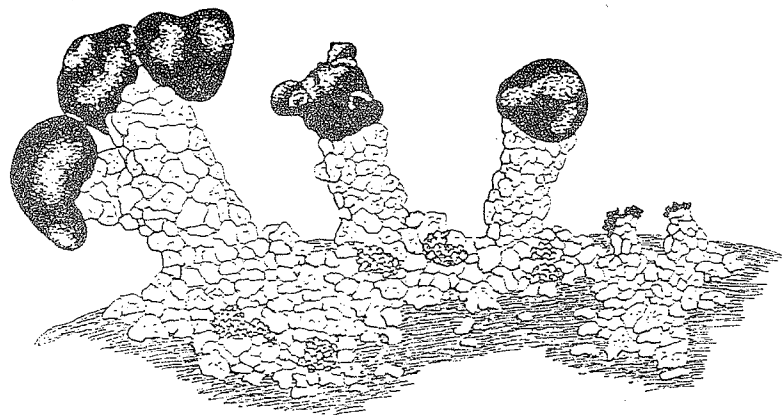


INTERNATIONAL

LICHENOLOGICAL

NEWSLETTER Vol.22, nr.1, February 1989



Official publication of the
International Association for Lichenology

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ISSN: 0731 - 2830

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

The International Lichenological Newsletter is the official organ of the International Association for Lichenology (IAL). It is published three times a year 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 (February, June and October of each year).

IAL membership is open to anyone who has an active interest in the study and use of lichens. The subscription is US \$ 20.00 or S.Fr. 32.00 for the six-year period between successive International Botanical Congresses. Subscriptions should be sent to the Treasurer or Deputy Treasurer.

Robert S. Egan, Dept. of Biology, University of Nebraska, Omaha, NE 68182-0040, USA. Cheques should be made out for US dollars, drawn on a US bank, otherwise it will cost the IAL US \$ 27 for each cheque!

Rosmarie Honegger, Inst. für Pflanzenbiologie und Cytologie, Zollikerstrasse 107, CH-8008 Zürich, Schweiz. In this case please pay S.Fr. 32.00 to the following bank account: Schweizerischer Bankverein (Swiss Bank Corporation, Société de Banque Suisse), Filiale Albisriederplatz, 8040 Zürich, Switzerland, Account Nr. PI-560.486.0 in the name of IAL/Honegger. Those who wish to use the Postal Giro service may use the Postal Account number of the Bank: 80-206-1.

IAL affairs are directed by an Executive Council of thirteen members elected during the last International Botanical Congress. Council members elected at the 14th Congress (Berlin, Western Germany, 1987) are listed below and will serve until the 15th Congress (Tokyo, 1993).

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Lichen Terminology Committee

Chairperson: Vernon Ahmadjian, Department of Biology, Clark University, Worcester, Massachusetts 01610, USA

RESEARCH NEWS & NOTES

Büdel, Burkhard (Marburg, West Germany) received a DFG grant in August 1988 for his two-year research project "Blue-green Algae (Cyanobacteria) and cyanophilous lichens of tropical/subtropical savannas, deserts and semideserts". The project will deal primarily with taxonomy, functional morphology, anatomy and ecology of lichens in the families *Lichinaceae* and *Peltulaceae*, their photobionts and associated epi- or endolithic Cyanobacteria. It will be based on observations made during a stay in the savannas of Transvaal (1983) and a travel in arid and semi-arid areas of Australia in 1987. Additional observations and material for cultivation will be acquired by participation in the Sonoran Desert field meeting and a subsequent stay in North America.

Daniëls, Fred (Münster, West Germany) is planning a study of the syn-taxonomy and ecology of terricolous *Cladonia* vegetation in Western Europe. Special attention will be paid to the life strategies of these lichens and the structure of the phytocoenosis as a habitat factor for them. This project is expected to take 5 years and will be carried out by members of the Arbeitsgruppe "Geobotany and Vegetation Ecology" of the Westfälische Wilhelms-Universität, Münster. He would very much appreciate receiving duplicates of European terricolous microlichens for the Münster herbari-

um, to facilitate correct determinations for his project.

Galloway, David (London, UK) participated in the Kimberley Research Project, Western Australia (see IAL Newsletter 21(2): 44-45), spending 6 weeks in the field during May-June, 1988 collecting lichens from localities in the King Leopold and Napier Ranges. A preliminary report of findings in this remote area of the arid tropics will be given in the next issue. Nathan Sammy (Darwin), Jack Elix and Heinar Streimann (Canberra) also joined the project at different times. I visited Chile (August-September) to participate in the VI. Reunion Nacional de Botanica in Valparaiso. (See below for a report.)

Work on *Pseudocyphellaria* is proceeding, with monographs on South American and Ecuadorean taxa nearing completion and on Australian and palaeotropical taxa due for completion towards the end of 1989. A study of cool temperate species of *Sticta* in the southern Hemisphere is under way, together with collaborative work on Australasian *Pannariaceae* with Per Magnus Jørgensen (Bergen).

Van Haluwyn, Chantal (Lille, France) is studying recolonization by lichens following a decrease in air pollution in northern France, particularly the effect of hysteresis. In collaboration with Mme. Letrouit-Galinou

she has been investigating the lichen epiphytes of eastern Algeria (region of Annaba and Tebessa) since 1985. Epiphytic *Caloplaca* species with poliarilocular spores collected in south-eastern Algeria are being studied in cooperation with Dr. Gomez-Bolea (Barcelona).

Horáková, Jana (Prague, Czechoslovakia) has accepted the position of curator of the Lichen Herbarium at the Department of Mycology of the National Museum in Prague.

Huneck, Siegfried (Halle/Saale, Eastern Germany) took part in an expedition through the Mongolian Peoples Republic from June 1st to July 20th, 1988, (see special report "The thirty three faces of the Gobi" in this number of ILN). Further members of the expedition were Dr. Hans Dieter Knapp (geobotanist, Waren/Müritzt, GDR), Dr. Ulzjin Cogt (lichenologist, Institute of Botany of the Academy of Sciences of the MPR, Ulan-Bator), and Mrs. Tuja (Institute of Folk Medicine, Ulan-Bator). Dr. U. Cogt is now in Leipzig to learn German. He intends to finish his "Promotion B" at the Martin-Luther-University Halle in 1990. From September 23rd to October 6th, 1988, he visited the Democratic Peoples Republic of Korea (DPRK), spending one week in Pyongyang; during the second week he made an excursion to the Diamond Mountains (Kumgangsan), where he collected lichens and liverworts.

Inoue, Masakane (Akita, Japan) will

join the 5th Chinese Antarctic Research Expedition (CHINARE-5) from 1st November until late March, 1989, to study the ecology and taxonomy of maritime Antarctic lichens in the vicinity of the Great Wall Station on King George Island (South Shetland Islands).

James, Peter (London, UK) has relinquished the post of Head of the Lichen Section of the Cryptogamic Herbarium, British Museum (Natural History), to David Galloway. He continues as Head of the Cryptogamic Herbarium and Deputy Keeper of Botany. Work is now well advanced on a world monograph of *Menegazzia*, which will be finished shortly. Considerable input into the Lichen Flora of Great Britain and Ireland continues and much of the scientific editing of this work will be undertaken.

Kappen, Ludger (Kiel, West Germany) enjoyed a highly successful cooperation in the study of the ecophysiology of *Umbilicariaceae* with Dr. Leo Garcia Sancho from the Universidad Complutense, Madrid, who visited his laboratory in Kiel last year (1988). In January 1989 he will visit "Juan Carlos I", the new Spanish station in Antarctica, together with his co-workers B. Schroeter and Dr. Sancho. There they will study the lichen vegetation and its ecology in the maritime Antarctic. Co-worker Peter Jacobsen is making good progress with his study of the lichen vegetation of Schleswig-Holstein in relation to environmental impacts. So far he has

published a checklist in Kieler Notizen 19 (1/2), 1987, and various other papers. Doris Zimmer recently joined his team as a new student to investigate the lichens of Kiel. Additional students with good basic knowledge in lichenology are welcome, some urgent short-term work in Schleswig-Holstein is waiting! Those interested should contact Prof. Dr. L. Kappen, Botanisches Institut der Universität, 2300 Kiel, F.R.G.

Kashiwadani, Huroyuki (Tokyo, Japan) continues his studies on the genus *Ramalina* in Eastern Asia and South and Central America. A treatment of this genus from Brazil is being prepared in cooperation with K. Kalb.

Laundon, Jack (London, UK) has completed an account of the *Lepraria membranacea* group, which has been referred to *Lepruloma*. He is now writing an account of *Lepraria* s.str. in the British Isles. The genus *Caloplaca* is being studied for the Lichen Flora of Great Britain and Ireland.

Lökös, László (Budapest, Hungary) took part in an expedition of the Hungarian Natural History Museum to North Korea in June-July 1988. He visited the Kumgang Mountains and the Paek-du Mountains, where he observed a lichen flora somewhat similar to that of European mountains. He collected many *Parmeliaceae* as well as other groups such as *Collemataceae*, *Stictaceae* etc. Part of the material has been studied already by A. Vezda, who will issue several species

in his *Exsiccata*. In Pyongyang László Lökös met Ri Jong Dzae, the lichenologist of the Botanical Institute of the Korean Academy of Sciences.

Miyawaki, Hiromi (Saga, Japan) is now (Nov. 1988 to March 1989) doing lichenological fieldwork at Syowa Base, Antarctica, as a member of the Japanese Antarctic Research Expedition.

Pickering, Jane (London, UK) has been awarded a British Museum (Natural History) Studentship for 3 years to undertake a study of morphological and chemical evolution in the *Peltigerales*, and has taken up a post in the Lichen Section.

Purvis, William (London, UK) has recently taken up a post in the Lichen Section, filling the vacancy left by Joy White's resignation. His first major task will be to complete work on the Lichen Flora of Great Britain and Ireland (now c. two thirds complete in draft form) in collaboration with Profs. D.M. Moore and D.L. Hawksworth, Mr. P.W. James and Dr. B.J. Coppins (see *IAL Newsletter* 21(2): 43). He plans to continue work on lichens and mineralization, and to become more involved in pollution monitoring studies, particularly those relating to "acid rain", and in monitoring metals in the environment.

Tehler, Anders, Göran Thor and Leif Källsten (Stockholm, Sweden) have started a phylogenetical investigation of *Arthoniales* and *Opegraphales* (*Arthoniaceae*, *Seuratiaceae*,

Opegraphaceae, *Chiodectionaceae*, *Roccellaceae*). The objective is to examine the monophyly of *Artoniales*/*Opegraphales* as a group and their outgroup relationships, basing on morphological and chemical characters. Cladistic parsimony is the method selected for undertaking the analysis of relationships, and species will be

used as terminal taxa. In a first publication, integral monophyletic groups will be expressed by using only the type species from each genus. In the extension project terminal taxa (species) will be continuously added and the ultimate objective is to have all known species of the group in one data set.

Workshop on tropical lichens

From 21-31 May 1989 a lichenological workshop will be held at the Maricao Biological Station, Puerto Rico. The organization is in the hands of Inés Sastre-D.J. (Puerto Rico) and R.C. Harris (New York). The workshop is intended for both beginners and experienced lichenologists, and includes one-day excursions to see different vegetation types. A fee of \$50.00 per person will be charged. For further information, those interested should write for the brochure to:

Dr. Inés Sastre-D.J., Departamento de Biología, Universidad Católica de Puerto Rico, Ponce, Puerto Rico 00732.

Course on Arctic and Subarctic lichens

The programme of the Churchill Northern Studies Centre, Canada, for this summer features a course entitled "Arctic and Subarctic Lichens", from June 19-28, 1989. Instructors will be Dr. Irwin M. Brodo (National Museum of Natural Sciences, Toronto) and P. Scott (University of Toronto). Costs: \$500, for tuition, room and board and local transportation (for \$150 a minicourse, including tuition only, can be taken).

On this course the taxonomy and ecological characteristics of lichens found in the Hudson Bay Lowlands, northern boreal forest, the forest-tundra transitional regions, and the Arctic tundra will be described and discussed, often in a broader lichenological context. Field trips will be made to learn how to identify the more conspicuous species in the field and to make collections of the less conspicuous, but equally important species, which will be keyed out in the laboratory. Modern concepts of morphology, anatomy and chemistry, and the techniques for studying

them, will be emphasized. For further information write to: Churchill Northern Studies Centre, P.O. Box 610, Churchill, Manitoba R0B 0E0, Canada.

Phytogeography of lichens in the Mediterranean area

A symposium with this title will be held during the Congress of the Organization for the Phytotaxonomic Study of the Mediterranean Area (OPTIMA), to be held in Delphi, Greece, from 8-16 September 1989.

The symposium will be held on 12 September, and the programme is as follows:

Chairman: Prof. Josef POELT.

Pier Luigi NIMIS (organizer): Introduction

Claude ROUX: Phytogéographie des lichens calcicoles dans l'Europe méditerranéenne.

Jose M. EGEA and Xavier LLIMONA: Phytogeography of silicicolous lichens in Mediterranean Europe.

Eva BARRENO: Phytogeography of terricolous lichens in Mediterranean Europe.

BREAK

Helmut MAYRHOFER: Phytogeography of the genus *Rinodina* in Mediterranean Europe.

Christoph SCHEIDEGGER: Phytogeography of the genus *Buellia* in Mediterranean Europe.

Josef POELT: Summing up and concluding remarks.

DISCUSSION

There will be a poster session open to lichenological contributions covering all aspects of lichen biology of the Mediterranean Area.

For applications and further information write to: Prof. D. Phitos, Botanical Institute, Dept. of Biology, University of Patras, 26010 Patras, Greece.

IAL Field Meeting in Spain, September 1990

In connection with the International Mycological Congress, Regensburg 1990, the IAL intends to organize a field meeting in Spain. Leader will be: Eva Barreno, Botánica, Facultad de Ciencias Biológicas, Universidad de Valencia, 46071-Burjassot, Valencia, Spain.

The excursion will include visits to a wide range of habitats, littoral forest, continental areas in the east, high mountains in the centre, and sub-humid and thermophilous locations in the southwestern parts of the Iberian Peninsula. Some of these areas, with special lichenological interest, are already receiving attention by Spanish lichenologists, while other areas are much less known. The tentative schedule is as follows:

- Valencia, Sierra Javalambre and the Iberian Parameras, including Guadalajara, Soria. Habitats are mostly calcareous, and include the most continental areas in Spain, with vagant life-forms (*Sphaerothallia*, *Agrestia*, etc.).
- Central Spain (Madrid, Avila, Segovia), with gypsum soils and siliceous mountains ranging from the meso- to the oromediterranean stage.
- Extremadura (Toledo, Cáceres, Badajoz). Habitats are quartzites, granites, and thermophilous sites, with *Rhizoplaca bullata*, *Acarospora hiliaris*, *Lecidea deustata*, *Pannaria* spp., *Cetraria iberica*, *Coelocaulon crespoeae*, *Xanthoporella llimonae*, *Parmelia soledians*, *Physconia* and *Phaeophyscia* spp.
- Sevilla and Coto de Doñana (National Park) (Huelva, SW Spain), where sandy soils occur with shrubs of *Halimium*, *Cistus*, *Ulex*, and forests of *Quercus suber* and *Q. canariensis*. Lichens to be encountered include *Ramalina* spp., *Usnea* spp., *Pertusaria* spp., *Parmotrema hypoleucinum*, *Cladina mediterranea*, *C. portentosa* and tapestries of *Cladonia* spp. on soil.
- If time allows, an additional visit to the *Abies pinsapo* forests in the Serania de Ronda (Malaga) could be included.

Date: c. 8-16 September 1990, after the IV International Mycological Congress.
 Number of available days: 8-10.

Number of participants: a maximum of 30.

More details on costs and on how to register will be announced in the next Newsletter. Those interested are invited to contact E. Barreno as soon as possible - suggestions will be welcome.

Conference: Endoliths and Weathering

A conference entitled Endoliths and Weathering will be held in South Africa during the period 4-10 March 1990. The primary aim of the congress is to promote and create awareness of ongoing research on endolithic microorganisms and the role these organisms play in the biological weathering of substrates. All lichenologists, phycologists and microbiologists specializing in the fields of morphology, physiology, ecology, chemistry and taxonomy of endolithic microorganisms are invited

to attend this conference.

The conference will be held at a modern leisure camp, Berg-en-Dal in the Kruger National Park. The camp offers a conference centre which can accommodate 100 participants, a restaurant and a swimming pool. Participants will be accommodated in two-bed huts. Animal viewing trips are planned to provide breaks in the scientific programme. A field excursion, which will take place after the conference, is also planned.

Further information can be obtained from: Dirk Wessels, Department of Botany, University of the North, Private Bag X 1106, Sovenga, 0727 Republic of South Africa.



Usnea on postage stamp

During 1987 the Museo Nacional de Historia Nacional, (Casilla de Correo 399), Montevideo, Uruguay (MVM) celebrated its 150th anniversary. It is the oldest institute for scientific research in Uruguay and is still the leading one in the fields of anthropology, zoology, paleontology and botany. At present it houses over 100,000 zoological specimens, over 50,000 botanical specimens, and a library of about 200,000 volumes.

As part of the commemorative programme, two postage stamps were issued, and we selected a lichen (*Usnea densirostra* Tayl.) as the motif for one of them. This *Usnea* is the commonest species of the genus in Uruguay. It is widely distrib-

uted on rocks throughout the country and is the only Uruguayan lichen with a popular name: "Yerba de la Piedra" (Stone Grass).

In a recent note (*Phytologia* 52: 217-220, 1983) we have established the scientific name of the "Yerba de la Piedra". The type specimen was gathered by Charles Darwin near Montevideo City and is preserved in the Farlow Herbarium.

--- Héctor S. Osorio

Electronic mail for lichenologists!

Robert Egan has been experimenting on his personal computer with the capacity for using electronic mail, and discovered that his university is part of the BITNET system, which includes almost 3000 institutions around the world. Electronic mail can be easily sent to anyone who has an account at one of these computer centres (called 'nodes'). He would like to begin a directory for the IAL of all those who have access to BITNET. With BITNET mail can be very fast: one could be writing a note on his computer in his office, and send it to anybody in a matter of minutes, if the BITNET account and computer node name are known! It is really an incredible communication possibility. The purpose of this note is to encourage anyone with access, to share his "address". Egan can be reached at EGAN@UNOMA1.

---Robert S. Egan

Oxner's Lichen Flora of the Ukraine to be continued

One of the major works of A.N. Oxner, the famous Soviet lichenologist, was the "Flora of the lichens of the Ukraine". Volume 1 of this multi-volume work was published in 1956, and volume 2, part 1 in 1968. Vol. 2, part 2, was due for publication in 1974. However, the author's death in November 1973 prevented this. Fortunately the already prepared manuscripts were saved and kept in the Central Scientific Archives of the Academy of Science of the Ukrainian S.S.R.:

Now the lichenologists of the Institute of Botany N.G.F. Hkolodny of the Academy of Sciences of the Ukrainian S.S.R. plan to complete the Flora. They are updating and completing Oxner's manuscripts, and hope to publish them in two volumes: Vol. 2, part 2, covering *Pertusariaceae*, *Lecanoraceae*, *Parmeliaceae*, *Usneaceae*, *Candelariaceae*, *Teloschistaceae* and *Phlyctidaceae*, is scheduled for the end of March 1989; Vol 3, the final volume, should be ready by the end of November 1990.

This work is intended to summarize all available data on the lichens of the Ukrainian S.S.R. There is an increasing need for such a compilation, since the re-

sults of recent studies of Ukrainian lichens are often presented in little known and inaccessible publications.

We would be very grateful to receive any information on Ukrainian lichens, which is not included in Oxner's Vol. 1 and 2(1), and also reprints concerning lichens of the Ukrainian S.S.R. We are also very interested in acquiring works with a bearing on the lichen flora of the Ukraine in exchange for Soviet botanical literature.

Other manuscripts of Oxner which are kept in the Central Scientific Archives of the Academy of Science of the Ukrainian S.S.R. include "Flora of the lichens of the U.S.S.R., Family *Caloplacaceae*". This contains original descriptions of most species, keys for identification, and information on new species, such as *Caloplaca altaica*, *C. barchalovii* and *C. phloginoides*. We hope to have this manuscript ready for printing in 1989. Fragments of Oxner's "Floristic and generic analysis of the lichen flora of the Crimea", which were kept in the archives of the Institute of Botany N.G. Hkolodny, will shortly be published in the Ukrainian Botanical Journal.

---Sergej Kondratjuk

Lichens of the Ottawa Region

The Ottawa Field-Naturalists' Club has published a new and revised edition of Lichens of the Ottawa Region, by Dr. Irwin Brodo, Curator of Lichens at the National Museum of Natural Sciences (Canada). This book is an illustrated guide to the identification of the lichens of southeastern Canada and the adjacent areas of the United States. While this edition is written with the serious amateur in mind, it makes lichen identification and study possible for novices as well. It also features an illustrated glossary, 84 line drawings, and practical keys to 400 species of fruticose, foliose and crustose lichens.

Copies of this publication can be obtained for \$8.95 U.S. each. Please add \$3.50 U.S. for postage and handling of the first copy, \$6.00 for postage and handling of two copies, \$9.00 for three to five, \$13.00 for six to eight and an additional \$2.00 for each additional copy. Make cheques or money orders payable to The Ottawa Field-Naturalists' Club, P.O. Box 3264, Postal Station C, Ottawa, Ontario, Canada, K1Y 4J5. Please allow seven weeks for delivery.

Any profits which accrue to the OFNC from the sale of this publication will be used to purchase lands in the Alfred Bog, the largest peat bog remaining in southern Ontario. Every dollar raised by the Club to save this threatened resource will be matched by an additional \$3.00 from other supporting agencies.

---Jeff Harrison

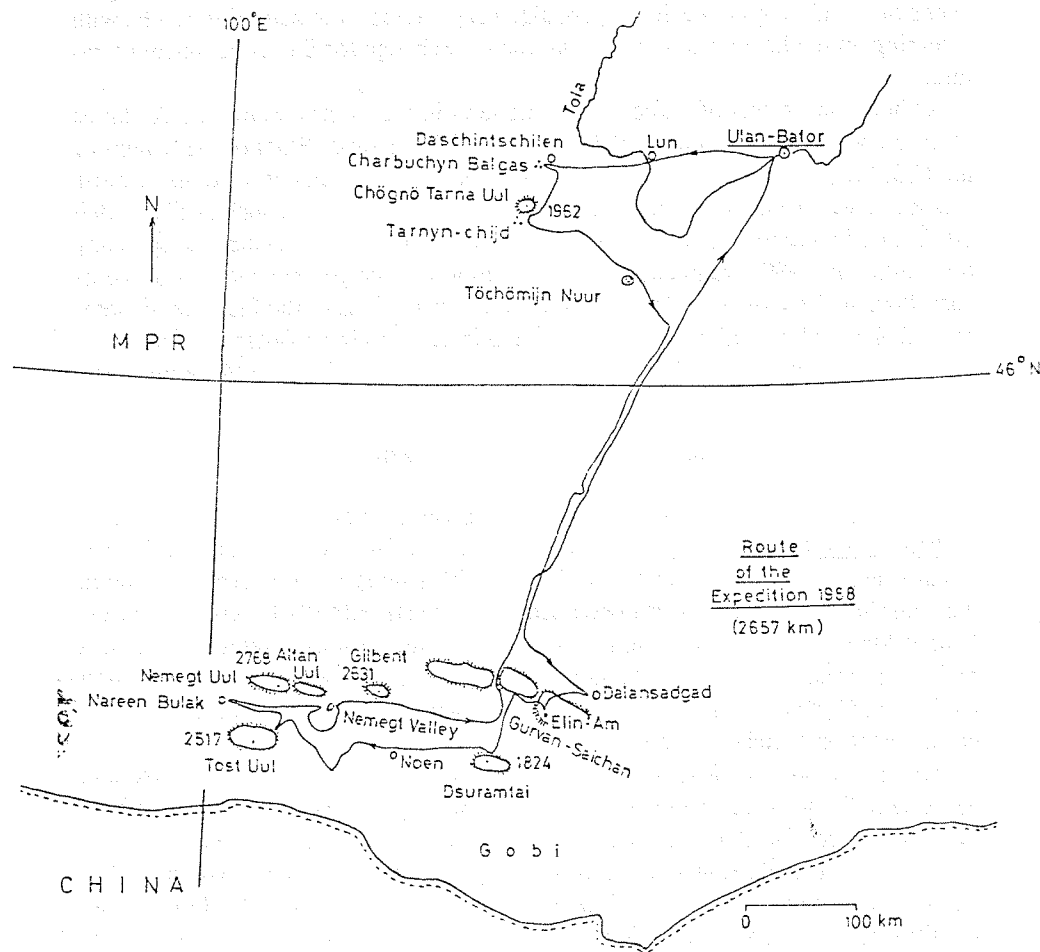


Fig. 2. Route of the 1988 expedition through Mongolia.

The Thirty-Three Faces of the Gobi

This is a travelogue about our third expedition through the Mongolian Peoples Republic, from June to July 1988. Our aim was to collect lichens, bryophytes and selected higher plants for phytochemical investigations and to make geobotanical observations. Initially we were six persons: Dr. U. Cogt (Institute of Botany of the Academy of Sciences of the MPR, Ulan-Bator), Mrs. Tuja (Institute of Folk Medicine, Ulan-Bator), Mr. Scharaw-Arildii (our Mongolian driver), Dr. H.D. Knapp (geobotanist, Waren/Müritzt, GDR), Ing. H.G. König (Institute of Plant Biochemistry of the Academy of Sciences of the GDR, Halle) and myself (leader of the expedition). Mr. König left us for Ulan-Bator on June 20th. Figure 1 shows our expedition team immediately before leaving Ulan-Bator, and Fig. 2 shows our route.

After some trouble with the lorry we started with a GAS 530 in the early afternoon of June 11th, crossed the Tol river near Lun, spent the first night in the steppe between Lun and Daschintschilen, visited the next day the ruins of Charbuchyn Balgas and arrived at the Chögnö-Tarna-Uul in the evening of June 12th. We pitched our tents near the ruins of the old Lama monastery, Tarnyn-chijd, and, though I had sacrificed a 'chattak' (a strip of cloth) at the nearby ovo (see ILN 17 (3), 1984), the mountain ghosts seemed unfriendly. Just before midnight a storm came up suddenly and quickly destroyed my tent with a loud bang. After saving my remaining belongings, I spent the rest of the night in Tuja's tent, who had crept to the Mongolian colleagues of fear of the tempest. It was one o'clock in the morning when I awoke by the howling of wolves, about 100 m above our camp: a dreadful night indeed. The next morning I went uphill in the valley north of the Tarnyn-chijd ruins to collect lichens and liverworts on the steep east slope. I had a bag with a hammer and chisel and paper envelopes in my right hand and two cameras on my left shoulder. On jumping from one granite boulder to another one I suddenly lost my balance and fell on a rock about 2 m below. After having recovered from the shock I was happy to find that I could move all my limbs; only my right hand was blood-stained and painful: my wrist was sprained. This was a real handicap for I could neither use the hammer nor carry the heavy expedition boxes for the next two weeks. Furthermore, my electronic camera had breathed its last and could only be used with special precautions. "Nitschewo", sacrifices must be made.

At mid-week we moved to the Dund-Bulak of the Chögnö-Tarna-Uul where we were nearer the virgin forests of the mountains. These forests, the boulders therein and the cliffs at the summits were very rich in lichens and it was here where I found *Pseudocyphellaria crocata*, a species very probably new to Mongolia. Other interesting species were *Cetraria komarovii*, *Lobaria retigera* and a large grey *Dermato-*



Fig. 1. Our expedition lorry with (from left to right) Dr. Knapp (wearing hat), Mr. Scharaw-Arildii, Ing. König and Dr. Cogt; 11.6.88. Photo: S. Huneck.



Fig. 3. Our camp in the Gurvan-Saichan; 24.6.1988. Photo: S. Huneck.

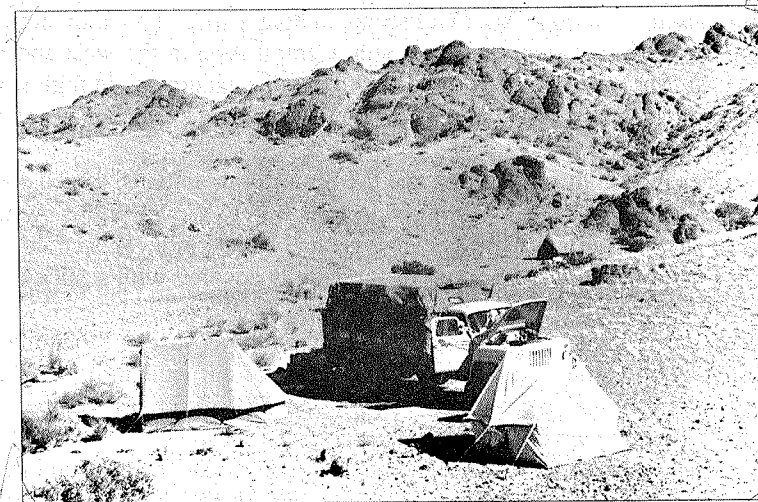


Fig. 4. Our camp at the Tost Uul in the Gobi Desert; 2.7.1988. Photo: S. Huneck.



Fig. 5. The ravines of Nareen Bulak in the Nemegt Valley, Gobi Desert; 3.7.1988. Photo: S. Huneck.

carpon. Actually the Chögnö-Tarna-Uul seems to hold a special position between the taiga in the north, the steppe in the south, Central Asia in the west and East Asia in the east. My friend Hannes came back from his excursions in high spirits every day, always with plants new to this region; his standard exclamation was "sagenhaft" (legendary).

On Monday, June 20th we had to leave the beautiful mountains, turned southward and travelled along the Töchömjn-Nuur near Buren. We knew this swampy lake from our first expedition in 1978, when we had bathed in it. This could have been our last bath, because the bottom of the lake is covered with a sticky grey mud, very difficult to get off!

To lead an expedition for a limited time in a country as vast as Mongolia is a hopeless fight against time. To reach the destination of our expedition - Nareen-Bulak in the Gobi - we had to cover between 100 and 200 km per day which means 8 to 10 hours driving on terrible tracks with an average speed of only 10 to 20 km/hr. After breakfast at 8 o'clock we pulled down the tents, loaded the lorry and started at 10 o'clock. Stops were allowed only for collecting plants, taking photographs and obtaining fresh water or petrol. In the evening between 8 and 10 p.m. we looked for a suitable camping site and had a hearty dinner; there was no time for lunch.

Herds of two-humped camels and large areas covered with *Stipa gobica* indicated that we had arrived at the Gobi. Many foreigners imagine the Gobi as a boundless plain of sand without any life. That is wrong: there is no monotony in the Gobi: its landscapes are rich and diverse and there is good reason for the Mongol saying that the Gobi has thirty-three different faces. Of course, there is no space to describe here all 33 aspects of this desert, but let us glimpse at some faces at least.

After one night at Dalansadga, the centre of the South Gobi Aimak, we turned westwards and spent some days in the mountains of the Gurvan-Saichan ("The three beauties"), the southeasternmost part of the Gobi Altai. First we visited the famous Elin Am, (gorge of vultures), a deep and narrow gorge which surprisingly contains an ice layer about 100 m long and 5 m thick. It is a strange feeling, to stand on the greenish ice of a glacier in the middle of the Gobi Desert. Every now and then a block of ice breaks off with a deafening noise. We pitched our tents in a valley west of Elin-Am (Fig. 3) where at night we sat around a big fire of dead *Juniperus* and *Artemisia*, which released a wonderful odour of the essential oils present in both plants, while a bottle of cognac provided the necessary inner warmth. For several reasons the Gurvan-Saichan gives an impression of devastation. The main reason is without any doubt overgrazing by too many domestic animals. The little grass which regenerates is eaten by several rodents living by the thousands in their burrows which undermine every square metre of the ground. Occasional heavy

showers wash the soil downhill in brown floods, causing deep ravines. Wolves, foxes and birds of prey, the natural enemies of these rodents, have been destroyed by shooting and now the ecological balance is disturbed. Fortunately the lichens on the rocks are not eaten by sheep, goats or rodents and there is a multitude of species, including the yellow-greenish *Lecanora kukunorensis*, the deep yellow *Acarospora gobiensis* and many grey *Aspicilia* species.

Our next goal was the Dsurantai Mountains south of the Gurvan-Saichan. There we enjoyed seeing the very rare *Incarvillea potaninii* with its beautiful red flowers and came across the poisonous scorpion *Buthus martensi*.

West of the Dsurantai Mountains we encountered another face of the Gobi, the mirages. This part of the Nemegt Depression is a parched plain and in the shimmering hot air dark mountains and blue lakes can be seen on the horizon, but never reached: on the way they dissolve into nothing, and other mirages lure you deeper and deeper into the desert. We crossed the black mountains of Noen, pitched our tents on the eastern slopes of the Tost Uul (Fig. 4) and arrived finally at Nareen Bulak, the most western point of our expedition.

Nareen Bulak (Fig. 5) is a system of ravines of Cretaceous sandstone layers (deposited 100 million years ago) and famous for the occurrence of skeletons of dinosaurs. The ravines are about 20 to 30 metres deep and highly branched; hence one must be careful to remember the entrance. Immediately after our arrival at Nareen-Bulak I rushed into the ravines to look for fossilized dinosaurs. The sun stood nearly vertical, there was not the lightest breeze and the thermometer climbed to 45°C. After 3 hours unsuccessful search I gave up and went back to our camp. Near the camp was another wonder of the Gobi: a well with cold fresh water. Fortunately the desert is without mosquitos and flies, but where there is water, they occur in very large numbers. During the few minutes I spent at the well, I was bitten by hundreds of tiny mosquitos. At this moment I remembered that I am a chemist and the next time I went to the well I used a chemical weapon against the insects and sprayed my head, hands, arms and legs with a repellent (Autan, diethyltoluamide from Bayer-Leverkusen): no one mosquito dared to attack me after that.

Time was fast running out and we had to make a 180° turn to cross the Nemegt Valley from west to east. In the afternoon of July 4th a heavy sand-storm came up and we stuck fast in a sand-dune on the way to the next filling station at the Taus Nuur. It took us four hours hard work at temperatures around 42°C to push the lorry onto firm ground: only then did the sandstorm cease. It was impossible to pitch the tents on the sandy ground and so we spent the following night under the open sky which was an unforgettable experience and yet another face of the Gobi. I looked up for a long time at the countless stars and thought about the endlessness of the universe and the minuteness of man. When the saurians populated the Gobi

man did not exist. Will he exist in further 100 million of years? After midnight I was awoken by the rattling of tins near our camp. What could it be? In the light of my electric hand lamp I observed a hedgehog (*Hemiechius auritus*) searching for edible left-overs in the tins. This was an interesting meeting with an animal typical of the Gobi. The next morning I looked for lichens around our camp, but in vain. The reasons are the lack of a firm substrate (only the ever-moving sand), the frequent sand-storms and the low amount of precipitation. We by-passed the sand-dunes and arrived safely at the Taus Muur where we got enough petrol for the next 500 kilometres. North of our route were the attractive mountains of the Nemegt Uul, Altan Uul and Gilbert, but we had neither time nor petrol to visit their glorious and lonely summits. Who will make the effort to cross the Gobi and to look for lichens in this remote and deserted part of Central Asia?

Almost 3000 kilometres lay behind us when we reached Ulan-Bator again. We collected over 300 lichens specimens, about 100 bryophytes and more than 600 higher plants; the scientific treatment of these materials is now under way.

We are very grateful to the Academies of Science of the GDR and MPR and the Ministry of Health of the MPR for funding the expedition, and to Prof. Dr. K. Schreiber, Dr. T. Khaidav, Dr. U. Cogt and our always friendly and enthusiastic Mongolian driver, Mr. Scharaw-Arildii, for their continuous help.

— Siegfried Huneck

News from COLO

William Weber informs that he has been sending Fasc. 17, Numbers 640-700, of his *Lichenes Exsiccati* COLO. It is the last one he will prepare. Since he began this exchange, it has been distributed to 60 institutions (except for Fasc. I, of which 100 sets were distributed), and he has sent 42.000 specimens in all! "This has been a lot of hard work including muscle building in my left (hammer) arm, cuts and bruises, scratched eyeglasses and carrying heavy loads of rocks in the field. But it has also given me some of the most marvelous memories of field work in many interesting parts of the world. I also hope that the specimens have elicited surprise and pleasure upon their discovery by our recipients." The many new species based on material in his exsiccati testify to the great scientific value of it.

The lichen section of Herbarium COLO now contains over 83.000 specimens. It had its origin in about 1952, with the encouragement of the older generation including A.W.C.T. Herre and John Thomson, and grew with collecting and exchanges and an occasional fortuitous purchase. The single most important acquisition was that of the Kryptog. Exsicc. Vindob., which came in an unusual way which you might like to know about. I had a call from a friend in San Francisco asking

me if I could host a friend of his who was coming to Denver for a few days. This was Karl Rechinger. Karl stayed with my family and awakened us every morning with his playing of Bach preludes and fugues on the piano. On a trip to Flagstaff Mountain behind Boulder he saw that we were seriously interested in working with the lichens, and he offered us one of the last almost complete sets of the Vienna Exsiccati, in exchange. Since that time COLO has sent many numbers of lichens and bryophytes for the Vienna exchange and our herbarium has grown from that seed.

In June 1989 William Weber has to retire formally from the curatorship because of his age. "My attitude toward the herbarium and its organization has always been that I work as if I were expected to be hit by a truck on my way home that day, and that I must never leave any unfinished messes for my successor to have to clean up". No doubt his successor will be very happy about this attitude, as many less lucky successors can confirm! After his retirement William intends to continue to collect and exchange and do field work as long as he is able. And there is enough backlog of unidentified material to last many years.

Index to "Lichenes Rariores et Critici Exsiccati"

In March 1988 Syo Kurokawa and Hiroyuki Kashiwadani published an "Index to Lichenes Rariores et Critici Exsiccati". It consists of a full list of the specimens issued with name corrections, synonyms, and some additional information, arranged in the numerical sequence of the exsiccata. An alphabetical index to taxa is added. With the publication of this index, the present series of exsiccata has ended (the last fascicule of LRCE, fasc. XIV, was issued in March, 1987). A new series of lichen exsiccata from TNS will be arranged by H. Kashiwadani this year. The "Index" may be obtained by writing to one of the compilers.

—H. Kashiwadani

Red List of Macrolichens in the European Community

A preliminary "Red List of Macrolichens in the European Community" has been prepared for the European Commission, as part of the efforts towards a directive for the protection of wild and seminatural habitats and of wild species of plants and animals.

A first draft of the list was sent to 34 European specialists on May 20th, 1988, and eventually given to the Commission. This first draft had to be prepared within

a short period, and consequently was quite unsatisfactory. Nevertheless it was used as an annex to the proposal for Directive 88/C 247/03, which was submitted to the European Council on Aug. 16th, 1988 (see the Official Journal of the European Community of September 21th, 1988).

A final report is now ready and available for further comments and suggestions. It is written in French and includes the following chapters:

1. Introduction and scope of the study.
2. Criteria for the selection of species, and list of selected species.
3. Species data (status and distribution; habitat; trends; comments; references).
4. Important factors for lichen decline in the Community.
5. Areas of lichenological importance to be studied in the Community (Priorities).
6. Habitats of lichenological importance to be preserved in the Community (Priorities).
7. Lichen Red Lists available (in the Community and elsewhere in Europe).

Anyone interested in the report in its present stage can obtain it by transferring BFr. 500 (Belgian currency) to account 001-2037856-59 of the Centre de Recherches sur les Lichens, Dept. Botanique, Sart Tilman, B-4000 Liège, Belgium. Any comments are very welcome at the above address.

—E. Sérusiaux

Fifth Field Meeting of Polish Lichenologists

The Fifth Field Meeting of Polish Lichenologists was held in Pszczew and Gorzów Wielkopolski (western Poland) on 12-16 September 1988. Foreign guests from Czechoslovakia and East Germany also attended the meeting. The organizer, Dr. L. Lipnicki, arranged excellent working conditions, discussions and leisure activities for all participants. However, he was unable to alter the effects of air pollution from East German industrial works on lichens, so less than 200 species were found in the large area of the Pszczew Landscape Park. Very few foliose and fruticose epiphytic lichens were present at some localities. Sixteen reports were presented, most of them concerned with the problems of bioindication of air pollution. Problems of dying lichens dominated not only the scientific part of the meeting, but were also reflected in the nostalgic "Lichenological Blues" that was sung in the evenings by Dr. Giersberg from Rostock.

—Wiesław Faltynowicz

First Czechoslovak Bryological & Lichenological Days

The Slovak and Czech lichenologists and bryologists held their "First Bryological & Lichenological Days" on 28-30 September 1988 in Jur near Bratislava. The meeting was dedicated to the memory of the 50th anniversary of the death of Dr. Alexander Zahlbruckner, native of Jur (St. Georgen).

On the first day, the participants were welcomed by the Chairman of the town, who laid a wreath at the memorial plaque of A. Zahlbruckner and visited the cemetery where Zahlbruckner's parents and relatives are buried. The official programme was rounded off with a visit to the very famous local wine-cellars.

On the following two days field trips to the Malé Karpaty Mountains were undertaken. Unfortunately, the epiphytic lichen flora is very poor in this area (neighbourhood of Bratislava), so that mainly saxicolous species were collected.

The following lichenologists participated: A. Vezda, I. Pišút, Anna Lackovičová, J. Liška, Zuzana Kyselová, Eva Lisická (all CSSR), S. Kondratjuk (Kiev, USSR), M. Giersberg (Rostock, GDR), Edit Farkas and her husband L. Lőkös (Vácrtót, Hungary). The rest of the participants, about 10 persons, were bryologists.

—Eva Lisická

Further News from Czechoslovakia

The Czechoslovak lichenologists are glad to inform You of a new member in the family of Lichenological Societies. In February 1988 a Bryological and Lichenological Section of the Czechoslovak Botanical Society was established. Its committee is composed as follows: Chairperson - V. Pospíšil, Vice-Chairperson - I. Pišút, Secretary - I. Novotný. At present the section has 32 members.

Its main activity is the organization of lectures, excursions and other meetings. The first meeting was in Dr. Zahlbruckner's birth-place Jur near Bratislava, on 28-30 September 1988.

In addition, an official newsletter, "Bryonora" (editors Z. Soldán and J. Liška), is published in Czech twice a year. A bibliography of Czechoslovak lichenological (odd numbers) and bryological (even numbers) literature since 1985 is published as an appendix to "Bryonora". The first number contains news, book reviews, personalia, a calendar of bryological and lichenological activities (not only those in Czechoslovakia), as well as a membership list. The address of the secretary is: Dr. I. Novotný, Botanické odd. Moravského muzea, Preslova 1, CS-60200 Brno. The address of the lichenological editor: Dr. J. Liška, Dreyerova 641, CS-15200 Praha 5.

— J. Liška

Lichenology on the VI. Reunion Nacional de Botanica, Chile

The VI. Reunion Nacional de Botanica, held in Valparaiso, was organized by Prof. Wanda Quilhot, who arranged a lichen symposium with the following speakers and topics:

- Dr. D. Tovar (Peru) - Culture of the photobiont of *Leptogium menziesii*.
- Prof. G. Guzman (Valparaiso) - Nitrogen fixation in lichens.
- Dr. D.J. Galloway (London) - Biogeographical relationships of Southern Hemisphere lichen floras with special reference to Chile and Australasia.
- Prof. J.A. Garbarino (Valparaiso) - Secondary metabolites in Chilean lichens.
- Prof. W. Quilhot (Valparaiso) - Significance of lichen metabolites in thallus physiology.
- Prof. J. Redon (Vina del Mar) - Lichen ecophysiology.

During the Congress Prof. Quilhot was elected as first President of the newly formed Botanical Society of Chile.

—David Galloway

News from Italy

The Italian Lichen Society (Societa' Lichenologica Italiana), founded in 1986, now has 120 members. In 1986 and 1987, the Society organized several courses and excursions in different parts of Italy, and started the following projects, which are now at an advanced stage:

- 1) Survey of lichenological collections in Italy.
- 2) Compilation of a complete list of papers published by Italian lichenologists.
- 3) Foundation of a Documentation Centre, where most of the papers cited in the list will be available upon request (photocopies).

In 1989 three further projects will start:

- 4) Location and retypification of the types of taxa described by Italian lichenologists.
- 5) Editing of a series of Exsiccata.
- 6) Introduction of a simplified method for monitoring air pollution by lichens in c. 150 schools throughout the country (project financed by the Italian WWF).

The 1989 programme includes the following events:

March: excursion to the Island of Ponza.

18-23 June: excursion to Aspromonte (Southern Calabria)

September: two lichen courses for beginners in the Carnic Alps and in Calabria.

October: two courses on lichens and air pollution (Trieste, Ferrara).

October: General meeting of the Society in Venice, with a one-day excursion to the Carnic pre-Alps.

For further details write to: Prof. P.L. Nimis, Dipartimento di Biologia, Cas. Universita', I 34100 Trieste.

— Pier Luigi Nimis

New Council of the Lichenological Society of Japan

From 1989 the LSJ has a new council. The new members are:

President: I. Yoshimura, Kochi Gakuen College, Kochi.

Secretary & Treasurer: H. Kashiwadani, National Science Museum, Tokyo.

Editors: M. Inoue, Akita University, Akita; K. Yoshida, Saitama Prefectural Museum, Nagatoro, Saitama; M. Miyawaki, Saga University, Saga.

— H. Kashiwadani

Flora of New Zealand Lichens

This well-known Flora is available from DSIR in Christchurch:

Flora of New Zealand Lichens, by D.J. Galloway, 1985, ISBN 0-477-01266-3, lxxiii + 662 pages, hardcover. Price NZ\$ 17.00.

Postal orders to:

Advisory Officer, Botany Division, DSIR, Private Bag, Christchurch, New Zealand.

The price includes postage and packing within New Zealand. It would be advisable to write first to ascertain total price posted overseas.

New Literature

A.M. BRAND, A. APTROOT, A.J. de BAKKER & H.F. van DOBBEN. 1988. Standaardlijst van de Nederlandse korstmossen. Wetenschappelijke Mededeling KNNV nr. 188. Available from: Bureau KNNV, Oudegracht 237, NL-3511 NK Utrecht, Netherlands. 67 pages. (A checklist of 665 taxa of lichens and lichenicolous fungi found in the Netherlands, with notes on ecology and distribution; includes many unpublished data and probably represents the most complete list ever made for any country)

Irwin BRODO. 1988. Lichens of the Ottawa Region. Published by the Ottawa Field-Naturalists' Club. 115 pages. (Treats about 400 species occurring in south-eastern Canada and the adjacent areas of the United States; contains a key to the genera and keys for all macrolichen genera and many microlichens; illustrated by 84 line drawings; second, improved and updated edition of this practical guide; first edition was a Syllogeus 29, Natl. Mus. Canada; see above for how to order)

A. LACKOVIČOVÁ (ed.). 1988. Dr. Alexander Zahlbruckner (1860-1938) Osobnost a dílo. Bratislava. 61 pages. Orders can be sent to: A. Lačková, UEBE SAV, Mlynské Nivy 59, 814 34 Bratislava, CSSR (Contains biographical contributions by A. Lackovičová, I. Pisút and H. Riedl, and a complete list of Zahlbruckner's publications, including posthumous ones and reprints, by E. Lisická; in Slovak)

Jong Dzae RI. 1988. Spore plants of Korea. 7. Lichens. Publ. Science and Encyclopedia. 276 pages. ("This book, in Korean, describing the lichens of Korea, contains keys, numerous drawings, and literature references. It is an important step forwards to the knowledge of the Korean lichen flora. Unfortunately the crustose species are not taken into consideration adequately." - S. Huneck)

WEI Jiang-chun & JIANG Yu-mei. 1986. Lichens of Xizang. Series of the scientific expedition to Qinghai-Xizang plateau, Science Press. 130 pages and 24 plates with photographs. (An illustrated flora with keys and descriptions to 178 species of lichens, mostly macrolichens, from Xizang (Tibet); all in Chinese, except Latin names and literature citations)

PERSONALIA

Prof. Dr. Maximilian Steiner deceased

On October 7, 1988 Prof. Dr. Maximilian Steiner died after a long illness.

Changes/Corrections of address

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Bruno MIES, Linnicherstraße 60, D-5000 Köln 41, Germany BRD

Hans OBERHOLLENZER, Eichenweg 3, D-7400 Tübingen 1, Germany BRD

Keith J. PUCKETT, Atmospheric Environment Service, Environment Canada, 4905 Dufferin Street, Downsview, Ontario M3H 5T4, Canada

Clifford W. SMITH, Department of Botany, University of Hawaii, 3190 Maile Way, Honolulu, HI 96822, USA

Arthur E. WADE, 281 Malfroy Road, Rotorua, New Zealand

New Members

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 Viktor J. RICO, Depto. de Botanica, Fac. Farmacia, Universidad Complutense, E-28040 Madrid, Spain
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Back issues of ILN

The following back issues of ILN are still available: 9(1), 9(2), 10(1), 10(2), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2), 14(1), 14(2), 15(1), 15(2), 16(1), 16(2), 17(1), 20(1), 20(2), 20(3), 21(1), 21(2), 21(3). In photocopy available are: vol. 1(1), 1(2+supp.), 1(3), 2(1), 3(2), 6(2), 7(1-2), 8(1-2). Moreover two indexes are available: Index to vol. 1-8, Index to vol. 9-13.

According to a resolution of the IAL Executive Council, published in ILN 16(1), April 1983, the following charges will be levied for back issues of ILN:

Vol. 1: US\$ 0.25 per number (3 per volume); vol. 2-8: US\$ 0.50 per number (2 per volume); vol. 9-13: US\$ 1.00 per number (2 per volume); vol. 14-17: US\$ 1.50 per number (2 per volume).

Back issues from vol. 20 onward are available for US\$ 1.00 per number (3 per volume). The Indexes are free.

New members will receive free only copies of the numbers constituting the volume issued for the calendar year in which they join IAL.

Orders to be sent to the editor H. Sipman.

LIST OF LICHENOLOGICAL SOCIETIES

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

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

Czechoslovakia: Bryological and Lichenological Section of the Czechoslovak Botanical Society. Info: Dr. I. Novotný, Botanické odd. Moravského muzea, Preslova 1, CS-60200 Brno, Czechoslovakia.

France: Association Française de Lichénologie (AFL). Info: Dr. Richard Lallement, Université de Nantes, Laboratoire de Biologie et Cytophysiologie Végétales, 2 Rue de la Housinière, F-44072 Nantes Cedex, France.

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

Italy: Società Lichenologica Italiana (SLI). Info: Secretary, Prof. Giovanni Caniglia, Dipartimento di Biologia, Via Orto Botanico 15, I-35123 Padova, Italia.

Japan: Lichenological Society of Japan (LSJ). Info: Dr. H. Kashiwadani, National Science Museum, Division of Cryptogams, Hyakunin-cho 3-23-1, Shinjuku-ku, Tokyo, Japan.

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

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

Poland: Lichenological Section of the Polish Botanical Society (Polskie Towarzystwo Botaniczne). Secretary: Dr. W. Faltynowicz, Department of Plant Ecology, University of Gdansk, ul. Czajkowskiego 46, 81-378 Gdynia, Poland.

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

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