

Cover drawing: *Trapelia mooreana* (Caroll) P. James based on a specimen from Venezuela (Hertel 10458: see Willdenowia 6:261, 1971). The drawing was made by Mrs. A. Trüger (Berlin).

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# international lichenological newsletter

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## Editorial

### *Lichens and "Heavy" Metals*

For many years it has been known that lichens can grow on mineral rich substrates such as mine wastes or natural copper swamps. A few species accumulate such high levels that the lichen is visibly coloured brown by iron (e.g. *Acarospora smaragdula* f. *subochracea*) or green by copper (e.g. *Lecanora cascadiensis*). More frequently, considerable metal contents are only revealed by analysis of the lichen sample.

The ability of lichens to accumulate elements without apparent detriment is not only of great interest but also of practical value, as it allows these plants to be used as monitors of metal fallout in the vicinity of highways, smelters and power stations. The uptake mechanisms include: extracellular ion exchange, particulate trapping, and active and passive intracellular uptake. Very often the titles of papers on the use of lichens as monitors include the words "heavy metal". This is usually taken to include metals in the Periodic Table of elements beyond scandium which for the most part have high atomic densities and can thus be referred to as "heavy". However, a brief survey of the literature suffices to show that the term heavy metal lacks clear definition and includes an array of elements which vary in their chemistry, physiological role and toxicity.

The *International Lichenological Newsletter* is the official organ of the International Association for Lichenology. Membership is open to anyone who has an active interest in lichenology. Dues are \$5-\$10 per 6 years and should be sent to the Association's treasurer (see Vol. 9 no. 1, p. 16). News items intended for the *Newsletter* may be forwarded to the editor.

The affairs of the International Association for Lichenology are directed by an Executive Council consisting of Teuvo Ahti, president, Rolf Santesson, vice-president, Thomas Nash III, secretary, Hannes Hertel, treasurer, Irwin Brodo, editor, as well as Hans Trass and Oleg Blum. They will serve until the next International Botanical Congress.

Bio-inorganic chemists no longer use the term "heavy metal" but distinguish between class A, class B and borderline metal ions. Class A ions include those of the alkali metals ( $\text{Li}^+$ ,  $\text{Na}^+$ ,  $\text{K}^+$ , etc.), the alkaline earths ( $\text{Mg}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Sr}^{2+}$ , etc.), and the lanthanide metals as well as  $\text{Al}^{3+}$  and  $\text{Sc}^{3+}$ .

Class A ions form bonds of large ionic character preferring oxygen donor groups such as water, hydroxide ion, carboxylate, phosphate and the alcohol OH unit.  $\text{K}^+$ ,  $\text{Na}^+$ ,  $\text{Mg}^{2+}$  and  $\text{Ca}^{2+}$  have well defined biological roles.  $\text{K}^+$  and  $\text{Mg}^{2+}$  stabilise intracellular structures (e.g. RNA, DNA) through complex formation and are also required by many intracellular enzymes, especially those involved in the production and hydrolysis of high energy compounds such as ATP. In contrast  $\text{Ca}^{2+}$  and  $\text{Na}^+$  stabilise structural components of the cell (membranes and walls) and in animal cells also activate extracellular enzymes.

Class B ions ( $\text{Cu}^+$ ,  $\text{Ag}^+$ ,  $\text{Au}^+$ ,  $\text{Hg}_2^{2+}$ ,  $\text{Hg}^{2+}$ ,  $\text{Pd}^{2+}$ ,  $\text{Pt}^{2+}$ ,  $\text{Tl}^{3+}$  etc.) form bonds of considerable covalent character and tend to form complexes with donor atoms from the third or subsequent period in the Periodic Table. The class B metal ions exhibit the following donor atom preference sequences:  $\text{I}^- > \text{Br}^- > \text{Cl}^- > \text{F}^-$ ;  $\text{Se} > \text{S} > \text{O}$ ;  $\text{As} > \text{P} > \text{N}$  and  $\text{N} > \text{O}$ . Only  $\text{Cu}^+$  is known to have a biological function and all the remaining metals of this class are highly toxic to living organisms. The toxicity of class B cations is often related to their high affinity for N and S donor sites, especially sulphhydryl centres. Such binding is often irreversible and destroys the integrity of, for example, proteins and nucleic acids.

The borderline metal ions ( $\text{Fe}^{2+}$ ,  $\text{Co}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Cd}^{2+}$ ,  $\text{Pb}^{2+}$  etc.) are ambivalent and may exhibit either class A or class B characteristics depending on the circumstances. Trace quantities of particular borderline ions are needed by living organisms for a host of functions. Among these are hydrolysis (Zn), oxygen transport ( $\text{Fe}$ ,  $\text{Cu}$ ), oxidation by oxygen incorporation ( $\text{Fe}$ ,  $\text{Cu}$ ), electron transport ( $\text{Fe}$ ,  $\text{Cu}$ ) and complex syntheses ( $\text{Co}$ ). Borderline ions tend to be toxic when present in excess as their latent class B properties become manifested under such conditions.

Lichens are frequently used as monitors of metal levels in the environment (air, substrate etc.). Perhaps lichenologists should take the lead among biologists and replace the term "heavy metal" by the metal-ion classification outlined here which is both biologically and chemically more meaningful.

- Evert Nieboer and David Richardson

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## News and Notes

AHMADJIAN, Vernon (U.S.A.) recently received a two year National Science foundation grant to study developmental aspects of the lichen symbiosis. Major emphasis of his work will be on ultrastructure of the early stages of lichen development in laboratory synthesis cultures and ultrastructure of the separate algal and fungal symbionts. An SEM study of early lichen synthesis, done with a former student, Jerome B. JACOBS, and a present student, Lorraine A. RUSSELL, has been submitted for publication. Currently, Dr. Ahmadjian has three graduate students, all of them M.A. candidates who are beginning their research projects. A description of their planned research is as follows: Lorraine A. RUSSELL - ultrastructure of lichens with emphasis on the early cellular interactions between fungus and alga and the ultrastructure of the fungus in culture. Kathy C. HILDRETH - ultrastructure of lichens with emphasis on the algal symbiont in culture; studies will be made to determine if the algal symbiont forms and releases zoospores while still within the lichen thallus. Brent L. DORVALL - working on biochemical means to bring about protoplast release from lichen fungal hyphae; attempts will be made to fuse *Trebouxia* zoospores (which lack a cell wall) with the fungal protoplasts to achieve an intracellular lichenized association.

AHTI, T. (Finland) will visit Newfoundland in August 1978 to supplement his earlier lichen collections from the island. He will also be the keynote speaker at the annual meeting of the Canadian Botanical Association in St. John's, Nfld. on 14 August.

ARSENAULT, Pierre (Canada) has almost finished writing his master's degree thesis on the influence of aqueous extracts of subarctic lichens on seed germination and growth of vascular plants, especially *Picea mariana*, as well as on mycorrhizal fungi. Although a student at l'Université Laval, he is presently employed as a biologist with La Société d'énergie de la Baie James in La Grande, Québec.

BIRD, Charles D. (Canada) is currently at work, with John THOMSON, George SCOTTER, A. MARSH and P.Y. WONG as coauthors, on a paper (or papers) covering the lichens of Mackenzie River valley. This paper will be similar to the one that appeared in the November issue of the Canadian Journal of Botany on the bryophytes of the area.

BRODO, Irwin M. (Canada) reports significant progress on the computerized Catalogue of the Lichens of Canada, Alaska, and Greenland. There are now records from approximately 490 articles and books included in the data base. The catalogue is in the form of a computer printout; it will not be published in book form since it is being regularly up-dated. Names are listed exactly as published together with the place of publication. The catalogue is a project of the Systematics and Phytogeography Section of the Canadian Botanical Association in cooperation with the National Museums of Canada. Those wishing information about the catalogue (e.g., how to obtain a copy of the bibliography, full or partial printouts, etc.) can contact Dr. Brodo directly.

CHAGHTAI, S.M. (Pakistan) is working on the lichen flora of the area near Peshawar (northern Pakistan) and would appreciate receiving literature on the morphology of lichens.

DELZENNE, Mme. Chantal (France) s'occupe de la floristique des lichens dans le nord de la France ainsi que du problème de la pollution atmosphérique en relation avec les épiphytes. Par ailleurs elle étudie la synsystème des associations lichéniques épiphytes.

DERSTINE, Kittie Sue (U.S.A.) is completing her M.S. thesis entitled "The Lichen Genus *Xanthoparmelia* in Texas." She is working at Texas A&M University under Robert EGAN.

DEY, Jonathan P. (U.S.A.) is currently an Assistant Professor of Biology at Illinois Wesleyan University in Bloomington, Illinois. Having completed his project on the fruticose and foliose lichens of the high-mountain areas of the southern Appalachians, he has begun work on a fruticose and foliose lichen flora of the state of North Carolina.



Gunnar DEGELIUS - 75th Birthday

Dr. Gunnar Degelius, renowned specialist of the genus *Collema* but equally acclaimed for his contributions to lichen ecology and phytogeography, celebrated his seventy-fifth birthday on 27 January 1978. A man of extraordinary talent, his books and papers have served as models for many others: "Das Oceanische Element..." for studies of ecology and vegetation, "... the lichen flora of Maine", and "the Smokies" for floristic work in North America, "The lichen genus *Collema*" for all subsequent lichen monographs, and "vegetation on twigs of *Fraxinus excelsior*" for studies of productivity and succession, to name a few.

The International Association for Lichenology wishes him good health and success in the years ahead.

DIBBEN, Martyn J. (U.S.A.) has a 300 page monograph on North American *Pertusariae* in press; it will be released in May (1978) as a publication in the Milwaukee Public Museum series. Four student projects currently in progress at the Museum are: Bernice POPELKA - Ecophysiology of swamp-land bryophytes; Kurt BART - Lichen distribution in relation to urban pollutants (Milwaukee); Leo BRUDELE - Bryo-lichen floristics of forest islands; Robert REICH - Bryo-lichen flora of Washington Co. (Wisconsin).

EGAN, Robert (U.S.A.) is continuing studies on Texas lichens, especially the Parmeliaceae. He is continuing general anatomical work using SEM and his investigations on *Speerschneidera*. He spent 2 weeks in November (1977) collecting lichens in Mexico, specifically in the states of Mexico and Michoacán. Dr. Egan will assume responsibility for the "Recent Literature on Lichens" lists in *The Bryologist* beginning with #101 and encourages all lichenologists to send reprints or notifications of their publications to him for inclusion in these lists. He is continuing the computerization of all lichen collections at Texas A&M University using the data base management program SYSTEM 2000.

ESTÉVEZ, M.P. and VICENTE, C. (Spain) have recently published a series of articles on chloroatranorin, especially its physiological activity. The papers appeared in *Anal. Inst. Bot. Cavanilles* and *Bol. R. Soc. Española Hist. Nat. (Biol.)*

GALLOWAY, David (New Zealand) writes: "After four and a half years working at the British Museum (Natural History) on revisions of the macrolichen genera of New Zealand, I am now based in New Zealand at Botany Division, D.S.I.R. Christchurch (CHR) engaged in the preparation of a macrolichen flora of New Zealand to be illustrated by Keith West. It is expected that this work will be ready in 1981.

Current projects include: Revisions of the New Zealand species of *Xanthoparmelia*, *Parmelia* sens. lat. (incl. *Parmelia* sens. str., *Hypotrachyna*, *Parmelina*, *Pseudoparmelia*, *Everniastrum*, and *Parmotrema*), *Anzia* and *Pannoparmelia*; *Stereocaulon*; *Siphula*; *Unea* and *Neuropogon*; *Coccocarpia* (with Lars Arvidsson); *Pseudocyphellaria* (with Peter James and Alistair Wilkins); *Sticta* and *Lobaria*; a long-term study of N.Z. Pannariaceae (with P.M. Jørgensen). Ecological work continues on the alpine lichens of New Zealand; the lichen vegetation of Stewart Island, and the Three Kings Islands; the lichen flora of the Nelson Lakes National Park (with M.J.A. Bulfin); and a census of the lichens of Banks Peninsula.

Historical works include studies on: the lichen collections of Archibald Menzies (1754-1842); the influence of Erik Acharius and Olof Swartz on English lichenology from 1799-1814; an investigation of the lichenological correspondence between Acharius and Swartz; and the preparation of a detailed account of the history of lichenological exploration in New Zealand from 1769-1978.

HAWKSWORTH, David L. (England) reports that his current research is mainly on the lichenicolous fungi; a monograph of all Hyphomycetes reported from lichens is almost ready for press and should appear in 1979, and the identities of all groups of lichenicolous fungi first described from the British Isles are gradually being investigated. He is travelling to Saudi Arabia in March-April 1978 as Visiting Professor at the University of Riyadh where he will be lecturing and collecting microfungi and lichens. Dr. Hawksworth was elected secretary of the International Association for Mycology at the IMC-2 meetings in Tampa last summer.

KÄLLSTEN, Leif (Sweden) started his thesis work, a revision of the genus *Opegrapha* in Scandinavia, last autumn in Uppsala.

LÖFGREN, Ola, (Sweden) is working on a revision of *Sphinctrina* in Europe with L. TIBELL.

MACKENZIE, Elke (Costa Rica) is preparing a key to all species of *Stereocaulon* for publication in the Journal of the Hattori Botanical Laboratory (no. 44). The "Conspectus" for the genus has just appeared in no. 43 of the same journal.

MOBERG, Roland (Sweden) is continuing his study of *Physcia* and allied genera in Europe and North America. He has also started a revision of the East-African species and will probably extend investigation to other parts of the world.

NASH, Thomas III (U.S.A.) and his wife Bess spent three weeks in Marburg, Germany with Aino HENSEN who reports that Tom speaks German very well after only a month at the Goethe-Institut in Rothenburg. Aino writes that she and Tom will be studying "the small black ones" from the arid Arizona deserts.

POELT, Josef and NAYRHOFER (B.R.D.) are continuing their work on saxicolous *Rinodinae* in Europe and have some of their results in press.

RENNER, Bernd (B.R.D.) is working at Marburg on a doctorate, and will be studying "the influence of algae on the morphology and physiology of the lichen mycobiont". He would appreciate receiving fresh, living material of *Lobaria*, *Pseudocyphellaria*, *Sticta/Dendrisocaulon*, *Nephroma*, and *Peltigera* species, especially composite green algal and blue-green algal morphotypes.

SIPMAN, H.J.M. (Netherlands) has started a monographic revision of the genus *Megalospora* of the whole world. He may later expand the study to include the related genus *Bombyliospora*. He therefore requests material of *Megalospora* (or unidentified *Bombyliospora*) for identification or confirmation.

TIBELL, Leif (Sweden) is continuing his revisional work in Caliciales, including Mycocaliciaceae. Just having finished a revision of *Microcalicium* he is now working on a revision of *Chaenotheca* in the Northern Hemisphere. *Calicium* is also being studied on a world-wide basis.

TØNSBERG, Tor (Norway) has moved to the Department of Botany, University of Trondheim, 7000 Trondheim, Norway. He is working with the corticolous microlichenflora in an area around Oslofjorden, South Norway.

VĚZDA, A. (Czechoslovakia) is currently working on foliicolous lichens, especially from Africa, as well as a monograph of the Gyalectaceae s.str. (*Gyalecta*, *Gyalectina*, *Pachyphiale*, *Dimerella* and *Coenogonium*) on a worldwide basis; he would be interested in seeing unidentified material for study. He plans also to continue in the study of marine and maritime lichens in SE Bulgaria (2 weeks) and of foliicolous lichens in Caucasus (Colchis, 3 weeks).

WEBER, W.A. (U.S.A.) will spend three weeks of late March and early April along the southern coast of Peru to try to discover possible sources of the Galapagos lichen flora. In August 1978 he is going to participate in the Soviet-American Botanical Exchange Program, a 30- to 45-day field expedition by American botanists to Altai. Three American botanists are scheduled to make the trip, in cooperation with resident Soviet botanists. Very close floristic connections exist, at least in the phanerogamic flora, between the Rocky Mountains and the Altai, recognized over a hundred years ago by Sir Joseph Hooker.

## Awards & Honors

BIRD, Charles D. (Canada), in January, 1978, was given the Loran L. Goulden award for outstanding work in the area of natural history in the Province of Alberta.

HAWKSWORTH, David L. (England) is to be awarded the Linnean Society of London's Bicentennial Medal on May 24, 1978. This is a new medal to be awarded each year to a biologist under 40. Dr. Hawksworth remarks that he feels very honoured to be the first recipient.

## Herbaria

### Harmand Herbarium

There has been a great deal of confusion concerning the location of the original herbarium of l'Abbé J. Harmand. Richard LALLEMANT (France) checked into the situation and reports the following:

Le Laboratoire de biologie végétale et de phytogéographie de l'I.R.F.A. rappelle qu'il est dépositaire de l'herbier général HARMAND, composé d'environ 30.000 parts; cet herbier demeure à la disposition des spécialistes. Pour tout renseignement, s'adresser à: Laboratoire de Biologie végétale et de Phytogéographie - I.R.F.A., 2 bis, rue Volney, B.P. 858, 49005 Angers Cedex, France.

### Laurila Herbarium

The herbarium of MATTI LAURILA (1915-1942) was recently transferred from Department of Plant Pathology, University of Helsinki (HPP) to the Botanical Museum of the same university (H). His collections amount to 22,000 specimens, including 7900 lichens. Laurila was an exceptionally talented mycologist and lichenologist who, in spite of his young age (only 26 when killed in the war), was already a specialist of many crustose lichens and the corticiaceous fungi. His carefully prepared and well-labelled collections are mainly from the provinces Satakunta, Varsinais-Suomi and North Karelia in Finland and the former Finnish areas Kutsa National Park and Lake Paanajärvi that are now located in the Murmansk Region and Karelian ASSR in the USSR. During the war he also collected along the Vichka River north of Lake Onega in the Karelian ASSR. A large part of the herbarium is still unmounted and unnamed. Numerous duplicates of his specimens are also located in Turku (TUR), where, in 1940 he was a student majoring in botany under Professor Harry Waris, a student of lichen algae. In lichen taxonomy he was also helped a great deal by Dr. Veli Räsänen.

- T. Ahti

### Texas A & M

Robert EGAN encourages systematic lichenologists to request loans of specimens for their research projects from the Texas A&M University Biology Department Herbarium (with about 12,000 lichens).

### Milwaukee Public Museum

The MIL bryophyte and lichen herbaria have now been reactivated. They will soon begin an exchange but are currently seeking *gifts* of exsiccata or other reference materials. Emphasis to be on Wisconsin (esp. inventory of biotic preserves), the American Midwest, selected North American research areas, flora of Central America, and international collections (esp. Pertusariaceae).



## Books

*Opredelitel' lishaynikov SSSR (Handbook of the lichens of the U.S.S.R.).* Volume 4. (Verrucariaceae - Pilocarpaceae). E.G. Kopaczewskaja, M.F. Makarevich and A.N. Oxner. 1977. 344 pages. Izdatel' stov "Nauka", Lenin-grad. Roubles 3.50. This volume includes the treatment of 415 species, representing 41 genera. There are 270 illustrations consisting of drawings which have been mainly redrawn from various monographs, and numerous, original, black-and-white photographs. In particular, the book gives a useful synopsis of difficult lichenized pyrenomycetes, among them many little known species described by Soviet authors (e.g., in *Endocarpon* and *Endopyrenium*).

- T. Ahti

*Lichen Ecology.* M.R.D. Seaward, ed. Academic Press, London, New York, San Francisco. 1977. 550 pp. £23.00, \$44.90 (U.S.). The subjects of lichen ecology and phytogeography, treated relatively lightly in recent review volumes, are given a rather thorough examination in this new book. Most aspects of lichen ecology are covered including two chapters on lichen-animal relationships, a 120 page "preliminary conspectus" of British lichen communities, and a lengthy bibliography of lichen floras of the world.

- I.M. Brodo

*Bestimmungsschlüssel europäischer Flechten. Ergänzungsheft I.* J. Poelt und A. Vězda. J. Cramer, Vaduz, Germany. 1977. 258 pp. (Bibliotheca Lichenologica 9). Subs. Preis DM 40,--; Ladenpreis DM 50,--. A worthy complement to the famous "Bestimmungsschlüssel..." of 1969, this volume presents the most modern treatments of 56 genera (or subgenera in a few cases). Most have been written by the authors, but several have been contributed by recognized experts in certain groups (e.g., Ahti for *Cladonia* and Jørgensen for *Pannaria* aggr.) Of these genera, 15 did not appear in the 1969 edition, having been, for the most part, recently segregated from large genera (e.g., *Parmelia* and *Biatorella*). Anyone involved in the identification of lichens will have to have a copy of this book nearby.

- I.M. Brodo

*Lichenology in the British Isles 1568-1975. An Historical and Bibliographical Survey.* D.L. Hawksworth and M.R.D. Seaward. Richmond Publ. Co., Richmond, England. 1977. 231 pp. £23.10. This historical account of the development of lichenology in the British Isles over the past 400 years is presented together with a bibliography of approximately 2700 titles (books, articles, exsiccatae, etc.) which include British lichen records. This will be an important reference for anyone dealing with the British lichen flora.

- I.M. Brodo

*Dyes from Lichens & Plants.* Judy Waldner McGrath. Van Nostrand Reinhold Ltd., Toronto, New York, Cincinnati, London, Melbourne. 1977. 144 pp. \$14.95 (Can.) This unusual book, beautifully illustrated with excellent photographs, 16 of them in colour, is a guide for using lichens (and flowering plants) as sources of dyes. What makes the book particularly unique is that the plants are all arctic species, found near Spence Bay in northern Keewatin (N.W.T., Canada). The text is written in a chatty, easy-to-read style. The methods seem to be easy to follow, and the lichenological information is reasonably accurate.

- I.M. Brodo

*Second Supplement to "Chemical and Botanical Guide to Lichen Products".* C.F. Culberson, W.L. Culberson, A. Johnson (see I.L.N. 10(2): 15). Copies can be ordered, at \$12.00 (U.S.), from: The Bryologist, 2345 Tower Grove Ave., St. Louis, Missouri 63110 U.S.A.

## Views

As already stated (9(2):13) fungi included in lichen genera must be named as lichens (lichen nomenclature) and lichens in fungal genera as fungi (fungal nomenclature). A combined lichen-fungal nomenclature such as that envisaged by Hawksworth (Mycologist's Handbook), Ahti (9(1):19), and Jørgensen (10(1):13), with different starting points for lichens and fungi, is a logical impossibility, contrary to the Code, and practically unworkable. Thus Jørgensen (10(2):16) considers that two lichens with the same fungal component, e.g., *Lobaria amplissima* and *Dendroscopaulon umhausense*, can have only one legitimate name. The Code states that lichen names shall be considered as applying to their fungal components, but this was done solely to ensure that lichen names would not be rejected as nomina confusa. It does not alter the fact that *L. amplissima* and *D. umhausense* are both legitimate lichen names (starting point 1753) as opposed to fungal names (starting point 1821). Neither does it invalidate the names for the fungal components of lichens proposed by Thomas (1939) and later Ciferri and Tomaselli. Thus the name of the fungal component of *L. amplissima* (lichen) is '*Stictomyces amplissimus*' (fungus) whether it occurs in *L. amplissima*, *D. umhausense*, or any other lichens.

- G. Salisbury

"It is quite impossible to distinguish some lichens from fungi, .."

February 1869

Letter from the mycologist Rev. M.J. Berkeley (1803-89) reproduced in *Trans. R. Soc. Edinb.* 25: 515 (1869) in an article by W.L. Lindsay.

Communicated by D.L. Hawksworth



## Deaths

ALLORGE, Madame Valentine (France) qui assura pendant trente-trois ans la direction de la Revue bryologique et lichénologique est décédée à Paris le 24 décembre 1977. Elle allait avoir 90 ans.

Au décès de son mari Pierre Allorge en 1944, V. Allorge prit la direction de la Revue bryologique et lichénologique, secondée dès ce moment par Mme S. Jovet-Ast. En relation avec de très nombreux lichénologues dans le monde, Mme Allorge attachait une grande importance à l'édition régulière de leurs travaux et à leur diffusion. "Elle commença ainsi la publication d'une bibliographie lichénologique, donnant de brèves analyses des articles qu'elle recevait.

En dépit de son âge, qu'elle n'avouait pas, Madame Allorge restait active. En 1975, elle était à Leningrad participant aux séances du 12<sup>ème</sup> Congrès international de Botanique. Elle fréquentait régulièrement le laboratoire de Cryptogamie du Museum National d'Histoire Naturelle. C'était un plaisir de l'y rencontrer, toujours curieuse du devenir de chacun, gaie, pimpante et incorrigiblement coquette! Tous ceux qui l'ont connue se sentiront attristés aujourd'hui.

- Marie-Agnes Letrouit

LOUNAMAA, Kaarlo Johannes (Finland) died on 21 February 1978 in Helsinki, Finland. He was born on 6 October 1913. He worked in various teaching and research positions at the University of Helsinki and Helsinki Technological University, and recently, as an Associate Professor of Biology, at the newly established University of Joensuu in eastern Finland, retiring in 1976. To lichenologists he is known for his studies on trace elements in lichens and other plants, and especially for his Ph.D. thesis (1956), still frequently cited, entitled "Trace Elements in Plants Growing Wild on Different Rocks in Finland. A Semi-quantitative Spectrographic Survey".

- T. Ahti

KUJALA, Viljo Vilho (Finland), a distinguished Finnish ecologist, phytogeographer and mycologist, died on 17 September 1977 at the age of 86. He was a Professor of Forest Biology in the Finnish Forest Institute between 1938 and 1961. He paid some attention to lichens, e.g., publishing a useful paper entitled "Untersuchungen über die Waldvegetation in Süd- und Mittelfinnland. I. Zur Kenntnis des ökologisch-biologischen Charakters des Pflanzenarten unter spezieller Berücksichtigung der Bildung von Pflanzenvereinen. C. Flechten" (Comm. Inst. Quaest. Forest.

Finlandiae 10(3):1 - 61. 1926). His lichen collections made in British Columbia in 1931 were reported by V. Räsänen in 1933 ("Contribution to the lichen flora of North America". Ann. Missouri Bot. Garden 20:7-21). His collections are located in two herbaria in Helsinki (H and HFR). The lichen *Usnea kujalae* Räs. is named after him.

- T. Ahti

## Excursions

### *British Lichen Society*

*Mid Wales, 16-23 June 1978.* This excursion, based at the Llysdyman Field Centre, Newbridge on Wye, promises to be particularly interesting with visits to relic woodlands, ravines, and outcroppings which have been little-studied. The costs for accommodation are quite low. For information and reservations, contact the trip leader, Dr. F. Rose, 36 St. Mary's Road, Liss, Hampshire GU33 7AH, U.K.

*Worcester, 24-25 June.* This trip, to examine the Cotswolds and Malverns with their interesting calicolous habitats, is being held in conjunction with the mid-Wales meeting described above. For information, contact the leader, Mr. R.H. Bailey, Dep't of Extra-Mural Studies, 26 Russell Square, London WC1B 5DP, U.K.

*Loch Lomond, Scotland, 6-9 October 1978.* To be held jointly with the Botanical Society of Edinburgh (Cryptogamic Section), this excursion will explore the Loch Lomond National Nature Reserve. Pauline Topham and Frank Brightman are the leaders. Early booking is essential, so contact Mr. Brightman at the British Museum (Natural History), Cromwell Road, London SW7 5BD, if you think you can attend.

### *American Bryological and Lichenological Society*

An excursion in the Mountain Lake area of southwestern Virginia will precede the annual A.B.L.S. meeting to be held this year in Blacksburg, Virginia (see MEETINGS). Activities will include an orientation meeting the evening of 23 June, and visits to a limestone area, an epiphyte-rich beech-birch-hemlock forest, oak forests, siliceous boulder gardens and *Sphagnum* communities on the 24th and 25th. For information and reservations, contact Dr. Susan Moyle, Division of Science and Mathematics, Centre College, Danville, Kentucky 40422. Susan Moyle and David Breil are trip leaders.

I.A.L.-Sponsored Field Meeting in Costa Rica, 27 Dec. 1978 - 6 Jan. 1979.

Plans for the *Field Symposium in Tropical Lichenology*, organized by the International Association for Lichenology, are rapidly taking form. Some preliminary details were published in the last Newsletter (10(2): 14). A list of eight potential invited speakers has been drawn up with talks aimed at reflecting the state of our knowledge of tropical lichens. Those invited so far (but not all confirmed) include T. Ahti, M.J. Dibben, M.E. Hale, P.W. James, P.M. Jørgensen, O.L. Lange, T.H. Nash III, and R. Santesson. Other names have been suggested and the list may grow.

The bulk of the activities other than the symposium will center around excursions into tropical habitats rich in lichens. The trips are being arranged in conjunction with the Organization for Tropical Studies, Inc.

Drs. Martyn Dibben and Thomas Nash III have submitted a proposal to the U.S. National Science Foundation for partial travel support for American participants. They are also seeking UNESCO and other sources for support of non-American attendees.

Reservations should be made through Dr. Martyn Dibben, Botany Division, Milwaukee Public Museum, 800 W. Wells St., Milwaukee, WI 53233, U.S.A.  
*Note:* A DEPOSIT OF \$150 WILL BE REQUIRED BY 1 OCTOBER 1978. Checks can be made out to the International Association for Lichenology and sent to Dr. Dibben.

## Exsiccatae

### *A New Lichen Exsiccata from Uppsala*

The first fascicle of a lichen exsiccata containing species of Caliciales (including Mycocaliciaceae A. Schmidt) will be distributed from the Herbarium, Institute of Systematic Botany, University of Uppsala, Sweden. The first fascicle includes 25 numbers representing 24 species. The majority of the numbers, 16, originate from Europe, nine are from North America and one is from the Canary Islands. Complete sets will be distributed i.a. to: BM, CANL, CHR, H, LWU, M, MEL, MICH, PE, POZ, TNS and US. Comments pertaining to the exsiccata will be published separately in *The Lichenologist*. The name of the exsiccata is "*Caliciales exsiccatae*".

- L. Tibell

## Meetings

### *Deutsch Botanische Gesellschaft.*

The annual meeting of the D.B.G. (German Botanical Society) will be held at the University of Marburg from September 10th through the 16th. One day (the 13th) has been set aside for "Flechten und ihre Symbionten" (Lichens and their symbionts). Aino Henssen writes that all those passing through West Germany and who will be near Marburg "would be very welcome to attend the meeting and make acquaintance with our beautiful old town".

### *American Bryological and Lichenological Society*

The A.B.L.S. will hold its 1978 meeting at Virginia Polytechnic Institute in Blacksburg, Virginia, 25-27 June together with some other American botanical societies (but not with A.I.B.S.). The meeting will include 10 papers on all aspects of lichenology, a pre-meeting excursion to a segment of the Appalachian Mountains (see EXCURSIONS), and several social gatherings. Registration forms and housing information can be obtained from A.B.L.S. secretary, Dr. Marshall Crosby, c/o ABLs-Registration, Missouri Botanical Garden, 2345 Tower Grove Ave., St. Louis, Missouri 63110, U.S.A.

### *Symposium on Symbiosis*

As mentioned in the last issue of the Newsletter (10(2):13), the Ohio State University College of Biological Sciences will sponsor a symposium entitled "*Cellular Interactions in Symbiotic and Parasitic Relationships*". The meeting will take place in Columbus, Ohio, 7-9 September 1978. Three of the 12 invited presentations will be on lichens, but the other papers will naturally be of interest to those interested in the more general aspects of the symbiotic phenomenon. For a detailed announcement and registration forms, or a request to present a 15 minute contributed paper with proposed title, write to: 5th Annual Colloquium, College of Biological Sciences, The Ohio State University, 484 West 12th Ave., Columbus, OH 43210, U.S.A.

## Journals

David L. Hawksworth has become the editor of *The Lichenologist* following Peter James' retirement from the editorship. Peter, together with Drs. O.L. Gilbert, D.J. Hill and P.B. Topham, will act as assistants; all contributions to *The Lichenologist* should now be sent directly to Dr. Hawksworth.