

The Bryological Times
March 1982, Number 13
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The BRYOLOGICAL TIMES

Newsletter of the International Association of Bryologists

March 1982

No. 13.

BRYOLOGY AND THE DESKTOP COMPUTER

By R.E. Magill

OVER THE LAST FIVE YEARS, rapid advancements in the field of micro-processing (desktop computers) have produced a unique opportunity for the scientific community, i.e. personal, affordable computers.

Most of the development in data-processing has taken place in aerospace and related industries. However a driving force from outside has been the demand for word-processors by small businesses, a demand that has resulted in significant price reductions while retaining the flexibility of the micro-processors, so useful to scientists.

The three most important differences between the 'large computers', most commonly available to scientists, and the new microprocessors, can be summarized as follows:-

1. Low cost The desktop computers capable of manipulating data and/or text from scientific research, and the peripherals necessary for hard-copy output, fall within two price ranges. The first group of smaller computers has prices ranging from between \$2,000 and \$10,000. In the second group, consisting of more advanced units (in many ways favourably comparable with 'large computers'), computers are available for between US\$20,000 and \$40,000.

The cost of the microcomputer itself is generally at the lower ends of these ranges, its price increasing with the addition of peripheral equipment as needed.

2. Simple Operation The micro-computers operate on modified forms of BASIC, a simple and easily-mastered language. Most units also prohibit syntax errors during programming, a great help to beginners that almost eliminates debugging. In addition, many of the micro-computers can be quickly programmed to accept other languages, e.g. PASCAL, APL, etc. a useful option if programming is done by someone other than the user. It should also be noted that a large number of standard programmes are available for sale or exchange, thus shortening and simplifying system development.

3. Free access Perhaps the most important advantage of the micro-processor is its accessibility. To anyone who has experienced delays and queues on a large computer, the instant response of the desktop computer will be a

Outstandingly Successful Conference

XIII INTERNATIONAL BOTANICAL CONGRESS, SYDNEY, AUSTRALIA - AUGUST, 1981.

By W. C. Steere

AS THE FIRST INTERNATIONAL BOTANICAL CONGRESS to be held in the Southern Hemisphere, the XIII Congress attracted many bryologists from all parts of the world who wished to learn more about the "curious and diverse" flora and fauna of Australia. The first bryological event was the Bryophyte Field Trip (16-20 August), which started in Melbourne and travelled via Mildura to Sydney. Led by Drs. Patricia Selkirk and George Scott, it was well attended by an international group of bryologists. Well-known Australian bryologists participating in the field trip were Ilma Stone and Helen Ramsay, so that the identification of specimens presented little problem. As late winter rains had fallen at the most opportune time, bryophytes were at their best, so that visiting bryologists could see in the field for the first time many fascinating genera including *Gigaspermum*, *Goniomitrium*, *Eccremedium*, *Bryobartramia*, *Carrpus* and *Dawsonia*.

delight. In addition to the time saved through free access, if a user is purchasing computer time, the micro-processor will quickly pay for itself. The expense of "on site service contracts" for the microprocessor is similar to rental costs of standard terminals, printers and connecting telephone lines.

FORM The microprocessors can be divided into three groups: (i) Data-processors; (ii) Word-processors; and (iii) 'combinations', i.e. either data processors with word-processing capabilities or the reverse. The 'combination' micro-processors are the most flexible and therefore the most useful in scientific research.

An important feature of micro-processors is that they can be easily and quickly upgraded, as requirements or objectives change. In this regard the industry has produced a large variety of peripherals. For instance, micro-computers have only a small amount of internal memory in which to store data or programmes. Most rely on tapes or discs as data storage media. External cassette recorders are commonly used on the smallest units, but they are slow and inefficient. Storage capacity and operational efficiency can be increased by addition of tape drives,

The original organizing committee, for the Congress did not plan for a separate section of bryology, although one had been in the preceding congress. At the urging of George Scott and other Australian bryologists, with the support of the Officers of IAB, a subsection, 8A, Bryology, was appended to Section 8, Systematic and Evolutionary Botany. In spite of its status as something of an afterthought, this *de facto* bryology section provided an outstanding series of symposia (24-26 August), so much so that on several occasions the size of the audience in the McCrae theatre, with a seating capacity of 70-80, attracted over 100. The titles of the symposia and the names of their convenors have already been published in *Bryol. Times* 12: 1-3. In addition to the papers formally delivered, much original and interesting information was presented in the form of many posters which were exhibited in a large and well-lighted hall.

Cont. p.4

(0.5 m bites), floppy discs (2.5 m bites), or hard discs sealed in special environments (12 m bites).

Another important part of micro-processing is the output of results. Most desktop computers produce a visual display of output on monitors or TVs. Several also have, as standard equipment, complex colour graphics displays. Hard-copy output is, however, not only useful but often required for later comparison or publication. This makes the addition of a printer or plotter a necessity for any unit used in scientific research. As is the case with the data storage media, a large variety is available. For example contact printers come with or without the option of lower case letters; in dot matrix (most commonly used by 'large computers') or in typewriter type (frequently used for personalized junk mail)- or with dual printing heads for multiple type printing.

FUNCTION The following examples have been chosen to illustrate only a few of the possibilities available with a medium priced micro-processor equipped with a printer and plotter.

Data Processing The data-processor is designed for data storage and retrieval and will perform numerous opera-

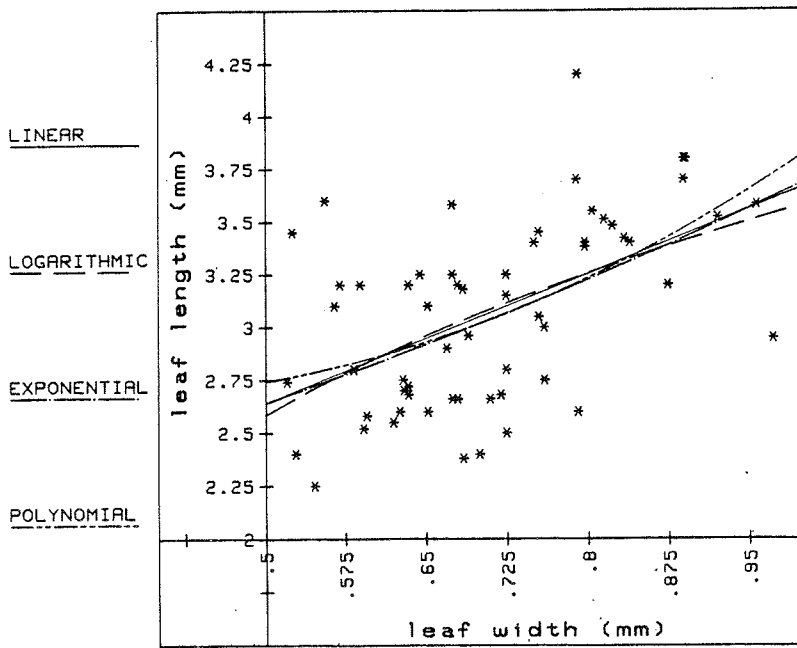


FIG. 1 - Scatter diagram of variation in leaf length and width with linear regression and logarithmic, exponential and polynomial curves through points.

operations that include comparing, sorting or manipulating various types of data. These data can be as simple as numbers (i) representing X,Y co-ordinates for scatter diagrams or as complex as lists of strings; (ii) representing scientific names, label data, or literature references that must be sorted and printed.

(i) The computer is probably most widely known for its ability to manipulate numbers. This ability can be used to compare character measurements and display results as scatter diagrams, dendrograms or histograms; important tools in systematic research.

The programme used to plot the scatter diagram in Fig.1 also performed a regression analysis on the data. This statistical analysis, previously a laborious task, was done quickly and accurately by the micro-computer. The resultant diagram more clearly establishes the relationship among the data points and reduces the significance of errors in observation.

Use of microcomputers in ecological data analysis clearly demonstrates the benefits of free access and operator-computer interaction. The computer is very good at performing numerous or prolonged operations, and comparing numbers very quickly, but is inherently weak in deciphering patterns. On the other hand, the human brain is quick to spot developing patterns, but slow and easily distracted when performing repetitive mathematical operations. Thus the opportunity of uninterrupted interaction between microcomputer and operator is extremely valuable in certain areas of ecology. For example, in ecological modelling and theoretical ecology, where interacting processes in the environment are reflected as mathematical equations, the possibility of numerous alterations to stimulus or response parameters is an extremely important aid, quickly and easily performed by the microprocessor.

Mapping is another interesting possibility with microprocessors. Whether for species distribution maps (Fig.2) or Braun-Blanquet tables, the plot is only a form of scatter diagram. In the former longitude and latitude are entered as X, Y co-ordinates; in the latter relevé data and taxa. The computer would then be used to collate, plot and label the diagram.

(ii) The microprocessors can also manipulate strings (data in the form of words or groups of characters). This of course opens up a large variety of

curatorial and administrative functions.

For example specimen label data for small herbaria or specimens used in a revision could be encoded and the microprocessor used as a storage and retrieval system to provide loan lists, distribution data (for mapping, or lists of specimens examined), type registers, etc. In the same way combinations of strings and numbers could be stored, with a programme giving access to both data types, i.e. a list of all species and their reported chromosome numbers. The microprocessor could be used to search for specific numbers or sort by taxa, and print-out lists arranged by numbers, genera, etc.

Label production by microprocessor, whether for address lists or herbarium specimens, is also a helpful and time-saving procedure. In the case of herbarium specimen labels (Fig.3), the general locality data are entered only once. As specimens are identified, their names and specific details (such as collection no., substrate, aspect, etc.) are encoded. The microcomputer then combines the general locality data with the specimen data to produce a label. The programme can also print a specified number of labels for duplicates or, as in the example shown here, use a format for preprinted stationery.

NATIONAL HERBARIUM PRETORIA		77-66	
2929 CC	Grid Ref./Reference	Page	LL507HO
R.E. Magill	Legit. No. 4324	Anno Alt.	4 Dec 1977 7900*
Bartramia hampeana C. Ruell.			
Seshiathobe National Park. Hills around sandstone outcrops just E of Looge.			
Moist grassland.			
In rock crevices.			
R&M, 1961	Det.	Ref./View	

FIG.3.- Herbarium specimen label typed by microcomputer.

Word processing Text editing programmes, now available for most microprocessors, will turn the data-processor into an adequate word-processor. Although not as fast or easy to use as a microprocessor made for word processing, with a good printer, and the option of upper and lower case lettering, data-processing equipment is fully capable of handling scientific manuscripts.

The time saved in reorganizing, re-typing and proof-reading is significant. In addition, the microprocessor could be programmed to produce lists, charts, tables, etc. for the manuscript from data entered during the research.

Camera-ready copy is also possible with a few data-processors, but certainly more expensive and probably best left to equipment specifically designed for word-processing. Current trends are to produce in-house tapes that are compatible with the printer's computer-type setter.

In conclusion, the microprocessor

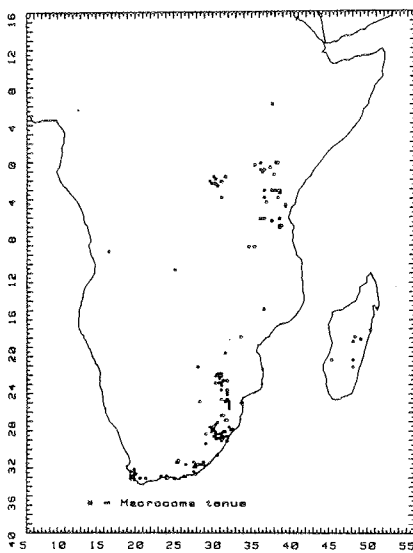


FIG.2.- African distribution of *Macrocoma tenue* subsp. *tenue*; asterisks and dots plotted by micro-computer.

provides us with a unique opportunity. Many of the important long-term projects (type register, chromosome index, literature lists) discussed at the IAB Geneva Workshop are (or would be) managerially difficult and time-consuming tasks. In addition, there has been little prospect of widespread dissemination of this type of information outside the present journal format. Microprocessors can provide a simple and reliable method of storage and retrieval for these larger, long-term projects as well as ready access to critical information at a reasonable cost and effort.

Botanical Research Institute, Private Bag X101, Pretoria 0001, South Africa.

INDEX ICONUM MUSCORUM

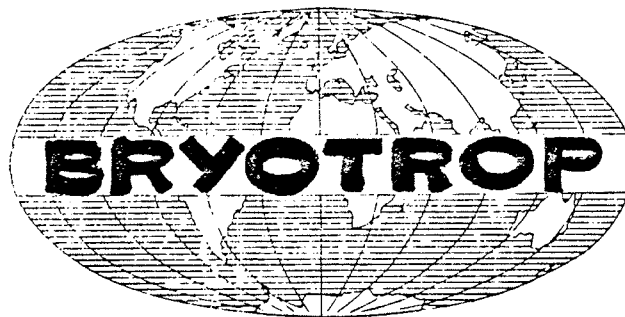
THE INITIAL ANNOUNCEMENT of this project was made in the first number of *The Bryological Times* (January 1980). Our goal is to index all illustrations of mosses from 1801 through 1980. Supplements are planned. Although the nomenclatural starting-point for *Sphaerium* is pre-Hedwigian, we have decided that such early illustrations are not critical; all species figured before 1801 have subsequently been illustrated and these are more accessible. We are indexing both line drawings and photographs from journals, monographs and floras. Illustrations in general biology/botany textbooks are not included (the index should include ample references to *Funaria* and *Polytrichum*, without these sources). Also omitted are subcellular illustrations, i.e. chromosomes and TEM photographs. However early books, such as William Gardner's *Twenty lessons on British mosses*, in which specimens are glued into the book as a means of illustration, are included. Aspect photographs are arbitrarily selected depending on whether we decide we can see the moss. Illustrations labeled only to genus are not indexed.

Entries are arranged by the name given in the publication. Bibliographic citations are as complete as possible, such as the fascicle number in journal volumes and works issued in parts. The years cited are those listed in the publication to more readily facilitate its recovery from a library; the *Index* is not meant to be used as a means to discern accurately the date of publication of the bibliographic entries. When an illustration accompanies a description of a new taxon that information is indicated. All taxa from the level of species to sub-form are included.

At present the indexing is restricted to those materials contained in our institutional libraries. Eventually we hope to visit major botanical libraries in Europe and Japan. The initial estimate of two years to finish this project was much too short. We now anticipate about 10 years to completion. Publication will probably be by The New York Botanical Garden.

William R. Buck, The New York Botanical Garden.

Ronald A. Pursell, The Pennsylvania State University.



THE GERMAN RESEARCH FOUNDATION has granted funds for a two years' project entitled "Ecology, sociology and evolution of tropical rain forest bryophytes" (BRYOTROP). Participants in this project are Dr. Jan-Peter Frahm (University of Duisburg), Dr. Wolfgang Frey, (University of Berlin), Dr. Georg Philippi (Natural Science Museum, Karlsruhe) and Dr. Wolfram Schultze-Motel (Botanical Museum, Berlin).

Field work will be carried out from July to September 1982 in Peru. There a transect is planned, reaching from the Amazon lowlands to the timber line of the eastern Andes with representative studies being made on the floristic composition, sociology and ecology of bryophytes at intervals of 100m altitude. Additional studies are

planned at the Institutes in Germany concerning the taxonomy of special groups and the water conducting system of pendulous and dendroid mosses by ultrastructural analyses. Similar studies, using the same methods, are planned in the future in Cameroun and New Caledonia to give a comparison of the structure of bryophytic vegetation in the tropical rain forests of different parts of the tropics.

Bryologists interested in special genera or families of bryophytes from N.E. Peru, or in other aspects of this project, should write to one of the participants mentioned above.

Jan-Peter Frahm, Universität Duisburg, Fachbereich 6, Botanik, Postfach 101629, D-4100 Duisburg, B.R.D.

SHOULD THE REVUE BRYOLOGIQUE ORIGINAL SERIES, BE PHOTO-REPRODUCED?

AS WILL BE KNOWN TO MANY, copies of the original series of the *Revue Bryologique* are no longer available in hard-back form. They may, however, be obtained in a microfiche edition from the Inter Documentation Company, A.G. Poststrasse 14, 6300 Zug, Switzerland.

Not everyone has a microfiche reader easily to hand, and as not all of the latter will produce hard copy, there are inevitably problems with microfiche for some types of work, e.g. when examining a plant under a microscope against a description. In recent correspondence between the Editor and M. D. Lamy of the Cryptogamic Museum in Paris about the availability of the original series, M. Lamy asked if the readership of *The Bryological Times* could be consulted about the likely demand for a photo-reproduced hard copy set.

If you, or someone you know, an institute, or a university library, might be prepared to purchase a set, provided the cost was not too high, would you please write directly to M. D. Lamy.

If you have an opinion about any other bryological serial which you think should be re-issued in microfiche or hard back form, and would care to canvass the opinion of the readership through these columns, the Editor would be pleased to hear from you.

S.W. Greene

Personalia

PROF. D.G. CATCHESIDE, F.R.S., has been elected an Honorary Member of the British Bryological Society.

DR. JANICE GLIME will be in Heidelberg, Germany, working with Dr. Martin Bopp on effects of hormones on bryophytes from 20 April until mid July. Her address will be c/o Dr. Martin Bopp, Botanisches Institut der Universität-Heidelberg, Bundesrepublik, Deutschland.

DR. T. PÓCS writes that recent visitors to Vácraót included our Honorary Secretary, Dr. S.R. Gradstein, Dr. Rychard Ochyra from Krakov and Sta. Deisi Reyes Montoya from Cuba. Sta. Reyes arrived early last October for a half year stay to finish her post graduate studies. Dr. Pócs hopes to visit Cuba in the Spring of this year.

MISS ANNE SÉE. The second "Prix Scientifique Philips pour les Jeunes", for 1981 has been awarded to IAB's youngest member, Miss Anne Sée (born 1964) 36, Rue des Fédérés, 93100, Montreuil, France, for her comparative study on the bryophyte flora of the island of Corsica.

Anne Sée will show her results at a special session in the Philips Headquarters in Eindhoven, The Netherlands, in May 1982.

Miss Sée has this year entered studies in biology at the Faculté des Sciences in Paris.

A NEW LOOK FOR THE BRYOLOGICAL TIMES

RIISING PRODUCTION COSTS - paper and xeroxing charges, the cost of envelopes as well as the ever-increasing postage charges, have necessitated some changes in the appearance of The Bryological Times, as well as in its method of production.

It seems that many readers did not like the old page size, which was marketed by Rank Xerox as American foolscap. It was liked by your Editor, as it was a little wider and, of course, larger than A4, so more print could go on a page. Once the insidious financial pressures of modern life dictated that this page size should be changed to the cheaper A4, the Editor decided to 'set' his copy on a much larger sheet (420 x 297 mm)! Photo reduction gives the present three-column page with a print size similar to much newsprint. So there should be no need for readers to rush and purchase stronger spectacles!

From the point of view of copy, the real bonus is that an issue of 4 leaves (i.e. 2 pages) at this new size about equals an 8-leaf (i.e. 4-page) issue at the old foolscap size, thus substantially reducing costs. The use of offset litho for printing the required number of copies per issue offers a further saving. Another advantage of the new layout is that with 3 columns, more variation in the appearance of each page is possible.

Increasing the size of the sheet on which the copy is typed necessitated new lettering and art work, so the opportunity was taken to experiment with a new-style title and page head.

All printable comments about the new look will be published.

- SYDNEY BRYOLOGICAL CONGRESS
(Contd. from page 1)

Other field trips in which bryologists took part were a one-day congress trip to the Blue Mountains, and an unscheduled visit to Somersby Falls led by George Scott, for some 20 bryologists. At the end of the congress, others joined in a one-week trip to the Blue Mountains. Many bryophytes of interest to Northern Hemisphere bryologists were seen for the first time e.g. *Dawsonia*, *Hypnodendron*, *Tortula papillosa* in fruit, *Campylopus* spp., *Geobellobryum*, etc.

Thanks to the generosity of S. Hattori, the bryological proceedings of the Congress will be published, beginning early in 1982 in the Journal of the Hattori Botanical Laboratory, compiled and edited by Helen Ramsay, George Scott and Patricia Selkirk.

One item, so far omitted, must not be forgotten. By far the most important event of a social nature was the bryological banquet and business meeting held at Macquarie University. The before-dinner business session was kept as informal as possible by Lewis Anderson who, with typical good humour and amusing stories, handed over the gavel and the presidency of the International Association of Bryologi-

ADVANCES IN BRYOLOGY

Edited by W. Schultze-Motel, Botanisches Museum, Berlin-Dahlem

Editorial Board:- E.-J. Bonnot, S.R. Gradstein, S.W. Greene,

S. Hattori, N.G. Miller

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Preface

- M. BOPP : Entwicklungsphysiologie der Moose
B. CRANDALL-STOTLER : Morphology/anatomy of Hepatics and Anthocerotales
W. FREY : Morphology und Anatomy der Laubmoose
Z. IWATSUKI : Taxonomy of mosses
M.C.F. PROCTOR : Physiological ecology of bryophytes
C. SUIRE & Y. ASAKAWA : Chimie et chimiotaxonomie des bryophytes
B.O. van ZANTEN & T. PÓCS: Distribution and dispersal of bryophytes

The Advances in Bryology is an official publication of the International Association of Bryologists, and will appear biennially. It has as its aim the presentation of authoritative and up-to-date reviews, essays and surveys of the different fields of bryology, written by established authors, many of whom are leaders in their fields.

SPECIAL OFFER

J. CRAMER VERLAG (In den Springaeckern 2, D-3300 Braunschweig, W. Germany) is pleased to offer one copy of this number, at a specially reduced price, to every fully paid-up member of the International Association of Bryologists. Details, together with an order form, will be found on the Advertising leaflet which is circulated with this issue of The Bryological Times.

sts to the newly-elected incumbent, Hiroshi Inoue. This was without doubt the most painless business meeting in the history of IAB! The freely-flowing Australian vintage white wine, apparently in unending supply, contributed much to the festive air and light-heartedness of the occasion. After a delicious buffet dinner, we were graciously entertained by bryologists of several nationalities. First, Rob Gradstein and Patricia Geissler presented a programme of music, in which Rob played the cello brilliantly, accompanied by Pat on the piano, and then Wolfram Schultze-Motel sang several songs. The resulting applause was fully merited. Several individual acts followed, representing several countries. As we left the banquet hall, we were given the opportunity to sign greeting cards to be sent to our less fortunate bryological colleagues who were for one reason or another unable to attend the Congress. Occasions such as this one will long remain in our memories, since they give such clear evidence of the oneness of our far-flung international community of bryologists.

To sum up, in an international botanical congress for which no bryolog-

ical section had been planned originally, bryology nonetheless assumed an important role. For the creation of an outstandingly successful bryological programme of symposia and field excursions, we bryologists of other nations owe a very deep measure of appreciation and gratitude to the handful of dedicated Australian bryologists who achieved such success, especially George Scott, Patricia Selkirk, Helen Ramsay, David Catcheside and Ilma Stone.

New York Botanical Garden
Bronx, New York 10458, U.S.A.

SPIRAL MOSSWORD

A NOVEL PUZZLE under the above title from the pen of an irrepressible R. Rednaz was published in Bryol. Times 11/8.

Strange to relate, there has been no reply received - not one! I have not dared to tell him! Will no one try it?

The correct solution will appear in the next issue.

A NEW YEAR'S GREETING

Lieber Herr Dr. Grolle!

In diesen letzten Tagen des alten Jahres rüttelte mein Gewissen in mir und befahl: Noch ehe der Hahn zum letztenmal in diesem Jahr gekrätzt haben wird, muss ein inhaltsschwerer Brief an Deinen guten Freund RICLEF in Jena unterwegs sein! Und unter solchem "Gewissenzwang" kommt nun dieser Brief zustande!:

Was ich mir in diesem Jahr an Schreibfaulheit geleistet habe, ist absoluter Rekord, Herr Meinunger, Herr Marstaller und auch Herr San.Rat Eckhardt werden mich längst aufgegeben haben. Auch Ihnen schreibe ich 1/2 Jahr lang nicht. Nun heisst es "Wiedergutmachung" leisten, und allein deswegen zog ich in hessischen Gefilden aus, 1-2 "Rosinen" für Sie und alle Freunde zu "pflücken".

Ich erinnere mich mit Freuden unserer gemeinsamen Exkursion ins Lahntal zu *Scapania gymnostomophila* und *Lophozia perssonii*. Während des Gesprächs erinnerten Sie mich auch an *Anthoceros neesii*.

Am 15 September 1980 fuhr ich per Auto für 5 Tage in die Rhön, um mein Prominenten-Messtischblatt KLEINSASSEN weiter unter die Lupe zu nehmen. Vorläufiges Ergebnis 420 Species, davon 97 Lebermoose! Ich wählte auf dem Hinweg und notwendigerweise auch am Rückweg die ruhiger Strecke über den Vogelsberg, der bryologisch auch heute noch ein wenig im Abseits steht. Just 1 km nördlich des Städtchens Gedern lockten Getreide-Stoppeläcker, hier mal eine Stichprobe auf *Anthoceros neesii* zu machen. Ich war überrascht von der reichen Flora, viel *Anthoceros* und viel *Riccien*. Ich freute mich, dass der Bauer hier von der verheerenden Minereraldüngung noch nicht Gebrauch gemacht hatte. Aber - met Ihrem geistigen Beistand - achtete ich eben auf die kleinsten Antho-Rhinoceroten, fand recht viel von diesem Gemüse, ohne zunächst überzeugt zu sein, was ich da gefunden hatte.

Schon wollte ich weiterziehen, denn für meinen Rhönaufenthalt hatte ich kein Quartier im vorhinein reservieren lassen. Mit dem Messer stach ich noch einige grössere Ackerbrocken, mit schönen antho-erotischen Rosetten. Beim Betrachten des letzten Brockens unter der Lupe bemerkte ich da eine auf fällig kleine gelbgrüne Rosette mit fast wagrecht aufliegenden Sporogonen, genauer gesagt mit Hüllen (Perichätien), in denen bei genauester Betrachtung die Spitzen einer fast schwarzen eiförmigen Kapsel gut zu erkennen waren. Da gab es nur eine kurze Überlegung: *Anthoceros* hat doch keine schwarze Kapsel, sondern eben die Sporenmasse in fadenförmig-aufrechten Sporogonen.... Fazit: Es konnte nur *Notothylas* sein! Die Freude - zunächst recht vorsichtig - war gedampft. Nun, wo ist ein 2. Exemplar? Ich suche kramhaft an die 5 Minuten, aber nichts, rein garnichts! So fuhr ich weiter in die Rhön, hanged und bangend, immerwieder enttäuscht, dann wieder Hoffend! Ich schwor mir: Aber auf der Rückfahrt, da nehme ich mir Zeit - das ganze Feld wird abgesehen!

Und so geschah es auch: Ich begann am anderen, oberen Eck des grossen Haferfeldes, auf einer Auto-Fussmatte kniete ich nieder - als echter "Mooslem" und nun erlebte ich einen jener seltenen Augenblicke des Glücks; denn rings um mich "hatten sich eine Unzahl *Notothyl-Asse* versammelt, um mir zu huldigen".....! Alles Weitere was Routinesache, ein Geduldsspiel! Bislang fand ich *Notothylas* auf 15 Äckern in maximal 10 x 6 km Distanz - und dies ist erst der Anfang meiner Suchaktionen! Überall fand ich neben *Notothylas* auch *Anthoceros neesii*, ja es scheint, dass dieses Übersehene, Moos verbreiteter im Vogelsberg ist. So war *Notothylas* im Niddertal bei 380 m. vorläufig noch da, während ich höher, bei Herchenhain am Ernstberg bei 610m nur *A. neesii* allein fand....

Soviel für heute! Lachen Sie, schmunzeln Sie und staunen Sie ein wenig darüber, was Ihr kapita-listiger Freund als Mooslem über antho-erotische Funde und Befunde zu berichten weiss!:

Herzlich grüssend, Ihr J. Futschig.

Chinese gallnuts have long been a valuable forest by-product in hilly regions of our country, the horned galls produced on sumac trees (*Rhus* sp.), in response to attacks by aphids *Schlechtendalia* sp., being the most important.

From the beginning of the second world war, Prof. Ch. Tang of Chekiang Agricultural University, has been studying ways of increasing the production of these Chinese gallnuts. He found that the horned gall aphid is one of the most important aphids, and that their numbers are closely related to the availability of their winter host plants - *Plagionium maximoviczii* (Lindb.) Kop., *P. cuspidatum* (Hedw.) Kop. and *P. versicatum* (Besch.) Kop.

Since species of *Plagionium* constitute one of the essential requisites in the production of gallnuts, protection of the over-wintering populations of *Plagionium* spp. is essential to the success of the gallnut crop.

Institutum Botanicum, Academia Sinica, 141 Hsi Chih Men Wai Ta Chie, Peking, China.

SOME USES OF MOSSES IN CHINA

by

P.C. Wu

FROM THE MIDDLE of the eleventh Century, *Polytrichum commune* has been recorded in the Chinese book of herbal remedies "Jia You Ben cao" as the best of the well-known "medicinal" mosses. Since then it has been used in China as an antipyretic (i.e. in the prevention of fever), as a detergent or cleansing agent and as a diuretic.

In 1976 the staff of the laboratory of the fourth medical school went to East Sezhuan to gather information on the use of mosses by peasants and found that *Rhodobryum giganteum* was used to cure angina. An ether extract of this species was found, on analysis, to contain volatile oils, lactones and aminoacids. This extract, when tested on animals, increases the rate of flow in the aorta of white mice by over 30%, causing a reduction in the amount of oxygen resistance. Thus *Rhodobryum giganteum* (Schwaegr.) Par. can be of use in the treatment of cardio-vascular disease.

CHANGE OF CURATOR AT PENICUIK

ALTHOUGH DR. S.W. GREENE has now left the ITE station at the Bush Estate, Penicuik, as reported in *Bryol. Times* 11:7, the Bryophyte Herbaria (ACHE & AAS) remain in Penicuik under the curation of Mr. B.G. Bell, who will be pleased to help anyone wishing to obtain loans or specimen data. The taxonomic studies on sub-Antarctic and Antarctic mosses currently being undertaken at Penicuik will continue. The full address is: Institute of Terrestrial Ecology, Bush Estate, Penicuik, Midlothian, Scotland, EH26 0QB.

GUIDE TO LIVING COLLECTIONS

MR. M.V. FLETCHER of 70, South Street, Reading, Berkshire, England, is compiling an updated guide to the contents of living collections of bryophytes. He would be pleased to hear from anyone maintaining plants of interest on a reasonably long-term basis.

In addition to a list of species a few sentences about the mode of cultivation would be appreciated.

Merger of The Bryological Times and The Bulletin of Bryology

AS OF JANUARY 1982, the *Bulletin of Bryology* will cease to exist as a separate news column in *Taxon*. As a matter of efficiency it has been decided to incorporate all news items concerning bryology in *The Bryological Times*, including such items as "News on Institutes", "Herbaria", "Research News", etc., traditionally published in the *Bulletin*.

Contributors are invited to send their items direct to the Editor of *The Bryological Times*, Dr. S.W. Greene.

Publication of bryological news in *Taxon* remains possible however through the column "News and Notes" edited by Dr. R. S. Cowan, Department of Botany, Smithsonian Institution, Washington D.C. 20560, U.S.A. Those wishing to publish news in *Taxon* should send their items directly to Dr. Cowan.

S.R. Gradstein, Hon. Sec. I.A.B.

DIARY

SECRETARIES OF BRYOLOGICAL SOCIETIES, organizers of symposia, workshops or anyone with knowledge of a meeting or event of interest to bryologists which has not yet taken place, and has not already been noticed in these columns, are asked to send details direct to the Editor of this Newsletter. The more complete and up-to-date the diary the more useful it will be.

ABLS = American Bryological and Lichenological Society; BLAM = Bryologisch-lichenologische Arbeitsgemeinschaft für Mitteleuropa; BBS = British Bryological Society; CEBWG = Central and East European Bryological Working Group; DBS = Dutch Bryological Society; SEB = Society for Experimental Biology; WMBE = Working Group for Mapping the Bryophytes of Europe.

1982

- 14-21 April. BBS Spring field meeting Okehampton, Devon. Local Sec.: Dr. M.C.F. Proctor, Dept. of Biological Sciences, Hatherley Laboratories, University of Exeter, Prince of Wales Rd., Exeter, EX4 4PS, England. For details, see Bull. BBS, 39: 21-23.
- 30 Apr. - 3 May. DBS. Netherlands. Annual Meeting. Information and registration: H. van Melick, Unistate 47, Eindhoven, Netherlands.
- 14-16 May. BLAM. Marktheidenfeld, W. Germany. Annual field meeting along the Main between Würzburg and Aschaffenburg, south-east of Frankfurt. Information and registration (before March 31): Dr. G. Philippi, Landessammlungen für Naturkunde, 7500 Karlsruhe, W. Germany.
- 14-19 June. CEBWG Prague. 3rd Biennial meeting. For details, see Bryol. Times 9:10.
- 6-8 July. SEB. Dublin, Ireland. Experimental biology of lichens and mosses. Offers of papers and details: Prof. D.H.S. Richardson - School of Botany, Trinity College, Dublin 2, Ireland.
- 28 July - 4 Aug. Summer field meeting, Penrith, Cumbria. Local Sec.: Mr. P. Taylor, 2 Meadows, off Sedbergh Rd., Kendal, Cumbria. For details, see Bull. BBS 39: 21-23.
- 7-8 Aug. ABLS. Pennsylvania, U.S.A. Annual Foray. For preliminary announcement see Bryol. Times 12:7.
- Sept. 1982. Eifel, W. Germany. Field meeting based on Ripsdorf (near Blankenheim), organized by Prof. Dr. R. Düll, Gesamthochschule, F.B. Biologie, Lotharstr. 65, 4100 Duisburg, W. Germany.
- 24-26 Sept. BBS. Paper reading meeting and A.G.M. Nottingham. Local Sec.: Dr. J.O. Rieley, Dept. of Botany, University of Nottingham, University Park, Nottingham NG7 2RD

England. For preliminary notice, see Bull. BBS 39: 21-23

30 Oct. - 2 Nov. WMBE. Belgium. Second meeting in Mont Rigi, Ardenes. Information and registration; Prof. R. Schumacker, Station Scientifique des Hautes Fagnes, Mont Rigi, B-4898 Robertville, Belgium.

27-28 Nov. BBS. Taxonomic Workshop Bradford, Local Sec.: Dr. M.R.D. Seaward, Postgraduate School of Studies in Environmental Science, University of Bradford, Bradford, BD7 1DP, England. For Preliminary notice, see Bull. BBS, 39:21-23.

For details of BBS local meetings during 1982, see Bull. BBS, 39: 23-24.

1983

1-11 Feb. 15th Pacific Science Congress. Dunedin (New Zealand). For preliminary announcement see Bryol. Times 3:4. Information from: The Secretary General, 15th Pacific Science Congress, P.O. Box 6063, Dunedin North, New Zealand.

22-28 May. Tokyo. World Conference of Bryology. For preliminary notice see Bryol. Times 12:5. Further details from: Dr. S. Hattori, Botanical Laboratory, Obi, Nichinan-shi, Miyazaki Pref. 889-25, Japan.

8 June. Palermo, Sicily. Symposium on Mediterranean Cryptogamic Botany and meeting of the newly-established OPTIMA Bryophyte Working Group (concurrent with the biennial OPTIMA congress in Palermo, 4-13 June, 1983). Information: Dr. C.C. Heyn, Dept. of Botany, Hebrew University of Jerusalem, Israel.

Desiderata

IN ASSOCIATION with my revision of New Zealand *Macromitrium*, I have been trying to locate the herbarium of Richard Helms (1842-1914). According to the Index Herbariorum Collectors Index his herbarium is at MANCH; however, there are no New Zealand specimens there that match the names described by C. Mueller. I would appreciate any information as to where Helms' specimens might be located.

Dale H. Vitt, Department of Botany, University of Alberta, Edmonton, Alberta, Canada R6G 2E9.

Recent Publications

- Advances in Bryology, Vol. 1, 1981.
- Bull. Br. Bryol. Soc. No. 39, 1982.
- Cryptogamia, Bryol. Lichen 2(4), 1981.
- J. Hattori bot. Lab. 50, 1981
- Miscnea bryol. lichen 9 (3), 1981
- Nova Hedwigia 34 (3/4), 1981.

MARGADANT, W.D. & L. TERKEN 1981. Index of author abbreviations in the Index muscorum. Utrecht, Instituut voor geschiedenis van de biologie R.U.U. 28 pp.

A list of abbreviated and unabbreviated names of authors, referring to more than 1100 people, thus amplifying the incomplete list of 429 names in Index muscorum, Vol. 1, p. xxi-xxv.

EXCHANGE AND MART

Still Available

BARTRAM, E.B. 1949. Mosses of Guatemala. Fld. Bot. 25: 1-442. Reprinted 1972. Price U.S. \$8.00

Orders to Department of Publications, Field Museum of Natural History, Roosevelt Rd. at Lake Shore Drive, Chicago, Illinois 60605, U.S.A.

Wanted

Buxbaumia Vols. 1 and 2, 1947-48. S.W. Greene, Department of Botany, The University, London Road, Reading, Berkshire RG1 5AQ, England.

For Sale

Unbound copies of Stephani, Species Hepaticarum Vols. 4, 5 and 6 at U.S. \$6.-- (D.f. 15.--) per volume, including postage. Orders to S.R. Gradstein, Institute of Systematic Botany, Heidelberglaan 2, Utrecht, The Netherlands.

THE INTERNATIONAL ASSOCIATION OF BRYOLOGISTS publishes The Bryological Times every 2 months, and Advances in Bryology every 2 years. A submission date for the Advances should be agreed with Dr. W. Schultze-Motel (Berlin). The editors do not accept responsibility for views expressed by authors in any of the articles published under their control.

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

ITEMS FOR NEXT ISSUE of The Bryological Times to be with the Editor, Dr. S.W. Greene, Department of Botany, The University, London Road, Reading, Berkshire RG1 5AQ, England, (Telex 847813 RULIB) by 15 April at the latest

Correspondence concerning mailing etc. of The Bryological Times to M.A. van Slageren, Instituut voor Systematische Plantkunde, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands.

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