The International Lichenological Newsletter is the official organ of the International Association for Lichenology (IAL). It is published twice yearly in English with selected items in French, German or Spanish. Information and news intended for publication should reach the editor at least one month prior to scheduled production (usually April and October of each year).

IAL membership is open to anyone who has an active interest in the study and use of lichens. Current dues are U.S. $20.00 for the six year period between successive International Botanical Congresses. Dues should be sent to the treasurer in U.S. CURRENCY with checks made payable to the "International Association for Lichenology (K.J. PUCKETT - Treasurer)."

IAL affairs are directed by a seven person Executive Council elected during the last International Botanical Congress. Council members elected at the 13th Congress (Sydney, Australia, 1981) are listed on the inside back cover of the Newsletter and will serve until the 14th Congress (Berlin, Germany, 1987).

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Cover Drawing: Aspicilia hedinii (H. Magn.) Oxn. from the Changai Mountains near Zezerleg. This species is named after the famous Swedish geographer Sven Hedin who spent many years of his life in Central Asia. Drawing by Gertrud Morchen.

international lichenological newsletter

Volume 17 Number 2 October 1984

Special Report

Four Thousand Kilometers Through The Heart Of Asia

A travelog about an expedition to the central northern and northeastern parts of the Mongolian Peoples Republic (MPR) in search of lichens, liverworts, and selected higher plants. The party consisted of myself, Dr. U. Cogt from the Botanical Institute of the MPR Academy of Science, Dr. W. Hilbig a geobotanist from the Department of Botany of the University of Halle-Wittenberg, and Mangal - our primary Mongolian driver. The expedition, accomplished through agreement between the Academies of Science and the Ministries of Health of the German Democratic Republic and MPR, ran from June 16 to August 17, 1983.

The first day began with funny confusion. A Mongolian Travel Agency manager asked me at breakfast in the Ulan-Bator hotel, "Are you a hunter?" I answered "Yes, I hunt for lichens and liverworts." The manager looked surprized and somewhat disappointed for he supposed me to be a "big game hunter". The biggest animals I ever killed in Mongolia were mosquitoes and horse-flies.

On June 23 we left Ulan-Bator in a GAS 606 (a USSR-made cross-coutry lorry) heavily loaded with nine voluminous wooden crates, a number of plastic cans filled with fresh water, and a large barrel of petrol (gasoline). I sat beside the driver in the cabin, but the jolts and shakings were just as bad as behind. Roadways in Mongolia are terrible, and after some 150 kilometers and thousands of pot holes one feels as if broken on the wheel.

Because a chemist is familiar with fire it was my task to prepare the cooked meals. Finding enough dry wood is no problem in a forest, but in the steppe we had to use dry dung of cattle and horses. While our Mongolian friends preferred black tea, we Germans drank if possible the tea of freshly collectd Thymus species which are very abundant in Mongolia. The Mongolians who had either meat and rice or rice and meat for each meal, named the crisp bread we had at breakfast, lunch, and supper "cardboard bread".

The most abundant lichen in the steppe is Parmelia camtschadalis which is used as a folk medicine against coughs. Stones in the steppe are frequently colored bright orange-red by Caloplaca elegans. A review of the terricolous lichens and a conspectus about the lichen flora of MPR have both been recently published by U. Cogt and N.S. Golubkova, respectively.

About 150 km southwest of Lun (Fig. 1) we arrived at the Zezerleg Mountains with magnificent granitic rocks covered with yellow Acarospora chlorophana and A. gobiensis, the brownish Aspicilia hedinii (see cover drawing), the bright-brown Parmelia tominii, and the yellow-green Dimelaena oreina which seems to be the most common crustose lichen of Mongolia.

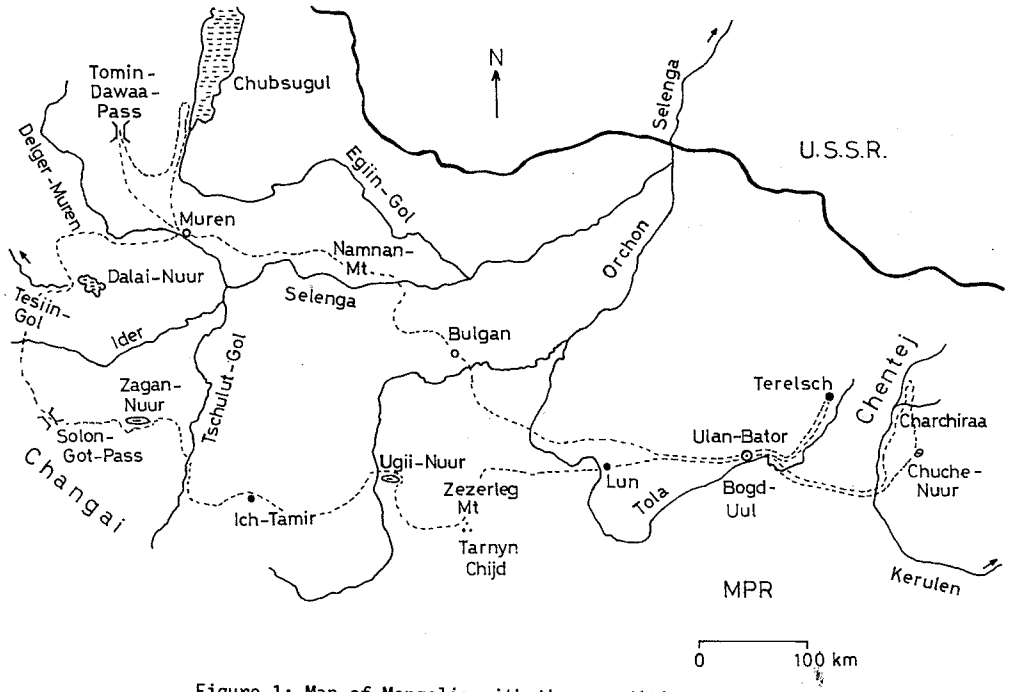

Figure 1: Map of Mongolia with the expedition routes.

Cetraria komarovii, Nephroma helveticum and Leptogium saturninum are foliose lichens we found in the mountain-forests of the Chogno-Chaan-Uul. Figure 2 shows recently plowed-up steppe near the Zezerleg Mountains. Here the poisonous Stellera chamaejasme spreads a sweet odor while the numerous Artemisia species give different "green tones" to the steppe. Via the ruins of the Lamaist monastery at Tarnyn Chijd, the lake Ugii-Nuur, and the settlements of Zezerleg and Ich-Tamir, we eventually arrived at the Tschulut-Gol on June 30 and pitched our tents near the river's deep canyon (Fig. 3).

We had to survive some critical moments in Ich-Tamir. Our driver had to repair a leaking fuel tank. After placing the petrol in empty tubs and dismounting the tank he lit a blowlamp. My blood stood still; would he solder the hole in the tank with the blowlamp? An explosion would have occurred without doubt. No, he heated a soldering iron with the flame and indirectly fixed the tank. I gave a deep sigh of relief when he had finished the procedure.

Near Lake Zagan-Nuur we greeted an old acquaintance, the extinct volcano Chorgo; we last stood on its summit in June 1978. Up through the Choit-Terchiin-Gol valley we climbed higher and higher into the Tarbagatai Mountains, crossing this range at the Solon-Got pass (2,650 m) on America's Independence Day - July 4. We had typical pass weather: rain mixed with snow and a strong cold wind. Despite the miserable conditions we collected numerous alpine lichens, including Alectoria ochroleuca, Cetraria cucullata, and Sphaerophorus globosus.

At the pass is a large ovo*, and when the sun came through the clouds for a moment I took a photo of Dr. Cogt with one molecule of ovoic acid in his hand (Fig. 4). Ovoic acid is a tridepside we described some years ago from Parmelia substygia collected in Mongolia during our 1978 expedition. A few kilometers west of the pass we came to a rather dangerous track with no less than six warning signs (Fig. 5). Fortunately such signs are international, and we had added material to the ovo ensuring our survival.

After crossing the Tarbagatai we turned north and came into the Tesiin-Gol valley which ends in the salt lake Ubs-Nuur far in the northwest of Mongolia. We pitched our tents near the Zurchen-Uul and it was here that we raised our expedition pennant with the arms of MPM and Halle and a good-luck horse (Fig. 6).

In the steppe behind our tents I found another interesting terricolous lichen which is spread by wind: Evernia perfragilis. However, dark clouds and thunder over the Tesiin-Gol valley sent me quickly back to camp. I had hardly jumped into the GAS 606 cab when the storm arrived. Hailstones as large as peas drummed on the roof and danced crazily on the steppe. Ten minutes later sun broke through the clouds again and only the hailstones remained of the apparition.

Our next goal was Lake Chubsugul north of the aimak center of Muren. This lake is about 130 km long, 25 km wide, and 238 m deep and shares similarities with the famous Lake Baikal. A rift supposedly runs between both lakes, and scientists predict the giant Asian continent will drift away from there in the course of geologic time.

We reached the northernmost point of our expedition at the Tomin-Dawaa pass on July 16. A violent snowstorm forced us to camp in the Belmes-Gol valley in an empty log-house with a small front building. At midnight I awoke to a strange rumbling in the front building. What was happening? Taking my flashlamp I opened the door to see a he-goat ransacking the room for edible things. South of the Tomin Brigade we collected some interesting rock lichens at a steep cliff. We hope that our friend Josef Poelt will be successful in determinig these species.

An unforgettable experience was the ascent of Sumber-Uul about 70 km southwest of Chubsugal. At first we crossed boggy meadows, then we passed through primeval forest of Larix sibirica and climbed over extensive rocks.

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*An ovo is a pile of stones, often with stakes, placed at passes and mountain summits in Central Asia. In order to dispose favorably of the ghosts and demons of such places, every passer-by adds stones or something dispensable to each pile all of which continue to grow in this way.

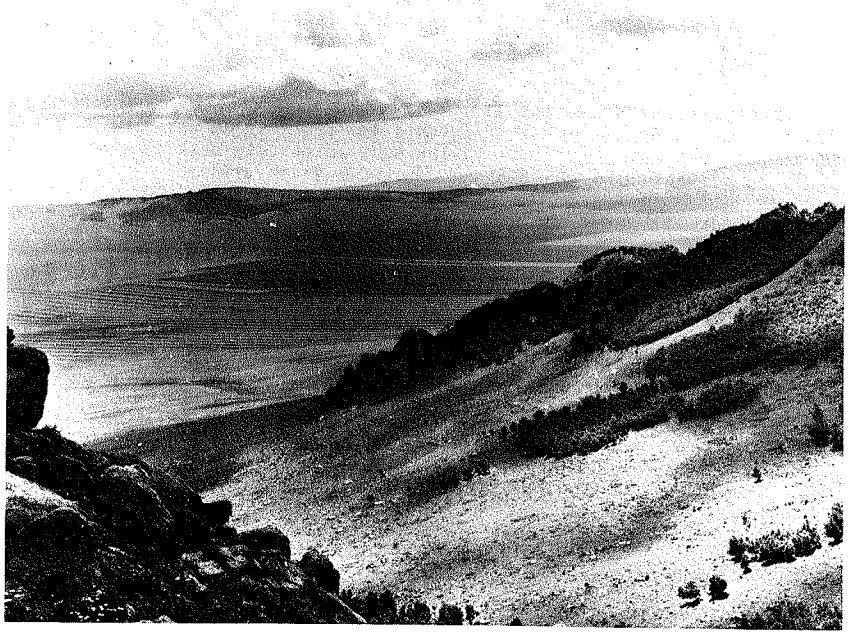
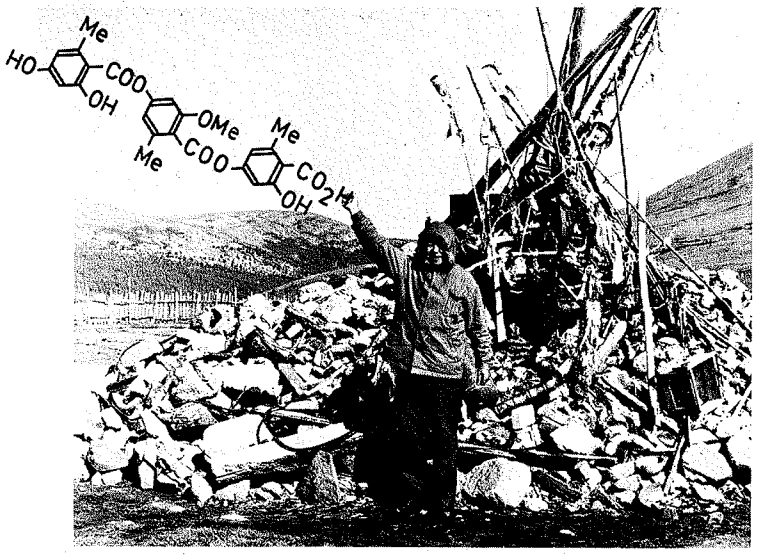
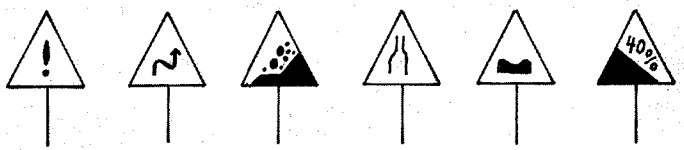


Figure 2: Looking south from the Chogno-Chaan-Uul to the steppe. Figure 3: The canyon of the Tschulut-Gol. Figure 4: Dr. U. Cogt with one molecule of ovoic acid in front of the ovo at the Solon-Got pass. Figure 5: Warning signs along the track west of Solon-Got pass. Figure 6: Dr. Cogt, the author, and driver Mangal [L to R] beside our expedition pennant near the Zurchen-Uul. Figure 7: Stone Lion at entrance of the Gandan Monastery in Ulan-Bator (see page 6).





The route had no path and the climb through knee-high forest was very toilsome. The ground was covered with luxurious thalli of Peltigera aphthosa and P. canina and at open places I found the rare moss Tetraplodon urceolatus which has a strong butyric acid odor when fresh. Above, the forest thinned out to a plateau covered with Rhododendron adamsii in full blossom. Finally we had to overcome a steep step of large granitic boulders, and then we were at the summit. What a view! The eyes went at once to the north where the snow-covered peaks of the Sajan Range (3,000 m) shone in the sun. Deep below spread the steppe and far to the south glittered the Delger-Muren. Sumber-Uul means "a mountain with a comprehensive prospect" and truly this name does the mountain great credit.

On our way back to Ulan-Bator we spent one day in the Namnan Mountains near the Selenga River where another event happened to me. It was a hot day and I had spread out many freshly collected lichens and higher plants on the ground to dry. I was sitting in the tent occupied with determining some Labiatae when I noticed a curious snorting. Leaping out the tent I got a shock; a herd of cows was about eating the gathered materials. Only after impressive threats with a stick did the animals trot relunctantly away, but a part of the collections went with them in their bellies.

Some twenty kilometers northwest of Bulgan we climbed up to the summit of the extinct volcano Uran-Togoo; from the rim we had a superb view into the crater with its small lake. As we descended we collected in Larix sibirica forest two bags full of Suillus grevillei mushrooms which gave a delicious meal that evening. After crossing the rivers Orchon and Tola we spent the last day of our tour at a place we later called "Mosquito Hell". On the final morning we arose early hoping the insects would not be active. How wrong we were! The air was warm and moist and swarms of these bloodthirsty insects blackened even the lorry. We did not have breakfast; but quickly struck our tents, loaded the GAS 606, and fled this terrible place in utmost haste.

On June 26 we were all happy to see Ulan-Bator again. We two Europeans had long expedition beards, and my trousers and anorak had numerous holes produced by sparks of the many fires I had made during the past weeks. But this did not negate the rich experiences, the little "adventures", nor the boxes full of lichens and other plants. On June 29-30 we spent two days near the beautifully situated sanatorium Terelsch in the Chentej. A second tour took us together with Dr. T. Khaidav, head of the Institute of Folk Medicine, to the eastern part of the Chentej from August 2-10.

I remember with great pleasure a party at the home of Dr. Cogt, where his wife served us many delicious Mongolian dishes. We had so many toasts with "Archi" to lichenology and common friends that we Europeans had difficulty finding our way back to the hotel shortly before midnight. Another social highlight was a party given for us by Dr. Khaidav in the hotel Ulan-Bator. He told us many fascinating stories of past expeditions and discussed with us future plans for cooperation. On August 17 we said good-by to our Mongolian friends and left Ulan-Bator in the late afternoon. The fortune-lion at the entrance of the Gandan Monastery (Fig. 7) aptly symbolizes our best wishes to these friends.

I am grateful to the Academies and Ministries of Health of the GDR and the MPR for financing this expedition, to Prof. Dr. K. Schreiber, head of IBP, for his continuous interest and support, to Drs. T. Kaidav and U. Cogt for their guidance and help, and the Mongolian drivers Mangal, Bataa, and Scharaw-Arildii who drove us more than 4,000 km over the difficult steppe and mountain terrain of Central Asia.

--- Siegfried HUNECK

News and Notes

AHTI, Teuvo (Finland) spent 9 weeks in New York and Washington, D.C. working on neotropical Cladoniaceae. He also visited the CULBERSON's in North Carolina, Harry THIERS in San Francisco, and collected in northern California and southern Oregon with bryologists Dan Norris and Paul Wilson. In Canada he visited Vancouver, Vancouver Island, and Ottawa to finish a) the new lichen checklist of British Columbia with Willa NOBLE, George OTTO, and Ernie BRODO and b) the macrolichen flora of Wells Gray Park, B.C. with Trevor GOWARD. Ahti is planning another trip to Venezuela in the beginning of 1985.

ALMBORN, Ove (Sweden) spent three months (September-November, 1983) and two months (January-February, 1984) in South Africa collecting materials for the proposed Flora of Southern Africa: Lichens. He is currently completing his revisions of Teloschistes and Xanthoria in southern Africa. A more detailed survey of the scope and state of this Flora will appear in a later issue of ILN.

ARVIDSSON, Lars (Sweden) has accepetd a position at the Natural History Museum, Goteborg in the Unit of Nature Conservation. He will have facilities for continuing his lichenological research.

AWASTHI, Dharani Dhar (India) retired from active service at Lucknow University in late 1983. He will continue work on the lichens of India in its Department of Botany as an Emeritus Scientist of the Council of Scientific and Industrial Research. He is presently engaged in the investigation of microlichens of India under projects from C.S.I.R. and the University Grants Commission (New Delhi).

BRODO, Irwin M. (Canada) notes that the lichen collections at the National Museums of Canada (CANL) will be relying more and more on computer technology in its label production, with specimen data capture and the potential for data handling of various kinds occurring as a by-product. As part of a new system being instituted at CANL, there is need for an up-to-date "machine-readable" list of lichens, the authorities for the names, and synonyms of those names. If anyone has already developed such a list in any stage of finality, and is willing to share (or sell!) it, please contact Brodo in Ottawa.

CLAUZADE, George and Claude ROUX (France) report that the manuscript of their book "Lichens d'Europe Occidentale: Flore Illustree" is now with the editor. Copies of the flora may be ordered from them at a pre-release subscription price of 360 F francs (ultimately 450 Ffr.) c/o Societe Botanique du Centre-Ouest, "Les Andryales", Saint Andre, F-17550 DOLUS, France.

DERVEULLE, Serge (France) indicates that copies of his doctoral study on "L'Ecologie des Lichens du Bassin Parisien; Impact de la pollution atmospherique (engrais, SO2, Pb) et relations avec les facteurs climatiques" are available from him for a cost of 250 Ffr. Also - a colored "Carte de la pollution atmospherique acide de la Region parisienne, obtenue a partir de l'observation de la vegetation lichenique" is available for 15 Ffr.

HALE, Mason E. (U.S.A.) will be travelling again to Antarctica in December and January of 1985 to continue studies of endolithic lichens. He will make a side trip to Tasmania at the end to collect more Parmelias for ongoing monographic investigations.

HERTEL, Hannes (Germany) is continuing his research on the saxicolous species of Lecidea (sensu Zahlbruckner) from the Antarctic floral province. Initial findings are about to be published in "Poelt-Festschrift" (November 1984). An extended and improved key covering some 105 species is in preparation. He would welcome for study any Lecidea-like saxicolous lichens from Antartica, all subantarctic islands, Patagonia, Juan Fernandez, Tristan da Cunha, Tasmania, and New Zealand. Fieldwork in New Zealand, Tasmania, and southeastern Australia is planned with Helmut Mayrhofer (Graz) for January-February 1984.

KARNEFELT, Ingvar (Sweden) spent January and February, 1984 in South Africa with Ove Almborn. He has completed his revision of Cornicularia s. lat. and is now taking up research on Caloplaca and Diploschistes for the Flora of Southern Africa: Lichens project.

KILIAS, Harald (Germany) has begun studying the role of the phycobionts on the morphogenesis of Parmelia s. ampl. He has in culture a number of self-isolated algae at Bayreuth (FRG). During January-April of 1985 he will spend four months at the laboratory of Vernon AHMADJIAN (Worcester, MA) comparing technique. Furthermore, he has begun studying protein characters (isozymes) of Parmeliae and their isolated partners. Despite these "modern" activities, he will continue with classical taxonomic studies in Catillaria and related genera.

LAI, Ming-Jou (Taiwan) sends greetings from Taipei explaining that for the last two years he has been engaged in a project "Window on China" which is a miniature display not unlike the Madurodam in The Hague (Netherlands). This landscaped project includes mosses and opened to the public July 7, 1984. So far over a million visitors have been received. Current research work on the local lichens and bryophytes has been granted through the Taiwan National Park Service. As an Associate Professor at the National Chunghsin University (Taichung), he has one student preparing an M.Sc. thesis on the genus Lobaria in Taiwan. Lai plans to visit Japan again in the spring of 1985 to examine Taiwanese lichen and bryophyte specimens.

LALLEMANT, Richard (France) reports that following the Bristol congress on physiology (described later in this Newsletter), l'AFL has adopted for stability the 'anglican' root terms myco-, photo-, phyco-, and cyanosymbiote (a la the IAL Terminology Committee) for use in describing components of the "gonidial" layer.

PEVELING, Elisabeth (Germany) will be organizing an international symposium for March 16-21, 1986 at the University of Munster (FRG). The symposium will be entitled Progress and Problems in Lichenology in the Eighties. Interested participants should contact Peveling for information at this time.

RICHARDSON, David H. S. (Ireland) with Eanna Ni Lamhna, Dr. Paul Dowding and various students, is undertaking a third survey of air quality in Ireland with the help of school children. The survey examines lichens, leaf yeast numbers, and rainfall acidity. The first survey was carried out in and around Cork City, while the second involved the whole of the Shannon Estuary which is becoming industrialized. The current project will examine air quality in the Waterford area where oil finds off the Irish coast are likely to be brought ashore. About fifty schools and three hundred children have participated in each survey.

ROSENTRETER, Roger (U.S.A.) has become state botanist with the US Bureau of Land Management in Boise, Idaho. He is pursuing species composition studies of Artemisia grassland lichens and is interested in materials exchange of the Aspicilia desertorum (Kremp.) Meresch. complex.

SANTESSON, Rolf (Sweden) published his "checklist" on The Lichens of Sweden and Norway in April of 1984. The text is reviewed elsewhere in this issue.

SEMADI, Ammar (Algeria) is studying the corticolous lichens of Annaba for their decline under the influence of atmospheric pollution. He requests from members literature that will help him establish his pollution bases and the identification of mediterranean lichens.

THROWER, Stella L. (Hong Kong) is currently working on the production of a handbook for the local Urban Council's natural history series: "Hong Kong Lichens". She would welcome offers to determine South China Lecanora species. In July 1985, she is due to retire to the Isle of Man (British Isles) with the hopes of working on the local flora there.

VITIKAINEN, Orvo (Finland) reports that recent lichenologists visiting the herbarium in Helsinki have included Aino HENSSEN, Klaus KALB, Adolf SCHWAB, Klaus AMMANN, Leif KALLSTEN, Wolgang MAASS (Canada), and Alan ARCHER (Australia).

Meetings

BLS Meetings for 1985

Eight British Field Center courses on lichens will be offered next year between April and August. Locations will be Juniper Hill, Kindrogan, Leonard Wills, Malham Tarn, Orielton, Preston Montford, and Slapton Ley.

A lichen workshop on "Lichens of Walls, Buildings and Monuments" will be given April 12-14 at Burwalls, Leigh Woods, Bristol by messrs. JAMES. COPPINS, and HILL. Fees are 38.00 inclusive of field and laboratory work. The special problems of identification and collection of lichens growing on "cultural treasures" will be emphasized.

A Spring Field Meeting is set for the Isle of Arran, April 10-15 to survey parts of this popular but lichenologically neglected island. The northern highlands and southern plateau both contain lichen-rich specialized habitats, as do the parklands of Brodick Castle, the mountains of Goat Fell, and the coastal hazel woodland. Headquarters will be the west coast Outdoor Center at Shiskine with good drying and laboratory facilities. Bookings should be made by January 25, 1985 with the leader Vince GIAVARINI, 21 Woking Road, Parkstone, Dorset, England (UK).

A Summer Field Meeting in Somerset will foray from Dulverton to Taunton, collecting Exmore, the Barle Valley, south-central county areas needed for the Atlas, the Blackdown Hills and a selection of churchyards, parks and woods. Headquarters will be the Lamb Hotel in Dulverton and the Castle Museum in Taunton. Francis ROSE is the leader, but Rob Jarman (Somerset Trust for Nature Conservation) and Jeff Carrington (Taunton Museum) will be local secretaries and site organisers. Make your own bookings; B&B nightly accomodation both areas should average £12.00.

General Assembly of L'AFL

An evening convocation of l'Assemblee Generale annuelle de l' Association Francaise de Lichenologie will be held at 6:30 PM, Saturday, May 4, 1985 at the Boulevard H.P. Schneider locale of the Le Creusot Societe d'Histoire Natrelle. The meeting will be in conjunction with a two day (May 4-5) AFL sortie in the south Bourgogne region.

The foray will study subatlantic and submontane influences on the corticolous and saxi-siliceous lichens of the Haut-Morvan. Saturday sites to be visited include Gorges de la Canche, Cascades de Voucoux, and Roches de Glennes (between Auton and Chateau-Chinon). On Sunday, calcicolous taxa and the influence of middle-European and submediterranean elements (including subalpine) will be seen in the mountains of Rome and Reme between Creusot and Chagny.

Those interested in attending should contact J.C. BOISSIERE at Laboratoire de Biologie Vegetale, Route de la Tour Denecourt, F-77300 FONTAINEBLEAU, France.

Awards and Honors

Lucknow University (India)

Coincidental with his 1983 retirement from Lucknow University, Dr. Dharani Dhar AWASTHI has been elected Fellow of the Indian National Science Academy (F.N.A.). In 1978 he had been elected Fellow of the Indian Academy of Sciences (F.A.Sc.). Both of these appointments are the highest scientific honors that can be bestowed on an Indian in India.

University of Wisconsin (U.S.A.)

For over 40 years, John W. THOMSON has been one of America's foremost lichenologists. This last year, he wound up one phase of his career at U.W.-Madison by retiring as Professor of Botany at the age of 70 years. He is continuing his studies on lichens of the northern climes, and hopes to have Part 2 (The Microlichens) of his "American Arctic Lichens" ready for submission soon. In March of 1984 he was appointed Honorary Curator of Lichenology at the Milwaukee Public Museum, where he will continue work on the lichen flora of Wisconsin. A note on the disposition of his collections appeared in the last issue of ILN (17/1: 9).

John is known throughout the world from his numerous revisions and monographs on North American lichens; among them, treatments of Peltigera, Cladonia, and Physcia. He has long been the authority on lichens of the northern edge of the continent, and published a series of floristic papers on the arctic, the most encompassing being his "Lichens of the Alaskan Arctic Slope (1979)" and Part 1 (The Macrolichens) of "American Arctic Lichens (1984)" reviewed elsewhere in this Newsletter.

To me, however, one of his most important contributions has been the unfailing help given to countless students and professionals in the identification of lichens from all over North America. This often overlooked and thankless task has kept lichenology alive and forward-moving on this side of the ocean. It has also contributed to lichens being included in numerous ecological and environmental studies when it is clear they would otherwise have been ignored.

Lichenologists from North America and around the world join in wishing John the best of health and success for the many projects that lie ahead. There is much that he can still offer to the world of lichenology!

--- Irwin M. BRODO

Theses and Dissertations

AWASTHI, Garima (India) received a Ph.D. in Botany from Lucknow University in December of 1983. Her work pertained to studies on the Indian Usneaceae.

CASSERLEY, Rosemary (Ireland) is starting a research project on Trentepohlia with David RICHARDSON at Trinty College, Dublin. This is an important organism causing cement disfigurement in western Ireland. She would appreciate references on, or cultures of, both symbiotic and free-living strains of Trentepohlia for her research.

FEUERER, Tassilo (Germany) finished his thesis on the non-yellow multicellular-spored species of Rhizocarpon under the guidance of Hannes HERTEL in Munich. He has now begun duties as curator of lower plants at the Herbarium Hamburgense (HBG). He plans to complete his studies on Rhizocarpon and to work on Bolivian lichens collected from 1979 to 1982.

KIANG, Sophie (Canada) having completed an honors moderatorship thesis with David RICHARDSON at Trinity College (Dublin, Ireland) on lead uptake by lichens and lichen symbionts, has moved to McMaster University (Hamilton, Ontario) where she will be undertaking research in Kenneth KERSHAW's laboratory.

KNOPH, Johannes-Gunther (Germany) completed his Diplomarbeit on euthalline species of Porpidia based primarily on specimens deposited at M. Information on P. [ex Lecidea] albocaerulescens, with discussion of certain other species often confused with it, has been published already in Mitt. Bot. Munchen 20: 467-480, 1984.

LOWEN, Rosalind (U.K.) is conducting a study of the fungal genus Nectriella and its anamorph Illosporium which produce, respectively, red perithecia or pink growths (circular lesions) on lichens. She would welcome fresh or air-dried collections in order to grow pure cultures for study of the organism's biology for a Ph.D. dissertation. Please contact her c/o the Commonwealth Mycological Institute, Ferry Lane, Kew, Surrey TW9 3AF, ENGLAND (UK).

OKSANEN, Jari (Finland) defended his Ph.D. dissertation entitled Lichen-rich forests and related communities in Finland: ordination and classification studies at the University of Joensuu in September. The thesis is printed in English and includes a summary part published as Univ. Joensuu Publ. Sci. 1 and five articles published in Annales Botanici Fennici or Vegetatio in 1981-83. With Ted AHTI, he is now preparing an articles on Epigeic lichen communities of taiga and tundra regions for the volume on lower plants in Handbook of Vegetation Science. As contribution towards this work he would appreciate receiving reprints of articles on phytosociology and ecology of plant communities rich in lichens.

RAMBOLD, Gerhard (Germany) completed his Diplomarbeit saxicolous species of Lecidea (sensu Zahlbruckner) from Iceland. His work was largely a continuation of studies initiated by Hannes HERTEL. Numerous additional specimens were examined and various characters (e.g., ascus type, excipulum structure) evaluated for their importance in taxonomic classification. Gerhard will continue work on Lecidea species from Australia for his doctoral dissertation and would be pleased to receive material.

RYAN, Bruce (U.S.A.) is now at Arizona State University working on a Ph.D. under Tom NASH. His dissertation will involve a systematic study of the lobate species of Lecanora in North America. He would appreciate receiving specimens, ideas, and information on the group. Does anyone know the location of the type of Biatorella kulshanensis Herre (1943, Proc. Biol. Soc. Wash. 56: 17-20)?

SCHWAB, Adolf (Germany) will soon submit his doctoral dissertation under Hannes HERTEL. It will be a taxonomic monograph of the Central and Northern European species of Lecidea (sensu Zahlbruckner) that produce rust-colored thalli through incorporation of iron-oxide.

TRIEBEL, Dagmar (Germany) completed her Diplomarbeit under Hannes HERTEL, and is now conducting doctoral research on lichenicolous fungi from saxicolous species of Lecidea (sensu Zahlbruckner) on a world-wide basis. Any materials for study would be gratefully received at Munchen.

UPRETI, Dalip Kumar (India) received a Ph.D. in Botany from Lucknow University in October of 1983. His work pertained to studies on the Indian Cladoniaceae, and he is currently working in the National Botanical Research Institute at Lucknow.

ZURN, Lydia (Germany) has completed her Diplomarbeit under Hannes HERTEL. A taxonomic monograph of the genus Schaereria in Europe is being prepared for publication.

Herbaria

Herb. Mycol. Instit. Microbiol. Acad. Sinicae

Jiang-chun WEI of the lichen section (HMAS-L) of the Herbarium Mycologicum Instituti Microbiologici Academiae Sinicae in Beijing, China reports on activities. In 1981 fascicle I (nos. 1-50) of the "Lichenes Sinenses Exsiccati" was published with fascicle II to be issued in 1985. In 1982 he visited Sweden and Finland for four months working at Umea, Stockholm, and Uppsala and then Helsinki and Turku. He met the following persons: O. Eriksson, N. Lundquist, R. Santesson, G. Thol, I. Karnefelt, R. Moberg, L. Tibell, O. Almborn, T. Ahti, O. Vitikainen, Y. Makinen, R. Alava, U. Laine, and a visitor from Japan - H. Kashiwadani. In 1983-84 he made a lichenological expedition to Antartica, and visited Valparaiso University and met J. Redon during his stay in Santiago. A combined lichenological and mycological team under his leadership has just returned from a three month expedition to the Shennongjia virgin forest of Hubei province in central China.

Reports

Lichen Physiology Meeting - Bristol (U.K.)

April 16-18, 1984 the University of Bristol, England was supposed to host a mini-symposium on Recent Advances in Lichen Physiology with the blessing of IAL and the British Lichen Society. However, the proposal met with more than a 90% enquiry response such that 65 people from 14 countries attended giving 28 papers and 16 posters by invitation. In essense, this proved to be the first international symposium devoted entirely to the subject of lichen physiology. And the high attendance clearly reflects the level of research activity in the subject.

The meeting was broken into six sessions under 12 chairpersons and covered photosynthesis and ecophysiology, nitrogen metabolism and mineral uptake, stress effects, ultrastructure, and cell recognition and development. Day one was devoted to aspects of carbon metabolism as a theme central to a lichen's functioning. Eight papers reflected on sensitivity to physical influences and the processes of growth and productivity. Deliberation over the relative merits of various IRGA-based techniques was countered by alternative approaches to experimental design (i.e., multivariate versus straighforward simulation of environmental fluctuations) as pioneers combatted recent workers.

Day two followed a similar pattern of presentation with ten papers considering aspects of nitrogen and mineral nutrition. Several of the papers emphasized biochemical aspects while others touched on heavy metal pollution. Day three picked up on this theme, discussing in turn (as five papers) stress and then ultrastructure as reflected in differing physiological states of a lichen. The last four lectures concentrated on that distinctive and little understood area of development and specificity in lichens. Clearly, one stimulating line of investigation is (and will continue to be) th study of cell surface recognition sites and lectin-based systems. In his concluding remarks, David SMITH summarized "symbiosis" and our current knowledge or lack of it pointing out that we still know little about the extent to which bionts may be free-living.

In academic terms the meeting was a huge success, due in no small measure to Dennis H. BROWN's initiation of the concept and his excellent organization of the program. The pleasant venue, various receptions, and meeting's supper held at John Harvey and Son's Wine Museum (coupled with the innate friendliness of lichenologists), ensured that the event was also a social success. Travel expenses of a number of attendees were supported by grants from the British Council, Nuffield Foundation, The Tansley Fund (New Phytologist Trust), and the Royal Society. The proceedings resulting from the meeting are likely to be published in 1985 by Plenum Press. It is hoped that a reduced pre-publication purchase price might be negotiated for the IAL membership.

--- Brian W. FERRY

IUPAC Natural Products Symposium, Poznan

At the IUPAC 14th International Symposium on the Chemistry of Natural Products (Poznan, Poland), July 9-14, 1984, three lichen related papers were given. S. Huneck (Halle/Saale, GDR) gave a half-hour lecture on "Recent Advances in the Chemistry of Lichen Substances. J. Gunzinger, S. Claude, and R. Tabacchi (Neuchatel, Switzerland) demonstrated by poster the "Isolation, Identification, and Synthesis of Furfuric Acid from Pseudevernia furfuracea (L.) Zopf". Furfuric acid is a new-type depsidone with a diphenylmethane unit as the A part of the molecule. J. A. Ogur (Nairobi, Kenya) showed in a poster on "Natural Dyestuffs from the Kenyan Flora" that the anthraquinones chrysophanol, physcion, and emodin isolated from higher plants are suitable dyestuffs for wool. These compounds are also common in certain lichens.

--- Siegfried HUNECK

Australasian Lichenologists Meeting

The 6th meeting of Australasian Lichenologists was held in Melbourne the weekend of May 12-13, 1984. A total of ten participants attended: Alan ARCHER, John CONRAN, Jack ELIX, Rex FILSON, Alex GEORGE, Gintaras KANTVILAS, Rod ROGERS, Nathan SAMMY, Heinar STREIMANN and Doug VERDON. Absense apologies were received from John Bartlett, Nik Donner, Nell Stevens, and Cheryl Scarlett.

The major purpose of the conference was a workshop on organizing materials/authors for the lichen volumes of the Flora of Australia project. George, representing the Bureau of Flora and Fauna, chaired the meeting. Five theme areas were discussed: 1. Lichen classification and Australia's state of knowledge - consensus reached on using Poelt's system (with possible modifications) and publication that would follow workable rather systematic order; likely Australia's 2,400 lichens would require four volumes. 2. Division of Volumes - recommended that three volumes cover Lecanorales and one the other families; volumes A and B would cover macro-lecanoralean families, volume C crustose Lecanorales, and volume D all other families. 3. Priorities for Research - problematical genera scheduled for volumes A and B were given top billing (e.g., Leptogium, Pannaria, Parmeliella and Psoroma for A; Caloplaca, Parmelia sens. lat., and Usnea for B). 4. Format for Flora - description guidelines and an Elix draft for Hypogymnia were distributed; script submission/publication dates agreed to were December 1987/1988 (volume A) and December 1991/1992 (volume B).

5. Plan for Writing - likely global contributors were discussed and concensus reached that current generic monographers be offered first refusal and/or that overseas workers might collaborate with Australian partner; Bureau of Flora and Fauna would make official approach. Volume A would contain introductory material (general information on lichens, classification, chemistry, ecology, etc.) to be drafted by Filson and Rogers; Rogers would also write key to families/genera and both texts would be circulated for approval/revisions. George noted that funds are available for illustrations, old paintings and pre-published drawings/photographs acceptable, and one page of artwork available (if necessary) for every 10 species described. Color photographs will illustrate the introductory

section, and Seppelt offered to supply line drawings for authors not submitting artwork. An agreed-to glossary will appear in volume A; to aid contributors the Bureau shall amalgamate those published in The Lichens of South Australia and The Genera of Australian Lichens and circulate. George proposed that DELTA be used for computerizing descriptions and keys and workshops held on its use. It was unanimously agreed that for lichen authorities, Laundon's paper Abbreviations of Deceased Lichenologists and their Herbaria (Lichenologist, 1979) would be adopted as an extension to the Kew List.

Books

A Monograph of the Lichen Family Megalosporaceae. Harrie J.M. Sipman. Bibliotheca Lichenologica 18. iv + 5 tables, 24 plates, and 53 figures. 241 pp. ISBN 3-7682-1354-4. 1983. Price: DM80/100.

The taxonomy of this lichenized ascomycete family of the order Lecanorales is revised following examination of anatomical, chemical, and morphological variance. The Megalosporaceae are characterized by features of apothecium ontogeny, thallus and apothecium chemistry, and a range of spore types. Three genera are distinquished: Austroblastenia (gen. nov.) with two species in Australia and New Zealand; Megaloblastenia (gen. nov.) with two species inhabiting Australia, New Zealand, and southern South America; and, Megalospora with twenty-five species concentrated in Australasia, but represented throughout tropical and warm-temperate zones of the world.

The delimitation of genera is based on spore structures that reflect cellularity, wall thickness, and absense/presense of curvature. Species segregations reflect epithecium pigmentation and granulation, spore form and size, hymenium size, and thallus chemistry. Entities that do not differ in two or more independent characters are treated at the subspecific rank or left unnamed. The confines of Megalospora are changed to include the type of Bombyliospora as well as some species with muriform spores. Several taxa have been transfered to other genera, in particular Catinaria, and in all eleven species and three subspecies are newly described.

Most family members inhabit humid, cool forest such as tropical mountain cloud forest. Ancestry supposes a thick-septated bicellular spore as basic, with relationship to the Buelliinae. Evolution is supposed to have centered on Gondwanaland with migration routes taking species into tropical Africa and America, into tropical and eastern Asia, and into southern South America.

Analiz flory lishainikov Mongolii (An analysis of the lichen flora of Mongolia - in Russian). N.S. Golubkova. Nauka, Leningrad (U.S.S.R.). 6+9 tables and 48 figs. 248 pp. 1983. Price: Rbl. 2.80.

This is a continuation to the "Conspectus" of the Mongolian lichens (see ILN 16(1): 11) by Nina Golubkova, who was recently appointed Head of the Cryptogamic Herbarium in Leningrad (LE). The treatment gives a phytogeographic background and analysis of the Mongolian lichen flora (including a new classification of the life-forms of lichens), a division of the geographic elements, and special discussions on the endemism of relict lichens in Mongolia and Central Asia. For those who cannot read Russian there are numerous original maps of lichen distributions (total or Mongolian) derived from recent monographs with supplementary records.

--- Teuvo AHTI

American Arctic Lichens. I. Macrolichens. John W. Thomson. Columbia University Press, New York. xii plus numerous maps and illustrations. 504 pp. ISBN 0-231-05888-8. 1984. Price: US$71.50.

This flora to 350 species of 62 genera of foliose and fruiticose lichens of Arctic America is one half of a proposed two-volume work that will also include the microlichens. Considering taxa native to both the tundra and the fringe of the boreal forest, volume I covers macrolichens from an enormous segment of the North American continent. Since 70% of this flora is also circumpolar in distribution, the book actually has hemispheric significance making it a major world reference.

Resultant from some 14 arctic expeditions and appropriate funding from NSF, the Arctic Institute of North America, and the Office of Naval Research, the book is replete with quality dot maps and line drawings for most taxa. Illustrations are the work of Bethia Brehmer, Lucy C. Taylor, and Janet Mackenzie, successive staff artists at the University of Wisconsin-Madison. A compact introduction covers arctic climate and geology, the history of American arctic lichenology, and the geography and ecology of arctic lichens. Typically low precipitation and a predominantly acidic substrate provide for thirteen patterns of distribution, which (European's should note) include lichen records from Greenland and Iceland. Agyrophora leiocarpa and Neuropogon sulphureus are considered the only two truly bipolar macrolichens, while Teloschistes arcticus from the western islands and adjacent mainland is treated as the only endemic.

An indented key to the genera is succeeded by their alphabetic treatment in the main taxonomic section. Here each is briefly described, species keyed out, and taxa discussed morphologically, chemically, and in terms of habitat and niche characteristics. The black and white habit sketches are in most cases very useful and in some constitute works of art. But (as the author states), identification is often compounded by the atypical appearance of many specimens due to abrasion by windblown ice crystals. Also - some of the chosen taxonomy may not please all colleagues; for example, species delimitations in Peltigera and generic limits of Cladonia, Parmelia, or Umbilicaria. Indeed, sterile specimens of the latter genus, treated also under Actinogyra, Agyrophora, Lasallia, and Omphalodiscus, require use of a special key in the book's introductory section.

Nevertheless, the work is a pleasure to use, should be owned by all studying arctic-alpine ecology, and definitely will inspire others to study the flora. Thomson's vast knowledge and field experience show throughout the text which includes much habitat information on associated crustose lichens. Lichenologists world wide eagerly await the completion of American Arctic Lichens. II: The Microlichens following John's recent retirement.

Census Catalogue of Irish Lichens. Mark R. D. Seaward. Staionery Office, Department of Agriculture, Dublin. 32 pp. 1984. Price: £1.25 sterling.

This paper from the occasional journal Glasra of the National Botanic Gardens, Glasnevin, Dublin 9, is available from the gardens or the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2.

Reprinted with original pagination, the booklet lists 957 taxa and their distribution within Ireland's 40 vice-counties. The data has been assembled from the literature, records of Irish and British herbaria, and the Distribution Maps Scheme of the British Lichen Society. However, many records are from the last century and in need of verification. Some of the taxonomy is also questionable in light of recent generic revisions, although the text lists some 90 doubtful taxa. Currently underway is a survey of the Irish lichen flora that will resolve these issues and reinstate omitted species.

Introductory text gives a brief account of the development of lichenology in Ireland, compares the vice-counties in terms of number of taxa per unit area, and provides incentive for future research by characterizing the status for each region. Thus, while South Kerry has the richest flora (581 taxa), the best recorded vice-counties based on taxa/area are Dublin (1.06), Carlow (0.75), and West Galway (0.69); those most in need of attention are East Mayo (0.11), North-East Galway (0.13), and (London)Derry and Roscommon (both 0.15).

A list of literature containing distributional information published mostly in the last decade is provided, ensuring that this work will be the basic reference for futher study.

The Lichens of Sweden and Norway. Rolf Santesson. Swedish Museum of Natural History, Stockholm and Uppsala (Sweden). 333 pp. ISBN 91-86510-00-2. 1984. Price: SKr 125.00.

This computer-generated, English-language, annotated catalogue to the lichens of the Scandinavian Peninsula by its current dean has been long awaited. With the acknowledged help of mycological colleagues and past students, Santesson has prepared a concise work which includes short reports on distribution and habitat of all taxa. Conservative in its approach to some modern genera, species, and subspecific rankings, the work lists only 16 new names and combinations. But it does establish new synonyms (at times having to list specific epithets under generic names to which they have not previously been validly referred), and most generic treatments are followed by very useful lists explaining the current placement of species' names.

Santesson holds to a firm stand on the restricted application of authors names as appendices to the names of lichens, questioning such new designations as ":Fr." and taking great pains in the main text to clarify the past incorrect uses of "ex" and "in" in species designations. He also reminds us of the uncertainty remaining over nomenclatural change as proposed at the 1981 Sydney Congress. Article 13.1(d) of the 1983 Code states "excluding Myxomycetes and lichenized fungi" while the Congress proposal accepted "excluding the Myxomycetes" only. Pending a final decision the Code is followed in this book, but such discrepancy affects the conservation of generic names like Racodium Fr. [lichen] versus Racodium Pers.:Fr. [fungus] and species names like Xylographa abietina, Lecidea hypopta, or Pertusaria leioplaca - P. leucostoma if combined.

A number of lichens are reported from the area for the first time, but 22 recently cited taxa are excluded pending further investigation. The reference role of this work is clearly seen in the care given to the preparation and listing of the literature cited. Often overlooked in the past, most published maps to Scandinavian lichens are included to aid the work of non-Scandinavian lichenologists in compiling distribution data. Only one text correction was found necessary at publication (the genus Hypocenomyce). Despite recognizing the problem of remaining current among today's high activity in lichenology, the author has done his colleagues a great service in pulling together the floristic and taxonomic data for this historically significant lichen region. Update is inevitable, but Santesson can rest assured that he has left lichenology a gem and been mentor to a bevy of lichenologists willing to do the work.

Every lichen investigator should have a copy of this book.

Membership

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ARVIDSSON, Lars	Unit of Nature Conservation, Natural History Museum, Slottsskogen, S-402 35 Goteborg, SWEDEN.
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Miscellaneous

British Lichen Society Bulletin

Mason E. HALE gives an update on cryptoendoliths from downunder. Credit for their initial discovery goes to American Wolf Vishniac (microbiologist designer for the Mars Viking landers). He died in an accident shortly after collecting the first Antarctic rock samples for endolithic algal specialist Imre Friedmann.

Brian FOX's AGM talk on "Lichens in Medicine" in part discusses the roles of lichenins and lectins. Lichenin and isolichenin both act as anti-tumor agents in mice with only the former causing enlargment and hardening of the liver. How they act and why only one has secondary effects we don't yet know. Lectins from a variety of organisms (including lichens) can be modified and used as "stains" to pick out different types of cells otherwise indistinguishable from their neighbors.

Anthony FLETCHER (Conservation Officer) reports on preservation of British terricolous lichens as expressed in the second BLS report (Lowland heath, dune, and machair working party) to the Nature Conservancy Council. Larger than the Woodland Survey Report, it summarises information on 329 sites SE of the Exe-Tees line lying mostly below 300 m. Recognition of five Coastal and four Inland community sub-types is proposed and their distinctive floras described. Thirteen criteria evaluate sites with the number of species present being most important. Size of lichen-rich areas is also critical, along with habitat available for recolonization, as 10-15 year cycles appear significant among such short-lived lichen communities.

British Petroleum has funded a series of BLS Lichen Conservation Committee leaflets. The first of these "Lichens in Churchyards" has now been issued. Future issues propose to cover "Lichens and Dyeing" and "Lichens and the Law". Copies may be obtained from Tony FLETCHER, Leicestershire Museum Service, 96 Walk Way, Leicester LE1 6TD, ENGLAND (UK).

A new and more comprehensive BLS mapping card is now available 16 years after the start of the project. The card can be folded to form four pages and lists 1,100 lichens and 96 commonly found lichenicolous and allied fungi. The lichen names are numbered to cross-reference directly with the mapping computer database at Bradford University, and should be underlined or crossed-off when recording. Thanks to the generosity of the World Wildlife Fund, BLS members can obtain cards for just the mailing charge. Others may obtain copies at cost from Mark SEAWARD, School of Environmental Science, U of B, Bradford BD7 1DP, England (UK).

Identification aids for the amateur lichenologists are offered in a tabulated Primer to Cladonia by Anthony FLETCHER and a more detailed, illustrated, key to non-submerged Crustose pyrenocarpous lichens on limestone and associated substrata by Brian COPPINS. The latter author also gives a compact but descriptive summary of the Botanical Society of Edinburgh's foray to the mountains of Beinn Dearg and Seana Bhraigh on the border of the East and West Ross vice-counties. This Mountain Cryptogam Weekend to the arctic-alpine zone was attended by 14 persons (including bryologists, mycologists and a few clandestine phanerogamists) and supported by the Nature Conservancy Council. Some 50 plus microlichens are cited in the report.

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