammer and chisel sounds. We were provided with a list of 136 species known from the area, hopeful that we would find several new species. Among the many lichens found here were *Petractis clausa* and *Acarospora glaucocarpa* on small calcareous rocks. At the summit we viewed the mire complex and



*First row (left to right): Jana Steinova (Slovakia), Piret Lõhmus (Estonia), Ana Maria Millanes Romero (Spain), Lucia Muggia (Italy), Alica Kosothova (Slovakia), Maria Prieto (Spain), Ave Suija (Estonia), Andreas Frisch (Germany), Astri Botnen (Norway).*

*Second row: Zuzana Fackovcova (Slovakia), Anne Karin Toreskaas (Norway), Malin Stapnes Dahl (Norway), Sonja Kistenich (Norway/Germany), Anna Guttova (Slovakia), Mika Bendiksby (Norway), Håkon Holien (Norway).*

*Third row: Einar Timdal (Norway), Ulrika Nordin (Sweden), Juha Pykälä (Finland), Reidar Haugan (Norway), Harald Bratli (Norway), Fredrik Jonsson (Sweden), Vagn Alstrup (Denmark), Hans Chr Gjerlaug (Norway), Andrei Tsurukau (Belarus), Jurga Motiejunaite (Lithuania), Ulrike Hanssen (Norway), Staffan Wall (Sweden), Jon T. Klepsland (Norway), Aimon Niklasson (Sweden), Martin Westberg (Sweden), Tor Tønberg (Norway).*

*Photo: E. Timdal*

lunchtime was spent by a small lake. On our journey back we visited the famous Bøla reindeer, a stone carving in natural size, on the rocky outcrops by the Bøla river.

The last day excursion was to **Hoøya** a calciferous schistose peninsula not far from Steinkjer. Here we observed *Nephroma arcticum*, *Fuscopannaria mediterranea*, *Peltigera hymenina* and *Lobaria scrobiculata* and spent most time on the beautiful SW sloping cliffs with *Rusavskia (Xanthoria) sorediata* in full sun.

A final list of species will hopefully be published on the homepage for the Nordic Lichen Society. Further links to the meeting congress: [nhm2.uio.no/lichens/nordiclichensociety/](http://nhm2.uio.no/lichens/nordiclichensociety/) and [www.bfig.se/ombfig/bildportal.html](http://www.bfig.se/ombfig/bildportal.html)



*Examining cyanolichens on Populus tremula. Photo: A. Niklasson*

The next Nordic Lichen Society Meeting, announced with enthusiasm by Vagn Alstrup at Steinkjer, will be held in Denmark, but sadly a few weeks later on his visit to Tanzania his life was tragically ended.

*Aimon Niklasson, Trolltjärn 18, 43640 Askim, Sweden. [aimon@bahnhof.se](mailto:aimon@bahnhof.se) and Staffan Wall, Gibraltargatan 44, 41258 Gothenburg, Sweden. [wall@chem.gu.se](mailto:wall@chem.gu.se)*

## REVIEWS

### **Acharius's personal copy of *Lichenographiae suecicae Prodromus***

The following proposal for the digitisation of Erik Acharius's *Lichenographiae suecicae Prodromus* (1799) was made by David Galloway prior to death in 2014:

“Erik Acharius (1757–1819), Linnaeus's last student, and the founder of modern systematic lichenology, was a doctor in the country town of Vadstena, where he produced four books on lichenology. The first of these appeared early in 1799 (the title page gives 1798) and was an introduction to the lichens of Sweden, being a distillation of several lichenological papers published between 1794 and 1797. Acharius sent James Edward Smith a copy of the *Prodromus* for the Linnean Society Library in July 1799, and for this gift Smith proposed Acharius as a Foreign Member of the Society. Acharius also dedicated the *Prodromus* to the Linnean Society and later sent the Society a set of named lichens mentioned in his ground-

breaking volume, the *Methodus* of 1803; this important lichen collection is now in The Natural History Museum, London (BM).

In 1992, a memorial plaque to Acharius (designed and cast by the renowned Swedish sculptor Liss Eriksson) was affixed to the end wall of the Acharius House in Vadstena under the auspices of the International Association for Lichenology. This memorial had as its major supporters the Linnean Society of London, the Swedish Linnean Society and the British Lichen Society, complemented by donations from the international lichenological community.

In August 2013, while researching the Acharius Archive in the Manuscripts Department of Carolina Rediviva (the University Library) in Uppsala, I came across Acharius's personal, interleaved copy of the *Prodromus*, a handsome volume with a particularly luscious hand-painted frontispiece plate (drawn and coloured by Acharius himself) and with a text replete with many hand-written changes and additions, and lists of generic, species and variety names. Clearly this was Acharius's working model for the *Methodus* of 1803, and as such a volume of considerable historical and taxonomic interest. The copy that Acharius sent to J.E. Smith for the Linnean Library has the frontispiece drawing completely blackened by age, whereas Acharius's copy is as clean and fresh as the day it was painted."

The initiative to digitise this very important work by the famous Swedish lichenologist Erik Acharius was due entirely to David Galloway, but sadly he passed away on 6 December 2014 before this could be undertaken. David, a graduate and doctorate of the University of Otago, New Zealand, worked at the Natural History Museum, London from 1973 to 1994, becoming Senior Research Fellow in 1982, and promoted to Principal Scientific Officer and Head of the Lichen Division in 1987, before returning to New Zealand where he obtained a research position at Landcare Research in Dunedin. He was President of the International Association of Lichenology, 1987–1992, and received its highest honour, the Acharius Medal, in 2001. Although he will be mainly remembered for his monumental *Flora of New Zealand: Lichens*, first published in 1985, and the extensively revised and expanded two-volume second edition published in 2007, his taxonomic expertise and encyclopaedic knowledge of the history of lichenology, more particularly of 18th and 19th century lichenologists, were frequently called upon.

I was particularly anxious to ensure that David Galloway's proposal to issue an electronic version of Acharius's personal interleaved copy of *Lichenographiae suecicae Prodromus* should come to fruition; to this end the Uppsala University Library, as well as generously providing a major source of funding, also provided the expertise for the digitisation and production of this internationally important work which can be viewed at:

<http://www.ub.uu.se/samlingar/verk-och-samlingar-i-urval/acharius/?languageld=1>

Other major sources of funding for this project were provided by the British Lichen Society and the Linnean Society of London.

This impressive and most valuable resource is a fitting tribute not only to Erik Acharius but also to David Galloway, one of his distinguished successors.

*Mark R.D. Seaward, Bradford*

## Naming a lichen: a pragmatic oxymoron

The objective of applying scientific names to organisms is to facilitate communication about them. Some of the more conspicuous lichens, especially those considered to be of medicinal importance, were given names in some of the earliest herbals in the 16th century. This practice of naming lichens as single organisms continued even after their dual nature was explicitly stated by Schwendener in 1867 and the term symbiosis was coined especially for the relationship by Frank in 1877. Lichenologists continued this tradition and classified lichens independently from non-lichen-forming fungi, even using the class *Lichenes* for them in the editions of the *International Code of Botanical Nomenclature* adopted by the Amsterdam International Botanical Congress of 1935.

Thomas, however, had been culturing the separate partners of lichens, and found the cultured fungal colonies to be so unlike intact thalli that he proposed separate names for them in 1939; for example *Xanthoriomyces* for the fungal partner of *Xanthoria* lichens. The issue led to an extensive debate at the Stockholm Congress in 1950 which came up with the decision that “For nomenclatural purposes names given to lichens shall be considered as also applying to their fungal components”. Despite that decision, in a series of papers published from 1952 to 1958, Cifferi and Tomaselli introduced separate names for all the currently accepted “lichen” genera, whether known in pure culture or not; 215 new generic names, mostly with the suffix “-myces” (Lücking & Hawksworth 2007), and also names of numerous higher ranked taxa were published. They proposed changes to the *Code* to permit this practice, but the *status quo* was retained at the Paris Congress in 1954, where the case for no change was championed by Santesson. Further information on this debate is summarized in Hawksworth (1999, 2000).

“Lichenes” finally disappeared from the body of the *Code*, and the former “Lichenes” appendices of names were united with other fungi, at the Sydney Congress in 1981; “(including lichen-forming fungi)” was dropped from the Appendices of fungal names to the *Code* in 1993; and the “Committee for Fungi and Lichens” also deleted “and Lichens” from their title in 1993.

The situation remains the same today: the partners in lichens have separate names, but the associations themselves do not have names. This is a pragmatic solution, as it means that the same generic name can be used regardless of the biology of the fungus, which in any case is not always clear or may be facultative. In genera which include both lichenized and non-lichenized species, it would be nonsensical to use different generic names in groups of species which are congeneric; that would mean, for example, referring to lichenized species of *Arthonia* as *Arthonia*, but non-lichenized ones as *Arthoniomyces*.

As lichens are ruled strictly as having no names, the corollary for the pedantic lichenologists is always to speak of either lichen-forming, or lichenized, fungal genera and species. With the changes in the rules relating to non-lichenized fungi which have been introduced into the *Code*, starting from the 1981 Sydney Congress, the need for any special provisions has almost disappeared. The last issue that has concerned some lichenologists was provisions related to the abandonment of dual nomenclature for different morphs of pleomorphic fungi adopted in 2011, particularly the priorities accorded to sexually typified morphs; those requirements are now expected to be deleted at the Shenzhen Congress in 2017 following recommendations arising from the 10th International Mycological Congress held in Bangkok in 2014 (Redhead

*et al.* 2014; Hawksworth 2015), at which lichenologist had been well-represented. The 2014 Congress also supported the extension of the ability to produce lists of protected names to lichenized as well as non-lichenized fungi. These lists have the potential of making an enormous contribution to nomenclatural stability by avoiding name changes due to, for example, the discovery of earlier names for species. Working Groups have been established under the auspices of the International Commission on the Taxonomy of Fungi (ICTF) to prepare lists of names for protection, some of which relate to their biology and not their systematics, for example medically important fungi, and plant pathogenic fungi. Personally, I would like to see the IAL encouraging the proposed International Committee for the Nomenclature of Lichens and Allied Fungi (INCLAF; Lendemer *et al.* 2012) to work on the development of lists of names of lichenized fungi to propose for protection; this is something that would I am sure be enthusiastically embraced by all lichenologists concerned with facilitating communication within the subject. A without-prejudice first draft of all fungal generic names considered worthy of protection, including those that are lichen-forming, has already been prepared (Kirk *et al.* 2013), and is now available for revision by such a committee.

Those who work with fungi with particular biologies or niches, such as those forming mycorrhizas or causing animal and plant diseases, have always been content to use the name of the fungus for the condition, and lichenologists need to view the objects of their study in a similar light. They also have their own international and national organizations, congresses, and journals, which continue to prosper. This is most important as mycology is such a broad field. It has, however, been pleasing to see the enormous progress in the incorporation of lichenology into main-stream mycology which has occurred since the 1st International Mycological Congress in Exeter in 1971, not least in the inclusion of papers on lichenized fungi in mycological congresses and journals, and the treatment of lichenized and other fungi together in phylogenetic studies. This increased integration is now becoming more complete to the mutual benefit of lichenologists and those who study fungi with other biologies. Lichenologists are increasingly recognising that they are a group of mycologists. Further, other mycologists are coming to appreciate the importance of lichen associations, and realising they should never pass over this important component of fungal diversity and biology; this association is becoming increasingly mutualistic, although not obligately so. After all, the perhaps only workable, yet tongue-in-cheek, definition of a “lichen” is “a fungus studied by a lichenologist” . . .

## References

- Hawksworth, D.L. (1999) [“1997”] Raffaele Ciferri, the crisis precipitated in the naming of lichen-forming fungi, and why whole lichens have no names. *Archivio Geobotanico* **3**: 3–9.
- Hawksworth, D.L. (2000) Raffaele Ciferri, the crisis precipitated in the naming of lichen-forming fungi, and why whole lichens have no names. In: *Raffaele Ciferri, Scienziato Versatile e Critico* (G Caretta & A Pirola, eds): 39–48. [Fonti e Studi per la Storia dell’Università di Pavia No. 34.] Milan: Cisalpino, Istituto Editoriale Universitario.



- Kirk, P.M., Stalpers, J.A., Braun, U., Crous, P.W., Hansen, K., Hawksworth, D.L., Hyde, K.D., Lücking, R., Lumbsch, T.H., Rossman, A.Y., Seifert, K.A., Stadler, M. (2013) A without-prejudice list of generic names of fungi for protection under the *International Code of Nomenclature for algae, fungi, and plants*. *IMA Fungus* **4**: 381–443.
- Lendemer, J.C., Benatti, M.V., Esslinger, T.L., Hafellner, J., Hodkinson, B.P., Knudsen, K., Kocourková, J., Spribille, T. (2012) Notice of the formation of the *International Committee for the Nomenclature of Lichens and Allied Fungi* (ICNLAF). *Opuscula Philolichenum* **11**: 1–3.
- Lücking, R., Hawksworth, D.L. (2007) Names for lichen-forming fungi introduced by Ciferri and Tomaselli are illegitimate and not available for use, except for three cases. *Taxon* **56**: 1274–1284.
- Redhead, S.A., Demoulin, V., Hawksworth, D.L., Seifert, K.A., Turland, N.H. (2014) Fungal nomenclature at IMC10: report of the Nomenclature Sessions. *IMA Fungus* **5**: 449–462.

*David L. Hawksworth*

*Universidad Complutense de Madrid; The Natural History Museum, London; and Royal Botanic Gardens Kew; d.hawksworth@nhm.ac.uk*

## OBITUARIES

### Hildur Krog

**22 March 1922–25 August 2014**



*Photo: R. Moberg*

Hildur was born in Søre Simostranda, Modum, near Drammen in Norway where her father, Knut Nygård, was a teacher. She did well at school and was sent to Voss for further schooling. Though this was interrupted by the outbreak of The Second World War (when Voss was

attacked by bombers), she managed to finish at 'Voss Landsgymnas' in 1941, and continued her studies in natural history at the University of Oslo. Here after the war she met Eilif Dahl (1916–1993) who had just returned from his war exile in England and had discovered the importance of Asahina's new microcrystallization method for use in lichenological taxonomy. Dahl was convinced about its importance and managed to persuade Hildur to work on a Cand. Real thesis on "Microchemical studies in Norwegian Parmelias" which she finished in 1948 with top marks. This proved pivotal for her further lichenological work in development as a leading chemotaxonomist. She was a close friend of Chicita Culberson and introduced her TLC method to Scandinavia.

However, prior to this, in 1948 Hildur married the zoophysiologicalist Jon O. Krog (1920–2007), who had obtained a position in Dr Irving's Laboratory in The Arctic Health Research Centre in Anchorage, Alaska where also Hildur was eventually employed as a general biologist. She took part in the zoophysiological work and appears as co-author of several papers (one as the senior author) on the thermal influence on the metabolism of Arctic animals. However, in her spare time, which certainly became sparse after she gave birth to their first son in 1950, she started to collect lichens in the vicinity of the town. The situation changed markedly in 1957 with the arrival of the Norwegian botanist Olav Gjærevoll (1916–1994), who engaged her in his project in the White Mountains, where she collected numerous lichens which formed the core of her doctoral thesis in 1968 on "The macrolichens of Alaska". In the meantime she had also collected in other parts of Alaska, and given birth to two more children – the last, a girl, was gravely handicapped and was to take up much of her time.

In 1971 she was appointed Curator of the Herbarium in Oslo where she developed the rich lichen collection considerably. She was mostly engaged with the lichens of Norway and produced with Dahl in 1973 the first flora for the macrolichens of Scandinavia since Magnusson's in 1929. She was also a popular teacher, many of her students specializing in lichens, some of whom obtained important positions in the Norwegian universities, and established lichenology as an academic subject. Her students describe her as helpful, though demanding. In 1983 she obtained a well deserved personal professorship. By then she was a leading international lichenologist, and took an active part in the establishment of IAL, serving as its first Secretary (1969–1973); the President, Peter James (1930–2014) described her as structured and reliable, both very important capacities in the initial stages of the Society. She also later took part in the formation of the Nordic Lichen Society.

Hildur also contributed to the international scene in other ways. The Oslo Museum has a tradition (going as far back as 1815) in researching the flora of the Canaries. She became involved in this and made many excursions there (often with her student H. Østhagen). This resulted in several important papers; she was particularly fascinated by the variation of the genus *Ramalina*, of which she became a leading specialist. However, her greatest achievements was her research on the lichens of East Africa, which was initiated by a student, Bodil Winnem, who was sent as a missionary to southern Ethiopia and wanted to work on the lichens in that region. Hildur needed to see this flora and travelled there in the autumn of 1971. On revising the material at BM, she met Dougal Swinscow (1917–1992) who worked with

material from nearby East-Africa, and they decided to join forces. This resulted in a stream of papers revising critical groups, and finally in 1988 the masterpiece, the “Macrolichen Flora of East Africa”. She even expanded her research to the African island of Mauritius from where her student E. Timdal described a new genus named after her, *Krogia*, which was published in the Festschrift for to her in *The Lichenologist*. She and Swinscow were honoured with the genus *Kroswia*, based on their East African material, and a Norwegian lichen, *Cladonia krogiana*, was described by Løfall & Timdal. There are also other species carrying her name as an epithet, sometimes incorrectly given as *krogii* (the correct being *krogiae*), which she disliked. Although here lichenological activities diminished in her latter years, she continued to travel and visited the Phillipines when aged 85. Otherwise she spent her last years quietly in her house overlooking Oslo, until she died in August 2014. International lichenology has lost a major contributor, and Norway one of the most important researchers in the field.

*Per M. Jørgensen, Bergen*

## Vagn Alstrup

**4 February 1944–18 August 2015**



*Vagn at Lake Ladoga, 2004. Photo: J.W. Wolf*

During the initial phases of his career Vagn Alstrup studied Arctic lichens, and published numerous papers on Greenland lichens and from the 1990s he passionately focused his studies on lichenicolous fungi on which he became a respected scholar with numerous international contacts. He described a large number of new species and even seven new genera, particularly from Polar Regions. His monograph prepared with David L. Hawksworth “The lichenicolous fungi of Greenland” (1990) is still of considerable value and often cited.

At an early stage he made and continued to have contact with east European lichenologists, particularly from Poland with whom he made several contributions to their knowledge (e.g.

the Tatra Mountain lichens and lichenicolous fungi). Later he organized a very successful joint Nordic-Russian lichen meeting in the Komi Republic in Russia. The participants of the Nordic Lichen Society excursions still remember “easy-and-relaxing” lichen trips, as for example that undertaken in Greenland.

However, throughout his scientific life he was always interested in Danish lichens and how to manage and protect substrates and environments to ensure their future health. He was responsible for red-listing Danish lichens and was instrumental in publishing new knowledge on Danish lichens, and “Additions to the lichen flora of Denmark” were almost regularly published in the official journal of the Nordic Lichen Society *Graphis Scripta*, where he was the managing editor of the journal during its first eight years (1986–1993). In addition to scientific papers and numerous floristic contributions he published an illustrated book on Danish “Epiphytic Microlichens”, and before his untimely death he was working on a book on the Danish epilithic lichens as encountered on Neolithic monuments and ancient stone walls.

During his whole career Vagn worked from project to project, fueled by his own intensive interest in the study and protection of lichens, and the dissemination of lichenology, even though he was not always supported by grants. In his early career he was hosted by the Department of Ecological Botany at University of Copenhagen, but later he worked out of the Botanical Museum in Copenhagen. Most recently he worked from his home, but less intensively. He carefully collected vouchers, as documented by the impressive number of his specimens in the Danish national lichen herbarium at Copenhagen University (C), which are now being digitalized.

Throughout many decades Vagn was the dynamic organizer of shifting groups of passionate lichen amateurs studying lichens on excursions, camps and travels, as well as through regular meetings in the laboratory. He also encouraged and assisted Danish nature enthusiasts by Internet identification of their lichens.

He spent part of the year on his small farm in Tanzania with his wife, Janeth while tending the farming activities. On several occasions he received lichenologists here, and this was also the reason for three publications on Tanzanian lichens and lichenicolous fungi. It was at his farm that he was sadly shot during an armed burglary and died on 18 August in Dar el Salaam.

Shortly before he died, Vagn was elected as the new President of the Nordic Lichen Society at the Society’s field meeting in Norway. He was always a helpful colleague and invariably enjoyed the social life associated with Society events. Although he had opinions which were not always in accordance with the mainstream line, his professionalism, positive approach and good humor were always appreciated by both younger and older members of lichenological circles. We will be frequently reminded of him in the names of lichenized and lichenicolous species – *Astrochapsa alstrupii* (Frisch) Parmen, Lücking & Lumbsch, *Caloplaca alstrupii* Søchting (1999) and *Paranectria alstrupii* Zhurb. (2009), and the genus – *Vagnia* D. Hawksw. & Miadl. (1997).

We are grateful for his impressive contribution to international and Danish lichenology, and will be denied the many projects he was about to launch; but most of all we will miss him as a colleague and friend.

*Ulrik Sjøchting, Copenhagen and Ave Suija, Tartu*

## **Enel Sander**

**24 March 1953–18 October 2015**



*Photo: personal archive*

Enel Sander graduated *cum laude* as a botanist from the University of Tartu (then Tartu State University) in 1976, her diploma thesis concerned with a detailed study of the epiphytic lichen flora of Lahemaa National Park. From then until 2005 she worked at the Tallinn Botanic Garden of the Academy of Sciences of the Estonian SSR (since 1995, the Tallinn Botanic Garden), when her deteriorating health started to limit her ability to move. She had to stay at home, but still continued working on the Tallinn Botanic Garden and the Museum of Natural History Herbaria databases and specimens.

In the 1980s, Enel mainly studied the lichen flora of broad-leaved trees (*Ulmus glabra*, *Quercus robur*, *Fraxinus excelsior*, *Acer platanoides* and *Tilia cordata*) in the parks of Northern Estonia, but later expanded her research to other Estonian parks. Unfortunately, her deteriorating health prevented her from finalising the results of her research for a doctoral thesis on “Comparison of the lichen flora of different broad-leaved trees in Estonia“, being registered as a PhD student at the Institute of Zoology and Botany of the Estonian Agricultural University during 1999–2004.

From 1989, Enel took part in the international environmental monitoring programme “Atmospheric heavy metal deposition in Northern Europe“ and also from 1995 in the “Atmospheric heavy metal deposition in Europe“ programme initiated and conducted by the Environmental Monitoring and Data Group in the Nordic Countries under the Nordic Council of Ministers. When the Estonian State Monitoring Programme was launched in 1994, she

participated in its ambient air monitoring sub-programme “Biomonitoring of metal deposition in Estonia by moss analysis“. Enel participated in many bioindication studies during this period, such as those studies of air pollution using epiphytic lichens in the Estonian towns of Pärnu (1992; 1999), Tallinn (1996), Viljandi (1997) and Valga (1998). These environmental projects demanded extensive fieldwork of both epigeic mosses and epiphytic lichens. She was a well-read, broad-minded and interesting discussion partner as testified by those who shared her company by the evening campfire of fieldwork days; she was influenced by ample reading of fiction and her considerable interest in jazz.

Enel finalised her research results in reports and articles and introduced these on many scientific conferences both in Estonia and abroad. She also participated in the compiling of the book *Macrolichens of Estonia* (1994). She also participated in many different botanical and plant ecology-related studies. As a curator, she also prepared and carried out a number of natural and environmental education exhibitions and guided tours in the Tallinn Botanic Garden. She participated in the compilation of different herbaria (herbaceous plants, mosses and lichens) for schools and creation nature trails at Tallinn Botanic Garden in the Pirita Valley Landscape Reserve. She was the author of texts for information boards and for an introductory booklet on the trails (2006).

Enel will be greatly missed by her husband Heldur, her daughter and son, her little grandson, and all her colleagues at the Tallinn Botanic Garden.

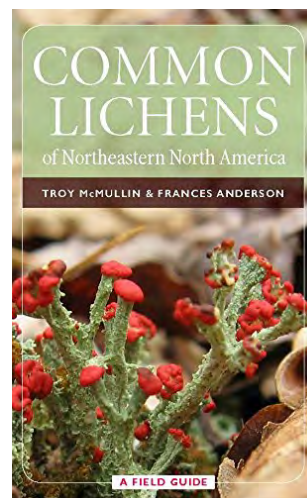
*Siiri Liiv, Tallinn*

## BOOK REVIEWS

**McMULLIN, T. & ANDERSON, F. (2015):** *Common Lichens of Northeastern North America. A Field Guide.* (Volume 112 of the *Memoirs of the New York Botanical Garden*), Botanical Garden Press, New York. Pp. iv + 183 pages. Spirally-bound hardback. ISBN 978-0-89327-511-2. Price: US \$39.

Lichenological studies, even those involving, for example, molecular biology, physiology and environmental monitoring, require the collection and identification of the experimental material. As this region of North America has such a highly diverse lichen flora, how in a book to introduce students and amateurs to the group can one make a representative selection of their immense morphological differences and the wide variety of habitats they exploit over such a large and highly varied landscape? Although the present work covers only 138 lichen species (110 foliose and fruticose, 28 crustose), the authors have made every effort in their selection to ensure that these taxonomic and ecological criteria have been met, and that each lichen's frequency, distribution and recognisability have also been considered. This guide does more than whet the appetite to study these fascinating organisms by providing details of the salient features of representative species. However, although it must be stressed that lichens are not easy to identify, those selected here can normally be diagnosed with the aid of the text and illustrations which in this case are most lavishly produced in colour and also in black and white.

A novel colour-coded approach using marginal tabs for identification (but *not* classification) based mainly on the colour and shape of thalli, and on habitats (tree, soil & rock), has been employed. However, perhaps the results of spot tests or reactions with UV light could have been added for those with access to chemicals or wishing to be more confident about identifications. The book is designed for use in the field or the laboratory not only in terms of diagnoses, but also in its physical make-up, with glossy pages that are spirally-bound to lie flat. For the library shelf, this book has a ‘raised’ spinal covering but the title printed in white on a light background is almost invisible. There are short sections on lichens in general, how to use the book, suggestions for further reading, websites and a glossary. Despite the above reservations, and the relatively high price, this is a helpful and attractive introduction to lichens.



*Mark R.D. Seaward, Bradford*

**CEZANNE, R. & EICHLER, M. (2015):** Verbreitungsatlas der Flechten von Darmstadt – einschließlich flechtenbewohnender Pilze. (Botanik und Naturschutz in Hessen, Beiheft 12) Frankfurt am Main: Botanische Vereinigung für Naturschutz in Hessen, 239 Pages, Paperback. ISSN 1867-6804. Price: unknown.

Darmstadt is a city of c. 150,000 inhabitants with an area of 122.11 km<sup>2</sup> at an altitude of c. 150 m in the south of the German state of Hesse. This sounds not very promising for a lichen survey, but this is the home of two of the most active floristics and lichen mappers in Germany who have investigated the area for more than two decades – the result is an astonishing atlas for 491 recently found species including lichenicolous and some related fungi.

The distribution is grid mapped using 1/64 of the regular sheet of the German topographical map 1 : 25,000 (“Messtischblatt”) which comprises 6 to 10 geographical minutes or roughly 10 to 10 km. The area of Darmstadt covers 82 of these units completely or in part. The highest number of species found in one such unit of a size of roughly 2 km<sup>2</sup> is 195.

Following 30 pages of introduction there are 15 pages of high quality colour photographs. The main part treats all species, including accepted historical records, including distribution maps and additional information on the ecology and habitat selection in the study area. There are no taxonomic novelties, but six species are first records for Hesse and *Karschia cezannei* is new for Germany.



The book may be of limited interest outside Central Europe, but it is a must for all who want to know how diverse the lichen flora of a rather small area really can be.

*Peter Scholz, Schkeuditz*

## PERSONALIA

**Otto Ludwig Lange** (Prof. Emeritus of the University of Würzburg) received in 2015 the highly prestigious Cothenius Medal of the Leopoldina, German National Academy of Sciences. Awarded for a lifetime of superb scientific achievement, this medal is made entirely of gold and bears the engraving “Praemium virtutis salutem mortalium provehentibus sancitum” (In recognition of the bearer’s great contribution to increasing the well-being of humankind). The medal has been awarded since 1792 to 141 outstanding scientists. Former recipients include Ernst Haeckel (1864), Joseph Dalton Hooker (1900) and Otto Hahn (1944).

**Hanna Lindgren** defended her Ph.D. thesis “Phylogeny, symbiotic interactions and chemical variation in the genus *Bryoria* section *Implexae* (Parmeliaceae, Lecanoromycetes) at the University of Helsinki on 11 September 2015.

**Lars R. Ludwig** defended his Ph.D. thesis on “The reproductive ecology of *Icmadophila splachnirima*, including aspects of the reproduction in additional members of Icmadophilaceae” at the University of Otago (Dunedin, New Zealand) and was awarded a doctorate on 15 August 2015

On 20 October 2015, Dr **David Richardson** (Dean Emeritus of St Mary’s University, Halifax, Canada) received the *Distinguished Service Award* from Atlantic Canada (see <http://www.scienceatlantic.ca>) for his outstanding contribution from 1993 to 2007 when he retired. One of his sponsors noted that his “strength provides opportunities for my colleagues and me to continue the promotion and development of science in the region”. Many IAL members will concur with this sentiment as they too have been recipients of his prompt and sound advice over the years.



## IAL Advisory Committee

**Laurens Sparrius** – Dutch Bryological and Lichenological Society – *sparrius@blwg.nl*

**Arne Thell** – Nordic Lichen Society – *arne.thell@botmus.lu.se*

**Chris Ellis** – British Lichen Society – *C.Ellis@rbge.ac.uk*

**Paolo Giordani** – Italian Lichen Society – *giordani@dipteris.unige.it*

**Nobuo Hamada** – Lichen Society of Japan – *n-hamada@city.osaka.lg.jp*

**Susan Will-Wolf** – American Bryological and Lichenological Society – *swwolf@wisc.edu*

**Ana Rosa Burgaz** – Spanish Lichenological Society – *arburgaz@bio.ucm.es*

**Volker John** – Bryologisch-Lichenologische Arbeitsgemeinschaft für Mitteleuropa –  
*v.john@pfalzmuseum.bv-pfalz.de*

**Mikhail Zhurbenko** – Russia – *zhurb58@gmail.com*

**Susana Calvelo** – South America – *scalvelo@crub.uncoma.edu.ar*

**Gintaras Kantvilas** – Australasia – *gkantvilas@tmag.tas.gov.au*

**Paul Kirika** – Africa – *paulkirika@yahoo.com*

**Khwanruan Papong** – Asia – *khwanruan.p@msu.ac.th*

**Paulina Bawingan** – South East Asia – *pbawingan@slu.edu.ph*

Auditor:

**Ulf Arup**, Botanical Museum, Lund University, Sölvegatan 37, 223 62 Lund, Sweden. E-mail: *ulf.arup@biol.lu.se*

Vice Auditor:

**Starri Heiðmarsson**, Icelandic Institute of Natural History, Akureyri Division, Borgir vid Nordurslod, IS-600 Akureyri, Iceland. E-mail: *starri@ni.is*

### The cover-page illustration

*Umbilicaria torrefacta* by Bethia Brehmer, first published in *American Arctic Lichens* Vol 1. *Macrolichens* by J.W. Thomson