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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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Editorial

Analytical Role of Lichens

In recent times, lichenology has been suffering from the lack of something big that would catch the attention of the general public and the granting agencies. Then came the work of Hawksworth, Seaward, LeBlanc, Nash and others pointing out the advantage of using lichens as air quality indicators. These pioneers proved the utility and reliability of the method, first in the survey of the area around point sources and then on a regional scale. LeBlanc and his students developed the IAP method which refined the technique. But there were still cases where pollution was suspected but sensitive species were absent or pollutant levels too low to kill lichens. Fortunately, Nieboer, Puckett and others then showed the value of elemental analysis to give the levels of sulfur and other elements in lichen thalli and demonstrated that this method could detect pollution before lichens were killed.

Now several of these workers have turned to other topics and left the field for others to pick up and continue. There is still much to be discovered and more that deserves our attention. There remain very few lichens with known thresholds of sensitivity to sulfur dioxide, to say nothing of other air contaminants. There are many areas where lichens with known sensitivities do not occur yet there are other species which might be useful if only we knew their thresholds. There is no published table summarizing all of the sensitivity information. Likewise, most lichens have never been analysed for elemental content and there is no comprehensive source of what is known.

Information on the elemental content of one lichen cannot be applied to another species because of differences in accumulation rates. Many more lichens need to be tested to provide standards for comparison. What about techniques of specimen collection and preparation for elemental analysis? There exists no published summary of methods and different workers proceed in different ways. There is still disagreement over the effect of substrate on the elemental content that needs to be resolved. In fact, there is no end to the profitable areas for basic research within this field.

Recently, I have begun applying some of these program techniques in the U.S. National Parks and have encountered several frustrating barriers. Internationally, we now have the potential for making significant application of what we know about lichens as bioindicators. We have long been saying that lichens are the most sensitive of air pollution indicators, and finally people in government and industry have heard us. Now is the time to push onward and apply, refine, and extend this aspect of lichenology which has gained the attention of those outside of the speciality. Let's not pass up the chance to utilize this great attention-getter and at the same time contribute towards a better appreciation of lichens.

--- Clifford M. WETMORE

News and Notes

AHTI, Teuvo (Finland) will spend 6 weeks in New York (NYBG) and 3 weeks in Washington, D.C. (Smithsonian) between April and June of 1984. In January and February he visited West Berlin to work on *Ochrolechia* with C. Leuckert and B. Hanka and on paramo *Cladoniae* with H. Sipman. Thereafter he went to Munich to visit H. Hertel and to Berne to see E. Ruoss.

ASTA, Juliette (France) travaille actuellement sur différents thèmes d'écologie appliquée des lichens. Elle étudie la colonisation par les lichens de différents milieux pister de ski, carrière, calcaires Elle travaille en collaboration avec M.-A. Letrouit sur une étude morphologique et anatomique de *Baeomyces rufus*. Elle dirige une étudiante ve'ne'zue'lienne -- Gladys Belandria.

CLAUZADE, Georges (France) terminent la rédaction d'une flore des lichens d'Europe occidentale avec Claude Roux. Cette flore sera écrite en Langue Internationale (ou Espéranto), langue qui peut être maîtrisée très rapidement et qui est particulièrement bien adaptée au domaine scientifique par sa clarté et sa précision. Cet ouvrage, qui sera édité (vraisemblablement en 1985) par la Société Botanique du Centre Ouest de la France, sera illustré par de nombreux dessins originaux de P. Raimbaut (Angers) et de C. Gabouriaut (Marseille).

DIBBEN, Martyn J. (U.S.A.) has been sidetracked exhibit-wise with MPM's centennial Geology Hall and is currently travelling with respect to a new 1988 Biology Hall. After two terms as President of the Wisconsin Botanical Club he is now President (and Newsletter Editor) of the Wisconsin Mycological Society. Students Richard Barloga and Dianne Foster will report at April's Wisconsin Academy meetings on (respectively) local preservation activities and the ultrastructure of *Pertusaria*. The latter topic will form a poster display at the 1984 Summer AIBS meetings where Lois Brako and Dibben will also report on lichen habitats of the 1983 Projeto Flora Amazonica expedition. Dibben will convene the lichen session at this AIBS/AIBS meeting in Colorado.

EGEA, José María (Spain) continues to work at Murcia where he has recently completed a saxicolous lichen study of southeastern Spain. He has also prepared a work on coastal lichens and a revision of Spanish (Mediterranean) *Caloplacae*. He is currently directing the doctoral thesis of J. G. Rowe (Sevilla) on Andalusian silicolous lichens, and a license thesis of P. Torrente (Murcia) on epiphytic lichens of southeastern Spain.

ELIX, Jack A. (Australia), following his trips to Hawaii and the mainland U.S.A., spent two weeks in Fiji where he found the tropical sub-montane regions to be much like Papua New Guinea. He then travelled to the Northern Territory with Lyn Craven and Hew Prendergast seeking more *Xanthoparmeliae*, and later entertained both Mark Seaward (U.K.) and John Bartlett (N.Z.) who visited for brief spells. Elix has just released (December 1983) the second fascicle of his *Lichenes Australasici Exsiccati* (Nos. 26-50).

HALE, Mason E. (U.S.A.) spent 5 weeks in Antarctica from December 1983 through January 1984 continuing taxonomic studies of his (crypto)endolithic lichens. This was followed by a 5 week collecting trip in New Zealand and 10 days in Canberra, Australia with Jack Elix, while Rex Filson was visiting with his updated (computerized) checklist of the Australian lichen flora.

HLADUN, Nestor (Spain) is now back at Barcelona after a stage in Paris with M.-A. Letrouit. He is working with X. Llimona on the Catalan lichen flora and directing the thesis of A. Gomez-Bolea on epiphytic vegetation and P. Navarro on calcareous sandstone lichens.

JAMES, Peter W. (U.K.) revisited Australia by way of Hawaii to restudy the ecology of *Menegazzia*, *Nephroma*, and *Psoroma*. He continued his collaboration with Gintaras Kantvilas on the temperate rainforests of Tasmania, and spent time with Neil Stevens (Brisbane) on *Ramalina*, Jack Elix (Canberra) on chemical problems, and Rex Filson (Melbourne) on the Australian checklist. The BM is ready to release several publications on antipodean lichens: David Galloway's *Lichen Flora of New Zealand*; Joy Walker's *Usnea* subg. *Neuropogon* manuscript; and the works on *Pseudocyphellaria* and *Leioderma* by Galloway and Per Magnus Jorgensen.

KAPPEN, Ludger (Germany, BRD) is working up studies done on the ecology of the antarctic lichen vegetation in 1981/82 (North Victoria Island) and 1982/83 (King George Island) done in part with Jorge Redon (Valparaíso, Chile). He reports that A. T. G. Green from Waikato University (New Zealand) is staying with him at Kiel as a Humboldt Fellow until May 1984.

KYRIACOPOULOS, Tatiana (Greece) is again visiting Helsinki (this time for two months) to continue her studies on the lichens of Greece with Ted Ahti and Orvo Vitikainen.

LEUCKERT, Christian (Germany, BRD) has been visited by both Teuvo Ahti Ochrolechia and Helmut Mayrhofer Rinodina with respect to chemical interpretations. Bernd Hanks remains at the Freien University working on Ochrolechia having published his work on European Pertusariae (see BOOKS review).

LLIMONA, Xavier (Spain) is now Catedrático (Professor) de Botanica at the University of Barcelona where he is working on silicolous west-Mediterranean Buellia and a study of the cryptogamic vegetation of Cap de Creus (a future National Park on this NE Catalanian peninsula). He has also been exploring the higher parts of the Sierra Nevada and been conducting some phytosociological field studies on the coasts of Tenerife in the Canary Islands.

LUMBSCH, H. Thorsten (Germany, BRD) is compiling a worldwide revision (South Africa excepted) of the lichen genus Diploschistes. Anyone with interesting collections of this taxon or who wishes their materials determined should send the specimens to Lumsch c/o Prof. Dr. Aino Henssen, Fachbereich Biologie, Lahnberge, D-3550 Marburg/L.

ROUX, Claude (France) poursuit l'étude des peuplements lichéniques des forêts méditerranéennes dans le Midi de la France et dirige le travail de deux étudiantes -- Souad Khalife (Beyrouth, Liban) et Laleh Abassi-Maaf (Teheran, Iran).

SHARNOFF, Sylvia D. (U.S.A.) is a free-lance Californian photographer specializing in close-up color pictures of lichens taken in the field. She and her husband (Stephen) currently have a travelling exhibit Lichens: Fine Details of the Natural Landscape touring America (see EXHIBITS). Lichen articles both written and illustrated by her are due to appear in the March/April issue of Museum of California (Oakland) and the April issue of Smithsonian Magazine.

SIPMAN, Harrie (Germany, BRD) is planning to revisit Columbia and Costa Rica this coming summer, but currently is incorporating the South American collections (some 3,000 lichens from Brazil, Chile, and Peru) of Fritz Mattick into B following the latter's death (see DEATHS). Reprints of some of Mattick's more recent papers are available from Sipman, and his collections were recently accessed by both Ted Ahti and Helmut Mayrhofer while visiting Sipman.

STEVENS, Nell (Australia) gives an in-depth report (ALN 14:1-2, February, 1984) on Mason Hale's recent visit downunder and a lichen safari made to Cape York. Many Thelotrema and parmelioid taxa were collected, some rough driving encountered, and the higher elevations of the tropical north visited. Species were collected that represent new first reports of Asian-Indian taxa on this island continent.

TRASS, Hans (Estonian S.S.R.) reports on the following Soviet lichen projects: Cryptoindication of atmospheric pollution in the Lake Baikal region (Trass, Kristyan Zobel, and Andi Parn -- Tartu State University); Cryptoindication of atmospheric pollution in Estonia (Ludmilla Martin, Eva Nilson, Siiri Liiv -- Tallinn Botanical Garden); Lichens of extreme ecological conditions (Juri Martin -- TBG); Lichens of the reserves areas of Estonia (Tiina Randlane -- TSU and Enel Sander -- TBG); Lichen flora of the Soviet Far East (Trass and Tiina Randlane -- TSU); Lichens of the Taimyr Peninsula (Taimi Piin -- TBG).

VAINSTEIN, E. A. (U.S.S.R.) reports from Leningrad that Kseniya A. Rassadina recently celebrated her 80th birthday (December 10, 1983). Although now retired she is still remarkably active at the Komarov Botanical Institute.

VELVE, Odd (Norway) is now Amanuensis (1) at Telemark and working on the Phytosociological Survey and Ecological Indicator Value of the Norwegian Flora and Vegetation. Several recent publications from this project include: Norske vegetasjonstyper I: Forarbeid til nytt kodesystem for kartlegging i store malestokkar, II: Forarbeid til plantesosiologisk oversikt (Norwegian vegetation types I: Draft for a revision of the code system for large scale vegetation mapping, II: Phytosociological Survey, Draft.) - BØ, 41, 71pp. (1983a,b) and Norwegian Vegetation Types, A Preliminary Survey of Higher Syntaxa. - TUOXENIA 3: 169-178. Göttingen.

Special Report

Galapagos Cryptogams and the 1983 Record El Nino

I am unaware of any published observations, except those of volcanic eruptions, dealing with the effects of environmental catastrophes on lichen and bryophyte floras. Therefore, I thought it would be of interest to lichenologists to read my impressions of the effect of the recent all-time exceptional El Nino on Galapagos cryptogams. All should know that the 1983 Nino was historically unprecedented. It is believed by many to have been responsible not only for catastrophic rains in South America and widespread destruction of marine and bird life, but for unusual weather patterns in North America, and drought in Australia and Africa. My observations will be further developed in a chapter that I am composing to be published, among others, by the Charles Darwin Research Station. The comprehensive report will cover all aspects in which the Galapagos Islands suffered during this tumultuous climatic event.

Last December, I returned to the islands with three students; my fifth visit since the GISP expedition of January 1964 (20 years ago almost to the day). The main mission was to collect an exsiccata set of an undescribed species of Stereocaulon for which we needed fruiting material. Secondly, I was interested in discovering anything missed during previous expeditions, since each visit and its subsequent studies results in increased perspective. Upon arrival at the Station we were bombarded with fantastic tales concerning sea temperature changes, the great destruction of marine life, the disruption of bird breeding (particularly for flightless cormorants and penguins), and the loss of the ubiquitous marine iguanas (which died by the thousands because normal algal food became unavailable and they had to eat indigestible red algae). Our first impression of the islands was of the most rampant development of vegetation we had ever seen, even on the usually dry sites.

One set of statistics given me by my old friend Forrest Nelson, whose Hotel Galapagos had been home for us in past years, indicates the incredible impact of the 1983 Nino. The average rainfall at Puerta Ayora, Academy Bay, Isla Santa Cruz, is 8 inches; this is actually a high figure since Nino years are averaged in along with normal ones. During the worst previous Nino season the highest recorded precipitation was 46 inches. In 1983, 130 inches were recorded in only 7 months! Probably over 400 inches fell in the highlands. Thirty waterfalls were seen at one time flowing over the cliffs between Plazas Islets and Baltra, on the northeastern coast of the island. A 20-foot gully was cut through the main plaza of the little village of Bella Vista, 2 miles above Puerto Ayora. The road connecting Puerto Ayora with the airport on Baltra became so bad that passengers rode bulldozers across, or

had to transfer to other buses on the far sides of washed-out roadways. The Galapagos', usually the most desert of desert islands, obviously were not during 1983. Tides were exceptionally high, rain was torrential, and the humidity remained extremely high for long periods of time.

Our first excursion was to a nearby beach where lava rocks formed a small jetty out into the surf, the type locality of Lecanora pseudopinguis and Buellia galapagana. To my surprise, I found these two species hardly recognizable having been soaked and eroded by salt water. The magnificent displays of lichens on Plaza Islet, one of the showpieces of the islands, were similarly affected. Even the normally white terete thalli of saxicolous Rocella galapagoensis were shrivelled and blackened. During the next five weeks we walked to the highlands of Santa Cruz and spent fifteen days working along the shores of Isla Santiago, Isabela, and Fernandina, helping CDRS census the flightless birds. We had numerous opportunities to make observations on the cryptogamic flora. Here are a few of the things we noted.

As host plants, Bursera trees, in general, were least affected. The bark remained tight and few trunks seem to have fallen. But other phorophytes, especially Pisonia and the arborescent Opuntia and Jasminocereus cacti, were undermined by water flows and a great many had fallen. Pisonia also suffered from loosening of the bark and waterlogging of the trunk. Even on the best substrates, the quality of thalli was poor with most species reduced to vegetative forms bleached of their usual cortical colors. Saxicolous lichens everywhere had become gray or white "ghosts" -- decorticated and without apothecia.

Corticolous fruticose lichens were noticeably absent. Rocella babingtonii, normally massively covering tree branches, evidently became waterlogged and fell to the ground. Ramalina usnea, usually abundant in the Transition Zone, was reduced to small remnants, while other Ramalinae typically abundant on trees and shrubs were essentially absent. Teloschistes flavicans was represented by a few, small, scattered thalli. The various mangroves, usually hosts to numbers of conspicuous crustose species such as Pyrenula cerina and Anthracotheicum ochraceoflavum, were presumably washed by very high tides and their trunks covered by algae. For whatever reason they were now denuded of lichens.

In the highlands there seems to have been no reduction in the populations of Cladina and Stereocaulon, but the large foliose lichens such as Sticta, Pseudocyphellaria, and the parmelioids were reduced by waterlogging, algal overgrowth, or competition from Frullania and Zelometerium bryophytes (the latter two actually benefitting from the rains). Dictyonema montana seems to have held its own. But throughout all of the zones, foliose species have been severely reduced in numbers and vigor; the only parmelioid lichen apparently remaining healthy is Parmotrema tinctorum.

While mature thalli of the interesting endemic green lobate species, Buellia straminea, were very hard to find, we discovered that this species was pioneering on steeply sloping tufa cones at Sombrero Chino on Isla Santiago. The thalli were extremely small and sterile, consisting of only a few marginal lobes, but they were abundant, and we shall distribute samples in an exsiccata. During the Nino, huge masses of this loosely consolidated tufa material slipped and bounced several feet away onto black pahoehoe lava with its lichens still intact and undamaged. Elsewhere along the coast of Isabela and Fernandina, localized colonies of Buellia formed similar pioneering colonies on rough a'a lavas. We had never noticed this before and do not yet know whether these colonies achieve permanent success.

The incredible development of phanerogamic vegetation, especially in the form of sprawling viny weeds such as Passiflora, Mormordica, Plumbago and a number of other introduced broad-leaved pests, now effectively forms a ground cover impenetrable to light. Most of the mosses typically found on the forest floor and on low exposed boulders in the moist zone were washed away; Philonotis and Rhacopilum remain. The general impression was that any serious attempt to make collections would have been very discouraging. Most of the species I had become familiar with were simply not present.

Undoubtedly the lichen and bryophyte flora will recover from this catastrophe. But how many normal years will it take to bring back the flora to what it was when I first visited the area in 1964? Unfortunately, I do not anticipate being able to live long enough to see this happen! However, I do regard my 1983-84 experience as fortuitous, for I never suspected that anything like this could possibly happen to the Galapagos Islands.

--- William A. WEBER

Theses and Dissertations

ABASSI-MAAF, Laleh (Iran) prépare, sous la direction de Claude Roux, à l'Université de Marseille III (France), une thèse sur les peuplements de lichens corticoles des Chênaies Vertes (Quercetum ilicis). Elle a mis en évidence, dans l'île de Port-Cros (Var), l'existence d'un peuplement lichénique d'affinités atlantiques (proche du Normandinio-Frullanietum dilatatae).

BELANDRIA, Gladys (Venezuela) qui fait, sous Juliette Asta à Grenoble (France), une thèse de doctorat de 3 années cycle sur le sujet suivant Les lichens, biodétecteurs de la pollution dans la région Rhône-Alpes. Le sujet couvrira à l'avenir les lichens pour la détection de la pollution acide dans la région sud de Lyon, et pour la détection de la pollution fluorée dans les vallées alpines.

CASARES, Manuel (Spain) has recently completed his doctoral thesis on Lichens of calcareous rock in the Province of Granada; flora and vegetation under Xavier Llimona. In collaboration with J. M. Egea and Llimona, he is now working on the lichens of the higher Sierra Nevada.

GÓMEZ-BOLEA, Antonio (Spain) has recently entered the Barcelona campus as "professor ayudante" freeing himself from secondary school teaching. He is completing his doctoral thesis on the Catalan epiphytic lichens under Nestor Hladun, and leads a program on thermo-Mediterranean trees (especially Ceratonia siliqua) and coal-fired power plant air quality.

KHALIFE, Souad (Liban) prépare, sous la direction de Claude Roux, à l'Université de Marseille III, une thèse sur les associations lichéniques corticoles et terricoles du Liban Central. Elle a déjà trouvé 33 taxons nouveaux pour le Liban, 25 nouveaux pour le Proche Orient et 3 probablement nouveaux pour la Science.

NAVARRO, Pere (Spain) is completing a license thesis under Nestor Hladun at Barcelona on the lichen flora and vegetation of calcareous sandstones of the central depressions of Catalonia (Comarca de la Segarra region).

OKSANEN, Jari (Finland) has moved to the University of Kuopio, but will defend his Ph.D. thesis on various Cladonia-dominated communities of Finland in March 1984 at the University of Joensuu.

REMMER, Nina R. (U.S.A.) is now an M.A. candidate working under Vernon Ahmadjian in Massachusetts. Her research thesis will be a study of the Effect of exogenous plant hormones on the development of synthetic lichens.

RYAN, Bruce D. (U.S.A.) has started work on a Ph.D. program under Tom Nash at Arizona State University. Currently his exact thesis topic is undecided, but he has received a teaching assistantship in the Department of Botany and Microbiology.

ZOOK, Douglas (U.S.A.), currently with Vernon Ahmadjian at Clark University, has been awarded a Fulbright-Hays Fellowship for one year beginning August 1984. This will enable him to continue his Ph.D. work in symbiosis specificity and chloroplast origins at the University of Tübingen (West Germany) with Prof. H. E. A. Schenk.

Herbaria

Botanischer Garten und Botanisches Museum, Berlin-Dahlem (B)

The lichen herbarium of Fritz MATTICK is now being incorporated into B. It consists mainly of his South American collections; around 1,500 lichens from Brazil and an equal number from Chile and Peru. Dr. Mattick's obituary is printed elsewhere in this Newsletter (see DEATHS). A number of reprints of his later publications are still available. Interested persons should contact Harrie SIPMAN at B, Konigin-Luise-Strasse 6-8, D-1000 Berlin 33, Germany (BRD).

Cryptogamic Herbarium, University of Toronto (TRTC)

This collection has been moved into expanded facilities in a separate building from the Botany Department. Space is now available for visitors and the examination of collections. Monographers and phytogeographers are especially encouraged to request the loan of materials. Reprints in all areas of morphology, taxonomy, chemistry and phytogeography for fungi and lichens would be appreciated for the herbarium's reprint files. For further information and specific arrangements contact the curator Dr. John C. Krug, Department of Botany, University of Toronto, Toronto M5S 1A1, Ontario, Canada.

University of Wisconsin, Madison (WIS)

The personal lichen collection of John W. THOMSON has been donated to the WIS herbarium during 1982-84. It consists of 10,870 specimens accumulated mainly during the years 1930 to 1944, and includes early collections of Thomson's from the East Coast, Wisconsin, and a large number of Eurasian and African specimens obtained via exchange or purchase from other lichenologists.

Especially valuable are isotypes of early American collections of Calkins named by Nylander. These were rescued from a wastebasket and given to Thomson by a friend. There is also a set of Cladonia duplicates from the herbarium of Raymond H. Torrey. The first set was packeted and prepared by the Thomsons and given to NYBG during the early 1940s in accordance with the wishes of Mrs. Torrey. These Cladoniae were the basis for papers published by Torrey on eastern lichens of particularly Quebec, New York, New Jersey, and the Delaware coast. His original collection was filed in envelopes which in many cases were only coded to locality. It was necessary to decipher the code at Yale where, fortunately, A. W. Evans had kept the codes with the duplicates Torrey had sent him for identification. Those Yale lichens are now at the Smithsonian Institution.

Thomson's collections contain very few duplicates from the period subsequent to 1944 when he returned to WIS and started to build up the campus lichen herbarium. His personal herbarium augments WIS to about 100,000 specimens, making it one of the largest on the North American continent. The University collection itself is outstanding in its representation of arctic and boreal lichens as a result of Thomson's specialization in those areas.

Meetings

1984 Annual ABLS Meeting

This year's annual meeting of the American Bryological and Lichenological Society will be held August 5-9 with AIBS at the Colorado State University campus, Fort Collins.

Under the chairmanship of President Norton G. Miller, four poster displays, a six-speaker symposium on Species concepts in Bryophytes, and contributed papers in bryology and lichenology will provide a three-day program. Martyn J. Dibben will preside at the lichen sessions and prepare a report for the October 1984 ILA Newsletter.

A premeeting foray is scheduled for August 3-5 to be held in Rocky Mountain National Park. Base camp will be the Lazy T Motor Lodge in Estes Park, and the group will travel by bus since the foray coincides with peak tourist season. Box lunches will be provided and facilities for drying; and a Saturday night banquet is planned.

Reservations should be made with either Roger Anderson (University of Denver) or Sam Shushan (University of Colorado, Boulder). Total costs are expected to be in the neighborhood of \$135.00 (wet bar excluded).

British Lichen Society Meetings

Members of BLS will have the following choice of courses to attend during 1984:

Lichens on Limestone, a residential weekend course in conjunction with Bristol University, will be run by Brian Coppins and Peter James, March 9-11 at Burwalls, Leigh Woods. Contact Dr. David Hill, Department of Extra-Mural Studies, 32 Tyndalls Park Road, Bristol BS8 1HR, U.K.

New Forest Field Meet led by Francis Rose on Saturday, March 24. Meet at Lyndhurst Road Station at 11:00am and bring lunch.

Presidential Field Meeting to be held in Wiltshire, April 9-14 that precedes the Bristol University "Lichen Physiology" symposium. Headquarters will be the Bear Hotel, Marlborough, with daily trips starting at 9:30am. Visits will be made to Avebury, Fyfield Down, East & West Kennett Long Barrows, Savernake Forest and Salisbury Plain. Leaders will be Alexandra O'Dare and Jack Laundon.

Kent Wall Tour of May 6 will be the traditional study of all plants found growing on walls around Tumbridge Wells. Meet at town station at 11:00am. Leaders will be Frank Brightman and Jack Laundon.

Summer Field Meeting from August 25 to September 3 will be at Bettyhill, Sutherland -- the remote northernmost tip of mainland Britain. Accommodation will be at the University of Aberdeen Field Center (£2.50 per night) with transport via hired minibuses. Visits will be made to extensive maritime habitats, untouched native woodlands, limestone outcrops, peat moorlands, and some 3,000ft elevations with ultrabasic rocks. Leaders will be Brian Coppins and Tony Fletcher with bookings to the latter c/o Leicestershire Museums Service, 96 New Walk, Leicester, LE1 6TD, U.K.

Autumn Field Meeting which will probably be held in Northamptonshire and be detailed in the May issue of the BLS Bulletin (No.53, Spring 1984).

Recent U.S.S.R. Conferences and Forays

Hans TRASS sends news of several broad-interest Russian meetings:

An All-Union conference on Bryological and lichenological studies of the high mountains and northern regions of the U.S.S.R. was held in Apatity (Kola Peninsula) in June of 1981. A 126 page book summarizing the meeting was published.

An international lichenoidication school and field meeting was held in June of 1982 at Tallinn in the Estonian S.S.R.

An All-Union symposium of mycologists and lichenologists was held in Minsk in November of 1982. From this a 272 page abstract of thesis on Ecology and Biology of the Lower Plants was produced.

An All-Union conference on Biogeochemical aspects of Cryptoidication (as revealed by base studies of algae, bryophytes, fungi and lichens) was held at Tallinn in 1982. A corresponding 53 page abstracts summary was published.

1984 Flora Neotropica Meeting

The Organization for Flora Neotropica held its most recent annual meeting at La Paz, Bolivia on Wednesday, January 18, 1984. The event was preceded by a four-day field trip that left from La Paz and visited cloud forest at Coroico, coca producing areas near Coripata, and relict *Podocarpus* mountain forests around Huancane. Local organizer and contact was Dr. Stephan G. Beck, with the business meeting being held at the Herbario Nacional de Bolivia, Campus University, Cota-Cota.

Swiss Association for Bryology & Lichenology

In conjunction with the Bryo-Lichen Association of Middle-Europe (BLAM), SVBL will host three 1984 programs of interest to cryptogamists.

A Workshop in Numerical Taxonomy to be held February 18-19 at the Systematisch-Geobotanisches Institut, Bern under the leadership of Klaus Ammann. Cluster and principal component analysis as applied to bryology will be reviewed as a microcomputer tool. Registration by February 16, 1984.

A joint BLAM-SVBL Annual Meeting to be held in Frauenfeld, May 11-13 with excursions to Schienerberg and Ittingen led by Alfons Schafer and August Schlafli. Also an afternoon paper session featuring Schlafli, Christoph Scheidegger, Patricia Geissler, and Engelbert Ruoss. Registration by April 14, 1984.

A Field Trip to Val Piora, Tessin from August 30 to September 2 led by Patricia Geissler. Accommodation will be at the Hotel Riton (Val Piora) and cost from Sfr. 32-50 plus Sfr. 19 for food. Some 330 bryophytes are known for the area including *Meesea triquetra*, *Paludella squarrosa* and *Riccia breidlerii*, but the lichens are only to be observed as all are protected species.

Exhibits

Lichens: Fine Details of the Natural Landscape

The Oakland Museum of California (U.S.A.) will be exhibiting this photo essay by Stephen and Sylvia Duran Sharnoff from February 15- May 12, 1984. The show consists of 49 color photographs with brief captions which introduce various aspects of lichenology. Arrangements have been made with the Travelling Exhibition Service of the Association of Science-Technology Centers for a two-year, twelve-museum tour of the United States. For further information on the Sharnoffs see NEWS & NOTES.

Miscellaneous

Lovable Lichens

U.S. mail order catalogs are again championing "living moss" -- but this time it is not plant fakery utilizing the hygroscopic properties of dyed bryozoans (the so-called "air ferns"). Rather, one can now buy a hollowed-out tree trunk containing its own lovable lichens, colored or otherwise. For those lichenologists needing a justification of their job or an addition to their pet (hacking) rock, here's your next floral four-flusher.

Red Data Book of the U.S.S.R.

The second edition of this Soviet endangered species book will be published in 1984. Hans TRASS is scientific editor of the part on "Lichens", which will include the following 29 species:

Asahinea scholanderi (Llano) Culb. & Culb.
 Aspicilia oxneriana Blum
 Bryoria fremontii (Tuck.) Brodo & Hawksw.
 Cetraria alvarensis (Wahlenb.) Vain.
 Cetraria komarowii Elenk.
 Cladonia graciliformis Zahlbr.
 Cladonia vulcani Savicz
 Coccocarpia cronia (Tuck.) Vain.
 Coccocarpia erythroxili (Spreng.) Swinsc. & Krog
 Coriscium viride (Ach.) Vain.
 Glossodium japonicum Zahlbr.
 Hypogymnia hypotrypea (Asah.) Rassad.
 Leptogium corticola (Tayl.) Tuck.
 Letharia vulpina (L.) Vain.
 Lobaria amplissima (Scop.) Forss.
 Lobaria pulmonaria (L.) Hoffm.
 Parmelia borisorum Oxn.
 Parmelia mougeotii Schaer.
 Pyxine endochrysoides (Nyl.) Degel.
 Ramalina evernioides Nyl.
 Ramalina maciformis (Del.) Bory
 Roccella fucoidea (Neck.) Vain.
 Stereocaulon saviczii Du Rietz
 Sticta limbata (Sm.) Ach.
 Teloschistes flavicans (Sw.) Norm.
 Tornabenia atlantica (Ach.) Kurok.
 Umbilicaria esculenta (Mioshi) Minks
 Umbilicaria subpolyphylla Oxn.
 Usnea florida (L.) Wigg.

The Land of the Lichens

This "playlet" described in the December 1983 issue of The American Biology Teacher (Vol. 45, No. 8:428-430) is designed for one teacher and six students who play narrator; Crustose, Foliose, and Fruticose; a pair of mutuals (Alga and Fungus); and, a Dwarf Cinquefoil.

It is dedicated to those leaders of the Environmental Science Program and the Hut People of the Appalachian Mountain Club in the New England area. Mt. Washington (White Mountains' home of Tuckerman's Ravine) is the motivating force and Ernest Ruber of Northeastern University, Boston, Massachusetts is the author.

Participants are encouraged to "ham up" the roles and appreciate that slapstick, satire, and insult are part of the task. The intent is to assault both the "impulsive" and the "conscientious" attitudes of an audience and to convince them of the merits of lichen and the significance of endangered species.

May the symbiotic force be with you!!!

Books

Ainsworth & Bisby's Dictionary of the Fungi (7th Edition). D. L. Hawksworth, B. C. Sutton and G. C. Ainsworth. Commonwealth Mycological Institute, Kew, Surrey (England). 445 + xii pp., XVI plates, and 228 figs. 1983. Price: £12.50.

This multi-authored (and assisted) text now regularly includes the lichens and is a substantial update from the 6th edition. The altered two column format and typography make this issue not only attractive but fun to browse. Ainsworth's preface reviews the text's origins and allows that J. H. Willis's A Dictionary of the Flowering Plants and Ferns (6th edition) was a motivating inspiration.

The Dictionary of the Fungi follows the original Willis concept and still includes much beyond just generic names, whereas this was dropped from the vascular dictionary starting in 1966. One annoyance remains, however, in the continued use of number coding to indicate the subdivision of a higher taxon to which a generic name is assigned. Thus -- one must look up the name of the higher taxon and check the code in order to determine the family, since most genera are referred to a suprafamilial taxon.

Some 500 plus (750 plus synonyms of) lichen genera are listed together with their date of publication, status, systematic position, number of accepted species, distribution, and key publication references. Many terms used in lichenology are explained along with short, informative accounts on such topics as: air pollution, antibiotics, biographies, dying, ecology, edible and fossil lichens, medical/veterinary roles, phylogeny, spore discharge and dispersal, symbiosis, and ultrastructure. Each is invariably supported by the citation of important literature.

The number of accepted lichens is now placed lower at around 13,500 species; approximately one-fifth of all known fungi. Some 20 mycological genera are now recognized to include a mixture of lichenized and non-lichenized (or even lichenicolous or parasymbiotic) species. But the definition of "lichen" is still open to debate depending upon one's point of view!

The Dictionary is available from the Commonwealth Agricultural Bureaux, Farnham House, Farnham Royal, Slough SL2 3BN (U.K.) for \$26.25 or from Lubrecht & Cramer, RFD1, Box 227, Monticello, New York 12701 for \$22.50 plus \$1.25 postage and handling.

Checklist of Australian Lichens. Rex B. Filson. National Herbarium of Victoria (Australia). 123pp. Price: A\$---(?).

A computer generated checklist conceived of as a precursor to lichens possibly occupying four volumes of the proposed new Flora of Australia. It attempts to list all names that at one time or another have been reported in the continent.

The list owes its origin to both the Catalog of the Lichens of Tasmania (C. M. Wetmore; Rev. Bryol. Lichenol. 32: 223-264, 1963) and the Catalog of lichens of Australia exclusive of Tasmania (W. A. Weber and C. M. Wetmore; Beih. Nova Hedwigia 41:1-137, 1972). Also to the work of the late P. N. S. Bibby who prepared and maintained a large card index to the literature on the Australian lichen flora at MEL.

The taxonomic arrangement is alphabetical by genus and species with family assignments following those of R. W. Rogers in his Genera of Australian Lichens (1982). The list has been exhaustively scrutinized by Filson's colleagues, but still contains some quirks that may amuse (annoy?) those schooled in the European market. For example, currently recognized taxa are underlined and have their references checked against original publications. But all names used in the past are listed, including illegitimate ones and nomina nuda that have not later been validated by an author. This may cause confusion for some, as may the use of symbols under the family name that signify different sorts of things. That is: * = name based on Australian type; t = type specimen in MEL; M = specimen other than MEL type; while -- other symbols indicate Australian regional distribution or an exotic taxon.

Undoubtedly this list will prove of immense help to the students of "downunder" lichens. By the time of the flora's production I am sure peculiarities will all be ironed out. Rex Filson is to be congratulated on keeping the Australian project on target.

Collins Guide to the Ferns, Mosses, and Lichens of Britain and northern and central Europe. Hans Martin Jahns. William Collins & Co., Ltd., London (U.K.). 272 pp. with VIII plates, 20 drawings, and 655 color prints. 1983. Price: £8.95.

This beautifully illustrated guide is a translated and expanded version of Jahns' earlier Farne, Moose, Flechten Mittel-, Nord- und Westeuropas published in Germany by BLV Verlagsgesellschaft mbH, Munchen (1980). Assisted by A. K. Masselink and revised by E. Launert, A. Eddy, and J. R. & R. J. Laundon, this book provides one of the best popular works on cryptogams exclusive of macrofungi.

The text clearly delineates relevant life-history and structural features for understanding each plant group. It then proceeds to key, illustrate, and discuss ecology of some 750 of the more readily encountered or identified cryptogams of Britain, Scandinavia and northern Europe from the Baltic to the Alps.

The lichen part discusses symbiosis and its ramifications, explores the physiology of thalli, relates sexual and asexual reproduction, and explains growth form, past exploitation and today's environmental role for these fungi. Only in the chemical part can one fault the text for a C+ orange (gyrophoric) spot test. Although a conservative attitude is taken over some genera (e.g., Cladonia, Parmelia, Umbilicaria), the book does establish in the popular press some other previously unmentioned generic names (e.g., Coelocaulon, Diploicia, Hyperphyscia).

An excellent buy even if merely placed on the coffee table despite its pocketbook size, and so wisely translated for the English-speaking market. If only the same could be done for Henssen & Jahns earlier text LICHENES: Ein Einfuhrung in die Flechtenkunde (1974), especially if in a revised form!

Die Chemotypen der Flechtengattung Pertusaria in Europa. Bernd Hanko. Bibliotheca Lichenologica 19. J. Cramer, Vaduz (Germany). 292 pp. with 2 tab., 59 fig. and 8 maps. 1983. Price: \$48.00.

This assessment of some 100 plus European species of Pertusaria supports a previous treatment of the North American taxa; but it does not go far enough in its systematic interpretation. It is, however, an excellent summary of the "chemism", provides the first European reports of long side chain orcinol para-depside formation in the group, and confirms the production of higher aliphatic acids of the --lactone type by the genus.

Twenty-four major substances are defined and their distributions discussed in terms of twenty-one chemotype groupings. Transatlantic comparisons are made and the differing use of names for xanthonenes and "unknowns" charted. Eight maps detail populational variances for five taxa, but little discussion is given to substrate or geographical differentiation and subgeneric standing or species' spore characteristics.

An in-depth review of the work has been prepared by the Editor for publication in The Bryologist. Overall, the text is well produced with few typographical errors, but it is clear that a thorough anatomical reinvestigation of the European Pertusariae is needed before any taxonomic update.

Lichenes Officinales Sinensis. Wei Jiang-chun et al. Science Press, Shenyang (China). 65 pp. plus 15 fig., 15 plates, and 85 illustrations. 1982. Price: Yuan 1.25(?).

This six-authored work is a modern introduction to Chinese lichens that deals with about 100 taxa in 35 genera and cites only 29 references. However, it is a well organized and cogent text that accomplishes its purpose of introducing students to the field of lichenology.

Structure, reproduction, component and chemical analysis are all briefly covered before the systematic treatment. Figures illustrate morphologic features and chemical configurations, while the numerous photographs (eleven in color) depict anatomical and crystal form along with habit of some 70 taxa.

Lichen students from the Far East should benefit greatly from this text, but comprehension will be difficult for those not familiar with Chinese script.

Macrolichens of Japan and Adjacent Regions. Yoshiatsu Ikoma. Fakuta Printing Co., Ltd., Tottori (Japan). 120 pp. 1983. Price ¥\$---(?).

This photo-offset work attempts to update Isao Yoshimura's Lichen Flora of Japan in Color (1974) allowing for the many monographs produced in the interim. The text starts with a brief (but interesting) history of Japanese lichenology that concludes with the Lichen Society of Japan's 1980 issuance of the compiled works of Yasuhiko Asahina.

Bibliographically, the literature covered is inclusive of 1982 with the subject material broken up into some 12 areas. The taxonomic part treats 53 genera and innumerable (often cross-referred) specific and subspecific taxa. Under each genus both general references and specific citations for selected taxa are listed.

A wealth of data -- but unfortunately non-illustrated with an English text that is full of errata. The publication includes an issued corrections list of some 60 addenda and corrigenda. But there are plenty more and the text's format is at times rather confusing. Hopefully, it will lead to something better down the road.

The Plants of the Upper Watut Watershed of Papua New Guinea. Heinar Streimann. National Botanic Gardens, Canberra (Australia). 209 + iv pp. 1983. Price: FREE!!!

This report covering all plant groups except fungi, is the result of 10 years work by the author following establishment of both the Papua New Guinea Forestry College (Bulolo) and the Bishops Museum (Hawaii) derived Wau Ecological Institute.

An historic introduction indicates that the areas cryptogams have been collected sporadically over the last 30 years. In 1953 both R. D. Hoogland and H. J. Lam first gathered lower plants. Later collections by H. Sleumer (1961), P. van Royen (1962-63), and A. Eddy & R. G. Robbins (1964) were followed by an extensive study of Aneuraceae (Hepaticae) by Helen J. Hewson (1965) and visits by S. Kurokawa (1965), D. N. McVean (1966), R. M. Schuster (1967), McVean, W. A. Weber, & B. O. van Zanten (1968) and E. A. C. L. E. Schelpe (1969).

During 1973, the National Science Museum, Tokyo, Japan organized several expeditions to collect lower plants. Mosses, liverworts and lichens from the area were collected by H. Inoue, H. Kashiwadani, & N. Takaki; and S. Kurokawa returned in 1975. At this time, G. A. Shea (lecturer at the Forestry College) also began collecting a large number of cryptogams. The author then completed his collecting during 1981-82.

Seventy lichens in 17 genera are listed for the watershed with affirmations made by J. A. Elix. But the enumeration should not be regarded as complete, and in reality is merely a foothold for more work to be done. The text is equally noteworthy for its vascular plant data, extensive New Guinea bibliography, and the attempt to computerize vastly disparate field reports.

Russian Books in Print

Hans TRASS has provided a list of some recent Russian language lichen publications:

Golubkova, N. S. (1981). Conspect of lichen-flora of the Mongolian Peoples Republic. Leningrad, "Nauka". 200 pp.

Makearevitch, M. F., I. L. Narotzkaya, & I. V. Yudina (1982). Geographical distribution atlas of lichens in the Ukrainian Karpethian Mountains. Kiev, "Naukova Dumka". 402 pp.

Malysheva, N. V. & A. G. Smirnov (1982). Manual of lichens of the Tatarian A.S.S.R. Kazan. 148 pp.

Piterans, A. V. (1982). Lichens of Latvia. Riga, "Zinatne". 353 pp.

Andreyeva, E. I. (1983). Lichens. 2. Lecideales -- Lecanorales in: "Flora of the spore plants of Kazakhstan", vol. XI, part 2. Alma-Ata. 308 pp.

Byazrov, D. G. (1983). Lichens in: "Biological resources and nature conditions of the Mongolian Peoples Republic", vol. XX (Flora of the Eastern Hangay), pp. 16-88. Moscow, "Nauka".

Novruzov, V. S. (1983). Great Caucasus lichen-flora within the limits of Azerbaydshan. Baku, "Elm". 131 pp.

Trass, H. A. (1983). Modern literature on the lichens in the U.S.S.R. -- a series of bibliographical papers. The first issue (1980-1981) was published in "Bulletin of the Moscow Naturalists Society, section biology", vol. 88, fasc. 6, pp. 107-112 (1983).

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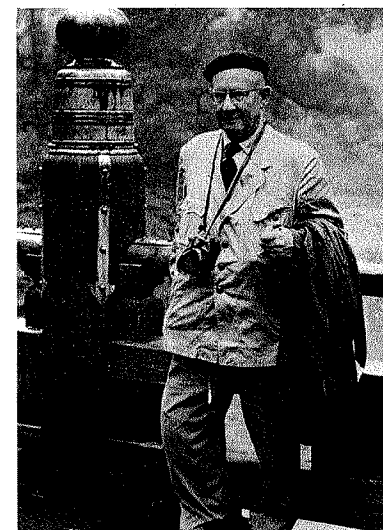
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Deaths

Fritz MATTICK (Germany): 1901-1984



Born May 17, 1901 in Dresden, Fritz Mattick died in Berlin on January 3, 1984 at the age of 83. His career started with teacher training and was followed in 1927 by a science degree from the Technische Hochschule (Dresden) based on a phytosociological thesis. Tobler was his professor, that it was no wonder that he soon demonstrated a lichenological interest and started a whole series of floristic and sociological papers on the lichens of northeastern Germany.

In 1932 Mattick accepted a position at the Botanischer Garten und Botanisches Museum Berlin-Dahlem, to which he was connected for the rest of his life. First as assistant, then since 1952 as curator, and later (after his retirement) as an honorary staff member. Apart from his lichenological activities he made revisions of several phanerogam genera and was involved in a mapping scheme for the German Flora. Gradually, he permitted extra-European lichens to come within his scope, as demonstrated by his work on the Cladoniae of Hawaii and New Guinea and the publication of some of Zahlbruckner's manuscripts. But then the second world war and the catastrophic fire at the Botanical Museum upset all his plans: he lost all his collections, research notes, field books, literature, etc.....

After the war Mattick spent a lot of energy in re-establishing the lichen herbarium at B, bringing together about 70,000 specimens in twenty years. He travelled a lot; for example to South America, southern Africa, and Japan. In 1958 he was appointed Honorary Professor in Phytogeography at the Freie Universität Berlin. His publications in this period concentrated on biographical and general topics.

After his retirement in 1966, Mattick kept himself active with travelling, teaching, and editorial duties. Unfortunately, he became more and more hindered by weak health that at last confined him to a wheel chair. Besides his botanical activities, however, he had a vivid interest in music and geography and these helped to entertain him. He is survived by his wife Maria (born Felgner), and by a daughter (Ingeborg) and son (Christian).

--- Harrie SIPMAN

NOTE: A more detailed biography and bibliography for Mattick will appear in WILLDENOWIA under the pen of J. Gerloff and B. Zepernick.

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