

INTERNATIONAL LICHENOLOGICAL NEWSLETTER

Vol. 58, no. 1, July 2025

Official publication of the
International Association for Lichenology



Editor:

BEATA GUZOW-KRZEMIŃSKA

University of Gdańsk, Wita Stwosza 59, 80-308 Gdańsk, Poland

Email: beata.guzow-krzeminska@ug.edu.pl, phone: +48 58 523 6162

Editorial Board:

WILLIAM B. SANDERS

Department of Biological Sciences, Florida Gulf Coast University, Ft. Myers, FL 33965-6565 USA

Email: wsanders@fgcu.edu

ISSN: 0731 2830

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

INTERNATIONAL ASSOCIATION FOR LICHENOLOGY

The **International Association for Lichenology (IAL)** promotes the study and conservation of lichens. It organizes symposia, field trips, and distributes a biannual newsletter. The activity of IAL can be followed on several social media platforms: [IAL YouTube channel](#), [IAL Facebook page](#), [IAL X account](#). People wishing to renew their membership or become members of IAL are requested to pay their membership fee (one payment of 30 EUR for 2021-2026) using PayPal or by bank transfer. All details available at <http://www.ial-lichenology.org/>.

The **International Lichenological Newsletter** is the official publication of IAL. It is issued twice a year (July and December) in English. Previously published newsletters are available at <https://ial-lichenology.org/newsletters/>. 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.

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 virtual IAL9 Symposium (Bonito, Brazil, 2021) are listed below, and will serve until 2026.

IAL COUNCIL 2021-2026

President: François Lutzoni, Department of Biology, Box 90338, Duke University, Durham, NC 27708, USA. Email: francois.lutzoni@duke.edu

Vice President: Marcela Eugenia da Silva Cáceres, Departamento de Biociências, Universidade Federal de Sergipe, Av. Vereador Olímpio Grande, s/n, 49500-000, Itabaiana-SE, Brasil. Email: mscaceres@hotmail.com

Secretary: Lucia Muggia, Department of Life Sciences, University of Trieste, via L. Giorgieri 10, 34127 Trieste, Italy. Email: lucia_muggia@hotmail.com; lmuggia@units.it

Treasurer: Andreas Beck, Botanische Staatssammlung München, Department of Lichenology and Bryology, Menzinger Str. 67, D-80638 München, Germany. Email: beck@snsb.de

Assistant Treasurer: Imke Schmitt, Senckenberg Biodiversity and Climate Research Centre, Senckenberganlage 25, 60325 Frankfurt/Main, Germany. Email: imke.schmitt@senckenberg.de

Editor: Beata Guzow-Krzemińska, University of Gdańsk, Department of Plant Taxonomy and Nature Conservation, Wita Stwosza 59, 80-308 Gdańsk, Poland. E-mail: beata.guzow-krzeminska@ug.edu.pl

Members-at-Large: Jessica Allen, Lead Mycologist, NatureServe, Arlington, VA, USA. Jessica.allen@natureserve.org – Cécile Gueidan, Australian National Herbarium, National Research Collections Australia - CSIRO, GPO Box 1700, Canberra ACT 2601, Australia. Cecile.Gueidan@csiro.au – Silvana Munzi, Centro Interuniversitário de História das Ciências e da Tecnologia, Faculdade de Ciências, Universidade de Lisboa, Campo Grande, 1749-016 Lisbon, Portugal. Email: ssmunzi@fc.ul.pt

Webmaster: Silvana Munzi, Centro Interuniversitário de História das Ciências e da Tecnologia, Faculdade de Ciências, Universidade de Lisboa, Campo Grande, 1749-016 Lisbon, Portugal. Email: ssmunzi@fc.ul.pt

ASSOCIATION NEWS

LETTER FROM THE PRESIDENT

Dear IAL members and friends,

It is hard to believe, but about four years have passed since IAL9. This means that this month we will cross the one-year mark until the opening ceremony of IAL10 in Trieste, Italy (<https://ial10.units.it/>). The Organizing Committee, led by Lucia Muggia (President of the Local Organizing Committee) and Mauro Tretiach (Vice President), as well as the IAL Council have been busy building momentum in preparation for IAL10. However, the success of the IAL10 Congress relies heavily on the participation of all its members. I want to thank everyone who took the time to propose symposia, workshops, fieldtrips and other activities for IAL10. The Organizing Committee will soon provide feedback and further information to those who submitted these proposals.

As you will see in this issue of the ILN, there are many ways in which you can contribute to the success of our society and IAL10:

- Nominate a member of the IAL for the election of Council Officers, Auditors, and the Nominating Committee. Instructions on how to submit your nomination is included in this issue of the ILN. <https://ial-lichenology.org/governance/>
- Nominate a member of the IAL for one of the awards that will be given during IAL10. Instructions on how to submit your nomination is included in this issue of the ILN. <https://ial-lichenology.org/awards/>
- Submit a proposal to host the next IAL congress (IAL11), which is likely to take place in 2029 (see article in this issue of the ILN).
- Encourage lichenologists to consider attending IAL10 and participating with a talk or a poster, for example. This is a good time to start thinking about how to fund the cost associated with this important event.
- Etc.

It is important to act soon, because deadlines are approaching quickly.

A few last words to report that as of July 1, 2025, our society includes 354 members. This is a kind reminder that there will be a major discount for the registration fee for IAL10 (Trieste) for current members of the IAL. Therefore, if you are not a member of the IAL, or if you know someone who is not currently a member of IAL, now would be a good time to become a member. This can be easily done on the IAL website: <https://ial-lichenology.org/membership/>. The membership fee is 30.00 EUR, and covers the entire period between two IAL meetings (i.e., currently, until IAL10, inclusively). Please note that if you would like to pay for the membership of someone other than you, this is possible through the same link. Make sure you indicate for whom you are paying, and preferably, indicate the email address of this new member. Thank you!

Warm regards,

François Lutzoni, Durham, North Carolina

IAL10 ORGANIZATION UPDATES

On July 26–31, 2026, the 10th International Symposium of the International Association for Lichenology, IAL10, will be held in Trieste, Italy, at the University of Trieste. The promoter is the Società Lichenologica Italiana (SLI), together with the group of lichenologists working at the University of Trieste, representing the local organizing committee. The IAL10 will be attended by lichenologists from all over the world and will host symposia addressing a wide array of topics concerning the lichen symbiosis, such as the taxonomy, ecology, and genetics of lichens and of their associated microorganisms, but also their biodiversity and conservation, their ecophysiology, and their relevance to environmental biomonitoring and cultural heritage preservation.

The call for symposium proposals succeeded in gathering over 20 proposals that will be evaluated by the Scientific Committee. **Starting from the 1st September 2025, the scientific program will be published on the congress webpage and abstract submission and registration will open.**

Considering the international nature and the great opportunity IAL10 will provide, we would like to encourage early career scientists, master's and PhD students from all over the world to attend this event, with special attention to those from developing/low-income countries. Therefore, we kindly ask all national associations of lichenologists to support the above-mentioned early career scientists who are going to present their scientific contribution by offering them travel grants/awards or grants to cover the congress fee.

The Organizing Committee will open a call for travel grants and congress registration on 1st September specifically dedicated to early career scientists, master's and PhD students from developing/low-income countries.

The national lichen societies, which will provide support for IAL10 participation, will be acknowledged with their logo on the web page of the Conference (<https://www.ial10.units.it>).

We look forward to your participation and your support for a successful international scientific event.

Do not hesitate to contact Lucia Muggia (President of the IAL10 and Secretary of the IAL; lucia_muggia@hotmail.com; lmuggia@units.it) if you have any questions.

On behalf of the IAL10 Organizing Committee,

Yours sincerely,

Lucia Muggia

ANNOUNCEMENT FROM THE NOMINATION COMMITTEE

The 10th international meeting in Trieste is quickly approaching, and the time has come to think about the election of a new IAL council. We are calling for nominations for IAL council officers –President, Vice-President, Secretary, Treasurer, Assistant Treasurer, Editor, and three Council Members at Large. According to the IAL constitution, any member of the IAL may submit nominations or be nominated. Nominations, to be valid, need the written consent of the nominee and must include short description of the background and rationale what this candidate may bring to the organisation in this position. The deadline for submissions is May 1st, 2026 and should be send to e-mail: ave.suija@ut.ee.

Hence, we are waiting for your proposals!

*Troy McMullin (tmcmullin@nature.ca),
Manuela Dal Forno (mdalforno@brit.org)
and Ave Suija (ave.suija@ut.ee)*

REMINDER – CALL FOR NOMINATIONS FOR IAL10 AWARDS

As we look ahead to the 10th Symposium of the International Association for Lichenology (IAL10), to be held in Trieste, Italy, from July 26–31, 2026 (<https://ial10.units.it/>), we remind the lichenological community that nominations for the IAL10 Awards are open. These awards recognize outstanding contributions across all career stages, from emerging researchers to those whose work has had a profound and lasting impact on the field.

We warmly encourage all IAL members to nominate individuals whose work exemplifies excellence in lichenology and who deserve recognition for their scientific, educational, or community-building efforts. Please review the award descriptions and nomination requirements below:

1. Acharius Medal

This award honors the lifelong achievements of outstanding lichenologists. Established in 1992, it is granted to one or more recipients. Nominations must include an email from two nominators and the CV of the nominee.

2. Dharani Awasthi Award

This award is aimed at young researchers residing in low-income countries who have completed their PhD within five years before the nomination deadline (January 31, 2026). Nominations must include a CV, a copy of a document showing the date the PhD was obtained, and two letters of support.

3. Mason Hale Award

This award recognizes excellence in research by young lichenologists for work resulting from doctoral theses or similar studies. Only graduate students who defended their dissertation between February 1, 2024, and January 31, 2026 (inclusively) are eligible. Nominations must include a letter of justification, a PDF of the dissertation (or a link to a Dropbox account or similar, where the document is stored), a CV, and a copy of a document showing the date when the PhD was obtained.

4. Aino Henssen Award

This award is for emerging researchers who have completed their PhD within five years before the submission deadline. Nominations must include a letter of justification, a CV, a copy of a document showing the date the PhD was obtained, and two letters of support.

5. Sylvia Sharnoff Education Award

This award recognizes outstanding educational websites devoted to lichens, prepared by students or educational institutions at any level. The site may be in any language and can include any aspect of lichen biology used in an educational program. Nominations must include the website link and a justification explaining why the site deserves recognition.

Nominations must be submitted by someone other than the nominee and should include all required documents specified for each award, accompanied by a detailed justification from the nominator. Both the nominee and the nominator must be members of the IAL.

The deadline for submitting nominations is **January 31, 2026**. All nominations must be submitted by email to **Julietta Orlando** (jorlando@uchile.cl) and **Marcela Caceres** (mscaceres@hotmail.com) simultaneously. The email subject line should state "**IAL Award Nomination**".

For more information about awards and previous recipients, visit: <https://ial-lichenology.org/awards/>.

Let's take this opportunity to celebrate the exceptional people who are advancing the field of lichenology around the world.

IAL Awards Nomination Committee

INVITATION FOR PROPOSALS TO HOST THE NEXT IAL CONFERENCE (IAL11)

The IAL Council herewith invites proposals for hosting the IAL11 Conference, which we propose should take place in 2029.

Because of the pandemic, many scientific societies had to shift their conferences by one or two years. The IAL is no exception. By 2029, we will have met only twice since IAL8 in Finland in 2016. with meetings 5 years apart (IAL9 in 2021, which was virtual only, and IAL10 to be held in 2026). To return to the usual 4-year schedule as stipulated in the IAL constitution, and to be in regular alternation with the International Mycological Congress (IMC, which is also usually occurring every four years), the IAL Council proposes to schedule IAL11 in 2029. The resulting three-year cycle is transitional and would immediately realign the IAL conferences to the usual, pre-pandemic, four-year meeting schedule in alternance with the IMC every two years. The only difference is that we would be meeting on odd years instead of even years.

This is how this would unfold:

IMC12: 2024 The Netherlands

IAL10: 2026 Italy

IMC13: 2027 South Korea

IAL11: 2029

IMC14: 2031

IAL12: 2033

IMC15: 2035

The formal decision on when to schedule IAL11 will be taken at the general meeting to be held at IAL10 (July 26-31, 2026) in Trieste, which is also when IAL members will vote on which country will host IAL11.

Proposals to host IAL11 should be sent to the IAL president François Lutzoni (francois.lutzoni@duke.edu) 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 be sent before February 28, 2026.

Countries hosting IAL Conferences so far are:

IAL10 – Italy (Trieste) 2026 - forthcoming

IAL9 – Brazil (Bonito) 2021

IAL8 – Finland (Helsinki) 2016

IAL7 – Thailand (Bangkok) 2012

IAL6 – USA (Asilomar) 2008

IAL5 – Estonia (Tartu) 2004

IAL4 – Spain (Barcelona) 2000

IAL3 – Austria (Salzburg) 1996

IAL2 – Sweden (Båstad) 1992

IAL1 – Germany (Münster) 1986.

François Lutzoni, IAL President

NEWS

EAGLE HILL INSTITUTE'S 2025 LICHENS AND RELATED SEMINARS

Eagle Hill is right on the coast of Eastern Maine, between Acadia National Park and Petit Manan National Wildlife Refuge.

Aug 3–9 • [Lichens, Biofilms, and Stone](#) • Judy Jacob & Michaela Schmull

For general information, the registration form, seminar flyers, and a complete calendar:

<https://eaglehill.us/programs/sems-weeklong/calendar-weeklong.shtml>

If you have any questions about the content of the seminar, please reach out to the seminar instructor(s), whose contact info can be found on the seminar flyer. If a seminar you are interested in is full, and you would like to be put on the waitlist, please fill out the application form.

If you have any questions about registering for the seminar, please contact us at office@eaglehill.us.

NORDIC LICHEN SOCIETY EXCURSION IN FINLAND – PRE-REGISTRATION

The Nordic Lichen Society will organise a lichen excursion in the **Turku area, Finland, from 3–7 October 2025**. The excursion will include field visits to interesting lichenological sites in the area, networking with new and old friends and colleagues, a scientific mini-seminar and the NLS meeting. The event is open to everyone interested in lichens.

The Turku area lies on the southernmost coast of Finland in the hemiboreal zone. We will visit interesting habitats for lichens, including hemiboreal forests, archipelago coastal sites (including calcareous rocks) and cultural sites. The area has a rich lichen flora, and is likely the most species-rich in Finland. During the excursion there will also be an opportunity to visit the Turku herbarium TUR, which houses the legendary Vainio collection.

Please pre-register for the excursion using this link: <https://forms.gle/zkwMchnSpue1GoDe7>

The full registration will start later in the summer when we have the accommodation costs finalised. We have acquired some external funding for the event, but this is unlikely to cover all accommodation and food costs – however, we will try to keep the costs for participants as low as possible.

Preliminary program:

Fri 3.10. arrivals

Sat 4.10. field day 1 + social night

Sun 5.10. field day 2 + seminar

Mon 6.10. field day 3 + NLS meeting

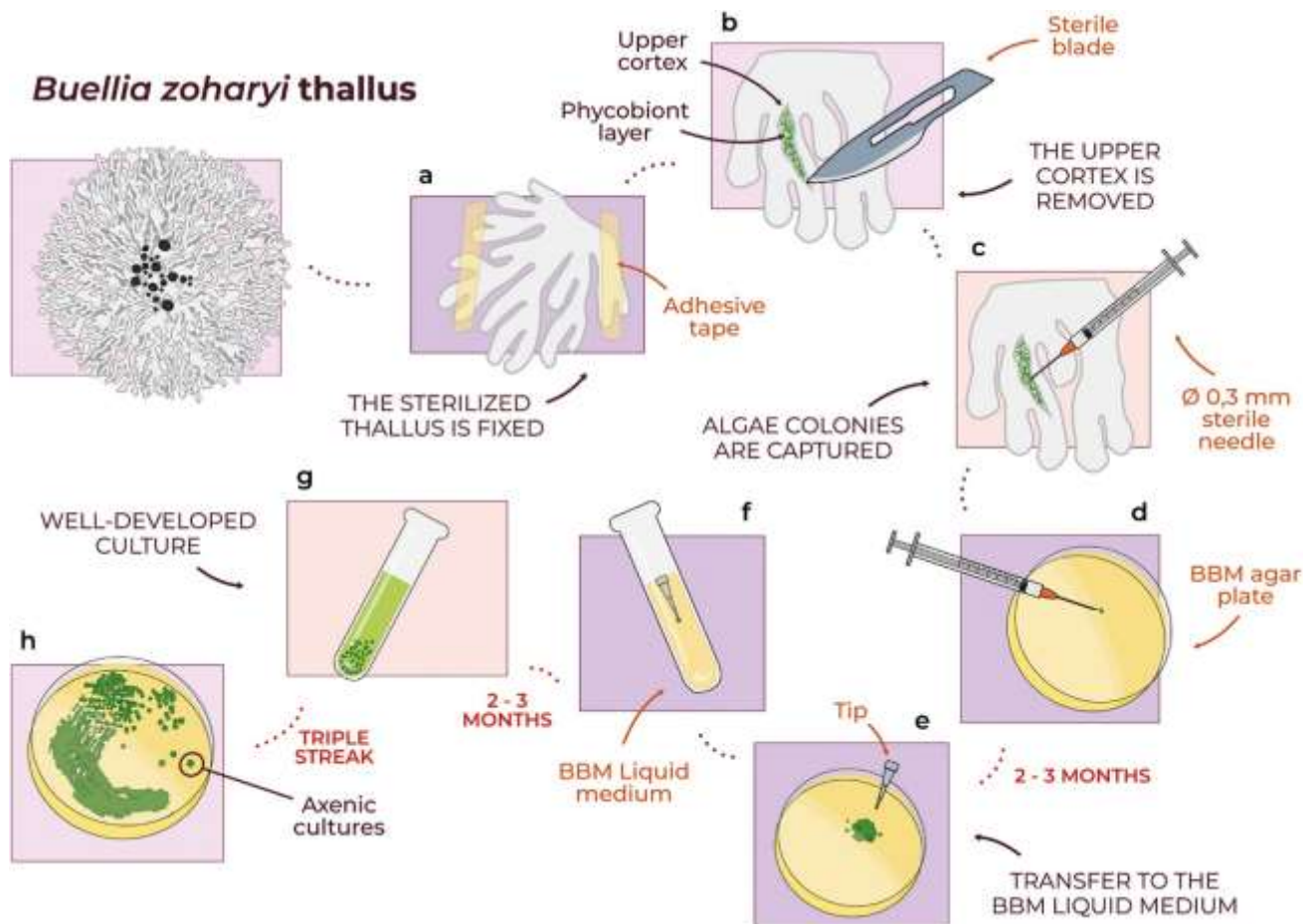
Tue 7.10. departures

For any questions, please be in touch with the organisers: Niko Johansson (niko.johansson@helsinki.fi) or Aleksi Nirhamo (aleksi.nirhamo@uef.fi).

Niko Johansson

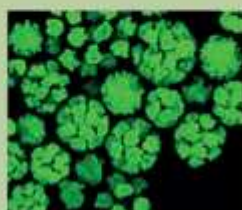
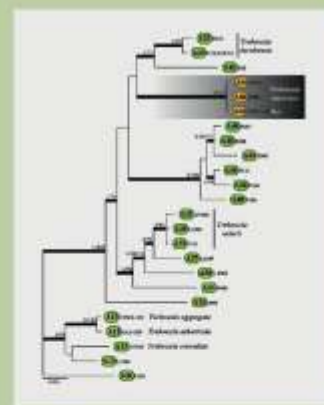
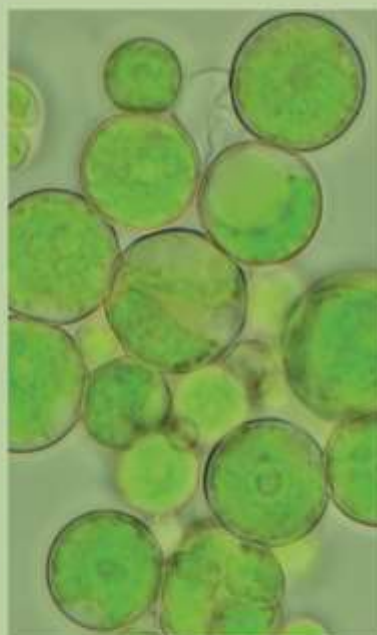
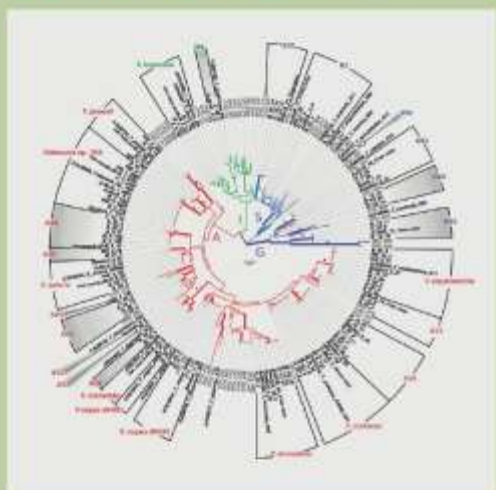
NEWS ABOUT THE SYMBIOTIC ALGAL COLLECTION (ASUV) AT THE UNIVERSITY OF VALENCIA

The Symbiotic Algal Collection (ASUV) of Lichens at the University of Valencia began in 1997. Initially, it was necessary to isolate and grow these organisms in axenic cultures to correctly identify them using phenotypic characteristics (cytology and ultrastructure) and molecular markers (barcoding), which were scarce at the time. This was also necessary in order to experimentally analyze their metabolism (physiology and biochemistry) under controlled conditions. Many taxonomically important strains are held there, including both genuine cultures and newly described species. Currently, these cultures are essential for responding to the challenges posed by massive sequencing techniques (genomics and proteomics) in biodiversity studies, phylogenetic reconstructions, and adaptations to extreme conditions. The ecological and biotechnological importance of these taxa is also emphasized.



From Chiva, Dumitru, Bordenave & Barreno (2021). *Phycological Research* 69(4), 226-236.

It was necessary to collect lichens from various habitats and biogeographical zones, to design original methods for isolation and propagation, and to acquire maintenance and conservation chambers, DNA extraction, and molecular analysis equipment. Lichens were collected in areas with diverse bioclimates and ecosystems, including high mountains, coastlines, forests, and Pacific deserts, with an emphasis on Mediterranean environments. The most densely sampled populations correspond to terricolous, epiphytic, and saxicolous habitats in the United States, Mexico (Mexico City, Baja California, and Oaxaca), Brazil, Argentina, China, Russia, and most of Europe, including the Iberian Peninsula, the Balearic Islands, and the Canary Islands.

A close-up photograph of a tree trunk heavily colonized by various lichens and mosses. The growth is dense and textured, with prominent white, branching lichens (possibly *Cladonia*) and green mosses. The bark of the tree is visible beneath the biological growth.

This collection must be maintained in several ways, including: A) Lichen specimens that allow for the viable isolation of microalgae must be stored as follows: Fresh specimens should be stored at 4°C. They are later stored at -20°C, as DNA degrades under standard herbarium conditions. B) Climate chambers are needed for 'in vitro' growth and propagation. To ensure the standards required for morphological and/or physiological characterisation, periodic recultivation is necessary. C) A laboratory must have equipment and facilities for DNA extractions and storage at -20°C and -80°C, for molecular identification using PCR techniques, and for the observation of samples under the microscope.

The ASUV collection consists of five essential parts: lichens (approximately 2,800 thalli), isolated symbiotic microalgae (410), tubes and plates for isolation and propagation in vitro (number varies depending on experimentation and maintenance), type collections acquired from other collections for standards and comparison, as well as for collaborative exchange with other collections developed by other universities. Additionally, around 2,400 tubes containing DNA extracts are necessary to identify the microalgae and fungi extracted from lichen thalli. Other standard cultures obtained from the algal collections of UTEX (University of Texas), SAG (University of Göttingen) or CCAP (Scottish Association for Marine Science) are also included. Further material are provided by collaboration with other institutions such as ACOI (University of Coimbra), CAUP Culture Collection (Charles University in Prague).

Other institutions and researchers may use the material included in the ASUV collection by means of a signed MATERIAL TRANSFER AGREEMENT, which grants them access to the requested material for the purpose of research collaboration or exchange. The material is not available for purchase at this time. Currently, the curators of the ASUV collection are Salvador Chiva and Patricia Moya.

Funding was obtained from the following competitive research projects: MEC: CICYT PB89-0415, CGL2005-25031-E, and CGL2006-12917-C02-01. MCYT: REN2003-04465/GLO. MINECO: CGL2009-13429-C02-01, CGL2012-40058-C02-01, and CGL2016-79158-P. INIA: DTCP 9134. AECID-PCI: A/5622/06, A/012737/07, A/018322/08, A/024755/09. GVA: PROMETEO/2008/174, PROMETEOII/2013/021, PROMETEO/2013/021, PROMETEO/2017/039, PROMETEO/2021/005, APOSTD/2021/162, "MARGARITA SALAS": MS21-058, "MARÍA ZAMBRANO": ZA21-046, PID2021-127087NB-I00.

Further information:

<https://www.asuvalgae.com/>

<https://doi.org/10.1111/pre.12463>

Barreno E. (2019). Title: Colección de Microalgas Simbiontes de Líquenes-Ficobiontes. In: *"Colecciones de Historia Natural de la Universitat de València"* Anna García-Forner (Ed.) pp. 26-30. Publicaciones de la Universitat de València, ISBN: 978-84-9133-270-1, Depósito legal: V-3551-2019.

https://puv.uv.es/colecciones-de-historia-natural-de-la-universitat-de-valencia.html?store=espanyol&from_store=valencia

<https://trebouxia.net/home>

DOI: <https://doi.org/10.1017/S0024282917000664>

<https://doi.org/10.1371/journal.pone.0175091>

DOI: [10.1111/j.1462-2920.2010.02386.x](https://doi.org/10.1111/j.1462-2920.2010.02386.x)

Eva Barreno

LICHEN MICROALGAE: A GREEN FUTURE FOR LIFE ON MARS

A NOVEL TOPIC FOR ASTROBIOLOGY

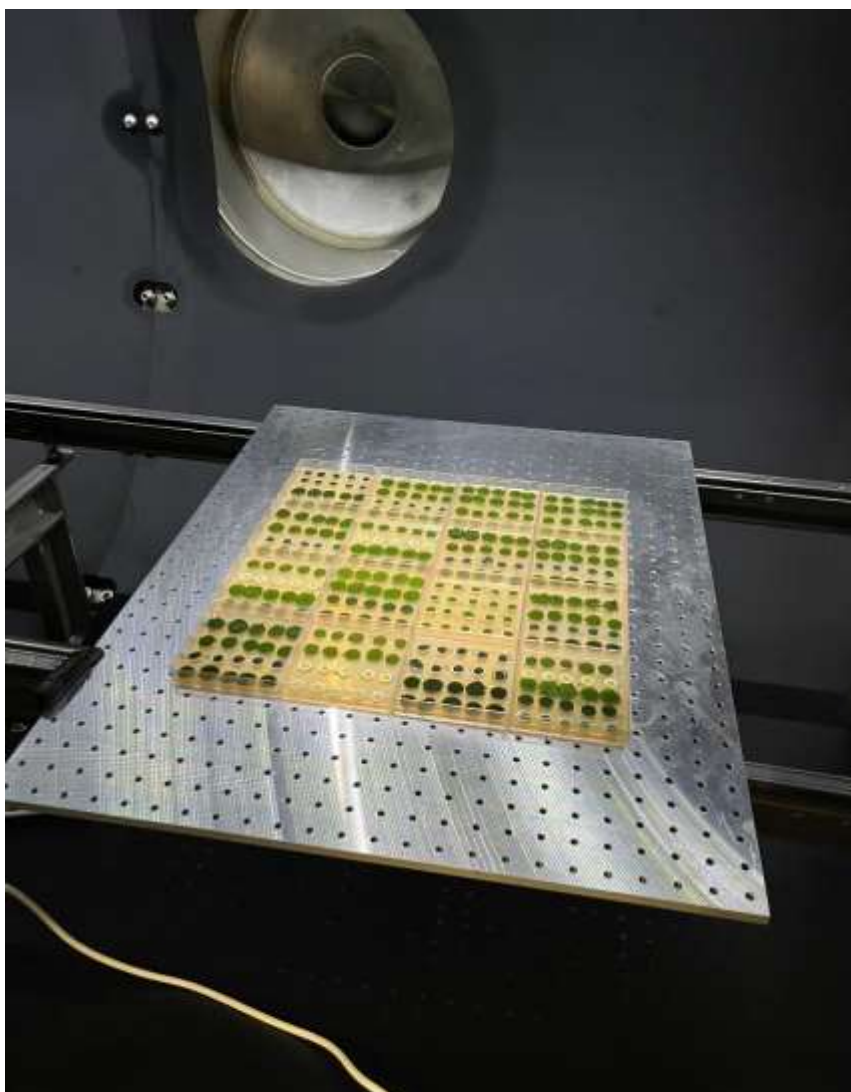
A study by the University of Valencia (UV) has shown that certain types of lichen-symbiont microalgae can survive under conditions similar to those found on the surface of Mars. These species' ability to produce oxygen and nutrients in harsh environments, as well as their significant biotechnological potential, makes them an interesting resource for the food industry, space agriculture, and the development of future human missions to Mars.

The project, named TREBOUXMARS, takes its name from the Trebouxiaceae family of green microalgae, which mostly live in symbiosis with lichens. Funded by the Generalitat Valenciana, the Spanish Ministry of Science, Innovation and Universities, and the European Space Agency (ESA), this work is the result of a collaboration between the SYMBIOGENE and PHOTOBIONTECH research groups at the University of Valencia.

The team has simulated the environmental conditions of the Martian surface in the laboratory, and the results have shown that some of these symbiotic microalgae, once extracted from lichen thalli, can be cultured independently and survive under extremely harsh conditions, including exposure to the environment of space. They are capable of surviving and thriving under Martian conditions and can be used to produce resources to support a human presence on Mars.

TREBOUXMARS now focuses on two key aspects: firstly, the cultivation of these symbiotic microalgae to produce oxygen and nutrients in the most severe environments, with a view to future human missions to Mars; and secondly, the exploration of the biotechnological potential of these species and their possible applications in pharmacology, the food industry or space agriculture.

The microalgae used in the study come from the [Symbiotic Algal Collection of the](#)



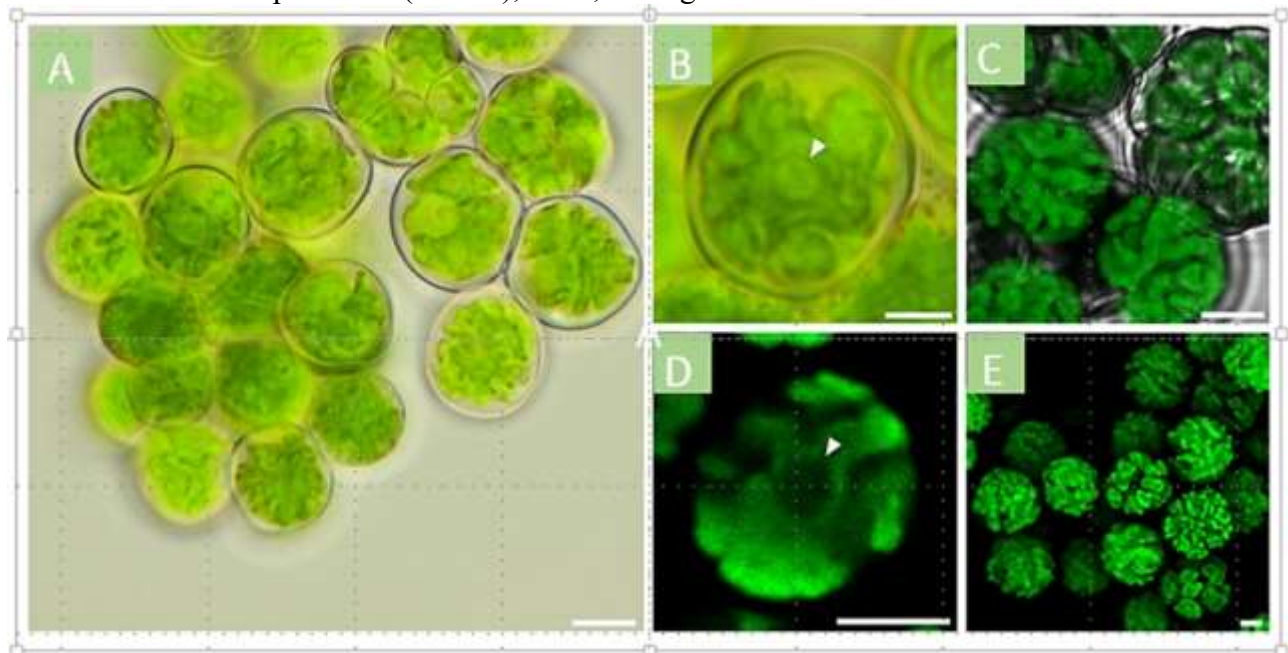
The potential of several Trebouxiphyceae microalgae to withstand, grow, and recover in simulated Mars conditions was analyzed. These conditions include low-pressure atmospheres rich in CO₂, intense UV radiation, freezing temperatures, an absence of organic compounds, high concentrations of iron oxide (Martian regolith), and scarcity of water. These results helped us determine whether microalgal cultures using in situ Martian resources (ISRU) supplemented with a minimum amount of human resources would be feasible. The experiments were conducted by Marta Pérez-Rodrigo and Pedro Carrasco in the Laser Laboratory of the Department of Analytical Chemistry at the University of Málaga in Spain (<https://laser.uma.es/>). The experiments were conducted in the Laser Laboratory of the Department of Analytical Chemistry at the University of Málaga in Spain (<https://laser.uma.es/>) (Photo: Marta Pérez-Rodrigo).

[University of Valencia \(ASUV\)](https://www.asuvalgae.com/), created by the SYMBIOGENE group, which is dedicated to the cultivation and maintenance of microalgae isolated from lichens, using protocols and techniques developed by the research group itself. <https://www.asuvalgae.com/>

“We are talking about organisms with a complex and highly adaptable metabolic repertoire that can be used in a variety of ways, both on and off the planet Earth. We already have a variety of microalgae that can continue to grow after being exposed to extreme environments. We have analysed their metabolomic and transcriptomic responses to different types of environmental stress, and we are now exploring the potential biotechnological applications of this”, explains [Pedro Carrasco](#), professor of Biochemistry and Molecular Biology, researcher at the University Research Institute of Biotechnology and Biomedicine (BIOTECMED) and head of the PHOTOBIONTECH group.

“These eukaryotic, symbiotic cells have unique and novel biological characteristics. For instance, the membranes of their chloroplasts, mitochondria and cytoplasm do not denature and they can recover their original structure and function within a short time. We are studying this feature using cell biology methodologies”, explains [Eva Barreno](#), Emeritus Professor of Botany and head of the SYMBIOGENE group at the Cavanilles Institute of Biodiversity and Evolutionary Biology (ICBIBE) of the University of Valencia.

The study forms part of **Marta Pérez-Rodrigo’s** doctoral thesis, which was co-funded by the ESA (IDEA I-2021-05232) under the framework of the PROMETEO/2021/005 project, GVA. The study has been presented at several scientific meetings, including the 2023 conference of the Italian Lichenological Society (SLI) in Verona, where it was published (https://www.lichenologia.eu/wp-content/uploads/2024/05/Notiziario_2023.pdf). More recently, it was presented at the 2024 Algae Symposium of the Spanish Society of Plant Biology (SEBP) in Barcelona, and at The Fourth Lichen Photobiont Workshop Gdańsk (Poland), 2024, among others.



Morphology of *Trebouxia barrenoae* Pazos, Chiva, Garrido–Benavent et Moya (reference strain: ASUV143) by LM (A, B) and by CSLM (C–E): (A) gross morphology of vegetative cells and autosporangia; (B) morphology of a mature cell, white arrow indicates the pyrenoid; (C) confocal reconstruction of the morphology of autosporangia, immature cells undergoing first chloroplast division and mature cells; (D) morphology of a mature cell and detail of the pyrenoid by CSLM; (E) gross morphology of vegetative cells and autosporangia with cells undergoing first chloroplast division by CLSM. Scale bars 2 μ m (A–F), 5 μ m (G–K). (from *Fottea, Olomouc*, 25(1): 68–80, 2025 DOI: 10.5507/fot.2024.010)

The project has been funded by the Generalitat Valenciana (PROMETEO/2021/005: “Decline of epiphyte lichens and the symbiont microalgae across the Valencia Community: biomonitoring and genomic techniques applied to biodiversity conservation”), the Spanish Ministry of Science and

Innovation (PID2021-127087NB-I00: “Las microalgas verdes verdes simbióticas como factores clave de las respuestas de los líquenes a los cambios ambientales” (Symbiotic green microalgae as key factors in lichen responses to environmental change), and the European Space Agency (IDEA I-2021-05232: “*Trebouxiaceae* as novel candidates to survive in Mars”).

The SYMBIOGENE-GIUV2016-330 group (Symbiosis, Diversity and Evolution in Lichens and Plants: Biotechnology and Innovation) is led by Eva Barreno, and PHOTOBIONTECH-GIUV2016-274 (Biodiversity and Biotechnology of Lichen Microalgae) by Pedro Carrasco.

Further information:

https://www.lichenologia.eu/wp-content/uploads/2024/05/Notiziario_2023.pdf

doi: 10.1017/S0024282917000664

<https://doi.org/10.1371/journal.pone.0175091>

DOI: [10.1111/j.1462-2920.2010.02386.x](https://doi.org/10.1111/j.1462-2920.2010.02386.x)

<https://www.asuvalgae.com/>

<https://doi.org/10.1111/pre.12463>

[Colección de Algas Simbióticas de la Universitat de València \(ASUV\) - MicroBioSpain](#)

Barreno E. (2019). Title: Colección de Microalgas Simbiontes de Líquenes-Ficobiontes. In: “*Colecciones de Historia Natural de la Universitat de València*” Anna García-Forner (Ed.) pp. 26-30. Publicaciones de la Universitat de València, ISBN: 978-84-9133-270-1, Depósito legal: V-3551-2019.

https://puv.uv.es/coleccion-de-historia-natural-de-la-universitat-de-valencia.html?store=espanyol&from_store=valencia

Eva Barreno

REPORTS

INTEGRATIVE TAXONOMY WORKSHOP: CROSSROADS OF GENERATIONS AND METHODS

For decades, members of the French Association of Lichenology (AFL) have been the cornerstone of lichen identification in France, working meticulously behind their binoculars and microscopes. Their



French Association for Lichenology (AFL)



(Photo: Joël Boustie)

At the same time, the advent of molecular tools is transforming our understanding of lichen biodiversity. Since 2021, several AFL members have sent specimens (such as *Parmelia saxatilis* agg.) to the lab in University of Liège (Belgium), puzzled by identifications. In return, they received... phylogenetic trees, which, understandably, are sometimes difficult to interpret!

To bridge this gap, a 3-day workshop on integrative taxonomy was organized in Fontainebleau (near Paris), from May 20 to 22. The training, which combined theoretical modules with practical sessions, was led by Nicolas Magain (Professor) and Elise Lebreton (PhD student) from the University of Liège. The goal: to connect traditional morphology-based approaches with molecular data for an integrative view of taxonomy.

The results included intense exchanges, debates lasting well into the evening, and computers filled with new tools and scripts. But above all, it was a powerful reminder that learning has no age limit. Participants ranged from their 30's to late 70's, all united by a shared curiosity and passion for lichens.

Elise Lebreton

A NEW HOTSPOT FOR THE THREATENED *HETERODERMIA SQUAMULOSA* IN NEW BRUNSWICK, CANADA



In Atlantic Canada, there are several lichens at risk of extinction (species at risk), mostly corticolous taxa that are dependent on old-growth forests in humid, coastal climates. Their legal designation as species at risk has stimulated significant search efforts in Nova Scotia, where many conservation organizations and biologists have worked to better understand the populations, distributions, and threats. In New Brunswick, extensive lichen research has been carried out by lichenologists such as Stephen Clayden and Kendra Driscoll; however, the lichenology community is much smaller in this

province, and in many cases, we still lack data on lichen species at risk. So, in September and October 2024, we spent 18 days searching for new populations of lichen species at risk in New Brunswick, primarily along the Bay of Fundy coastline.

We would like to highlight the discovery of a new hotspot for *Heterodermia squamulosa*, a species that has been assessed as Threatened in Canada. Typically, *H. squamulosa* occurrences consist of very few phorophytes (i.e., host trees). We recorded at least 168 thalli on 33 trees in the old, coastal *Picea rubens* – *Betula alleghaniensis* forests near the mouth of the Quiddy River. This more than doubled the known population in New Brunswick. It is also the third largest hotspot in all of Canada, after Blackadar and Cape Split, which have 198 and 76+ phorophytes, respectively (James Churchill, Lobaria Consulting pers. comm. 2025). It is worth noting that the latter two sites are both in Nova Scotia and have received much more survey effort. There is much more ground to cover at Quiddy River and elsewhere along New Brunswick's Fundy coast. The area is clearly of importance to the conservation of *H. squamulosa* in Canada, and we encourage further search effort.

This project was supported by a grant from the New Brunswick Wildlife Trust Fund, as well as in-kind support from the Atlantic Canada Conservation Data Centre, Fundy National Park, and the Canadian Museum of Nature.



Colin Chapman-Lam, Neil Vinson, and Iain Crowell

NEW BOOKS AND PUBLICATIONS

4793 TAXA AND COUNTING: THE 4TH EDITION OF THE FRENCH LICHEN CATALOGUE RELEASED

As he approaches his 80th birthday, Claude Roux, together with 126 collaborators, has published (14 May 2025) the 4th edition of the *Catalogue of Lichens and Lichenicolous Fungi from France* (2015 pp., 2 volumes).

The catalogue includes:

- 4793 documented taxa, an increase of +316 compared to the 2020 edition.
- 308 species newly reported for France (including 176 lichens and 132 lichenicolous fungi).

The principal author concludes with this question: "Are there still many taxa left to discover in France? Yes, certainly [...] There's no lack of work and discoveries for the next generation of lichenologists!"



Vol.1 : <https://lichenologue.org/fichiers/docs/Tome%201%20CLF4.pdf>

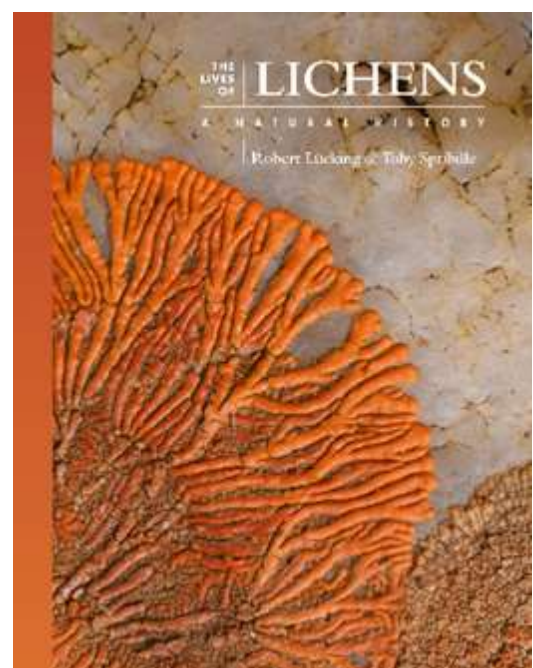
Vol.2 : <https://lichenologue.org/fichiers/docs/Tome%202%20CLF4.pdf>

Elise Lebreton

BOOK REVIEW

Lücking, Robert and Spribille, Toby (2024) The Lives of Lichens: A Natural History. Princeton University Press, Princeton, New Jersey, U.S.A. ISBN: 9780691247274. Published June 4, 2024. 288 pp., Hardcover, US\$35.00/£30.00.

This engaging and visually stunning book, written by Robert Lücking and Toby Spribille, is a standout contribution to the growing body of accessible literature on lichens. Two more expert spokespeople for our field could not be found, and we thank them for bringing our obsession to light for the rest of the world. Designed with the general reader in mind—particularly those curious about nature but new to lichenology—it provides a fresh, jaunty exploration of what lichens are, how they function, and why they deserve our admiration. There are seven sections with interesting, playful names (e.g., “The Archetypal Symbiosis”, “The Players”, “Lichen Architecture” etc.) each comprising short, concise, easily digestible chapters. The text is peppered with treatments of commonly encountered species of interest, e.g. *Cladonia*



crystalloidea, *Graphis scripta*, *Letharia vulpina*, and many others. This book not only brings readers up to speed on current lichenology, but also inspires curiosity about what future research may reveal.

The first section, “The Archetypal Symbiosis”, is a detailed, historical review of the “Lichen Controversy”, i.e., the proposal that lichens are dual organisms. The reader may be familiar with the names of some of the major players, e.g. Hoffmann, as authorities at the ends of specific epithets—but probably did not know they were voices in the Lichen Controversy. The reader will probably also be unaware that the word “symbiosis” was originally coined to describe the lichen relationship. There is much new information here—for example, in the vignette about *Nephroma arcticum*: who knew that tripartite lichens like this one achieve above-average sizes because of their nitrogen-fixing ability? (We didn’t.)

In the “Lichen Biology” section, the authors rightfully emphasize that the photobiont is often the “weak link” when it comes to lichens surviving air pollution. The historical review of lichens as biomonitors of air pollution is thorough, although mention of using twig communities to monitor lichen recovery would have been welcome. The section on using SPRUCE to predict the effects of climate changes on lichens was fascinating.

In “Lichen Architecture”, the authors point out that lichens only achieve their characteristic morphology when the mycobiont and photobiont are growing together—an important detail that some definitions of “lichen” miss. The authors’ comparison between leaf and lichen cross-sections in this section astounded us—we never considered how similar their anatomies are.

The “Evolution and Taxonomy” section is probably the section most readers will eagerly look forward to, and it didn’t disappoint. The section neatly sums up recent molecular phylogenetic studies, sparing the reader from having to read much of the primary literature. The recent segregation of the genus *Cladia*, for example, was news to us. The interesting relationship of Candelariaceae to earth tongues—and the existence of the LLE (Lichinomycetes/Lecanoromycetes/Eurotiomycetes) clade—are exciting epiphanies that will be new to many readers, and warrant further exploration by future workers. The authors’ use of “time trees” (phylogenies calibrated with molecular clocks; e.g. p. 179) in this section is genius, and vividly illustrates what the authors call “saltational evolutionary changes”—another crazy lichen phenomenon of which we (the reviewers) were mostly unaware. The summary diagram of relationships of lichens to non-lichens (p. 170-171) is well done, and should be part of every introductory mycology course. Other very useful diagrams that should be incorporated into introductory mycology courses include the lifecycle and nutrient cycle diagrams in the introductory parts of the book.

The authors’ review of lichen conservation in the “Lichen Ecosystems” section is both timely and melancholy, as it makes clear what little work has been done to conserve lichens compared to plants and animals. And just when we were afraid there would be no mention of lichens used in classic studies of industrial melanism, we find that the authors have tucked it into their review of “urban lichens” towards the end of this section. The review of calicioids as indicators of ecological continuity is also tucked in at the end of this section—the authors use the phrase “the onward march of forestry” (p. 234) to aptly sum up the ongoing threat to our overlooked, Lilliputian pin lichens.

If you thought you knew everything about “Lichens and People”, think again. This section reports many uses of lichens—both indigenous and modern—that had heretofore been lost to the sands of time. It is good to see emerging lichen-artists such as Eileen O’Shea and Nastassja Noelle (both of whom the first reviewer, SLG, follows on Instagram) spotlighted. As queer lichenologists ourselves, we’re not sure the use of “queer” to describe lichens is appropriate—but the discussion is food for thought. Along those lines, this book flirts with anthropomorphization of non-human organisms in the same way that the Radical Mycology movement of the Pacific Northwest does—we reviewers regard this as a slippery slope.

The photographs are fantastic; the detail and depth of each one is spectacular. It is refreshing to see other orange lichens highlighted besides the over-used *Rusavskia parietina*. For example, the spectacular—but little-known—*Stellarangia namibensis* on the cover (also featured in various other places between these covers). One negative is that book is well-indexed for lichenologists, but we think that it has much wider appeal. Navigation would have been considerably enhanced had the Contents at the beginning listed the short essays. The in many ways provocative essay titles—if present in the Contents—would have attracted readers to explore these fascinating accounts to their benefit.

The authors leverage their own unique research foci to good effect in this book. Toby offers a very self-aware reflection on the discovery of yeasts in lichens and their relevance, walking back the original headlines (of popular articles about his work) that all lichens have three partners. Robert brings his knowledge of leaf lichens (something most readers know little about) to good effect, although the discussion of *Racoplaca subtilissima* on p. 226 is difficult to follow. Robert convincingly proposes how foliicolous lichens might become useful model systems for studying the processes of lichenization.

Clearly, the authors are not only knowledgeable about lichens, they also love them—and this winning combination is what hooks the reader. The famous quote by former US President Theodore Roosevelt comes to mind: “No one cares how much you know, until they know how much you care”. Robert and Toby’s expert blend of cutting-edge science, elegant visuals, and inviting style makes this publication an exceptional resource for both beginners as well as professionals—indeed, we guarantee that even the most seasoned of lichenologists will learn something new (or be reminded of lichen facts they’d forgotten). If you haven’t already done so, buy this book today. And better yet, buy it for your natural history friends as their next birthday gift.

Scott LaGreca (Durham, NC, USA) and Clifford W. Smith (Honolulu, HI, USA)

PERSONALIA

NEW PHD

Arthur Macharia Muhoro had a successful defence of his PhD thesis „Biological contra chemical diversity and their practical, insecticidal aspects in lichenology” on 28 March 2025 in Gödöllő [<https://www.doktori.hu/doktori-vedesek/30496/>].

He completed his Ph.D. studies at the Hungarian University of Agriculture and Life Sciences, focusing on the bioactivity of lichen secondary metabolites against vectors of malaria found in western Kenya. He has a special interest in control of mosquitoes and other insects of medical importance using synthetic and natural products, testing their bioefficacy and possible development of resistance when used over a long period in intervention studies. He developed an interest in the biology of lichens that has widened his knowledge of lichen morphology, chemistry, ecology and the potential applications of lichen secondary metabolites



Arthur Muhoro and Edit Farkas after the PhD defence (Photo: Nóra Varga).



Hungarian lichenologists with their students after the PhD defence of Arthur Muhoro (Photo: Zsófia Tischner). From left to right: Katalin Veres, Nóra Varga, Edit Farkas, Arthur Muhoro, László Lőkös, Coretor Kanyungulu.

Edit Farkas

NEW PHD FROM HELSINKI

Niko Johansson defended his PhD thesis “Bird-mediated dispersal of fungi – using microscopy and environmental DNA to explore bird-fungal interactions” on May 23th 2025 at the University of Helsinki. The thesis explored fungal dispersal via birds by examining fungi, including lichens, attached to feathers and feet of various bird species. The thesis consists of three chapters: 1) a study on woodpecker-attached fungi and lichens with a special focus on calicioid lichens and fungi; *Ecology and Evolution* 11(12) 7154-7163, <https://doi.org/10.1002/ece3.7648> (Open Access); 2) an eDNA-based survey of fungi in robins and goldcrests that detected many sorediate macrolichens and crustose microlichens: *Annals of Botany*, accepted article <https://doi.org/10.1093/aob/mcaf077> (Open Access); and 3) an unpublished study using eDNA to identify fungi carried by migratory birds arriving in the boreal north in the spring. The summary section of the thesis can be accessed here: <http://hdl.handle.net/10138/595308>. Supervisors: Professor Jouko Rikkinen and Dr. Ulla Kaasalainen from University of Helsinki; Professor Silke Werth from Ludwig-Maximilians-Universität München acted as the opponent.



Ulla Kaasalainen, Jouko Rikkinen, Niko Johansson and Silke Werth.

Niko Johansson

LIST OF SOCIETIES

Australasia: Australasian Lichen Society. Info: W.M. Malcolm, Box 320, Nelson, New Zealand 7040. Phone: (+64) 3-545-1660, e-mail: nancym@micro-opticspress.com
Journal: *Australasian Lichenology*, web-page: <http://nhm2.uio.no/botanisk/lav/RLL/AL/>

Brazil: Grupo Brasileiro de Liqueólogos (GBL), contact: Dr. Adriano Afonso Spielmann, (e-mail: adriano.spielmann@ufms.br), e-mail: BrazilianLichens@gmail.com;
web-page: <https://brazilianlichens.wixsite.com/website>

Central Europe: Bryologisch-lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM). Contact: Martin Nebel, Wellengstr. 14, 70619 Stuttgart, Germany, e-mail nebel_martin@web.de, web-page: <http://blam-bl.de/>
Journals: *Herzogia* <https://blam-bl.de/herzogia/herzogia-ueberblick.html>, *Herzogiella*, web-page: <https://blam-bl.de/herzogiella-oben.html>

Colombia: Grupo Colombiano de Liqueología (GCOL). Info: Bibiana Moncada, e-mail: bibianamoncada@gmail.com;
web-page: <https://www.facebook.com/groups/485251978343916>

Czech Republic: Bryological and Lichenological Section of the Czech Botanical Society. Chairperson: Svatava Kubešová, e-mail: svata.kubesova@gmail.com, web-page: <https://botanospol.cz/cs/bls>
Journal: *Bryonora*, web-page: <https://botanospol.cz/index.php/cs/bryonora>

Ecuador: Grupo Ecuatoriano de Liqueología (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, Chairman: Kadri Pärtel, e-mail: kadri.partel@ut.ee
web-page: <http://mukoloogiauhing.ut.ee/> (in Estonian).
Journal: *Folia Cryptogamica Estonica*, web page: <https://ojs.utlib.ee/index.php/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.ahiti@helsinki.fi
Journal: *Karstenia*, web-page: <http://www.karstenia.fi/index.php>

France: Association française de Lichénologie (AFL). Président: Joël Boustie, e-mail: joel.boustie@univ-rennes1.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: Royal Society of Biology, 1 Naoroji Street, London, WC1X 0GB, United Kingdom. President: Rebecca Yahr. Secretary: Eluned Smith. Email and Info: enquiries@britishlichensociety.org.uk 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* <https://www.britishtichensociety.org.uk/the-society/bls-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. Gaurav K. Mishra, 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: Juri Nascimbene, Dipartimento di Scienze Biologiche, Geologiche e Ambientali Via Irnerio 42, Bologna, email: juri.nascimbene@unibo.it, 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: Yoshiaki Kon, e-mail: chiiruikenkyukai@gmail.com, 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: Niko Johansson, e-mail: niko.johansson@helsinki.fi
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: Scott Schuette, contact e-mail: swschuette@gmail.com, 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: Jesse Miller, contact e-mail: president@californialichens.org,

Venezuela: Grupo Venezolano de Liquenólogos (GVL). Info: Jesús Hernández, e-mail: jeshernandezm2@gmail.com, web-page: www.bit.ly/lqvzla

AUDITORSHIP COMMITTEE

Auditor: Starri Heiðmarsson, Icelandic Institute of Natural History, Akureyri Division, Borgir vid Nordurslod, IS-600 Akureyri. Iceland. Email: starri@nnv.is

Vice Auditor: Andrei Tsurykau, Francisk Skorina Gomel State University, Department of Biology, Sovetskaja str., 104, 246028 Gomel, Belarus. Email: tsurykau@gmail.com

IAL NOMINATION COMMITTEE

Manuela Dal Forno, Botanical Research Institute of Texas, 1700 University Drive, Fort Worth, Texas 76107-3400 USA. Email: manudalforno@hotmail.com

R. Troy McMullin, Research and Collections, Canadian Museum of Nature, PO Box 3443 Stn "D", Ottawa, ON, Canada, K1P 6P4. Email: tmcmullin@nature.ca

Ave Suija, Institute of Ecology and Earth Sciences, University of Tartu, Liivi street 2, Tartu, Estonia. Email: ave.suija@ut.ee

IAL EDITORIAL COMMITTEE

Editor: Beata Guzow-Krzemińska, University of Gdańsk, Department of Plant Taxonomy and Nature Conservation, Wita Stwosza 59, 80-308 Gdańsk, Poland. E-mail: beata.guzow-krzeminska@ug.edu.pl

Editorial Board: William B. Sanders, Department of Biological Sciences, Florida Gulf Coast University, Ft. Myers, FL 33965-6565 USA. Email: wsanders@fgcu.edu

IAL AWARDS NOMINATION COMMITTEE

Kansri Boonpragob, Lichen Research Unit, Department of Biology, Faculty of Science, Ramkhamhaeng University, Bangkok, 10240 Thailand. E-mail: bkansri@hotmail.com

Pradeep Kumar Divakar, Complutense University of Madrid, Department of Pharmacology, Pharmacognosy and Botany (DU Botany), Faculty of Pharmacy, Plaza de Ramón y Cajal s/n, 28040 Madrid, Spain. Email: pdivakar@farm.ucm.es

Paul Muigai Kirika, EA Herbarium, Botany Department, National Museums of Kenya, P.O. Box 40658 – 00100 GPO, Museum Hill, Nairobi, Kenya. Email: pmkirika@gmail.com

Yoshihito Ohmura, National Museum of Nature and Science, Department of Botany, Tsukuba, Japan. Email: ohmura-y@kahaku.go.jp

Julieta Orlando, ¹Instituto Milenio Biodiversidad de Ecosistemas Antárticos y Subantárticos (BASE); ²Universidad de Chile, Department of Ecological Sciences, Faculty of Sciences. Email: orlandojulieta@gmail.com

Gothamie Weerakoon, Senior Curator of Lichens and Slime Moulds, Algae, Fungi and Plants Division, Department of Sciences, The Natural History Museum, London SW7 5BD, UK. Email: gothamie.weerakoon2@nhm.ac.uk

IAL IDEA COMMITTEE

Co-Chair: Manuela Dal Forno, Botanical Research Institute of Texas, 1700 University Drive, Fort Worth, Texas 76107-3400 USA. Email: manudalforno@hotmail.com

Co-Chair: Natália Mossmann Koch, Department of Ecology, Evolution, and Behavior, University of Minnesota, 140 Gortner Laboratory, 1479 Gortner Ave, St Paul, MN 55108 USA. Email: nkoch@umn.edu

Co-Chair: Joel A. Mercado-Díaz, Botanical Gardens Herbarium of the University of Puerto Rico, Calle Juan Ponce De Leon, Rio Piedras, Puerto Rico. Email: joel_pr19@hotmail.com

Ekaphan Kraichak, Kasetsart University, Botany Department, Bangkok, Thailand. Email: ekaphan.k@ku.th

EARLY CAREER RESEARCH COMMITTEE

Ana Fávoro, Department of Ecology, Evolution, and Behavior, University of Minnesota, 140 Gortner Laboratory, 1479 Gortner Ave, St Paul, MN 55108 USA. Email: fvaro001@umn.edu; anafavarovga@gmail.com

Theo Llewellyn, Department of Life Sciences, Faculty of Natural Sciences, Imperial College London, Exhibition Road, London, United Kingdom, SW7 2AZ; Comparative Fungal Biology, Royal Botanic Gardens Kew, Richmond, Surrey, United Kingdom, TW93AE. Email: t.llewellyn@kew.org, t.llewellyn19@imperial.ac.uk

COMMUNICATION COMMITTEE

Chair: Silvana Munzi, Centro Interuniversitário de História das Ciências e da Tecnologia, Faculdade de Ciências, Universidade de Lisboa, Campo Grande, 1749-016 Lisbon, Portugal. Email: ssmunzi@fc.ul.pt

Andreas Beck, Botanische Staatssammlung München, Department of Lichenology and Bryology, Menzinger Str. 67, D-80638 München, Germany. Email: beck@snsb.de

Frank Bungartz, ¹Natural History Collections, Arizona State University, PO Box 874108, Tempe AZ 85287-4108, U.S.A; ²Charles Darwin Foundation (AISBL), Puerto Ayora, Santa Cruz, Galápagos, Ecuador; ³National Biodiversity Institute of Ecuador (INABIO), Quito, Ecuador. Email: frank.bungartz@gmail.com

Beata Guzow-Krzemińska, University of Gdańsk, Department of Plant Taxonomy and Nature Conservation, Wita Stwosza 59, 80-308 Gdańsk, Poland. E-mail: beata.guzow-krzeminska@ug.edu.pl

Natália Mossmann Koch, Department of Ecology, Evolution, and Behavior, University of Minnesota, 140 Gortner Laboratory, 1479 Gortner Ave, St Paul, MN 55108 USA. Email: nkoch@umn.edu, natimkoch@gmail.com

Theo Llewellyn, ¹Department of Life Sciences, Faculty of Natural Sciences, Imperial College London, Exhibition Road, London, United Kingdom, SW7 2AZ; ²Comparative Fungal Biology, Royal Botanic Gardens Kew, Richmond, Surrey, United Kingdom, TW93AE, Email: t.llewellyn@kew.org; t.llewellyn19@imperial.ac.uk

Yoshihito Ohmura, National Museum of Nature and Science, Department of Botany, Tsukuba, Japan. Email: ohmura-y@kahaku.go.jp

Marcela Caceres (ex officio), Departamento de Biociências, Universidade Federal de Sergipe, Av. Vereador Olímpio Grande, s/n, 49500-000, Itabaiana-SE, Brasil. Email: mscaceres@hotmail.com

François Lutzoni (ex officio), Department of Biology, Box 90338, Duke University, Durham, NC 27708, USA. Email: francois.lutzoni@duke.edu

Lucia Muggia (ex officio), Department of Life Sciences, University of Trieste, via L. Giorgieri 10, 34127 Trieste, Italy. Email: lucia_muggia@hotmail.com; lmuggia@units.it

The cover-page illustration

Umbilicaria phaea var. *coccinea* (Ascomycota: Umbilicariaceae) from Northern California (Photo: R. Troy McMullin).