

the
Bryological

Times
*Newsletter of
the International
Association of Bryologists*

Volume 91
December 1996
ISSN 0253-4738

Contents

Biographies of German Bryologists 2. Geheeb	1
Best Book Buys	2
"Advanced instruction in bryology and lichenology" opened to postgraduate students	2
New tools	3
ABLS Meeting 1997	3
Stanley Greene Awards - 1997	3
Pottiaceae wanted	4
Important Ukrainian literature available	4
Books on Bryophytes from the Missouri Botanical Garden	4
New literature	6
Some Moss Collections from Dakshin Gangotri, Antarctica	7
DIARY	8

Biographies of German Bryologists
2. Geheeb, Adalbert (1842 - 1909)

Jan-Peter Frahm, Botanisches Institut, Meckenheimer Allee 170, 53115 Bonn, Germany

Geheeb like many other German bryologists, was pharmacist. He was born on February, 21, 1842 in the small village of Geisa in the Rhön Mountains, where his father owned a pharmacy. In the last century, pharmacists „learnt“ their profession over a period of three years in a pharmacy (e.g. the practice of drug production) and had to gain experience as assistants in other pharmacies abroad (to learn other techniques or herbs) before they could go to university. These practicals had great influence on bryology. For instance, C.F. Hornschuch was the assistant of D.H. Hoppe in Regensburg, who interested him in bryology. Hampe was an assistant in the pharmacy of Sonder in Hamburg and got interested in bryology there. Furthermore, pharmacies must have a licence, and the only way for a pharmacist to get a pharmacy was to buy one or to marry the daughter of a pharmacist. The interest of the pharmacists in floristics was more widespread than today, since plant collecting for herbs and drugs was part of their profession.

Geheeb visited the highschool in Eisenach, Thuringia, learnt pharmacy in Coburg, and was assistant pharmacist in Bruchsal, SW-Germany, and two places in Switzerland. From 1864-65 he studied pharmacy in Jena and in 1867 he took over the pharmacy of his father in his home village. In 1867 he married his cousin and had four children with her. Two years after the death of his wife he married a second time the Swiss artist Emmy Belart in 1886. Because of a weak health, he sold his pharmacy in 1897 and went to milder climate of Freiburg in Southwest-Germany. In Freiburg, he met Theodor Herzog and Karl Müller, who were 17 viz. 18 years old at this time and classmates at the highschool. Geheeb, however, got nerve disease and had to go three times to a sanatorium in Switzerland. This disease was the reason that he could not work on the edition of the „Kryptogamenflora“ by Rabenhorst and Limpricht took over this job. In such a sanatorium in Königfelden in Switzerland he died on September 13, 1909 at the age of 67 years.

Geheeb got mainly interested in bryophytes by his father, who gave him a small collection of bryophytes from the surroundings of Geisa when he was 12 yyears old. At the age of 19 he already had published contributions to the bryoflora of Coburg and three years later on the bryoflora of thhe Swiss canton Aargau. During his practical in Bruchsal he met K. Schimper, W. Ph. Schimper and Alexander Braun.

Geheeb published about 65 bryological papers, first on the Rhön Mountains or other parts of Germany, but later also on mosses from Australia, New Zealand, Tasmania, Brazil, Mexico, Madagascar, Abyssinia, California and SE-Asia. For instance, he studied and published the Puiggari collections from Brazil, the Rutenberg (cf. genus Rutenbergia) collections from Madagascar and the Beccari collections from Sumatra (cf. Dawsonia beccarii). He second wife illustrated his mossflora of New Guinea and later on the „Bryologia atlantica“ (the latter with colour plates). After the

Continued on page 2

Continued from page 1

death of her husband she prepared also drawings for Herzog's "Geographie der Moose".

Geheeb developed a special skill to prepare pictures made from dried bryophyte specimens. He created several hundred of such mossy landscapes, which were even shown during the world exhibition in Paris and were published in the book „Kunstformen der Natur“ by Häckel.

His herbarium was bought after his death for 23.000 goldmarks by a citizen of Freiburg and later given to the Botanical Museum in Berlin, where it was destroyed during World war II. Many species such as *Brachythecium geheebii* and *Bryum geheebii* and the genus *Geheebia* were named after him.

The information about Geheeb was taken from Frahm, J.-P., *Lexikon deutscher Bryologen*, *Limprichtia* vol. 6, 1995. The text was kindly corrected by Brian O'Shea.

Best Book Buys

In 1985 Wilf Schofield authored the only modern textbook for Bryology. **INTRODUCTION TO BRYOLOGY** has become the standard general treatment for the structure of bryophytes. The book is now easily available from the Missouri Botanical Garden, Department Eleven, P.O. Box 299, St. Louis, MO 63166-0299 USA for US\$ 70.00 (US\$ 72.00 non US addresses) plus \$3.00 handling and postage. (e-mail: dept11@mobot.org).

R. M. Schuster's **THE HEPATICAE AND ANTHOCEROTAE OF NORTH AMERICA** was published in six volumes. The last two (volumes 5 and 6) are still available from the Field Museum. Orders should be sent to Publications Division, The Field Museum, Roosevelt Road at Lake Shore Drive, Chicago, Illinois, 60605, USA. Cost is US \$290.00 for the two volumes.

"Advanced instruction in bryology and lichenology" opened to postgraduate students

The Division of Systematic Biology of the Department of Ecology and Systematics, University of Helsinki was selected in 1994 as a "Large-scale Facility" by EU (see the "Bryological Times" No. 79). The status is given on the basis that the selected institute has something very large, expensive and rare equipment, and the sufficient infrastructure to operate the machinery. This status implies that it is not possible to establish another similar facility, except at great expenses. The ultimate aim of the program is to facilitate the mobility of scientists and students between EU countries. The excellent bryophyte and lichen collections of the Botanical Museum and the Botany Library, together with the necessary equipment for biomonitoring pollution by using lichens and bryophytes was the basis for the decision. Until now ca. 20 scientists have visited Helsinki through the program.

The technical audit to evaluate the progress of the program was held on November 22nd, 1996 in Brussels. One weak point of the program discovered was that the participation of postgraduate students has been limited. Postgraduate students from EU countries, Iceland, Norway and Switzerland are now encouraged to participate in the program. This is an excellent possibility, especially for students doing monographic work in any group of lichens or bryophytes to become acquainted with our collections and libraries, or to use our equipment in pollution studies. Special courses related to lichen taxonomy (Prof. Teuvo Ahti) and bryophyte taxonomy (Prof. Timo Koponen, Dr. Sinikka Piippo and Dr. Johannes Enroth) are currently running, and can be joined at any one time. A

course on biomonitoring heavy metal contamination will be held in the autumn of 1997 (Dr. Ahti Mäkinen), a course on the "Taxonomy and ecology of peatland and aquatic bryophytes" in August of 1997, and a course "Taxonomy and ecology of epigeic lichens" in May 1997. These courses will be advertised more accurately later through Internet. Short visits (1-2 months) to participate in our current research projects (e.g. the "Biodiversity of bryoflora of tropical SE Asia" and projects on lichen floras of Tierra del Fuego, Newfoundland, Mongolia or other areas) are possible to arrange.

To participate in the program, please send an application including (1) curriculum vitae, (2) short research plan of what you aim to do in Helsinki, and, for postgraduate students, (3) a recommendation from your professor. The applications are evaluated by a committee (T. Koponen, T. Ahti, A. Mäkinen, and two foreign experts), and the procedure is very quick.

Reasonable travel expenses, lodging, and living expenses in Helsinki, as well as expenses incurred for the use of electron microscope, DNA sequencing, chromatography or atomic absorption spectrophotometre, are subsidized through the funds available from the program. However, these funds are not available for Finnish citizens.

*Timo Koponen, Dept of Ecology and Systematics, Division of Systematic Biology, P.O. Box 7, FIN-00014 University of Helsinki, Finland
Phone +358-0-191 8614
Fax +358-0-191 8656
E-mail Timo.Koponen@Helsinki.FI*

New tools

Since the demonstration of the "Squirrel" datalogger during the Bryological Workshop held at Mainz in 1987, I used a "Squirrel" in ecology courses and also during fieldwork in Zaire. However, I was never satisfied with these black boxes. After having not used a squirrel for a year, I had to learn again the (sometimes simultaneous) use of three buttons for installation, and the software stored the data in Supercalc- format (a program originally written for Commodore 64) and also Lotus format, although we lived already in the Windows age. The graphics output of the data also created serious problems (at least for me), for converting data back and forth, until Excel 4.0 finally imported the format without problems and made nice graphs. Sometimes the display showed only a row of eights (I don't know why), and recently it gave up working in Venezuela, maybe for humidity reasons, but operated again when it was switched on at home.

Students drew my attention to something which is not an alternative but a totally new generation of dataloggers, which apparently have been available for about two years. So that it should not take more years until colleagues who have not yet heard about these sensational tools will notice it. I would like to introduce the Orion Tinytalks. These dataloggers are tiny, indeed. In contrast to the "Squirrel", which has the size of about a cigar box, these dataloggers consist of separate units for measuring temperature and air humidity, each one logging its own data. The standard logger comes packed in 35 mm plastic film tins. The waterproof versions (for water depth to 16 m) is slightly larger and has a weight of 135 g. These small boxes are positioned in the field, where they are hardly visible because of their size, and can store 1800 data over a period of a year. It is not only the size but also the price and ease of installation, which can make one enthusiastic. The loggers are fully operated by a computer. They are linked with a cable to a serial port and are set up (e.g. date, intervals) by Windows software. Downloading of the

Stanley

Awards

Greene

1997

Funds available for this competition - \$4000.00 (CAN).

Call for proposals: A maximum of three pages of proposal, a up-to-date curriculum vitae, and names of 2 persons who can evaluate your proposal.

Send to Dale H. Vitt; Secretary, IAB; CW 405 Biological Sciences Bldg, University of Alberta, Edmonton AB T6G 2E9

Deadline March 1, 1997 - Awards to be announced in late May at the biennial meeting in Beijing, China

ABLS Meeting 1997

It is time to start planning the American Bryological and Lichenological Society meeting to be held in association with AIBS at Montreal, Quebec, August 3-7 1997.

We tentatively plan two one-day field trips right before the meeting that will have a bryology/lichenology orientation: one to the University of Montreal Biological Station in the Laurentides and another to the McGill University Gault Estate (Mont-Saint-Hilaire). Also in the works is a more adventurous bryology/lichenology field trip of several days to arctic habitats (no details available at present).

Two symposia are currently planned: Phylogeny of Lichens (being organized by Francois Lutzoni) and Phylogeny of Bryophytes (being organized by Barbara Crandall-Stotler, Efrain De Luna, and myself). In addition, we hope to have some special sessions dealing with amateur concerns. The usual social events, contributed paper sessions (including the prestigious A.J. Sharp competition for best student paper), and poster sessions will round out the program.

The purpose of this initial announcement is to solicit ideas and suggestions for the program. In particular, proposals for WORKSHOPS are desired. These can be technical and analytical in orientation as well as instructional or computational. They usually are a half-day in length and are presented on Sunday. Proposals must be in to AIBS by December 13, 1996. If you are interested, please contact me and I will send you the required form.

Please send me any comments or suggestions as soon as possible. I will be sending out a mailing in January with further details on the program and a call for papers (abstracts will be due February 28th 1997).

Please make plans to attend the meeting and present your current research. Be sure to check out the ABLS web page at: <http://ucjeps.berkeley.edu/bryolab/ABLS.html>

Brent D. Mishler, Dept. of Integrative Biol., Univ. of California, Berkeley, CA 94720-2465 phone: (510)642-6810 FAX: (510)643-5390

Email: bmishler@garnet.berkeley.edu

data is as easy, and the resulting curves are automatically plotted within a second. The price for the waterproof version (and this is the only alternative for the field) is in Germany about \$150 each (humidity loggers being a bit more ex-

pensive than temperature loggers); the software costs \$50, the cable \$10.

Jan-Peter Frahm, Botanisches Institut, Meckenheimer Allee 170, D 53115 Bonn, Germany

Important Ukrainian literature available

Bachuryna, H.F. & Melnychuk, V.M. 1989. The Moss Flora of the Ukrainian SSR. Fasc. 3. Kyiv. Naukova Dumka. 176 pp. [In Ukrainian].

The book includes 130 species of 28 genera of 10 families of the orders Bryales & Orthotrichales. There are keys, descriptions, figures of taxa, data on their ecology and distribution in Ukraine as well as in the former USSR.

Zerov, D.K. 1964. The Flora of Hepatics and Sphagnum Mosses of Ukraine. Kyiv. Naukova Dumka. 356 pp. [In Ukrainian].

Additional information about this edition can be found in *Bryological Times* 85:5, 1996.

These books are available from: V. Virchenko, Institute of Botany, Tere-shchenkivska 2, Kyiv (Kiev), Ukraine.

Pottiaceae wanted

For a taxonomical work which includes molecular techniques such as DNA sequence and isozyme studies we would appreciate fresh or recently collected material of the family Pottiaceae of the world. We are especially interested in the most frequent genera in arid areas, such as *Acaulon*, *Aloina*, *Crossidium*, *Didymodon*, *Pottia*, *Pterygoneurum*, *Phascum* and *Weissia*. But all members of the family are welcome. Fruiting specimens up to eight years old are also desirable.

Rosa María Ros. Departamento de Biología Vegetal, Facultad de Biología, Universidad de Murcia, E-30100 Murcia, Spain. E-mail: rmros@fcu.um.es

Books on Bryophytes from the Missouri Botanical Garden

GENERA OF THE POTTIACEAE: MOSSES OF HARSH ENVIRONMENTS. Richard H. Zander; illustrated by Patricia M. Eckel. 1993. Bull. Buffalo Soc. Nat. Sci. 32. ISBN 0-944032-51-6. vi + 378 pp., 113 pl., hardbound. \$46.00 U.S.; \$48.00 non-U.S. Code: GENPOTT --- Seventy-six genera are recognized and each is described, discussed, and beautifully illustrated. "A dazzling tour de force in bryological explication." --The Bryologist.

A HANDBOOK OF MALESIAN MOSSES. Alan Eddy. ---Planned for five volumes, this nicely illustrated work covers Malaysia, Indonesia, the Philippines, and Papua New Guinea. "A must for anybody interested in the mosses of Southeast Asia." --Bryological Times.

Volume 1: Sphagnales to Dicranales. 1988.

The Natural History Museum and HMSO, London. ISBN 0-567-01038-7. 204 pp., f. 1 165. \$49.50 U.S.; \$52.00 non-U.S. Code: HMMOSS-1

Volume 2: Leucobryaceae to Buxbaumiaceae. 1990.

The Natural History Museum and HMSO, London. ISBN 0-565-01116-7. 256 pp., f. 166 326. \$57.50 U.S.; \$60.00 non-U.S. Code: HMMOSS-2

Volume 3: Splachnaceae to Leptostomataceae. 1996.

The Natural History Museum and HMSO, London. ISBN 0-11-310052-3. 277 pp., f. 327 510. \$65.50 U.S.; \$68.00 non-U.S. Code: HMMOSS-3 -- Just published!

FLORA OF SOUTHERN AFRICA, PART 1 MOSSES. Robert E. Magill. Botanical Research Institute, Department of Agricultural Services, South Africa.

--- This part of the Flora of Southern Africa to appear in four fascicles.

Fascicle 1. 1982. ISBN 0-621-06951-5. xv + 291 pp. \$21.00 U.S.; \$21.50 non-U.S. Code: 1-FSA --- Sphagnaceae through Grimmiaceae.

Fascicle 2. 1987. ISBN 0-621-10325-X. ix + 151 pp. \$21.00 U.S.; \$21.50 non-U.S. Code: 2-FSA --- Gigaspermaceae through Bartramiaceae.

INDEX OF MOSSES, 1963-1989. Marshall R. Crosby, Robert E. Magill & Cheryl R. Bauer. 1992. 656 pp., hardbound. \$32.00 U.S.; \$33.50 non-U.S. Code: MSB-42 --- About 8,500 names; appendices give full authors names and fully spelled journal and book titles.

INDEX OF MOSSES, 1990-1992. Marshall R. Crosby & Robert E. Magill. 1994. ISBN 0-915279-25-8. 87 pp. \$11.00 U.S.; \$11.50 non-U.S. Code: MSB-50 --- About 800 names and a bibliography of the publication in which nova for 1990-1992 appeared.

LATMOSS, A CATALOGUE OF NEOTROPICAL MOSSES. Claudio Delgadillo M., Bernardina Bello, & Angeles Crdenas S. 1995. ISBN 0-915279-35-5. 191 pp. \$20.00 U.S.; \$21.00 non-U.S. Code: MSB-56 --- The first comprehensive listing of the mosses that occur in tropical America since Mitten's 1869 *Musci Austro-Americani*. LATMOSS catalogs over 4000 records of species and infraspecies, with selected synonymy.

Books on Bryophytes from the Missouri Botanical Garden

MOSS FLORA OF CENTRAL AMERICA. Each species is fully described and discussed and its distribution mapped. The Flora will appear in four parts.

PART 1. Sphagnaceae-Calymperaceae. Bruce Allen with contributions from H. Crum, R. A. Pursell, W. D. Reese & N. Salazar Allen. 1994. ISBN 0-915279-26-6. 242 pp., hardbound. \$23.00 U.S.; \$23.50 non-U.S. Code: MSB-49 --- "A very nice debut for a treatment of the 871 species of 'Mesoamerican' moss." -- Bryological Times.

MUSCI AUSTRO-AMERICANI. G. Mitten. 1982. 652 + vi pp. \$13.50 U.S.; \$14.50 non-U.S. Code: MSB-7 --- A reprint of Mitten's classic.

Missouri Botanical Garden
Scientific Publications Order Form

Send order to:
Department Eleven Phone: (+1) 314-577-9534
Missouri Botanical Garden Fax: (+1) 314-577-9594
P.O. Box 299 E-mail: dept11@mobot.org
St. Louis, MO 63166-0299 Web: http://www.mobot.org

Date: _____ Your Phone: _____ Fax: _____

Ship to:

City State ZIP/Country

Code*	Title	Quant.	U.S. price	non-U.S. price	Total

* Code that accompanies title in catalog
Total for books: \$ _____
Handling fee: \$ 3.00
Add \$2.00 invoicing fee,
if payment is not enclosed: \$ _____
Total Order: \$ _____

Payment method:
 Check enclosed Send me an invoice
 Visa MasterCard
Card number:
Expiration date:
Name as it appears on the card (please print):
PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

New literature

Kannukene, L. 1995. Bryophytes in the forest ecosystem influenced by cement dust. In: Mandre, M. (ed.) Dust pollution and forest ecosystems. A study of conifers in an alkalized environment. Pp. 141-147. Institute of Ecology, Tallinn. Available from: Institute of Ecology, 2 Kevade Str., EE-0001 Tallinn, Estonia. Price: Unknown.

Wasser, S.P. (ed.) 1995. Accumulation of radionuclides by cryptogamic plants and higher fungi of Ukraine. Kyiv. M.H. Kholodny Institute of Botany. 131 pp. [In Ukrainian with English conclusion].

During 1990-93 the Department of Spore Plants of the M.H. Kholodny Institute of Botany of the National Academy of Sciences of Ukraine was carrying out investigations on accumulation of radionuclides by cryptogamic plants and fungi of ecosystems located at different distances from Chernobyl Atomic Power Plant. In this book the available data from scientific literature and original data on this topic are generalised. Recommendations are also given about the use of some taxa of fungi, lichens, mosses and algae accumulating high doses of radionuclides as indicators of radioactive pollution.

Snider, J. & Andreas, B. 1996. A Catalog and Atlas of the Mosses of Ohio. Miscellaneous Contributions from the Ohio Biological Survey No. 2. Price: US \$15.00. Available through the office of the Ohio Biological Survey. You may order using a Mastercard, a Visa card, check, money order, or purchase order. For shipping and handling charges, please add 10% if ordering within the U.S.A., 11% if ordering from Canada, Central America, or Mexico, 15% if ordering from Europe or South America, and 16% if ordering from Africa, Asia, or the South Pacific. Ohio residents must add 5.75% state sales tax

This reference work includes an introduction and a brief history of bryology in Ohio. A chapter on the collection and curation of bryological speci-

mens and a map of numbers of taxa precede the lists of mosses.

Following the moss lists is an atlas of county distributions for each taxon, including a referenced index map identifying the location of each of the 88 counties. A comprehensive list of references on Ohio mosses concludes the work.

The moss catalog provides up-to-date nomenclature through 1990 (the latest North American moss checklist) for the 400 taxa (385 species and 15 varieties) of mosses recorded for Ohio. The checklist consists of two parts: an alphabetical listing of Ohio mosses arranged by family and followed by an alphabetical listing of moss taxa arranged by genus and species. Synonyms are provided under each taxon. A list of excluded taxa, including the rationale for exclusion, follows the moss lists. A separate list of synonymy concludes the moss lists.

Ohio's moss flora represents 30% of the total moss flora on North America north of Mexico, and will therefore serve as a valuable reference tool for bryologists throughout this larger geographical region. [DHV]

S.R. Gradstein & H.M.H. van Melick (eds.) 1996. De Levermossen en Hauwmossen van Nederland [Hepatic Flora of The Netherlands]. Published by the Dutch Bryological & Lichenological Society, 368 pp., 140 plates, Price D. Fl. 75,- incl. postage. Can be ordered from DBLS, c/o F. van Gelder, Vossenkamp 24, NL-3972 VJ Driebergen, the Netherlands.

This Flora is the first full scientific account of the liverworts and hornworts of The Netherlands. The work contains keys to the families, genera and species, descriptions, and notes on distribution, habitat, variation and recognition. Full-page illustrations of all the species by J. Landwehr and M. Aptroot as well as dot maps showing the distribution of the species in the Netherlands accompany the text. The flora is based on a complete revision of the holdings of the Dutch herbaria (ca. 30.000 specimens) and was

prepared by a team of bryologists. An introduction with chapters on the morphology, anatomy, classification, distribution and conservation of the Dutch liverworts and hornworts is also provided.

The nice illustrations and the careful mapping of past and present distribution on a fairly small scale makes this flora valuable far outside the Dutch speaking area. It is especially appealing to use the flora to illustrate changes in the hepatic flora over time, analyzing which types of species are increasing and decreasing.

The species concepts used is that commonly used in central Europe, i.e. a fairly broad concept. For example is *Leiocolea collaris* treated as a synonym or variety of *L. bantriensis* and *Lophocolea cuspidata* under *L. bidentata* [LS].

L. Söderström (ed.), A. Âbolió, H.H. Blom, K. Damsholt, R. Fagerstén, K.I. Flatberg, A.A.Frisvoll, M. Haapasaari, L. Hedenäs, E. Heegaard, N. Ingerpuu, B. Jóhannsson, I. Jukoniené, L. Kannukenen, T. Koponen, M. Leis, J. Lewinsky-Haapasaari, T. Prestø, K. Thinggaard, T. Ulvinen, K. Vellak, R. Virtanen & H. Weibull. 1996. Preliminary Distribution Maps of Bryophytes in Northwestern Europe. Vol. 2 Musci (A-I). Mossornas Vänner, Trondheim. 72 pp. Price: 50 SEK (within Sweden, 90 SEK all other countries), incl. p.p. Order from: Mossornas Vänner, c/o Kristensson, Dekanvägen 8, S-24010 Dalby, Sweden.

This second part of a Nordic mapping project includes 497 maps of mosses from the Nordic and the Baltic Countries. The latter were not included in the previous hepatic volume.

M. Fletcher 1995. Moss Growers Handbook. 2nd ed. SevenTy Press, Reading. 114 pp. ISBN 0-9517176-2-6. Price: £6.00 (£7.00 overseas) incl. p.p. Order from SevenTy Press, 70 South Street, Reading, Berkshire RG1 4RA, UK.

Some Moss Collections from Dakshin Gangotri, Antarctica

S.D. Tewari & G. Pant

Department of Botany, D.S.B. College, Kumaon University, Nainital 263002, India

During the course of the 11th Indian expedition (Dec. 1991–Feb. 1992) to the permanent Indian station Dakshin Gangotri, Antarctica (70°45'12"S, 11°38'13"E), Dr. R.K. Gupta (a phycologist) of Banaras Hindu University, Varanasi, collected some mosses for the first time from the area around the Indian Antarctic station (Maitri). These moss samples were made available to us through professor A.K. Kashyap, CAS in Botany, B.H.U., Varanasi.

Eight moss samples were collected from the surroundings of Indian station Maitri, Schirmacher 'Oasis', Zub lake, Dalini lake and near the Russian station. All samples turned out to be sterile acrocarps. Species of *Bryum* and *Grimmia* were identified from sample nos. 2, 5 and 9 and 3, 6 and 7, resp. Other taxa recognized out of very scant collections were species of *Grimmia* (probably another species) epiphytized with Cyanobacteria (no. 4, 8), *Pohlia* and *Leptobryum*. The material of *Leptobryum* was extremely poor in quantity. Only a few shoots could be isolated from its underlying organic substrate (near Zublake, Maitri, sample no. 1). Interestingly, the moss was found to be gemmiferous. The pale-green, long, wiry shoots bear reddish-brown, multicellular, globose gemmae (105-140 µm × 72-105 µm) characteristically on long rhizoidal stalks originating from the leaf axil (Plate 1, Figs. A-C).

The flora of Dakshin Gangotri is predominantly of a cryptogamic nature with lichens and mosses constituting an important part of the vegetation (Wafar & Untawale 1983). The lichen flora of the Indian Antarctic station is better explored than mosses (Upreti 1995). Except for a mention of *Bryum* sp., no other moss taxa were documented earlier and knowledge of the bryophytic components of the Indian Antarctic region is

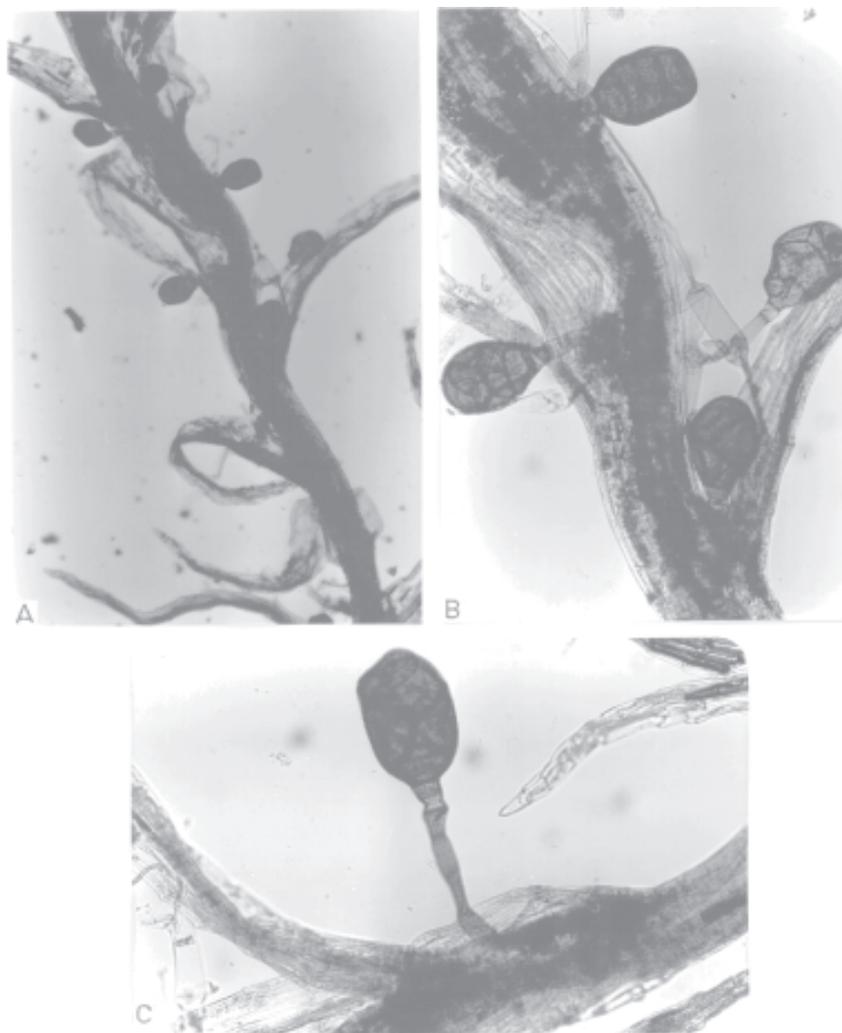


Fig. 1. A. Portion of *Leptobryum* shoot bearing reddish-brown, globose axillary brood bodies. Zub Lake, Antarctic specimen. B. Gemmiferous part of moss shoot enlarged. C. Close-up of a multicellular, stalked, globose, axillary gemmae of *Leptobryum*.

still shrouded in darkness. Now for the first time, an Indian bryologist, Dr. D.K. Singh, Deputy Director, botanical Survey of India, Northern Circle, Dehra Dun, has been nominated to carry out bryological studies in Antarctica during the 16th Antarctic Expedition of 1996-97.

REFERENCES

- Upreti, D.K. 1995. Studies on Antarctic Lichens. *NBRI News Letter*, Vol. XXII, no. 2: 20-21.
- Wafar, S. & Untawale, A.G. 1983. Flora of 'Dakshin Gangotri' in Antarctica. *Scientific Report of First Indian Expedition to Antarctica. Technical Publication no. 1*. Dept of Ocean Development, South Block, New Delhi, India.

The Bryological Times is a newsletter published bimonthly for the *International Association of Bryologists*. Items for publication are to be sent to the Editors (preferably HW), **except** for those for the regular columns, which may go **direct** to the column editors

Deadlines for material to the Bryol. Times will be January 15, March 15, May 15, July 15, September 15 and November 15 with the publication shortly afterwards. Shorter notes may be accepted later if there is still space.

Editors

Lars Söderström, Dept. of Bot., Norwegian Univ. of Sci. & Techn., N-7055 Dragvoll, Norway. FAX +47 73596100. Larss@alfa.itea.ntnu.no

Henrik Weibull, Dept. Ecol & Envir. Sci., Swedish Agric. Univ., Box 7072, S-75007 Uppsala, Sweden. FAX +46 18673430.

Henrik.Weibull@emc.slu.se

Terry Hedderson, Dept. of Bot., Univ. of Reading, Whiteknights, RG6 2AS Reading, UK. FAX +44 1 734 753 676. T.A.J.Hedderson@reading.ac.uk

Column Editors

J.-P. Frahm & B. O'Shea (computer techniques); J. M. Glime (ecology); T. Hallingbäck & E. Urmi (conservation); A. R. Perry (news from the herbaria); T. Pócs (tropical bryology); M. L. Sargent (techniques); J. Vána & W. R. Buck (floristics and phytogeography); D. H. Vitt (best book buys, taxonomy).

The Bryological Times, founded in 1980 by Stanley Wilson Greene (1928-1989), is distributed from Beijing (China), Canberra (Australia), Edmonton (Canada), Eger (Hungary), Geneva (Switzerland), Hiroshima (Japan), Moscow (Russia), Praha (Czech Republic), St. Louis (USA) and Trondheim (Norway).

Production

Lars Söderström, Trondheim

DIARY

1997

April 2-9. BBS Spring Meeting, Torquay, Devon, U.K. Local secretary: Mr Mark Pool, "Camelot", 91 Warbro Road, Torquay TQ1 3PS, UK Tel: (+44) (0)1803-316154 (evenings please). Fax: (+44) (0) 1803-386507 (please mark your fax "M. Pool - personal").

May 26-30. IAB meeting in Beijing, China. Topic: "2000's Bryology. Followed by two excursions, one to SE China and one to NW China. The first circular will be ready in mid 1996. Contact person: Prof. P. C. Wu, Inst. of Botany, Academia Sinica, Xian shan, 100093 Beijing, China. Fax: 0086-010-8319534.

June 13 - 15. Annual assembly of the SVBL. Les Diablerets (Calcareous Alps in Western Switzerland). Contact person: Patricia Geissler, Conservatoire et jardin botaniques de la Ville de Genève, Case Postale 60, CH-1292 Chambésy, Switzerland. Phone +41 22 418 51 48 (direct) 418 51 00 (switchboard), Fax +41 22 418 51 01, e-mail: geissler@cjb.unige.ch

August 3 - 7. ABLs Annual Meeting in Montreal, Quebec. Information from: Brent D. Mishler, Dept. of Integrative Biology, University of California, Berkeley, CA 94720-2465 phone: (510) 642-6810 FAX: (510) 643-5390 E-mail: bmishler@garnet.berkeley.edu

Is this all activity
in bryology until
next summer?????

For details regarding membership of to *International Association of Bryologists* (currently US \$ 11.- per year) write to Dale H. Vitt, Department of Botany, University of Alberta, Edmonton, Alberta, Canada TG6 2E9.