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No. 29

Through the Steppe and Mountains of Mongolia

By Siegfried Huneck

IN 1978 (June, July) and again in 1983 (June to August) I took part in two expeditions through the Mongolian Peoples Republic (MPR). These expeditions were joint enterprises of the Institute of Plant Biochemistry at Halle/Saale, GDR and the Institute of Folk Medicine in Ulan-Bator, MPR (the former Institute of Natural Products) and took us to the Changai Mountains, the Gobi Desert, the Chentej Mountains and to Lake Chubsugul. Although our main objective was the collection of lichens (Huneck, 1984) we also picked up bryophytes wherever possible.

The first contributions to the bryophyte flora of Mongolia were the papers of Duda (1968) and Schubert et al (1977). Both Karczmarz and Swies (1981) and Hilbig and Huneck (Grolle et al,

1983) collected numerous bryophytes in the country. But by far the most intensive work on Mongolian bryophytes has been done by Soviet scientists during their expeditions through all parts of the MPR. Recently Abramov and Abramova (1983) published an excellent and comprehensive conspectus of the country's bryophyte flora. According to this review 31 genera, including 52 species, of liverworts and 127 genera, including 329 species, of mosses have been found in Mongolia.

Botanical research in the MPR is done at the Institute of Botany of the Mongolian Academy of Sciences and the Department of Botany of the University, both in Ulan-Bator. As far as I know, there are no bryologists at these Institutions.

Our 1983 expedition began in Ulan-Bator. The members of the expedition were: Dr. U. Cogt, a Mongolian lichenologist; Mangal, our Mongolian driver; Dr. W. Hilbig, a geobotanist from the University of Halle, and myself. We used a GAS 606 lorry for transport (Fig. 1), which was the best for the terrible tracks in Central Asia.

About 100 km west of the capital we crossed the Tol Gol and came to Daschintschilen, a small settlement in the steppe. Here we found *Ricciocarpus nantans* (L.) Corda floating at the surface of some ponds. Fifty kilometres south of Daschintschilen we pitched our tents at the foot of the Chögnö Tarna Uul (Zezerleg Mountains) which was partly covered with forests and had magnificent outcrops of gra-



Fig. 1. Our lorry near Daschintschilen. June 24th, 1983. From right to left. Dr. Cogt, Dr. Hilbig.

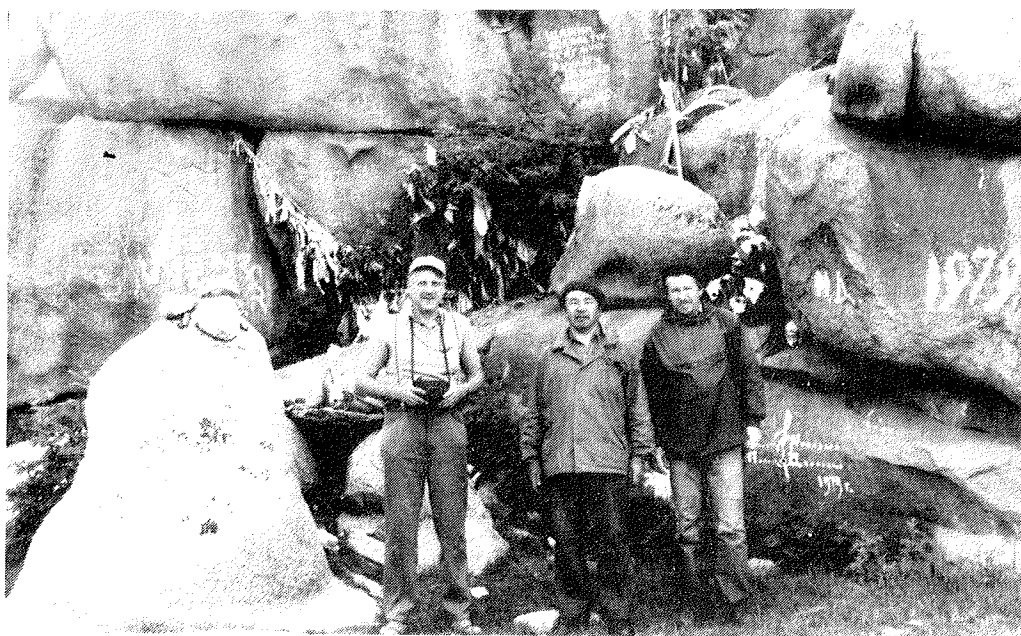


Fig. 2. An ovo near Tarnyn Chijd. June 27th, 1983. From right to left: Mangal, Dr. Cogt, the author.

[continued from page 1.]

nite rocks. At a cliff I collected some lichens, one of the species being overgrown by a small liverwort, determined as *Frullania muscicola* Steph. by Dr. S. Hattori, a species new to Mongolia.

Near the ruins of the Lamaist monastery Tarnyn Chijd, we came across an interesting ovo (Fig. 2). An ovo is a sacred place, mostly at the summit of a mountain or at a mountain pass. The Mongolians sacrifice a stone, a strip of coloured cloth, some money, or something else disposable at an ovo.

South of lake Ugii Nuur our Mongolian friends showed us the ruins of the monument of Kül-Tegin, a Turkish khan who ruled in this region about 700 AD. Fig. 3 shows a memorial stone to Kül-Tegin with old Turkish inscriptions on three sides and the Chinese translation of the text on the fourth side.

After crossing the Tschulut Gol river at a deep canon we came upon an old acquaintance, the black, extinct Chorog volcano, at the northern bank of the lake Zagan Nuur, which we had climbed to the summit during our first expedition in 1978. June 4th was a memorable day because we arrived at the Solon Got pass in the Tarbagatai Mountains, 2650 m above sea level: it was to be our highest point in Mongolia. Despite the miserable weather we collected a lot of alpine lichens, mosses and higher plants at this inhospitable place.

pitabile place.

From here we turned in a northerly direction, crossed the nearly-endless steppe behind the Ider river, and arrived at the Chubsugul on July 13th. This freshwater lake has some similarities with the famous lake Baikal, and is 130 km long, 25 km wide and 238 m deep. Geologists suppose that the huge Asian continent will split at both lakes at some time in the far distant future. Dr. Hilbig and I were the only bathers in the Chubsugul; no wonder - the temperature of the water was only + 8° C!

Our most northerly point in Mongolia was the Tomin Dawaa pass, about 50 km west of the Chubsugul lake. Here we spent two days in a log-house at the Belmes Gol river. Near the log-house on a cliff I collected large amounts of *Mannia fragrans* (Balb.) Frye et Clark, enough for isolating 36 mg of grimaldone, the substance that gives the fragrance to this liverwort. It is a rather common species in the MPR. We have been able to elucidate the structure of grimaldone which belongs to a new type of sesquiterpenoids. At these cliffs I found another liverwort new to Mongolia: *Plagiochasma japonicum* (Steph.) Mass.

Another unforgettable experience was the ascent of the Sumber Uul (2,000 m.a.s.), about 60 km southwest of the Chubsugul lake. The view from the summit was magnificent and did justice to the name of this mountain which means a mountain

with a comprehensive view. Far away on the northern horizon glittered the snow-covered summits of the Sajon range and deep below us was the vast steppe.

"Just why are high mountains beautiful?" The famous American genetist Dobshansky, in his book *The Roving Naturalist*, gives the explanation of Puschkin: "Anything which contains the threat of death has an inexplicable allurements for a mortal's heart, perhaps as a token of immortality". "But this is not a valid biological hypothesis - or is it?"

On the way down I found a dense cushion of the rare moss *Tetraplodon urceolatus* (Brid.) B.S.G. which, in the fresh condition, spreads an unpleasant odour similar to that of butyric and valerianic acids.

Via Muren, Ich Uula and Bulgan, we drove back to Ulan-Bator. Behind us lay 3,500 km! On a shorter expedition we went to the north-eastern Chentej, east of the Kerulen river, but space is too limited to report on our adventures in this part of Central Asia.

Highlights of the last few days in Ulan-Bator were farewell parties given by Dr. T. Khaidav (Head of the Institute of Folk Medicine) and Dr. Cogt, and a visit to the Lamaist Gandan Monastery. On August 17th we said goodbye to Ulan-Bator.

I am very grateful to my Mongolian friends; such an ex-

[continued from page 2.]

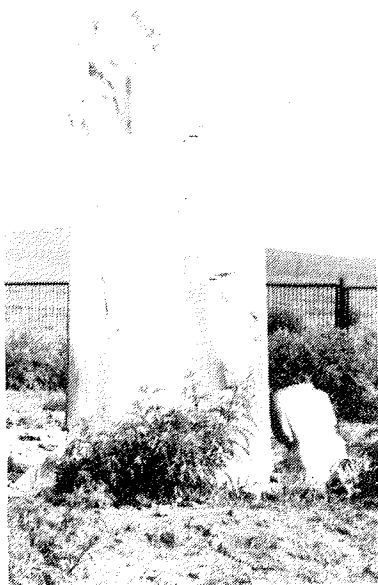


Fig.3. Stele of Kdl-Tegin at Chösöö Zeidam near the Orchon river in the Öwörchangai aimak. The stele was originally at the back of a stone tortoise.

pedition would have been impossible without their help. Mongolian people say, "He, who was once in Mongolia, will come back again", and that is what I hope.

My thanks are also due to the Academy of Sciences of the GDR and the Ministries of Health of the GDR and MPR for raising funds, and to Professor K. Schreiber, Head of the Institute of Plant Biochemistry, for his continuous interest.

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De Nominibus Nudis in Bryologia

Par P. Tixier

ON DOIT CONSIDÉRER qu'il existe deux types de *nomina nuda*. Il y a les *nomina nuda* publiés et que l'on trouve dans la bibliographie et les *nomina in sched.* que l'on rencontre dans les herbiers et qui n'ont pas été publiés pour différentes raisons.

L'auteur peut donner un certain nombre d'exemples des deux types de *nomina nuda*.

--- C. Mueller, en 1898, a publié une courte liste d'espèces nouvelles pour la Nouvelle Calédonie en *nomina nuda*. Theriot, avant la première guerre mondiale avait envisagé une étude monographique des mousses calédoniennes et obtenu des séparata de C. Mueller, ce qui fait que nous avons encore ce matériel malgré la destruction de l'herbier C. Mueller.

--- L'auteur a pu revoir aussi les *nomina nuda* dus à Schiffner (1900) concernant des espèces de *Cololejeunea* recueillies à Tjibodas et à Java.

--- L'auteur a retrouvé dans l'herbier Theriot, *Taxithelium julaceum* Card. & Thér., *nomen in sched.*, une bonne espèce récoltée en Chine et à ramener d'ailleurs au genre *Glossadelphus*.

L'auteur demande à ses confrères si quelqu'un a une idée sur le genre *Schiffnerobryum* Broth., nom d'herbier qui correspond à un échantillon que nous avons dans PC?

Nous avons, à Paris, l'herbier Cardot. Cardot a examiné beaucoup de matériel en particulier des terres australes et antarctiques et du Nord de l'Inde, et ses collections comprennent beaucoup de *nomina in sched.*, échantillons que les monographistes oublient généralement dans leurs études.

Le problème des *nomina in sched.* reste plus difficile à résoudre. Les bryologues, du début du siècle en particulier, ont donné beaucoup de *nomina nuda* et encore plus de *nomina in sched.*

--- Le classement de ces échantillons. Nous avons décidé à Paris (PC) de classer dans une seule chemise d'herbier toutes les espèces en *nomina in sched.* chemise placée au début du genre.

L'exploitation de ces échantillons demeure difficile car il faudrait un répertoire de ces collections ce qui demeure un travail long et difficile d'une part et d'autre part, il n'est pas toujours à la portée des conservateurs d'herbiers de décider de la valeur des noms attribués.

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Membership of IAB

THE FOLLOWING LISTS, for the period 1 May - 31 August, 1984, update those already published. The last list appeared in *Bryol. Times* 27:7.

New Members

Benitez, Carmen Viera*; Gottwald, Rainer*; Johnson-Groh, Cindy L.*; Renzaglia, Karen*; Rivas, Maria Jesus Elias*; Sen, Sarat Kumar*; Sidenvall, Göran*; Skarp, Erik; Untiedt, Edda*.

Addresses

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Sen, Sarat Kumar, UGC Research Fellow, Department of Botany, University of Rajasthan, Jaipur 302 004, India.

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Untiedt, Edda, Botanisches Institut, Ohlshausen Strasse 40-60, D-2300 Kiel 1, Germany, B.R.D.

Note* - Addresses are only given for those members with an * after their surname or family name, i.e. for those whose names will not be found in S. R. Gradstein's *Directory of Bryologists and bryological research*, Ed. 2 (*Regnum Vegetabile*, Vol. 99, 1979), or where their present address is different to that given in the *Directory*.

UTILITY OF BIBLIOGRAPHIES - Ter

By B. J. O'Shea

MY REACTION to Jan-Peter Frahm's discussion of the relative merits of bryological bibliographies (*Bryol. Times*, 25:2) was summarized partly by Hélène Bischler's response (*Bryol. Times*, 26:3). I would agree that there are two types of bibliography - the literature list of the *Bryologist* and *Journal of Bryology* and the annotated Bibliography of *Cryptogamie* - and that both types inevitably will be selective. As Dr. Bischler hints, however, the latter, being intentionally selective, is only worth having if the former also exists, and is appropriately exhaustive. That existing bibliographies are not exhaustive, even for their own geographical areas, is manifested by Dr. Frahm's figures, and although I have a touching faith in their thoroughness, I can also accept that there will always be items that escape.

Biological Abstracts will never cover the breadth of publications by biologists would wish to be included, and thus there seems little point in attempting to improve its coverage or indexing on bryological subjects, but it seems essential that a reliable bibliography be created. I would thus like to make a proposal that may well solve part of the problem.

Bearing in mind particularly the amount of effort involved in compiling these lists, this effort could be minimised if a different approach were made to the production of a central bibliography. I think in the past such a scheme, although proposed more than once, has not "taken off" because no independent organiser has been available to reassure those providing parts of the bibliography that the compilation would be adequately edited, timely, reasonably cheap, and would reflect the standards of the contributing societies and the full range of journals. In short, such a system looks unmanageable. There do seem, though, to be two solutions to the compilation of such a bibliography:

Option 1. To have a central editor who, at a cut-off date, will expect lists of references from contributing bibliographers, and will then merge these lists. There are several disadvantages with this:

1. There is no guarantee that the contributions will be available on time;
2. Bibliographers may well be extracting from journals

(other than those for which they are responsible) for their own benefit anyway, and so duplication will still take place;

3. References found by one bibliographer may not get into the system if it is in an area covered by another bibliographer, who happens to miss it;
4. Any co-ordination between contributors needs to be via the central editor, which reduces speed of information transfer and flexibility.

In conclusion, this option has all the hallmarks of another unworkable proposal.

Option 2. To have a central computer system accessible on-line to all bibliographers (as well as the editor, who may also be one of the bibliographers) which will allow the display of all references so far entered, thus preventing the duplicate entry of references. This will solve all the problems of option 1, which all stem from problems of co-ordination and communication, but provides some problems of its own:

1. There may be the initial cost of equipment, and the need to find money for running costs;
2. Such a system is probably less convenient than, say, entering references as they are found, directly onto cards: even the new 3-4 Kg portable micros are not as convenient as a few index cards. This would then require periodic updating of the central file of information.
3. Reliability and back-up may be a problem (although use of local micros to contain "snapshot" copies of the central file, together with amendments entered locally since the "snapshot" would mean quite a lot of latitude on central computer availability).

Despite the problems of the second option, if it were adopted, bibliography production could then be at a fixed cut-off date, with the list production a trivial task compared with the current tedious and time-consuming process. If an appropriate printing format was adopted, camera-ready copy could be produced, for central production by IAB and distribution to contributing societies, as a supplement to existing mailings. There must also be the possibility that such a

publication may well gain a subsidy.

Although there may well be plenty of practical problems in introducing such a scheme, there seem to be no technical difficulties. As a means of concentrating views on this subject, the Council of the British Bryological Society recently agreed that it would have no objection in principle to participating in such a computerized scheme, believing that there are many gains to be made - providing that the quality and usefulness of the end product can be guaranteed. It is therefore writing to the IAB supporting an investigation into a computer-based international bryological bibliography.

In the interim, I would be very pleased to hear any views on the subject, and will pass them on in a suitable form to the IAB.

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Briolatina

Boletín Informativo - Sociedad Latinoamericana de Briología

ISSUES NO. 1 - 3 of BRIOLATINA were sponsored by the Instituto de Biología, Universidad Nacional Autónoma de México. Issue No. 2, Junio, 1984, included the following requests and information:

R.A. PURSELL (*Fissidens*) and CLAUDIO DELGADILLO (*Aloina*, *Aloinella*, *Crossidium*) would like to see unidentified specimens of these genera from the Neotropics. S.R. GRADSTEIN is advertising a set of 50 specimens in exchange and E.DE LUNA enquires about a mounting medium for permanent slides which serves well under the high temperature and variable moisture conditions of the tropics.

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Universitaria, Del Coyoacán,
04510 México, D.F. Mexico.

Deaths

SAVICH - LJUBITSKAYA, Lydia
Ivanovna, in June, 1982, at the
age of 97 years.

Research & Development

EARLIER THIS YEAR I sent out a number of letters to see what support there would be for an R & D column in the *Bryol. Times*. The purpose of the column was explained as follows:

"The idea is to encourage colleagues to write 'mini reviews' about 3-6 columns long (perhaps with a second part in a later issue if a longer article is required) on recent developments in their speciality when something new has been published or an exciting development has taken place. The articles would be informal, but I would expect them to include well-chosen references that would help a reader to find out more about the subject. In other words, an author is not being called upon to give a considered opinion on the 'state of the art' of a sub-

ject, although there is no reason why this should not be done, but rather to draw to the notice of readers the nature and sources of new thinking and information in a branch of bryology that is forging ahead. Of course, these mini reviews would not be confined to taxonomy and floristics, but would include ecology, physiology, developmental morphology, chemistry and chemotaxonomy, cytology, genetics, etc."

The response was rapid and enthusiastic. Four articles have already been submitted, and more are promised. Additional articles will be welcome. Anyone wishing to contribute should write to the Editor, pending the appointment of a column editor who will take over the running of the column.

S. W. Greene.

The following is the first contribution to this new column.

Morphogenesis of the Young Protonema of Bryophytes

By Christian Brière

MORPHOGENESIS OF THE MOSS protonema has been dealt with in many experimental investigations, especially on branching and budding (Kofler, 1959; Bopp, 1965; Larpent-Gourgaud, 1969; Schmiedel & Schnepf, 1979; Brière, 1982). This organism can be considered as a morphogenetic system whose development results from many more or less interdependent processes. Statistical analysis (Brière, 1975; Buis et al., 1976) showed the existence of relationships between growth of the tip filaments and their bidimensional development. The apex of a filament has a complex morphogenetic role: it both stimulates branch formation, by increasing the branching potentialities of the cells, and delays it, by a dominance effect. From the statistical results it may be assumed that two systems at least are dealing with the branching process: a stimulator, connected with the overall equilibrium of the organism, and an inhibitor, produced from the apical cell.

The problem of the branching of the moss protonema may be posed in terms of cellular evolution. Two notions seem to be particularly important to consider; initial conditioning and cellular interactions. Cellular exchanges by means of active or passive transport of morphogenetic substances playing a role in the branching processes have been well studied (Bopp & Klein, 1963; Bopp &

Knoop, 1974; Larpent-Gourgaud, 1974; Chopra & Kumra, 1978; Larpent-Gourgaud & Aumaitre, 1977). But on their own these transport processes fail to explain all the characteristics of the branching, especially its relationship with tip growth.

The growth of the filaments might play a role in the behaviour of the non-apical cells by conditioning them, when they are formed by the division of apical cells. Such an hypothesis may be inferred from the evidence of a common dependence of the branching probability and the cell size from the apical growth. On the one hand, the growth rate of an apical cell determines, for the most part, the length of its sub-apical daughter cell. On the other hand, branches are initiated more frequently by short cells than by long cells (Brière, 1983). One may thus suppose that variations of the apical growth rate induce in the successive sub-apical cells some differences both in their size and in their initial state. Such an initial state could be defined in terms of concentration of some morphogenetic substances (morphogens), branching activator or inhibitor.

These hypotheses have led to a model of the branching pattern of the moss protonema, based on the two notions of activation and inhibition. Two morphogens are assumed to be produced in each cell (apical or not): an activator (X) which triggers branch initiation when its con-

centration reaches a critical level, and an inhibitor of the activator synthesis (Y) which diffuses from cell to cell. The variations of the concentrations of x and y are assumed to be ruled by a system derived from the Gierer-Meinhardt activation-inhibition system (Meinhardt & Gierer, 1974):

$$\dot{x} = s + cx^2/y - ax$$

$$\dot{y} = r + dx' - by + D\Delta y$$

where $D\Delta y$ is the inhibitor diffusion term.

For a single cell (or $D=0$) this system may have two stable steady states of high (branching state) and low (resting state) concentrations. Its behaviour then depends on the initial concentrations x_0 and y_0 . For low values of x_0 , it evolves towards the non-branching one. In a set of inter-connected cells ($D \neq 0$) the behaviour of each cell depends both on the concentrations in the neighbouring cells, due to the inhibitor diffusion, and on its initial state (Brière, 1984).

It has been shown (Babloyantz & Hiernaux, 1975) that the Gierer-Meinhardt system may generate a non-linear gradient of activator, whose slope increases with the length of the diffusion field. Such a gradient might exist in the apical cells, with the maximum of concentration at the tip of the cell, so that the concentration at their base would be a decreasing function of their length. This implies the initial concentration and the size of the subapical cells to be negatively correlated. The model thus relates the length of a cell to its initial state, which depends on the growth of its mother cell, and so can explain the observed relationship between cell size and branching: the longest cells have a low initial activator concentration and then evolve towards the resting state, without branching.

Computer simulations of the development of protonemata have shown that this model can generate filaments with branching characteristics which are in good agreement with those of observed protonemata. The most interesting feature of the model is to relate the initial state of the cells, and then their behaviour, to the growth of their apical mother cells, by a kind of "predetermination" of the cells.

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Society News

Bryological Society of Japan (BSJ)

THE THIRTEENTH ANNUAL MEETING of the Bryological Society of Japan was held, July 26-28, 1984, at Anan City, Tokushima Prefecture, in which about 80 bryologists joined. Arrangements for the meeting were made by Prof. Y. Asakawa of the Tokushima Bunri University.

The first day was assigned to the reception. On the second day, 10 lectures or presentations of research reports were made in various fields of bryology, including morphology and anatomy, physiology, taxonomy, ecology and applied bryology. Each question period was passed in a very lively atmosphere. After the lectures we had a General Meeting. On the same day was held the photographic contest, now becoming a customary activity at the summer annual meeting of our Society. Only bryological colour photographs (to a standard size) can be accepted for the contest, and they are examined in two divisions: scientific and artistic. Each participant has two voting cards: one for the scientific division, and the other for the artistic one. For each division, gold and silver prizes are awarded, the winning photographs being printed in black and white in the *Proceedings* of our Society.

In the evening of the second day, a social meeting was held in a big "Tatami Room" with much SAKE! We were very happy to have had a team of "Awa Dancers" made up of staff of Anan City Office, and to have been able to exercise ourselves dancing with them.

The third day was for field work, when we went to Gotaki, in the suburbs of Tokushima City, a resort famous for five waterfalls. Two post-meeting tours were organized: one to the Faculty of Pharmacy of Tokushima Bunri University, where various equipment for chemical analysis used by Prof. Asakawa was exhibited, and the other a tour for further field work, July 28-30, on Mt. Tsurugi (1955m)

the second highest mountain in SW Japan. Thirty bryologists participated in this tour which was nearly in a state of abeyance at one time because, unfortunately, one uninvited guest named "Typhoon" joined us on July 29 on the mountain. Fortunately all were safe.

The XIV Annual Meeting of BSJ will be held, July 21-23, 1985, at Daisenji, half way up Mt. Daisen, Tottori Prefecture. The presentation of research reports, a general meeting and field work, will be organized. Further details can be obtained from Prof. Harumi OCHI, Biological Institute, Faculty of Education, Tottori University, 101 Minami 4-chome, Koyama-cho, Tottori 680, Japan.

H. Deguchi, Dept. of Biology, Faculty of Science, Kochi University, Akebono-cho, Kochi-shi, Kochi 780, Japan.

Advances in Bryology, Vol. 2.

(edited by W. Schultz-Motel)

DELAYED, NOW DUE OCTOBER, 1984.

Available from: J. CRAMER VERLAG (In den Springaechkern 2, D-3300 Braunschweig, B.R.D.) at a specially-reduced price to all fully paid-up members of IAB.

Exchange & Mart

KOELTZ SCIENTIFIC BOOKS, of D-6240 Koenigstein, P.O. Box 1360, West Germany, have written to say that they have bought the last remaining sets of 4 Vols. of:

Schuster, Rudolf M., 1966-1980. *The Hepaticae and Anthocerotae of North America, east of the 100th meridian*. 4 Vols.

and are offering the four at a special price of US \$320. (Publisher's official selling price US \$483).

Koeltz's new list (Cat. No. 304, 1984) of Bryological books available has been published. It includes 269 items.

Recent Publications

Bryologist, 87(1): 1-96, 1984; 87(2): 97-183, 1984.

Buxbaumia, No. 15: 2-60, 1984.

Evansia, 1(1): 1-12, 1984.

J. Hattori Bot. Lab., No. 56: 1-550, 1984.

Proc. Bry. Soc. Japan, 3(11): 173-188, 1984.

Taxon, 33(3): 375-561, 1984.

EVANSIA, - An information Bulletin of the American Bryological and Lichenological Society. Vol.1, No.1, 1-12, 1984.

This new venture on the part of the ABLS, is dedicated to the memory of Alexander William Evans (1868-1959), the distinguished Yale bryologist and lichenologist. It is produced under the editorship of William R. Buck who is assisted by Clair Schmidt, a lichenologist, as co-editor.

According to the editorial a primary goal is ... "to make the publication of use and interest to, but not restricted to, the knowledgeable amateur. Therefore articles dealing with the techniques of bryophyte and lichen identification and biology were thought to be particularly appropriate. We would also like articles dealing with North American bryology and lichenology, although some of these articles will surely be of wider interest".

This first issue contains a short appreciation of Evans' work an account of the 1983 Mid-west bryological foray, and articles entitled, 'Sticta, an "easy" genus becomes difficult', and 'On pseudoparaphyllia'.

It ends with notes on some recent publications of interest.

Tsvetkova, N.N., Kryukova, Z.F., Chernaya, T.A. & M.B. Chernobaeva, (compilers), 1983.

Katalog Literaturny po Mokhoobraznyum (Bryophyta) 1976-1980. Po fondam ot dela Biblioteki A.N. SSSR pri Botanicheskoy Institutu im B.L. Komarova A.N. SSSR. Sostavili Pod redaktsiei Kand. geogr. nauk I.I. Abramova i kand. biol. nauk N.N. Tsvetkovoi. Leningrad, Ordena Trudovogo Krasnogo Znameni Biblioteka Akademii nauk SSSR. [Catalogue of the literature on Bryophyta, 1976 - 1980. From the collection of the departmental library of the Academy of Sciences of the USSR at the B.L. Komarov Botanical Institute. Compiled under the editorship of I.I. Abramova and N.N. Tsvetkova.] 231pp.

This work is a continuation of the 3 parts already published and is similarly arranged. Thus it starts with a list of publications in Russian (356 items) followed by a list of 1165 items in other languages. The next section is a supplement to the earlier lists, and contains 122 items in Russian followed by 43 items in other languages. A list of sources is included.

Reese, W.D., 1984. Mosses of the Gulf South From the Rio Grande to the Apalachicola. Baton Rouge and London, Louisiana State University Press. iv-xvi, 3-252 with 58 figs.

Although lack of punctuation makes the meaning of the word South unclear in the title, this book treats the mosses of southern Texas, all of Louisiana, the southern portions of Mississippi and Alabama and western Florida, U.S.A. It is intended as an introduction to muscology (first 20 pages) and a manual of the mosses of the Gulf Coast (the remainder). Keys are provided to genera and species, most of the latter being illustrated somewhat sketchily. A good feature is the comparative notes that follow the descriptions, but a curious feature is the restriction of the main text to 2/3 of most pages. There is a glossary and a brief literature list. The good-quality paper and the elegant dust cover, together with the clearly laid-out, uncrowded pages, gives the book a nice feel.

Grolle, R. & Sinikka Piippo, 1984.

Annotated catalogue of Western Melanesian bryophytes. I. Hepaticae and Anthocerotae. Acta Bot. Fenn. 125: 1-86.

Western Melanesia is defined as West Irian, Papua-New Guinea and the Solomon Islands from where, according to this catalogue, 708 species and many infra specific taxa have been recorded. The basis for recording these taxa, whether from the literature or specimens, as well as for their detailed distribution within the area, is carefully documented. References are also given to illustrations, except those which are common in the Northern Hemisphere. The check list is followed by a set of annotations chiefly dealing with taxonomy and nomenclature. Seven new combinations and five new typifications are made and 41 new synonyms proposed. The catalogue concludes with a systematic synopsis of the 116 genera and 39 families and an extensive bibliography.

IAB Conference of Bryo-Ecology

5-10 August, 1985.

Second Circular*, 1st September, 1984.

WITH THE GREATEST PLEASURE, we would like to let you know that we have received more than 140 preliminary registrations for the Conference. The proposed programme is as follows:-

REGISTRATION FEE: U.S. \$ 60.- (for accompanying participants \$ 30.-). The registration fee covers the costs of conference hall, excursions, including buses, packed lunches and farewell party, a visit to Vácrátót, to the Institute of Ecology and Botany (with an open-air concert in the Botanical Garden), and finally (for ordinary participants) the printing costs of the Abstracts and Proceedings respectively.

ARRIVAL: Ideally on 4th Aug.

SESSIONS: 5-6-7 Aug., to be held in the Congress Hall of the Hungarian Academy of Sciences, located in the Buda Castle District.

EXCURSIONS FOR ALL PARTICIPANTS:
8. Aug. Sand steppe and semi-desert vegetation of the Kiskunság National Park.
10. Aug. Limestone, dolomite and volcanic rock vegetation, near Lake Balaton. Farewell party in the evening.

OPTIONAL SIGHTSEEING PROGRAMME: that will be organized on 9th Aug.

- Sightseeing in Budapest by bus including a visit to the main attractions of the Capital both at the Pest and Buda sites, followed by a ride to Gellért Hill, for a whole panorama view of the city.
- To Szentendre, a mediaeval town 20 km north of Budapest, with a charming atmosphere renowned as an artists' colony with several museums (Margit Kovács Ceramics Museum, open air Village Museum, etc.)

ABSTRACTS: The abstract of lectures should be in the hands of Prof. T. Simon not later than 15th December, 1984 and include title, author and his/her address. The text of the abstract should not exceed 20 typewritten lines, each not longer than 65 characters, including spaces.

ACCOMMODATION: Will be arranged according to the wish of participants, in hotels within easy access of the Conference Hall. Please confirm registration and accommodation according to the order form by 30th April, 1985, at the latest.

*for First Circular, see Bryol. Times, 24:7, 1984.

Prof. T. Pócs. Institute of Ecology and Botany, Hungarian Academy of Sciences, Vácrátót H. 2163.
Prof. T. Simon, Department of Plant Taxonomy and Ecology of the Eötvös L. University, Budapest, Kun B. tér 2., H-1083.

XIV International
Botanical Congress
Berlin (West), Germany,
24 July - 1 August, 1987.

FOLLOWING THE RESIGNATION of Dr. Wolfram Schultze-Motel as organizer of IAB's bryological Programme at the above Congress, it is announced that Dr. Wolfgang Frey of the Institute for Systematic Botany and Plant Geography of the Freie Universität, Berlin, has agreed to take over these responsibilities.

As soon as details of the Bryological Programme become available, they will be published in these columns. In the meantime bryological enquiries should be sent to Dr. Frey.

S.R. Gradstein, Institute of Systematic Botany, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands.

DIARY

BBS = British Bryological Society; CEBWG = Central and East European Bryological Working Group; IBC = International Botanical Congress; SBLS = Swiss Bryological Society and Lichenological Society. WGMBE = Working group for mapping the bryophytes of Europe.

1984

Nov. 17-18. BBS. Taxonomic Workshop. University of Keele. Local Sec.: Dr. R. Murphy, 73, St. Christopher Ave., Penkull, Stoke-on-Trent, ST4 5NA. For details, see Bull. BBS, 44.

Nov. 23-25. Bryological Workshop. Duisburg and Robertville. Organizers: Profs. R. Düll and R. Schumacker. See Bryol. Times, 26:9 for further details.

For details of BBS local meetings and Bryophyte Courses at Field Studies Council Centres, see Bull. BBS, 43:15.

THE INTERNATIONAL ASSOCIATION OF BRYOLOGISTS publishes The Bryological Times every two months, and the Advances in Bryology every two years. Material for The Bryological Times can be sent at any time, but submission dates for the Advances should be discussed with its editor. The editors do not accept responsibility for the views of authors.

For details regarding membership of the International Association of Bryologists (currently U.S. \$ 8.00 p.a.), write to the Honorary Secretary, Dr. S.R. Gradstein, Instituut voor Systematische Plantkunde, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands.

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ITEMS FOR THE NEXT ISSUE to be with the Editor, Dr. S.W. Greene, Department of Botany, The University of Reading, London Road, Reading RG1 5AQ, Berkshire, England (Telex 847813 RULIB) by 1st December at the latest. Items for the Techniques Notebook should be sent direct to Dr. Janice Glime, Department of Biological Sciences, Michigan Technological University, Houghton, Michigan 49931, U.S.A.

1985

Feb. 17-18. SBLS. Identification days. Botanical Institute, University of Zürich. Further details from Dr. K.A. Ammann, Syst.-Geobot. Institut, Altenbergrain 21, CH-3013, Bern, Switzerland.

April 17-24. BBS. Chichester, West Sussex. Spring Field Meeting. Local Sec.: Mr. R.C. Stern, Botany Bay, Main Rd., Fishbourne, Chichester, West Sussex PO18 8AX. For details see Bull. BBS 44.

April 20-21. SBLS. Valais Central (around Sion) [Central Wallis better.] Annual Assembly with paper-reading sessions and excursions. Further information from Dr. K.A. Ammann, Syst.-Geobot. Institut, Altenbergrain 21, CH-3013, Bern, Switzerland.

June 10-14. AETFAT. St. Louis. The 11th AETFAT Congress will include a symposium on Systematics and floristics of African Bryophyta on Friday 14th. Further information from Dr. R.E. Magill, AETFAT Secretariat, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri, 63166, U.S.A.

July 4-10. Brighton, England. Third International Congress of Systematic and Evolutionary Biology. Bryophyte Symposium in collaboration with the BBS. For preliminary details, see Bryol. Times, 27:8.

July 28-3 Aug. BBS. Bavarian Alps. Summer Field Meeting. Local Sec.: Prof. Dr. R. Düll. Lehrstuhl f. Biologie (Botanik), D. Pädagog. Hochschule, 4100 Duisburg 1, Lotharstrasse 65, B.R.D. Preliminary details in Bull. BBS, 44.

Aug. 5-10. IAB. Budapest and Vácrtót. Conference on Bryoecology. For 2nd circular, see this issue, page 7.

Aug. 5-11. SBLS. Field work in Engelberg (northern Alps). Further information from: Dr. K. A. Ammann, Syst.-Geobot. Institut, Altenbergrain 21, CH-3013, Bern, Switzerland.

Aug. 12-14. CEBWG. Eger, Hungary. 4th Biennial Meeting. For 1st circular, see Bryol. Times 24:7.

Sept. 16-21. Edinburgh, Scotland. 2nd Symposium on plant life in SW Asia. For preliminary details of bryological programme see Bryol. Times, 27:8.

September BBS. Paper-reading Meeting and AGM. National Museum of Wales, Cardiff. Local Sec.: Mr. A. R. Perry, Dept. of Botany, National Museum of Wales, Cardiff CF1 3NP. Preliminary details in Bull. BBS, 44.

Oct. 31-3 Nov. WGMBE. Mont Rigi. 3rd Meeting of lectures and field work in Hautes Fagnes region and in the Eifel. Further particulars from Prof. Dr. R. Schumacker, Directeur, Université de Liège, Station Scientifique des Hautes-Fagnes, B-4898 Mont-Rigi, Robertville, Belgium.

Nov. 2-3. BBS. Taxonomic Workshop, Gilbert White Museum, Selborne, Hants. Local Sec.: Dr. J.E. Chatfield, The Gilbert White Museum, The Wakes, Selborne, Alton, Hants GU34 3JH. For details see Bull. BBS, 44.

1986

Spring, BBS. Norfolk. Spring field meeting. Local Sec.: Mr. R. Stevenson, 111, Wootton Rd., King's Lynn PE30 4DJ. Preliminary details in Bull. BBS, 44.

Summer, BBS. Scotland. Summer field meeting. Local Secs.: Mr. D.G. Long, Royal Botanic Garden, Edinburgh EH3 5LR and Mr. G.P. Rothero, Benmore Centre, By Dunoon, Argyll, Scotland. Preliminary details in Bull. BBS, 44.

1987

July 24-1 Aug. XIVth IBC Berlin (West). Preceded by IAPT Nomenclature Sessions, July 20-24. For preliminary notice, see Bryol. Times, 23:9. Congress Address: XIV IBC. Bot. Garden & Museum, Königen-Luise-Strasse 6-8, D-1000, Berlin (West) 33, Germany.