


the
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 Association of Bryologists*

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Contents

Directory of grants and scholarships	1
Computer Software: Component 2.0	4
Literature about the Cyathodiaceae	4
Wanted	4
Monograph of <i>Grimmia</i> Hedw. in Africa	4
Electronic ecobryology of epiphytes	5
New literature	6
Systematics and Biological Collections	6
Research in Huangguoshu Karst Area, China	7
Blomquist Bryological Foray	7
Additional, Up to date Notes on Red List Mono- typic Endemic Liverwort Taxa of Kumaon	7
Ecophysiology of production and response to stress in montane aquatic bryophytes	8
Symposium on the Biology of <i>Sphagnum</i>	8
Workshop on Macaronesian Fissidentaceae	9
Important old literature available	9
Change of address	9
DIARY	10

**DIRECTORY OF GRANTS AND SCHOLARSHIPS FOR
 BRYOLOGISTS**

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One major problem faced by bryologists working in developing countries is the lack of funding to visit overseas research institutions to carry out research (Tan et al. 1991). The standing Committee on Tropical Bryology of the International Association of Bryologists (IAB) undertook a compilation of information on sources of funding for travel and research. The information presented below is not complete, but we hope that it will stimulate further inquiries and promote exchange. Many programs listed require a sponsor from the host country (e.g. England, Finland), and in some cases, it is the hosting collaborator who has to initiate the application for the grant (e.g., Japan, Netherlands, Argentina). Other programs, however, are not as restrictive.

We encourage applicants using anyone of these programs to be specific in re-

search goals and be careful in budget proposal, always following the rules governing the application. Unscrupulous individuals would ruin similar opportunity for other would be applicants in the future.

The grant program directory is organized by country and name of institutional program. Information on eligibility, financial data, and application date are given for most programs. For programs in which these information are not available, we have provided address(es) for the interested applicant to pursue additional information. Note that many programs require an official sponsorship from the applicant's own country and the result is decided on a competitive basis. Lastly, we welcome addition or correction of information.

ARGENTINA

Visitor Grant

The National Research Council (CONICET) provides funding for visiting scientists through an application from a local sponsor and/or a working program. Not restricted to foreign visiting scientists.

Eligibility: Expertise in the research area needed by local sponsor.

Financial data: Amount given depends on the country of origin of the visitor/ applicant and covers travel, food, lodging expenses and travel inside the country.

Application information: Deadline is 6 months before the visit.

Address inquiries to: The National Research Council (CONICET), Av. Rivadavia 1917. 1033 Buenos Aires, Argentina

Note: Sponsorship from the host country required.

ENGLAND

British Council - Links, Visits & Collaborative Project.

Eligibility: Visitors to Britain mainly from Commonwealth countries. The applicant should have an advance degree, Ph. D., or equivalent in publications. Both applicant and hosting collaborator in Britain must have a good record of research in the area, i.e., tropical bryology.

Financial data: The money offered covers travel, food and lodging expenses.

Application information: There is no specific deadline. Apply to local British Council Office.

Address inquiries to: British Council, Medlock St., Manchester, England M1S LPR

Note: Sponsorship from the host country required.

The Dennis Stanfield Award

Eligibility: The award is open to both amateurs and professionals.

Financial data: The award is to be used for items of expenses such as travel, equipment, books, computer time, and the likes, in connection with any aspects of botanical research.

Application information: The deadline is March 31 of each year.

Address inquiries to: The Linnean Society of London, Executive Secretary, Burlington House, Piccadilly, London W1V OLQ, England

Royal Society

Eligibility: Visitors to Britain from all countries. The applicant should have an advance degree, Ph. D., or publication equivalents. Both applicant and host in Britain must have a good record of research in the field, i.e., tropical bryology.

Financial data: The money offered covers travel, food and lodging expenses.

Application information: There is no specific deadline.

Address inquiries to: Royal Society, 6 Carlton House Terrace, London, SW1 YSAG

Note: Sponsorship from the host country required.

FINLAND

Finnish Government Scholarships I. Bilateral Scholarships

These scholarships are based mainly on bilateral cultural agreements and programmes of cultural/scientific/technological exchange or similar arrangements between Finland and many countries.

Eligibility: The applicant should be a student or scientist.

Financial Data: The bilateral scholarship for study and research consists in most cases of a monthly allowance of FIM 3000 (cultural programs). For short-term visitors there is a daily allowance of FIM 160. Free accommodation (single room) is provided, but there are no travel grants to or from Finland. It is recommended that applicants establish first a contact with the collaborating institutions in Finland and the applicant's country.

Application Information: Applications for the bilateral scholarships are made to the appropriate authority of the applicant's country who selects the candidate and proposes the name and project to the Finnish Centre for International Mobility (CIMO) before March 1. In some cases the Finnish universities, research institutes and cultural institutes may also propose names of qualified candidates directly to CIMO.

Address inquiries to: Finnish Centre for International Mobility, P.O. Box 343, FIN-00531, Helsinki, Finland.

II. Scholarships for Postdoctoral Research and University Co-operation

Eligibility: The Finnish Centre of International Mobility (CIMO) may grant scholarships for research and for university teaching staff co-operation/collaboration:

a) Postdoctoral research in Finnish Universities for young researchers. Prior to application, contact with a Finnish University is required. The hosting institute in Finland can also apply to CIMO in behalf of the candidate for this type of scholarships.

b) University teaching staff co-operation, mainly for the purpose of promot-

ing student exchange between the Finnish Universities and those of the applicant country.

Financial Data: The monthly allowance is FIM 5000 and free accommodation. A single room in a guest house or student residence will be provided.

Application Information: Prepared form of applications (without deadline) are to be sent to the Centre.

Address inquiries to: Centre for International Mobility (CIMO), P.O.Box 343, FIN-00531, Helsinki, Finland.

GERMANY

Humboldt Foundation

Eligibility: Only for research stay in Germany.

Financial Data: Information not available.

Application Information: Information not available.

Address inquiries to: Your local German Embassy.

Deutscher Akademischer Austauschdienst (DAAD)

Eligibility: For research visit to Germany.

Financial Data and Application Information: The grant includes travel expenses to and from Germany and monthly stipends for living expenses. The amount of monthly stipend varies with the position and research experience of the applicant. A sponsoring host scientist is required who initiate the process with a DAAD office in Germany. Once started, an application form will be sent to the address of the applicant through the local German Embassy office.

Address inquiries to: Your local German Embassy.

INDIA

International Scientific Collaboration

Eligibility: Information not available.

Financial Data: Information not available.

Application Information: Information not available.

Address inquiries to: International Scientific Collaboration/Council of Sci-

entific & Industrial Research, Anusandhan Bhavan, Rafi Marg, New Delhi, 110001, India.

Project Officer, International Scientific Collaboration/Department of Science & Technology, Technology Bhavan, New Mehrauli road, New Delhi - 110016, India.

Secretary, Indian National Science Academy, Bahadur Shah Zafar Marg, New Delhi, India.

JAPAN

Japan Society for the Promotion of Science

Eligibility: All qualified foreign scientists and researchers. A Japanese host collaborator is required to sponsor the application.

Application & Financial Data: Grant includes travel expenses to Japan and living allowances in the country as needed in the project.

Address inquiries to: Japan Society for the Promotion of Science, 5-3-1 Kojimachi Chiyodaku, Tokyo 102, Japan.

NETHERLANDS

NWO-RT

Eligibility: Foreign experts, e.g., bryologist, whose service is needed by Dutch nationals.

Financial Data: Amount given is about 8,000 to 10,000 in Dutch currency and covers travel, food and lodging expenses.

Application Information: There is no specific deadline. The application form can only be requested by Dutch counterpart.

Address inquiries to: NWO-RT, Postbus G3138, The Hague, The Netherlands

PORTUGAL

Fundo de Apoio a Comunidade Cientifica

Eligibility: The applicants should be scientific researchers.

Financial data: The money offered covers travel expense and partial food and lodging expenses.

Application information: The deadline is different each year.

Address inquiries to: JNICT (Junta Nacional de Investigacion Cientifica e Tecnologica), Av. D. Carlos I. 126, 1200 Lisboa, Portugal

UNITED STATES

Addresses for inquiries are collected in the end of all programs at the same institute.

Smithsonian Predoctoral Fellowship Program

Eligibility: Applicant must have completed preliminary course works and examinations. A detailed proposal that includes a justification for conducting the research in residence at Smithsonian Institution is required. Approval of the University from which the doctoral degree will be granted is required.

Financial data: The stipend is \$14,000 per year, plus other allowances.

Application information: Deadline is January 15.

Graduate Student Fellowship

Eligibility: This fellowship is for conducting short term research in association with research staff members of the Smithsonian. Applicants must be formally enrolled in a graduate program, at least one semester has been completed. If in a Ph.D. program, the applicant must not have been advanced to full doctoral candidacy to qualify this program. A detailed research proposal is required.

Financial Data: The term is 10 weeks and the total stipend is \$3,000.

Application information: Deadline is January 15.

Postdoctoral Fellowships

Eligibility: For investigator who completed his Ph. D. degree (in) less than seven years before the application deadline to conduct a research for 6 to 12 months at the Smithsonian.

Financial Data: The stipend is \$25,000 per year plus other allowances.

Application Information: Deadline is January 15.

Senior Postdoctoral Fellowships

Eligibility: For investigators who had earned their Ph.D. more than seven years to conduct research at the Smith-

sonian from 3 to 12 months. Applications for this may be made up to two years in advance.

Financial Data: The stipend is \$25,000 per year plus other allowances.

Application Information: Deadline is January 15.

Faculty Fellowships

Eligibility: These fellowships are available to provide opportunities for minority faculty members to conduct research using the facilities and collections of Smithsonian Institution and resources of the local area. Awards may be requested for two to four months.

Financial Data: Stipends are determined by the appointee's faculty status.

Application Information: The deadline is February 15.

For information on this and the above stated programs, write to: Smithsonian Institution, Office of Fellowships & Grants, 955 L'Enfant Plaza, Suite 7300, Washington, D.C. 20560

Three-Year Postdoctoral Fellowships In Tropical Biology at STRI

Eligibility: Support is provided for research in ecology, evolution and behavior of tropical organisms. The successful candidate is expected to reside in the Republic of Panama and base his/her study at Smithsonian Tropical Research Institute (STRI). Proposals that include a component to work in other tropical countries will also be considered.

Financial Data: Continuation of this program is contingent on funding availability.

Short-Term Fellowships

Eligibility: Support is provided to carry out short-term research projects in the tropical research sites of Smithsonian Tropical Research Institute under the supervision of institute staff members. Projects may be exploratory in nature and their usual duration is three months. The majority of these fellowships are awarded to graduate students; but awards are occasionally made to undergraduates and post-doctoral candidates. Applicants are encouraged

to consult with STRI staff member who can serve as advisor before submitting a formal application.

Application Information: The deadlines are 15 of February, May, August and November.

To request application forms, please write to: Smithsonian Tropical Research Institute, Office of Education, Unit 0948, APO AA 34002-0948

Hessler's Visiting Professorship (in Floristic Botany)

Eligibility: All Ph. D. applicants with an institutional affiliation, be it a College, University, Museum, or Government research institution; need the co-sponsorship of the University Botany Department.

Financial data: Amount awarded is variable, up to ca. \$5000. The money offered covers travel, lodging expenses and supplies.

Application information: There is no fixed deadline. Application may be submitted anytime. Responses usually take 3 months.

Address inquiries to: Hesler Committee, Chairman, Department of Botany, 437 Hessler Biol. Bldg., University of Tennessee, Knoxville, Tennessee, 37996-1100

William C. Steere Fund For Bryologists

Eligibility: No specific qualifications required, except that applicants must justify why NYBG is a necessary place for their work. Because of the high cost of international travel, grants are usually given to foreign bryologists who are already in the U.S. Their costs to, from, and while in New York are covered.

Financial data: The amount given is variable, mostly no more than \$2,500 per request. The money offered covers travel, food and lodging expenses.

Application information: There is no deadline for application.

Address inquires to: William R. Buck, New York Botanical Garden, Bronx, NY 10458-5126 USA

Geneva Sayre Fund, Harvard University Herbaria

Eligibility: Graduate students and professionals; on competitive basis, because the funds can only support at most two applicants each year.

Financial data: Maximum of \$1000 to cover local travel to the Farlow Herbarium, and food and lodging expenses.

Application Information: No specific deadline. Allow 6 months for consideration.

Address inquiries to: Director Dr. D. H. Pfister, Farlow Herbarium, HUH, 22 Divinity Avenue, Cambridge, MA 02138 USA

INTERNATIONAL ASSOCIATION OF BRYOLOGISTS

S. W. Greene Grant in Bryology

Eligibility: All members of the IAB organization are encouraged to apply. No limit is set for the number of grants awarded to a single person, nor is there a limit to the number of grants awarded at one time. Grants are awarded on competitive basis and by projects which may include exploratory collecting trip, visit to herbaria, and/or travel to meeting.

Financial Data: Grants of less than US\$1,000 are to be expected per project.

Application Information: A clearly stated project with method of study, expected outcome and total costs is required. A current resume of the applicant and names of two referees are needed. No specific deadline.

For inquiries and application submission, write to: Dr. D. H. Vitt, Department of Botany, University of Alberta, Edmonton, Alberta, Canada T6G 2E9

REFERENCES:

Tan, B. C., Sastre-D. J., I. & Pocs, T. 1991. Tropical Bryology in Peril: a Survey. *The Bryological Times* 64:1-6.

Component 2.0

A new tree comparison software is now available from the British Museum. COMPONENT, of which the first version was a MS-DOS based program, has now been transformed for the use with MS-Windows. The program compare trees, compute area cladograms, find consensus trees, generate random trees and convert trees files amongst different formats. It may be thus roughly comparable to the program MacClade for the Macintosh. It does, however, not generate trees. It uses the NEXUS file format and support PHYLIP, Hennig86 and PAUP file formats. The price is £40. The program is available from the Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, UK

Jan-Peter Frahm

Literature about the Cyathodiaceae

Dr. Zhang Zhaohui would appreciate to get information about literature on the Cyathodiaceae. The address of Dr. Zhang Zhaohui is: Department of Biological Science and Biotechnology, Guizhou Normal University, Guiyang 550001, China.

Wanted

Spores of *Ricciocarpos natans* are needed for SEM studies. If you have fertile material (also herbarium material), please contact Dr. Christoph Neinhuis, Botanisches Institut der Universität, Meckenheimer Allee 170, D-53115 Bonn, Germany.

Monograph of *Grimmia* Hedw. in Africa in preparation

Henk Greven has finished a monograph of *Grimmia* Hedw. in Europe, and his work is planned to be published in July 1995. He is now continuing his studies of *Grimmia* with the African taxa, and in this connection he asks bryologists having African *Grimmia* material in their herbaria to send him specimens on loan for revision.

Henk Greven, curator of bryophytes, IBN/DLO, P.O. Box 23, 6700 AA Wageningen, The Netherlands

Electronic ecobryology of epiphytes

Ecology Column: Send contributions to the column editor: Janice M. Glime, Department of Biological Sciences, Michigan Technological University, Houghton, Michigan 49931, U. S. A.

Since my wooden mailbox has not been filled with contributed ecological tidbits for my column lately, I decided to try my electronic mailbox. I posted a call for information on any bryoecological projects in hopes of getting some from the parabryologists, and I was not disappointed. Since these studies are not likely to be known to the eubryologists for some years, I shall inform you what else is going on of interest to us. (There was an added bonus to this post - several respondents asked me how they could join IAB and get the *Bryological Times*.)

After my first bryoecological adventure on the net, I feel convinced that bryoecologists could greatly benefit from a discussion group on the net. I am not very net proficient, but I am willing to set up an unmoderated discussion group if there is enough interest. I have set up local mailing lists, and I think I could set this one up the same way. Since we are usually isolated as the only bryologist at our location, we often hunger for someone to discuss things with. This could be a great opportunity for our graduate students as well as the professionals, and after we get going, we could offer our discussion to the amateurs and parabryologists as well. Let me know what you think by sending me an email at jmglime@mtu.edu. If I get enough responses, I will look into setting up a listserv and moderating it. This seems like a good opportunity to get some good public relations for bryophytes, and bryologists. Please include your email address in the text since it does not always appear with the message.

Below is just a sample of what I have gotten from the above posting to the net. I am holding the aquatic and wetland responses for another column.

Terri McClymont of Prince George,

B.C., Canada, did her undergraduate thesis on "The study of epiphytic bryophytes and lichens on trembling aspen, Jack pine, and black spruce in Thunder Bay Plains and Nipigon Plains Ecoregions."

Her objectives were to determine the epiphytes present on these three species, to determine if different epiphytic species were associated with a specific tree host, to determine if there is a difference in epiphytic species between ecoregions, and to determine if there is a difference in epiphytic species and plot aspect. Using 3 sites per ecoregion and three trees per species per site, selected at random, she sampled two plots (one north, one south) per tree at breast (1.3 m) height, totalling 108 plots. She found 41 epiphyte species, most of which were specific to either trembling aspen or to the conifers, with little overlap. Plot aspect had no significant influence. In our subsequent discussion of her research, she was surprised to learn that our study in the Keweenaw Peninsula of Michigan, USA, had more bryophytes on the south side than the north side of the tree at breast height and we concluded that our enormous amount of snow cover protected these northern Michigan bryophytes, whereas plots in her study were exposed all winter, thus suffering desiccation when ours were protected. A further difference may be that our Keweenaw prevailing winds are from the north.

By contrast, Sharron Clark of Golden West College in S. California reports that in Costa Rica the epiphyllous bryophytes grow on little pieces of red plastic or anywhere and are definitely not host specific. Is this lack of host specificity generally true of tropical epiphyllous bryophytes? Would Rob, Noris, Ines, and others who have worked in the tropics like to comment? My own experience is that they grow on more leathery types of leaves and leaves that stay around for a while. In Florida they are predominately on the palmettos.

Sharron Clark also claims that in Southern California the bryophytes have been destroyed by air pollution except for

a few hardy species. Another Californian, Stephen Rae, is surveying the distribution of mosses on old growth trees in the California coastal forest this summer. Climbers will collect the samples on Douglas Fir, Redwood, and Hemlock trees 450 years old and older. He hopes to assess species composition and cover to compare with those of associated vascular plants.

In the tropics, Ines Sastre de Jesus is beginning a project to study the phenology of bryophyte communities. She is particularly interested in patterns of sporophyte production and influence of the rainy season. She has noticed more sporophytes during February, the dry season, and would appreciate any references or observations others have made in the tropics.

Roger Rosenstreter sent me a paper presented at the Symposium on Ecology, Management, and Restoration of Intermountain Annual Rangelands, Boise, ID, 18-22 May 1992. He drew my attention to a hidden statement about bryophytes, that the barren "slick spots" in the Wyoming big sagebrush areas are "sparsely vegetated by vascular plants, but are often carpeted with nonvascular microphytic plants, also called cryptogamic crusts." To this he appended a note that "mosses and lichens prevent weed invasion in the sagebrush steppe."

In another discussion, Michael Loik and another unidentifiable contributor pointed out some interesting aspects of rocks that are of interest to bryoecologists. Although Loik mentioned the vascular plant roots that extend under rocks where water evaporates less quickly, the unidentified contributor with his post mentioned that even in New England the rocky soil creates a more mesic habitat, and the exposed rock surfaces can be wet with condensation in the mornings when moisture stress is at a maximum in August. While this may not be important to trees, this contributor concludes that it certainly influences the growth of mosses and lichens. The contributor suggests that some rocks collect more than others, due perhaps to differences in specific heat or surface chemistry.

Janice M. Glime

New literature

Herbaria of Ukraine. 1995. Kyiv: M. H. Kholodny Institute of Botany. 126 pages. Available from: V. Virchenko, Institute of Botany, Institute of Botany, Tereshchenkivska Str. 2, 252601 Kyiv (Kiev), Ukraine.

This edition presents data about about 40 Ukrainian herbaria that include vascular plants, bryophytes, lichens, fungi and algae. It is written in Ukrainian, but the most important information (addresses, foundation, specimens, geographical areas covered, etc.) is also given in English.

Bryophytes are kept in herbaria of eight cities in Ukraine: Kyiv, Lviv, Kherson, Poltava, Odesa, Kharkiv, Chernivtsi and Lutsk. Most bryophyte specimens (in total c. 120,000) are kept in Kyiv (M. H. Kholodny Institute of Botany, KW) and in Lviv (Natural History Museum, LWS; I. Franko State University, LW; Institute of Ecology of the Carpathians, LWE). They were collected mainly by A. S. Lazarenko, D. K. Zerov, H. F. Bachuryna, M. P. Slobodyan, V. M. Melnychuk, K. O. Ulychna, L. Ya. Partyka, and by other Ukrainian bryologists in Ukraine, Caucasus, Southern Ural, Middle Asia, Siberia and the Far East. There are small bryophyte collections from outside the Holarctic region (e.g., Australia, South Africa, Madagascar) in the herbaria of Ukraine.

Material from the Ukrainian herbaria was used for preparing "The Flora of Hepatics and Sphagnum Mosses of Ukraine" (Zerov, 1964), "Bryophytes of the Ukrainian Carpathians" (Zerov & Partyka, 1975), "The Moss Flora of the Ukrainian SSR" (Bachuryna & Melnychuk, 1987-1989) and "A list of Anthocerotales and Hepatics of Ukraine" (Vána & Virchenko, 1993).

So, M. L. 1995. Mosses and Liverworts of Hong Kong. 170 pages, 21.6 x 15.0 cm, soft cover. 319 colour photographs and 11 SEM micrographs. ISBN 0-962-7350-78-8. Price: US\$ 30 (including air postage). Local price: HK\$ 120. (30% discount to individuals in developing countries and some Eastern European countries; 10% dis-

ADVANCE NOTICE AND FIRST CALL FOR PAPERS

LINNEAN SOCIETY CONFERENCE

ULSTER MUSEUM, BELFAST, 27-30 AUGUST, 1996

SYSTEMATICS AND BIOLOGICAL COLLECTIONS

Traditionally, systematics has relied heavily on the existence of collections of plant, animal and fossil material. This is still the case, but the range of collections studies and applications emerging is increasing.

This conference will examine the increasing importance of biological collections in the widest sense, including:

- Museum collections of modern and fossil biota, including Man.
- Zoological and botanical gardens and arboreta.
- Culture collections of bacteria, fungi, protozoa, microscopic algae and other micro-organisms.
- Seed banks.
- Botanical, zoological and palaeontological illustrations and photographic collections.
- Archival material.

The developing requirements of taxonomists and evolutionary biologists must be reflected in the conservation and preservation of these collections, which should also be seen as living or preserved records of genetic diversity.

Of interest to - botanists, zoologists, palaeontologists, illustrators, horticulturists, gardeners, anthropologists, curators of all types of collections (living and preserved), geneticists, systematists and taxonomists, librarians and archivists, commercial endusers, etc.

Enquires and offer of papers to: CR Tyre, Department of Botany, Ulster Museum, Botanic Gardens, Belfast BT9 5AB, Northern Ireland, Tel. +44 (0) 1232 381251, Fax. +44 (0) 1232 665510, e-mail: crt@belumreg.demon.co.uk

count for 5 copies or more; 20% discount for 10 copies or more). Available from: Biology Department, Hong Kong Baptist University, 224 Waterloo Road, Hong Kong; Fax: (852) 2336 1400.

Frahm, J.-P. 1995. Lexikon der deutschen Bryologen. Limprichtia vol. 6, 187 pp. Price: DM 25.- (US\$ 15). Order from: J.-P. Frahm, Botanisches Institut der Universität, Meckenheimer Allee 170, D-53115 Bonn, Germany.

This book includes biographies or biographical data of several hundred late German bryologists, amateurs as well as professionals, and also from bryophyte collectors, completed by their bibliographies. Text in German.

Frey, W., Frahm, J.-P., Fischer, E., Lobin, W. 1995. Die Moos- und Farnpflanzen Europas. Kleine Krypto-

gamenflora, Bd. IV, 6ed., Stuttgart (Fischer), 426 pp. with 149 plates. Hardcover. Price DM 78.- (US\$ 50).

The only book covering all bryophytes and ferns of Europe, published in 5 ed. by Helmut Gams between 1942 and 1973, was totally new written by Wolfgam Frey (liver- and hornworts), Jan-Peter Frahm (mosses), Eberhard Fischer and Wolfram Lobin (ferns).

Söderström, L. (ed.). 1995. Preliminary distribution maps of Bryophytes in Norden. Vol. 1, Hepaticae and Anthocerotae. Mossornas Vänner, Trondheim. Price: 40.- SEK (+postage outside Sweden). Order from: Mossornas Vänner, c/o G. Kristensson, Dekanvägen 8, S-240 10 Dalby, Sweden.

Distribution maps of all hepatics found in Iceland, Svalbard, Faroe Islands, Norway, Sweden, Finland and Denmark. Occurrence in each of the floristic provinces in the region is marked

Blomquist Bryological Foray

The Ninth Annual Blomquist Bryological Foray will be held this year at the Mountain Lake Biological Station in Virginia from October 6-8. The Mountain Lake Biological Station is located about 20 miles west of Blacksburg (accessible from I-81 and US 460 west), atop Salt Pond Mountain at an elevation of about 3800 ft. There are many interesting trails, drainage patterns, bogs, hardwood and spruce forests, Mountain Lake, and the nearby Cascades gorge to whet the appetites of hungry bryologists. Cabins and dorm room accommodations at the station cost \$6 per night (you must supply your own sleeping bag). These include running water and showers. A small kitchen will be available for preparing your own food. Camping is available at White Rocks Campground in the Jefferson National forest about 7 miles north of the station at a cost of \$2 per night. A variety of motels offer accommodations in Blacksburg, the site of Virginia Tech University. There is a Hardee's fast food restaurant in Pembroke, 6 miles to the foot of the mountain, and several restaurants in Blacksburg. Further information will be forthcoming 8or for further information contact: David Breil, Dept. of Natural Science, Longwood College, Farmville, VA 23909. 804-395-2575)

Additional, Up to date Notes on Red List Monotypic Endemic Liverwort Taxa of Kumaon (Western Himalaya)

Giribala Pant and S. D. Tewari

Department of Botany, D.S.B. Campus, Kumaon University, Naini Tal-263002, UP, India

Aitchisoniella himalayensis Kashyap

We have been observing the two localities at Orakhan (2000 m) and Mukteshwar (2150 m) in district Naini Tal since August 1988. The road-side sites are disturbed, hence the population is in great danger of being eliminated any time. A few sporiferous thalli were transplanted in September 1993 to an experimental "moss garden" developed in the Dept. of Botany, D.S.B. Campus, Kumaon University, Naini Tal where their survival/regeneration is awaited till the coming rainy season.

Stephensoniella brevipedunculata Kash. This taxon should be included in the World Red List of Bryophytes (Tan et al. 1994) because: (a) It is a monotypic endemic. (b) Narrowly distributed in Western Himalaya. (c) Presently known from Kumaon region only. (d) Even in Kumaon region it is disappearing very rapidly from the earlier known sites due to habitat destruction. The undisturbed sites of a year ago become disturbed the

very next year! There is no control on fast urbanisation. Few thalli of both male and female plants were transplanted to a stone wall of our "moss garden" in August 1991. The patch has survived and expanded during the last 2 seasons.

Sauchia spongiosa Kash. Known only from 2 high altitude localities in districts Almora and Pithoragarh in Kumaon region of North West Himalaya. It was last collected from a site on way to Namik Glacier (2800-3500 m) in district Pithoragarh (Oct. 1990).

Sewardiella tubifera Kash. Not collected even once since 1986. All the original habitats (microsites) of our previous collections from Kumaon region (1979-86) have been destroyed. Further collections are not so far known from any other part of the Western Himalaya.

Reference

Tan B., P. Geissler & T. Hallingback 1994. Towards a World Red List of Bryophytes. *Bryol. Times* 77: 3-6, 78: 4-5.

Recent research in Huangguoshu Karst Area, Guizhou Province, China

Zhang Zhaohui

Department of Biological Science and Biotechnology, Guizhou Normal University, Guiyang 550001, China

During January 1992 until December 1994, I took part in six expeditions through the Huangguoshu Karst Area, which is situated in the Guizhou Province (25° 40' 40"—26° 00' 15" N, 105° 37'—105° 38' E), SW China. This is 150 km west of the provincial capital, Guiyang City, and is a world-famous scenic area with the great Huangguoshu waterfall in its centre and with many small waterfalls in its surroundings. The Great Huangguoshu waterfall, where our 1992 expedition began, is 74 m high and 81 m wide, and is the nicest of all

waterfalls. It renews its graceful appearance when the seasons replace each other and the currents change.

Our main objective with the expeditions was to collect bryophytes from karst caves, waterfalls, valleys and mountains in the Huangguoshu Karst Area. In the end, about 2,100 bryophyte specimens had been collected in the area, and the preliminary identifications have yielded 208 species in 44 families. A number of papers presenting our results are planned to appear during this year.

Participants of the expeditions were

Mr. Zhuan, a geographer from our university; Mrs. Wang Zhihui, a biochemist; Mr. Li Yiyon from the Guizhou Agricultural Institute; and in addition eight students of myself. The bryological research in the Huangguoshu Karst Area is supported by the Natural Science Foundation of the Guizhou Science and Technology Committee and the Natural Science Foundation of China. (I thank Prof. Zhong Bengu for her kind suggestions regarding this report).

Ecophysiology of production and response to stress in montane aquatic bryophytes

The Interministerial Commission of Science and Technology in Spain has granted 7 million Pesetas (c. 57000 USD) for a project dealing with the ecophysiology of production and response to stress in montane aquatic bryophytes. The project will be carried out by Drs. Javier Martínez-Abaigar,

Encarnación Núñez Olivera, Rafael Tomás Las Heras (all from Universidad de la Rioja) and Dr. María José Gil García (Universidad de Alcalá de Henares).

Aquatic bryophytes play an important ecological role in mountain streams, both in primary production and in different trophic chains. They have also been used extensively as a tool in bioindicator studies.

The aim of this project is to enhance the knowledge of production and response to stress in aquatic bryophytes, through the simultaneous measurement of a number of indicator values during two successive annual cycles. Ecophysiological variables that will be studied include growth rate, photosynthetic pigment composition, photosynthesis, respiration, chlorophyll fluorescence, nutrient cycle and

sclerophylly index. The habitat stresses suffered by montane aquatic bryophytes (physical, light, temperature and nutrient stress) will also be recorded. For the first time in aquatic bryophytes, production will be simultaneously measured by direct methods and estimated indirectly by pigment indices and carbon metabolism data. The sensitivities of the different ecophysiological variables to the different stress types will be evaluated.

The aim of the project is to give a basis for a better management of mountainous aquatic ecosystems. The basic ecophysiological data collected will also serve as a basis for the interpretation of results in later bioindication studies.

Dr. Javier Martínez-Abaigar, Universidad de la Rioja, Centro de Enseñanzas Científicas y Técnicas, Edificio Politécnico, Luis de Ulloa, 20, 26004 Logroño (La Rioja), Spain

Symposium on the Biology of *Sphagnum*

The international Association of Bryologists will hold its **Second International Symposium on the Biology of *Sphagnum*** July 11-13 1996 at Université Laval, Québec City, Canada. Topics include population biology, community ecology, taxonomy, productivity and peatland ecology. Participants are invited to give oral or poster presentations. The symposium will be presided by a week long field trip that includes a transect from the Canadian Shield southward to the Pine Barrens of New Jersey, where over 60 species of *Sphagnum* may be found.

The IAB symposium will be followed, on July 13-14, by the **Fourth Annual Canadian Peatland Restoration Workshop**, also to be held at Université Laval. We invite communications on environmental factors, hydrology, vegetation, biotic interactions, biodiversity, chemistry, mineral cycling, reclamation options, restoration techniques or government and industry views related to bog and fen restoration (other wetland excluded). A field trip to several undisturbed peatlands and to peatland restoration experiments throughout Québec will follow on July 15-17.

For more information on the IAB Symposium and the Peatland Restoration Workshop, or for a copy of the first circular, please contact Dr. Line Rochefort, Phytologie, FSAA, Université Laval, Québec, Canada, G1K 7P4, Fax. (418) 656-7856 or e-mail LROC@vm1.ulaval.ca.

D I A R Y Continued

1996

July 11-13. Second International *Sphagnum* Field Trip and Symposium in New Jersey, New York and Quebec. Further information from Dr. Line Rochefort, Phytologie, FSAA, Université Laval, Québec, Canada, G1K 7P4, fax (418) 656-7856 or e-mail LROC@vm1.ulaval.ca.

July 13-14. Fourth Annual Canadian Peatland Restoration Workshop at Université Laval, Québec, Canada. Further information from Dr. Line Rochefort (address above).

July 25-28. International Symposium of Plant Character and Diversity of East Asia. Location: Kunming Institute of Botany, Academia Sinica, Kunming 650204, China

August 4-8. To celebrate the 100th anniversary of the British Bryological Society, a symposium entitled 'Innovations in bryophyte research' will be taking place at the University of Glasgow. Contributions are being invited. The BBS summer field meeting in west will take place immediately afterwards in the west and central Highlands of Scotland.

August 27-29. The Linnean Society of London is holding a conference in Belfast, Northern Ireland on 'Systematics and Biological Collectors'. Further information from Cathrine R. Tyrie, Department of Botany, Ulster Museum, Belfast BT9 5AB, N. Ireland. Phone 01232 381251. Email: crt@belumreg.demon.co.uk.

October 8-12. International Symposium of Botanic Systematics and Plant Geography, Herbarium Haussmecht, Jena, Germany.

Workshop on Macaronesian Fissidentaceae

A. Losada-Lima & G. M. Dirkse

Departamento de Biología Vegetal (Botánica), Universidad de La Laguna, 38071 La Laguna, Tenerife, Islas Canarias, España, and Institute for Forestry and Nature Research, PO Box 23, NL-6700 AA Wageningen, The Netherlands

A workshop on Macaronesian species of *Fissidens* was held at the Department of Plant Biology of the University of La Laguna (Tenerife, Canary Islands) from 20-22 March 1995. The workshop aimed at contributing to the taxonomy of Macaronesian *Fissidens* species by: (1) Identification of collections (in the herbarium of the University of La Laguna, TFC Bry); (2) Field work (on Tenerife); (3) Construction of an identification key; (4) Discussions regarding taxonomic puzzles. The programme was organized by G. M. Dirkse and the local arrangements were made by A. Losada-Lima.

During three days, nine bryologists practised in identifying Macaronesian *Fissidens* collections under the guidance of two experts, M. A. Bruggeman-Nannenga (The Netherlands) and R. A. Pursell (U.S.A.).

The first day (20 March) was devoted to the section *Serridium*. After an address of welcome by the organizers, M. A. Bruggeman-Nannenga presented a provisional illustrated key to *Fissidens* species (sect. *Serridium*) of the Canary Islands, prepared in co-operation with G. M. Dirkse. Within *F. taxifolius* s.l., she provisionally introduced *F. barretoii* (large, broad-leaved plants) and *F. pallidicaulis* (smaller, narrow-leaved plants) as distinct

species. Then the laboratory work began with revisions of the exsiccata of the section *Serridium* present in TFC Bry. It appeared that the proposed taxa within *F. taxifolius* (*F. barretoii* and *F. pallidicaulis*) are not always clearly distinct. The participants discussed the nature of these taxa and their taxonomic treatment.

The next morning (21 March) was spent collecting *Fissidens* in Agua García (Tacoronte), a locality on the North of Tenerife with an interesting laurel forest and *Erica-Myrica* woodland. In the afternoon M. A. Bruggeman-Nannenga introduced the second part of the provisional key, which concerned the difficult sect. *Fissidens*, emphasizing on the very difficult *F. bryoides* group. Thereafter, the participants continued revising the exsiccata kept in TFC Bry, as well as collections brought home from Agua García and collections from Madeira sent on loan by C. Sérgio. Many identifications reflected contrasting species concepts, which gave rise to long and intense discussions. Most discussions concerned the application of the name *F. viridulus* versus *F. canariensis*, *F. sublimbatus*, *F. bambergeri* and even *F. coacervatus*. From our own field work we know that *F. viridulus* and *F. coacervatus* grow in very sheltered, damp localities, whereas both *F. sublimbatus* and *F. bambergeri* grow in more exposed and drier sites.

The last day (22 March) began with an excursion to the laurel forest of El Pijaral (Anaga), a nature reserve with an interesting *Fissidens*-flora. *Fissi-*

auspices of the Prince of Monaco, are available. Send your order to Denis Lamy, Museum National d'Histoire Naturelle, Laboratoire de Cryptogamie, 12 rue Buffon, F-75005 Paris

dens serrulatus was found everywhere. Along the sheltered footpath through the forest, both extremes of *F. taxifolius* grew next to each other. In the afternoon the participants finished the revision of the *Fissidens* samples. The final discussion started with a summary of the main results of the workshop: (1) *F. taxifolius* is surprisingly diverse in the Canary Islands; (2) Real *F. bryoides* (axillary males, limbidium and nerve fused at leaf apex) hardly occurs in the Canary Islands; (3) Within *F. viridulus* s.l., three groups of forms may be recognized (*coacervatus*, *viridulus*, *sublimbatus*). These results were discussed by the participants, who were not in total agreement about the taxonomic level at which some taxa should be recognized, if recognized at all. However, the participants were inclined to agree on the following: (1) Identification keys should be reliable in that they allow a distinct application of names; (2) Two bryophyte taxa differing in at least three distinct characters may be treated as separate species; (3) Two bryophyte taxa differing in less than three distinct characters should not be treated as separate species.

We gratefully thank the participants for their pleasant and interesting contributions to the workshop, especially M. A. Bruggeman-Nannenga and R. A. Pursell for their indispensable co-operation and valuable suggestions.

Important old literature available

Renauld F., *Prodrome de la flore bryologique de Madagascar des Mascareignes et des Comores...* Monaco, Imprimerie de Monaco, «1897» 1898, [i]-viii, [1]-296, err., index

Renauld F., *Essai sur les Leucoloma et supplément au prodrome de la flore bryologique de Madagascar, des Mascareignes et des Comores...* Monaco, Imprimerie de Monaco, 1909, [i]-ix, [1]-50, [1]-139, 24 pl.

Some free copies of these two important Renauld works, published under the

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1995

July 26-August 2. Summer field meeting (2) of the British Bryological Society, Hexham area, Northumberland. Further information from Stuart Hedley, English Nature, Archibold Terrace, Newcastle-upon Tyne, NE2 1EG. Tel: 091 281 6316.

July 29-August 3. ABLs Annual Meeting, Jasper National Park, Alberta, Canada. Further information from Dale H. Vitt, Department of Biological Sciences, University of Alberta, Edmonton, Alberta TG6 2E9, ph. (403) 492-3380; Fax (403) 492-1899.

August 5-9. The Bryological and Lichenological Section of the Botanical Society of America will be held at the AIBS meetings in the town and Country Hotel, San Diego, California. One session is scheduled. Further information from Karen Renzaglia, Department of Biological Sciences, East Tennessee State University, Box 70703, Johnson City, Tennessee 37614-0703; phone (615) 929-4329 or fax (615) 929-5958.

August 7-12. IAB Biennial Meeting entitled Tropical Bryophytes: Biology, Diversity and Conservation. IAB Conference in Mexico City (see BT77). Contact C. Delgadillo, Instituto de Biología, UNAM, Apartado Postal 70-233, Del. Coyoacan, 04510 Mexico, D.F. Mexico, Fax (525)555-1760, email: moya@redvax1.dgsca.unam.mx.

August 13-24. Summer field meeting (1) of the British Bryological Society, Tatra Mountains, Slovakia. Further information from Dr. Rudolf Soltés, Research Station of the Tatra National Park, 05960 Tatr. Linnica, Slovakia. Fax: 010 42 96996758; or Nick Hodgetts, JNCC, Monkstone House, City Road, Peterborough, PE1 1JY, U.K. Tel. 0733 555948.

August 29-September 2. IAB & IAL Symposium on Follicolous Cryptogams in Eger, Hungary. Further information from Dr. Edit Farkas, Institute of Ecologia and Botany, Hungarian Academy of Sciences, H-2163 Vácraót, Hungary. Phone +36-27-360122/147, Fax +36-27-360110, E-mail: H7483FAR@ELLA.HU

September 8-10. Annual General Meeting and Symposium meeting of the British Bryological Society, University of East Anglia, Norwich. Further information from Richard Fisk, 1 Paradise Row, Ringsfield Beccles, Suffolk, NR34 8LQ. Tel. 0502 714968.

September 18-21. XI Simposio Nac. Bot. Criptogamica. Further information from XI Simposio Nacional de Botánico Criptogámica, Departamento de Biología Vexetal (Botánica), Facultad de Biología, Universidad de Santiago de Compostela, 15706 Santiago de Compostela, Espana. Ph. (981) 563100, ext. 3263 or FAX (981) 596904.

October 21-22 (provisional date). Workshop meeting of the British Bryological Society, Manchester University. Theme: peristomes. Further information from Dr. Sean Edwards, the Herbarium, Manchester Museum, The University, Manchester M13 9PL. Tel. 061 2752000.