

# International Lichenological Newsletter

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

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## RESEARCH NEWS & NOTES

Ahti, Ted (Helsinki, Finland) will visit China in April-May 1987 to study *Cladonia* and other lichens. He was elected foreign member of the Scientific Council of the newly (1985) established Systematic Mycology and Lichenology Laboratory of the Institute of Microbiology, Academia Sinica, Beijing. The trip will include fieldwork in Yunnan or Guizhou Province with Prof. Wei Jiang-Chun, the director of the Laboratory, and other Chinese colleagues. (See also "News from Brazil".)

Alava, Reino (Turku, Finland) retired from his position as Curator of the Turku University herbarium (TUR and TUR-Vainio), and now has various projects under way which deal with Vainio's collections. Last year he published a paper entitled "Edvard August Vainio's journey to Brazil in 1885 and his *Lichenes Brasilienses Exsiccati*" (Publications from the Herbarium, University of Turku 1). It contains both numerical and taxonomical lists of this exsiccatum. He is currently compiling a catalogue of Vainio's types, to be published by the end of this year.

Brako, Lois (New York, USA) visited Brazil in January 1987 to collect *Phyllopsora* for her thesis studies. (See also "News from Brazil".)

Clayden, Stephen (Saint John, Canada) is finishing his thesis, under the guidance of Dr. A. Pentecost, University of London, on the systematics and ecology of yellow-pigmented taxa of *Rhizocarpon* in North Wales. Since January 1987 he has held the position of Curator of Botany at the New Brunswick Museum in Saint John.

Gonçalves-Pereira, Eugenia Cristina (Recife, Brazil) spent January 1987 in the Antarctic, working on lichen ecology. She is also studying antibiotic activity shown by lichen extracts on bacterial cultures.

Diederich, Paul (Lorentzweiler, Luxembourg) is making good

progress with his Ph. D. on the taxonomy of epiphytic micro-lichens and lichenicolous fungi from Belgium (Director: J. De Sloover, Louvain-la-Neuve, Belgium). He has written the programs for a database of the lichens of Luxembourg with such possibilities as printing distribution maps; it is planned to extend the database to include Belgium and Northern France, in cooperation with E. Sérusiaux. In April 1987 he visited D.L. Hawksworth and J. Laundon for discussions on *Polycoccum* and *Lepraria*, respectively. He is helping G. Clauzade and C. Roux in the preparation of a second edition of "Les champignons lichénicoles non lichénisés".

Ellin, Simon (Bradford, UK) has commenced field and solar-dome experiments in connection with his Ph.D. work on the effects of acid rain on lichens; his research, supervised by Mark Seaward, is supported by a grant from the Central Electricity Generating Board.

Hertel, Hannes (Munich, West Germany) collected lichens on a trip to Madeira in Summer 1986. He is continuing the revision of the saxicolous species of *Lecidea* s.l. in Antarctica and the Subantarctic Islands (incl. New Zealand, Tasmania and Patagonia). In preparation are treatments of the euthallinous species of *Porpidia* in Europa, together with J.G. Knoph, of the saxicolous *Lecideae* of Iceland, together with G. Rambold ("Diplomarbeit"), and of the saxicolous species of *Schaereria* in Europe, together with L. Zürn ("Diplomarbeit").

Inoue, Masakane (Akita City, Japan) returned to Japan after a 16-month stay in Antarctica. He collected many lichen samples and ecological data in the ice-free areas of Soya Coast and Prince Olav Coast, East Antarctica. His work included phytosociological investigations, micro-meteorological observations around terrestrial communities and detailed growth studies of *Buellia frigida*. He is now dealing with these collections, and he intends to resume his work on the lecideoid lichens of Japan.

Jacobson, Peter (Kiel, West Germany), a member of L. Kappen's research group, is just finishing a study of the *Xanthorion parietinae* in eastern Schleswig-Holstein (N. Ger-

many). Over the next three years he will continue with a mapping scheme of lichens in Schleswig-Holstein.

Jørgensen, Per M. (Bergen, Norway) has resumed his professorship at the Botanical Institute, University of Bergen, and has now much more time for lichenological research. He is continuing his studies on *Pannariaceae*: Part II, on *Leioderma*, in cooperation with David Galloway, will be published this autumn; Part III, on *Erioderma*, in cooperation with Lars Arvidsson, is now being written up. A treatment of the chemistry, by Jack Elix and students, is in press. In April Per will visit the British Museum (Natural History) to start work on Part IV, the Australasian species, in cooperation with David Galloway and Jack Elix. In addition, he is involved in a project on Norwegian crustose lichens (see below).

Kantvilas, Gintaras (Sandy Bay, Tasmania) is undertaking a lichen survey of Mount Sprent, S.W. Tasmania, as part of a management plan.

Kappen, L. (Kiel, West Germany) has successfully carried out field and laboratory measurements of photosynthesis and water relations of maritime and continental Antarctic lichens, together with B. Schroeter and M. Boelter. The measurements will be evaluated soon.

Kershaw, K.A. (Hamilton, Canada) reports that his laboratory is currently involved in the following aspects of physiological ecology of lichens: 1. Plant succession on raised beaches adjacent to James Bay which finally results in Spruce-*Cladonia* lichen woodland. During the coming summer the vegetation will be sampled and subsequently an analysis of the environmental changes that occur during the succession will be attempted. 2. A very pronounced level of apparent membrane damage in *Cladonia rangiferina*, apparently as a result of winter snow cover, has been discovered recently. Work is in progress to examine this intriguing concept. 3. The apparent "uncoupling" of some photosynthetic units in *Peltigera*, reported previously, but difficult to detect in some years, was very evident this year, after long snow cover. An attempt is being made to document this

phenomenon in detail.

Lackovicová, Anna (Bratislava, Czechoslovakia) is preparing, since 1985, together with Eva Lisická and Ivan Pisút, a series "Lichens and Air Pollution - a bibliography of papers published in socialist countries". They would very much appreciate receiving any references on the subject.

Lechner, Eva (Munich, West Germany) revises the species of *Lecidea* s.str. and some other small lecideoid genera of South Africa, as a "Diplomarbeit". Her study is based mainly on lichens collected by Ove Almborn, but she would welcome specimens from other collectors on loan.

Lisická, Eva (Bratislava, Czechoslovakia) and Ivan Pisút are preparing a catalogue of the ca. 1000 lichen species occurring in the Tatra Mts. They hope to finish this work by the end of April 1988.

Masselink-Beltman, Ineke (Doorwerth, Netherlands) began an investigation of ascocarp ontogeny in *Lecidea* s.l. in spring 1986, in cooperation with Hannes Hertel (Munich). Her address is: Sweelincklaan 2, NL-6865 JB Doorwerth, Netherlands; tel. 085-340580.

Orange, Alan (Cardiff, UK) is currently revising the British species of *Thelidium* as a preliminary stage in a revision of the European species.

Peveling, Elisabeth (Münster, West Germany) reports that Gerhard Schlarmann of her research group has finished his thesis on investigations on the cell walls of mycobionts. Under her supervision four students started studies on lichens and their initial stages occurring on *Picea* needles.

Pietschmann, Martin (Munich, West Germany) is revising (for a Ph.D. thesis) the saxicolous species of *Lecidea* s.l. (excl. *Lecidella*) of the European Mediterranean area (incl. the adjacent parts of North Africa and Asia Minor). He invites collectors to send their material from any part of the Mediterranean for investigation.

Pinto Marcelli, Marcelo (São Paulo, Brazil) finished his

Ph.D. thesis on the ecology of mangrove lichens in S.E. Brazil in January 1987.

Roux, Claude (Marseille, France), poursuit, en collaboration avec L. Abbassi Maaf, ses recherches phytosociologiques et écologiques sur les peuplements lichéniques de la chênaie verte de Basse-Provence (SE de la France): une première publication sur ce sujet (60 pages avec 12 tab. et 5 fig.) est actuellement sous-presse. Avec G. Clauzade (Cavaillon, France), il termine un deuxième supplément (près de 40 pages) à la flore "Likenoj de Okcidenta Eŭropo" (Clauzade & Roux, 1985), supplément qui paraîtra à la fin de 1987 ou au début de 1988, en même temps qu'une traduction, en langue française, de l'introduction de "Likenoj de Okcidenta Eŭropo" (traduction effectuée par le Dr. Vaille). En collaboration avec G. Clauzade et P. Diederich (Lorentzweiler, Luxembourg), il rédige un ouvrage de détermination, en Langue internationale (espéranto), sur les champignons lichénicoles non lichénisés (environ 130 pages). Cet ouvrage, prenant en considération les données récentes de la littérature, remplacera "Les champignons lichénicoles non lichénisés" de Clauzade et Roux (1976), aujourd'hui complètement dépassé. Avec M.S. Christansen, il termine un travail sur *Verrucaria viridula* (Schr.) Ach.: typification et revue des principales interprétations de ce nom. Avec J. Poelt, dans le laboratoire duquel il a effectué un séjour de 1 mois (en août 1986), il prépare une révision des espèces saxicoles-calcicoles du groupe de *Lecanora dispersa*.

Ryan, Bruce (Tempe, USA) visited Europe from 15 May to 1 August 1986 on an NSF grant. He stayed one month in Graz, and shorter periods in Vienna, Munich, Berlin, Stuttgart, Geneva, Uppsala and Helsinki, to visit herbaria and to work with lichenologists. He attended the BLAM excursion to Vorarlberg. In August 1986 he spent two weeks with Dr. Brodo (National Museum, Ottawa) and in March 1987 one week with Dr. Hale (Smithsonian Institution, Washington), the latter supported by a grant from the Smithsonian Institution. In February 1987 he and Dr. Nash were visited by Prof. Poelt, who accompanied them on two excursions to

Mexico. His PhD dissertation on the systematics of lobate species of *Lecanora* in North America is proceeding well, and publications are in progress. Other recent research projects include studies on lichens accompanying microcolonial fungi in Oregon, and a quantitative description of alpine lichens in California, both of which are in a manuscript stage.

Schwab, Adolf (Munich, West Germany). His Ph.D. thesis "Rostfarbene Arten der Sammelgattung *Lecidea* (Lecanorales), Revision der Arten Mittel- und Nordeuropas" appeared in *Mitt. Bot. München* 2: 221-476. It contains an elaborate key to Lecideoid saxicolous lichens with a "rusty" thallus. His present address is: Glatzberg 1, D-8251 Heldenstein, West Germany.

Schwaiger, Hans (Munich, West Germany) nearly finished his investigation ("Diplomarbeit") of the lichen flora of the "Forstenrieder Park", a forest area near the city of Munich, which was investigated by Arnold ca. 1890.

Stenroos, Soili (Helsinki, Finland) spent three months (December 1986 to March 1987) in Tierra del Fuego in Argentina and Chile. She participated in a Finnish Biogeographic Expedition to the Antiboreal Regions, to help phytosociologists in the identification of lichens, and paid special attention to *Cladoniaceae*. She also visited Bariloche, Corrientes and Buenos Aires.

Stevens, Nell (St. Lucia, Australia) received her Ph.D. in 1985 for her revision of the Australian *Ramalinae*. Her thesis will be published in the June 1987 issue of the *Bulletin of the British Museum (Natural History)*. Nell is also issuing an exsiccatum of the Australian *Ramalinae*. Her present research is concentrating on the Australian *Usneae*. After the 14th International Botanical Congress, Nell plans to visit G, GRZ, O and BM to study type specimens and European *Usneae*.

Triebel, Dagmar (Munich, West Germany) will soon finish her Ph.D. thesis on "Parasitische Ascomyceten auf saxicolen und terricolen Arten der Sammelgattung *Lecidea*". She deals with about 40 species in 20 genera (e.g. *Arthonia*, *Cercido-*

*spora*, *Dactylospora*, *Endococcus*, *Muellerella*, *Stigmidium*) mainly growing on lecideoid representatives of the lichen families *Biatoraceae*, *Lecanoraceae*, *Lecideaceae*, *Porpidiaceae*, *Psoraceae*, *Schaereriaceae*, *Tephromelataceae* and *Trapeliaceae*. She has just started a revision of the genus *Nesolechia*.

Vitikainen, Orvo (Helsinki, Finland) received a grant which will enable him to have research leave in order to finish his monograph on European *Peltigera*.

Xavier Filho, Lauro (João Pessoa, Brazil) will spend five months in Helsinki in 1987, to continue his studies on lichen chemistry and taxonomy.

### "Progress and Problems in Lichenology in the Eighties" Symposium volume

The contributions presented during the International Symposium held at the University of Münster in March 1986 will be published as volume 25 of the series "Bibliotheca Lichenologica". Most of the oral and poster presentations are included in this volume of about 500 pages, which is scheduled to appear by the end of May 1987. Price will be ca. 150,00 DM.

The contributions have been arranged in five chapters. The first, entitled "Developmental Morphology and Ultrastructure", is concerned with general morphology of lichen thalli and the problems of symbionts and their resynthesis. Reproductive strategies and -structures and electron-microscopical descriptions of certain symbiotic structures are also included. The second chapter, "Biology and Taxonomy of Genera and Specific Groups", deals with morphology, ecology and classification of some interesting and new lichen taxa. The third chapter, "Ecophysiology", covers photosynthesis and water relationships in lichens of different habitats and the occurrence of mineral elements in lichen thalli. The "Ecology and Distribution" chapter summarizes the contributions on certain groups of lichens occurring in the Southern Hemisphere and Europe. The concluding chapter "Chemotaxonomy" deals with the identification of lichen substances and their value in classification.

## NEWS OF FLORA PROJECTS

## Lichen Flora of Southern Africa

Ove Almborn and Ingvar Kärnefelt are working up lichen collections assembled from southern Africa during 1982-1986. They seek the assistance of as many specialists as possible for the proposed Lichen Flora of Southern Africa. Those interested are kindly requested to contact them. Among the more advanced contributions are the pyrenocarps by R.C. Harris and the *Parmeliaceae* by M.E. Hale.

## Lichen Flora of the Guianas

Within the framework of the project Flora of the Guianas, supported by Botanical Institutions in Berlin, Cayenne, Kew, New York, Paris, Utrecht and Washington, it was decided not to restrict the scope of the flora to vascular plants, as is usually done, but also to include bryophytes, fungi, algae and lichens. The present author was asked to undertake responsibility for the lichen section. This was accepted, even though it involves a lot of work on crustose, poorly known lichen groups, which are predominant here. Hopefully it will prove to be a good opportunity to improve the present poor knowledge of lichens in tropical lowlands.

As a start, a checklist of earlier published records was compiled from a large card index made by Wim Hekking. A manuscript of this checklist is available now, and it will probably be published in a few months. In addition, André Aptroot and H. Sipman participated in an expedition to the Guianas, mainly Guyana, in 1985, and collected some 2500 lichen specimens. The first flora treatments scheduled are on *Physciaceae* by Aptroot, for which the manuscript is ready, and on *Parmeliaceae* by R. van Aabel, which is scheduled for 1988. Treatments of *Leptogium*, the pyrenocarps and *Thelotrema* have been started, or will be started soon, by M. Lindstrom, R. Harris and M.E. Hale respectively. A draft key to the genera is already available for trial; comments are very welcome.

--- Harrie Sipman

## News from Brazil

At the 38th Brazilian Botanical Congress, held in São Paulo from 25-31 January 1987, lichenology was well represented. Brazilian participants included Mariana Fleig (Porto Alegre), Maria Aparecida Arauso dos Santos (Rio de Janeiro), Sionara Eliasaro (Belo Horizonte), Lúcia Yoko Nagaoka (São Paulo) and Suzana Maria de Azevedo Martins-Mazzitelli (Porto Alegre). Among the foreign participants were Ted Ahti (Helsinki) and Lois Brako (New York). Several lichenological papers were presented, including those by Fleig, Eliasaro and Azevedo.

Prior to the congress, Ted Ahti participated in the "Flora Neotropica" meeting and excursion to Itatiaia, and made field excursions in northeastern Brazil together with Lauro Xavier Filho. He also travelled to Brasília, where he visited George Eiten and made excursions to "cerrado" vegetation, which is locally rich in epiphytic lichens. Lois Brako made field excursions from Rio de Janeiro to Torres (Rio Grande do Sul), combing the Serra do Mar and Serra Geral for additional *Phyllopsora* specimens for her thesis studies. Both spent time consulting local herbaria including the collections at RB and the historic holdings of the Museu Nacional in Rio. Moreover, Ted Ahti studied *Cladoniae* in São Paulo (SP), Brasília (UB), Recife (IPA, UFP, URM) and João Pessoa (JPB).

## Offer of Philippine lichens

Mr. Julio M. Mirafuente, Boac, Marinduque Island, Philippines, offers to collect lichens in the Philippines, against payment to cover the costs of collecting. The specimens will be without name, since he cannot provide identifications.

## Book offer: Dodge's Antarctic Lichens

The Farlow Reference Library and Herbarium of Cryptogamic Botany offers copies of Carroll W. Dodge, Lichen flora of the Antarctic Continent and adjacent islands.

To order a copy, send name, address and number of copies, together with a check or money order for \$ 15 per copy, in U.S.

funds drawn on a U.S. bank, payable to Farlow Library. Mail to: Farlow Reference Library, Harvard University, 20 Divinity Avenue, Cambridge Massachusetts 02138, U.S.A.

### Project on Norwegian crustose lichens

Norway has not had a lichen flora covering crustose species since Th. M. Fries' *Lichenographia Scandinavica* (1871-74). The lichenologists of Bergen and Oslo have joined forces, to compile a scientific flora with full descriptions of morphology, anatomy, chemistry, distribution and ecology, all based on personally studied specimens collected in Norway.

An application to the Norwegian Research Council (NAVF) resulted in a grant for a period of three years (1985-1988) to start work on such a flora. An executive committee consisting of P.M. Jørgensen, H. Krog and R. Santesson was set up, and cand.real. Lillian Skjolddal was engaged as project assistant. Of course the three-year period will not be enough to complete a flora covering all 1300-1400 species, but it should be possible to prepare an extensive survey of them.

All Norwegian lichenologists are taking part, and some foreign ones have promised their assistance. The flora will be written in English and cannot be expected before 1990.

### Field reports

#### Note from the editors

Since field exploration plays an important role in detailing lichen diversity, it seems valuable to have a source of information on areas of potential lichenological interest. To provide such a source, the editors would very much welcome reports of field-trips, in which facilities, lichen groups encountered and other aspects of interest are treated. The first treatment of this kind is offered here.

#### The Azores

In July 1986 I made a collecting trip the Azores, together with Mariëtte Teeuwen. These islands, easily accessible from both Europe and North America, have an abundant lichen flora with a pronounced oceanic character. The coastal parts are, due no doubt to the absence of frost, a northern outpost for many tropical lichens.

On the higher mountains, of volcanic origin and rising up to 2300 m, temperate lichens like *Coelocaulon aculeatum* and *Platismatia glauca* occur. Surprisingly, the flora of the Azores appears very incompletely known, and much less so than, for example, the Canary Islands. During our visit, ca. 50 species were encountered which were not previously recorded from these islands. Ten of these, all with a wide tropical distribution, are apparently new to Europe, e.g. species of *Heterodermia*, *Hypotrachyna*, *Ocellularia*.

During the trip, three out of the seven main islands were visited. We started on *São Miguel*, where the international airport is located. The richest sites encountered here were the parks and gardens, and the vicinity of the major crater lakes. Laurisilva relics contained many foliicolous lichens. *Fayal*, reached by plane, was better for coastal rock lichens, with, for example, various species of *Roccella*, *Ramalina*, and much *Sclerophyton circumscriptum*. Caldeira, the major crater on Fayal, also proved very interesting. The island of *Pico* has the largest forest relics, with abundant *Lobarion*, and the highest volcano, the Pico. Ascending the Pico is rather tiring, but the complete change in lichen (and other) vegetation makes the trip worthwhile. It is recommended, however, to start early in order to avoid the burning sun of mid-day.

In all, the Azores are a highly recommended site for a combined lichen- and holiday-trip, and may yield many more northern outposts of tropical lichens.

---André Aptroot

### XIV International Botanical Congress, Berlin 1987

During the XIV International Botanical Congress, to be held in Berlin from 24 July to 1 August 1987, an extensive programme of special lichenological interest is scheduled, including lectures, poster sessions, a fieldtrip, an IAL business meeting and a dinner.

Full details of the scientific programme will only be announced at the beginning of the Congress. A provisional and incomplete list of the items of lichenological interest is given here, mainly based on communications by the responsible symposium organizers.

#### Symposia

**5-01** Classification of higher categories of lichenized and non-lichenized Ascomycetes (O. Eriksson, A. Henssen)

- TIBELL, L. - Criteria for the classification of higher categories of lichenized Ascomycetes.  
 HONEGGER, R. - Ultrastructural studies of asci and the classification of higher taxa of Ascomycetes.  
 KOHN, L.M. - Redelimitation of families in the Helotiales.  
 BARR-BIGELOW, M.E. - Classification of supraordinal taxa of the Ascomycetes.  
 HAWKSWORTH, D.L. - Towards a new systematics of the Ascomycotina.

**5-02 Systematics of lichens at the generic and specific level I + II**  
 (T. Ahti, J. Hafellner)

- STEVENS, G.N. - Taxonomic problems in *Ramalina*.  
 VITIKAINEN, O. - A new taxonomy of *Peltigera*.  
 ALMBORN, O. - The lichen genus *Teloschistes* in Africa.  
 KÄRNEFELT, I. - Evolutionary lines and phylogenetic analysis in the *Teloschistaceae*.  
 SERUSIAUX, E. - A cladistic approach to the generic taxonomy of lichens.  
 RUOSS, E. - Taxonomy of the *Cladonia arbuscula* aggregata.  
 BRAKO, L. - Studies on the genus *Phyllopsora*.  
 KNOPH, J. - Studies in the lichen genus *Lecidella*.  
 COPPINS, B.J. - Some problems with *Micarea*, and implications in other genera.  
 HERTEL, H. - On *Rimularia* Nyl. (Lecanorales), a forgotten genus of lecideoid lichens.  
 BRODO, I.M. - Systematic studies of North American species of *Ochrolechia*.  
 SØCHTING, U. - Ecological modifications in northern species of *Caloplaca*.  
 FARKAS, E. - Systematics of foliicolous lichens.  
 KILIAS, H. - The species concept in lichens, a genetical approach.

**5-03 Systematics of non-lichenized Ascomycetes** (R.A. Shoemaker, E. Müller).

Although no lichens are treated, this symposium will be of interest to anybody interested in the taxonomic relationships of lichenized ascomycetes.

**5-04 Chemosystematics of lichenized fungi** (J.A. Elix, S. Huneck)

- HALE, M.E. - Chemosystematics and evolution in the lichen genus *Parmotrema*.

- LEUCKERT, C. - Studies in lichen chemosystematics: results and perspectives.  
 FAHSELT, D. - Chemosystematics of lichens on the basis of enzymological information.  
 HUOVINEN, K. - Biosequential patterns for the formation of phenolic lichen substances in the genus *Cladia*.  
 MATTSON, J.E. - The species pair concept and the species with vulpinic acid within the genus *Cetraria*.  
 SCHEIDEGGER, C. (and B. RUEF) - Chemotaxonomy of European species of the lichen genus *Buellia* by modern methods of mass spectrometry.  
 APTROOT, A. - Terpenoids in tropical *Pyxinaceae*.

**5-05 Fungi as symbionts and parasites on archegoniates and lower plants** (L. Holm, J. Poelt)

This symposium will compare the fungal parasites on various cryptogam groups, including lichens.

Several contributions on lichens will be included in programme division 6. Those known to the editors are:

**6-08 Plant life under extreme environmental conditions in Antarctica** (E.I. Friedmann, L. Kappen)

- FRIEDMANN, E.I. (& OCAMPO-FRIEDMANN, R.) - Life and death in the Ross Desert: balancing on the brink of existence.  
 BROADY, P. - Plant life on fumarolic soils.  
 SEPPELT, R. - Aspects of the ecology of mosses and lichens in a continental Antarctic ecosystem.  
 SELKIRK, P. - Interpopulation variation in Antarctic mosses.  
 LEWIS-SMITH, R.I. - Environmental gradients in the cryptogamic plant communities of Wilkes Land, continental Antarctica.  
 KOMARKOVA, V. - Ecology of Antarctic peninsula plant community recovery in Qinghai.  
 NOAKES, T. (& LONGTON, R.E.) - Water relations of maritime Antarctic mosses.  
 KAPPEN, L. - Possible indication for the origin of maritime and continental Antarctic floras.

**6-29 Water relations and photosynthetic production of cryptogams** (Lichens, Bryophytes) (T.H. Nash, L. Kappen)

- PROCTOR, M.C.F. - Water-content, water-loss and growth-form in Bryophytes.

VERSEGHY, K. - Water relations of lichens in xerothermic habitats.

ALPERT, P. - Comparative water relations in an assemblage of desiccation-tolerant mosses.

TUBA, Z. - CO<sub>2</sub> exchange of drought-tolerant lichen and moss species in a continental semidesert grassland.

GREEN, T.G.A. - Lichens with two primary photobionts.

LARSON, D.W. - The role of niche segregation for water in permitting coexistence of two sympatric lichen species.

MATTHES-SEARS, U. - Photosynthesis and water relations of *Ramalina menziesii* at the coast of California.

COXSON, D. - Carbon gain patterns in lichens of tropical cloud-shroud mountain habitats.

LINK, S. - A comparison of lichens from contrasting environments based on a model of CO<sub>2</sub> gas exchange.

**6-42. Ecological effects of air pollution on plants** (K. Grodzinska, H.J. Jäger).

SEAWARD, M.R.D. - Effects of quantitative and qualitative changes in air pollution on the distribution of lichens in the British Isles.

#### Poster sessions

**5-153 Lichen studies** (H. Hertel, J. Poelt).

AHTI, T. - The lichens of the family *Cladoniaceae* in the Neotropics.

CANIGLIA, G. - Some aspects of lichen vegetation in the Forest of Cansiglio (Treviso - Belluno - Pordenone, NE Italy).

MAYRHOFER, H. - Distribution patterns within the lichen genus *Rinodina*.

SIPMAN, H. - Distribution patterns of the lichen genus *Stereocaulon* in the Northern Andes.

STENROOS, S. - Studies on the family *Cladoniaceae* in Tierra del Fuego.

BLUM, D.B. & KASHEVAROV, G.P. - The homologies in DNA as a proof of the legitimacy of the establishment of *Lasallia* Mérat lichen genus (*Umbilicariaceae*).

FRIEDL, T. - Phycobionts in the lichen genus *Parmelia* Ach. s.l.

SANDERS, W. - Growth and development of form in the lichen *Ramalina menziesii*.

SEN, K. - A laboratory maintained, litmus producing, 3-component lichen.

**6-142. Ecological effects of air pollution on plants** (K. Grodzinska).

#### IAL activities

The International Association for Lichenology will hold its business meeting, the place and time to be announced at the beginning of the Congress. This is an opportunity to discuss proposals for new activities, express complaints, etc.! A formal agenda will not be published in advance, but the following points are expected to be discussed: secretary's report, treasurer's report, election of a new Council and future activities, such as the suggestion that IAL should be responsible for inter-Congress meetings, such as that in Münster, and excursions.

On the evening of 29 July an informal lichenologists' dinner, in Berlin style, will be held.

#### Lichenological excursion

The excursion programme features a special lichen excursion: Nr.49, The lichen flora of Sardinia (Italy), to be held from 13. - 22. July. It is being organized by P.L. Nimis and J. Poelt. Participants receive a 270 page introduction including an annotated checklist of the species so far known from this under-investigated Mediterranean island.

(A second lichen excursion, nr. 38, The epiphytic, terricolous and saxicolous lichens of Spain, has been cancelled)

For all information, as well as registration, write to: XIV. International Botanical Congress, Königin-Luise-Strasse 6-8, D-1000 Berlin (West) 33.

#### Symposium on Modern Approaches in the Terrestrial Biology of Microorganisms and Plants (lichens, mosses) in the Antarctic, 7-12 Sept. 1987

This symposium will be held at the University of Kiel, 7.-12. September 1987. About 35 scientists from Australia, Denmark, Germany, Japan, New Zealand, Norway, UK and USA are expected to participate in this interdisciplinary meeting. Several lichenologists will present papers. Those interested in attending should

contact Prof. Dr. L. Kappen, Botanisches Institut, Olshausenstrasse 40, D-2300 Kiel, West Germany.

### Lichen Symposium on AEFTAT Congress

The next AEFTAT (Association for the Taxonomic Study of the Flora of Tropical Africa) Congress will be held at the University of Hamburg, West Germany during September 1988. The provisional dates are September 4 - 10, 1988. One of the concurrent symposia to be held during the congress will be on African lichens. Lichenologists interested in attending or contributing towards the programme are invited to contact: Dirk Wessels, Department of Botany, University of the North, Private Bag X 1106, Sovegna, Republic of South Africa, 0727. Non-taxonomic contributions will also be appreciated.

### PERSONALIA

Krog, Hildur (Norway) has been awarded with a personal professorship in taxonomic botany at the University of Oslo, from January 1987. She will continue as head of the lichen department of the Botanical Museum, Oslo.

Tønsberg, Tor (Norway) has been appointed as the first curator of the cryptogamic herbarium in Bergen, from February 1, 1987.

#### Changes of address

M. Casares-Porcel, Depto. de Biología Vegetal, Laboratorio de Botanica, Facultad de Farmacia, 18071 GRANADA, Spain

William Sm. Gruezo, Dept. of Botany, University of Alberta, Edmonton, Alberta T6G 2E9, Canada

Steven O. Link, Earth & Environmental Science Dept., Pacific Northwest Laboratories, Battelle, Richland WA 99352, USA

Bruce McCune, Department of General Science, Oregon State University, Corvallis OR 97331, USA.

Philip W. Rundel, Lab. of Biomedical and Environmental Sciences, 900 Veteran Avenue, Los Angeles, CA 90024-1786, USA

R. Türk, Institut für Pflanzenphysiologie, Hellbrunnerstrasse 34, A-5020 Salzburg, Österreich (Austria)

#### New members

Clayden, Stephen R., The New Brunswick Museum, 277 Douglas Avenue, Saint John, New Brunswick E2K 1E5, Canada

Jacobsen, Peter, Botanisches Institut und Botanischer Garten, Olshausenstrasse 40, D-2300 Kiel 1, Germany-FRG

#### Deceased

A. Zehnder, Dubendorf.

### LIST OF THE SOCIETIES

Australasia: Society of Australasian Lichenologists (SAL). Info: Dr. J. A. Elix, Dept. of Chemistry, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia.

Central Europe: Bryologisch-Lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM). Info: Dr. G. Philippi, Landes-sammlungen für Naturkunde, Erbprinzenstrasse 3, Postfach 3949, D-7500 Karlsruhe 1, Western Germany (FRG)

France: Association Française de Lichénologie (AFL). Info: Dr. Jean-Claude Boissière, Laboratoire de Biologie Végétale, Route de la Tour Dénécourt, F-77300 Fontainebleau, France.

Great Britain: British Lichen Society (BLS). Info: Secretary of the British Lichen Society, Botany Department, British Museum (Natural History), Cromwell Road, London SW7 5BD, UK.

Japan: Lichenological Society of Japan (LSJ). Info: Dr. M. Nakanishi, Dept. of Biology, Faculty of Education, Hiroshima University, 3-1-33-Shinonome-cho, Minami-ku, Hiroshima-City 734, Japan.

Netherlands: Bryologische en Lichenologische Werkgroep der KNNV (BLW). Info: P. Hovekamp, Eiberoord 3, NL-2317 XL Leiden, The Netherlands.

Nordic Countries: Nordisk Lichenologisk Forening (NLF). Info: Ulrik Søchting, Institut for Sporeplanter, Ø. Farimagsgade 2 D, DK-1353 København K, Denmark.

Switzerland: Schweizerische Vereinigung für Bryologie und Lichenologie (SVBL). Info: K. Amman, Systematisch-Geobotanisches Institut der Universität Bern, Altenbergrain 21, CH-3013 Bern, Switzerland.

USA: American Bryological and Lichenological Society (ABLS). Info: Dale M.J. Mueller, Dept. of Botany, Texas A & M University, College Station, Tx 77843-3258, USA.