INTERNATIONAL LICHENOLOGICAL NEWSLETTER

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INTERNATIONAL ASSOCIATION FOR LICHENOLOGY

The **International Association for Lichenology (IAL)** promotes the study and conservation of lichens. It organizes symposia, field trips, and distributes a biannual newsletter. There is a listserver that enables on-line discussion of topics of interest. Webpages devoted to lichenology are also maintained by members of the Association. People wishing to renew their membership or become members of IAL are requested to pay their membership fee (one payment of 40 USD for 2016-2020) using PayPal or by bank transfer. All details available at http://www.lichenology.org/.

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 10 and November 10 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 IAL8 Symposium (Helsinki, Finland, 2016) are listed below, and will serve until 2020.

IAL COUNCIL 2016-2020

President: Mats Wedin, Swedish Museum of Natural History, Department of Botany, P. O. Box 50007, SE-104 05 Stockholm, Sweden. Email: mats.wedin@nrm.se

Vice President: Ana Crespo de Las Casas, Catedrática de Botánica, Directora del Departamento de Biología Vegetal II, Facultad de Farmacia, Universidad Complutense de Madrid, 28040 Madrid, Spain. Email: amcrespo@ucm.es

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ASSOCIATION NEWS

LETTER FROM THE PRESIDENT

Dear IAL Members!

As most of you are aware, 2019 is our 50th anniversary. The IAL was formally inaugurated in 1969 at the 11th IBC in Seattle, and with this issue of the IAL Newsletter, we wish to celebrate this jubilee. I hope you will find the contributions enjoyable to read! I certainly did enjoy them very much! As several of the contributions look back at the early IAL Conferences, I was very much reminded of the IAL2 Conference that was held in Hemmeslöv outside Båstad in southernmost Sweden, in 1992. At this time, I was a young PhD student at Uppsala University. I had participated in the Tropical Lichens Conference at the Natural History Museum in London 1989 and the IMC4 in Regensburg 1990. There I had met many of the lichenologists active at the time and built up an extensive network of friends, but I had yet to give a talk about my own research. This finally happened at the IAL2. Otherwise, the IAL2 was not a particularly social event for me in comparison with these earlier meetings. This was before laptops and the digital age, and talks were delivered with the help of manual slide projectors and over-head projectors. Speakers would need assistance with these during the sessions, the slide pre-view room needed attending, and numerous other practical things required help. The organizers had handed over all these functions to my colleagues, the poor lichen PhD student colleagues in Lund, to arrange and carry out. I had earlier in passing told them that I would, of course, help them if there ever were a need. This was a rather vague promise that I had totally forgotten. However, when I arrived at Hemmeslöv, I was presented with a complete timetable where the whole week was filled with chores, with the exception of the one session where I would give my own presentation. Directly after my talk, I remember sneaking over to the other lecture hall where I was scheduled to run the slide projector.

2020 looks very promising with the IAL9 coming up in Bonito, Brazil, in August. This is the first time the IAL organizes our Conference in South America and we can clearly look forward to an exciting meeting! Please make sure to register as soon as possible! I want to point out the joint grant scheme that IAL and the BLS have presented, which may help some presenters of talks or posters to afford the journey. Do look that up here in this Newsletter! At the IAL9 Conference, the IAL will have our General Meeting where a new Council will be elected for the coming four years. Please read the announcement from the Nomination Committee about nominations and election procedures! During IAL9, we will also announce awardees of IAL Medals and Awards, and you will find an announcement about nominations here in the Newsletter. Finally, we will decide on the venue of the next IAL Conference, IAL10, during IAL9.

I hope that you all will enjoy a great holiday towards the end of the year, and that you will have a splendid 2020, and finally I hope to meet most of you next year in Bonito!

Mats Wedin, IAL President

UPDATES REGARDING THE NEXT IAL MEETING IN BONITO, BRAZIL

DATES: 2–7 August 2020 (opening ceremony on Sunday evening)

WEBSITE: www.boineventos.com.br/ial9

VENUE: Bonito Convention Center (http://www.ccbonito.com.br/en/index.html)

SOCIAL MEDIA: @IAL9Brazil (Facebook, Instagram, Twitter)

Abstract Submission and Early-Bird Registration Fee
EXTENDED UNTIL 01/JAN/2020!!

EARLY BIRD REGISTRATION FEES:

Professionals US$350

Postdoctoral Researchers US$300

Graduate Students (MSc/PhD) US$250

Undergraduate Students US$200

FREQUENTLY ASKED QUESTIONS (FAQ) and TIPS

What is the exchange rate between the Brazilian Currency "REAL" to US Dollars or Euros? This changes daily, but a rough conversion puts 1 REAL = 0.24 US DOLLARS or 0.22 EURO (as of 20 November 2019)

How can I pay? Via credit card and PayPal only. Bank Transfers are not possible.

Where can I fly? We recommend you fly to Campo Grande, the capital of the Mato Grosso do Sul State, and then take a shuttle to Bonito. You can get your shuttle here: https://eventos.h2oecoturismo.com.br/IAL9/en. Click on the Transport tab, then on the "add to package" button. Then you will be prompted to a window where you can select the type of shuttle: From Airport to Hotel or from Hotel to Airport. Inside these options, there are shared or private shuttles for you to choose from.

How can I find lodging? We recommend you utilize our official partner to book your hotel in Bonito. The suggested lodging options will provide a few extra rooms that will help us offer housing for speakers and organizing committee members. The website is here: https://eventos.h2oecoturismo.com.br/IAL9/en. Alternatively, you can get an AirBnB or utilize hotel platforms such as Kayak, Orbits, Expedia, etc, but we cannot assist you with those.

Will there be IAL9 official excursions? YES, but only POST-congress. Please check them here (https://www.doity.com.br/ial9/blog/excursions-and-alternatives). More information will be added soon!

Is collecting allowed during the IAL9 post-congress excursions? YES, you will be allowed to collect, but will need to sign a document stating you will abide by the rules and regulations of the new Brazilian Biodiversity Law. All collections will require duplicates to be prepared by participants, who will also sign an MTA and then have the material sent to their home institutions as gifts.

Can you get us any further discount? NO, unfortunately we cannot, sorry. These are the lowest prices we could offer for attendants and still be able to cover the basic costs of the conference (space, organization, IT, food, etc). But if you are from a developing country, you may receive a 15% discount if you request it via email (ial9@boineventos.com.br). You will then receive a code to include in your

registration. Meanwhile, here are some recommendations for people in general on how to reduce costs:

1- Look for an airfare that goes to Campo Grande, MS and not Bonito, MS. There is an option to purchase a shuttle from Campo Grande to Bonito for about US$25 (see above). This will certainly reduce the ticket cost.
2- There are several affordable lodging options in the city, including AirBnB, starting at $25/night.
3- Write your local lichenological, mycological or botanical society and/or to your institution to inquire about available funds for students/researchers.

We are applying for external grants to help us, but cannot guarantee them right now.

Do I need a VISA to go to Brazil? It depends on your country. Check if you need one in official portals online.

Is the IAL award ceremony dinner, AKA the "fancy" dinner, included in the price? YES! Everybody will go to this amazing dinner and enjoy an incredible evening.

Are meals included? MOSTLY YES, during the meeting, we will offer two coffee breaks and one lunch on Monday, Tuesday, Thursday and Friday. Wednesday will be a half-day only (with one coffee break in the afternoon), as we want people to have some free time to enjoy the city and/or catch up with colleagues and friends.

We look forward to seeing you in Brazil!

The IAL 9 Organizing Committee

IAL TRAVEL GRANTS

We are pleased to announce that the International Association of Lichenologists (IAL) has set aside €7,000 to help its members attend IAL9 in Bonito, Brazil. Similarly, The British Lichen Society has allocated £15,000 to subsidize its members' travel to this meeting.

Applicants do not need to apply for these two awards separately—only one application is needed. In other words, applications for both awards will be considered together. Applicants must be a current (paid-up) member of the IAL at the time of application to be considered for an IAL award and/or a BLS member to be considered for a BLS award. All applications will be reviewed by a committee comprised of both BLS Council and IAL Council members.

To apply for a travel award, please write an email with the following subject line: "IAL9 travel grant application". In this email, provide the following information : name; institution address and supervisor (if you are a student); whether you are a current, paid member of IAL and/or BLS; and the title and authorship of your oral or poster contribution. In addition, attach a one-page CV, together with a one-page summary of your itinerary and approximate budget.

Please send this information to Scott LaGreca (ial_secretary@duke.edu) before 15 January 2020.

Applicants will be notified by early March.

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

Thank you,

Scott LaGreca
Secretary, IAL

INVITATION FOR NOMINATIONS FOR IAL AWARDS IN IAL9, BRAZIL

The IAL Council plans to make awards of all our Medals and Awards, at the IAL9 in Bonito, Brazil in August 2020. For information regarding previous recipients, please consult the IAL website http://www.lichenology.org/.

The IAL currently gives five awards that require nominations, as well as one award for student contributions at an IAL meeting:

The Acharius Medal, presented in recognition of outstanding lifetime achievements over the long careers of very distinguished senior lichenologists. Several medals could be awarded at the IAL9.

The Dharani Awasthi Award for a prominent young researcher working and living in a low income country (i.e. OECD low and middle income countries; see below), who has completed a Ph.D. within five years prior to the submission deadline. The Awasthi Award is intended to recognize work resulting from the postdoctoral level.

The Aino Henssen Award for a prominent early-career researcher who has completed a Ph.D. within five years prior to the submission deadline. Like the Awasthi Award, the Henssen Award is intended to recognize work resulting from the postdoctoral level.

The Mason Hale Award is granted to recognize excellence in research by a young lichenologist based on a doctoral dissertation (or similar) on lichens. Nominated dissertations must not be older than the last nomination deadline period (which was January 2018).

The Sylvia Sharnoff Education Award is given to an outstanding educational web page devoted to lichens, prepared by a student or school at the pre-university, university or graduate level at any language.

The Margalith Galun Award for outstanding student contributions to an IAL meeting. The Galun Awards will be decided on and presented at the IAL meeting and require that the speaker/poster presenter is recognized as a student. No nomination is required.

All nominations should be sent directly by e-mail to Mats Wedin (mats.wedin@nrm.se), to arrive not later than 31 January 2020, and should include a detailed justifying statement from the person making the nomination, including a CV and copies of certificates and/or university diplomas where relevant. Nominations for the Hale Award should also include a pdf(s) of the nominated thesis/work(s) or a link to a Dropbox account (or similar) where such a pdf is present. Nominations for the Awasthi and Henssen Awards should include two letters of support. All nominations must be made by a person other than the one being proposed. Committees will assess the nominations for each Award, and decisions will be taken by the IAL Council.

Many thanks!

Mats Wedin, IAL President

(Note: OECD low and middle income countries - http://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/DAC-List-of-ODA-Recipients-for-reporting-2020-flows.pdf)

INVITATION FOR PROPOSALS FOR HOSTING THE NEXT IAL CONFERENCE (IAL10)

The IAL Council herewith invites proposals for hosting the coming IAL10 Conference, which will take place in 2024.

Proposals should be sent to Mats Wedin (mats.wedin@nrm.se) and include a description of the city or location and venue with a brief summary of the relevant infrastructure, and potential local committee members. Bids should reach me before February 29th 2020.

Countries hosting IAL Conferences so far are:

Brazil (Bonito) 2020
Finland (Helsinki) 2016
Thailand (Bangkok) 2012
USA (Asilomar) 2008
Estonia (Tartu) 2004
Spain (Barcelona) 2000
Austria (Salzburg) 1996
Sweden (Båstad) 1992
Germany (Münster) 1986

Mats Wedin, IAL President

NOMINATIONS FOR UPCOMING IAL ELECTION

Nominations are sought for Officers, Auditors and Nominating Committee of the IAL. The rules stipulate that no officer may serve more than a single term at the same post, with the sole exception of the Editor. We are currently seeking nominations for Council (President, Vice-President, Secretary, Treasurer, Assistant Treasurer, Editor, and three Council members-at-large). We also seek nominations for Auditor, Vice-Auditor, and for three members of the next Nominating Committee.

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.

Please submit nominations to Toby Spribille (toby.spribille@ualberta.ca) by 3 June 2020.

The Nominating Committee (Jolanta Miadlikowska, Toby Spribille, Rebecca Yahr)

50TH ANNIVERSARY OF INTERNATIONAL ASSOCIATION FOR LICHENOLOGY

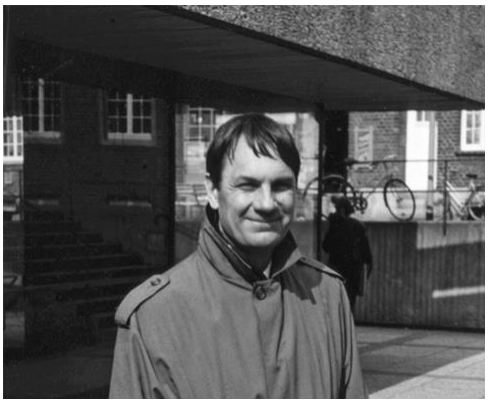
IAL COUNCILS OF THE LAST 50 YEARS AND THEIR PRESIDENTS

1969 Council elected during the 11th International Botanical Congress in Seattle (USA)

Chairman	**Peter James**
Assistant Chairman	Syo Kurokawa
Secretary	Hildur Krog
Editor	Vernon Ahmadjian
Co-Editor	Irwin Brodo
Member	Gerhard Follmann

1975 Council elected during the 12th International Botanical Congress in Leningrad (Russia)

President	**Teuvo Ahti**
Vice-President	Rolf Santesson
Secretary	Thomas Nash III
Treasurer	Hannes Hertel
Editor	Irwin Brodo
Member at large	Oleg Blum
Member at large	Hans Trass



1981 Council elected during the 13th International Botanical Congress in Sydney (Australia)

President	**Mason E. Hale**
Vice-President	Aino Henssen
Secretary	Per Magnus Jørgensen
Treasurer	Keith J. Puckett
Editor	Martyn J. Dibben
Member at large	Marie-Agnes Letrouit-Galinou
Member at large	Isao Yoshimura

1987 Council elected during the 14th International Botanical Congress in Berlin (Germany)

President	**David Galloway**
Vice-President	Margalith Galun
Secretary	Lars Arvidsson
Treasurer	Robert S. Egan
Deputy Treasurer	Rosmarie Honegger
Editor	Harrie J. M. Sipman
Editor	Mark R.D. Seaward
Member at large	Jack A. Elix
Member at large	Ana Crespo
Member at large	Josef Poelt
Member at large	Ingvar Kärnefelt
Member at large	R. Schubert

1992 Council elected during the 2nd IAL meeting in Båstad (Sweden)

President	**Ingvar Kärnefelt**
Vice-President	Jack A. Elix
Secretary	André Aptroot
Treasurer	H. Thorsten Lumbsch
Deputy Treasurer	Clifford W. Smith
Editor	Harrie J. M. Sipman
Editor	Mark R. D. Seaward
Member at large	Paula DePriest
Member at large	Gintaras Kantvilas
Member at large	Bruce McCune
Member at large	Wendy Nelson
Member at large	Pier-Luigi Nimis
Member at large	Sieglinde Ott
Member at large	Tiina Randlane
Member at large	Leopoldo Sancho
Member at large	Gernot Vobis
Member at large	Dirk Wessels
Member at large	Hiroyuki Kashiwadani
Member at large	Isao Yoshimura

1996 Council elected during the 3rd IAL meeting in Salzburg (Austria)

President	**Hans Martin Jahns**
Vice-President	Dianne Fahselt
Secretary	Dagmar Triebel
Treasurer	Edit Farkas
Deputy Treasurer	François Lutzoni
Editor	Pier-Luigi Nimis
Member at large	Paula DePriest
Member at large	Gintaras Kantvilas
Member at large	Hiroyuki Kashiwadani
Member at large	Xavier Llimona
Member at large	Bruce McCune
Member at large	Wendy Nelson
Member at large	Sieglinde Ott
Member at large	Tiina Randlane
Member at large	Leopoldo Sancho
Member at large	Gernot Vobis
Member at large	Dirk Wessels

2000 Council elected during the 4th IAL meeting in Barcelona (Spain)

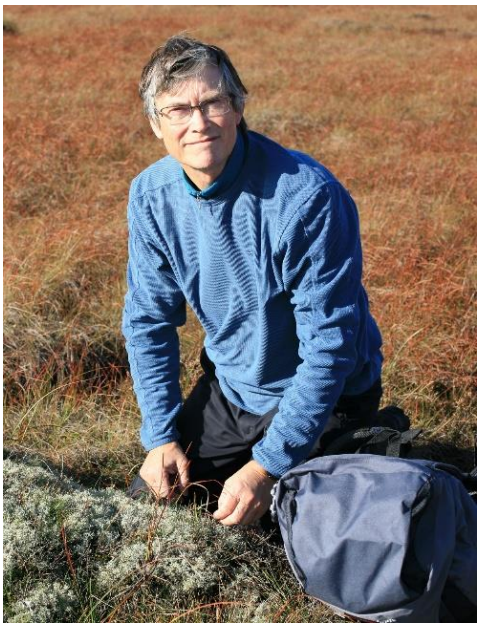
President	**Pier-Luigi Nimis**
Vice-President	Irwin Brodo
Secretary	Leopoldo Sancho
Treasurer	François Lutzoni
Assistant Treasurer	Christoph Scheidegger
Editor	Martin Grube
Member at large	Jack A. Elix
Member at large	Rosmarie Honegger
Member at large	Gintaras Kantvilas
Member	Tiina Randlane

2004 Council elected during the 5th IAL meeting in Tartu (Estonia)

President	**Irwin Brodo**
Vice-President	Christoph Scheidegger
Secretary	Einar Timdal
Treasurer	Ulrik Søchting
Assistant Treasurer	James D. Lawrey
Editor	Peter Scholz
Member at large	Franc Batič
Member at large	Richard P. Beckett
Member at large	Isabel Martínez
Member at large	Tom H. III Nash

2008 Council elected during the 6th IAL meeting in Asilomar (USA)

President	**Peter Crittenden**
Vice-President	H. Thorsten Lumbsch
Secretary	Jurga Motiejūnaitė
Treasurer	Christian Printzen
Assistant Treasurer	Imke Schmitt
Editor	Peter Scholz
Webmaster	Andreas Beck
Member at large	Kansri Boonpragob
Member at large	Maria Herrera-Campos
Member at large	Ana Crespo



2012 Council elected during the 7th IAL meeting in Bangkok (Thailand)

President	**H. Thorsten Lumbsch**
Vice-President	Mats Wedin
Secretary	Sergio Pérez-Ortega
Treasurer	Volker Otte
Assistant Treasurer	Christian Printzen
Editor	Ave Suija
Webmaster	Andreas Beck
Member at large	Heidi Döring
Member at large	Jolanta Miadlikowska
Member at large	Adriano Spielmann
Member at large	Marko Hyvärinen

2016 Council elected during the 8th IAL meeting in Helsinki (Finland)

President	**Mats Wedin**
Vice-President	Ana Crespo de Las Casas
Secretary	Scott LaGreca
Treasurer	Imke Schmitt
Assistant Treasurer	Volker Otte
Editor	Beata Guzow-Krzemińska
Webmaster	Andreas Beck
Member at large	Chris Ellis
Member at large	Martin Kukwa
Member at large	Silke Werth
Member at large	Marcela Eugenia da Silva Cáceres

SOME MEMORIES OF MY YEARS AS THE TREASURER DURING THE EARLY PERIOD OF IAL

With regard to technology and science, 50 years are a long time. During my years as the Treasurer there were not yet any PCs, Internet or e-mail. I was really astonished when I saw machines that could change bank notes or microwave ovens in the USA for the first time. With great interest I witnessed a programmable typewriter operated by punched paper tape that could print herbarium labels in Bill Weber's herbarium (COLO) (see photograph).

Bill Weber in his herbarium (COLO) in Boulder, Colorado, USA using his programmable typewriter, April 1972 (*Photo: Hannes Hertel*).

My task as the Treasurer was to collect membership fees, manage funds and pay the bills as well as inform those Council members who attended to compiling the International Lichenological Newsletter about the respective cash position.

My memory of details has faded, but I want to tell here about two strong impressions. They are connected with personal cheques from the USA and the making of the Newsletter.

The Cheques

Being the Treasurer I received membership fees in various ways, either by bank transfer, bank notes in envelopes, cash during all sorts of meetings or – from the USA – by cheque. Today I regret not having taken photographs of the multitude of those cheques, because a picture of a large number of them, arranged neatly on a table, would have made a colourful image, similar to one taken of a stamp collection. All of them were small and longish, about the size of your palm, usually coloured and very often adorned with printed designs, such as landscapes, buildings or animals.

For my Munich bank, where I cleared those cheques, this surprising diversity of cheques was obviously a new experience too, ultimately causing me to negotiate with them for reduced bank charges. Otherwise, not much would have remained of the original sums of money: compared with common bank transactions, the IAL cheques were written out for really small amounts.

Compilation of the International Lichenological Newsletter

Publishing the Newsletter was not only the number one priority, but also the greatest expense of the IAL. The print office did not run up bills for personnel costs, because the print office was “Hale & Son Printers, Arlington”, as stated by an entry in small print at the bottom of every issue. At that time only very few members knew that it was no commercial print office, but in fact Mason E. Hale Jr. and his son John. Well-known among all lichenologists, above all from his excellent little handbook “The Biology of Lichens”, he had established a print office in the cellar of their house in Arlington,

The print office “Hale & Son, Printers, Arlington”, April 1972 (Photo: Hannes Hertel).

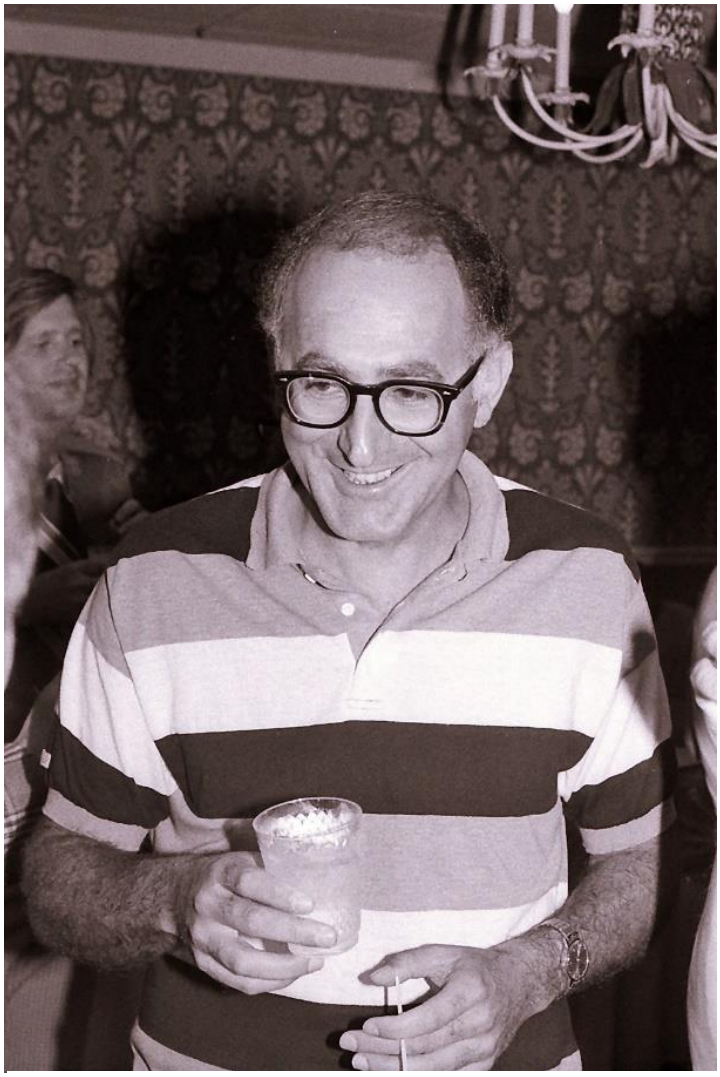
Virginia USA. One day Mason showed his print office to me (see photographs). Next to the washing machine were the hand-printing press and chests of drawers containing thousands of lead characters. It should be kept in mind that for each letter of the alphabet there had to exist six different lead characters in sufficient numbers for every type size and typeface—capital letters and lowercase letters, normal print, italics and bold print, respectively.

Mason Hale in his print office in Arlington, Virginia USA, April 1972 (*Photo: Hannes Hertel*).

Back then we were using two very similar hand-printing presses to print labels and forms at the Botanische Staatssammlung München. As I was familiar with the concentration and accuracy required by the time-consuming steps from the manuscript to the printed page, I felt great respect and admiration for Mason and his son's achievement.

Mason, who had a command of many languages, really made an effort to correctly compose persons' names which contained letters not used in the English language, and he often told me about his ambitions in this regard. However, these characters were not easily obtained. But he kept trying and soon he was happy to be able to compose names like "Vänskä, Sömermaa" correctly for print, although he was sad about having to print "Nadvornik, Pisut, Vezda" instead of "Nádvorník, Pišut, Vězda". Soon, however, he obtained the diacritical characters of the French language, "é, è, ê, ç", which had been missing from the first issues and which, as of 1969, could be deployed in the Newsletter.

Mason would have liked to made use of his supply of special characters more often. Thus he asked me to encourage German lichenologists to write their brief statements in the "News" section in German.



Vernon Ahmadjian, who supported "Hale & Son Printers" in many ways (IAL2 in Tampa), 1977, (*Photo: Hannes Hertel*).

Bill and Chicita Culberson at their home, with Mason Hale, April 1972) (*Photo: Hannes Hertel*).

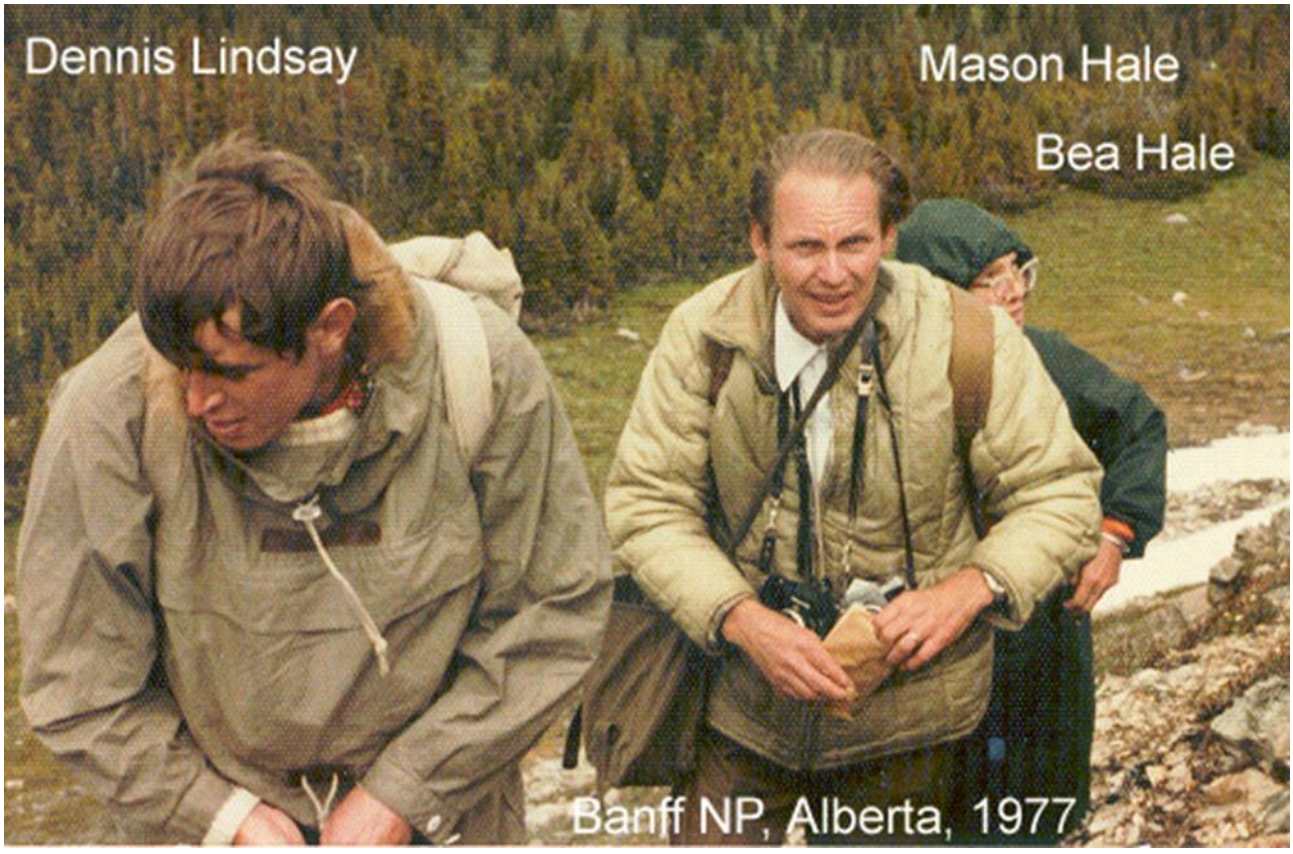
Leading lichenologists in action: Rolf Santesson, Josef Poelt, and Ernie Brodo at the 1973 IAL-Excursion in the Tyrolian Alps (*Photo: Hannes Hertel*).

With great joy and gratitude I look back on those years, which I regard as a pioneer era. Lichenology was gaining momentum then, and I considered myself a member of a large, close-knit family during lichenological meetings.

Hannes Hertel

IAL MEMORIES FROM BRUCE MCCUNE

I believe that I joined the IAL in 1977, probably at the suggestion of Mason Hale, my first mentor in lichenology. That was good advice. The cost was very low (US$5 for 6 years!), something I could afford as a graduate student. The first issue on my shelf is Feb. 1976, Volume 9, with Irwin Brodo as editor. The printed volumes that I have (1976-2008) take up only 17 cm on a shelf, but it has had disproportionately high interest per cm for me.

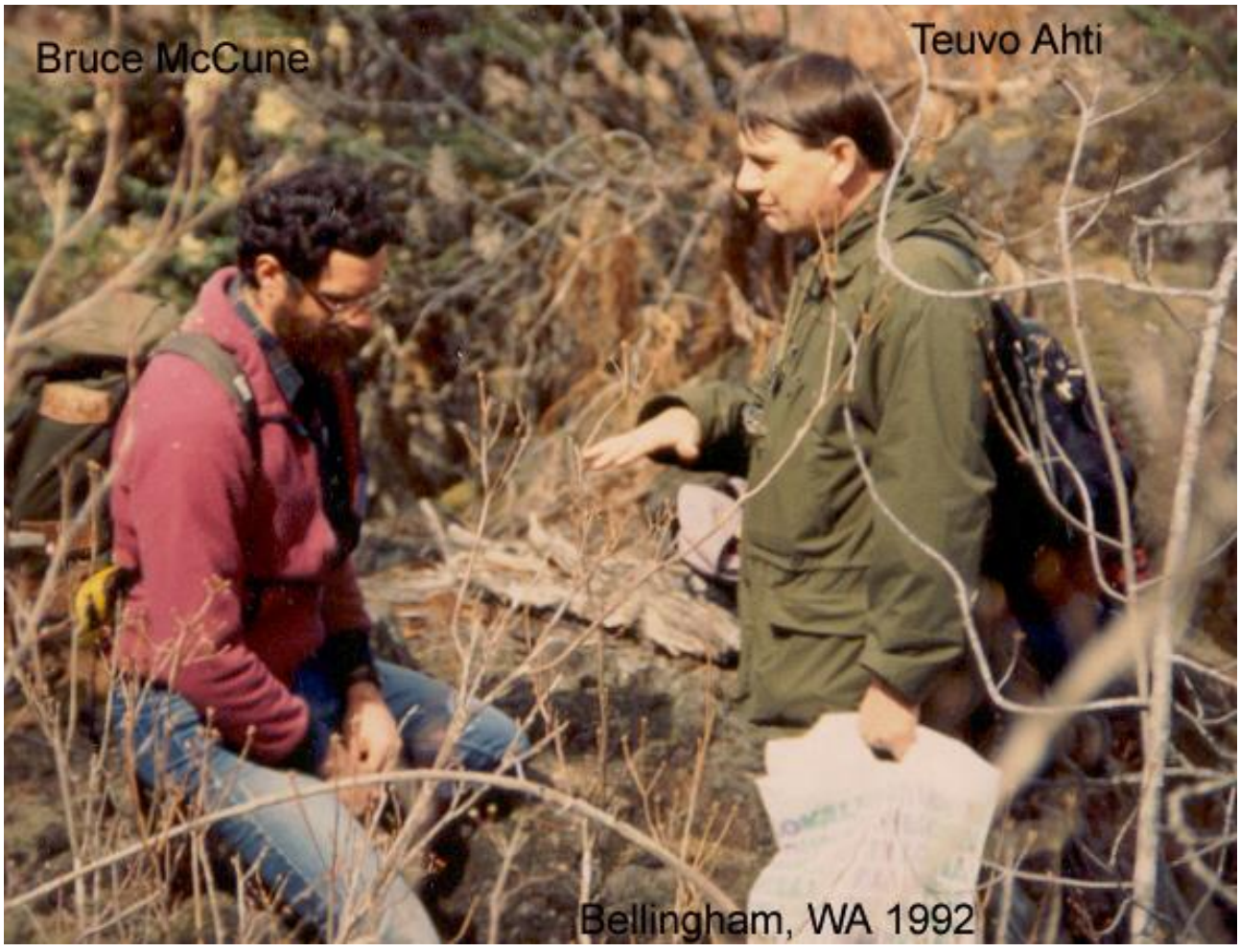


Dennis Lindsay, Mason Hale and Beatrice Hale in Banff National Park, Alberta in 1977.

Before my first IAL meeting, IAL2 in Båstad, Sweden, 1992, the IAL was to me simply the newsletter. I probably read every word in those early newsletters. Lichenologists seemed so few and far between and the newsletter provided one of the few windows into the current activities of other lichenologists. My first IAL meeting was overwhelming – I remember listening to such a wide range of talks by lichenologists of all persuasions, penetrating questions from the audience by young lichenologists such as Thorsten Lumbsch, and meeting revered more senior lichenologists from all over the globe, such as David Galloway, Wei Jiang-Chun, and Teuvo Ahti. In particular I remember Ernie Brodo scurrying around with a massive 3-ring binder of material for his forthcoming works, consulting with people. I participated in a fantastic excursion to the coastal areas of Bohuslän where I had the opportunity to rub elbows with both up-and-coming and well-established lichenologists. My roommates on the excursion were the eminent Martin Jahns and Josef Hafellner, who probably both tired of my persistent questions and notetaking. But as a result I have, for example, two pages of very detailed notes on EXACTLY how Martin used a freezing microtome. Also that was my first exposure

to post-glasnost scientific exchange, so I met many scientists from the former Soviet Union and "Eastern Bloc" countries, including Edit Farkas, Birgit Litterski, Laszlo Lokos, Alexander Mikulin, and Svetlana Tchabanenko. From those first meetings I developed a number of rewarding working relationships with scientists who for political reasons had been on the other side of barriers to communication.

I find that the intensity and action of those meetings continues, but with a rotating cast of characters and a gradual shift in topics. The engaging in-person interactions are much the same at meetings. However, it might be difficult for many younger people to imagine the nature of interactions from afar, pre-internet. I still have a file drawer about 1 m deep in *letters* from lichenologists, all delivered by postal services. These include thick folders from people who provided so much taxonomic help to me, for example Drs. Ahti, Brodo, Esslinger, Hale, Harris, Hertel, Moberg, Poelt, Sheard, Thomson, Timdal, Vitikainen, and many others. Many of those people I met for the first time at IAL2, despite having corresponded with them for more than 10 years. It was also exciting to meet for the first time and have extended conversations with many other eager young lichenologists, now famous, from other countries. For me that included André Aptroot, Ulf Arup, Othmar Breuss, Philippe Clerc, Peter Crittenden, Darwyn Coxson, Stefan Ekman, Per-Anders Esseen, Louise Lindblom, François Lutzoni, Sieglinde Ott, Christoph Scheidegger, and Ulrik Søchting.



Bruce McCune and Tuevo Ahti in Bellingham, WA, 1992.

I give my heartfelt thanks to the founders of the IAL for initiating such a vital, engaging organization; the editors over these many years for their under-appreciated labors of love; and all the individual contributors to the meetings and newsletter for keeping me on the edge of my seat.

Bruce McCune, Corvallis, Oregon, USA

THE EARLY IAL MEETINGS AND EXCURSIONS UNTIL SALZBURG 1996

The first author became involved in the IAL for the first time during the 14th International Botanical Congress held in Berlin in August 1987. During the symposium, and in separate meetings with the delegates, he talked quite a lot with Aino Henssen. She had been to Lund several times because of her interest in the African lichens collected by Ove Almborn. The first author knew German pretty well since his studies in Cologne in the 1960s. Aino Henssen, a well-known professor in Marburg, and the first authors of the famous book, *Eine Einfürhung in die Flechtenkunde* (1973) was well-acquainted with the tradition of lichenology in Sweden. She spontaneously asked the first author to organize the next IAL meeting in Lund, Sweden. She was at that time one of the Council members of the IAL, being vice president, with Mason Hale as president and Ernie Brodo as secretary. The first author responded positively to her question, and started to explore the possibilities to organize such a large event. There was still plenty of time: the next Botanical Congress was to take place in Japan 1993, while the next mycological congress was scheduled for Regensburg in 1990. There were, however, already ideas of having separate IAL meetings in-between the large botanical and mycological congresses. Meetings under supervision of the IAL had earlier been organized in the Alps in 1973; Costa Rica in 1978–1979; New Zealand in 1981; and an excursion in Namibia in 1986. The famous meetings organized in Bristol in 1974 by Dennis Brown and in Münster in 1986 by Elisabeth Peveling, arranged under the titles *Progress and Problems in Lichenology*, were remarkably without involvement from the IAL. During the Berlin Congress meeting in 1987 a new IAL Council had been installed with David Galloway as president, Margalith Galun as vice president, and Lars Arvidsson as secretary. David Galloway was full of ideas and enthusiasm and invited to a first IAL meeting in the Natural History Museum, London in September 1989, focusing on *Tropical lichenology*. At the Regensburg meeting, *IMC4*, David Galloway followed up Aino Henssen's question from 1987 and asked the first author about the plans for an IAL meeting in Lund. Galloway was informed of fairly far-reaching plans for a meeting that would be called *IAL 2* when the meeting in Münster in 1986 afterwards came to be called *IAL 1*. In addition, a meeting on lichen biology (mainly physiology) was arranged in Madrid in April 1990, where some 40 participants met and discussed biochemistry, environmental physiology, and lichen biology in general; but other themes such as taxonomy and ecology were treated in this successful meeting arranged by Carlos Vicente.

The first excursion held under the IAL flag, in the Austrian alps in 1973, was arranged by Maximilian Steiner and gathered several famous participants who would come to make great contributions to lichenology such as Irwin Brodo, Anna Crespo, David Galloway, Hannes Hertel, Klaus Kalb, Rosmarie Honegger, Marie-Agnes Letrouit-Galinou, Xavier Llimona, Claude Roux, Harrie Sipman, Ulrik Søchting and Volkmar Wirth.

The Costa Rica excursion in 1978–1979 was arranged by Tom Nash and Martyn Dibben. It improved our knowledge of tropical lichens, and also became a lesson in how to collect properly.

The third excursion visited alpine areas of New Zealand. It was arranged by David Galloway in connection with the *13th International Botanical* Congress in Melbourne in 1981, inviting the participants to a new knowledge of southern hemisphere biodiversity.

The excursion to Namibia and the Namib desert, arranged by Dirk Wessels in 1986, was a great opportunity to observe unique lichen biodiversity in an extreme environment, though only a handful of lichenologists attended, perhaps because apartheid was still in effect in this part of Africa. We could see entire fields of *Teloschistes capensis*, the extraordinary *Santessonia*, and many wonderful *Caloplacae* growing on very hard metamorphic volcanic rocks.

The Namibia excursion in 1986, the group gathered in front of the *Welwitschia mirabilis* plant, from the left: Volkmar Wirth, Tom Nash, Dirk Wessels, Richard Beckett, Mason Hale, Bea Hale, Bill Buck, Dick Harris, John Krug, Ingvar Kärnefelt and Harrie Sipman.A similar event was arranged by Corinna Gries & Tom Nash to the Sonoran Desert in 1988–1989, where some 35 participants delved into the great lichen flora in Arizona and Baja California. This field trip came to be known as the 5th IAL excursion. Tom's effort to invite these lichen specialists later resulted in *The Lichen Flora of the Greater Sonoran Desert Region*, comprising three volumes totalling 1841 pages.

Prior to the 1992 IAL meeting in Båstad, in September 1989, a symposium on Tropical lichens arranged by David Galloway. Some 35 participants met in the classical environment of the BM and discussed (and lectured on) all aspects of tropical lichens, among them participants from China and Brazil. During the introduction, however, David Galloway announced that one of the most important lichenologists ever, Mason E. Hale, was seriously ill and therefore had to refrain from attending the meeting. The following spring, on April 23, we received the sad message that Mason Hale had passed away after a long illness at only 61 years old. This great scientist, known for his enormous collections, his great work in the Parmeliaceae, and his popular textbooks *Biology of Lichens*, *How to Know the Lichens* and the more scientific volume *The Lichens* (edited by Ahmadjian & Hale) was mourned by lichenologists all over the world. A prize called *The Mason E. Hale Award* was later instituted in his memory.

The fourth International Mycological Congress, held in Regensburg in 1990, became a great success with some 1650 members and a very comprehensive programme covering most aspects of mycology, including lichenology. Some 100 lichenologists had the opportunity to give presentations in different sessions arranged by David Galloway, David Hawksworth, Hannes Hertel, Rosmarie Honegger, Hans Martin Jahns, Tom Nash and Josef Poelt, of which the latter was president of the whole congress. Regardless of any special interests in lichenology, the good cohesion within the lichenological family

was striking in Regensburg. This was emphasized by the fact that the IAL dinner, always a great event, was the only one of its kind during the IMC 4.

In September 1992, the long-planned meeting *IAL 2* finally took place in the village of Hemmeslöv in southernmost Halland, near the border of Skåne called Hemmeslöv. During the planning it became obvious that it would be too expensive to arrange the meeting near Lund University. However, in Hemmeslöv we found appropriate conference venues, restaurants and lodging facilities. It became the largest lichenological conference so far with close to 250 participants. We had parallel sessions, and all modern aspects in lichenology were treated. *The Acharius Medal*, a recognition for a lifetime of distinguished contributions to lichenology, was introduced. At this time, we had a large backlog of very well-qualified persons, some them also attending the meeting, e.g. Gunnar Degelius, Rolf Santesson, Otto Lange, Josef Poelt, Aino Henssen, Hildur Krog and Peter James. Absent persons who also received medals were Hans Trass, John W. Thomson, William L. Culberson, Chicita F. Culberson, Antonin Vezda, and Dharani D. Awashti. For the younger generation, the earlier mentioned *Mason E. Hale Award* was presented to Dagmar Triebel for her monography about *Lecideicole Ascomyceten*, published as Bibliotheca Lichenologica 35. Since the Bristol meeting we observed distinct changes in focus, from floristic studies, impact of air pollution, use of secondary chemistry, morphology, ecology and systematics to phylogeny, cladistics, developmental morphology, ecophysiology, chemotaxonomy based on advanced methods such as HPTLC, reproduction and dispersal, biogeography, and biodeterioration. Molecular methods also began to be used in phylogenetic analyses.

Aino Henssen receiving the Acharius Medal from the vice president Margalith Galun with the president David Galloway at IAL 2 in 1992.

During text next years there were a lot of interesting and stimulating meetings involving the new Council and IAL members. In April 1993, Han van Dobben and Dennis Brown organized an international workshop in Wageningen attended by 30 lichenologists on the effects of agriculture on lichen diversity. The retreat of lichen diversity in agricultural landscapes clearly correlates with the

William L. Culberson and Chicita F. Culberson during the Ascomycete Systematic workshop in Paris in 1993.

dispersal of fertilizers, in addition to the well-known decrease caused by acid rain.

During a few lovely spring days in May 1993, a workshop on ascomycete systematics was organized in Paris by several famous ascomycete researchers—namely, David L. Hawksworth, André Bellemère, Hannes Hertel, and Marie-Agnès Letrouit-Galinou—and several local persons. The workshop was organized primarily to improve the systematic arrangement of ascomycetes, particularly at higher systematic levels, i.e. families and orders. Some 130 delegates from 24 counties attended the meeting. Plans included future workshops with the same goal of cre-lassification of the ascomycetes; however, this successful meeting received no sequel. Among renowned participants attending the meeting were Josef Poelt, and William and Chicita Culberson.

Some of the participants during the Ascomycete meeting in Paris visiting Jardin de Plantes, from the left: Hannes Hertel, Gerhard Rambold, André Aptroot, Per Magnus Jørgensen, Teuvo Ahti and Josef Poelt.

A major international event happened during August/September, 1993: the 15th International Botanical Congress in Yokohama, Japan. Around 40 participants from eleven countries attended the congress, in spite of the long journey. A number of papers were presented in three symposia—lichen substances, taxonomy and phytogeography and experimental biology of lichens—and there were also additional poster presentations. The congress also offered a pleasant excursion to the central mountain region of the main island, where the participants enjoyed the delicate life in small Japanese villages, with their delightful atmosphere and unusual cuisine.

Excursion in central Honshu in connection with the 15th IBC in Yokohama in 1993. The lichenologists gathered in front of a meeting place during the excursion.

The Fifth International Mycological Congress took place in Vancouver, Canada in August 1994. A large assembly of lichenologists came to an otherwise largely mycologically-oriented congress, with representatives from 20 countries. The scientific programme was huge, with some 100 talks and posters presented by lichenologists in seven different symposia, from alpine and polar lichenology (dedicated to John W. Thomson) to symposia covering symbiosis, molecular and cellular interactions, conservation, systematics, biotechnology and foliicolous lichens. Four new *Acharius Medals* were presented, to Elisabeth Tschermak-Woess, Maraglith Galun, Syo Kurokawa and Irwin M Brodo. *The Mason E. Hale Award* went to Fernando Valladares Ros. Some of us enjoyed a very nice lichen excursion with Tom and Corinna Nash, all the way from Tempe, Arizona. We traveled over the spectacular western United States to Vancouver, a trip the first author will personally never forget! A post-congress excursion covering a part of interior British Columbia was attended by the second author, who enjoyed a spectacular and unforgettably rich biodiversity. Among the over 50 persons attending were Josef Poelt, J. W. Thomson and Teuvo Ahti, the latter in the role of tour guide on this very well-organized field trip.

In late October 1994, there was a birthday party in Graz for Josef Poelt celebrating his 70th birthday. Many friends and colleagues from central Europe showed up, including most of his former pupils, of which many had presentations. It was a warm, friendly, and very personal colloquium, which the invited guest and the jubilee enjoyed very much. Sadly enough, the joyful birthday party turned out to be a goodbye when, less than a year later—in June 1995— Josef Poelt unexpectedly passed away in his home. The afterwar scientific contributions from Josef Poelt had indeed been of enormous importance, and his name remains one of the foremost in lichenology.

The lichenological family at IMA 5, International Mycological Congress in Vancouver 1994, gathered for the traditional congress photo.

Some participants during the IAL meeting on Foliicolous Cryptogams in Hungary 1995 visiting the building where Alexander Zahlbruckner was born in 1860 close to Bratislava in the village Svätý Jur, Sankt Georgen. From left: Ivan Pisut, Anna Guttova, Peter Scholz, Cliff Smith, Ingvar Kärnefelt, Edit Farkas, László Lőkös, Anna Lackovičová and Antonin Vězda.

In August/September 1995, Edit Farkas organized a small IAL meeting in the small university town of Eger, Hungary, devoted to foliicolous species. Some 40 bryologist and lichenologists met up to lecture on, and discuss, the specialized ecology and systematics of these foliicolous cryptogams. Among the participants was Antonin Vezda, who was very surprised and thankful to receive a Festschrift, *Scripta Lichenologica*, on the occasion of his 75th birthday.

IAL 3, Progress and Problems in Lichenology in the Nineties, took place in Salzburg in early September, 1996, another successful event which broke previous records in terms of number of participants—specifically, over 300—and an impressive scientific programme with more than 80 oral contributions and 160 posters in nine sections: systematics, morphology, ecology, chemistry, environmental change and conservation, lichens in high mountains, resynthesis and cultivation, photobionts, lichens in the tropics. On top of all this, two workshops and two contributed symposia were also presented. With regards to systematics, DNA studies had now definitely entered the scene, which within a decade would change the entire classification of the lichens. Three new *Acharius Medals* were presented, to Siegried Huneck, Vernon Ahmadjian, and Christian Leuckert. *The Mason E Hale Award* was presented to Robert Lücking for his thesis *Foliicolous Lichens – A Contribution to the Knowledge of the Lichen Flora of Costa Rica, Central America*, published as Beihefte zur Nova Hedwigia 104. Lücking is today keeper in the herbarium in Berlin, with a body of impressive scientific work behind him, including several books. IAL 3 set a record that was hard to surpass with regards to number of participants, when the torch was handed to Barcelona for the year 2000. A new Council was elected at that time, with Hans Martin Jahns as president, Dianne Fahselt as vice president and Dagmar Triebel as secretary.

Ingvar Kärnefelt & Arne Thell

THE IAL – A SIDEWAYS GLANCE

I probably joined the IAL in 1975. I certainly remember visiting the lichen herbarium at BM, Peter James waving a copy of the *International Lichenological Newsletter* and saying ‘you should join the IAL’. I did so (note: paying $5 US to an overseas account was not straightforward back then) and I was then puzzled as to why nothing happened for weeks, months and almost a year until I received the February 1976 *Newsletter*. Newsletters were the mainstay of the IAL but it also organized occasional field excursions to exciting locations. Then, in 1986, it nominally supported the first IAL meeting in Münster. I am unsure why this is regarded as the first IAL meeting. There had been earlier meetings organized by Dennis Brown in Bristol. Furthermore, I could find no mention of the IAL either in the Münster programme or in the volume of *Bibliotheca Lichenologica* that arose from it (Band **25**). Indeed, Kärnefelt and Thell comment in their detailed history of the IAL that ‘it is remarkable that the hitherto most important lichenological meetings in Bristol in 1974 and in Münster 1986 did not involve the IAL Council’.

I attended and thoroughly enjoyed the Münster meeting. I had obtained grants for travel, registration etc. but nonetheless I was on a very tight budget. I was on a junior lecturer’s salary, my wife was on maternity leave and I was wondering how I would manage the usual socializing over a beer and restaurant meal with my colleagues and mates. However, at registration, Elizabeth Peveling presented me (and I assume all other speakers) with an envelope containing deutschmarks – quite a lot of them. I was not expecting this. The problem was solved. The provision of such honoraria for speakers is now rare in my experience (if readers get them quite frequently it would be a kindness not to tell me!).

I also attended IAL2 which was originally intended to be in Lund. In the event there was an opening reception in Lund after which delegates were taken by bus to a conference centre near Båstad, 90 km or so to the north. The hotel complex was quite spacious. Beno Feige and his group from Essen camped in the hotel grounds. I was allocated quite a large room with two single beds. I eyed these

suspiciously and with a certain amount of indignation; I had not been asked if I was prepared to share with someone. By bed time no one had laid claim to the other bed. The room was very warm, the heating could not be adjusted and the beds had high tog rated duvets; accordingly I opened several windows as a means of survival. In the early hours of the morning someone entered my room. He did not switch on any lights but there then commenced what sounded like a prolonged wrestling match between him and his bed after which the windows were slammed closed and quiet ensued - together with intolerable heat. In the morning my roommate introduced himself: he was an emeritus botanist of some renown who had taken an interest in lichens in his retirement, but who, for reasons of discretion, I would prefer not to name. He explained that he disliked duvets and so had removed his and slept under the empty duvet cover and that, with the windows closed, he had been comfortably warm. At this meeting the IAL made its first presentations of Acharius Medals. Being the awards inception, there was a long list of eminent lichenologists deserving recognition (13 in fact) and the presentation ceremony was understandably long. So long, that half way through, a Canadian colleague and I (again, discretion required) decided that we fancied an ice cream and, while enjoying it, we might discuss research ideas and possible collaboration. We slipped out at the back of the hall which was, on reflection, an ungracious act but at least we had the sensitivity to crawl along a glass-fronted corridor opposite to the hall so that the audience at the ceremony could not see us making our way to the café.

With one exception, I have attended all IAL conferences and all, in my opinion, were great successes. The one I missed was IAL4 in Barcelona. That year I had taken part in field research programmes in the Russian Arctic, the Namib Desert and northern Scotland as well a 2 week undergraduate field course, and with two young children I had been recommended by a higher authority not to 'push it'! So, sadly, I did not attend, which was made worse by so many people telling me how enjoyable the meeting was.

In addition to IAL symposia, the IAL has a firm tradition of participating in IMC meetings. It has to be said that the marriage between lichenology and mycology in the broad has not always been a happy one. At a recent IMC meeting I bumped into a lichenologist colleague who was looking somewhat glum. When I asked if all was OK she replied 'these people are lichen blind!'. And who can deny that lichens have been underrepresented at some IMC meetings. When I was IAL president, IMC9 was being planned and then took place in Edinburgh in 2010. It was hosted by the British Mycological Society (BMS). If ever there was an opportunity to have lichen research showcased and integrated with mycology, then this was it. The BLS provided a key platform from which to lobby. It was the first society to offer travel grants to attend IMC9 and, thanks to Sandy and Brian Coppins, it was the first society to offer (on behalf of the IAL) a field excursion; this seemed a good beginning. I had also recently been on the BMS Council and was in earshot of the IMC9 Organizing Committee. We were successful in securing lichenologists in positions as co-conveners for a number of symposia. I gathered from those who attended that IMC9 was considered a very successful meeting from a lichenological standpoint. Even so, I detected elements of 'lichen blindness' if not prejudice. I was devastated when I heard, well after the event, that a convener who had been coupled with a lichenologist as a co-convener, had complained to the IMC organizing committee about the proposed lichen component of 'their' session and that, as a result, the lichen content had been relegated to a special interest session.

At IMC9 I attended the IAL field excursion based at Kintail on the west coast of Scotland. It was clearly a great success despite the wet (typical) Scottish weather and midges. I slept in a tent but most slept in dormitories. One person (discretion) was banished from the dormitory for rumbustious snoring and was forced to sleep on a mattress in the telephone room. One day was spent surveying the local valley. We first gathered at the nearby public car park. A number of people began to examine a large old ash tree in an adjacent field while I and others began to walk inland and eastward along the valley. We walked for several kilometres in the rain examining lichens as we went, sat and had lunch and then wandered some more before retracing our steps back to camp. Some two to three hours

later we returned to the car park. As we approached, we could barely believe our eyes; in the distance we could see our colleagues still standing around that ash tree!

Happy anniversary IAL. I hope that it continues to flourish and continues to provide lichenologists with outstanding conference experiences.

Peter Crittenden

32 YEARS OF IAL (1987-2019) IN 22 PICTURES

Spending a considerable time in the field with our plant taxonomy teachers of the Eötvös Loránd University Budapest, László Lőkös and myself were asked exactly 40 years ago in 1979 if we chose lichenology or higher plant ecology for our MSc research. We did not need a lot of time to decide on lichenology because it is such a rarified field; we felt very lucky to have the chance to learn lichens and discover new things about them. Soon we were introduced to Dr Klára Verseghy and prepared our theses on the bioindicator role of lichens in Budapest. Due to the—at that time—decade-long friendship of Professor Tamás Pócs and Dr Antonín Vězda, we could continue lichenology by joint field and laboratory studies. Working as a researcher for the Hungarian Academy of Sciences I had several possibilities for travelling to Brno and the Tatra Mountains, and many opportunities for learning from Ivan Pišút, Zuzana Kyselova, Eva Lisicka, Anna Lackovičova and Jiří Liška. Toni Vězda also supervised my work on Tamás's Tanzanian foliicolous lichen collection before I had the opportunity to travel and collect lichens in tropical rainforests. These studies led to my application for a Young Botanists' Grant to attend the XIVth International Botanical Congress (sponsored by DAAD) where I gave a lecture in West-Berlin in 1987.

During the Congress there were several lichenological sessions with about 60 lichenologist participants. Everybody was talking about another great event held in Münster the year before (1986). We felt that the world opened for us at that time. Before the Congress, we met Mark Seaward, Harrie Sipman and David Hawksworth, all of whom visited Hungary; however, most lichenologists existed for us only as black printed names on reprints. In Berlin this changed: they became smiling faces, cheerful voices, gestures, fast-moving steps, smooth or curly hairs, owners of moustaches, glasses—and over time, famous lichen collections and field anecdotes. IAL—the association we first heard about from Antonín Vězda—became a reality from black and white brochures. It was Ulrik Søchting who first noticed us, and then directed us to Professor Josef Poelt, adding that we MUST know him (Fig. 1). We had no good camera to take pictures of these rare moments, but after the meeting many

Fig. 1. Ulrik Søchting (Stuttgart, 1989) and Josef Poelt (Regensburg, 1990) (*Photo: Edit Farkas*).

photographs were posted to us from Ulrik and Hannes Hertel. Before the time of the computers and internet we received a huge amount of reprints from colleagues, also by mail. These were extremely useful for our work, since all journals weren't available in our libraries.

Some years later in 1992, it was again Ulrik who said in Båstad (IAL2) that we cannot go home without speaking to Gunnar Degelius (Fig. 2). By now we had learned that although lichenologists don't live forever, they live longer if we keep them in our hearts, brains and ears, rather than only on a bookshelf, or in computer folders of their publications. For us it meant a lot that we had personal contact with Mason Hale, Ove Almborn, Rolf Santesson, Aino Henssen, David Galloway, Peter James, Ingvar Kärnefelt, Leif Tibell, Roland Moberg, Josef Hafellner, Helmut Mayrhofer, Roman Türk, Teuvo Ahti, André Aptroot, and Rosmarie Honegger—and with many others, years later.

Fig. 2. Hannes Hertel, Rolf Santesson and Gunnar Degelius in Båstad IAL2, 1992 (*Photo: Edit Farkas*).

During the IAL meeting at the 1987 IBC in Berlin, Mason Hale relinquished his position as president to David Galloway. David was not present at this meeting, so he could not refuse this position—as I learned later, he was not entirely happy to inherit this responsibility. Still, David did an excellent job as president, and several important decisions were taken at that time. The text of the IAL constitution was revised. It was also decided that IAL Symposia would take place every 4 years from 1992 onwards. I was present at several important moments, e.g., when the idea of our two most prestigious awards (the Acharius Medal and the Mason Hale Award) was raised, developed and first bestowed in 1992.

One may learn from ILN 3(2), 1969, that at the 1964 International Botanical Congress, Edinburgh, a group of lichenologists met and approved the formation of the International Association of Lichenologists (*cf*. the association afterwards being made "official" at a special meeting during the 11th IBC Seattle, 1969 under the name "International Association for Lichenology" - see ILN 3(2), 1969). A newsletter of the association was to be circulated at periodic intervals. A committee, composed of Rolf Santesson, Peter James and Vernon Ahmadjian, was appointed to prepare the

newsletter. After some delay, Vernon Ahmadjian, with the assistance of Irwin Brodo, finally started the newsletter in 1967. In these early days, elections of new IAL Councils were made at International Botanical Congresses; but later, with the development of Lichenology Symposia, these symposia became our main scientific forum, and accordingly the place of elections too. As far as I know, when the IAL2 was organised, it was David Galloway and Ingvar Kärnefelt who developed this new system of symposia and elections, since David could have been president one year longer, but it was practical to start a new Council in 1992 and have elections after this every 4 years in the planned IAL Symposia. The periodicity of these meetings was easy to remember because the Olympic Games are held in these same years, on this same cycle, too. It was also well-planned that the timing would be just at the middle interval between International Mycological Congresses, in which a considerable number of lichenologists participate, in IAL dinners are usually organised (Fig. 3).

Fig. 3. Jolanta Miadlikowska, Esther Gaya, François Lutzoni, Robert Lücking, and Ulrik Søchting in Oslo IMC7, 2002 (*Photo: Edit Farkas*).

Regarding the numbering of IAL meetings, I know that the first official IAL Symposium was the IAL Symposium on Tropical Lichens (4-8 September 1989, London- Fig. 4), three years prior to the Båstad IAL2, and another three years earlier another important meeting with wider topics was held in Münster 16-21 March 1986. The experiences gathered during these two meetings led to the regular organisation of the IAL Symposia, and therefore the numbering began with „2" in Båstad.

During the IAL Symposium on Tropical Lichenology I made many new acquaintances, e.g., Per Magnus Jørgensen, Klaus Kalb, Nell Stevens, Begoña Aguirre Hudson, and Pat Wolseley. It was a special pleasure to meet Dougal Swinscow and take a joint picture with him and Hildur Krog, his partner researcher and coauthor of their famous book, „Macrolichens of East Africa" (1988) (Fig. 5). I took a similarly special photograph of Aino Henssen and Hans Martin Jahns, authors of the „Lichenes. Eine Einführung in die Flechtenkunde" (1974) (Fig. 6).

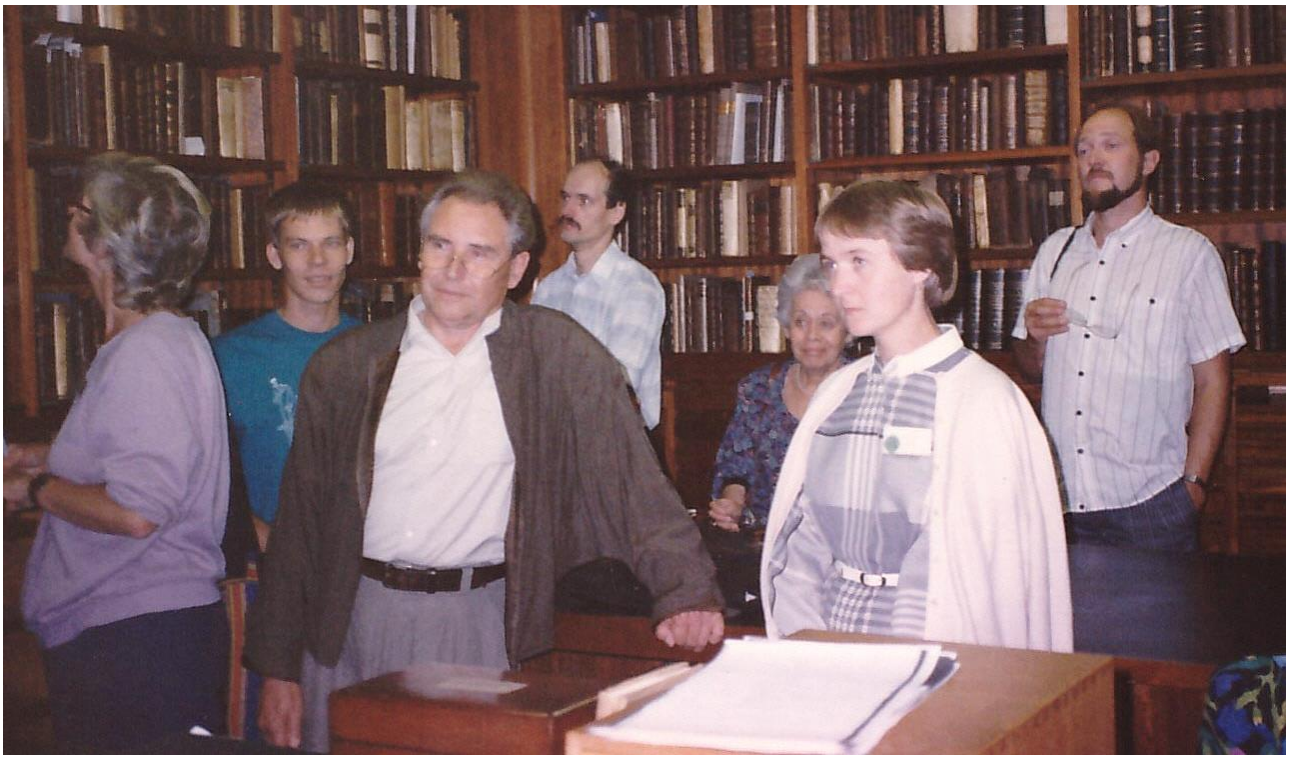


Fig. 4. Visit to the Linnean Society Library during the 1989 IAL Symposium on Tropical Lichenology. (Pat Wolseley, André Aptroot, Gerhard Follmann, Harrie Sipman, Margalith Galun, Edit Farkas, Leif Tibell).

Fig. 5. Dougal Swinscow and Hildur Krog in London, 1989 (*Photo: Edit Farkas*).

Fig. 6. Aino Henssen and Hans Martin Jahns Regensburg IMC4, 1990 (*Photo: Edit Farkas*).

Several photographs from IAL2 were already published at that time in the ILN. A few more are presented here, one from the poster presentation (Fig. 7) and another from an excursion (Fig. 8). During a discussion after a lecture, Elisabeth Tschermak-Woess made an astonishing remark certifying her exceptional eyesight: „I don't understand why should we stain the chromosomes, if we simply see them under the microscope." The next picture is a memory of Irina Navrockaja, researcher of lichens in Chernobyl region (Fig. 9).

Fig. 7. David Galloway and Begoña Aguirre Hudson at the poster presentation during IAL2 Båstad, 1992 (*Photo: Edit Farkas*).

Fig. 8. Elisabeth Tschermak-Woess and Natalia Malysheva during an excursion near Båstad, 1992 (*Photo: Edit Farkas*).

Fig. 9. Irina Navrockaja at the IAL Dinner in Båstad IAL2, 1992(*Photo: Edit Farkas*).

It happened, perhaps during IAL3 (Salzburg, 1996), that Gintaras Kantvilas (Fig. 10)—being aware of my studies with Antonín Vězda—assumed I had a good knowledge of German and began talking to me in German: „Vielleicht können wir sprechen miteinander in deutscher Sprache." I was slightly surprised, since I thought people spoke English in Tasmania, but answered: „Ja, aber warum sprechen wir nicht in englischer Sprache?" Then we both laughed and continued in English, which was much easier for both of us. Since Toni belonged to the generation who spoke better German than English, it was natural that I took more efforts for learning German than he did for improving his English. However, I have another story about Gintaras. After the farewell in Barcelona IAL4, 2000 I was already sitting on the airplane to Budapest, when suddenly all passangers had to return to the transit because of some

technical problem. Gintaras was supposed to be traveling in a different direction at the same time, but his plane was also delayed, and suddenly we met and spent 1-2 more hours together in addition to our time at the symposium. It was a special gift from the Barcelona airport.

Fig. 10. Martin Grube and Gintaras Kantvilas in Barcelona IAL4, 2000 (*Photo: Edit Farkas*).

In my younger days, I was especially fond of the international life of lichenologists and the activities of the association. Probably due to this special enthusiasm, I was proposed for Council positions in both 1996 (nomination for treasurer position, elected during IAL3 Salzburg) and 2000 (nominations both for treasurer and secretary positions). I acted as treasurer between 1996 and 2000 while Hans Martin Jahns was the president, with Dagmar Triebel as secretary (Fig. 11). Pier Luigi Nimis (Fig. 12) edited the ILN, and we distributed it from Hungary since mailing was cheaper in this way at that time. Pier Luigi organised a Council meeting in Venice where we made preparations for IAL4 in Barcelona, and also discussed the possibilities of IAL5 in Tartu (Fig. 13). My assistant treasurer was François Lutzoni. We followed Hannes Hertel (1975–1981), Keith J. Puckett (1981–1987), Robert S. Egan & Rosmarie Honegger (1987–1992), and H. Thorsten Lumbsch & Clifford W. Smith (1992-1996); we in turn were followed by François

Fig. 11. Dagmar Triebel in Oslo, 2002 (*Photo: Edit Farkas*).

Fig. 12. Pier Luigi Nimis in London, 1998 (*Photo: Edit Farkas*).

Fig. 13. IAL Council meeting in Venice prior to IAL4 Barcelona, 2000 – Xavier Llimona, Hans Martin Jahns, Dagmar Triebel, Mats Wedin, François Lutzoni, and Pier Luigi Nimis. (*Photo: Edit Farkas*).

Lutzoni & Christoph Scheidegger (2000–2004), Ulrik Søchting & James D. Lawrey (2004–2008), Christian Printzen & Imke Schmitt (2008–2012), Volker Otte & Christian Printzen (2012–2016), and Imke Schmitt & Volker Otte (2016–2020). There was a special moment in IAL7 (2012, Bangkok) when I took a picture of several treasurers near the place where the acting treasurer Christian Printzen collected IAL membership fees (Fig. 14).

Fig. 14. „Treasurers" – Christian Printzen (IAL 2008–2016), François Lutzoni (IAL 1996–2004), Heidi Döring (Membership Secretary, British Lichen Society), Starri Heiðmarsson (Tresasurer, Nordic Lichen Society) (*Photo: Edit Farkas*).

In 1995, a special interest meeting was organised in Eger in cooperation with bryologists: „the IAB & IAL Symposium on Foliicolous Cryptogams" (president: Tamás Pócs, secretary: Edit Farkas), where we celebrated Antonín Vězda's 75th birthday (Figs. 15–16). It goes back to the time when I

Fig. 15. Participants and logo of IAB & IAL Symposium on Foliicolous Cryptogams (Eger, 1995) (*Photo: Robert Lücking)*.

Fig. 16. Presenting Scripta Lichenologica. Lichenological papers dedicated to Antonín Vězda. Bibliotheca Lichenologica 58, presented to the 75-years-old Antonín Vězda during IAB & IAL Symposium on Foliicolous Cryptogams (Eger, 1995) (*Photo: Robert Lücking*).

learned Robert Lücking (Fig. 17). We had a great time together, preparing for the meeting and editing Bibliotheca Lichenologica 58. I kindly remember that we were able to exhibit the original drawings—by Marija Induss, an Estonian artist—of the world monograph of „*Foliicolous lichens*" by Rolf Santesson, 1952.

Fig. 17. Robert Lücking in Ulm, 1993 (*Photo: Edit Farkas*).

Although I later I took less part in the life of the IAL and the ILN, I participated in all IAL symposia, where I met up regularly with colleagues whom I had known from various events and cooperations (e.g. Mats Wedin, Ulf Arup, Louise Lindblom, Stefan Ekman, Einar Timdal, Starri Heiðmarsson , Jurga Motiejūnaitė, Martin Kukwa, Adam Flakus, Lucyna Śliwa, Anna Guttowa, Andrei Tsurykau) as well as meeting the younger generation of lichenologists (e.g. Damien Ertz, Sergio Favero Longo, Toby Spribille, Pamela Rodriguez-Flakus, Zuzana Fackovcova) who have participated in the most recent symposia (Figs. 18–19), or might participate in the following ones (e.g., Michal Goga, Irina Stepanchikova, Ludmilla Gagarina).

Fig. 18. Toby Spribille presenting in Helsinki IAL8, 2016 (*Photo: Edit Farkas*).

Fig. 19. Nóra Varga and Zuzana Fačkovcová in Helsinki IAL8, 2016 (*Photo: Edit Farkas*).

Looking at these photographs, I remember well the speech I gave during the 1987 IAL Dinner in West-Berlin at the restaurant „*Papillon*", where I represented the few scientists from Eastern Europe, and spoke also for those who were unable to attend from less developed nations which were referred to (at that time) as „third world countries" (Figs. 20–21). In general, at that time, very few participants arrived from outside Europe to West-Berlin. Since those early days, the number of lichenologists who are able to attend IAL symposia has grown to several hundreds, representing all continents and all fields of lichenology. While earlier the classical research sessions (i.e. taxonomy, morphology/anatomy, physiology, lichen chemistry, biogeography, ecology) were natural, the development of science and technology has resulted in a new level of research where the study of functions is placed in focus, and where the role of DNA coding and gene expression might provide new solutions to both classic and modern scientific problems. It is becoming more and more difficult to follow all research directions within lichenology.

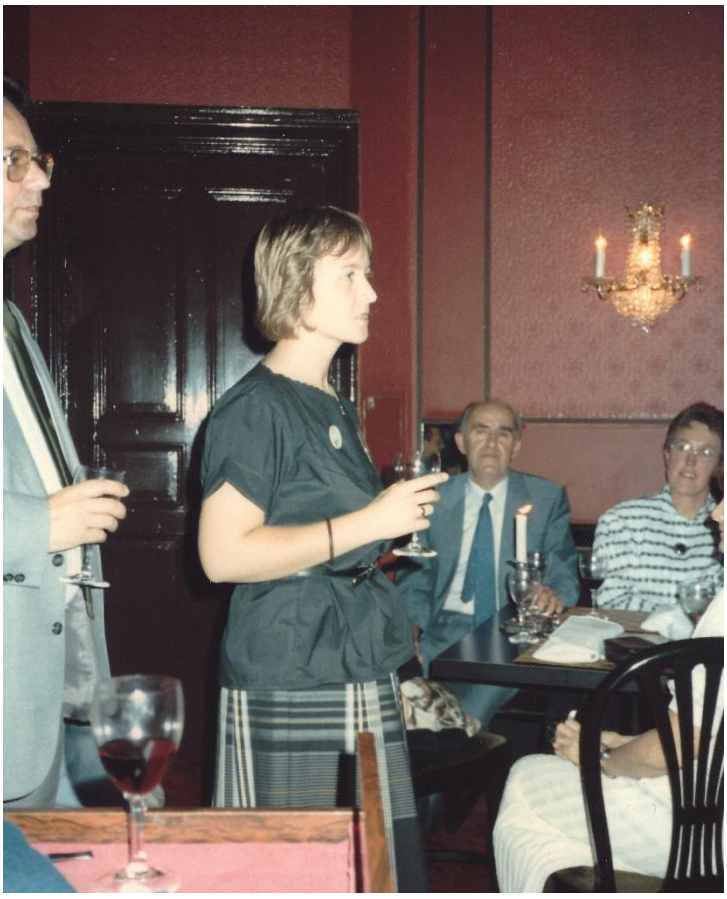


Fig. 20. IAL Dinner, Berlin, 1987. Speech of Edit Farkas for those who cannot be present. (Left Mark Seaward, right Josef Poelt). (*Photo: Ulrik Søchting*).

Fig. 21. IAL Dinner, Berlin, 1987. *Xanthoparmelia* song. (Mason Hale, André Aptroot, Brian Coppins, László Lőkös, Mark Seaward, Lois Brako, Edit Farkas, Josef Hafellner, and David Hawksworth) (*Photo: Ulrik Søchting*).

Nevertheless, let's hope that no geographical, political or financial reasons will isolate us in the future and prevent us from meeting personally and discussing scientific problems of interest. And let's hope that new discoveries in lichenology will contribute to solving problems caused by global change and other broad scientific questions.

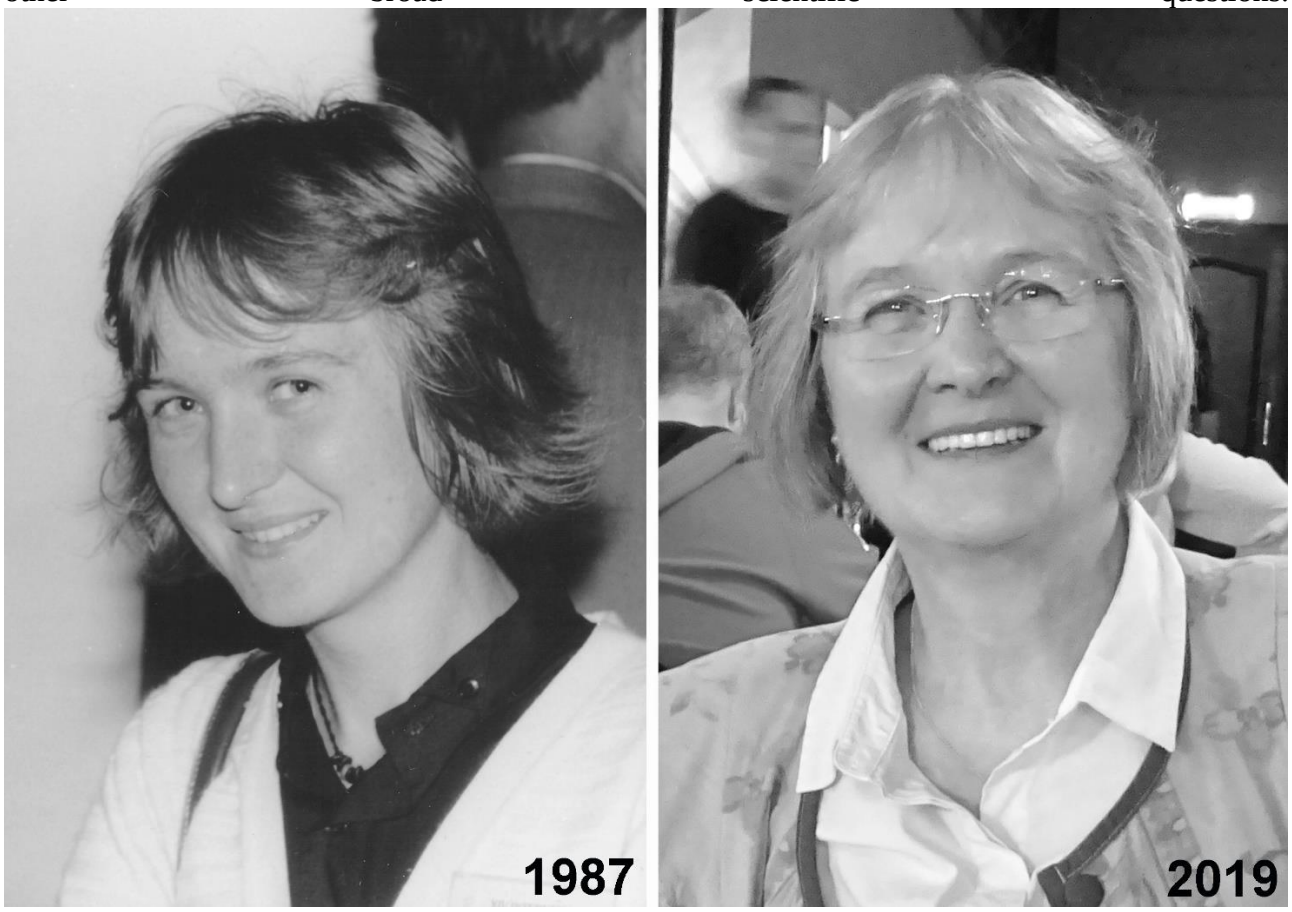


Fig. 22. The author, Edit Farkas, 1987 (*Photo: Hannes Hertel*) and 2019 (*Photo: Laura Lőkös*).

Edit Farkas (Vácrátót, Hungary) – Fig. 22

REFLECTIONS ON FOUR DECADES OF IAL MEMBERSHIP

The official aim of the IAL is "to promote the study and conservation of lichens". This is something it does very well, as proven by the regular symposia it holds every four years, as well as other events. However, IAL fulfils another purpose which, in many ways, is even more important. It brings together the extended international family of lichenologists– a fellowship where lasting friendships and productive collaborations are forged.

A glance through past *Newsletters* reveals numerous reflections about IAL meetings, often from young lichenologists at the beginning of their careers, and often from distant countries. These invariably mention the excitement of meeting "the old guys"- those famous lichenologists that have written the books and papers that we first studied, making friends with contemporaries, and long discussions into the evenings, typically at some bar or café. I was privileged to write such an account myself after the meeting in Regensburg in 1990 (*Newsletter* 24, 1), where it was accompanied by an article expressing similar sentiments by Edit Farkas and Lászlo Lökös.

My first IAL meeting had been some years earlier at the Sydney IBC in 1981. As a youthful beginner, I was initiated into the IAL and introduced by my PhD supervisor, Peter James, to such illustrious figures as Aino Henssen, Bill Weber, Hildur Krog, Ove Almborn, Mason Hale, Per Magnus Jørgensen

and others, some of whom became regular correspondents and mentors. My next IAL meeting was the Regensburg one, by which time David Galloway was President. He cut an imposing figure and was an enormous presence that could fill any room. In those days, Members-at-Large on Council were essentially appointed rather than elected, with the aim of obtaining a broad geographical representation from across the world. David, I think, compiled his list in a truly Presidential style, and somewhere along the way, his finger rested on me as "the" Australian representative. With names from Australia, the U.S.A., Argentina, South Africa and Japan, as well as a smattering of European countries, this early Council certainly never had all its members in the same room together.

It was only at IAL 4, in Barcelona in 2000, that the current election method for all positions on the Council was instigated, after much work in preceding years to develop a strong constitution for the IAL. The new President elected that year was Pier Luigi Nimis, the Vice-President was Ernie Brodo, and I was fortunate to be elected as a Member-at-Large. To call Pier Luigi a colourful character would be an understatement. The first meeting of the new Council was held in a Barcelona café (no more meetings in gloomy annex rooms in conference centres) and a new format for formalising discussions using email was introduced. I think many innovations that we take for granted today were introduced under Pier Luigi's guidance in those years. Certainly being on Council became more than just having your name inside the front cover of the *Newsletter*.

The principal task of Council was to plan for the next IAL symposium and associated medals and awards, which was to be hosted by Tiina Randlane's team in Tartu, Estonia. Although deliberations were mainly by email, Pier Luigi arranged what surely remains to this day the highpoint for any IAL Council member: In March 2002, he hosted a Council meeting in Venice. All the members (Pier Luigi, Ernie, Tiina, Leopoldo Sancho, François Lutzoni, Christoph Scheidegger, Martin Grube, Rosemarie Honegger and I) attended; Jack Elix was an apology.

Those three days in Venice were unforgettable. Ever the exceptional host and showman, Pier Luigi ensured that hard work and deliberations were skillfully blended with an eye to Venice's glorious past. The first day we met in an historic building where, on the opposite side of the street, a plaque commemorated the departure of Giovanni Cabot to the New World in 1497. The second day we met in the historic Ca D'Oro, one of the oldest palazzi in Venice, across the Canale Grande from the Rialto Fish Market. In between, we walked the narrow streets, following Pier Luigi like geese, stopping at various places of interest where he regaled us with stories. To cross the Canale, the Council took a Tragetto- a commuter gondola where the locals are practiced enough to stand for the 5 minute trip, but we foreigners needed to sit and cling to each other for fear of losing our balance and falling into the water. Thus the Tartu meeting was planned largely in this splendid location, and we Council members learned much about Venice and, dare I say, each other. Another memory of this trip was when Pier Luigi had the entire Council in his Venetian micro-flat, his "sleeping box" as he called it, barely able to fit a bed and desk. One can well pose the riddle "how many people can you fit into PL's flat"? The answer is around 10, but they have to be good friends and lichenologists because it will be squeezy!

Tartu was my sixth international IAL event, and I have been lucky to be a faithful attendee at all subsequent IAL symposia and some IMC Congresses. At the latter in particular, the fellowship of lichenologists is especially obvious. In a sea of hundreds of mycologists of all persuasions, the IAL members tend to cluster, attend the same symposia, dine together and relax together. Thanks to lichenology, I feel blessed to have made some of my nearest and dearest friends in far-flung corners of the world, people who I see regularly, even outside of meetings. Lichenology, particularly as manifested by the IAL, brought us together, even if it is now friendship that binds us. It is incumbent on us current members of IAL to maintain that sense of welcome and fellowship; the young members, those who will have to carry the torch of lichenology into the future, are watching. Lichenology offers a fulfilling and interesting road through life….and it can be great fun too.

Gintaras Kantvilas

FROM BARCELONA TO TARTU

I was elected as President of IAL in Barcelona (September 2000). Members of the new Council were Irwin Brodo (Vice-President), Leo Sancho (Secretary), François Lutzoni (Treasurer) Martin Grube (Editor of the Newsletter) and Christoph Scheidegger (Assistant Treasurer); Members-at-Large, were Jack Elix, Rosmarie Honegger, Gintaras Kantvilas, and Tina Randlane (Organizer of the next IAL5 meeting in Tartu).

During the four previous years in which I was active as Editor of the Newsletter, I had got the impression that the Council could work efficiently only by setting up a strict and clear system of communication among members. Already in Barcelona, on the last day of IAL4, the new Council managed to meet briefly (while eating a sandwich in a bar), just to rapidly set up a rather complex, but with hindsight efficient system of coded e-mail messages for discussions and decisions to be taken online in the following years.

In Barcelona, time was too short for any in-depth discussions. I thought, however, that a longer physical meeting of all Council members would be the best way to discuss our general policy, in order to ensure a smooth progress of work. Fortunately, at that time I had some money left, which could be used for facilitating the participation of (especially) overseas Council members. Thus, a meeting of the Council was organized in Venice (March, 16-18, 2002), to which all Members except Jack Elix were able to take part.

That proved to be a useful, intense meeting, during which we discussed at length a series of critical issues concerning our role as Council, and the role of the IAL in general. A detailed plan for the organization of IAL5 in Tartu was laid down. The main points were: 1) IAL5 should be as cheap as possible, to facilitate the participation of students, and of colleagues from low-currency countries (e.g. inscriptions fees should stay as low as possible, expensive restaurants should be avoided for the social dinner, etc.); 2) whenever possible, the papers related to the various sessions should be published as monographic issues in international journals, avoiding bulky "Proceedings volumes" without any Impact Factor; 3) Parallel sections should be avoided: the idea was that participants should have the opportunity of following recent developments along the whole spectrum of lichenological disciplines. A sketch of the scientific program of IAL5 was published in the International Lichenological Newsletter in July 2002, and the Conveners of each session were appointed by Council as early as December 2002, in order to give them sufficient time, especially for negotiating the publication of monographic issues with the various journals.

The Venice meeting also proved to be useful for establishing an atmosphere of true friendship among Council members, which still lasts today: although we were working hard from 9 am to 5 pm every day, there was some time left to visit the city, including an excursion to the islands of the Lagoon on the third day. One of our two venues was the Cà d'Oro, one of the most emblematic gothic palaces of Venice (presently a Museum): we were gathered around an old, huge wooden table, and I still remember Ernie Brodo saying: "Maybe Christopher Columbus was sitting at this very table, wondering where he should spend the holidays next year…".

In the following years, the activity of the Council proceeded very smoothly by e-mail: all messages were coded and numbered progressively, including those relevant to ballots whenever a formal decision was needed. In Venice we had decided that the whole activity of the Council should be made transparent for IAL members. In the end, I printed out all the e-mail messages, and brought to them with me to Tartu in a very heavy "book" that I deposited at the entrance to the symposium. I did this so that everybody could check what decisions Council had made, and how. I do not think that many people read it through, but the fact that it was there was in itself important.

In the beginning I was rather worried about the organization of IAL5 in Tartu, chiefly because it was in the hands of a relatively small group of lichenologists, who likely would have needed some help by the lichenological community. Thus, in 2003 I visited Tiina Randlane, to get an idea of the possible

venue (at the end we decided for the Opera House), and to discuss several details. In the end, my worries proved to be unnecessary: the local Organizing Committee, also with the help of several students, did an excellent job, and everything was organized perfectly.

What else to say? I have only positive memories of that four-year period, and I am sure that all other Council members do. This in itself is a good thing.

Pier Luigi Nimis

PIER LUIGI NIMIS, PRESIDENT OF IAL 2000-2004

Pier Luigi Nimis (PLN), since 1986 full professor of Systematic Botany and since 1996 director of the Department of Biology of the University of Trieste, internationally renowned scientist, served as IAL president from 2000-2004. Before that, he had been IAL Council member (1992-2000) and editor-in-chief of the International Lichenological Newsletter (1997-2000).

Already during IAL4 in Barcelona in September 2000, shortly after taking over the presidency of IAL, Pier Luigi informed the newly elected Council that members will henceforth collaborate on-line, *i.e*. discussions and decisions will occur within an uninterrupted four-years-long Council meeting held on the Web, the official correspondence being printed and stored in an internet archive. Towards the end of that year (December 7, 2000) 30 official messages (discussions) and 7 ballots (formal decisions) had been processed (Nimis 2000, IAL Newsletter 33/1: 47-49). In 2004, at the end of PLN's presidency, 135 matters had been debated via e-mail (at least 1 every second week!) and 29 formal decisions balloted. The densely printed version of the correspondence, without debates about nominations for awards, is 129 pages long.

Pier Luigi proposed to establish much closer links with national and regional lichenological societies. From 2001 onwards, the Council decided to endorse scientific events (meetings, courses, excursions, exhibitions etc.), as organised by national or local societies, museums etc.; organisers of events endorsed by IAL are entitled to advertise them as *held under the auspices of IAL* (PLN 2000, IAL Newsletter 33/1: 48-49). Some online debates within the IAL Council focused on lichen database projects.

One of Pier Luigi's main concerns is the popularisation of botany, mycology and lichenology and especially the dissemination of lichenology from elementary school to the university level. He proposed to launch an award for an outstanding educational webpage devoted to lichens, prepared by a student or school at pre-university, university or graduate level (in any language), to be given at each IAL meeting. Thus, the Sylvia Sharnoff Education award was initiated, commemorating Sylvia Duran Sharnoff (1944-1989 Berkeley, CA, USA), the outstanding lichen photographer with a passion for educating the general public about the beauty and importance of lichens. The first Sylvia Sharnoff Education award was given at IAL5 in 2004 to Class IIId, Scuola Media Statale L. Trombini, Tirano (PLN 2004: IAL Newsletter 37/2: 9). Pier Luigi prepared special educational tools for schools which are greatly appreciated. Years ago, when stopping in a picturesque historic village in central Italy on a Sunday noon, Pier Luigi discovered an interesting lichen on a historic monument in the centre of this village; it could only be collected with hammer and chisel. This strange sound, albeit being produced as discreetly as possible, attracted the local policeman. Pier Luigi introduced himself, explained that he wanted to explore and scientifically document this special lichen, and was prepared to face problems. Much to his surprise the policeman was very excited and joyfully exclaimed: "il **Professore Nimis**!" and wanted to invite him for lunch in his home. "Why do you know me?" asked Pier Luigi. The surprising answer was: from the handouts on lichens, as brought home by his son from school, which he had read with interest.

The IAL Council entering a Venetian gondola. Standing: Irwin Brodo, vice president (left), Pier Luigi Nimis, president (right).

Pier Luigi Nimis on the so-called Attila's throne in Torcello; this monolithic chair, presumably constructed in the 7th Century, was the seat of either the bishop or the governor of the island; Attila (who died in 453) never reached this area. *(Photo: Andres Saag*).

A special highlight in the history of IAL was the Council meeting, as organised and presided by PLN from March 16-18, 2002 in Venezia, for organising the 5th Symposium of the International Association for Lichenology (IAL5) to be held at the University of Tartu, Estonia, 16-21 August 2004. Tina Randlane and Andres Saag, the organizers of IAL5, and all Council members except Jack Elix attended: Irwin Brodo, vice-president; Leopoldo Sancho, secretary; François Lutzoni, treasurer; Christoph Scheidegger, assistant treasurer; Martin Grube, editor; Gintaras Kantvilas and Rosmarie Honegger, members-at-large. For all of us these exciting three days are unforgettable. Two days of brainstorming and one day of sightseeing were scheduled. Brainstorming took place in the CNR Institute of Marine Biology and in the famous Ca' d' Oro museum, a 15th Century Gothic palazzo bordering upon the Canal Grande. On the third day, PLN took us to exquisite sites showcasing the rich cultural heritage of Venezia (e.g. Scuola Grande di San Rocco) and of the Venetian Lagoon (Murano, Burano), the absolute highlight being Torcello with its magnificent Basilica di Santa Maria Assunta in the Veneto-Byzantine style, the oldest building in the lagoon (founded in 639).

Pier Luigi pointed out that this meeting, excellent food included, was financed by several individual institutions and did not involve any IAL funds. – The Council members concluded that he is not only a great scientist and outstanding president, but also a magician! In 2012 he was honoured with the Acharius medal of IAL. Thank you, Pier Luigi!

Rosmarie Honegger

MY CONNECTIONS WITH THE IAL

I was aware of the existence of the International Association for Lichenology (IAL) much earlier than I had any official contacts with the organisation. Hans Trass, my mentor in lichenology, had been receiving the International Lichenological Newsletter since 1968 (vol. 2), kindly mailed to Tartu by Vernon Ahmadjian and later by Ernie Brodo. Occasionally we managed to send a few lines about Estonian lichenologists and their work to the Newsletter and were extremely happy when these short reports were published. Every piece of international communication was of great value in those days, especially if you were restricted to scientific prospects solely within the Soviet Union.

A real breakthrough came in 1992 when Ingvar Kärnefelt and his team organised the IAL2 at Båstad (Sweden). Ingvar managed to arrange scholarships for about a dozen people from the Soviet Union to participate in the grand event. Lev Bjazrov, Oleg Blum, Sergey Kondratyuk, Mikhail Zhurbenko and others, including myself, were among the invited and fully financed participants. It was an enormous adventure and unforgettable experience for all of us who came from the USSR. A gathering of more than two hundred lichenologists seemed truly impossible as all earlier meetings in which we had participated had brought together a maximum of twenty lichenologists... When we met the people whose names were familiar to us from the front covers of lichen handbooks—e.g. Ernie Brodo, David Galloway, Aino Henssen, Josef Poelt and Isao Yoshimura—you realised that even our greatest idols were made of flesh and blood.

At the time, phylogenetic analysis was still in its infancy. Our own phylogenetic tree of cetrarioid lichens, although generated with the help of a computer (which was borrowed from Erast Parmasto), was actually drawn by hand. A funny moment came when Josef Poelt—the great master of old-school morphological identification—presented a 'cladistic' overview of Swedish lichenologists depicted in the form of an evolutionary tree... That IAL meeting influenced my further life profoundly.

Twelve years later, in 2004, the team of lichenologists in Tartu had the task to organise the next IAL meeting, the IAL5. The countdown for it began in 2000 during the IAL4 in Barcelona, where the organiser and venue of the next symposium was for the first time in the history of the IAL decided by vote. All present members were to choose between the Estonian team and Tartu, and Tom Nash and California, USA. Somehow the Estonian team gained the upper hand. I think that the novelty of our country and its previous isolation from foreign visitors was the main reason for this.

So it was quite clear that we wanted to advertise Estonia in the best possible way, and so we started to think about the organisation of the symposium right after the IAL4. The IAL Council that served in 2000–2004, led by Pier Luigi Nimis as President, was fantastic and in my personal opinion the best of all times. Pier Luigi took the preparations for the next symposium very seriously. First, he visited Tartu in November 2001 to get acquainted with the possible venues of the congress. Then, in March 2002, he invited the Council to a meeting in Venice to discuss the design of the forthcoming event. All Council members (except Jack Elix) participated in the meeting: Ernie Brodo as Vice President, Leo Sancho as Secretary, François Lutzoni as Treasurer, Christoph Scheidegger as Assistant Treasurer, Martin Grube as Editor and Rosmarie Honegger, Gintaras Kantvilas and myself as members-at-large, while Andres Saag took part in the discussions as a co-organiser.

At this meeting, some key concepts for the organisation of IAL symposia were formulated which have been used in every IAL since, e.g. scientific sessions during the symposia are not the responsibility of a single person, but of a group of specialists (we called such a group 'a triumvirate' containing a Convener, a Chairman and a Poster-Chairman); posters must have a prominent position during IAL symposia and poster displays stay open until the end of the event; and congress fees should be as low as possible, and even lower for the students. The Council also decided to introduce a new award, the Sylvia Sharnoff Education Award, which was dedicated to the memory of Sylvia Duran Sharnoff, a remarkable lichen photographer and co-author of the magnificent book *Lichens of North America* (2001).

Those who participated in this extraordinary Council meeting in 2002 still remember not only the fruitful discussions on IAL issues, but also the unique city of Venice with all its amazing details and our President acting as a member of the local community. Martin Grube wrote later about those three days in Venice: "... the phantom Nimis coming out of the fog, with a cigarette between his fingers, and slowly fading away again in the fog, with the glowing cigarette as the last light left. I think all people of the IAL Council still have dreams about Venice." We still do.

The IAL Council (2000–2004) in Venice in March 2002 (from the left): Martin Grube, Christoph Scheidegger, Leo Sancho, Tiina Randlane, Pier Luigi Nimis, Francois Lutzoni, Irwin Brodo, Rosmarie Honegger, and Gintaras Kantvilas (*Photo: Andres Saag*).

The IAL5 Symposium 'Lichens in Focus', held in Tartu in August 2004, was a success. There were exactly 250 registered participants from 36 countries. Six scientific sessions (both oral and poster sessions) took place, as well as three discussion sessions. Altogether 65 lectures and 153 posters were presented. One pre-congress and two post-congress excursions were organised which resulted in the collection of 30 species of lichens and lichenicolous fungi new to the country. We have described the atmosphere at the IAL5 as follows: "It was unbelievable but true – you could meet a lichenologist on every street corner in the city centre of Tartu during dinner breaks, or in the Gunpowder Cellar and the Wilde Pub every evening (or perhaps even at night time). The concentration of lichenologists in the population of Tartu (which had somewhat diminished due to the summer holidays) was surely the highest of all times and could also be perceived visually – our blue bags represented the most popular trend of all bags worn at that time in Tartu."

Participants of the IAL5 in the Concert Hall of Tartu, August 2004 (*Photo: Rein Toom*).

IAL5 welcome party in the Botanical Garden of the University of Tartu, August 2004 (*Photo: Rosmarie Honegger*).

The Local Organising Committee of the IAL5 (http://www.eseis.ut.ee/ial5/5s/orgs.html) consisted mainly of young and enthusiastic lichenology students of the time. Now, 15 years later, they (the so-called red-caps, as we had agreed that the local organisers would wear red baseball caps during the event to be easily identified) – Inga Jüriado, Piret Lõhmus, Ede Leppik-Oja, and Ave Suija – are not

young students any more, but researchers in their prime. All of them finished their PhDs and all of them continue to study lichens.

Red-caps – student members of the Local Organising Committee of the IAL5 (from the left): Heini Hyvärinen (a voluntary helper from Finland), Piret Lõhmus, Ave Suija, Katrin Kolnes, Inga Jüriado, Lauri Saag (*Photo: Rosmarie Honegger*).

I think that I can declare on their, but also on my own, behalf that the IAL is not just an ordinary society that formally unites people who work in the same field. The IAL is a community where you can not only find scientists with the highest lichenological expertise, but also lifelong friends who share similar ideas.

Tiina Randlane

THE SYMBIOSIS WITH AN ASSOCIATION

I served the IAL as an editor in the years 2000-2004, between the meetings in Barcelona (IAL4) and Tartu (IAL5). It was an exciting period when the association just revised the constitution, and when sequence data became standard in different branches of lichenology. Remembering the history of IAL, I became suddenly aware that the first IAL meeting coincided with the start of my own scientific career. When the first IAL meeting took place in Münster in 1986, I had just started my diploma thesis (on lichenicolous fungi), but as innocent as I was, I only took notice of the meeting after the publication of its proceedings volume. I saw a fascinating compilation of the diverse topics of interest at that time, which aroused my appetite for more. This was the time when ultrastructural studies using TEM were popular and welcomed cutting-edge technology to solve problems of lichen systematics. Nevertheless, I still was at a stage to squash hymenia to observe ascus tholus structures (with my finger tips stained in Lugols solution) and to prepare TLCs to get huble insights into lichen diversity. I also missed the IAL2 meeting in Southern Sweden as well, but was told about that very exciting meeting when our master and teacher Josef Poelt (I worked on his Himalaya collections at that time) came back with a medal around his neck. At that time, I tried my first steps using molecular methods in Graz using a machine that flushed water at different temperatures to run a PCR. After a training in the US, where I met important lichenologists, I could also invite some of the colleagues to Austria who helped a lot to engage lichenology students.

Chcicita Culberson, Martin Grube, Tor Tønsberg and Wiliam Culberson in Durham 1993.

The student group with Andrea Gargas, Paula DePriest and Martin Grube in Graz in 1995.

Thorsten Lumbsch at the 1st Molecular lichen systematics workshop in Graz 1998 (*Photo: Martin Grube*).

Sequencing approaches had already arisen on the horizon and were expected to somehow solve problems in lichen systematics. Some results were already shown at the IAL3 meeting in Salzburg (1996) and two years later at a 1st workshop dedicated to molecular studies of lichens in Graz (1998). Since then molecular approaches have indeed reshaped our picture of lichen evolution. Phylogenetic studies revealed sometimes unexpected relationships and molecular data also improved our knowledge about the diversity of photobionts and the association patterns with the mycobionts.

Mario Matzer with Jack Elix on the left (Tschermack Woess in the background) in Salzburg at IAL3 (*Photo: Martin Grube*).

The lichenized statue at a shrine (Nantai, Japan) meditating over an *Usnea* specimen (*Photo: Martin Grube*).

Nowadays, hardly any systematic lichen study is presented without phylogenetic studies of molecular sequence data, and at the last meeting in Helsinki (IAL8), people already presented comparative analyses of whole lichen symbiont genomes. This trend for huge data sets will continue, and lichenologists started to use so-called "omics approaches" to approach both the biology and diversity of lichens: these include genomics, transcriptomics, proteomics, or metabolomics of both single-spore cultures of symbionts and the entire symbiosis as well (using metagenomics, meta-transcriptomics ... etc.). Formerly, lichen physiologists, systematists and ecologists met at IAL congresses to discuss and reconcile their independent results, but now, they may also interpret the same datasets to understand more details of the lichen symbiosis. Furthermore, novel microscopic methods are now available to visualize associated microorganisms, or to analyse the distribution of secondary metabolites *in situ*. However, scientific progress is not at all limited to studies using molecular data or high-end microscopic study. The success of the collective effort is also demonstrated by large floristic diversity projects, where experts of taxonomic groups work together to improve the knowledge about lichens in yet-understudied regions of the world, or to study the geographic distribution of lichens and how they respond to changing environments. There are many open challenges which need to be addressed by cooperations, ranging from species delimitation problems in lineages with taxonomic difficulties, to an understanding of the signals between the partners that mediate the symbiotic integrity. Over the many years, the cooperative atmosphere of the lichenological community is reflected by the activity of the IAL with its strong pulse beats every four years when the general meeting takes place at interesting places of the world. Then friends and colleagues meet again and become aware that the association has suppported the careers of many of us. With great confidence I foresee that this will continue in the future.

Martin Grube

RECOLLECTIONS OF A FORMER PRESIDENT OF THE IAL (IMB, 2004-2008)

The International Association for Lichenology was conceived in 1964 at the International Botanical Congress in Edinburgh, Scotland, and I was there, with my doctorate not quite complete and accompanied by my very pregnant wife, Fenja. It was my first international meeting, and getting to know some of the most notable and accomplished lichenologists in the world was a thrill I still recall. I was, of course, much in favour of creating an association devoted to lichenology, and if there was a vote taken, I certainly would have supported the suggestion. Vernon Ahmadjian proposed a newsletter, and a few years later, the International Lichenological Newsletter was born, with Vernon

as editor. Soon after, Vernon asked me to help him with the newsletter, which I did. (I've shared my recollections in ILN 50(1): 9.)

In 1969, the Botanical Congress was held in Seattle, a rare North American venue, and I drove across the country to participate. (My country by this time was Canada, having taken up a position as lichenologist at the National Museums of Canada, as it was called then). At this congress, the vote among the lichenologists present was overwhelmingly in favour of creating an official Association for Lichenology. Very few of the established lichenologists present at that meeting are still alive (it was, after all, 50 years ago!), but those that are I'm sure would agree that it was exciting to be a part of that inauguration. The first President was Peter James, and the presidents that followed were presumably luminaries in the field. How then did *I* get to become president in 2004? Never mind; it happened.

My tenure as President of the IAL had a number of goals. First, I wanted the IAL to be on firm financial footing since the Newsletter (our biggest expense) was getting bigger and fancier and more widely distributed. We would not be able to depend on the generosity of home institutions of Council members forever in paying some of the bills, as they had been. A corollary of having all the members paying their dues was to create a realistic membership list. Ulrik Søchting and I had a lot of correspondence trying to set this up, with only partial success despite our best efforts.

There was also an International Mycological Congress about to occur in Cairns, Australia (August 2006), and I wanted very much that lichenology be represented with some meaningful symposia and good lichenological participation. I thought there should be at least one good lichen fieldtrip in the Cairns area, and so, one was arranged with a great deal of help from a local botanist from James Cooke University, Dr Betsy Jackes, and some of her colleagues. The field trip was fun, we saw many interesting lichens and had permits to collect specimens, but we had almost no time at all to study them, and we weren't allowed to take any of the collections out of the country! All collections were deposited in either the Queensland Herbarium, Brisbane, or at James Cook University, under the terms of the collection permits to Dr. Jackes. As far as I know, they are still there, almost all unidentified.

Thirdly, I thought it would be a good idea to have an IAL logo for web pages, publications and other communications, so a contest was held to select a suitable logo design. The winning design (by Robert Lücking) was selected at the IAL6 meeting in Asilomar, California, in 2008. The logo, which features a lobe of *Lobaria pulmonaria*, is prominent on the IAL web page.

The Asilomar symposium itself, of course, was my final big goal. There were field trips to plan, awards to be given, symposia to organize, and logistics to be worked out. Thanks to a large number of competent and dedicated colleagues, it all went very smoothly, and I couldn't have been more pleased with the meeting.

Looking back on the field of lichenology as it existed in 1964-1969, the formative period of the IAL, and what it is now, I can see both major changes and significant similarities. Let me begin with the latter.

Lichenologists still feel like they are part of a large club, with natural feelings of affinity for like-minded biologists. We enjoy each other's company, making our meetings both informative as well as socially gratifying. We enjoy "knowing everyone" and somehow are surprised when someone identifies themselves as a lichenologist (especially in a home country) whom we don't know personally. Anything that mentions a lichen catches our eye and our interest, from a newspaper report of an oddly named species (*Japewiella dollypartoniana* … really?) to a novel featuring the magical properties of lichen extracts (e.g., "Trouble with Lichen" by John Wyndham). Lichenology has a history, its heroes and heroines, and its scandals and even humour.

But who can deny that lichenology has vastly changed over the past 50 years? The literature is now voluminous, with computer technology making it relatively easy to access information about lichens

from every part of the world. We now communicate with our colleagues all over the globe almost instantaneously. That said, we should be better informed about what everyone is doing, but I fear that we are not. This Newsletter provides that potential forum, and we should make better use of it.

One other change deserves mention. Lichenology used to be male-dominated, even though many of our most extraordinary contributors have been female (e.g., Annie Lorraine Smith, Ursula Duncan, Aino Henssen, Hildur Krog, Elisabeth Tschermak-Woess, etc.), but now, the field is well represented by extremely talented, knowledgeable and productive women (35% of the present IAL list of members). There are role-models aplenty for any aspiring female lichenology student.

As my own activity winds down, I am tremendously impressed and heartened by the knowledge, innovation and energy of today's active lichenologists. The next 50 years of our Association will be exciting indeed.

Irwin (Ernie) Brodo

PERSONAL REFLECTIONS ON THE IAL ANNIVERSARY

Looking back at my career in lichenology, I cannot help but feel that there have always been some specific moments that influenced the direction I was going. Starting from an open day at the Phillips-University in Marburg (Germany) where I – as a schoolboy at age 16 – was the only visitor in the lichen exhibit and met Aino Henssen to my first conference ever, which was the first IAL conference in Münster (Germany) organized by the late Elisabeth Peveling who was a professor at the university there. I was late for the conference since I had my last exam for the Bachelor's degree in Marburg earlier that week, but was struck by the friendliness and openness of everyone when I arrived, whether they were students like me or established scientists whose names I only knew from publications. It was an amazing experience to be able to talk to and exchange ideas with colleagues from all over the world. I remember having a long and stimulating discussion with Christian Leuckert (Berlin) who patiently answered my naïve questions of the biogenetic relationship of secondary metabolites. At that time I was interested in the genus *Diploschistes*, a genus that included species mostly containing depsides, such as gyrophoric, lecanoric or diploschistesic acid, but also had one species (*D. ocellatus*) containing norstictic acid and I tried to understand how a switch could have happened from the depsides to depsidones and remember being disappointed when Leuckert explained to me that these substances are unrelated. Much later, Bier (Ekaphan) Kraichak showed me the reason for this unusual pattern – his phylogenetic work showed that *D. ocellatus* was only distantly related to *Diploschistes* and the species now is classified into a different genus (*Xalocoa*). However, the discussion with Leuckert got me interested in understanding more of a field I had no idea about, chemotaxonomy. This later helped me to convince Benno Feige (Essen) to accept me as a graduate student for a study on the genus *Lecanora.* Different discussions at the Münster meeting I still remember are discussions on plate tectonics and biogeography of southern Hemisphere lichens with David Galloway and Peter James that sparked my interest in biogeographical patterns – a field that has become so amazingly exciting with the results coming out from phylogenetic studies using molecular data.

In general, I most enjoy the team spirit in lichenology and the openness to help and to collaborate. This makes scientific work enjoyable, and helped me make friends all over the world over time. The major impact of the IAL for me was through its symposia that are held every four years.

The first IAL meetings were dominated by lichenologists from Europe and North America and given the strength of the field in Europe the first of these conferences were held in Europe. I am pleased to see how lichenology has mushroomed all over the world and how we have become a truly global network of scientists working on a fascinating symbiotic system. This is also reflected in the choice of the venues with Asilomar being the first meeting held outside of Europe followed by the meeting in Bangkok and the forthcoming one in Brazil.

I had the pleasure of attending all of the IAL symposia and enjoyed every single of them enormously, learning about new ideas and techniques, exchanging ideas and discussing with old and new friends, and just meeting up with old friends for a beer and reminiscing over shared memories. I have also seen an enormous change in the research in lichenology with a stronger focus on molecular data – in the beginning there was more of a schism between the older folks looking at these new methods critically and enjoying over- or misinterpretation of the (at that time) less than perfect data and the new generation of students employing these methods and sometimes looking at it without the necessary amount of doubt. This is a normal development that can be seen when new data sets become available – in the initial phase there is the hope that we finally found the "magic trick" to interpret evolutionary patterns; later, we come to realize that this is a great addition to our toolbox that has to be interpreted with the same caution as the established data sets. This was also true for the excitement of using chemistry or ascus-types for systematics, but this is actually not a recent phenomenon, since the same can be said about the discovery of patterns in ascospore types roughly 150 years ago.

My perspective of lichenology is skewed towards evolutionary biology and systematics because of my own research interests, but the "big tent" approach of the IAL allows for stimulating interactions among lichenologists interested in different aspects, including ecology, physiology, or lichen biology. There is so much to learn from each other and the IAL conferences are the ideal venue to keep this conversation going. We should encourage our students and post-docs to be as broad as possible in their interests and not to be shy to ask supposedly simple questions. I have most benefitted from such discussions with experts in other fields of lichenology – for example learning so much about lichen ecophysiology and adaptation of lichens. This helps to understand morphological or chemical characters, which taxonomists tend to see as taxonomic characters to use to separate taxa, as adaptations to a specific habitat.

This is an exciting time to be a lichenologist: we can now address research questions we could not dream about when I started getting interested in lichens, and there is so much more to learn about these organisms. The dramatic change of technology – in my lecture notes from my studies in my evolutionary biology class, it said that you need to use amino acids and proteins for phylogenetic studies since there is not enough DNA available in cells – obviously before PCR was invented – has opened a door to a new world of fun questions to address. It is exciting to think about how our field will look if the development in scientific progress that I have seen over the last four decades will continue to revolutionize biology. Aspects of machine learning; use of drones for ecological studies; hyperspectral reflectance patterns for ecology and taxonomy; and a better understanding of the genetic basis of this fascinating symbiotic relationship, are just a few possibilities of how our field can thrive in the future. I am excited about the opportunities and am looking forward to my 9th IAL symposium in Bonito (Brazil) next year to learn more about various aspects of lichenology, meet old friends, make new friends, and meet the next generation of lichenologists – onward and upward!

Thorsten Lumbsch

THE PHOTO STORY OF IAL

Below you will find a photo story of our lichenological community. I am grateful to colleagues, who shared pictures for this special issue of the Newsletter, especially: Edit Farkas, Jurga Motiejūnaitė, Martin Kukwa, Irwin Brodo, Ingvar Kärnefelt, Arne Thell, Hannes Hertel, Martin Grube, Scott LaGreca, Peter Crittenden. For technical reasons, the names of the photographers are not mentioned in subtitles.

The Editor

1. Mark Seaward, Sydney, 1987.
2. Jack Elix, David Galloway, Per M. Jørgensen, IAL Symposium on Tropical Lichenology, 1989.
3. Edit Farkas and Mats Wedin, IMC4, Regensburg, 1990.
4. László Lőkös, Ingvar Kärnefelt, Harrie Sipman, IMC4, 1990.
5. Teuvo Ahti with students at the Advanced course on lichenology „Biology and Systematics of Lichens and Lichenicolous Fungi", Lovstabruk, Sweden, 1996.
6. Jolanta Miądlikowska measuring at the pulpit of Carl Linnaeus, Advanced course on lichenology „Biology and Systematics of Lichens and Lichenicolous Fungi", Lovstabruk, Sweden, 1996.
7. Leif Tibell and Anders Nordin performing, Lovstabruk, Advanced course on lichenology „Biology and Systematics of Lichens and Lichenicolous Fungi", Sweden, 1996.
8. Leif Tibell, Sieglinde Ott, Martin Westberg, Advanced course on lichenology „Biology and Systematics of Lichens and Lichenicolous Fungi", Lovstabruk, Sweden, 1996.
9. Sieglinde Ott, IMC5, Canada, 1994.

10. Gintaras Kantvilas, Jack Elix, Ingvar Kärnefelt, Thomas Nash, IAL3, Salzburg, 1996.
11. Roland Moberg and Patrick McCarthy, IAL3, Salzburg, 1996.
12. Volkmar Wirth and Hannes Hertel, IAL3, Salzburg, 1996.
13. Ulrik Søchting, IAL3, Salzburg, 1996.
14. Orvo Vitikainen, IAL3, Salzburg, 1996.
15. Christoph Scheidegger and Jan-Eric Mattsson, IAL3, Salzburg, 1996.
16. Christian Printzen, London, 1998.
17. Ana Crespo, London, 1998.
18. Xavier Llimona and Pier Luigi Nimis, London, 1998.
19. Rosmarie Honegger, 1998.
20. Brian Coppins, NATO Advanced Research Workshop on lichen monitoring, Wales, UK, 2000.
21. Peter James showing coastal lichen communities, NATO Workshop on lichen monitoring, Wales, UK, 2000.
22. William Purvis, Christoph Scheidegger and Peter Scholz, NATO Workshop, Wales, UK, 2000.
23. Stefano Loppi, Peter Scholz, Pat Wolseley, Brian Coppins, NATO Workshop on lichen monitoring, Wales, UK, 2000.

24. Anders Tehler, Mark Seaward, Margalith Galun, IAL4, Barcelona, 2000.
25. Dagmar Triebel, Martin Jahns and Anders Tehler, IAL4, Barcelona, 2000.
26. Paweł Czarnota, Martin Kukwa, Beata Guzow-Krzemińska, Urszula Bielczyk, Jurga Motiejūnaitė, Mark Seaward, Lucyna Śliwa, IAL4, Barcelona, 2000.
27. Pier Luigi Nimis and Sergey Kondratyuk, IAL4, Barcelona, 2000.
28. Paul Diederich, Pieter van den Boom, Emmanuël Sérusiaux, IAL4, Barcelona, 2000.
29. Pat Wolseley and Irina Mikhailova, IAL4, Barcelona, 2000.
30. Gintaras Kantvilas and Philippe Clerc, IAL4, Barcelona, 2000.
31. Thorsten Lumbsch, IAL4, Barcelona, 2000.
32. Einar Timdal, IMC7, Oslo, 2002.
33. Ingvar Kärnefelt and Martin Grube, IMC7, Oslo, 2002.

34. Rikard Sundin, Pat Wolseley, Heidi Döring, Mats Wedin, IAL5, Tartu, 2004.
35. Rene Larsen and David Hawksworth, IAL5, Tartu, 2004.
36. William Purvis, IAL5, Tartu, 2004.
37. Anna Zalewska, Beata Guzow-Krzemińska, Paweł Czarnota and Franc Batič, IAL5, Tartu, 2004.
38. Štěpánka Slavíková-Bayerová, Ondřej Peksa, David Svoboda, Lucyna Śliwa, IAL5, Tartu, 2004.
39. Martin Kukwa and Jana Kocourková, IAL5, Tartu, 2004.
40. Tassilo Feuerer, IAL5, Tartu, 2004.
41. Thorsten Lumbsch, Vagn Alstrup, Beata Guzow-Krzemińska, Tiina Randlane, Andres Saag, Agnieszka Kowalewska, Jurga Motiejūnaitė, Katarzyna Jando, Martin Kukwa, IAL5, Tartu, 2004.
42. Mats Wedin and Thorsten Lumbsch being approached by the police, IAL5, Tartu, 2004.
43. Helmut Mayrhofer and Martin Grube, IAL5, Tartu, 2004.
44. Sabine Wornik and Magdalena Opanowicz, IAL5, Tartu, 2004.

45. Vagn Alstrup, NLS excursion, Greenland, 2005.
46. Vagn Alstrup, Wolfgang von Brackel and Jurga Motiejūnaitė, NLS excursion, Greenland, 2005.
47. Einar Timdal and Reidar Haugan, NLS excursion, Greenland, 2005.
48. Ulf Arup, Einar Timdal and Reidar Haugan, NLS excursion, Greenland, 2005.
49. Emmanuël Sérusiaux and Vagn Alstrup, NLS excursion, Greenland, 2005.
50. NLS excursion, Greenland, 2005.
51. Emmanuël Sérusiaux and Tassilo Feuerer, NLS excursion, Greenland, 2005.
52. Georg Brunauer, Elfie Stocker-Wörgötter, Daniele Armaleo, ?, Martin Grube, Beata Guzow-Krzemińska, ISS, Vienna, 2006.
53. Damien Ertz and Paul Diederich , IAL6, Asilomar, 2008.
54. Anna Guttová and Jurga Motiejūnaitė, IAL6, Asilomar, 2008.
55. Edit Farkas and Irwin Brodo, IAL6, Asilomar, 2008.

56. Peter Crittenden, IAL7, Bangkok, 2012.
57. Imke Schmitt and Anna Sadowska-Deś, IAL7, Bangkok, 2012.
58. Andreas Beck, Silke Werth and Adam Flakus, IAL7, Bangkok, 2012.
59. Edit Farkas, Jurga Motiejūnaitė and Martin Kukwa, IAL 7, 2012.
60. Manuela dal Forno, IAL7, Bangkok, 2012.
61. Adam Flakus, Martin Kukwa, Pamela Rodriguez Flakus, IAL7, Bangkok, 2012.
62. Fenja and Irwin Brodo, IAL7, 2012.
63. Edit Farkas, IAL7, 2012.
64. Pamela Rodriguez Flakus and Imke Schmitt, IAL7, 2012.

65. IAL8, Helsinki, 2016.
66. Scott LaGreca, IAL8, Helsinki, 2016.
67. André Aptroot, IAL8, Helsinki, 2016.
68. Fernando Fernandez Mendoza, IAL8, Helsinki, 2016.
69. Troy McMullin, IAL8, Helsinki, 2016.
70. Marcela Cáceres, IAL8, Helsinki, 2016.
71. Edit Farkas and Andreas Beck IAL8, 2008.
72. Last slide from somebody's talk at IAL8, Helsinki, 2016.

AN ANNIVERSARY APPRECIATION: ACHARIAN APPELLATIONS

14 October 2019 marked the 200th anniversary of the death of Professor Erik Acharius, *The Father of Lichenology*. Acharius was born on 10 October 1757 in the Swedish town of Gävle on the Baltic coast. A student of the great Carl Linnaeus, *The Father of Modern Taxonomy*, Acharius became a medical doctor, eventually settling in the little town of Vadstena, where he remained for the rest of his life (Kärnefelt & Thell 2007). He returned to botany in spectacular fashion in the 1790's with many important works on lichens, the most influential being his *Methodus Lichenum* (Acharius 1803). In this revolutionary paper, Acharius proposed a taxonomic system for lichens based on ascocarp structure, form and position that introduced 23 new genera. Additional publications followed in which Acharius continued to describe new species of lichens while fine-tuning his taxonomic system. Acharius died of a massive stroke while joyfully identifying a collection of lichens from Spain (Kärnefelt & Thell 2007). He was only 61 years old—young by today's standards. By the end of his productive career, Acharius had proposed no less than 46 new lichen genera, a vast improvement on the work of his teacher Linnaeus, who chose to lump all lichens together into a single genus, *Lichen* (now a *nom. rejic.*).

They say you should only speak good of the dead. Specific epithets can speak volumes about our love for colleagues whom we hold in high esteem. Lichenologists and non-lichenologists alike have honoured Professor Acharius with species named after him, including: Antoine Fée, Elias Fries, Vilmos Gyelnik, Gustav Körber, Christiann Persoon, Pier Saccardo, Annie Lorraine Smith, Edward Tuckerman, Edmond Tulasne, and Edvard Vainio. In commemoration of the 200th anniversary of *Our Father's* death, we here list all specific epithets that bear his name.

[List is based mainly on Index Fungorum (2019), supplemented with other sources.]

The List

Acarospora schleicheri* var. *acharii Cout.
Zahlbruckner (1927) considered this name as a heterotypic synonym of *A. schleicheri* (Ach.) A. Massal., but more recent clues about the disposition of this name have not been found in published lichen checklists.

Acharia Thunb.
Interestingly, this is a monotypic vascular plant genus placed in the order Malpighiales (Stevens 2001).

Actidium acharii Fr.
This is a non-lichenized fungus of uncertain identity.

Alectoria achariana Gyeln.
Notes: According to Brodo and Hawskworth (1977), the identity of this name is uncertain because the holotype is missing. The name is treated as a synonym of *Bryoria pseudofuscescens* (Gyeln.) Brodo & D. Hawksw by Esslinger (2018). Holien (1989) listed the latter name as synonymous with *B. implexa* (Hoffm.) Brodo & D. Hawksw, but Velmala et al. (2014) kept *B. pseudofuscescens* as a separate taxon. Lindgren et al. (2014) stated that genetic data suggest several traditionally recognized species might be conspecific. We believe that additional studies will be necessary to solve this problem.

Cetraria aculeata* var. *acharii Grognot
This name is listed by Zahlbruckner (1930) as a synonym of *C. aculeata* (Schreb.) Fr., but no other information has been found in lichen checklists.

Cetraria lacunosa* var. *acharii Du Rietz
This is perhaps a synonym of *Platismatia lacunosa* (Ach.) W.L. Culb. & C.F. Culb., but no additional information has been found. It was not treated by Culberson & Culberson (1968).

Conferva acharii F. Weber & D. Mohr.
This algal name is of uncertain identity (Guiry 2019a). *Conferva* L. is listed as a *nom. rejic*. (Guiry 2019b).

Cytospora acharii Sacc.
A non-lichenized fungus of uncertain identity.

Eutypa acharii Tul. & C. Tul.
This name is a synonym of *E. maura* (Fr.) Sacc. (Mułenko et al. 2008).

Glyphis achariana Tuck.
This is a synonym of *G. cicatricosa* Ach. (Esslinger 2018).

Graphis acharii Fée
This widespread species is now placed in the resurrected genus *Allographa* Chevall. as *A. acharii* (Fée) Lücking & Kalb (Kalb et al. 2018).

Lecanora achariana A.L. Sm.
This species is a member of the genus *Protoparmeliopsis* M. Choisy and is now known as *P. achariana* (A.L. Sm.) Moberg & R. Sant. (Santesson et al. 2004; Miadlikowska et al. 2014; Zhao et al. 2016).

Lecidea pantherina* var. *achariana Vain.
This name is of uncertain identity. No information about this variety has been found in published lichen checklists, but Zahlbruckner (1925, 1932) lists it as a synonym of *L. pantherina* (Hoffm.) Ach., which is treated as a variety of *L. lapicida* (Ach.) Ach. in recent checklists (e.g., Santesson et al. 2004; Nimis et al. 2018).

Lepraria achariana Flakus & Kukwa
This name was introduced by Flakus and Kukwa (2007) for a species from the Neotropics. It was originally known only from Bolivia (Flakus & Kukwa 2007), but later reported from the Galapagos Islands (Bungartz et al. 2013). Recently this species was sampled for a molecular phylogeny of *Lepraria* (Guzow-Krzemińska et al. 2019).

Lichen acharii Westring ex Ach.
This name, as *Lecanora acharii* (Westring ex Ach.), is listed as a synonym of *Ionaspis lacustris* (With.) Lutzoni (Santesson et al. 2004). For more homotypic synonyms see Index Fungorum (2019).

Melanotheca achariana Fée
This name is listed as a synonym of *Pyrenula anomala* (Ach.) Vain. by Aptroot (2012).

Mycoporum acharii Spreng.
This species was placed in synonymy with *Pyrenula anomala* (Ach.) Vain. by Aptroot (2012).

Rosa acharii Billb. *in* Palmstr.
This vascular plant name is listed as accepted by Kerguélen (1999) and Flora Iberica (2019).

Rhizomorpha achariana Fr.
According to Saccardo (1899) this is a synonym of *Rh. verticillata* Ach.

Sagiolechia protuberans* var. *acharii Körb.
Zahlbruckner (1924) listed this name as a synonym of *S. protuberans* (Ach.) A. Massal., but its true identity remains uncertain. No additional information has been found in lichen checklists.

Stereocaulon virgatum* f. *achariana Vain.
Lamb (1977) listed this name as a synonym of *S. virgatum* Ach.

Synalissa acharii Trevis.
In Zahlbruckner (1924) this is listed as a synonym of *S. symphorea* (Ach.) Nyl., but no other information has been found in lichen checklists.

Thelotrema acharianum G. Salisb.
This name was introduced by Salisbury (1978) to replace *Pyrenula clandestina* Ach. due to the existence of a homonym, *Thelotrema clandestinum* Fée. Since *Pyrenula clandestina* is now placed in *Clandestinotrema* as *C. clandestinum* (Ach.) Rivas Plata, Lücking & Lumbsch (Rivas Plata et al. 2012), *Thelotrema acharianum* became a synonym of the latter (Index Fungorum 2019).

Tortrix achariana Thunb.
This name is noteworthy because it is a species of moth (Thunberg 1797).

Usnea gracilis* var. *achariana Vain.
The identity of this name remains uncertain as no information on it has been found in any recent papers. Zahlbruckner (1930) lists it as a separate entity; it is not listed as a synonym of any other taxon.

Verrucaria acharii Fée
According to McCarthy (2013) this is *Pertusaria acharii* (Fée) Nyl., but Archer and Elix (2017) do not list this name. Therefore, the identity of this name remains uncertain.

Acknowledgements

We thank Zdenek Palice for his help with literature references.

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NEWS

HERBARIUM OF BURKHARD BÜDEL MOVED TO HERBARIUM HAMBURGENSE (HBG)

Upon his retirement from the position of Professor of Botany at the University of Kaiserslautern, Germany, Burkhard Büdel generously handed his lichen herbarium to the Herbarium Hamburgense (HBG) at the Institute of Plant Science and Microbiology of the University of Hamburg, Germany. Approximately 80 boxes with 3000-4000 specimens were transported to Hamburg in December 2018. The material is currently stored among the HBG lichen separate collections. The bulk of the specimens is arranged into a general herbarium covering lichen genera A-Z, with the species usually sorted by geography. Collections come from Germany, France, Mexico, New Zealand, Panama, Spain, USA, Venezuela and other countries. Genus *Peltula* is particularly well represented, being both rich in species and number of specimens. There is also material collected by other lichenologists such as J.M. Egea (duplicates ex MUB), D.J. Eldridge (Australia), R. Filson (Antarctic lichens exsiccate), A. Henssen (with Büdel), O.L. Lange (small number), B. Mies (Cape Verde cyanolichens), D. Wessels (South Africa, Namibia), G. Willems (Andalusia, Greece) and others. The herbarium contains a substantial number of types, mostly Peltulaceae and Lichinaceae; these will be registered and incorporated first into the HBG general lichen collection. The further processing of the herbarium will require additional funds, which HBG is currently applying for.

Matthias Schultz, Hamburg
Burkhard Büdel, Frammersbach

TWO-DAY NATIONAL LEVEL WORKSHOP ON IDENTIFICATION TECHNIQUES OF MACROFUNGI AND LICHENS, 6TH – 7TH DECEMBER 2019

This workshop will be held at the Department of Botany, University College Mangalore, India. The workshop aims at spreading awareness of diversity, as well as the importance of macrofungi and lichens. In addition, general knowledge about the identification of these two groups of organisms will be given to the participants. Dr. Shobha (shobhadevadiga@yahoo.com), Head of the Department, is the coordinator of the workshop.

Dr. Sanjeeva Nayaka
Secretary, Indian Lichenological Society
Senior Principal Scientist, CSIR-NBRI, Lucknow
Email: nayaka.sanjeeva@gmail.com

LICHENS ASSESSED IN CANADA AS PART OF THE 'SPECIES AT RISK ACT'

If you are interested in lichens that may be at risk in Canada, you can click on:

https://species-registry.canada.ca/index-en.html#/documents/1151

This website provides a list of lichens that have been assessed to date by COSEWIC (Committee on the Status of Endangered Wildlife in Canada). If you click on the lichen of interest, you can access and download the status report and other available details. Most status reports are about 30 pages long. Each includes an executive summary, plus information on distribution, habitat, biology, population and trends, threats and status, along with a Threats Calculator Assessment. Maps and other illustrations are part of each Status Report. For more information about COSEWIC and the other organisms they assess, consult cosewic.ca. The completed lichen status reports are listed below:

Common	**Scientific Name**	**Status**
Batwing Vinyl Lichen	*Leptogium platynum*	Endangered
Black-foam Lichen	*Anzia colpodes*	Threatened
Blue Felt Lichen	*Degelia plumbea*	Special Concern
Boreal Felt Lichen	*Erioderma pedicellatum*	Endangered (Atlantic population)
Boreal Felt Lichen	*Erioderma pedicellatum*	Special Concern (Boreal population)
Crumpled Tarpaper Lichen	*Collema coniophilum*	Threatened
Eastern Waterfan	*Peltigera hydrothyria*	Threatened
Flexuous Golden Stubble	*Chaenotheca servitii*	Data Deficient
Flooded Jellyskin	*Leptogium rivulare*	Special Concern
Frosted Glass-whiskers	*Sclerophora peronella*	Special Concern (Atlantic population)
Ghost Antler Lichen	*Pseudevernia cladonia*	Not at Risk
Golden-eye Lichen	*Teloschistes chrysophthalmus*	Endangered (Great Lakes population)
Golden-eye Lichen	*Teloschistes chrysophthalmus*	Special Concern (Prairie /Boreal population)
Oldgrowth Specklebelly	*Pseudocyphellaria rainierensis*	Special Concern
Pale-bellied Frost Lichen	*Physconia subpallida*	Endangered
Peacock Vinyl Lichen	*Leptogium polycarpum*	Special Concern
Red Oak Stubble Lichen	*Phaeocalicium minutissimum*	Data Deficient
Seaside Bone Lichen	*Hypogymnia heterophylla*	Threatened
Seaside Centipede Lichen	*Heterodermia sitchensis*	Endangered
Smoker's Lung Lichen	*Lobaria retigera*	Threatened
Vole Ears Lichen	*Erioderma mollissimum*	Endangered
Western Waterfan	*Peltigera gowardii*	Special Concern
White-rimmed Shingle Lichen	*Fuscopannaria leucosticta*	Threatened
Wrinkled Shingle Lichen	*Pannaria lurida*	Threatened

David Richardson,
e-mail: david.richardson@smu.ca

THE UNIVERSITY OF VALENCIA ORGANISES A SCIENTIFIC CONFERENCE IN HONOUR OF BIOLOGIST LYNN MARGULIS

The sessions, under the title "SYMBIOTIC EARTH: How LYNN MARGULIS started a scientific revolution" will take place on December 11 and 12, and there will be films screenings, talks and a round table. The *SYMBIOTIC EARTH: How Lynn Margulis rocked the boat and started a scientific revolution*, film deals with the life and career of the microbiologist, and analyses her contributions to the development of symbiosis theory. Registration for the conference is free and is now open at http://ir.uv.es/5uzGUKz.

The sessions are organised by the Cavanilles Institute of Biodiversity and Evolutionary Biology of the University of Valencia, together with the Scientific Culture and Innovation Unit.

The planned conferences will revolve around the microbiologist Lynn Margulis, and the work she disseminated, on the theory of endosymbiosis and its application in different world realities. The different concepts of symbiosis between different organisms, and the advances that have led to conceptual changes in classical symbiosis paradigms, will also be reviewed and updated. The speakers include professors from Spanish universities, such as the Autonomous University of Madrid, the Complutense or the King Juan Carlos, but also from universities in Argentina (National University of Mar de Plata) and Italy (University of Trieste).

The conference coordinator, Eva Barreno, Full Professor in Botany, will be in charge of presenting the event. Meanwhile, Rubén Duro (Science into Images), on behalf of Hummingbird Films (the production company that made the documentary about Lynn Margulis), will introduce the film. The opening ceremony will also feature two vice-rectors of the University of Valencia: the one of Equality, Diversity and Sustainability, Elena Martínez; and that of Innovation and Transfer, Dolores Real.

The events will take place on December 11 in the Darwin Hall of the Burjassot campus of the University of Valencia and on December 12 in the Graduate Room of the Faculty of Mathematics.

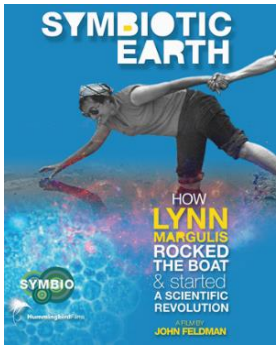
Lynn Margulis, preeminent woman in molecular biology

Lynn Margulis began her scientific career at a very young age, and will be forever remembered for developing the theory of symbiosis as a source of evolutionary innovation. Her pioneering works in the 1960s triggered the progressive acceptance of the origin of complex eukaryotic cells from the aggregation and joint transmission of simpler cells. Current evolutionary theory recognises and incorporates many of the ideas that Margulis defended in the midst of indifference, or even rejection, of the majority of the scientific community of the time. Her other scientific contributions—the result of tireless and enthusiastic work until her death—have not been free of controversies. An example was her microbiological contribution to James Lovelock's Gaia hypothesis. Margulis received an Honoris Causa Doctorate from the University of Valencia in 2001.

For more information and registration for the conference see: **https://ir.uv.es/5uzGUKz**.

SYMBIOTIC EARTH:
HOW LYNN MARGULIS STARTED A SCIENTIFIC REVOLUTION

SCIENTIFIC CONFERENCES
PROMETEO2017/039-EXCELENCE in RESEARCH, GVA - UNIVERSITY of VALENCIA



Wednesday, 11 December 2019

Darwin Conference Room, Burjassot Campus

09:00 Inauguration of the conference

Elena Martínez, Vice Chancellor for Equality, Diversity and Sustainability

Dolores del Real, Vice Chancellor for Innovation and Transfer

Presentation of the conference: **Eva Barreno** (coordinator)
Presentation of the film: **Rubén Duro** (Hummingbird Films)

Registration for the conference is free and is now open at: **https://ir.uv.es/5uzGUKz**

09:30

Projection of the film **"SYMBIOTIC EARTH: How Lynn Margulis rocked the boat and started a scientific revolution"** (with Spanish subtitles) Part 1. Chapters 0-6 (duration 01:17:24) *https://symbioticearth.bullfrogcommunities.com/sym_resources*

11:15 Coffee break

11:30 "**Lynn Margulis: a shining example of women in science"**, Begoña Vendrell

12:30 "**Lessons from the dark biosphere: symbiosis in the deep solid rock subsurface"**, Ricardo Amils (INTA, UAM)

Lunch break

15:00 Projection of the film **"SYMBIOTIC EARTH: How Lynn Margulis rocked the boat and started a scientific revolution"** (with Spanish subtitles) Part 2. Chapters 7-10 (duration 01:10:20) *https://symbioticearth.bullfrogcommunities.com/sym_resources*

16:30 "**Mutual and sweet interactions between plants and bees: Co-evolution of cellular signals in response to environmental stimuli"**, Lorenzo Lamattina (UMDP, Argentina)

17:30 "**The lichen symbiosis, a way to cope with the most extreme conditions on the earth and beyond"** Leopoldo G. Sancho (UCM)

Thursday, 12 December 2019

Grados Conference Room, Faculty of Mathematics, Burjassot Campus

ADVANCES AND FUTURE PERSPECTIVES CONCERNING THE COMPLEXITY OF SYMBIOSIS

09:30 "The symbiosis through the image: the use of images as support for the research", Rubén Duro *https://scienceintoimages.com/*

10:45 ROUND TABLE.
Discussion topics:

Cell signaling in symbiosis. Lichens and climate change. Extremophilic organisms.

The biodiversity of microorganisms in holobiomas. Metabolism and biotechnological applications

Speakers: Ricardo **Amils** (INTA, UAM), Eva **Barreno** (UVEG), Pedro **Carrasco** (UVEG), Myriam **Catalá** (URJC), Lorenzo **Lamattina** (UMDP, Argentina), Lucia **Muggia** (UNITS, Italy), Leopoldo G. **Sancho** (UCM)

Moderators: Patricia **Moya** (ICBIBE) and Arantzazu **Molins** (ICBIBE)

https://symbiolichen.blogs.uv.es/

Registration for the conference is free and is now open at:

https://ir.uv.es/5uzGUKz

PROGRESS AND FUTURE PERSPECTIVES ON THE COMPLEXITY OF SYMBIOSIS

Thursday, 12 December 2019

Grados Conference Room, Faculty of Mathematics, Burjassot Campus

Information for students who are participating in the round table

Registration for the conference is free and is now open at https://ir.uv.es/5uzGUKz

10:45 ROUND TABLE.

Moderators: Patricia **Moya** (ICBIBE) and Arantzazu **Molins** (ICBIBE) ***https://symbiolichen.blogs.uv.es/***

What is a round table? A round table is a group dynamics technique in which a group of specialists on a topic, coordinated by a moderator, conducts a discussion.

Objectives of the round table: To offer and share different points of view from a wide and varied level of information and expertise. To provide facts and opinions on the topics under discussion. To debate the proposed topics. To generate ideas and possible collaborations.

Session planning by experts and moderators:

Assignment of the subject matter and the order of presentation.

1. **Biodiversity of microorganisms in holobiomas**: Lucia Muggia (UNITS, Italy), Eva Barreno (UVEG)

2. **Extremophile organisms:** Ricardo Amils (INTA, UAM)

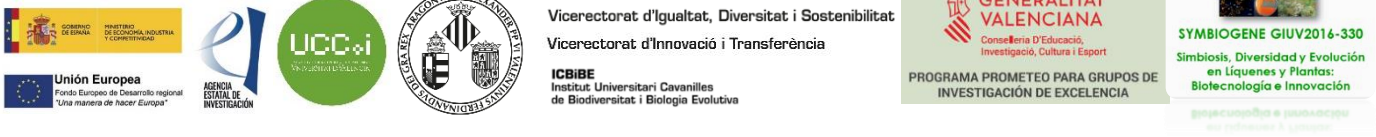
3. **Lichens and climate change:** Leopoldo G. Sancho (UCM)

4. **Cell signaling in symbiosis:** Lorenzo Lamattina (UMDP, Argentina), Myriam Catalá (URJC)

5. **Metabolism and biotechnological applications:** Pedro Carrasco (UVEG)

- ✓ The participants will sit in a semi-circle on the central stage of the Grado Conference Room of the Faculty of Mathematics, with the moderator sitting in the middle.
- ✓ The moderator will start the round table, present the general subject matter and briefly present each speaker.
- ✓ Each speaker will give a 10-minute presentation with the help of a PowerPoint, if necessary. The PowerPoint will be projected behind the semi-circle, and can be controlled remotely by the speaker from his/her seat.
- ✓ The moderator will control the time for each speaker and encourage debate amongst the round table participants concerning the topic.
- ✓ A question and answer session will take place between the members of the table and the audience in the auditorium.
- ✓ **The moderator will summarize and bring each discussion point to a conclusion.**

The round table will conclude with a summary of the meeting or debate.



IS THE LICHEN SYMBIOSIS STRESS, SUSTENANCE, SIGNALING, EXTRAMARITAL SEX, AND SELF-RELIANCE?

A brief personal account of the genesis and significance of the recently published "*The lichen symbiosis re-viewed through the genomes of Cladonia grayi and its algal partner Asterochloris glomerata*. (https://doi.org/10.1186/s12864-019-5629-x)

Preface

Lichens have existed for hundreds of millions of years. Their photobionts and mycobionts evolved in separate kingdoms and, once combined, had to develop specific molecular languages to produce the lichen lifestyles. An ultimate goal is to understand how these cross-kingdom languages merged and work. Although cross-kingdom interactions are widespread across life, few have the tightness and stability seen in lichens. That was what drove me to lichens, and analyzing their genomes is a step toward that goal.

It took about 10 years to meander towards the publication of a genomic analysis of two primary lichen partners, those of *Cladonia grayi*. The impetus behind choosing *C. grayi* was the seminal work done on this lichen by Chicita and Bill Culberson and especially the inspiration and knowledge provided by Chicita to this author. The project took so long for a combination of reasons, including the technical hurdles involved in developing culture methods for the symbionts that would satisfy the quality and quantity requirements for DNA and RNA sequencing, and my initial lack of experience in bioinformatics and in organizing the large and varied group of expert colleagues needed to deal with such large data sets.

Our paper is finally here and it is not alone. Over the last few years several groups have used "omic" tools to investigate various aspects of the symbiosis (including evolution, physiology, stress resistance, microbiome issues), steering the study of lichens towards the molecular mainstream of modern biology. Our paper, however, has uniquely approached the lichen partnership from the

perspective of both primary components and from several different angles, **focusing specifically on genes which, by several criteria, were deemed important for the symbiosis: an ambitious goal only partly fulfilled of course. However, the information we uncovered opens many new and specific experimental avenues to investigate the lichen symbiosis**. As always, the key to ideas is in the details, and I encourage the truly interested to comb not only through the main text, but also through the content buried in "Additional files".

What we found

From a bird's eye perspective, the genome size and structure of the two main components of *Cladonia grayi* show no dramatic differences with those of their close non-lichen relatives. Despite the long and tight evolutionary coexistence of the partners, we found no evidence of inter-symbiont gene transfer. Interesting findings were represented by the many diverse genes we found in each partner to be potentially important for the symbiosis. I mention here are a few.

Both partners have expanded sets of transcription factors involved in chromatin remodeling and stress responses, possibly due to the extra developmental plasticity necessary to transition between free-living and symbiotic states. In the mycobiont, genes important for symbiosis are involved in protein translation, translocation and sorting, probably instrumental in the defense against environmental stresses like desiccation. We also found a unique set of G- protein α subunit paralogs, probably managing new sets of signals from the algal partner; a ribitol transporter and an ammonium transporter, the first specific for delivering to the fungus the carbon fixed by the alga, the second for exporting nitrogen to the alga. Some algal proteins of importance to the symbiosis include carbohydrate active enzymes, possibly involved in constructing the varying extracellular surfaces required in the diverse interactions of the lichen alga, and a large number of novel ATPases probably acquired from Archaea through horizontal gene transfer and probably involved in improving desiccation tolerance.

The presence and expression in the alga of genes necessary for meiosis definitely confirms that the alga has sex, most likely during its short periods of near- but extra-thalline existence. The mycobiont also engages in "out-of-symbiosis" sex, as fruiting bodies are commonly homogeneous fungal tissue not in intimate contact with algae and whose spores disperse in the environment. Sexual recombination in each partner provides the genetic variability whose contribution to the fitness of the whole is tested during symbiotic reentry. This could explain why the lichen partners have not lost their cellular autonomy over millions of years of coexistence. Finally, the diversity of the genes affecting the symbiosis suggests that lichens evolved by accretion of many scattered regulatory and structural changes rather than through introduction of a few key innovations. This predicts that evolutionary paths to lichenization were variable in different phyla, which is consistent with the emerging consensus that ascolichens had several independent phylogenetic origins.

Daniele Armaleo

REPORTS

200th anniversary of the death of Erik Acharius in Vadstena

August 14th 2019 marked the 200th anniversary of the death of Erik Acharius, the father of lichenology. Acharius was born 1757 in Gävle and studied at Uppsala University under Linneaus, where he was the last student to defend a dissertation with Linnaeus presiding. After his studies in Uppsala and Lund, Acharius worked as a physician in the small town of Vadstena and eventually became director of the Vadstena hospital 1795, shortly after his first publication on lichens 1794. He remained working in Vadstena until his death. An excellent introduction to Acharius' life and his work can be found in Kärnefelt & Frödén (2007; downloadable from Recent Literature on Lichens).

Acharius' garden, with the old pear tree still remaining (*Photo: Martin Westberg*).

On August 13th 1819 Acharius was sitting in his garden, studying lichens from Zaragoza in Spain, when he suffered a stroke from which he died the next day. The house where Acharius lived the last years of his life still remains in Vadstena, and is owned by the Söderström-Unnerbäck Foundation, which takes very good care of the building and garden. In conjunction with the IAL2 Symposium in 1992, a bronze memorial plaque modelled on the portrait from Acharius' "Synopsis", was placed on the wall of the house facing the street.

Mats Wedin delivering his speech (*Photo: Martin Westberg*).

The IAL decided to commemorate this day together with our sister organisations the Nordic and the Swedish Lichen Societies. Mats Wedin (IAL President), Ave Suija (NLF President) and Martin Westberg (SLF President) participated in the event. We organised a small memorial gathering outside

the house, hosted by Göran Söderström and Axel Unnerbäck, who currently live in the house. Vadstena municipality turns out to be very aware of its scientific heritage, and the Town Councillor Anders Hedeborg wished us welcome and talked about the importance of research for a small municipality like Vadstena. Mats spoke about Acharius and his scientific significance, and then placed a bouquet of flowers under the plaque. The Chair of the Vadstena Culture Committee Göran Fältgren honoured Acharius with a laurel crown. Roland Moberg, well-known lichenologist, former head of the Uppsala University herbarium (UPS), and one of the initiators of the bronze plaque, talked about the unveiling of the plaque in 1992, and showed us some photos from that event.

Participants gathered outside Acharius' house, in front of the memorial plaque (*Photo: Martin Westberg*).

Thanks to the kindness and hospitality of Göran Söderström and Axel Unnerbäck, our local hosts, the day became very memorable and well-covered by local media. Thanks finally to all involved, and let us raise a glass in memory of Erik Acharius! *Te referrent musci teneri fragilesque lichenes*!

Mats Wedin & Martin Westberg

Reference: Kärnefelt, I. & Frödén, P. 2007. Erik Acharius - the last of the Linnean pupils. *Svenska Linnésällskapets årsskrift* **2007**: 105-131.

MEETING OF THE NORDIC LICHEN SOCIETY 2019

The 2019 meeting of the Nordic Lichen Society took place in southwestern Estonia, in a cosy farmstead called Maria (close to Pärnu city), where we enjoyed the soul of the Estonian countryside; warm hospitality; and, of course, traditional cuisine. The first evening of the meeting was dedicated to "greenish/yellowish sterile crusts". Martin Kukwa (Gdańsk) gave a very inspiring lecture on this notoriously difficult group of lichens, and later helped determine specimens that other participants brought along. The rest of the meeting was dedicated to the field trips, where we explored the diversity of lichens and lichenicolous fungi in equally diverse habitats. Evenings were spent determining our collections and enjoying lively discussions.

At the Tori Hell outcrop (*Photo: Jurga Motiejūnaitė)*.

The field trips are worthy of special mention. We were blessed with regards to the weather, moderately warm and sunny with only one bout of rainstorm and hail – quite unusual in the unpredictable climate of the Baltics. We explored a wide variety of habitats including dunes; an inland

wooded meadow, oak forest and old manor park; bogs to hardwood forest (and everything in between) in the Nigula Nature Reserve; juniper shrublands and coastal meadows on the island of Kihnu; and alvar and limestone cliffs on the island of Muhu. We not only added new records of lichens and lichenicolous fungi to the already extensive Estonian list, we also had a good glimpse into Estonian history and culture: from an open-air Muhu museum and ancient Muhu church to a spectacular Tõstamaa manor house with its own little exhibition. We even tried to get to the Hell in Tori, but the entrance was sealed, so unfortunately we could not produce a report on lichens from Tori Hell proper. The closest we got was Martin Kukwa's find of (suspected) *Botryolepraria lesdainii* growing by the Hell's entrance.

It was a truly memorable and enjoyable five days for the participants. We all wish to cordially thank the organizers, and all helpers, who made the meeting happen. Special thanks are extended to Ave Suija, Inga Jüriado and Piret Lõhmus.

Evening studies at the microscopes (*Photo: Jurga Motiejūnaitė*).

On the bog island in Nigula (*Photo: Jurga Motiejūnaitė*).

Tiina Randlane and Andres Saag working on coastal saxicolous lichens (*Photo: Jurga Motiejūnaitė)*.

Ave Suija and Andrei Tsurykau studying soil lichens on alvar (*Photo: Jurga Motiejūnaitė)*.

Jurga Motiejūnaitė

A NEW CONSORTIUM OF LICHEN HERBARIA FOR LATIN AMERICA – DATA MANAGEMENT WORKSHOP FOR THE *CONSORCIO DE HERBARIOS DE LÍQUENES EN AMÉRICA LATINA* (CHLAL) AT THE GLAL XIV IN CUSCO, PERU

The *Consorcio de Herbarios de Líquenes en América Latina* (CHLAL, https://lichenportal.org/chlal/) is a new initiative of the *Grupo Latinoamericano de Liquenólogos* (a Latin American Group of Lichenologists with the acronym GLAL for its Spanish initials). The objective of this initiative is to share biodiversity data focusing on lichenized fungi from South and Central America, as well as those parts of North America, where Spanish and/or Portuguese is generally spoken. This region is characterized by immense geographic and ecological diversity: from the deserts of the Sonora and Chihuahua in northern Mexico, around the Gulf of Mexico, across the Caribbean Islands, throughout the tropical forests of Central America and the Amazon region, along the Andes, the Galapagos Islands, the coastal Atacama desert of Peru and Chile, the pampas of Argentina and Uruguay, to the southernmost subpolar regions – all these environments are inhabited by an enormous lichen diversity: from Mexico in the north all the way to the southernmost tip of South America.

The GLAL is dedicated to the scientific study of lichenized fungi in this region and the principal objective of this new data portal is to provide detailed information about biodiversity of these organisms in this region. With its partner organisation, the *Consortium of North American Lichen Herbaria* (CNALH, https://lichenportal.org/cnalh/), the new Latin American *Consorcio* provides efficient tools to manage specimen data and create dynamic and/or static species checklists for different regions throughout Latin America. The site also provides a library of specimen-based images from contributing institutions and a taxonomic thesaurus to facilitate navigating taxonomic synonyms. Both sites, the Latin American *Consorcio* and the North American *Consortium*, share the same database and hence the same taxonomic thesaurus. Specimen records from South America can be accessed from any one of the participating collections, in either one of the two portals.

The new site was launched at the XIII International Meeting of the GLAL in Iquique, Chile, in December 2017. Recently, in September 2019, at the XIV GLAL in Cusco, Peru, the two portal managers Jésus Hernández and Frank Bungartz organized a two-day, pre-conference workshop. The objective of this workshop was to invite curators and collections managers from Latin America to join and provide them with the resources necessary to manage both specimen and checklists data. Twenty lichenologist from Argentina, Chile, Ecuador, Mexico, Paraguay, Peru and Venezuela participated.

During the first day, participants set up an account and learned how to create voucher-based checklists. Checklists can a very powerful tool. For a particular geographic area (local, regional, national, even international), specimen data can be searched across all participating collections, in both the Consorcio and the Consortium. A researcher then selects specimen records to be included in their list, according to which records he/she considers most reliable. Checklists can then be browsed according to the researcher's own preferred taxonomy, or displayed according to the Central Taxonomic Thesaurus, maintained by the system. For each record in a checklist, it is possible to cite literature and include additional important information (as an example see the Checklist of Galapagos Lichens at https://lichenportal.org/chlal/checklists/checklist.php?clid=1278&pid=517). Each checklist can be exported in table format or as a Word document. With some additional polishing ,these lists can easily be formatted to be submitted for publication in a scientific journal. A tutorial, "How to Manage and Create Checklists", is available in both English and Spanish (https://lichenportal.org/help-resources/index.php/2019/06/create-and-manage-checklists/).

GLAL – XIV workshop participants (*Photo: Jésus Hernández*).

The second day of the workshop focused on creating new specimen records and managing specimen data, either directly online as a "live collection", or as a "snapshot", i.e., where the data are maintained in a local database and the *Consorcio* is regularly updated. All data in the *Consorcio* are 100% DarwinCore-compliant. Therefore, specimen records can be easily exchanged (including their annotation history and image references) with any database that makes use of this international standard. Once online, records not only become available for creating checklists, but data sets can also be published directly (and regularly updated) to the Global Biodiversity Information Facilities (GBIF). The *Consorcio* is a full-fledged specimen management system that does not require local installation, but it is available from any computer that has internet. Tutorials on how to manage records are available online in Spanish and English (https://lichenportal.org/help-resources/index.php/category/tutorials/collections/).

GLAL – XIV workshop – auditorium (*Photo: Jésus Hernández*).

The workshop in Cusco, two days before the GLAL XIV (16 & 17 September), was a great success. With more than 20 participants from Latin America, ten herbaria from seven different countries have now joined. Participants of the workshop came from Argentina, Brazil, Chile, Ecuador, Mexico, Paraguay, Venezuela, and Peru. Since then, several herbaria throughout Latin America have expressed their interest in joining, and anyone with collections from this continent is most welcome to contact portal administrators Jésus Hernández and/or Frank Bungartz (CHLAL.help@gmail.com).

Future workshops are already planned for the IAL 9 in Bonito, Brazil, and locally in Caracas, Venezuela, and again at the next GLAL XV in Bariloche, Argentina.

Mark your calendar! We would love to have you participate!

Jésus Hernández, Herbario Nacional de Venezuela
and Frank Bungartz, Arizona State University

XVI MEETING OF THE LATIN AMERICAN GROUP OF LICHENOLOGISTS (GLAL XIV) AND THE III NATIONAL LICHENOLOGY CONGRESS OF PERU

From September 16th to the 21st, 2019, the *Grupo Latinoamericano de Liquenólogos* held its fourteenth Latin American Meeting, GLAL XIV, in the city of Cusco, Peru. This international meeting is also considered the *Third National Lichenological Congress of Peru*. The GLAL meetings take place every two years in different Latin American countries. This year the GLAL XIV was jointly organized by Dr. Maria Encarnación Holgado Rojas, *Universidad Nacional San Antonio del Cusco* (UNSAAC), and Biol. Angel Ramirez, *National Peruvian Museum of Natural History, Lima*.

Participants enjoyed a beautiful setting in the auditorium of a former Jesuit Convent in Cusco's historic City Center, the old town which is recognized internationally by the UNESCO as a World Heritage Site.

The GLAL is a group of Latin American lichenologists founded in October, 1994. During the Latin American Botany Congress in Mar del Plata, Argentina, that year, lichenologists met informally at a

roundtable to discuss how to ameliorate challenges that their discipline faced throughout Latin America. This informal meeting is now considered the GLAL I, the founding meeting of our group. It was decided then that Vicente Marcano would be organizing the next GLAL II in Merida, Venezuela. From that date onwards the GLAL has been held, without interruptions, every two years in different cities across Latin America. Presentations are generally in Spanish or Portuguese, less frequently in English.

Thanks to the generous support from many Peruvian sponsors, the GLAL XIV was very well attended. Prior to the meeting, four workshops were held with a total of 90 participants. Overall, more than 200 researchers participated in the general conference, from twelve different countries: Argentina, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Mexico, Paraguay, the US, Venezuela and Peru.

At the conference, 11 keynote talks, 23 general presentations and 21 posters were presented, covering a wide range of topics: taxonomy, biodiversity, ecology, lichens as bioindicators, biotechnology, lichenometry, education and biodeterioration of monuments.

Participants of the conference.

One outstanding event was a podium discussion on "*Biodeterioration of Cultural Heritage Sites*", organized by Biol. Gladys Huallparimachi. At this podium discussion, lichenologists and archaeologists argued about lichen biodeterioration of cultural monuments, and how their impact might best be mitigated without negatively affecting biodiversity. Peru is of course a country with a large number of important cultural heritage sites. At the same time, it is one of the most megadiverse countries on Earth, with a mandate to also protect not only its cultural heritage, but its natural heritage as well. Experts from the podium and members of the audience discussed how challenging it can be to define best practices, given the complexity of the topic. Each cultural heritage site is characterized by its own peculiarities: a unique geography, different environmental and climatic conditions, different life zones with their unique biological diversity, an enormous variety of construction materials available to lichen colonization, etc. One of the most important conclusions was an

emphasis on long-term monitoring. Although lichens undoubtedly deteriorate their stone substrates, many species often persist at these sites for many decades, or even centuries. During that time, thalli may even protect against erosion. Therefore, to objectively assess the damage and develop effective mitigation strategies, it is necessary to first investigate the time scales of weathering and erosion processes. Even if lichens are frequently perceived as disfiguring, these aesthetic considerations are largely a result of cultural prejudice. Preserving cultural heritage sites needs to be balanced against conservation of their biodiversity and only if the time scales at which the processes take place are known, can best mitigation practices be developed.

Overall, the GLAL XIV in Cusco was most certainly a success! The presentations from more than 200 participants included contributions from nearly 100 undergraduate and graduate students. It was a fantastic opportunity to meet other lichenologists from all over Latin America, forming new networks and new collaborations. One of these networks is the *Consorcio de Herbarios de Liquenes en América Latina* (CHLAL, https://lichenportal.org/chlal/). As a result of our workshop (see the next article in this newsletter), nine herbaria with more than 20 researchers have now joined our lichen biodiversity data portal.

Several prizes were awarded at the meeting: one for best lichen photography, one for best poster and one for best oral presentation. As a reward, students received grants to attend the next *National Congress of Lichenology* in Peru, the GLAL XV in San Carlos de Bariloche, Argentina, and the IAL 9 in Bonito, Brazil.

Last but not least: the customary GLAL dinner at the *Tika Sara* restaurant in the city center of Cusco was one of the highlights that we will all long remember. The food was an exquisite gastronomic feast, featuring local and regional delicacies and drinks (Pisco Sour), and of course folkloric music and dances. Thank you so much to the presiding GLAL president, Dr. María Encarnación Holgado, for this wonderful conclusion of this event!

At the closing ceremony, Dr. Holgado passed her presidency of the organizing committee for the next GLAL to Dr. Alfredo Passo, *Instituto de Investigación en Biodiversidad y Medio Ambiente*, Argentina. Alfredo and his team will be organizing the 2021 GLAL XV in Bariloche, Argentina. The organizing committee also decided that the GLAL XVI in 2023 will be held in Yucatán, Mexico, hosted by Dr. Maria de los Angeles Herrera-Campos and her group of lichenologists from the *Universidad Nacional Autonoma de México*.

Needless to say: You are all invited!

See you at the GLAL XV in Bariloche!

Jésus E. Hernández M., Instituto Experimental Jardín Botánico, Universidad Central de Venezuela, Caracas, Venezuela.

María Encarnación Holgado Rojas, Universidad Nacional de San Antonio Abad del Cusco

Gladys Huallparimachi Quispe, Parque Arqueológico Nacional de Machu Picchu, Dirección Desconcentrada de Cultura Cusco, Ministerio de Cultura Perú.

THE 32ND MEETING OF THE ITALIAN LICHEN SOCIETY (SLI)

The 32nd meeting of the Italian Lichen Society (SLI) took place September 18-20, 2019. The meeting took place in Bologna, the Italian city known as the home of the oldest public university in the world, the Alma Mater Studiorum-Università di Bologna. The conference was organized in the main building of the Botanic Garden of the University and included three main sessions focused on Ecology and Biodiversity, Biomonitoring and Biology and Ecophysiology of lichens. The Society enjoyed the company of invited speaker Martin Grube, and about 70 other registered participants (including students).

Participants of the 32nd meeting of the Italian Lichen Society, Bologna 2019, at the entrance of the main building of the Botanic Garden of the University of Bologna (*Photo: Domenico Puntillo*).

The meeting also included a session of 'mini-seminars' dedicated to master and graduated students approaching lichenology. These min-seminars treated general topics in lichenology, ranging from biodiversity and ecological studies, to genetic analyses and cultures of lichen holobiomes.

Several members also attended the post-conference excursion to the Parco dei Gessi Bolognesi e Calanchi dell'Abbadessa (just a few kilometres from downtown), where rich saxicolous lichen communities colonize extensive gypsum outcrops.

The directive committee, elected in 2017 and in charge through 2020, was represented by President Sonia Ravera, Secretary Sergio Favero Longo, and three other members, Renato Benesperi, Paolo Giordani and Lucia Muggia.

Lichenological excursion to the 'Parco dei Gessi Bolognesi e Calanchi dell'Abbadessa': Prof. Pierluigi Nimis is shown here teaching students about the diversity of lichens on gypsum outcrops (*Photo Gabriele Gheza*).

Lucia Muggia

WORKSHOP ON CONSERVATION ASSESSMENT OF LICHEN SPECIES PREFERRED IN TRADE AS PER IUCN GUIDELINES, INDIA

The workshop was held at CSIR-National Botanical Research Institute (CSIR-NBRI), Lucknow in collaboration with the Indian Lichenological Society on 11th July 2019. This workshop was an initiative to provide strategic guidance for information collection and to assess the conservation status of economically important lichen species under the supervision of specialists. A total of nine species were evaluated - *Everniastrum cirrhatum* (Fr.) Hale ex Sipman, *E. nepalense* (Taylor) Hale ex Sipman, *Parmotrema reticulatum* (Taylor) M. Choisy, and *P. melanothrix* (Mont.) Hale were categorised as near threatened while *P. hababianum* (Gyeln.) Hale, *Heterodermia diademata* (Taylor) D.D. Awasthi, *Ramalina conduplicans* Vain., *Usnea orientalis* Motyka, and *U. thomsonii* Stirton were treated as least concern. The evaluation process was carried out by Drs. G.P. Sinha (Botanical Survey of India, Allahabad), D.K. Upreti, Sanjeeva Nayaka, Siljo Joseph (CSIR-National Botanical Research Institute, Lucknow), and Himanshu Rai (Banaras Hindu University, Varanasi). All the data collection and taxon sheet compilation was done by Ms Sahaj Kaur, which is also a part of her Ph.D. dissertation at TERI School of Advanced Studies, New Delhi. The Research Scholars of the Lichenology Laboratory, CSIR-NBRI also took part in the workshop.

Sanjeeva Nayaka

WORKSHOP ON IDENTIFICATION, BIOPROSPECTING AND CONSERVATION OF LICHENS

The workshop was held at the Department of Botany, Bharathiar University, Coimbatore during 12 – 13th September 2019, in collaboration with CSIR-NBRI, Lucknow and the Indian Lichenological Society. The event was funded by Bharathiar University; National Biodiversity Authority, Chennai; Indian National Science Academy, New Delhi; University Grant Commission – Special Assistance Programme; and Tamil Nadu State Council for Science and Technology, Chennai. The purpose of this workshop was to introduce lichens to enthusiastic students and train budding Indian lichenologists. About 100 candidates from all over the country participated in the workshop. Drs. D.K. Upreti, Sanjeeva Nayaka, Gaurav K. Mishra (CSIR-NBRI, Lucknow); N. Raaman (University of Madras, Chennai); P. Ponmurugan (Bharathiar University, Coimbatore); Jayashree Rout (Assam University, Silchar); and G. Ayyappadasan (KSR College of Technology, Tiruchengode) took part in the workshop as resource persons. The following topics were discussed – An Overview of Lichens; Lichen Systematics; Collection, identification and Preservation; Conservation; Isolation of Phycobionts and Mycobionts; Bioinformatics; and Ecology and Phytogeography. The lichen samples were collected from a nearby forested area of the Marudhamalai hills, after which they were brought to the laboratory, where identification and preservation techniques were demonstrated. The practical session also included a demonstration of symbiont isolation and culture. The workshop also included Drs. A. Rajendran, Professor and Head, Department of Botany; Prof. K. Murugan, Registrar; Prof. Parimelazhagan Thangaraj; and other faculty members of Bharathiar University as guests and special invitees. The whole event was convened by Dr. P. Ponmurugan, while Dr. P. Gurusaravanan acted as the Organizing Secretary.

Photograph of the participants of lichen workshop held at Bharathiar University Coimbatore (*Photo: P. Ponmurugan*).

Sanjeeva Nayaka

FIELD-BASED HANDS-ON TRAINING ON LICHEN SYSTEMATICS

The workshop was organized by the Indian Lichenological Society at Strabo Pixel Club, Sattal (Nainital) during 28th September - 5th October 2019, in collaboration with CSIR-NBRI and the Society of Pollution and Environmental Conservation Scientists, Dehradun. The event was partially funded by Council of Science and Industrial Research, New Delhi and the National Biodiversity

Authority, Chennai and Uttarkhand Council of Science and Technology, Dehradun. Prof. S.K. Barik, Director, CSIR-NBRI, inaugurated the workshop. September 28th was Dr. D.D. Awasthi's birthday, and Dr. D.K. Upreti paid tribute to him.

The workshop included lectures, practicals, project development, and presentations by the participants. A total of 19 participants from all over the country participated in the workshop. For proper execution of the training, a total of five teams were formed, and these teams were named after well-known lichenologists of the country and world such as – Drs. D.D. Awasthi, Ajay Singh, P.G. Patwardhan, D.L. Hawksworth and T.H. Lumbsch. The lichens were collected from a nearby forest by the participants for the purpose of identification training. Drs. D.K. Upreti, S. Nayaka, R. Bajpai, S. Joshi, G.K. Mishra, S. Joseph, S. Upadhyay and K.K. Ingle served as resource persons. The research scholars of the Lichenology Laboratory, CSIR-NBRI, helped organize the workshop. Topics such as general lichen biology, diversity, distribution and biogeography, classification, techniques in identification, molecular methods, biodeterioration, biomonitoring, climate change, bioprospecting, GIS techniques were all discussed in detail. Hands-on training for identification of lichen groups such as crustose, foliose and fruticose in general--but in particular parmelioid, physcioid, cyanolichens, pyrenocapous, Arthoniales, Teloschistaceae, Graphidaceae, and Thelotremataceae lichens--were provided. The identification procedure included the study of lichen material under microscope, colour spot tests, and thin layer chromatography. The participants were also given guidelines for writing research articles and project proposals focusing on lichens.

At the end of the workshop Mr. Sanjiv Chaturvedi, Director, Forestry Training Institute, Haldwani and Prof. Lalit Tewari, Kumaun University, Nainital were invited as guests for the valedictory function. The certificates, prizes and token of appreciation were distributed to participants under various categories such as Best Participants (Drs. Shah Dharmendra Govindlal, Anil Kumar A.K. and Ms. Aswathi Anilkumar) and Best Team (Dr. Ajay Singh).

Photograph of lichen systematics workshop held at Sattal, Nainital (*Photo: Hemant Bishnoi*).

Sanjeeva Nayaka

PERSONALIA

NEW IAL MEMBERS

Tânia Keiko Shishido Joutsen, Postdoctoral researcher interested to use multi-omics tools to study lichen natural products. Institute of Biotechnology, University of Helsinki, Finland, *tania.shishido@helsinki.fi*

Klara Scharnagl, Postdoctoral Scientist, The Sainsbury Laboratory, *klara.scharnagl@gmail.com*

Research interests: ecology of lichens, mechanisms of the lichen symbiosis.

Felix Grewe, The Field Museum, *fgrewe@fieldmuseum.org*, website: http://www.felixgrewe.de/

Magdalena Kosecka, PhD student at Laboratory of Lichenology and Experimental Mycology at Department of Plant Taxonomy and Nature Conservation, Faculty of Biology, University of Gdańsk,Wita Stwosza 59, 80-308 Gdańsk, Poland, *magdalena.kosecka@phdstud.ug.edu.pl*

Santosh K. Upadhyay, Assistant Professor (Sr. Scale), Department of Biotechnology, Kumaun University, Bhimtal Campus, Bhimtal (Uttarakhand), India-263136, *upadhyaysk97@gmail.com*. Dr. Santosh Upadhyay is a researcher working at Kumaun University-Nainital (INDIA) on 'Molecular approaches for understanding Biodiversity and Diseases'. His research group at Kumaun University has adopted various molecular techniques for identification of ethno-medicinally important plants (including 'Lichens') and characterization of their medicinal potential; those include 'DNA-barcoding' of diverse plant groups, as well as development of pathway-specific reporter systems for characterization of medicinal potential of phyto-preparations, among others.

Chiara Tonon, PhD student of the University of Turin, Department of Life Science and System Biology, viale Mattioli 25, 10125 Torino (Italy). Office telephone number: +39 011 670 5972, *chiara.tonon@unito.it*

Lucie Vančurová, Charles University, Faculty of Science, Department of Botany, Benátská 2, 128 01 Prague 2, Czech Republic, *lucie.vancurova@natur.cuni.cz*, research interests: ecology and diversity of lichen phycobionts.

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Rhonda Kotelko is an independent researcher examining lichen diversity in the Yukon, Canada. *rkotelko@hotmail.com*

LIST OF SOCIETIES

Australasia: Australasian Association for Lichenology. Info: W.M. Malcolm, Box 320, Nelson, New Zealand 7040. Phone: (+64) 3-545-1660, e-mail: *nancym@clear.net.nz*
Journal: *Australasian Lichenology*, web-page: http://nhm2.uio.no/botanisk/lav/RLL/AL/

Brazil: Grupo Brasileiro de Liquenólogos (GBL). Info: Marcelo P. Marcelli, Instituto de Botânica, Seção de Micologia e Liquenologia, Caixa Postal 4005, São Paulo – SP, Brazil 01061-970. Fax: (+55)-11-6191-2238, phone: (+55)-11-5584-6304 (institute), 218-5209 (home), e-mail: *mpmarcelli@msn.com*

Central Europe: Bryologisch-lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM). Contact: Volker John, Pfalzmuseum für Naturkunde, Hermann-Schäfer-Straße 17, D-67098 Bad Dürkheim, Germany, e-mail: *V.John@pfalzmuseum.bv-pfalz.de*, web-page: http://blam-bl.de/
Journals: *Herzogia, Herzogiella*, web-page: http://www.blam-hp.eu/herzogia.html

Colombia: Grupo Colombiano de Liquenología (GCOL). Info: Bibiana Moncada. E-mail: *bibianamoncada@gmail.com*; web page: http://grupocolombianodeliquenologia.blogspot.com/

Czech Republic: Bryological and Lichenological Section of the Czech Botanical Society. Chairperson: Svatava Kubešová, e-mail: *svata.kubesova@gmail.com*, web-page: http://botanika.bf.jcu.cz/bls/english/index.html
Journal: *Bryonora*, web-page: http://botanika.prf.jcu.cz/BLS/bryonora_en.php

Ecuador: Grupo Ecuatoriano de Liquenología (GEL). Info: Alba Yanez, e-mail: *albayanez8@gmail.com*; web page: http://grupoecuatorianodeliquenologia.blogspot.com/

Estonia: Mycology Society, Estonian Naturalists' Society, Struve 2, Tartu 51003, Estonia, web-page: http://mukoloogiauhing.ut.ee/avaleht (in Estonian). Chairman: Külli Kalamees-Pani, e-mail: *kulli.kalamees-pani@ut.ee*
Journal: *Folia Cryptogamica Estonica*, web page: http://www.ut.ee/ial5/fce/

Finland: Lichen Section, Societas Mycologica Fennica. C/o: Botanical Museum (Lichenology), P.O. Box 7, FI-00014, Helsinki University, Finland. Info: Teuvo Ahti, e-mail: *teuvo.ahti@helsinki.fi*
Journal: *Karstenia*, web-page: http://www.karstenia.fi/index.php

France: Association française de Lichénologie (AFL). Président: Jean-Pierre Gavériaux, e-mail: *jp.gaveriaux@numericable.fr*, web-page: http://www.afl-lichenologie.fr.
Bulletin: *Bulletin d'Informations de l'Association française de lichénologie* (deux Bulletins annuels), web-page: http://www.afl-lichenologie.fr/Afl/Publications_afl.htm

Great Britain: The British Lichen Society (BLS). C/o: Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD,UK. President: Dr. A. Pentecost. Secretary: P.A. Wolseley. For membership go to https://my.britishlichensociety.org.uk/, Society web-page: www.britishlichensociety.org.uk/
Journal: *The Lichenologist* (accessible via Cambridge Core https://www.cambridge.org/core/journals/lichenologist); *British Lichen Society Bulletin*

India: Indian Lichenological Society. Address for correspondence: Lichenology Laboratory; CSIR-National Botanical Research Institute; Rana Pratap Marg, Lucknow-226001, U.P., India. President:

Dr. D.K. Upreti. Secretary: Dr. Sanjeeva Nayaka, e-mail: *indianlichenology@gmail.com*, webpage: http://www.indianlichenology.com

Iran: Lichenology Branch, Iranian Mycology Society, C/o: The Museum of Iranian Lichens. P.O. Box 33535111, Tehran, Iran, Iranian Research Organization for Science and Technology (IROST). Info: Mohammad Sohrabi, e-mail: sohrabi@irost.org

Italy: Società Lichenologica Italiana (SLI). President: Sonia Ravera, via del Labaro 54, I-00188 Roma, e-mail: *presidente@lichenologia.eu*, web-page: http://www.lichenologia.eu/
Journal: *Notiziario della Società Lichenologica Italiana* (in Italian), web-page: http://www.lichenologia.eu/index.php?procedure=pubbl_not

Japan: The Lichenological Society of Japan (LSJ): President: Hiromi Miyawaki, e-mail: miyawakh@cc.saga-u.ac.jp, web-page: http://eng.lichenjapan.jp/
Journal: *Lichen*, web-page http://lichenjapan.jp/?page_id=19
The Japanese Society for Lichenology (JSL). President: Kunio Takahashi, contact email (secretary): *kawahara@kansai-u.ac.jp*, web-page: http://www.lichenology-jp.org/index.php/en/
Journal: *Lichenology*, web-page: http://www.lichenology-jp.org/index.php/en/journal/

The Netherlands: Dutch Bryological & Lichenological Society (Bryologische +Lichenologische Werkgroep, BLWG). Contact: L.B. (Laurens) Sparrius, contact e-mail: *sparrius@blwg.nl*, web-page: http://www.blwg.nl
Journals: *Buxbaumiella* and *Lindbergia*, web-pages: www.buxbaumiella.nl (open access) and www.lindbergia.org (open access)

Nordic Countries: Nordic Lichen Society (Nordisk Lichenologisk Förening, NLF). President: Ave Suija, e-mail: *ave.suija@ut.ee*, web-page: http://nhm2.uio.no/lichens/nordiclichensociety/
Journal: *Graphis Scripta*, web-page: see NLF web page

North America: American Bryological and Lichenological Society, Inc. (ABLS). President: Catherine LaFarge, contact e-mail: *clafarge@ualberta.ca*, web-page: http://www.abls.org/
Journals: *Evansia*, web-page: http://www.bioone.org/loi/evia; and *The Bryologist*, web-page: http://www.bioone.org/loi/bryo

North America, Northwest: Northwest Lichenologists (NWL). Info: Bruce McCune, contact e-mail: *bruce@salal.us*, web-page: http://www.nwlichens.org
Newsletter: *Northwest Lichenologists Newsletter*, web-page: http://www.nwlichens.org

North America, California: The California Lichen Society (CALS). President:, contact e-mail: *president@californialichens.org*, web-page: http://californialichens.org/
Bulletin: *Bulletin of the California Lichen Society*, web-page: http://californialichens.org/?page_id=15

North America, East: Eastern Lichen Network. Info: Marian Glenn, e-mail: *glennmar@shu.edu*, web-page: http://www.nybg.org/bsci/lichens/eln/

Poland: Lichenological Section of the Polish Botanical Society (Polskie Towarzystwo Botaniczne). President: Beata Krzewicka, W. Szafer Institute of Botany Polish Academy of Sciences, Lubicz 46, PL 31-512 Kraków, Poland, b.krzewicka@botany.pl,web-page: http://www.porosty.varts.pl/

Slovakia: Slovak Botanical Society – Lichenological Working Group, c/o Institute of Botany, Slovak Academy of Sciences, Dúbravská cesta 9, 841 01, Bratislava 4, Slovakia. Info: Alica Košuthová, e-mail: *alica.kosuthova@savba.sk*, web-page: http://sbs.sav.sk/
Journal: *Bulletin Slovenskej botanickej spoločnosti*, web-page: http://sbs.sav.sk/SBS1/content.html; http://ibot.sav.sk/lichens/

South America: Grupo Latino Americano de Liquenólogos (GLAL). Info: Susana Calvelo, e-mail: *scalvelo@crub.uncoma.edu.ar*
Journal: *GLALIA*, web-page http://nhm2.uio.no/botanisk/lav/RLL/GLALIA/

Spain: Sociedad Española de Liquenologia (SEL). President: Isabel Martínez, e-mail: *isabel.martinez@urjc.es*, secretary: Sergio Pérez-Ortega, e-mail: *sperezortega@rjb.csic.es*, web-page: http://www.ucm.es/info/seliquen/
Journal: *Clementeana*, web-page: http://www.ucm.es/info/seliquen/cl.htm

Sweden: Svensk Lichenologisk Förening (SLF). President: Martin Westberg, e-mail: *martin.westberg@nrm.se*, web-page: http://www.sbf.c.se/slf/
Bulletin: *Lavbulletin*, web-page: http://www.sbf.c.se/slf/Bulletinen.html; see also *Svensk Botanisk Tidskrift*, web-page: http://www.sbf.c.se/index.php?id=122

Switzerland: Swiss Association of Bryology and Lichenology (BRYOLICH). President: Ariel Bergamini, e-mail: *praesidium@bryolich.ch*, web-page: http://www.bryolich.ch/index_en.html
Journal: *Meylania*, web-page: http://www.bryolich.ch/meylania/meylania_en.html

Venezuela: Grupo Venezolano de Liquenólogos (GVL). Info: Jesús Hernandez, e-mail: *Jeshernandezm@gmail.com*, web-page: www.bit.ly/lqvzla

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The cover-page illustration

Carbacanthographis chionophora (Redinger) Staiger & Kalb, (*Ascomycota: Ostropales: Graphidaceae*) from Brazil (*Photo: Adriano A. Spielmann*).