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The TAXA Computer System - a taxonomic, distribution and herbarium management database.

by Brian O'Shea

[Computer techniques column. Send contributions to the column editors: Jan-Peter Frahm, Universität Duisburg, Fachbereich 6, Botanik, D-47048 Duisburg, Germany, or Brian O'Shea, 141 Fawnbrake Avenue, London SE24 0BG, UK]

When compiling a checklist of Malawi bryophytes (O'Shea, in press), I thought it important that all data was held on a computer database. The database, called TAXA, was written by the author in the dBASE IV language for use on an IBM-compatible PC, and is based on a program of the same name produced originally to hold details of the UK and European bryophyte flora. It has now been significantly enhanced and holds the following data:

1. Families A world list of all moss and liverwort families, with authorities. All families are identified by a unique 4 character alphabetic code (usually the first four characters of the family name). (Both family and genus names are based on Crosby and Magill (1977), and Grolle (1983), with later additions.).

2. Genera A world list of all moss and liverwort genera, including the authority, and the family to which each genus belongs. All genera are identified by a unique 5 character code, based on the genus name.

3. Species/subtaxa A list of all bryophyte taxa so far required by the system (currently numbering almost 3500). As well as all the Malawian taxa, this also includes all European taxa, as well as many others, including most mosses occurring in Africa

(a current project, see below).

4. Lists The system is structured around a concept of hierarchical lists relating to geographical areas. For instance, the UK list of taxa is part of the European list, which is part of the world list: an entry on a lower level list thus automatically infers membership of any higher level list(s). Each entry on a list represents a taxon found in that area, and contains a pointer to the full details of the taxon held in the species file.

5. Regions The area to which each list refers is divided into Regions. These might be constituent countries (e.g. England, Ireland, Scotland, Wales), or states in the USA etc.

6. Districts Each region is divided into Districts, e.g. vice counties in the UK, counties in the USA. Malawi has 24 Districts, spread over 3 Regions.

7. Localities Each taxon on a list can be linked to a set of localities within a District where it has been found. This can in turn be linked both to a bibliographic reference and/or a collection number. For the Malawi list, this is where any information (e.g. the original collection numbers) extracted from the references is stored.

8. Collections Collection data can be held, and linked to a specific list. The collection data can be used to generate dot maps via an automated

link to and from the DMAP program, and can also be searched in various ways, e.g. for all material identified down to genus level, all plants for a specific genus or grid reference, etc., and labels can be produced. This area of the database will be used extensively when writing up the collections from the BBS Malawi Expedition of 1991.

9. Accessions The author has

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transferred all his herbarium information from the BACCHUS system (written in Turbo Basic) into TAXA. This took about 8-10 hours to write conversion utilities, to transfer the data between the two systems, and to check all name discrepancies and automatically insert any taxon names new to TAXA. This allows the taxon part of TAXA to be further exploited, but also prevents the duplication of names in two different databases. All the many print options of BACCHUS are not yet available. The accessions database holds only a minimum of information, to prevent duplication with the collections database.

10. Bibliography A bibliography is held containing all relevant references in the system. Each reference can be associated with as many lists (countries) or list members (individual taxa) as appropriate, or any localities. Multiple keyword search facilities are provided.

11. Journals Each bibliographic reference is keyed by a journal abbreviation to a journal file, which contains full details of the journal.

There are processes associated with the maintenance of all of this data (which is held in more than 40 files), and in addition, a number of other processes for displaying, listing and searching for data, including the production of the formatted lists included in the Malawi checklist (O'Shea, in press). The lists are output by TAXA containing special characters that can be used by word processors to determine the use of italic, underlined and bold characters, and the formatting of the document. The final copy of the Malawi checklist was produced using WordStar 6 (for the initial formatting) and Microsoft Word for Windows 2 (for the final print). There are currently 98 menu options, together with a number of options selected at run time (e.g. what order to print the records in).

As a project to follow the Malawi checklist, all African moss taxa are being entered (from literature referen-

ces) with a view to providing a preliminary list for the continent - surprisingly one does not already exist. 1237 African taxa are now on the database (12 April 1993), showing in which countries they are recorded.

Potential users should note that it can only be used with dBASE IV - it will not work with earlier versions of dBASE because it uses facilities such as windows and pull down menus. The system is under constant development, both in the addition of new facilities to the programs, and in the addition of extra data, and is not yet well documented. Some of the facilities described above are not yet fully implemented. At present the system consists of over eight thousand lines of code, and requires nearly 8 megabytes of disk storage, the majority of which is the main data files, and the rest is indices, temporary storage files and program code. Anybody who would like to use the system can have a copy of the author's system by sending seven high density (1.2Mb) 5.25" disks or six 1.4Mb 3.5" disks, but it will at some point become available via the IAB software library, when the basic system will be available separately from the Malawi and other data, with full instructions on how to build your own data files.

References

Crosby, M.R. and Magill, R.E. (1977). *A Dictionary of Mosses*. Missouri Botanical Garden, St. Louis.

Grolle, R. (1983). *Nomina generica Hepaticarum; references, types and synonymies*. Acta Bot. Fennica 121, 1-62.

O'Shea, B. (in press). British Bryological Society Expedition to Mount Mulanje, Malawi. II - Checklist of Malawi Bryophytes.



DMAP for Windows

by Brian O'Shea

Computer techniques column.
Send contributions to the column editors: Jan-Peter Frahm, Univ. Duisburg, FB 6, Botanik, D-47048 Duisburg, Germany, or Brian O'Shea, 141 Fawnbrake Avenue, London SE24 0BG, UK

Dr Alan Morton, the developer of the DMAP mapping system for IBM-compatible PCs, has recently produced two new versions of DMAP: a new DOS version (August 1992), and a first version for Windows (DMAP for Windows version 1). The subscription prices for the new versions are £30 (DOS version) and £75 (Windows version), with much cheaper upgrades for existing users.

DMAP has been described in this column before as an excellent product that performs extremely well, and is now used widely for distribution mapping on gridded maps. The DOS version doesn't look very different but has a number of new facilities, and continues to work as before with existing data files - for instance, the link I have into DMAP from my own dBase TAXA program still works the same. The Windows version has the look and feel you would expect, but remains a simple to use, well-focused product. Details of how to convert existing DOS-based files (straightforward) are given. Recommended.

New and existing users are advised to buy/upgrade to the new versions. Please contact Alan Morton at Blackthorn Cottage, Chawdridge Lane, Winkfield, Windsor SL4 4QR, UK.

IAB dues in Australia and New Zealand

Patricia Selkirk has volunteered to collect IAB dues in Australia/New Zealand area. Her address is School of Biological Science, Macquarie University, North Ryde, New South Wales 2109, Australia. [D. Vitt]

An easy method to establish a bryological bibliography

by Jan-Peter Frahm

[Computer techniques column. Send contributions to the column editors: Jan-Peter Frahm, Universität Duisburg, Fachbereich 6, Botanik, D-47048 Duisburg, Germany, or Brian O'Shea, 141 Fawnbrake Avenue, London SE24 0BG, UK]

You can hear it everywhere: bibliographies are one of the most useful computer applications. But why do so few colleagues make use of a computerised bibliography? The answer is, it is not so easy. Some programs are practically unusable. The first program I bought in early PC times was Martz bibliofile for \$250. I never installed it but gave up (fortunately) when I had read the first ten pages of the manual. Others are better, some of them very good. The German program LITSY can be invoked by a keystroke from MS-Word and has the same appearance. It pastes selected references directly into Word in the style of different journals. But how to paste references into LITSY? It is possible to import so-called ASCII files but you must separate every field by a comma. This means sitting down and putting commas into a textfile, several commas following each other to indicate fields which you are not using. One error and all fields are out of step. I gave up after two hours. "Bookworm" in the software library is a pretty Windows application. If you don't already have a bibliography, it must be nice to use from the start. But how do you change from another program (and another database structure) to Bookworm? Brian O'Shea wrote a utility to convert dBase files to Bookworm format, but I have failed so far to get more than 64 K imported.

Back to dBase? An argument in favour of dBase is that there are large masses of data available, e.g. the "Recent literature on mosses" viz. "hepatics" 1986-1992 in the software library with more than 10,000 records. This would be particularly useful when somebody needs to search for references for a specific topic, for instance, if you want to get orientated

about what has been published on a certain subject. The same is true for the huge database provided for the software library by Janice Glime. In daily work, however, you may be preparing a manuscript and have to cite a particular title for the fifth time in the past two years, and you have forgotten the publisher of the book you are going to cite. Here it would be useful to have a cumulative file of all your references which you have used through the years. It is a common experience that certain references are used again and again and must always be retyped. More advanced word processors such as MS-Word or Word for Windows have facilities to sort text and to search for text. A complete database of all references used in the past five years can be prepared within 30 minutes. The manuscripts are just loaded into the word processor and the references marked and copied. They are pasted all together in one new file, just one list of references after the other. The whole block is then marked and can be sorted automatically by the word processor by the appropriate menu option. All references are thus merged together alphanumerically, which should even put all references for an author in chronological order.

The next time you are writing a manuscript, the required reference can be just pasted from the bibliographical file into the manuscript. If the author is known, one can just scroll to the required citation, in longer bibliographic files the search or goto options can be used. It allows you even to search for a string of characters in the title (e.g. the name of a country or a genus).

In the disk version of the journal "Tropical Bryology", all references

included in the contributions of a volume are put together in a cumulative file that can be used as an ASCII database. In addition, from vol. 5 onwards, a cumulative file for all previous volumes is also included (also indicating from which volume the reference originates), providing an enormous mass of references for tropical bryology. This file is hard formatted for ease of use on screen, which makes sorting impossible. For use in the way described above, a special version is available from the author (free for subscribers of the disk version), in which every reference is separated by a carriage return.

IAB Elections

Bernard Goffinet, judge of the IAB elections 1993, has reported the following results to me. Number of ballots: 115. Those elected are as followed.

President: T. Koponen, Finland.

1st Vice President: W. B. Schofield, Canada.

2nd Vice President: R. E. Longton, United Kingdom.

New Councillors:

- 1) R. Seppelt, Australia
- 2) T. Cao, China
- 3) L. Söderström, Norway
- 4) M. Ignatov, Russia

Continuing Councillors:

- 1) H. Ando, Japan
- 2) W. Buck, U.S.A.
- 3) C. Delgadillo, M., Mexico
- 4) J.-P. Frahm, Germany
- 5) P. Geissler, Switzerland
- 6) N. G. Miller, U.S.A.

I wish to express my appreciation to R. Magill, S. Piippo, J. Lewinsky, and R. Stotler for allowing their names to stand in this important election.

Dale H. Vitt
Secretary, IAB

New entries to IBIS

by Jan-Peter Frahm

[Computer techniques column. Send contributions to the column editors: Jan-Peter Frahm, Universität Duisburg, Fachbereich 6, Botanik, D-47048 Duisburg, Germany, or Brian O'Shea, 141 Fawnbrake Avenue, London SE24 0BG, UK]

The following new entries to IBIS, the International Bryological Information System on the host duc220 at the university of Duisburg, are listed as arranged in the IBIS-subdirectories.

The data and programs are available (as always free for IAB members):

1. by downloading with ftp (Internet number 134.91.4.5)

2. on 3.5" HD disk together with the contents of the whole subdirectory in compressed form.

3. on 5.25" disk (DD or HD, if indicated). The disk number of the IAB software library is given in brackets.

For orders on disk, please send the appropriate number of disks in the appropriate format and density, and consider which files you can contribute in exchange.

For downloading from IBIS, please ask the author for usercode and password.

/Checklists

M-USSR (#436)

Database of the mosses of the former USSR by M. Ignatov in dBase and Paradox format.

Canada.dbf (#442)

dBase version of the checklist of the mosses of Canada (#233) provided by M. Ignatov, compressed as .zip file.

/Bibliographies

Bryobib.zip (#441, HD Disk)

Janice Glime's huge bryological bibliography with 12,600 references now in dBase Format for the use with the dBase Program "Info" (#166) in delimited format (which means that the fields are separated by a special

character (delimiter) and occupy only 15% of the original size). For use, type "use demo" from the Info disk containing the structure of the database and type "append from b:filename delimited". Compressed, extracted 7.6 MB on harddisk.

Litmo.exe

Recent literature on mosses 136-142 in dBase format for the use with the dBase program "Info". Includes 2500 references in self-extracting file.

Lithe.exe

Recent literature on hepatics 110-128 in the same format. Includes 3120 references.

A total of 18,220 bryological references are now available in this series.

/Labels

PLabel (#437, HD)

A Clipper-compiled program by K. Perkins, University of Florida, for storing herbarium data and printing excellent two-column labels on a laser printer. It uses a dBase compatible structure for the database. With numerous utilities to set up title, header, or footer to configure the labels for your own purposes.

/Ecology

MVSP2 ver. 2 (W.L. Kovach, shareware, #42)

New Version of the Multivariate Statistical package, including Principal Component Analysis, Correspondence Analysis, Distances and Similarities, Cluster Analysis etc.

/Taxonomy

Montanus (Jason Nunn, freeware, #443)

A user friendly clone of Delta Intkey and Confor. Although not as powerful as Delta, it is easier to use.

New Project: The phylogeny of the Marchantiales

DNA sequencing can provide new insights in plant evolution. We will soon have the opportunity to apply these techniques to the Marchantiales. The phylogeny of this order has been controversial for a long time.

Many genera of the Marchantiales are rare or are found in tropical countries only. We would be very grateful for living specimens of any species, *Monoclea* included. For our studies we need samples of about 10 cm diameter. If necessary, mailing expenses can be covered by us.

Thank you for your help!

H. Bischler-Causse and M. C. Boisselier-Dubayle, Laboratoire de Cryptogamie, Muséum National d'Histoire Naturelle, 12 rue Buffon, 75005 PARIS, France.

Personal news

As a visiting scientist awarded by the Natural Sciences and Engineering Research Council of Canada (NSERC) International Scientific Exchange Award, Prof. Cao Tong spent six months, from October 1992 to April 1993 at the University of Alberta, Canada. In collaboration with Prof. Dale Vitt, he worked on the Bryoflora of China (English edition), mainly with taxonomic revisions of the moss genera *Andreaea*, *Ptychomitrium* and *Racomitrium* in China. In March, Prof. Tong also visited Dr. D. Pfister, Dr. B. C. Tan and Prof. W. R. Buck at The Farlow Herbarium (Harvard University) and The New York Botanical Garden, respectively. The address of Prof. Cao Tong is now: Dept. of Plant Resources, Institute of Applied Ecology, Academia Sinica, Shenyang 110015, China.

Personal news

J. Pujos is at present investigating certain aspects of *Sphagnum*, particularly the sporophyte-gametophyte junction, the fertility and the variability among and within populations. He is also working with the conservation of bogs in southern France.

If anyone happens to know about possibilities to make a bryological visit to Russia this summer, please inform J. Pujos, Laboratoire de Cryptogamie, Muséum National d'Histoire Naturelle, F-75005 Paris, France.

Dr. Giribala Pant at the Department of Botany, D.S.B. College, Kumaon University is at present working on the project "Ecology and Taxonomy of Kumaon Himalayan Bryophytes", funded by the Government of India, Dept. of Science and Technology, New Delhi.

As a part of the project, Dr. Pant is working with the establishment of a small, experimental "bryophyte garden" at the Department of Botany. In the garden, endemic species are grown for conservation purposes, but bryophytes are grown also for use in the education and for their aesthetic properties. At present 61 species of mosses and 25 species of liverworts are grown.

Another part of the project is the bryological investigations in the Askot, Nachni, Kharbagadh and Madkot areas in Kumaon (Western) Himalaya, between 900-2000 m a.s.l. Among interesting finds made so far are *Scopelophila cataractae* (Mitt.) Broth. from copper-mines at Askot, 1100 m a.s.l. (with gemmae), *Jungermannia confertissima* Nees., *Campylopus involutus* (C. Muell.) Jaeg., *C. gracilis* (Mitt.) Jaeg., *C. sedgwickii* Dix. and *Scopelophila ligulata* (Spruce) Spruce were repeatedly observed or collected from exposed, acid limonite rocks or outcrops throughout the Kumaon. In hot-water, carbonated, sulphur springs at Madkot (Pithoragarh), 1400 m a.s.l., *Marchantia*,

Hydrogonium and *Splachnobryum* species have been found. Other interesting finds include tufa forming bryophytes in the Gori valley, Pithoragarh, such as *Hydrogonium*, *Hymenostylium*, *Fissidens*, *Philonotis*, *Splachnobryum* and *Vesicularia* species.

Dr. Pant also informs about the rediscovery of the endemic *Aitchisoniella himalayensis* Kash. in Mukteshwar (2150 m a.s.l.) in Naini Tal., finds of *Tayloria subglabra* (Griff.) Mitt. and *Tetraplodon mnioides* (Hedw.) B., S. & G. on sheep carcasses lying on the alpine meadows along the way to the Namik Glacier (3500 m a.s.l.) in Pithoragarh and the first find of *Sphagnum*, *S. ovatum* Hamp., in Kumaon Himalaya (Madhari, 3500 m a.s.l.).

Finally, Dr. Pant informs about the publication "Himalayan Bryophytes. (A Plea for Conservation)", published 1992 in HORNBILL, Bombay Nat. Hist. Soc. 3: 26-27, by G. Pant and B. Malcolm.

The address of Dr. Giribala Pant is: Department of Botany, D.S.B. College, Kumaon University, Naini Tal (263002), India.

Bryoflora and bryoecology of Boehler Seeps, Oklahoma, U.S.A.

Drs Susan Moyle Studlar and Suzanne McAlister have completed a preliminary floristic and ecological inventory in Boehler Seeps Nature Preserve in south-eastern Oklahoma (Atolca Co.). The bryophyte communities in The Seeps are dominated by *Helodium paludosum*, *Aulacomnium palustre*, *Pallavicinia lyellii*, *Sphagnum lescurii* and *Polytrichum commune*. The work is part of an ecological monitoring project stimulated by concern over the impact of state road improvement through the

preserve. This is an Oklahoma Nature Conservancy Preserve and the work was done under their contract. The OKNC awarded them and Dr. Rebecca Ovrebo of the Rose State College (who worked on the vascular plants) with their annual Stewardship Award at the annual meeting (April 1993) for their work at the Boehler Seeps.

If you are interested in more details about the results of the study, please contact: Dr. Susan Moyle Studlar, Botany Dept., Oklahoma State University, Stillwater, OK 74078-0293, U.S.A.

New address

Tomio Yamaguchi, Department of Biology, University of the Ryukyus, Nishihara-cho, Okinawa 903-01, Japan

The list of addresses of IAB members (as well as phone no., fax no., and e-mail address if provided) is now available from Jan-Peter Frahm on computer disk as a data base. The data will be updated at six-month intervals, thus keeping it fairly current. You will be billed for the cost of the computer disk and postage. Printed copies will be made on an individual basis for those who prefer from Dale H. Vitt at a cost of \$5 CDN to cover printing and mailing.

Order computer disk from:

Dr. Jan-Peter Frahm
Universität Duisburg
Fachbereich 6, Botanik
Postfach 10 16 29
Lotharstrasse 65
D-47048 Duisburg
Germany

Order the printed copy from:

Dale H. Vitt
Department of Botany
University of Alberta
Edmonton, Alberta T6G 2E9
Canada

Program for the Annual Meeting of ABLS - 1993

Friday, July 30 - Sunday, August 1 -
Foray in Northeastern Iowa.

MONDAY MORNING, 2 AUGUST

7:30 **ABLS BREAKFAST: MEMORIAL UNION**

- SESS 1** **CONTRIBUTED PAPERS:** Bryophyte structure and classification. Joint Session with the Bryological and Lichenological Section, BSA. NORTON G. MILLER, New York State Museum, Science Service, Albany, NY 12230 (518/486-2010), presiding.
- 9:00 SHARON E. BARTHOLOMEW-BEGAN. West Chester University, West Chester, PA. A controlled, comparative investigation of the patterns of sporeling ontogeny of *Pellia epiphylla* (L.) Corda and *Pellia neesiana* (Gott.) Limpr.
- 9:15 ANN E. RUSHING. Baylor University, Waco TX. Ultrastructural features of the foot of the mature sporophyte of *Lorentziella imbricata* (Mitt.) Broth.
- 9:30 BARBARA M. THIERS. New York Botanical Garden, Bronx. Evolutionary relationships in the Pleuroziaceae (Hepaticae).
- 9:45 KENNETH D. MCFARLAND*, KAREN S. RENZAGLIA, DAVID K. SMITH, MARIE HICKS and PAUL G. DAVISON. University of Tennessee, Knoxville, East Tennessee State University, Johnson City and University of North Alabama, Florence. Discovery and description of antheridia on *Megaceros aenigmaticus*.
- 10:00 BARBARA CRANDALL-STOTLER. Southern Illinois University, Carbondale. Ontogenetic shifts in apical organization in bryophytes and some thoughts on meristem evolution.
- 10:15 Recess
- 10:30 STEVEN L. TIMME. Pittsburg State University, Pittsburg, KS. Historical review and the current status of hepaticology in Kansas.
- 10:45 TERRY A. HEDDERSON* and ROYCE E. LONGTON. Louisiana State University, Baton Rouge and The University of Reading, England. Patterns of life history variation in the Funariales, Polytrichales and Pottiales.
- 11:00 TERRY J. O'BRIEN. University of Iowa, Iowa City. The generic affinities of *Helodium* Warnst. (Musci).
- 11:15 GARY L. SMITH MERRILL. Field Museum of Natural History, Chicago, IL. *Ozobryum ogalalense*, a new moss genus and species from the American Great Plains.
- 11:30 ALISON WITHEY. Duke University, Durham, NC. Phylogenetic relationships of the Spiridentaceae (Musci): chloroplast DNA data.
- 11:45 ANGELA E. NEWTON. Duke University, Durham, NC. Phylogenetic relationships in the Pterobryaceae.

Program for the Annual Meeting of ABLS - 1993 (continued)

MONDAY AFTERNOON, 2 AUGUST

- SESS 2 SYMPOSIUM: The Bryophytes of Peat-forming Ecosystems. Cosponsored by the Bryological and Lichenology Section, BSA. Organized by DALE H. VITT. Devonian Botanical Garden and Department of Botany, University of Alberta, Edmonton, Alberta, Canada T6G 2E1 (403/492-3380).
- 1:00 DALE H. VITT. University of Alberta, Edmonton, Canada. Introduction.
- 1:15 DIANA G. HORTON*, NILS MALMER and DALE H. VITT. University of Iowa, Iowa City, University of Lund, Lund, Sweden and University of Alberta, Edmonton, Canada. Peatland classification: how important are bryophytes?
- 1:45 KELMAN R. WIEDER. Villanova University, Villanova, PA. Biogeochemical cycles relative to the bryophyte layer in peatlands.
- 2:15 YENHUNG LI* and L. DENNIS GIGNAC. University of Alberta, Edmonton, Canada. The responses of bryophytes to gradients in peatlands.
- 2:45 Recess
- 3:00 DENNIS L. GIGNAC. University of Alberta, Edmonton, Canada. The responses of peatland bryophytes to climate.
- 3:30 LINE ROCHEFORT. Université Laval, Québec, Canada. Growth of bryophytes in peatlands and peat accumulation.
- 4:00 JILL L. BUBIER. McGill University, Montreal, Canada. Relationships between bryophyte habitats and the emission of greenhouse gases in northern peatlands.
- 4:30 DALE H. VITT. University of Alberta, Edmonton, Canada. Changes in moss-dominated peatland communities over the past 10,000 years.

MONDAY EVENING, 2 AUGUST

- 5:15 ABLS EXECUTIVE COUNCIL MEETING

TUESDAY MORNING, 3 AUGUST

- SESS 3 SYMPOSIUM: Evolutionary Potential and the Reproductive Biology of Bryophytes and Lichens. Cosponsored by the Bryological and Lichenological Section, BSA. Organized by KAREN S. RENZAGLIA. Department of Biological Sciences, East Tennessee State University, Johnson City, TN 37614-0703 (615/929-6930).
- 8:30 NEIL W. ASHTON. University of Regina, Regina, Saskatchewan, Canada. Insights into bryophyte evolutionary potential from experimentation with *Physcomitrella patens*.
- 9:15 D. NICHOLAS MCLEITCHIE. University of Tennessee, Knoxville. Infertility and the potential of inbreeding while maintaining heterozygosity in the liverwort *Sphaerocarpos texanus*.
- 10:00 Recess
- 10:20 DIANA FAHSELT. University of Western Ontario, London, Ontario, Canada. Isozyme polymorphism and evolutionary potential in lichen populations.
- 11:05 PAULA T. DEPRIEST. Smithsonian Institution, Washington, DC. Molecular evolution and genetic variation in lichen-forming fungi.
- 11:50 KAREN SUE RENZAGLIA. East Tennessee State University, Johnson City. Symposium summary and discussion.

Program for the Annual Meeting of ABLS - 1993 (continued)

TUESDAY AFTERNOON, 3 AUGUST

- 2:00 ABLS BUSINESS MEETING
- 3:30 BUSINESS MEETING: BRYOLOGICAL AND LICHENOLOGICAL SECTION, BSA

TUESDAY EVENING, 3 AUGUST

- 6:00 ABLS MIXER: Jointly with the Bryological and Lichenological Section, BSA. (Cash bar)

WEDNESDAY MORNING, 4 AUGUST

- SESS 4 SYMPOSIUM: Integration of Bryology and Lichenology into Biodiversity Preservation and Management Plans. Cosponsored by the Bryological and Lichenological Section, BSA. Organized by ROGER ROSENTERTER, Bureau of Land Management, 3380 Americana Terrace, Boise, ID 83706 (208/384-3064) and BARBARA CRANDALL-STOTLER, Department of Plant Biology, Southern Illinois University, Carbondale, IL 62901-6509 (618/453-3232).
- 9:00 DALE H. VITT* and YENHUNG LI. University of Alberta, Edmonton, Canada. Patterns in the diversity of bryophytes.
- 9:30 INES SASTRE-D. J.* and BENITO TAN. University of Puerto Rico, San Juan and Harvard University Herbarium, Cambridge, MA. Problems of bryophyte conservation in the tropics: neotropical and paleotropical cases.
- 10:00 Recess
- 10:15 JERRY A. SNIDER. University of Cincinnati, Cincinnati, OH. Preservation of bryophyte diversity: problems, practice and policy.
- 10:45 DOUGLAS LADD. The Nature Conservancy, St. Louis, MO. Conservation of bryo-lichen biodiversity: a Missouri perspective.
- 11:15 ROGER ROSENTERTER. Bureau of Land Management, Boise, ID. Fostering agency advocates for non-vascular plants.
- 11:45 BARBARA CRANDALL-STOTLER. Southern Illinois University, Carbondale. Closing comments.

Program for the Annual Meeting of ABLS - 1993 (continued)

WEDNESDAY AFTERNOON, 4 AUGUST

- SESS 5 CONTRIBUTED PAPERS: Lichen systematics and ecology; systematics of *Sphagnum*. Joint Session with the Bryological and Lichenological Section, BSA. BARBARA M. THIERS. New York Botanical Garden, Bronx, NY presiding (718/220-8622).
- 1:45 SAMUEL HAMMER. Harvard University, Cambridge, MA. The lichen genus *Cladonia* in the western United States.
- 2:00 IRWIN M. BRODO. Canadian Museum of Nature, Ottawa, Ontario, Canada. The crustose lichens of the Queen Charlotte Islands, British Columbia: observations on some new or interesting species.
- 2:15 MARIAN GLENN*, ANTONIO GOMEZ-BOLEA, CLAUDE ROUX and ROSE LOBELLO. Seton Hall University, South Orange, NJ, Universitat de Barcelona, Barcelona, Spain and Institut Méditerranéen d'Ecologie, Marseille, France. Lichen health in relation to vehicular traffic in two Mediterranean forest preserves.
- 2:30 STEVEN B. SELVA. University of Maine at Fort Kent, Fort Kent, ME. Lichen diversity and stand continuity in the ancient forests of New Hampshire and Vermont.
- 2:45 JAMES D. LAWREY. George Mason University, Fairfax, VA. Chemical ecology of a lichenicolous hyphomycete.
- 3:00 Recess
- 3:15 ALLEN C. RISK. University of Tennessee, Knoxville. *Sphagnum* of eastern Kentucky.
- 3:30 CYRUS B. MCQUEEN. Johnson State College, Johnson, VT. The *Sphagnum* flora of the Andes.

THURSDAY MORNING, 5 AUGUST

- SESS 6§ POSTER SESSION: The biology of bryophytes and lichens. Joint Session with the Bryological and Lichenological Section, BSA.
- 9:00-12:30 Posters will be available for viewing from 9:00 a.m. to 12:30. Authors will be available to discuss their presentations from 10:00 - 11:30.
- ABLS KATHERINE A. GLEW. University of Washington, Seattle. Alpine lichen communities in Washington State.
- ABLS ANTONIO GOMEZ-BOLEA*, MARIAN G. GLENN and ERNEST V. ORSI. Universitat de Barcelona, Barcelona, Spain and Seton Hall University, South Orange, NJ. Effects of environmental stress on the interaction of lichenized and non-lichenized fungi.
- ABLS TERRY A. HEDDERSON*, RUSSELL L. CHAPMAN, DEBRA A. WATERS and BARBARA CRANDALL-STOTLER. Louisiana State University, Baton Rouge and Southern Illinois University, Carbondale. The phylogenetic position of *Takakia*: a preliminary assessment based on cladistic analysis of rRNA sequences.
- ABLS ROBERT J. THOMAS*, TAIT A. NORDEN and HARRY A. ROGOFF. Bates College, Lewiston, ME. Computer-assisted analysis of gravitropism in *Pellia*.

Bryology at the University of Murcia, Spain

The bryological group of the University of Murcia consists of Prof. Dr. Guerra (Catedrático, according to the Spanish system) and me (Profesora Titular) as the permanent staff. M. J. Cano has a grant from the Spanish government for four years, to complete her doctoral thesis. In November 1992, Dr. Jorge de las Heras successfully defended his doctoral thesis "Studies of bryophyte succession and edaphic changes after fire in Mediterranean forests (Albacete, SE Spain)" at the University of Murcia. He is now at the University of Albacete, but is still collaborating with us. Other persons co-operating with us include former students who are now employed outside the university, but who are still doing bryological research in their spare time: M. N. Jiménez, P. García-Zamora and J. J. Moya. Dr. Olaf Werner, who finished his doctoral thesis "The influence of several plant hormones on protein synthesis and protein phosphorylation in *Funaria hygrometrica*" at the University of Heidelberg in July 1992, is now living in Murcia and collaborates with us in the laboratory work.

Our bryological research is varied, ranging from the flora and vegetation of SE Spain, the taxonomy of problematic groups (especially the family Pottiaceae), the ecology of bryophytes after fire and the ecophysiology of tolerance of stress from dry conditions.

During the last six years we have carried out several research projects, the more important of which are the following:

- The bryophyte and Lichen flora and vegetation of the gypsum areas in SE Spain. This project was carried out between 1988 and 1991 and was supported by the Spanish government.
- The bryophyte and lichen flora and vegetation of the coastal mountains between Gata Cap and

La Nao Cap. This project started in 1991 and will continue until 1994 and is also supported by the Spanish government.

Our most important results and publications deal with the taxonomy of the Pottiaceae (*Didymodon*, *Phascum*, *Crossidium* and *Pottia*) and the recolonization of bryophytes after fire.

Rosa María Ros, Departamento de Biología Vegetal, Facultad de Biología, Universidad de Murcia, Campus de Espinardo, 30100-Murcia, Spain.

Lindbergia

Lindbergia, the journal published by the Nordic Bryological Society and the Dutch Bryological and Lichenological Society, has recently gone through some personal and organisational changes. After 17 years of hard work on the journal, Gert S. Mogensén resigned as editor of Lindbergia. As its Editor-in-Chief, Gert has not only been the 'face' of the journal, but also the driving force behind it. We want to thank him most warmly for all the work done and for his continuous efforts to provide bryology with an efficient instrument for communication among bryologists. Guy Brassard, who has served the journal very well since 1979, has also resigned. We welcome Kell Damsholt (University of Copenhagen) as a new editor.

As a journal published by two Bryological societies, Lindbergia used to print communications of both societies, usually floristic contributions in the local language. In view of the increased interest in floristic data due to the recent emphasis on endangered bryophytes and other aspects of nature conservation, we intend to make such papers more readily accessible to our global readership by publishing also such papers in English.

As the readers undoubtedly have noted, in the last few years publication of Lindbergia has become rather behind schedule. We have therefore

decided to skip 1992 and assign volume 18 to 1993. At the same time, we will return to three fascicles per year. This will still allow rapid publication of accepted manuscripts, while considerably reducing the costs of mailing and, thus, the price to subscribers.

Presently the price of the journal is DKK 400.- (ca. USD 75.-) per volume, but members of the societies publishing the journal pay only DKK 200.- (ca. USD 37.50) per volume. Both societies are open for bryologists from all countries; if you are interested, please contact Lars Söderström, Department of Botany, University of Trondheim, N-7055 Dragvoll, Norway (NBS) or Bart van Tooren, Venuslaan 2, NL-3721 VG Bilthoven, The Netherlands (DBLS).

Journals need not only subscribers, but also authors. Bryologists from all countries are invited to publish original research from any field of bryology in Lindbergia; review papers will also be welcome. As usual, manuscripts will be reviewed by two referees. Please submit manuscripts to the editor-in-chief, Heinjo During, Department of Plant Ecology and Evolutionary Biology, P. O. Box 800.84, NL-3508 TB Utrecht, The Netherlands.

Heinjo During

New journal

Limprichtia is the name of a new journal edited by Jan-Peter Frahm. It publishes contributions on German bryology in German. The edition is based on the consideration that many bryological papers have no chance to be published since they might be only of limited local interest and are too long to be published in one of the bryological journals. This concerns especially mapping projects and other lengthy publications. Furthermore, local bryological journals like *Herzogia* for central Europe do not any longer fulfil the requirements of a societies' journal but publish paper on lichen

chemotaxonomy or lichens of Costa Rica, leaving a gap for floristic papers. This concerns also other societies and has led to the foundation of small journals for floristic data such as *Myrinia* and *Evansia*. On the other hand, valuable bryological data will be lost if such floristic studies are not published. In the fast changing world, it will be of high interest in 20 or 30 years to see which species occurred today.

At present, only single, camera ready contributions will be published per volume in the way as in the series *Dissertationes Botanicae* or *Bryophytorum Bibliotheca*.

Limprichtia comes in the format 18x25 cm and costs approx. \$10 per 100 printed pages. As vol. 1, studies on the lichen and moss flora of the city Halle in Eastern Germany by F. Müller (167 pp.) has been published.

Jan-Peter Frahm, Universität Duisburg, Fachbereich 6, Botanik, D-47048 Duisburg Germany.

New Checklist of Southern South American Bryopsida

A collaborative effort has been started by Celina M. Matteri (MACN & CONICET), Buenos Aires and Marshall R. Crosby (Missouri Botanical Garden), St. Louis, towards the preparation of a moss checklist encompassing all genera, species and varieties cited to date (deadline still open) for all land areas between 20° and 60° S. lat. in South America, meant to cover the mainland and surrounding islands. Since both the bryologists are at present active in the field within the area, finds from their current projects will be included in the checklist. The checklist will include accepted names, basionymes, type specimens, synonyms and distribution of individual records, a list of nomina nuda and a complete regional bibliography. For the compilation of

DIARY (contd.)

1993

September 24-26. Eighth annual Blomquist Bryological Foray at Roan Mountain, Tennessee/North Carolina. Habitats on the mountain range from mixed hardwood to high elevation spruce/fir forests. The entire area supports a rich bryoflora, with several disjunct populations in the higher elevations. Further information from Karen S. Renzaglia, Biological Sciences, Box 70703, East Tennessee State University, Johnson City, TN 37614. Telephone (615) 929-6931; Fax (615) 929-5958.

1994

April 30-May 1. Excursion to Gooi (the Netherlands) with the Dutch Bryological and Lichenological Society to look at inland forests and heathland. Contact Dr. A. Aptroot (address see 11-12 Sept. 1993)

July 4-11. Australian Bryological Society Conference on "Australian Tropics". Lake Tinaroo (Atherton Tableland west of Cairns). Further information from Elisabeth Brown or Helen Ramsay, Nat. Herb. of New South Wales, Royal Botanical Gardens, Sydney N. S. W., Australia 2000. Fax (61) (02) 251 4403.

September 4-9. International Symposium: Endangered Bryophytes II, together with the meeting of the European Committee of Conservation of Bryophytes. Zürich. For information contact: E. Urmi, Inst. für Systematische Botanik, Zollikerstr. 107, CH-8008 Zürich. Phone: (41)1/385.44.41. Fax: (41) 1 385 42 04.

September 10-11. Excursion to Schouwen (the Netherlands) with the Dutch Bryological and Lichenological Society to look at coastal dunes. Contact Dr. A. Aptroot (address see 11-12 Sept. 1993)

October 2-8. VI Congreso Latinoamericano de Botanica to be held at Mar del Plata, Argentina. Further information from Celina M. Matteri, Museo Arg. Cs. Nat. B. Rivadavia, Av Angel Gallardo 470, C.C. 220, 1405 Buenos Aires, Argentina. Fax: (54) 1 9824494.

1995

A symposium organized by the International Association of Lichenologists, dealing with foliicolous cryptogams is planned to take place in Hungary during spring or summer 1995. Anyone interested in further details should contact Edit Farkas, Institute of Ecology and Botany, Hungarian Academy of Sciences, Vácrátót, H-2163, Hungary (Fax: 36 27 60 110). E-mail H7483FAR@ELLA.HU

the list, the authors will make use of data already available in the TROPICOS system, with additions and corrections.

Botanists having recent unpublished data on moss collections from this part of South America are requested to send their information to one of the authors. Please contact Celina M.

Matteri, Museo Arg. Cs. Nat., B. Rivadavia, C.C. 220, 1405 Buenos Aires, Argentina (Fax: (54) 1 9824494; E-mail: cmatteri@muanbe.gov.ar) or Marshall R. Crosby, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A. (Fax: (1) 314 5779595; E-mail: crosby@mobot.org).

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 for it.

COLOPHON

The Bryological Times, founded in 1980 by Stanley Wilson Greene (1928-1989), is a newsletter of the *International Association of Bryologists*. It is published in Edmonton (Canada) and distributed from Albany (USA), Canberra (Australia), Edmonton (Canada), Eger (Hungary), Geneva (Switzerland), Hiroshima (Japan), Moscow (Russia), Praha (Czech republic), St. Louis (USA) and Trondheim (Norway).

Items for publication in *The Bryological Times* are to be sent to the Editors (preferably LH), except for those for the regular columns, which may go direct to the column editors.

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Production

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DIARY

Send contributions to D. H. Vitt, University of Alberta, Department of Botany, Edmonton, Alberta, Canada T6G 2E9

1993

July 2-4. NISM (Bryophyte Inventory Programme) Zürich. Taxonomic workshop on the *Calliergon-Scorpidium-Drepanocladus* complex, with Lars Hedenäs, Stockholm. For information contact: E. Urmi, Institut für Systematische Botanik, Zollikerstr. 107, CH-8008 Zürich. Phone: (41)1/385.44.41. Fax: (41)1/385.42.04.

July 28-August 4. BBS Summer meeting at Dumfries and Galloway. Further information from Alexander Rowan, 1 Robertson Avenue, Dumfries DG1 4EY, U.K. Telephone and Fax 0387 63051.

August 8-17. Nordisk Forskarkurs: NorFa Researcher Network of Nordic Bryologist's Course on the Taxonomy and Ecology of Nordic Peatland Bryophytes. Course will begin in Helsinki and end at Trondheim. Further information from Timo Koponen, Department of Botany, P.O. Box 7, SF-00014 University of Helsinki, Finland. Fax 358-0-1918656.

August 25-29. SVBL Annual Field Course. Piora - Leventina (upper Tessin valley, Central Alps). For information contact: E. Urmi, Institut für Systematische Botanik, Zollikerstr. 107, CH-8008 Zürich. Phone: (41)1/385.44.41. Fax: (41)1/385.42.04.

August 28-September 3. XV International Botanical Congress, including IAB General meeting. Tokyo, Japan. Further information from Zennoske Iwatsuki, Botanical Institute, Hiroshima University, Higashi-senda-machi, Japan.

September 11-12. Excursion with the Dutch Bryological and Lichenological Society to Drente/Appelscha (the Netherlands). Inland dunes and heathlands. Contact the secretary of DBLS, Dr. A. Aptroot, G. v. d. Veenstr. 107, NL-3762 XK Soest, the Netherlands. All DBLS excursions are open for non-members.

September 17-19. Annual General Meeting and Symposium of BBS at Ripon. Special theme is 100th anniversary of the death of Richard Spruce, a 19th century bryologist who is known for his collections and studies in South America. Cost approximately £38 per day (full board). Further information from Mike Longman, 8 St. Quentin Rise, Bradway, Sheffield S17 4PR, U.K. Telephone 0742 368010.

September 21-24. X National Symposium of Cryptogamic Botany to be held in La Laguna, Canary Islands, Spain. Further information from Secretaria, Dpto. de Biología, Facultad de Farmacia, Universidad de La Laguna, 38271 La Laguna (Tenerife), Espana. Fax 922/630095

September 21-24. Sixth Meeting of the Czech and Slovak Bryologists and Lichenologists in the Tatra National Park in Tatranská Lomnica, Slovakia. The meeting will consist of both lectures and excursions. Further information from Dr. Rudolf Šoltés or Dr. Zuzana Kyselová, both at the Research Station of the Tatra National Park, 059 60 Tatranská Lomnica, Slovakia (Fax: 0969-967958; Phone: 0969-967951).

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For details regarding membership of the *International Association of Bryologists* (currently US \$ 10.- per year) write to Dale H. Vitt, Department of Botany, University of Alberta, Edmonton, Alberta, Canada T6G 2E9. All correspondence concerning mailing to Mrs. Sandi Vitt at the same address.