

INTERNATIONAL LICHENOLOGICAL NEWSLETTER

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The opinions expressed in the *Newsletter* are not necessarily those held by
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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 listserv that enables on-line discussion of topics of interest. Webpages devoted to lichenology are also maintained by members of the Association. People wishing to renew their membership or become members of IAL are requested to 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.

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ASSOCIATION NEWS

LETTER FROM THE PRESIDENT, WITH AN UPDATE REGARDING THE GENERAL MEETING, COUNCIL, AND IAL AWARDS

Dear IAL Members,

This letter contains some important updates regarding what has been happening since the last Newsletter. I am sure that 2020 has been one of the weirdest and most frightening years ever, for all of us. I myself was already working from home most of the time when the severity of the covid-19 threat dawned upon the relevant authorities and us all, as this coincided with the most intensive grant application period here in Sweden. Most of us have generally adapted more or less well to working from home most of the time, to having digital meetings and not really being very social in general. As I write this, many parts of Europe are starting to open up to some extent, but it is clear that this pandemic is by no means over yet.

The IAL Council was forced to deal with some smaller consequences of covid-19. As most of you have already seen, we have postponed the IAL9 Meeting, and you can read more about the details regarding the revised dates etc. elsewhere in this Newsletter. As a result, Council also had to postpone the General Meeting, where a new Council will be elected, to a new date during IAL9 next year. Therefore, our current Council will remain in office until a new one is elected, but Ana Crespo who recently retired, is stepping down as Vice President. I want to thank her warmly for all her work and support during her period on Council! I am happy to announce that Silke Werth, who already is a Member-at-Large of Council, is taking on the role as Vice President until the next General Meeting.

After IAL9, I hope that we will manage to go back to some sort of normal situation. Regardless, the IAL will become better prepared for unforeseen events, and we will most likely offer on-line conference participation, and revise the voting system to allow some sort of on-line voting. Council is setting up a small committee to look into updating our Constitution to, among other things, look into how we can deal with voting etc. if we cannot meet physically. IAL10 will take place in 2024 as originally planned. Presentations of the proposals for the IAL10 venue would have been included in this Newsletter, but we have postponed these presentations until a bit later.

Council also decided to postpone the announcement and presentation of our Prizes and Awards to the new dates of IAL9, and that these will be based on the current nominations. Prizes and Awards presented at the IAL10 will be based on the nomination period 2020-2024, so that no defender of a PhD thesis (or postdoc) misses out on the opportunity for nomination.

The exception to this is the Travel Awards. The applications for Travel Awards for IAL9 will be re-opened next Spring to accommodate new applicants. To be clear, if you have already applied, there is no need to re-apply. However, current applicants may withdraw their applications, or change their applications, if necessary (for example, if they are changing the title of their presentation).

I write this having just started my midsummer vacation. Midsummer is one of the most important celebrations in Sweden, second only to the midwinter (“jul”). I hope that the rest of 2020 will become much better than the first part for all of us, and that the possibilities for fieldwork and other travel will improve quickly. I do hope that all of you and your friends and families remain healthy and safe, and finally, I hope to meet most of you next year in Bonito!

Mats Wedin, IAL President

NEWS

UPDATES REGARDING THE NEXT IAL MEETING IN BONITO, BRAZIL



Dear fellow lichenologists,

It was with immense regret that earlier this year we announced the official postponement of **IAL9** to **August 1–6, 2021**. Nonetheless, we are confident that we have taken the right decision in view of the progress of COVID-19. We recognize that new ways of meeting have become the new normal, and we are discussing how to accommodate such technologies in a hybrid in-person/digital event next year. The actual losses for the participants, organizers and companies involved were high, so we would like to thank all participants who were able to postpone their registration fee to next year, and at the same time state that we understand some people's needs for requesting a refund. We hope we were able to fulfill all requests as best as we could.

We are all being affected by this pandemic and we need to face this difficult moment together. Best wishes to all and see you in 2021!

Sincerely,

Marcela Cáceres (Head of the IAL Organizing Committee)

IUCN GRANT OPPORTUNITY TO SUPPORT LICHEN CONSERVATION

The IUCN Species Survival Commission provides a small grant (\$2000-\$3500) to promote activities contributing to conservation, including work by the Specialist Groups. It is anticipated that the next available funding will be available following a Winter 2020 call. Further details can be found at: <https://www.iucn.org/species/about/species-survival-commission/ssc-chairs-office/ssc-internal-grant>. If anyone has ideas for conservation work that they would wish to develop in collaboration with the Lichen Specialist Group, then informal enquiries can be made to Jessica Allen (jessilynnallen@gmail.com) or Rebecca Yahr (r.yahr@rbge.org.uk)

Chris Ellis

NEWS FROM ESTONIA: THE FUNGUS OF 2020 IS *CLADONIA STELLARIS*!

Every year since 1995, the Estonian Ornithological Society nominates a Bird of the Year for Estonia. The selection of a „species of the year“ helps to draw attention to that particular species and its ecology, as well to natural sciences overall. In addition, it also engages the public with research and conservation activities regarding that species. Following the example of the Estonian Ornithological Society, the Estonian Mycological Society has been choosing a „Fungus of the Year“ since 2017. The beloved, edible mushroom *Cantharellus* was chosen as the first Estonian Fungus of Year. In 2018, this honor was given to *Fomes fomentarius*; and in 2019, to *Coprinus comatus*. This year, a lichenized fungus —*Cladonia stellaris*— was chosen for the first time as the Fungus of the Year for 2020. The choice of a lichenized fungus this year aims to educate society on the diversity of fungi and more specifically, on lichenized fungi. *Cladonia stellaris* is widely distributed in Estonia, but we are concerned about the collection of this species for decoration purposes. We are also concerned about declining quality of its habitats due to ongoing strong economic pressures on forest management.



Cladonia stellaris (Photo: Andres Saag).

Polina Degtjarenko
Kristiina Mark
Inga Jüriado
Tartu, Estonia

FESTSCHRIFT IN HONOR OF PROF. EMMANUËL SÉRUSIAUX

On June 2nd, 2020, a Festschrift in honor of Prof. Emmanuël Sérusiaux was published in the journal *Plant and Fungal Systematics*. Prof. Sérusiaux retired from the University of Liège (Belgium) in October 2019, and this volume celebrates over 40 years of his accomplishments in the field of lichenology. Guest editors of this volume Nicolas Magain, Damien Ertz, Bernard Goffinet and Paul Diederich presented this special volume to him as a surprise (unfortunately in a mostly virtual way, given the circumstances). Emmanuël was very happy to receive this special gift! The volume comprises sixteen papers (including fourteen on lichens) with descriptions of several new genera and species named after him. Many thanks to all the authors who contributed, and special thanks to Adam Flakus and Jolanta Miadlikowska for handling this special volume so well. Please check the special issue at <http://pfsyst.botany.pl/Issue-1-2020,8594>



Festschrift delivery (Photo: *Laurent Gohy, University of Liège*).

Nicolas Magain

ILS LAUNCH ITS RENEWED WEBSITE

Indian Lichenological Society has launched a new version of its website, www.indianlichenology.com. The site is now secured with 'hypertext transfer protocol secure (HTTPS)'. Interested lichen researchers can become a member of the society by using the easy online membership registration form. The site also includes updated bibliography on Indian lichens, news, event reports, awards being given by the society, as well as a picture gallery.

Dr. Sanjeeva Nayaka
Secretary, Indian Lichenological Society
Senior Principal Scientist
CSIR-NBRI, Lucknow (India)
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DATABASE LOCKED

Over a year ago, the internet resource "Checklists of lichens" (http://www.lichens.uni-hamburg.de/lichens/portalpages/portalpage_checklists_switch) was shut down by the administration of the University of Hamburg. This valuable webpage offered more than 10,000 species descriptions of lichens and more than 1,000 checklists of geopolitical units. The descriptions included (among other things) the chemical data of Culberson (1969, 1970), Culberson et al. (1977) and Huneck & Yoshimura (1996), as well as the updated biographical data of Grummann (1974). Further, the "Checklists of lichens" site included a complete list of synonymisations and their authors (with detailed citations) from Index Fungorum.

More than 300 authors of lichenological publications used "Checklists of lichens" in the past. My pleas to the administration to reopen the resource, and make updates possible, remained unanswered. It is now necessary that as many scientists as possible write to the Dean, Prof. Dr. Heinrich Graener, heinrich.graener@uni-hamburg.de to stop this administrative wrong-way drive. A short e-mail will be sufficient. Please send a copy (via the CC-field) to tassilo.feuerer@gmx.de.

*Dr. T. Feuerer
Retired Curator
Herbarium Hamburgense*

REPORTS

WORKSHOP ON IDENTIFICATION TECHNIQUES OF MACROFUNGI AND LICHENS

The workshop was organized at the Department of Botany, University College, Mangalore, during 6 - 7th December 2019. The aim of the workshop was to spread awareness regarding fungi, and to motivate the younger generation to pursue mycology for their career. A total of 112 persons including teachers, students and research scholars from different parts of India participated in the workshop. Eminent regional mycologists served as resource persons, delivered interesting talks and conducted demonstrations. The list of resource persons includes - Prof. (Rtd.) D. Jayarama Bhat, Department of Botany, Goa University, Taleigao; Prof. (Rtd.) K.R. Sridhar, Mangalore University, Mangalagangothri; Dr. P. Manimohan, Calicut University, Calicut; Dr. Sanjeeva Nayaka, CSIR-



Resources persons and dignitaries of the workshop during valedictory function (Photo: Shobha).

National Botanical Institute, Lucknow; Dr. Vinalayaka, K.S, Buntwal College, Buntwala; Dr. Syed Abrar, Sahyadri College, Shimogga; Mr. Shivkumar, Kalladka. The following talks were presented - Fungi and many opportunities (by JB); Identification of gilled Mushrooms (PM); Diversity of macrofungi in the forests and plantations of South West India (KRS); Importance and diversity of lichens in India (SN); and Identification of lichens (VKS). Demonstrations were conducted for identification of macrofungi (SA), cultivation of edible mushrooms (S) and identification of lichens (SN, VKS). The inaugural and valedictory portions of the function event included several dignitaries such as Prof. Shripathy Kalluraya, Dr. Prasanna Rai, Dr. Udayakumar, M.A. and Prof. K.R. Chandrashekhar. The workshop was organized by Dr. Shobha, Head, Department of Botany, University College, Mangalore, with support from her colleagues and students, especially Dr. Siddarju M.N. and Mrs. Devamma.

Sanjeeva Nayaka

THE SOUTH ASIA NITROGEN HUB - TRAINING ON SAMPLING AND TAXONOMY OF LICHENS

A two-day workshop and hands-on training on sampling and taxonomy of lichens was organized at the TERI School of Advanced Studies (TERI SAS), New Delhi during 16 – 18th March 2020. The workshop was organized under the South Asia Nitrogen Hub (SANH), Work-Package on ‘Impacts of nitrogen pollution on forests in South Asia, with lichens as an indicator’. The first day of the workshop featured presentations from Dr. Chris Ellis, Royal Botanical Garden Edinburgh, Dr. Patricia Wolseley and Dr. Gothamine Weerakoon from Natural History Museum, London who informed the participants of the initiative under SANH and lichens that are sensitive to pollution. Drs. D.K. Upreti and Sanjeeva Nayaka from CSIR - National Botanic Research Institute, Lucknow provided an historical account of lichen studies in India, as well as the diversity and distribution of lichens in India. They emphasized the participants about the need for taxonomic studies on lichens and also demonstrated the basics techniques in lichen identification. Dr. G.P. Sinha, Botanical Survey of India (BSI), Allahabad provided an account of the role of BSI in lichens research. The following day, Dr. Himanshu Rai, Banaras Hindu University, Varanasi led hands-on sessions on the taxonomy of economically important lichens viz., *Everniastrum*, *Ramalina*, *Parmotrema*, *Parmelia* and *Usnea*.



Resources persons and participants of training program (Photo: *Sudipto Chatterjee*).

Representatives from Kathmandu University, Nepal, Peredenya University, Sri Lanka and Royal Bhutan University, Bhutan were the other participants of the workshop. In the workshop, it was decided that field work related to the SANH project will be carried out in the foothills of the Himalaya in association with 'Uttarakhand Youth for Research and Development' as well as at tropical montane forests of Sri Lanka. The workshop was coordinated by Dr. Sudipto Chatterjee, Associate Professor and Head, Dept. of Natural Resources, TERI SAS, New Delhi.

Dr. Sanjeeva Nayaka

OBITUARIES

WILLIAM A. WEBER (16 NOV 1918–18 MAR 2020)



Weber in Hood River, Oregon, U.S.A., 2009 (Photo: *Thor Heinrich*)

William A. ('Bill') Weber, a titan of Rocky Mountain botany whose contributions to science included over 50 lichenological papers over the course of five decades, passed away on 18 March 2020 in Longmont, Colorado, U.S.A., at the age of 101. Dr. Weber, who recently received the Acharius Medal from our association in 2018, mentored and assisted many generations of botanists and lichenologists since founding the University of Colorado Herbarium in 1946, including many members of the IAL. A full tribute to Dr. Weber will appear in the next issue of the IAL Newsletter.

Toby Spribille
University of Alberta

Clifford M. Wetmore (1934 – 2020)



Cliff at the 2007 Tuckerman Workshop on the Bruce Peninsula in Canada, ready to go out collecting (Photo: Irwin M. Brodo).

Clifford M. Wetmore passed away on 1 June 2020 in Tempe, Arizona at the age of 85, only 17 days before his 86th birthday. He experienced a fall in May that led to hospitalization, where widespread cancer was found that quickly led to his death. He left behind a son Larry, a daughter Cynthia, and a brother Frank.

After earning his Ph.D. at Michigan State University with Henry Imshaug in 1965, Cliff took a teaching job at Wartburg College in Waverly, Iowa. Anxious to get back to lichen research, he found a position at the University of Minnesota in St. Paul, where he spent most of his lichenological career. It was there that he assembled his world-renowned lichen collection, numbering approximately 150,000 specimens, most of them acquired through his extensive air-quality surveys of U.S. National Parks. He authored about 135 publications on lichens, including monographs of *Nephroma*, *Heppia* and *Peltula*, and several important revisions of sections of *Caloplaca* s. lat. Cliff particularly enjoyed doing floristic studies, which began with Isle Royale National Park, Michigan, and the Black Hills of North Dakota, and ended only a few years ago with a study of the lichens of the Mississippi River basin. He collected all over the world. One of his goals was to collect 100,000 specimens, which he achieved in his retirement years. He published two exsiccatae (*Lichenes exsiccati* and *Teloschistaceae exsiccati*), and Wetmore duplicates can be found in most lichen herbaria.

Computers were among Cliff's early interests, and he actually built his own computer before the days of personal computers. He used computer technology in managing his large herbarium in Minnesota and provided computerized searches of label data at no cost.

Cliff loved being out in nature and camped at his collecting localities whenever he could. Other interests besides lichens included opera, engines, ham radio, and making wooden boats. He was a hard-working, first-rate taxonomist who helped many young lichenologists get started. Among his students were Lois Brako, Thomas Sullivan and Susan Fricke Meyer. We all benefitted from his many lichenological contributions.

There will be more said about his life and work in the obituaries to follow.

*James P. Bennett
Irwin M. Brodo*

PERSONALIA

NEW PH.D. THESIS

David Pizarro successfully defended his Ph.D. thesis on “METAGENOME SEQUENCING WITH NEW BIOINFORMATIC APPROACHES TO UNDERSTAND THE EVOLUTION OF LICHEN FORMING FUNGI”, supervised by Ana Crespo and Pradeep K. Divakar, on 22nd November 2019 at Faculty of Pharmacy, Complutense University of Madrid, Spain.

David's research addresses the study of genomes and metagenomes of lichens, a novel topic in the field of lichenology that has not been previously documented in depth. Genomic studies in lichenology have experienced a considerable delay compared to other fungal groups due to the symbiotic nature of lichens. As is now well-known, they are not only composed by a mycobiont and a photobiont, but also a multitude of other fungi, algae, secondary photobionts, protozoa and non-photosynthetic bacteria. Their symbiotic nature makes it really difficult to obtain mycobiont genomes by procedures widely used in other groups of organisms, since a non-specific tissue is lacking for obtaining pure mycobiont DNA. Some authors have tried to address this problem by performing aposymbiotic cultures of mycobiont, the difficulty of obtaining and maintaining lichen mycobiont cultures, combined with their slow growth, generally does not generate enough DNA for genomic studies. In his thesis, David chosen to use a different technique, in which the DNA present in the entire lichen symbiosis is massively sequenced, and the mycobiont part is recovered using different computational tools.

The Ph.D. thesis is divided into four chapters:

Chapter 1. demonstrates that the approach to isolate the mycobiont genome from total metagenome sequences works efficiently, and provides a starting point for the development of the next three chapters of the thesis. At the same time, this methodology lays a baseline for many other researchers who need to sequence genomes of lichen mycobionts, providing a more efficient tool to pave the way for the genomic era of lichenology.

Chapter 2 resolves deep evolutionary relationships in Parmeliaceae with 2500 single-copy genes, as well as providing an analytical pipeline that can be used in other groups of fungi. In addition, this set of genetic markers lay the foundation for using more efficient and inexpensive methodologies for future phylogenomic studies.

Chapter 3 identifies and characterizes genes responsible for sexual reproduction (i.e. MAT genes) in 41 genomes of lichen-forming fungi representing a wide range of growth forms and reproductive strategies in the class Lecanoromycetes. Widespread heterothallism is demonstrated in this largest group of lichenized Ascomycota, as opposed to the previous homothallism hypothesis for this group of lichens. Results indicate that at the genomic level, cross-fertilization is needed to generate ascospores in this class of fungi. However, it is speculated that genetically heterothallic lichen thallus may behave as homothallic, in part because a mycobiont can be made up of several individuals

originating from the germination of a single group of spores (i.e. the complete ascus is ejected from an ascocarp, and then several spores germinate simultaneously).



A picture of David with the jury member (Photo: *Pradeep K. Divakar*).

Chapter 4 studied the genetic basis of secondary metabolism. In this study, the groups of genes responsible for the biosynthesis of usnic acid are characterized. Interestingly, lichens that do not synthesize usnic acid lack the gene cluster responsible for synthesizing it. Since these genes would be expected to be present but silenced, this finding is of great interest from an evolutionary point of view. Ancestral loss of usnic acid is hypothesized for the evolutionary success of the Lecanoromycetes, the largest group of lichens. This chapter establishes a genetic basis to explore the production of other secondary metabolites, and better understand how these metabolic pathways are activated and silenced. In parallel, the group of genes responsible for synthesizing fungal melanins was also studied, and a new group of genes, belonging to a group of non-reducing PKS genes with unknown function, was discovered.

Pradeep K. Divakar

THEO LLEWELLYN AT RBG KEW

Last September Theo Llewellyn was awarded an Imperial DTP scholarship to do his PhD at RBG Kew with Ester Gaya.

Ester Gaya

TWO NEW DISSERTATIONS FROM THE SCHMITT LAB (FRANKFURT)

Anna Sadowska-Deś defended her thesis “Genetic diversity and environmental structuring of fungal and algal symbionts in the lichen *Umbilicaria pustulata*” on 24.01.2020, and Anjuli Calchera (nee Meiser) defended her thesis „Genome-wide analyses of biosynthetic genes in lichen-forming fungi“ on 24.06.2020.



Anna Sadowska-Deś



Anjuli Calchera

Congratulations to both!

Imke Schmitt

ROGER ROSENTRER

Roger Rosentreter continues to work on biocrust ecology and restoration projects in Idaho, USA. He is currently doing some reciprocal transplant studies looking at the role of local versus regional plant material in the successful growth in the restoration of biocrusts. Roger is using *Psora*'s in the lichen transplant studies and two moss species. He has also been assisting Ann DeBolt on lichen transplant studies of several *Cladonia* species including the United States Federally endangered species, *Cladonia perforata* in Florida. They have also transplanted *Cladonia leporina*, *C. evansia*, and *C. prostrata*. Roger is now affiliated with Boise State University in Boise, ID and has been teaching classes on the ecology of desert shrubs.

Roger Rosentreter

NEW IAL MEMBERS

Andrei Tsurykau, PhD, Associate Professor, Francisk Skorina Gomel State University, Sovetskaja str. 104, 246019 Gomel, Belarus. E-mail: tsurykau@gmail.com

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Rob Smith, Postdoctoral Fellow, USDA Forest Service, Air Resource Management Program, USA. Research interests in lichen ecology, forest ecology, biogeography. E-Mail: robert.smith3@usda.gov

Elise Lebreton, herbarium engineer (Muséum National d'Histoire Naturelle de Paris - France), Interests: Spatial and temporal study of lichen diversity in France and Lesser Antilles (Guadeloupe Martinique); E-mail: eliselebreton@yahoo.fr

Carlos G. Boluda, I obtained PhD in taxonomy and population genetics of alectorioid lichens (Parmeliaceae) 3 years ago, however currently I am working on plants as a postdoc in the Botanical Garden of Geneva, performing a phylogenomic revision of the Sapotaceae trees from Madagascar. I continue studying lichens and lichenicolous fungi without funding, focusing especially on collection and identification of specimens from Tanzania, North of Mexico and Madagascar. E-mail: carlos.g.boluda@gmail.com

LIST OF SOCIETIES

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Brazil: Grupo Brasileiro de Liqueólogos (GBL). Info: Marcelo P. Marcelli, Instituto de Botânica, Seção de Micologia e Liqueologia, 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: Martin Nebel, Wellingstr. 14, 70619 Stuttgart, Germany, e-mail nebel_martin@web.de, web-page: <http://blam-bl.de/>
Journals: *Herzogia*, *Herzogiella*, web-page: <http://www.blam-hp.eu/herzogia.html>

Colombia: Grupo Colombiano de Liqueología (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

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Estonia: Mycology Society, Estonian Naturalists' Society, Struve 2, Tartu 51003, Estonia, web-page: <http://mukoloogiauhiing.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.ahiti@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*

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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

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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/elin/>

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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 Liquenología (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@em.uu.se, web-page: <http://lavar.se>
Bulletin: *Lavbulletinen*, web-page: <https://lavar.se/lavbulletinen/>

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

Dermaticum thunbergii (Ach.) Nyl. (Lecanoromycetes, Caliciaceae), photo taken in 2019 during
GoLife fieldwork in South Africa (Photo: Adam Flakus and François Lutzoni).