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Bryology at the Royal Botanic Garden Edinburgh Part II: Recent bryological expeditions to the Himalaya and China

by David G. Long

The first recent bryological exploration of the East Himalaya from Edinburgh took place on three expeditions to Bhutan in 1975, 1979 and 1982, led by David Long. The vegetation (especially forests) of Bhutan is the least degraded of the whole of the E Himalaya, with large tracts of uninhabited and undisturbed forests, especially the bryophyte-rich Evergreen Oak, Cool broad-leaved and montane coniferous (*Abies*- and *Tsuga*-dominated) forests. On these three expeditions totals of 296, 1158 and 661 [in all 2115] collections of bryophytes were made, primarily in the forested areas of southern and central Bhutan. Details of these expeditions have been given by Long (1979) and Long & Grolle (1990), and most of the liverworts enumerated. Many of the mosses, however, await critical identification and research, although most are named to genus; a few interesting

discoveries are listed by Long (1992). Much of northern Bhutan remains unexplored for bryophytes, but field-work is not permitted at the present time.

From 1989 onwards a series of five expeditions has been run from Edinburgh to Nepal, Sikkim and Yunnan. These trips, in 1989, 1990, 1991 and 1992 have been designed primarily to collect herbarium material and seeds of vascular plants for Sino-Himalayan studies at Edinburgh and elsewhere. Bryophyte collecting has been a secondary but nonetheless important aim. Four to six botanists have participated in the expeditions enabling Long to concentrate largely on bryological collection.

Details of logistics, planning and funding of these expeditions have been written up in Expedition Reports (e.g. McBeath et al. 1991, Long et al. 1992). Planning and fund-raising took approximately one year for each trip, and involved finding private sponsors, contracting trekking companies, liaising with botanical institutes and permit-granting bodies, etc. Local collaboration and participation were essential. Good route-planning and maps were equally vital.

Drying of specimens is probably the major difficulty facing bryological collectors in monsoon regions. At many times of the year rain can be a problem, especially during June to October, which are of course the best

months for field-work in mountain areas. Some form of heat-drying is

From the new editors

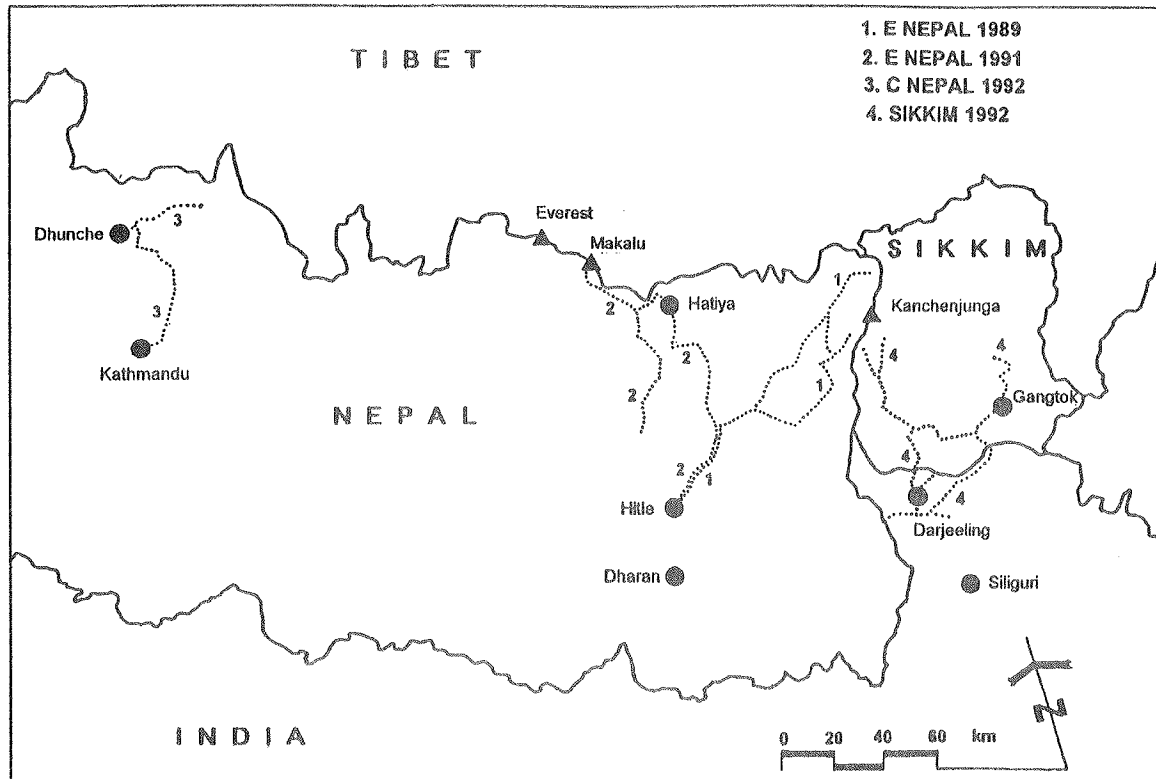
With this issue of The Bryological Times, the editing and production of the newsletter has moved from The Netherlands and Germany to Scandinavia. We hope that this shall mean nothing else than that the newsletter can continue with the same high quality as before, after Rob Gradstein and his coworkers have decided that it was time for someone else to take over. We believe that all readers of The Bryological Times can join in thanking them for their efforts.

We intend to continue with the newsletter in about the same style as before, but there may be some trial and error with the layout before we have found out what suits us best. However, there is one important part with which we can not do without your help, ie. fill The Bryological Times with contents. If you have something you think other bryologists should know or which they may be interested in, this is the place to publish it! You can be sure to reach a very large proportion of the bryologist in the world in this newsletter. We are happy to receive both shorter and longer items, from a few lines to several pages, so don't hesitate.

Lars Hedenäs & Lars Söderström

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Routes of expeditins to Nepal and Sikkim 1989—1992

unfortunately essential, and we have found a collapsible aluminium and canvas drying frame, with two kerosene wick-stoves (locally available) to be the most practical, as they can be carried by porters or pack-animals, and can be used in a work-tent or in local shelters or huts (or on balconies of hotels). Specimens once dry must be carefully and securely packed in waterproof bags, these preferably carried in small metal trunks.

Summary of recent bryological expeditions

1. EAST NEPAL: KEW/EDINBURGH KANCHENJUNGA EXPEDITION

Dates: 27 August to 10 October 1989.

A joint undertaking between the Royal Botanic Gardens of Kew and Edinburgh (6 persons), with Dr C. Grey-Wilson as leader and Mahendra N. Subedi of Kathmandu herbarium as Liaison Botanist.

Route: Part of the route coincided

with that taken by J. D. Hooker in 1848. The trek began at Hille in SE Nepal, and followed a route NE, mostly in Taplejung District, to the Kanchenjunga area. Hille (2270 m), Basantapur, Chauki, Gupha Pokhari, Nesum, Dobhan (Tamur Valley, 800 m), N to Chirwa, Hellok, NE up Ghunsa Khola to Amjilassa, Kyapra, Pheri and Ghunsa (3460 m), NE to Rambuk Kharka, Kambachen (4060 m), Ramtang (4500 m), Lhonak and Kanchenjunga Glacier and finally Pang Pema (5010 m), close to the border with Tibet and Sikkim. Return to Ghunsa, then E ascent to Tamo La, Sinion La (4525 m), Mirgin La then descent to Tseram on Simbua Khola (3840 m); NE to Yalung and Yalung Glacier, Lapsang (4200 m) then return to Tseram and SW down Simbua Khola to Tarangdi; ascent of Deorali Danda (3400 m), descent to Omje Khola valley and across ridge to Kabeli Khola at Yamphudin (1720 m); ascent of Dobala Danda then SW to Mamankhe, Funfun, Suketar, Taplejung and Arun River at Dobhan;

return via Gupha Pokhari to Hille and Kathmandu.

Results. A total of 1230 collections were made. The remote Kanchenjunga Glacier and Yalung Glacier valleys provided numerous interesting habitats such as cliffs, block screes, moraines and exposed steppe-slopes. Disjunct hepaticae such as *Anastrophyllum joergensenii* were abundant, along with genera such as *Andreaea*, *Aongstroemia*, *Desmatodon*, *Oreas*, *Stegonia*, *Tayloria* and *Voitia*. The high passes between these glaciers (Sinion La etc.) were rich in hepaticae, e.g. *Gymnomitrium* and *Marupella* spp., *Andrewsianthus*, *Horikawaella* (both species) and *Takakia ceratophylla*. The *Abies/Rhododendron* forests of the Ghunsa and Simbua Khola valleys were rich and little-disturbed, yielding genera such as *Anastrophyllum*, *Breutelia*, *Geocalyx*, *Poeltia* and *Pseudolepicolea*. Wetter temperate forests were rich around Yamphudin, notably on the Dobala Danda ridge

with a spectacular relict flora including many Lejeuneaceae, *Acrobolbus ciliatus*, *Distichophyllum*, *Jubula*, *Hookeria*, *Schiffneria* and *Temnoma*. Other outstanding finds were *Jungermannia conchata* sp. nov., *Encalypta sibirica*, *Haplomitrium hookeri* and the rediscovery of *Andreaea rigida*, last seen in 1849, exactly 140 years previously, by J. D. Hooker.

2. EAST NEPAL: EDINBURGH MAKALU EXPEDITION

Dates: 15 September to 30 October 1991.

The expedition comprised four Edinburgh botanists and Dr Nirmal Bhattarai from Kathmandu herbarium as Liaison Botanist.

Route: The expedition centred on the Barun Khola valley, Makalu area, upper Arun Valley and Jaljale Himal/Milke Danda ridges, mostly in Sankhuwasabha District of East Nepal. The trek began at Tumlingtar airstrip in the Arun Valley at 550m; north to Khandbari, Bhotebas (1980 m), Chichila, Num, descent to cross Arun River (880 m), ascent W to Shidua, Tashigaon (2000 m), Kauma (3250 m) and Shipton La (4130 m); descent N to Barun Khola valley, W to Pemathang Kharka (3400 m), Nehe Kharka (3715 m), Repu Kharka, Mera and Lower Barun Glacier (4420 m), Makalu Base Camp (4700 m), SE ridge of Makalu (to 5450 m), Upper Barun Glacier; return descent of Barun Khola, ascent N to Barun/Saldim divide (4260 m), descent N to Saldim Khola system (2920 m), SE to Hatiya in Arun Valley (1650 m), S through Arun River gorge, Syiksilla, Obak, E up Pawa Khola, SE to Panch Pokhari (Five Lakes) and Jaljale Himal ridge (4100 m); south along Jaljale Himal to Saba Pokhari and Jaljale Pokhari, S along Milke Danda ridge to Suke Pokhari and Gupha Pokhari; return via Chauki to Basantapur and Kathmandu.

Results. Total collections 1350 (but 110 lost in transit).

Two areas, previously unknown bryologically, turned out to be exceptional: a. the upper Barun Khola valley, with extensive calcareous metamorphic outcrops rich in exciting bryophytes, e.g. *Asterella* sp. nov., a *Sphaerocarpos* (Order Sphaerocarpaceles new to E Asia) and *Blindia* (2 spp.), *Campylophyllum*, *Desmatodon*, *Leiocolea*, *Meesia*, *Orthothecium*, *Schistidium* etc. The rare *Miehea* was found here and many common calcicoles in abundance: *Cirriphyllum cirrosum*, *Encalypta alpina* etc. b. the Saldim Khola valley on the Tibetan border NW of Hatiya, with superb primeval *Tsuga* forest, with a relict hepatic flora including *Geocalyx*, *Schiffneria*, *Scaphophyllum* and *Temnoma*. This area deserves more careful study and strict protection.

The expedition visited other areas of interest. The Makalu Base Camp area was very dry and bryologically limited, unlike the wetter ridges of the Shipton La and Jaljale Himal, where *Takakia ceratophylla* (12 localities) was locally abundant and species such as *Andreaea rigida* (c. sp.), *Lophozia decolorans*, *Miehea indica*, *Oreas martiana* and *Plagiochila carringtonii* were common. The Milke Danda ridge, famous for its *Rhododendron* forest, is suffering severe degradation, but nevertheless revealed both species of *Tetradontium*, *Schiffneria hyalina* and the genus *Campylostelium* new to continental E Asia.

3. CENTRAL NEPAL 1992

Dates: 18 April to 9 May 1992.

This was a shorter trek on which only more limited collecting was possible.

Route: The route was from the Trisuli River NW of Kathmandu to the Langtang National Park, returning on foot to Kathmandu via the Gosainkund Lakes and Laurebina La. Trekking began from Dhunche (1980 m) NE to Bharkhu, Syabru then followed the Langtang Khola to Lama Hotel (2490 m), Ghora Tabela (3040 m) and

Langtang Village (3450 m); return to Syabru then ascent to S to Sing Gompa (3320 m), ascent to Laurebina village, Gosainkund Lakes (4300 m), crossed Laurebina La, descent along Thare Danda ridge to Phedi, Ghopte, Thare Pati (3680 m), Mangan Ghotha, Kutumsang, Gul Bhanjyang, Chipling and Sheopuri Lekh ridge (2430 m); descent to Sundarjal (1590 m) and Kathmandu.

Results. 293 collections of bryophytes were made.

The areas visited in Langtang National Park and the Gosainkund area had been relatively well-explored bryologically, so new discoveries were few. Noteworthy was the observation that many of the disjunct 'oceanic-montane' hepaticae so characteristic of E Nepal clearly extend west to Central Nepal: *Anastrepta orcadensis*, *Anastrophyllum donnianum*, *A. joergensenii*, *Mastigophora woodsii* and *Mylia taylorii*, as well as Sino-Himalayan specialities such as *Acrobolbus ciliatus*, *Delavayella serrata*, *Lophocolea sikkimensis* and *Pseudolepicolea trollii*. Other notable finds were *Buxbaumia* new to Nepal, on *Abies* logs and the new *Asterella* found previously in E Nepal.

4. INDIA: EDINBURGH SIKKIM EXPEDITION 1992

Dates: 1 July to 11 August 1992.

The expedition, of four Edinburgh botanists, visited Darjeeling District of West Bengal, and western Sikkim.

Route: Based on Darjeeling (2250 m), excursions were made to Lebung (1990 m), Mungpoo (1200 m), Sanchal (2340 m) and Little Rungit Valley (480 m). The Sikkim trek began at Yoksam (1850 m), and followed the Rathong Chhu valley NW to Bakkim, Tsoka, Jamlinghang, Bikbari (3910 m), Chaunrikiang and the Rathong Glacier (to 4650 m); crossed Dzongri Pass (4250 m) to Dzongri, then followed Prek Chhu valley N to Thangshing (3900 m), Lam Pokhari, Lambi, Onglathang, Samiti Lake (4260 m), Chemathang and Gocha La (4865 m);

dang, Bakkim and Yoksam; road to Gangtok (1800 m) with excursions to Rate Chhu and Phodong Gompa.

Results. A total of 707 collections of bryophytes were made, mostly in Sikkim.

Although a number of significant discoveries were made, SW Sikkim was found to be less rich than adjacent parts of E Nepal. For example, *Takakia ceratophylla* was found only once, but is the first record for Sikkim since Hooker's discovery (at Lachen in N Sikkim) in 1849. The uniform acidity of rocks may partly explain this; the only exception was around Samiti Lake, upper Prek Chhu valley. Here, calcareous metamorphic rocks, though limited in extent, supported calcicoles such as *Anacolia*, *Blindia*, *Campylophyllum*, *Myurella*, *Orthothecium*, *Oreas*, *Plagiopus*, *Preissia* and *Tortella*.

Unlike the forests of the Darjeeling district, now severely degraded, those of the Rathong Chhu catchment were magnificently preserved with many noteworthy bryophytes, e.g. *Acrobolbus ciliatus*, *Geocalyx*, *Horikawaella*, *Lyellia*, *Mastigophora* and *Pleurozia purpurea*. *Haplomitrium hookeri* was found close to the E Rathong Glacier at 4550m, perhaps an altitude record for the genus? The lower degraded foothills were not totally without interest, with several species of *Asterella* abundant and some surprises such as *Dendrophorum paradoxum* in several places.

5. YUNNAN: CHUNGTIEN-LI-CHIANG-DALI EXPEDITION 1990.

Dates: 20 September to 25 October 1990.

This was a joint expedition between the Royal Botanic Garden, Edinburgh, Royal Botanic Gardens, Kew, Royal Horticultural Society, London and Kunming Institute of Botany, comprising six botanists and horticulturists from Britain and two from Kunming.

Route: The expedition focussed on

three areas of W Yunnan: the Zhongdian (Chungtien) Plateau, north of the Yangtze bend, the Lijiang (Lichiang) area and Yulong Shan mountains, and thirdly the Cang Shan mountain range above Dali. At Zhongdian (3260 m) visits were made to Wu Fang Shan, Bi Ta Hai forest reserve (3360 m), Nada hot springs (3400 m), Na Pa Hai forest (3500 m), Ge Zao area and Qin Go, followed by the Yangtze valley at Lou Swang. From Lijiang visits were made to Wen Bi Shan (2700 m), the Lijiang plain and 'Camellia Temple'; in the Yulong Shan Mountains: Gang Ho Ba valley (3150 m), Baishui valley (2900 m), Wo Tu Di (3580 m) and Mu Zhou Go valley (3500 m). In the Cang Shan an ascent was made above Dali to 3510 m and a trek to the Medicinal Herb Farm at Hua-dianba (2900 m) with excursions to surrounding areas.

Results. 899 bryophyte collections were made.

1. Zhongdian Plateau. A very 'continental' area with rolling conifer-forested hills; rocks mostly acidic. The beautiful *Myuroclada maximo-wiczii* was seen several times, with familiar boreal species such as *Aulacomnium palustre*, *Climacium dendroides*, *Ptilium crista-castrensis* and *Rhytidium rugosum*. Of Himalayan acquaintance *Aongstroemia orientalis* and *Bryoerythrophyllum inaequalifolium* were frequent. *Buxbaumia*, on shady *Picea* logs, was an exciting find.

2. Lijiang/ Yulong Shan. A well-known but magnificent and rich area, dominated by limestone. Common calcicoles included *Campylophyllum halleri*, *Cirriphyllum cirrosum*, *Didymodon giganteus*, *Encalypta alpina*, *Orthothecium rufescens*, *Reimersia inconspicua* and *Schistidium* sp. At 3710 m in the Yulong Shan, *Miehea indica* was found new to China, proving that rich areas are never exhausted. As in the E Himalaya, the 'oceanic-montane' element was present, for example *Anastrophyllum joergensenii*, demonstrating that the

European populations of such species are tiny compared to the extensive Sino-Himalayan ones. The forests, though heavily logged, were of interest for epiphytes such as *Rhacithecium*, *Orthotrichum* and *Tortula fragilis* (new to China).

3. Cang Shan. Almost the first moss collected, *Didymodon michiganensis*, was new to China. These much-visited mountains, like the Yulong Shan, nonetheless produced significant finds such as *Andreaea*, *Diplophyllum*, *Kurzia*, *Lyellia*, *Pseudolepicolea* and *Tetradontium*, and two hepaticae apparently new to China: *Geocalyx graveolens* and *Schiffneria hyalina*. Especially rewarding were the degraded forests of *Lithocarpus* and *Rhododendron sino-grande*, which with careful searching yielded surviving refugia of relict species.

The genus *Asterella* was found to be frequent in all areas visited, with many valuable collections made. These are being used to prepare a revision of the Chinese taxa for the Chinese Bryophyte Flora. It is hoped that other collections from this expedition will be used by other contributors.

References

- LONG, D. G. (1979). Hepaticae from Bhutan, East Himalaya. *Lindbergia* 5: 54-62.
- LONG, D. G. (1992). Mosses of Bhutan I. *Bryobrothera* 1: 119-125.
- LONG, D. G. & GROLLE, R. (1990). Hepaticae of Bhutan II. *Journal of the Hattori Botanical Laboratory* 68: 381-440.
- LONG, D. G. et al. (1992). Report of the 1991 Makalu Expedition. 37pp. Royal Botanic Garden, Edinburgh.
- MCBEATH, R. J. D. et al. (1991). Report of the 1990 Chungtien-Lijiang-Dali Expedition. 28pp. Royal Botanic Garden, Edinburgh.
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CHANGES IN THE IAB SOFTWARE LIBRARY

by Jan-Peter Frahm

[*Computer techniques column.* Send contributions to the column editors: J.-P. Frahm, Universität Duisburg, FB 6, Botanik, Postfach 101503, 4100 Duisburg, Germany, or B.J. O'Shea, 131 Norwood Rd., London SE24 9AF, U.K.]

When the software library of the IAB was founded in 1987, most of the computers available were IBM XT-compatibles with 360 K disk drives for 5,25" floppy disks. Accordingly, the programs were offered on this (today increasingly unusual) disk format with very limited disk space. Furthermore, early versions of the operating systems (DOS, Windows) were very unsatisfactory and many utility programs were written to fulfill the needs of the many users. Public Domain and shareware programs were few, however, and not easily accessible. Therefore the software library included not only specific botanical software but also utility programs for more general application. So far, 440 disks have been included in the library and more than 2000 copies have been distributed.

Today, 3,5" floppy disks contain as much as 1,44 MB space and compression programs allow more than 3 MB of programs and even up to 10 MB of data to be stored on one disk. New operating systems and Windows versions with many more facilities are available. Moreover, commercial software has become considerably cheaper and is often offered for free with a purchased computer. "Light versions" of commercial programs are available at really low cost and have become an alternative to shareware programs. All this allows us to work much more easily with a computer than before. In North America and Europe, thousands of shareware and public domain programs are now available and single CD disks with up to 2000 of such programs may be purchased at a price of less than 25\$.

Therefore it seems to be pointless to continue the software library in the present form. Although the present contents will continue to be available in the future, the software library will not be expanded with more programs. Anybody looking for particular programs and application and having no access to other sources may contact the author who can provide, e.g., the contents of the PC-SIG software library or more than 2000 programs for Windows 3.

As an alternative to the present software library, the author has established a new software series, which is limited to botanical applications and bryological data. These programs and data are distributed on 3,5" 1,44 MB disks in compressed form, usually self-extracting. This means they come as ".exe files", have to be copied on a hard disk and executed. In this way, the numerous files belonging to one program are combined into one file. The selection of programs and files is based on the contents of IBIS, the International Bryological Information System hosted on a CONVEX computer of the University of Duisburg (for access to this system by international networks see *Bryol. Times* 64:11). Every subdirectory of IBIS is available on one disk.

The programs and data of the Software Library - New Series are arranged as follows:

1. **Information.** Seven different items, e.g., address files of the herbaria and bryologists of the world, and the complete catalogue of the previous version of the IAB software library.

2. **Checklists.** Eleven regional bryological checklists.

3. **Bibliographies.** Includes 8 bibliographies on specific bryological subjects, e.g. literature to identify Tropical African bryophytes, and recent literature on hepatics/mosses from 1985 onwards.

4. **Taxonomy.** Nine programs for use in taxonomy, e.g. cladistic programs (PAUP, PHYLIP, TREE-SEARCH), program for processing taxonomic descriptions (DELTA) and cluster analysis programs (CLUSTER).

5. **Identification.** Includes a few keys and programs for making keys.

6. **Mapping.** Includes a few mapping programs and maps for bryophytes of the Vosges.

7. **Ecology.** Six programs for use in classifying vegetation records, analysing multivariate data and preparing cenological tables (PST2, DECORANA, TWINSPAN, etc.)

8. **Labels.** Ten different programs to make herbarium labels.

9. **Herbaria.** Includes several programs for maintenance of herbaria, administration of loans, etc.

A full list of the programs and files can be obtained from the author at the address given below. All items are, as always, available for free to IAB members by sending the appropriate amount of 3.5" disks. Please refer to the names of the specific items you like to receive. Also, when you are placing your order, please consider whether you can contribute to this pool of programs and information. Many colleagues may have data files in their possession which can be of use to other bryologists!

NORDISKA FORSKARKURSER

NorFa Researcher Network of Nordic Bryologists
 Course on the Taxonomy and Ecology of Nordic Peatland Bryophytes
 8 Aug - 17 Aug 1993, by K. I. Flatberg and P. Isoviita

Purpose

The aim of the course is to provide the students with the ability to identify, in the field as well as in the laboratory, peatmosses and other bryophytes inhabiting Nordic mires and to give basic knowledge of the ecology of peatland bryophytes.

Scope

In the laboratory work, the focus will be in (1) microscopic investigation of the most important main groups (Sphagnaceae, Amblystegiaceae s. lat., Mniaceae, Hepaticae), with respect to their relative role as components of peatland vegetation, and (2) presentation of major ecological and distributional trends of the taxa involved. In the field, attention can be paid to other species as well; the emphasis will be in easily observable characters of morphology, environmentally introduced variation, autecology, and synecology.

Basement

The course begins on August 8, 1993 at 3 p.m. in Helsinki. Lammi Biological Station is the major base for the Finnish part of the course. Other places to be visited: Sweden, Östersund; and Norway, Trondheim and Slättvik. The course ends at Trondheim railway station.

Transportation

For Helsinki - Lammi, field trips, and Lammi - Turku, two Ford Transit cars; Turku - Stockholm, ship; Stockholm - Östersund - Trondheim, train; Östersund, two minibuses; Trondheim - Slättvik, bus.

Teachers

K. I. Flatberg, L. Hedenäs, P. Isoviita, T. Koponen, A. Moen, S. Piippo, H. Vasander.

Teaching language: English

Costs

The course fee, FIM 1650,-, covers full quartering (including all meals, lodging in double rooms, sauna, etc.) at Lammi 8 - 13 Aug, total 400 FIM, and the following transportation fees: Turku - Stockholm (ship, class B) 305 FIM, Stockholm - Trondheim (train) 466 FIM, Östersund, Sweden (night) 100 FIM, Trondheim (night, youth hostel) 200 FIM, and Slättvik (field station) 180 FIM.

More detailed information from:

Timo Koponen, University of Helsinki, Department of Botany, P.O. Box 7, SF-00014 University of Helsinki, Finland (fax +358-0-1918656)

New Bryological Journal

Mossornas vänner, the Swedish society for amateur bryologists, has started a new journal. In 1991 the old journal Mossornas Vänner was replaced by Myrinia. The new name derives from the moss genus Myrinia which Schimper named in memory of the Swedish bryologist Claës Gustaf Myrin (1803-1835).

The journal is written in Swedish and meant to be the medium for Swedish amateurs in bryology, and everybody interested is welcome to participate. Myrinia reports about excursions and new literature, finds of species new to the Nordic countries and other biogeographically interesting finds. A project of mapping the distribution of Swedish bryophytes has been started and is published as the project progresses. The most recent checklist of the Swedish mosses was also published in Myrinia.

Editors are Thomas Hallingbäck, Lars Hedenäs and Lars Söderström.

For subscription, please contact Gerard Kristensson, Dekanvägen 8, S-240 10 Dalby, Sweden.

Address list

Information is arriving daily about member's E-mail addresses, phone and fax numbers, so we are not going to get the list of members out with this issue of The Times. We are setting a cutoff of March 1, after which the list will be compiled; a booklet put together and then mailed with the first following issue of The Bryological Times. All those members who wish to have their electronic addresses included should have their information to us as soon as possible.

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

Nordic bryologists join their forces

Nordic Research Council (Nordisk Forskarakademi) has granted the project "Researcher Network of Bryologists". The first network meeting was held in connection with the Annual Meeting of Nordic Bryological Society in Kilpisjärvi in 1992. Fourteen bryologists from four Nordic (Finland, Denmark, Norway and Sweden) countries participated. The possibilities to organize joint bryological courses and cooperation in research were the topics of the discussion. Both courses and cooperation were found worth trying.

The second meeting of the Researcher network took place in Trondheim in December 1992. Timo Koponen (Helsinki) was the chairman, Sinikka Piippo (Helsinki) was the secretary, and the other participants were Kell Flatberg and Lars Söderström (Trondheim), Kjell Damsholt (Copenhagen), Lars Hedenäs (Stockholm) and Pekka Isoviita (Helsinki).

The first course organized by the Researcher network will be "Course on the Taxonomy and Ecology of Nordic Peatland Bryophytes" in August 1993 (see the information in other part of this "Times"). In 1994 there will be two courses. (1) Nordic liverworts: their ecology and taxonomy will be held in Kongsvold, Norway; the teachers will be Kell Damsholt and Sinikka Piippo, and (2) Course on the population biology of bryophytes will take place in Denmark; organizer Lars Söderström.

Two joint research programs will be carried out. The Nordic checklist of bryophytes will be compiled. The participants of the Researcher network from different countries will collect the information from their own countries, and the data are combined in electric form. An identification service for amateurs and scientists will be organized. The detailed information of this service will be pub-

lished in the journal "Myrinia", which is the newsletter of "Mossornas Vänner", a Swedish Bryological Society (presented elsewhere in this issue, eds. comm.).

Timo Koponen, Helsinki

New editors of Briolatina

Last July, at the III SIMPOSIO LATINOAMERICANO DE BRIOLOGIA in Mexico City, Claudio Delgado, Bernadina Bello and Angeles Cárdenas resigned as editors of BRIOLATINA, the newsletter of the Sociedad Latinoamericana de Briología, after nine years on the job. The forthcoming issues, beginning with BRIOLATINA 29, will be edited by Drs. Noris Salazar Allen (Panama) and María Isabel Morales (Costa Rica).

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Changed addresses in Helsinki

The postal addresses of the University of Helsinki were changed 1 January 1993. New addresses to bryologists and other staff working also with bryophytes in Helsinki are as follows.

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Thesis

In December 1992 Lars Hedenäs successfully defended his thesis at the Stockholm University. The title was "Taxonomic studies on pleurocarpous mosses, with special reference to the *Calliargon-Scorpidium-Drepanocladus* complex in northern Europe".

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 (Czechia), 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

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March 31-April 7. BBS Spring Field Meeting, Brittany, France. Further information from J. W. Bates, Imperial College Field Station, Silwood Park, Ascot, Berkshire SL5 7PY, U.K. Telephone 0344 23911.

June 16-21. Nordic Bryological Society Annual Meeting and Excursion. To be held on the island of Gotland, Sweden. Further information from Lars Hedenäs, Naturhistoriska Riksmuséet, Kryptogambotanik, Box 50007, S-10405 Stockholm, Sweden.

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. Nordiska Forskarkurser: 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, with trips to Lammi Biological Station and Turku, Finland; Stockholm and Östersund, Sweden; and Trondheim, Norway. Further information from Timo Koponen, Department of Botany, P.O. Box 7, SF-00014 University of Helsinki, Finland. Fax 358-0-1918656.

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 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.

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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, National Herbarium of New South Wales, Royal Botanical Gardens, Sydney N. S. W., Australia 2000. Fax (61) (02) 251 4403.

Deadlines for material to *The Bryological 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.

For details regarding membership of the *International Association of Bryologists* (currently UD \$ 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.