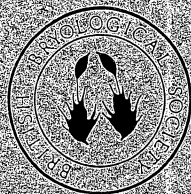


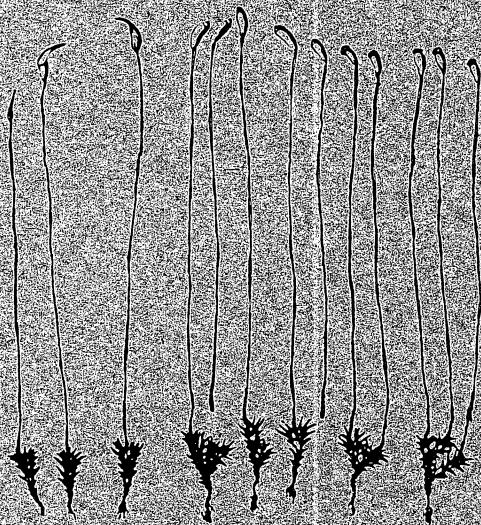
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OF THE
BRITISH BRYOLOGICAL
SOCIETY

Edited by A. R. Perry



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PRESIDENT: G. BLOOM Esq.



BULLETIN

No. 50

July 1987

Edited by A.R. Perry

National Museum of Wales

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NOMINATIONS OF OFFICERS AND ELECTED MEMBERS OF COUNCIL

Mr P.J. Wanstall, currently Vice-President, will succeed Mr G. Bloom as President of the Society on 1 January 1988 for a two year term. The terms of all other officers expire at the end of 1987, and nominations are invited. Present officers are eligible for re-election but Mr R.J. Fisk (Reading Circle Secretary) and Mr C.D. Preston (Conservation Officer) wish to resign. Three elected members of Council, Mr L.T. Ellis, Mr F.J. Roberts and Dr P.E. Stanley also retire at the end of 1987. They are not eligible for re-election until two years have elapsed and nominations for their replacement are invited. Nominations for officers and elected members should be sent to the General Secretary, Dr R.E. Longton, Department of Botany, The University, Reading, RG6 2AS by 29 August 1987. Nominations must not be made without the consent of the person concerned. If elections are necessary they will be held at the AGM at Wye College, Kent on 26 September 1987.

REPORTS OF OFFICERS FOR 1986

a) GENERAL SECRETARY'S REPORT

The Officers' Reports that follow indicate that the affairs of the Society continue to run smoothly. Meetings during 1986 were well attended and appear to have been enjoyed. The Society made a small operating profit and the subscription for 1987 has therefore been maintained at the level established in 1982. Membership has fluctuated around 500 since 1970, but has never been higher than its present level of 544. On a more sombre note, we were saddened by the death of two Honorary members, Miss Lorna Scott and Mr Ted Wallace (Bulletin 49, p. 30). A Wallace Memorial Fund has been established and members are urged to contribute generously.

An ad hoc working group was formed following Peter Pitkin's presentation at the Autumn Meeting in Leeds in an attempt to formulate a coherent policy on conservation within the Society. This group has made a number of specific proposals for discussion at the April 1987 Council meeting. Comments and suggestions from members on conservation issues would be most welcome. Also at Leeds, the Tropical Bryology Group held its first meeting: members interested in participating in the Group's activities should write to Mr Martin Wigginton, Nature Conservancy Council, Northminster House, Peterborough PE1 1UA. Finally, it is encouraging to note that the Nature Conservancy Council has agreed to fund work on computer analysis of BBS Mapping Scheme data for a further two years, at the Biological Records Centre. It is intended that we shall be in a position to publish the long-awaited Atlas at the end of this period. The support of both NCC and BRC is much appreciated.

R.E. Longton
March 1987

b) TREASURER'S REPORT

After fears last year about the state of the accounts, we ended this year with a surplus on the year's accounts. About half of the surplus came from donations arising from the estate of Ted Wallace and thanks are due to Mr Crundwell for donating the proceeds from the sale of Mr Wallace's books; the rest (£3811) included income from items paid for last year (ie. ties (£390), microscopes (£544)), an unusually large amount from back issues of the Journal (£486), and there was also an underspend on the expected Journal costs (by £534). Other items influencing the surplus were an increase in membership income, and a reduction in administrative costs.

The preliminary figures for the year (prior to audit) are as follows:

Profit/Loss

	1984	1985	1986	1987
Income	£15,707	£17,609	£23,633	-
Expenditure	£12,645	£14,918	£16,152	-
Profit	£ 3,062	£ 2,691	£ 7,481	(£2,025)*

* 1987 figures based on preliminary budget estimates (see associated budget statement).

Assets

	(1984)	(1985)	(1986)
Current account	£ 1,786	£ 1,813	£ 2,797
Deposit account	1,317	2,023	2,168
Nat. Sav. Bank	16,668	19,799	29,119
	<u>£19,771</u>	<u>£23,635</u>	<u>£34,084</u>

We now have a giro account (33 799 9805) which will be of use to all European members, and Professor Ronald Pursell has very kindly agreed to extend his collection of US subscriptions also to include payment for invoices in \$US. It has never been so easy to give the BBS your money!

BBS BUDGET - 1987Income

	1983	1984	1985	1986	Est. 1987	Notes
<u>Publications</u>						
Sales - librarian	334	543	(709)	985	1000	*1
- mapping/atlas	32	7	30	9	-	*2
- Census catalogue	381	211	123	130	50	
Royalties (Exp. Biol. Bry.)				144		
<u>General</u>						
Subscriptions from members	4658	4902	4675	5221	5200	*3
Legacies/Donations	23		5	3677	-	
Grants/misc.	132	16		5	-	
Interest from NSB & NatWest	1528	1703	2337	2465	2500	
Ties				390	250	

Expenditure

<u>Publications</u>						
Blackwell's (net)	2909	2931	1601	3570	5745	*4
Bulletin	733	702	699	759	800	*5
Other printing	119		341	56	1600	*6
Jubilee Publ. (Sp.Vol.1)				826	-	

General

Publicity			408	-	1100	*7
Cost of meetings	379	112	56	37	1050	*8
Grants given		7	254	125	130	*9
Stationery/typing/ telephone/post/copying	342	163	265	97	300	*10
Library purchases	138	264	63	-	225	*11
Insurance	50	50	61	75	75	
Sub. to Biological Council	15		50	-	-	
<u>Total</u>	2403	3153	2692	7481	(2025)	
Number of members	489	508	510	550	550	

Notes

*1. The amount reflects the total sales, (unless already covered elsewhere, eg ties, or special publications) less expenses of buying items for sale (lenses, forceps, microscopes); it does not include expenses on postage etc, which are included in the general overall totals of such expenses. Because stock may be purchased in one year and sold in the next, this figure is likely to fluctuate from year to year; the 1986 figure for instance includes income from microscopes bought in 1985.

*2. With a new atlas due, no sales of the provisional atlas are assumed. Mapping cards may be reprinted during the year with updated nomenclature, but costs will be met in full by BRC.

*3. A stable membership has been assumed.

*4. This is the net cost of Journal production (= income from Blackwell's sales, less expenses, and cost of printing.) This is the amount by which we subsidise the Journal, as estimated by Blackwells, but including an extra allowance in 1987 for a larger than normal part (Vol 4, part 4).

*5. The Bulletin size for 1987 is assumed to be similar to 1986.

*6. £600 has been allowed for Publication Committee offerings. A second Special Volume, based on the first results of the bryo-history project, has been assumed to cost £1000.

*7. The £1000 for the display boards (together with an extra £100 for smaller boards and posters) is assumed for 1987.

*8. The Linnean Society meeting (May 87) will cost £2000 for invited speakers, towards which we have received a New Phytologist Trust grant of £1000. £50 has been assumed to cover other meeting expenses. The 1988 BES/BBS meeting is likely to cost £2000 for which no grant is so far available.

*9. £5 is assumed for the reproductive biology project, and £125 for the bryohistory project.

*10. Much of our 'stationery' cost does not fall to the BBS budget, and this figure is thus artificially low, particularly so in 1986. Most of the cost is postage. An increase has been assumed.

*11. Library purchases are currently set at a maximum of £225 per year, but are dependent on the availability of second-hand books, and the publication of new books, and are thus erratic, and unaligned with financial years. A flexible policy of expenditure is thus assumed: under-expenditure one year to be compensated for by over-expenditure the next, and vice versa.

B.J. O'Shea
March 1987

c) JOURNAL EDITOR'S REPORT

The first part of volume 14 of Journal of Bryology appeared in a new format and although there were one or two complaints about the change in size there is general agreement about the improvement over the old format, especially with regard to the reproduction of photographs. Members of the editorial board have been active in securing contributions to the Journal and the supply of papers continues to be more than adequate. I am indebted to Mr A.R. Perry for checking the proofs of both parts of volume 14 which arrived whilst I was away. I should also like to acknowledge the efforts, since I have been Editor, of the secretaries of the School of Plant Biology, Bangor in typing correspondence and retyping edited papers.

A.J.E. Smith
March 1987

d) BULLETIN EDITOR'S REPORT

Bulletins 47 and 48 were published in February and July respectively and I wish to thank Mrs Jean McKenzie for doing the bulk of the typing. I am very grateful to those people who send in notes/articles already typed on an electric typewriter with a carbon ribbon. This saves us the effort of re-typing them. The typing should be single line spaced, on A4 paper, and with a format 165 mm wide and 250 mm high.

In May the completed artwork for the new Moss Wallchart was sent to the printers, who unfortunately did not manage to get it printed during the year. The BBS tie having very nearly sold out, an order for a further 50 (claret) was placed with the manufacturers. These are now on sale from the Librarian.

A.R. Perry
February 1987

e) REPORT OF THE RECORDER FOR MOSSES

There has been a reversal in the recent downward trend in vice-county recording, with 208 new records during 1986. It is particularly pleasing to note the increased number of new records from Ireland. The analysis below is intended to give some indication of the proportion of records which is due to current field work.

	<u>New Records</u> <u>Collected 1985-6</u>	<u>New Records</u> <u>Collected pre-1985</u>	<u>Deletions</u>
England	66	21	-
Wales	21	1	1
Scotland	55	11	-
Ireland	26	5	1
Totals	168	38	2

Problems have been caused in a few instances by the difficulty in interpreting hand-written place names on herbarium packets. It would be helpful both to the Recorder and to future users of BBSUK if such names were written in block capitals.

I am very grateful to Mark Hill, Alun Crundwell and Martin Corley for their advice and generous assistance in elucidating difficult specimens.

Tom Blockeel

f) REPORT OF RECORDER FOR HEPATICS

The new vice-county record list for 1986 shows a welcome increase over recent years with 84 new records. These were 16 from England, 8 from Wales, 43 from Scotland and 17 from Ireland. I am most grateful to Jean Paton, David Long and Tom Blockeel who have all helped me with particular problems. As I retire from this post, I wish to thank Jean Paton who has given me so much help and encouragement over the years of my recordership. I should also like to thank all the referees whose painstaking work has lightened my duties.

Martin Corley

g) LIBRARIAN'S REPORT

Sales:	J. Bryology (parts)	46
	TBBS (parts)	121
	Distribution of Bryophytes	28
	Census Cats. (old)	5
	Mosses of Europe & Azores	23
	Hepatics of Europe & Azores	9
	BBS Bulletins	33
	Jubilee Proceedings	8
	German-English Glossaries	4
	Library Cats.	8
	x20 lenses	26
	stainless-steel forceps	28
	microscopes (Chinese L21)	8
	BBS ties	42
Loans:	35mm slide loans	4
	Micrometer slide loan	1

In contrast to the poor sales record for 1985 there has been a substantial increase in sales during 1986 amounting to some 110 orders involving around 380 items.

A substantial quantity of books, separates and archive material has been

received from the collection of the late Ted Wallace.

Kenneth J. Adams
January 1987

h) BIBLIOGRAPHER'S REPORT

Work has proceeded as normal this year with the production of two lists of recently published literature. We have been very fortunate in being able to use the facilities at the British Museum (Natural History) for a computer-based literature search. This has extended the number of publications covered considerably, especially in fields such as biochemistry. All computer-based references are checked and it turns out that other people's quality control systems are not up to the standards we are accustomed to.

The discussions with the French and American publishers of equivalent literature lists to that of the BBS have moved very slowly and, so far, with little sign of solution to the numerous problems involved in amalgamation.

G.C.S. Clarke
February 1987

i) CURATOR'S REPORT

New voucher specimens incorporated were 138 mosses and 40 liverworts. There were nine loans, of approximately 200 specimens. During the year the BBSUK herbarium and NMW bryophyte herbarium were re-housed in wooden drawers in new compacter storage in the National Museum of Wales. Because the drawers are tailor-made for the Museum's standard bryophyte packets, which when folded (from A4 paper) are 135 mm wide x 100 mm high (approx. 5½" x 4"), it is essential that BBS voucher packets conform to this size. In order to avoid the re-folding of packets, contributors of records are asked to ensure that their packets do not exceed 135 mm in width.

A list of all vice-comital holdings in BBSUK has now been completed. It still needs checking and typing, but should be available to members in 1987.

A.R. Perry
February 1987

j) MAPPING SECRETARY'S REPORT

New field records have been designed with updated nomenclature and some changes in the species listed. There will be a total of about 660 taxa compared with 720 on the old cards (there are now 996 species known to occur in Britain and Ireland). The cards will be produced by the Biological Records Centre and it is hoped that they will be available some time in April. Towards the end of 1986 BRC commenced extracting BBS bryophyte records for the ultimate production of a bryophyte atlas and it was suggested that first priority would be given to this work.

A.J.E. Smith
March 1987

k) MEETINGS SECRETARY'S REPORT

The Society has received unstinted assistance from local secretaries, whose work it was that established a programme worthy of the customary enthusiasm of participants. Our thanks are therefore due to Mr R. Stevenson and Mr R.P. Libbey at East Dereham, to Mr D.G. Long and Mr G.P. Rothero in Scotland, to

Prof. D.J. Cove at Leeds and to Dr R.E. Longton, Dr H.L.K. Whitehouse and Mr M.V. Fletcher at Reading for giving their time and experience so readily. It is also a pleasure to record the success of an introductory session for beginners at the spring meeting and to thank Dr K.J. Adams and Mr P.J. Wanstall for willingly acting as tutors.

In addition to a programme of future meetings that follows the usual pattern, arrangements are being made to hold two special meetings. One, in 1987, will mark the bicentenary of the Linnean Society by presenting an insight into certain aspects of modern bryology and we are grateful for a grant from the Tansley Fund of the New Phytologist Trust in support of this meeting. The other, in 1988, is a symposium sponsored jointly with the British Ecological Society. Familiar aspects of BBS meetings are therefore planned to continue alongside some innovation. I should be very pleased to know what other ideas you may have for further meetings.

M.E. Newton
December 1986

1) MEMBERSHIP SECRETARY'S REPORT

The Society gained 31 new members during 1986, but 5 resigned and 11 names were removed through default of subscription payment. Membership figures show an overall slight increase of 15:

	1985	1986
Honorary members	14	12
Family members	19	18
Junior members	} 496	16
Ordinary members		498
	—	—
Total membership	529	544
	—	—

So far 12 new members have joined by mid-February, 1987, an encouraging start to the year.

I have experienced several problems. A number of members have had their journals sent back to the publisher marked "gone away". Please let me know of any changes of address - I will gladly organise both Bulletin and Journal to be correctly addressed. I have also received a note complaining a subscription was paid by a banker's standing order and debited in the members account. Sadly the member never gave his name or address! Our bank statements only show initials and name and it is not easy to credit to the correct member - especially when a husband's subscription is paid from his wife's bank account in her maiden name!

I was surprised and saddened to have to send out over 60 reminders to pay subscriptions in April and a further 25 at the end of May. If you do not want to renew your subscription, please drop me a postcard saying so. If I have not received payment by this time I suspend the sending of the July Journal. To restart wastes time, effort and money. Please help to keep any subscription rise put off as long as possible.

Computerisation of names and addresses of members allows up-to-date membership

lists to be printed and sold to members at cost. If you would like a copy simply write enclosing fl. I should be pleased to hear of any inaccuracies: a number of Doctors are now Professors, many addresses lack post-codes, etc.

S.L. Jury

m) CONSERVATION OFFICER'S REPORT

The Conservation Association of Botanical Societies, of which the BBS is a founder member, appointed N.F. Stewart as Conservation Officer in late 1985. Mr Stewart was able to meet many members when he attended the Spring Meeting at East Dereham. My work as BBS Conservation Officer has been dominated this year by issues tackled in co-operation with CABS, of which the following two are perhaps the most significant:

Wildlife and Countryside Act 1981, Quinquennial Review Section 13 of the Act protects scheduled plant species from certain specific threats, viz. picking, uprooting, and the sale of the plant and its products. So far only vascular plants have been scheduled, but the current Review raised the question of whether bryophytes and other non-vascular plants should be added to the schedule. Most are clearly too inconspicuous to be threatened by picking or collecting, and are best conserved by effective habitat protection. There may, however, be special cases where scheduling is desirable. NCC proposed to add numerous vascular plants and one charophyte to the schedule, and in its comments on the NCC proposals CABS has suggested adding the moss Thamnobryum angustifolium and two lichens. The response of the Department of the Environment to these suggestions is awaited.

Sites of importance for their cryptogamic flora A proposal to list such sites was made by Conrad Warwick, working under the aegis of CABS. This list would inevitably be dominated, at least initially, by sites of bryological and/or lichenological importance. BBS supported this suggestion in principle, and awaits detailed proposals.

Work on detailed Bryophyte Site Registers by N.G. Hodgetts and A.E. Newton, working for NCC in co-operation with BBS, continued. Reports for Surrey and Cornwall were written during the year. This work will now be suspended so that efforts can be directed towards the production of the Bryophyte Atlas.

Because of other commitments I no longer have sufficient time to continue as Conservation Officer. I must therefore inform Council that I would like to resign at the next AGM.

C.D. Preston
March 1987

n) PUBLICITY OFFICER'S REPORT

All material for the BBS Travelling Exhibition has now been submitted to me, and re-written (8,577 words) in the form required for submission to Margaret Hartley of Cliffe Castle Museum (Bradford), to be condensed to a size and form suitable for the exhibition panels. Almost all of the graphic material is available, or can readily be found.

The exhibition germinated in difficult economic times, and thanks are due to Margaret Hartley and to Barbara Woroncow (Museums and Art Galleries Service for Yorkshire and Humberside) for finding alternative ways of channelling funds. Nonetheless, it has been necessary to seek some extra funding from the BBS, and we now have sufficient money for a good exhibition. We are also seeking some outside sponsorship, and if any is found then our still tight budget will not

be pushed so much to the limit.

Construction will start in the summer of 1987, and the exhibition should be completed by the winter. The final design and number of panels are not yet certain, but we hope to have several 3-D models made of bryophytes (or parts of), and we hope to produce a simulated Schistostega cave as a centre-piece.

An eight page A5 (2 sheets of folded A4) xeroxed pamphlet depicting common bryophytes, has been prepared for the exhibition. The concept is a pamphlet that will provide an introduction to the "Mosses and Liverworts of Town and Garden", and which can be sold for pennies. Forty-one species are illustrated, and a further eight are mentioned. Most of the back page consists of BBS prospectus, and each copy should enclose a BBS application form. An example will be shown at the spring meeting, and it is suggested that A4 (or A3) sub-masters could be made available (at cost) to anybody who wishes to make copies. Thus it is hoped that an interest in bryophytes could be sown more widely.

I must thank all those members, and some non-members of the BBS who responded so readily to requests for contributions, with especial thanks to Professor Ando.

S.R. Edwards
June 1987

o) READING CIRCLE REPORT FOR 1986

Membership has increased by three to twenty nine. There were five new members and two resignations. No copy of the Journal of the Hattori Laboratory was available during the year but 272 contents lists were distributed and 29 papers totalling 300 pages were sent to 14 members.

Income		
	Members credit at 1.1.86	£ 88.16
	Income (cheques received)	£ 57.00
	Total	£145.16
Expenditure		
	Internal costs (Post, etc.)	£39.05
	Administration	£ 2.33
	Total	£41.38
Excess of income over expenditure		£103.78
	Less members credit at 31-12-86	£100.85
Balance of income over expenditure		£ 2.93

R.J. Fisk
January 1987

READING CIRCLE

Following the resignation of the Reading Circle Secretary (Bulletin 49, p. 31), Agneta Burton has assumed responsibility for operating the Reading Circle until a new Secretary is appointed at the AGM in September 1987. All enquiries concerning the Reading Circle should therefore be directed to Dr M.A.S. Burton, Paris House, East Malling, Maidstone, Kent, ME19 6AU.

MINUTES OF THE ANNUAL GENERAL MEETING, LEEDS, 1985

Minutes of the Annual General Meeting held in Ellerslie Hall, University of Leeds at 4.30 p.m. on 20 September, 1985.

PRESENT: Mr G. Bloom (President, in the chair) and 41 other members.

The meeting began with one minute's silence as a mark of respect to the late Miss Lorna Scott and Mr E.C. Wallace.

(1) APOLOGIES FOR ABSENCE: Apologies were received from Professor J.G. Duckett, Dr S.W. Greene, Miss J. Ide, Dr S.L. Jury, Mrs J.A. Paton, Mr C.D. Preston, Dr M.C.F. Proctor, Mr F.J. Roberts and Dr A.J.E. Smith.

(2) MINUTES: The minutes of the AGM held at Cardiff on 21 September, 1985 were approved as a correct record.

(3) MATTERS ARISING: There were none.

(4) OFFICERS' REPORT for 1985:

(b) TREASURER: Mr O'Shea circulated the balance sheet for 1985 which showed a balance of income over expenditure of £3,066 and assets of £21,494 as at 31 December 1985. He concluded that there was no need to adjust membership subscriptions.

(d) BULLETIN EDITOR: Mr Perry reported that the moss wall chart was with the printer. It was to be funded by the British Museum (Natural History) with copyright held by the National Museum of Wales. BBS was acknowledged and could anticipate a share of any profit.

(f) RECORDER FOR HEPATICS: Mr Corley, who steps down at the end of 1986, wished his successor every success, and the President thanked Mr Corley and Dr Hill for their work as recorders, pointing out the considerable effort they had expended in relation to such projects as the revised Census Catalogue.

(g) LIBRARIAN: Dr Adams reported that the Society had received a quantity of books, reprints, correspondence and other papers from the estate of Mr Wallace. Some may be on sale to members at the Spring 1987 meeting. It might become necessary in the future to separate the posts of Librarian and Sales Officer.

(i) CURATOR: Mr Perry reported that the Herbarium had been rehoused in compacter storage and that a draft catalogue had been prepared. This document would be available to members on loan when complete.

(m) CONSERVATION OFFICER: There was considerable discussion about the Society's role in conservation arising from Mr Pitkin's presentation during the paper-reading meeting. Professor Richards, supported by Mr Stern, recommended that a working group should be established to identify threats to bryophytes and recommend remedial action. It was noted that the BBS is already a member of the Conservation Association of Botanical Societies, but Professor Richards stressed that the BBS should formulate a position specifically regarding bryophytes as well as collaborating with related Societies. Mr Pitkin said that work on the bryophyte Atlas should be accelerated and that the Society should strengthen its effort to recognize sites of bryological interest; it would be necessary to define criteria for recognizing such sites and to present data in a standard format. Dr Adams suggested that work on the Site Register Scheme could be speeded up by individual BBS members taking responsibility for

specific counties, particularly if the Nature Conservancy would provide expenses, and Dr Longton recommended that all BBS members should be invited to contribute data. Dr Adams said that preparation of a red data list for bryophytes should be completed with all due despatch. Professor Seaward said that a balance was necessary between recognition of threatened sites and threatened species. He urged the BBS to collaborate with the British Lichen Society as sites of interest were often complementary.

A working group (Mr Bloom, Dr Pitkin, Mr Preston and Mr Wigginton) was established to review the BBS approach to conservation and to report to the next Council meeting.

(n) PUBLICITY OFFICER: Dr Edwards said that material was being assembled for the travelling exhibit: contributions would still be welcome. He reported that June Chatfield had written an article on bryophytes for publication in Natural World.

There were no comments on the other Reports. Acceptance of the Reports was moved by Mr Blockeel, seconded by Mr Wanstall, and carried unanimously.

(5) REPORT FROM COUNCIL: Dr Longton reported that Miss Ide had been co-opted to serve on Council for two years from 1 January, 1987 in her capacity as Chairman of the Publications Committee.

Dr Longton also reported that Council had established a Working Group to consider a suitable memorial to Mr Wallace. It planned to collaborate with BSBI, and Professor Seaward said that the BLS could appropriately be involved. Mr Stern had suggested to Council that purchase of land suitable for the establishment of a nature reserve should be considered.

(6) ELECTION OF RECORDER FOR HEPATICS: Dr Longton noted that Council had nominated Mr Long to take over from Mr Corley for a two-year term from 1 January 1987. Mrs Paton had also nominated Mr Long. In the absence of other nominations, Mr Long was declared elected.

(7) ELECTION OF ELECTED MEMBERS OF COUNCIL: Dr Longton reported that Council had nominated Dr Bates, Mr Hodgetts and Mr Libby to serve for a two-year term beginning on 1 January 1987. In the absence of other nominations they were declared elected.

(8) DATE AND PLACE OF NEXT AGM: Dr Newton reported that the next AGM would be held at Wye College, Kent, on 26 September, 1987.

(9) OTHER FUTURE MEETINGS: Dr Newton reported that meetings to the Taxonomic Workshop 1988 would be held as announced in Bulletin 48. In addition, a special meeting would be held in conjunction with the Linnean Society on 7 May, 1987 at which leading bryologists would discuss current topics in research as part of the Linnean Society's 200th anniversary celebrations. She said that the Summer Meeting 1988 would be at Edinburgh and a more northerly location, probably Inverness. This meeting would include a 3-day symposium on Bryophyte Ecology, to be organized jointly with the British Ecological Society. Bristol, Juniper Hall and Losehill Hall, Castleton, were being considered for the Taxonomic Workshop 1988, and Lincoln for the AGM in 1989.

(10) ANY OTHER BUSINESS: Mr Stern referred to the need to record any relevant information in the archival material from Mr Wallace's estate. After some discussion this matter was referred to the working group appointed to consider the memorial to Mr Wallace.

Mr Bloom expressed his thanks to officers, council members and meeting

organizers for their work on behalf of the Society, noting especially the excellent arrangements for the current meeting made by Professor Cove and his colleagues.

The meeting adjourned at 6.02 p.m.

FUTURE MEETINGS OF THE SOCIETY

Members are recommended to read the BBS Safety Code, published in Bulletin 43 and available from local secretaries for inspection during meetings.

SUMMER FIELD MEETING, 1987, Achill Island, Co. Mayo, 5-12 August; Westport, Co. Mayo, 12-19 August.

Organizer & Local Secretary: Mr D.M. Synott, National Botanic Gardens, Glasnevin, Dublin 9, Ireland.

Headquarters: Slievemore Hotel, Dugort, Achill; The Olde Railway Hotel, The Mall, Westport.

Full particulars, additional to those published in Bulletin 49, are available from the local secretary.

ANNUAL GENERAL MEETING AND PAPER-READING MEETING, 1987, Wye College, Kent, 26-27 September.

Local Secretary: Dr M.A.S. Burton, MARC, The Octagon Building, 459A Fulham Road, London, SW10 0QX.

Details of the programme are available from the local secretary, who has arranged for all lectures to be held at the College in which accommodation has been reserved. All bookings should be made through her as soon as possible and not later than 31 August. The cost of accommodation has been itemized for the convenience of members wishing to attend only part of the meeting and it is hoped that British Rail conference rates will offer a saving to those travelling by train.

Speakers who have kindly agreed to present papers include the following:

Miss A. Davidson (University of Reading): Aspects of bryophyte herbivory.
Mr A. Eddy (British Museum (Nat. Hist.)): Malesian Leucobryaceae.

Mr L.T. Ellis (British Museum (Nat. Hist.)): Taxonomic problems in the Calymperaceae.

Dr M.C.F. Proctor (University of Exeter): Scanning electron microscopy and some thoughts on Polytrichadelphus.

Mr R.C. Stern & Dr F. Rose (Chichester, Sussex and Petersfield, Hants): Bryophyte distribution in Sussex - the progress on the new Sussex bryophyte flora.

Mr C. Studholme (University of Manchester): The peroxidase activity and isozyme variation of Sphagnum cuspidatum from polluted and unpolluted areas.

Dr H.L.K. Whitehouse (University of Cambridge): The use of axenic cultures to resolve the components of aggregate species in mosses.

The ANNUAL GENERAL MEETING will follow the paper-reading sessions at 4.30 p.m. on Saturday 26 September.

Offers of posters and demonstrations for display during the conversazione which follows would be much appreciated.

There will be a field meeting on Sunday 27 September led by Mrs Trudy Side. The major part of the day will be spent in an area of chalk woodland near Chilham, where the rich bryophyte flora includes species such as Thuidium hystricosum, Seligeria paucifolia, Tortella inflexa and Ctenidium molluscum. It is hoped that it may also be possible to visit an additional Ctenidium site on chalk grassland.

TAXONOMIC WORKSHOP, 1987, University of Manchester, 7-8 November.

Organizer & Local Secretary: Dr S.R. Edwards, The Museum, The University, Manchester, M13 9PL. (Tel. Manchester (061-) 273 3333 ext. 3319; home (061-) 442 9346).

The workshop is aimed particularly at amateur naturalists who wish to explore unfamiliar but useful aspects of examining and naming mosses and liverworts. Many groups of bryophytes produce gemmae, and these structures (particularly rhizoidal gemmae) are under-used or even totally ignored when the plants are being examined; Dr H.L.K. Whitehouse has kindly agreed to tutor on this important subject. We shall also look at moss peristomes; we shall teach students how to prepare the peristomes for examination, and what to look for both in naming individual species, and also in understanding the major taxonomic divisions which are based on peristome structure.

In addition, we shall teach a simple, very cheap and very quick method of sectioning bryophytes; sections are helpful or essential for identification in many groups, including Sphagnum, Polytrichum, Campylopus, and Scapania.

For further information, please contact the local secretary, who is willing to supply details of local hotels and guest houses on request. Please remember that we should have your applications in by the beginning of October.

SPRING FIELD MEETING, 1988, Cirencester, 6-13 April.

Organizer & Local Secretary: Miss K.A. Hearn, The National Trust, Spitalgate Lane, Cirencester, Glos., GL7 2DE.

Headquarters: The Royal Agricultural College, Cirencester.

To be centred on geologically and ecologically varied habitats in the Cotswolds and Forest of Dean, the meeting will be based at the Royal Agricultural College, where accommodation has been reserved. All bookings from members wishing to stay at the College should be made through the local secretary, who can also supply information about other types of accommodation in the area. It would be helpful if the local secretary could be informed, as soon as possible, by all who require College accommodation, and preferably by 1 November 1987. Facilities will be available to enable members travelling by train to use British Rail conference fares and details of these, too, may be obtained from the local secretary. Full details of the programme will appear in the next issue of the Bulletin.

INTERNATIONAL SYMPOSIUM ON BRYOPHYTE ECOLOGY, 1988, University of Edinburgh,
19-23 July, and SUMMER FIELD MEETING, Beaulieu, Inverness-shire, 23-30
July, in conjunction with the BRITISH ECOLOGICAL SOCIETY.

Organizers: Dr R.E. Longton (Department of Botany, University of Reading, Whiteknights, P.O. Box 221, Reading, RG6 2AS), Dr P.J. Lightowlers (Institute of Terrestrial Ecology, Bush Estate, Penicuik, Midlothian, EH26 0QB) and Mr D.G. Long (Royal Botanic Garden, Edinburgh)

Local Secretary: Dr P.J. Lightowlers (for correspondence concerning accommodation).

Offers of papers and poster should be addressed to Dr R.E. Longton. The field meeting will be led by Mr D.G. Long.

The symposium, at the University of Edinburgh's Pollock Halls, next to the scenic Holyrood Park and only twenty minutes walk from the heart of this historic city, will include two full days of invited papers and one of contributed papers (19-21 July). While offers of papers on all aspects of bryophyte ecology will be warmly welcomed, preference may be given, if there is a need to be selective, to those that relate to one or other of the four sessions of invited papers. They are:

Bryophyte production and decomposition.

Interaction between bryophytes and other organisms.

Bryophyte population biology.

Bryophytes in man-made ecosystems.

The symposium will be followed by a one day field excursion in the Edinburgh area and, for those interested in further field experience, there will be a one week field meeting in the Scottish Highlands based near Inverness at the Aigas Field Centre, Beaulieu (23-30 July). Localities to be visited include Glen Affric, Glen Strathfarrar and Ben Wyvis. Accommodation is centred on Aigas House, a Scottish baronial shooting lodge in a beautiful parkland setting above the River Beaulieu. There is a variety of types of accommodation, and hence of prices, both in the house and in chalets in the grounds.

ANNUAL GENERAL MEETING AND PAPER-READING MEETING, 1988, Liverpool, 17-18
September.

Local Secretary: Dr J. Edmondson, Merseyside County Museums, William Brown Street, Liverpool, L3 8EN.

Full details will appear in a later issue of the Bulletin.

TAXONOMIC WORKSHOP, 1988, November.

Very few comments have been received concerning the relative merits of the three proposed alternatives for this meeting. More would be appreciated, together with ideas for suitable topics to include, as it would help in making the final decision a popular one. Possibilities under consideration include Bristol University, Juniper Hall Field Centre, and Losehill Field Centre, Castleton, Derbyshire. Please send your views to the Meetings Secretary, Dr M.E. Newton, Dept. of Cell & Structural Biology, Williamson Building, University of Manchester, Manchester, M13 9PL.

SPRING FIELD MEETING, 1989.

It has been suggested that members might welcome a field meeting based in the Algarve. Mr A.R. Perry, who has kindly offered to make the necessary

arrangements if there were sufficient interest in such a meeting, has proposed that it should be held in February or March for reasons of climate. Easter of that year will be Sunday 26 March, thus making such an early spring meeting somewhat more feasible. University terms, and presumably school terms, will, however, continue to 17 March. His idea would be to fly to Faro (£90 return at to-day's prices) and travel overland to Lagos for convenient access to sites in the SW. Mr Perry would, however, like some idea of the number of members who would wish to attend so that full facts could be made available at the A.G.M. when this and any other venue members may prefer will be discussed. Letters should be addressed to Mr A.R. Perry, Department of Botany, National Museum of Wales, Cardiff, CF1 3NP.

SUMMER FIELD MEETING, 1989.

According to the established order of meetings, we should be thinking in terms of a summer venue in England or Wales. A request for a meeting in one of the Welsh border counties or in one of the bryologically less well-known areas of mid-Wales has been made. Comments on the likely response to such a meeting, or any alternative ideas, would be welcomed by the Meetings Secretary, Dr M.E. Newton, Dept. of Cell & Structural Biology, Williamson Building, University of Manchester, Manchester, M13 9PL.

ANNUAL GENERAL MEETING AND PAPER-READING MEETING, 1989.

Suggested venues would be appreciated by the Meetings Secretary (address above). In the natural order of things, the meeting would be somewhere in the southern half of England.

OTHER BRYOLOGICAL MEETINGS

1-8 August, 1987: Mosses and Liverworts. Dr M.E. Newton, Kindrogan Field Centre, Enochdhu, Blairgowrie, Perthshire, PH10 7PG.

Details from the Warden Dr A. Lavery, at this address.

4-11 September, 1987: Mosses and Liverworts. Dr M.E. Newton, Preston Montford Field Centre, Montford Bridge, Shrewsbury, SY4 1DX. (This and the following are advertized as alternatives.)

Details from the Warden, Mr J.A. Bayley, at the above address.

11-18 September, 1987: Mosses and Liverworts. Dr M.E. Newton, Malham Tarn Field Centre, Settle, North Yorkshire, BD24 9PU. (This and the preceding are advertized as alternatives.)

Details from the Warden, Mr K. Iball, at the above address.

2-4 October, 1987. Mosses and Liverworts of the Chalk and Greensand. Mr Peter Wanstall, Juniper Hall Field Centre, Dorking, Surrey, RH5 6DA.

Details from the Warden at this address.

THE B.B.S. MAPPING SCHEME

Bryophyte Atlas

The Nature Conservancy-Council has agreed to finance the preparation of bryophyte distribution maps from the data accumulated by BBS members since 1960. It is anticipated that the production of maps of all British and Irish taxa will be completed by April 1989. Financial arrangements for the publication of an atlas (probably in two or more parts) have not yet been settled.

Data from field record cards, herbaria, the literature and from previously published maps are being used. Records will be checked against the vice-county lists and any discrepancies will be followed up. Attempts will be made to trace the localities of vice-county records for which no field or other records have materialised. Each map will be accompanied by a brief legend detailing ecology, reproductive behaviour, European distribution, map reliability and missing vice-counties.

I have three requests to make for assistance:

- (1) Tracing vice-county records that have not materialised during processing of data. It would be particularly helpful if members with knowledge of specific vice-counties would volunteer for this.
- (2) Preparing legends. It is hoped that members will volunteer to prepare legends and that they will do so for whole genera or sections of genera rather than just "interesting species". As a standard format is being used for legends we have prepared a form that can be filled in for each species and these will then be edited into text by Dr M.O. Hill. As there will probably be more than 1000 maps help in preparing legends will be very welcome. I can provide further information about this.
- (3) Additional records. Field record cards can be accepted until December 1988 so if you have any cards made since my last request please let me have them so that maps are as up-to-date as possible.

Field Record Cards

The updated field record cards mentioned in Bull. B.B.S. 49 have still (at the time this note was written) not been prepared by the Biological Records Centre but hopefully will be ready soon and will be available from me or Mr C.D. Preston, Biological Records Centre, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, P17 2LS.

A.J.E. Smith
Mapping Secretary



NEW VICE-COUNTY RECORDS AND AMENDMENTS TO THE CENSUS CATALOGUES

All undated records are based on specimens collected in 1986. The names and numbers follow Corley & Hill, Distribution of bryophytes in the British Isles: a census catalogue of their occurrence in vice-counties (1981).

HEPATICAE

M.F.V. CORLEY

- 1.1 Anthoceros agrestis, stubble field by small church near Moel-y-don (52), Blackstock.
- 3.1 Sphaerocarpos michelii, bare soil of leek field, nr Broom (30), Yeo & Outen, 1984.
- 13.1 Metzgeria fruticulosa, bark of old elder at edge of woodland ride, nr Saighton (58), Fisk, 1985.
- 13.2 M. temperata, tree trunk by stream in wooded gorge, Dovedale (57), Blockeel; birch trunk in lightly wooded gorge below Loch a'Bhaile Mhargaidh, W of Craighouse, Jura (102), Corley & Pitkin.
- 17.3 Riccardia incurvata, damp roadside S of Delnabo, Tomintoul (94) Paton & Long.
- 17.4 R. palmata, among Sphagnum in Betula flush on raised bog, Clooneen (H.24), Grogan & Douglas.
- 18.2 Pellia neesiana, marshy turf at edge of small stream under trees, Holt Lowes, Holt (27), Corley; marshy ground by stream, Allt a'Mhuillinn, Craighouse, Jura (102), Corley & Pitkin.
- 21.1 Blasia pusilla, sandy bank of drain by railway, Barnby Dun, 5 miles NE Doncaster (63), Wall.
- 22.1 Fossombronia foveolata, peaty mud at edge of Lochana' Tana, S of L. Tarbert, Jura (102), Corley.
- 26.3 Barbilophozia floerkei, sandy peaty bank under Betula, S Wootton, nr King's Lynn (28), Libbey; blanket bog, Silvermines (H.10), Cross.
- 28.1a Lophozia ventricosa a var. ventricosa, sand-covered peaty bank by sea, Glenbatrick, L. Tarbert, Jura (102), Corley; blanket bog W of Ballinaboy (H.16), Bouman, 1985: b var. silvicola, damp peaty bank, N side of Beinn an Oir, Jura (102), Corley.
- 28.6 L. excisa, soil and rotten wood in heathland, Woolmer Forest (12), Crundwell; fixed dunes, Kilmory, Rhum (104), Pitkin, 1984.
- 28.10 L. bicrenata, damp gravelly roadside near Delnabo, Tomintoul (94), Long & Paton.
- 29.5 Leiocolea bantriensis, amongst tussocks in base-rich flush near Tyddyn y Waen, S of Mynydd Bodafon (52), Blackstock.
- 32.2 Sphenolobus hellerianus, on living oak trunk in steep woodland, W side of R Neath, ¼ km NE of Pont Melin-fach, NNW of Pont Nedd Fechan (42), Perry & Woods, 1985.
- 35.1 Tritomaria exsectiformis, steeply sloping rock-face in wood, Sron Garbh, Ardfernal, Jura (102), Corley.
- 36.1 Jamesoniella autumnalis, gritstone block scree in oakwood between road and head of Caban Coch Reservoir, Claerwen Valley, Llansantffraed Cwmdeuddwr (43), Woods.
- 37.2 Mylia anomala, raised bog, Flughany (H.26), Grogan & Douglas.
- 38.8 Jungermannia sphaerocarpa, in turf with water dripping from above, at mouth of cave in raised beach cliff, NE of Glengarrisdale, Jura (102), Corley & Pitkin; boulder in Caher River. (H.9), Bouman, 1985.
- 38.11 J. hyalina, soil in dry ditch, Ardfernal, Jura (102), Corley.
- 38.13 J. obovata, damp peaty overhang by sea, Sallerna, nr Cleggan (H.16), Long.
- 39.4. Nardia breidleri, thin soil on summit plateau on ground draining to SW, above Loch Luchd Coire, Seana Bhraigh (105), Corley.

- 40.2 Marsupella sphacelata, rock face on edge of W side of Lyn yr Adar, NE of Cnicht (48), Blackstock, 1984; below Ard Bheinn, W of Brodick, Arran (100), Simpson; stony flush, N side of Beinn an Oir, Jura (102), Corley.
- 40.3 M. funkii, gravelly footpath below Eag Mhor, Braes of Abernethy (95), Long & Paton.
- 40.4 M. sprucei, damp vertical rocks, N side of Beinn an Oir, Jura (102), Corley.
- 41.4 Gymnomitrium crenulatum, damp vertical rocks, N side of Beinn an Oir, Jura (102), Corley.
- 46.3 Plagiochila aspenioides, hazelscrub W of Doomore (H.9), Bouman, 1985; limestone boulder in hazel scrub, Clorhane, nr Clonmacnoise (H.18), Kelly, 1985.
- 46.4 P. britannica, shaded basic rocks on cliffs in woodland, Pontsioni, Aberedw, nr Builth Wells (43), Orange; river-side bank in gorge, Water of Ailnack, Tomintoul (94), Paton & Long; steep bank below limestone crags, Beinn Riabhach, S of Fort William (97), Paton; shaded basic rocks in coastal woodland, Taynish (101), Rothero; damp slope in oakwood NW of Letterewe, Loch Maree (105), Paton; bridge parapet in shady woodland, Kylemore Abbey (H.16), Long.
- 46.5 P. atlantica, mossy boulder in shady oak woodland, shore of Loch Maree, SE of Furnace, Letterewe (105), Long.
- 51.1 Harpanthus flotovianus, wet flush among basalt scree below crag, Sgurr nan Uig, Cuillins, Skye (104), Rothero, 1985.
- 54.3 Diplophyllum obtusifolium, sandy ground, Carman Muir, Cardross, nr Dunbarton (99), Smith.
- 55.1 Scapania gymnostomophila, mossy rock face on basic schist cliffs, W cliffs of Druim Mor, Caenlochan Glen (90), Long & B.M. Murray, 1985.
- 55.2 S. calcicola, massive tufa block on slopes below cliffs on NE side of Tarren yr Ysgob (42), Perry, 1965.
- 55.4 S. scandica, peaty bank on mountainside, N side of Beinn an Oir, Jura (102), Corley.
- 55.5 S. curta, steep sandy bank, Dorback Burn, Braes of Abernethy (95), Paton & Long.
- 55.6 S. lingulata, bare patches of soil on grassy bank above sea, Wylfa Head, Cemaes Bay (52), Yeo & Hill; soil on bank on limestone, burn above Glengour, Fort William (97), Long.
- 55.9 S. umbrosa, soil on footpath shaded by trees, Water of Ailnack gorge, above Delnabo, Tomintoul (94), Long & Paton.
- 55.19 S. aequiloba, calcareous cliff ledges, steep gully on E facing cliffs above Choire Ghranda, Beinn Dearg (106), Long.
- 55.21 S. gracilis, hummock, Mongan Bog, Clonmacnoise (H.18), Schouten, 1978.
- 57.3 Odontoschisma elongatum, on mud in stony flush at edge of Lochana' Tana, S of L. Tarbert, Jura (102), Corley.
- 57.4 O. macounii, wet calcareous ledges on gully wall, An Chul Coire, Aonach Beag, nr Fort William (97), Rothero.
- 58.1 Cephalozia elachista, among sphagnum in wet area of raised bog, Tully Cross (H.23), Douglas & Grogan.
- 58.2 C. subdentata, steep peaty bank on Eilean Subhainn, Loch Maree (105), Paton; among sphagnum on raised bog, Ballinderry (H.23), Grogan & Douglas.
- 58.6 C. divaricata, Betula trunk, wooded valley S of Delnabo, Tomintoul (94), Paton & Long; thin peat overlying boulder on moorland, N of Corran River, Jura (102), Corley.
- 59.1 Cephalozia bicuspidata b var. lammersiana, heathland, Bradgate Park (55), Ballard.
- 59.2 C. connivens, wet peaty ground on heath, among other mosses, Bradgate Park (55), Ballard.
- 59.7 C. macrostachya, bog on Eilean Subhainn, Loch Maree (105), Paton.
- 59.8 C. catenulata, peaty soil, Carman Muir, Cardross, nr Dumbarton (99),

- Smith.
- 59.9 C. leucantha, among sphagnum on moorland bank, Liath Dhoire, Tarbert, Jura (102), Corley.
- 60.1 Nowellia curvifolia, leaning rotting tree trunk in damp mixed woodland, Clonhugh Woodland, nr L. Owel (H.23), Kelly & S. Iremonger.
- 61.2 Cladopodiella fluitans, margin of hollow, Mongan Bog, Clonmacnoise (H.18), Schouten, 1978.
- 64.1 Anthelia julacea, slightly flushed sloping rock-face, N side of Beinn an Oir, Jura (102), Corley.
- 66.1 Kurzia pauciflora, among mosses on raised bog, Flughany (H.26), Douglas & Grogan.
- 66.2 K. trichoclados, among grit boulders in block-filled hollow on moorland, western slopes of Kinderscout, Hayfield (57), Blockeel.
- 72.2 Ptilidium pulcherrimum, Betula trunk, wooded valley S of Delnabo, Tomintoul (94), Paton & Long.
- 75.2 Radula lindenbergiana, stone beside backwater of R Spey, W of Dalnapot nr Bridge of Avon (95), Paton; boulder in Loch an t-Sìob, Jura (102), Corley.
- 76.1 Pleurozia purpurea, among mosses on raised bog, Flughany (H.26), Douglas & Grogan.
- 77.3 Porella platyphylla, limestone wall in mixed woodland, Clorhane, between Clonmacnoise and Shannonbridge (H.18), Kelly.
- 77.4 P. cordaeana a var. cordaeana, on alluvium on base of Fraxinus by R. Hodder, Stonyhurst (60), Wigginton.
- 78.4 Frullania fragilifolia, vertical rockface in cliffs above stream, The Bizzle, The Cheviot (68), Yeo & Long, 1984.
- 83.1 Lejeunea cavifolia, on field maple in swampy part of wood, Monks Wood, (31), Hodgetts; stone in limestone woodland, Dovedale (39), Blockeel.
- 84.1 Colura calyptrifolia, tree trunk, damp area of East Harptree Woods (6), Martin.
- 85.2 Cololejeunea rosettiana, shaded limestone, Dovedale (39), Blockeel.
- 86.1 Aphanolejeunea microscopica, wet rocks by waterfall, Falls of Rogie, Black Water (106), Rothero.

Contributors of Records, 1986

D.W. Ballard, T. Blackstock, T.L. Blockeel, A.C. Bouman, M.F.V. Corley, J. Cross, A.C. Crundwell, C. Douglas, R.J. Fisk, Miss H. Grogan, M.O. Hill, N.G. Hodgetts, D.L. Kelly, R.P. Libbey, D.G. Long, P. Martin, A. Orange, A.R. Outen, Mrs J.A. Paton, A.R. Perry, P.H. Pitkin, G.P. Rothero, M. Schouten, B. Simpson, J.A.B. Smith, C. Wall, M.J. Wigginton, R.G. Woods, M. Yeo.

MUSCI

T.L. BLOCKEEL

- 1.1 Sphagnum imbricatum a ssp. austinii, raised bog, Trawsfynydd Bog (48), Benoit; forming hummocks on wet, boggy flat ground, by Water of Avon, Inchroary (94), Payne, 1981; forming conspicuous hummock, at head of Loch Laidon, SE side, Rannoch Moor (98), Payne, 1985; Erne Head (H.24), G. Drennan, 1968; Fartrin Bog, S of Ballyconnell (H.30), G. Drennan, 1968; forming hummocks on raised bog, Clogh Mills, near Ballymena (H.39), E.M. Loble, 1953: b ssp. affine, heathy ground near river, Glen Quoich, Braemar (92), Paton & A.J.E. Smith, 1964; forming dark green cushions in marshy ground, by Lealt Burn, Jura (102), Payne, 1981.
- 1.5 S. squarrosum, minerotrophic soak, Clara Bog (H.18), O'Connell.
- 1.6 S. teres, fen at bog margin, Carrowbehy (H.25), Grogan, C. Douglas & J.C. Cross, 1985.

- 1.7 S. fimbriatum, damp acid ride in wood, Binfield Heath (23), Bowen, 1985; Molinia flush on raised bog, Cloncrow (H.23), Grogan & C. Douglas.
- 1.8 S. girgensohnii, on ground in damp N facing woodland in Wye valley, S of Glan Wye, Nannerth, Rhayader (43), Woods & F. Rose.
- 1.11 S. warnstorffii, in bade-rich flush, small valley near Delnabo, Tomintoul (94), Long & Paton.
- 1.13 S. fuscum, hummock on raised bog, South Cashel (H.29), Grogan & C. Douglas; hummock on raised bog, Kilconny (H.30), Grogan & C. Douglas.
- 1.14 S. subnitens b ssp. ferrugineum Flatberg: the entry for S. subfulvum should be transferred to this taxon (Flatberg, 1985).
- 1.15 S. molle, marshy heath near sliding stones, Bradgate Park (55), Ballard, 1985.
- 1.17 S. compactum, blanket bog, Tauntinna Mt. (H.10), J. Cross, comm. Grogan.
- 1.18 S. platyphyllum, in peaty, slightly basic flush with Drepanocladus revolvens, west of Pont y Gribble, south of Trawsfynydd (48), Yeo.
- 1.20 S. subsecundum, Girnwood Loch, west side (79), Corner, 1976; fen at bog margin, Carrowbehy (H.25), Grogan, C. Douglas & J.C. Cross, 1985, new to Ireland.
- 1.21 S. contortum, fen at bog margin, Carrowbehy (H.25), Grogan, C. Douglas & J.C. Cross, 1985.
- 1.24 S. tenellum, wet moorland at 2100 ft., Black Hill, Llanveynoe (36), Port.
- 1.26 S. pulchrum, in pools on raised bog, Cloonmore (H.17), Grogan & C. Douglas, 1985; large pools on raised bog, Cross Wood (H.23), Grogan & C. Douglas.
- 1.27 S. recurvum b var. tenue, margin of basic flush, small valley near Delnabo, Tomintoul (94), Long & Paton; slight flush draining from Racomitrium heath on N facing slope, Keepers Hill (H.10), J.C. Cross, comm. Grogan; small Betula flush along channel on raised bog, Wooddown (H.23), Grogan & C. Douglas; flush on raised bog, Carrowbehy (H.25), Grogan, C. Douglas & J.C. Cross, 1985; small Betula flushes on western raised bog, Gowlaun (H.26), Grogan, C. Douglas & J.C. Cross.
- 5.4 Polytrichum commune b var. perigoniale, waste ground, Benmore Gardens (98), E.V. Watson, 1967, comm. Jury.
- 8.2 Atrichum tenellum, damp bank of wide ride, Creech Wood, Denmead, near Portsmouth (11), Matcham.
- 13.1 Pseudephemerum nitidum, on clayey margin of a small pool, Brampton Wood (31), Porley; bare soil in pasture, Great Cumbrae (100), Cocking.
- 14.5 Ditrichum zonatum a var. zonatum, ledge on dry unstable cliffs, S facing cliffs at head of Caenlochan Glen (90), Long & B.M. Murray, 1985; in crevice of vertical acid rock face, N side of Beinn An Oir, Jura (102), Corley: b var. scabrifolium, on wet scree slopes below snow patch, NE slope of Beinn Dearg, above Choire Ghranda (106), Long.
- 18.2A Seligeria brevifolia, moist grit on bank of moorland stream, Ashop Clough, High Peak (57), Blockeel, new to England.
- 18.3 S. acutifolia, delete H39, the specimen is S. paucifolia (q.v.).
- 18.5 S. paucifolia, on chips of limestone among grass, Whitepark Bay (H.39), W.R. Megaw, 1936, as S. acutifolia (E).
- 23.2 Rhabdoweisia crispata, on soil in sheltered crevice in shale rock face, S facing cliffs NW of Gwynllyn, Llansantffraed Cwmdeuddwr (43), Woods; in rock crevice, Loch Luchd Coire, Seana Bhraigh, Strath Mulzie (106), Corley.
- 28.5 Dicranella subulata, moist grit on low cliff by moorland stream, Ashop Clough, High Peak (57), Blockeel.
- 28.8 D. staphylina, edge of vegetable plot, Fort William (97), Blockeel; flower bed, Inverewe Garden (105), Whitehouse.
- 31.2 Kiaeria blyttii, in dry scree, Eag Mhor, Braes of Abernethy (95), Long & Paton.
- 32.2 Dicranum polysetum, amongst Hypnum jutlandicum on moss-covered boulder in coniferous woodland, Cerrig Mawr, Newborough Forest, Anglesey (52),

- Yeo & C. Watts, new to Wales.
- 32.12 D. montanum, trunk of birch tree, Ecclesall Wood, Sheffield (63), Blockeel.
- 32.13 D. flagellare, on old decort. oak log in pasture woodland, Rabbit Warren, Gregynog Hill, Tregynon (47), Woods.
- 33.2 Dicranodontium asperulum, on boulder in boulder scree, above Llyn Bochlwyd, Glyders (49), Yeo, new to Wales.
- 33.4. D. denudatum a var. dedudatum, peaty bank above River Fowey, near Golitha Falls, Draynes Wood (2), Paton & G. Castle.
- 34.4 Campylopus fragilis, among rocks, near Slieve Elva, The Burren (H.9), Bouman, 1985.
- 34.5 C. pyriformis b var. azoricus, peaty ground in valley bog, Holt Lowes (27), Corley; damp peat in blanket bog regenerating after burning, above Pennant Melangel, Berwyn Mountains (47), Yeo; soil at base of Molinia tussock in flush, below Gau Graig, Cadair Idris (48), Yeo; bare peat on raised bog, Ballykenney (H.24), Grogan & C. Douglas.
- 34.10 C. polytrichoides, in S facing rock crevices on 'raised reef'. Lochan Maol an t'sornaich, S side of Loch Tarbert, Jura (102), Corley.
- 36.2 Leucobryum juniperoideum, on the ground in woodland, Pont Melin-Fach, near Pont Nedd Fechan (42), Orange, 1985; damp bank in ravine, woods at Kylemore Abbey (H.16), Long.
- 37.2 Fissidens viridulus, on thin soil in shade, Manton churchyard, Oakham (55), Jackson, 1981; on soil in shade, Rievaulx Abbey (62), E.V. Watson, 1967, comm. Jury.
- 37.2A F. pusillus b var. tenuifolius, shaded limestone rock in woodland, Cringlebarrow (60), Wigginton.
- 37.14 F. taxifolius b ssp. pallidicaulis, on wet shaded rocks by burn, deciduous woodland, Finlarig Burn, N of Killin (88), Perry, 1982.
- 40.6 Tortula laevipila a var. laevipila, on trunk on large Ulmus glabra, by footpath at rear of Aigas House, Strathglass (96), Rothero, 1985: b var. laevipiliformis, on Acer campestre trunk, Kingley Vale car park, West Stoke, near Chichester (13), Matcham.
- 45.2 Pottia starkeana a ssp. starkeana var. starkeana, spoil heap on old lead mine, Tideslow Rake, near Tideswell (57), Blockeel, 1985: b ssp. starkeana var. brachyodus, soil on limestone, Llanymynech Hill (47), Paton, 1975: c ssp. conica, on disturbed ground, Old Wood, Thornham Magna, near Eye (25), Smith; delete 47, specimens, from Llanymynech Hill, leg D.G. Long (E) & J.G. Duckett (BBSUK), 1975, are ssp. starkeana var. brachyodus.
- 45.9 P. heimi, sandy upper saltmarsh, Dovey Junction (47), Benoit.
- 46.1 Phascum cuspidatum b var. piliiferum, on sandy loam, ruderal habitat, near Wyre estuary, Stalmine (60), Wigginton: c var. schreberianum, on soil lying undisturbed over winter, shrub bed outside Plant Science Laboratories, Whiteknights, Reading (22), E.V. Watson, 1979, comm. Jury.
- 47.1 Acaulon muticum, gravel pit, on bare sandy soil by footpath, Asheldham (18), T. Pyner, 1984, comm. Adams.
- 48.1 Hyophila stanfordensis, on loamy stream bank, northern edge of New England Wood, Rayleigh (18), T. Pyner, 1984, comm. Adams.
- 48a.1 Scopelophila cataractae, 3 (Crundwell, 1986), new to England.
- 49.5 Barbula acuta, basic rocky river bank, Water of Ailnack gorge, above Delnabo, Tomintoul (94), Long & Paton (E).
- 49.18 B. tophacea, damp brickwork, railway bridge, Overton Mill, Overton (12), Crundwell, 1985.
- 49.20 B. cylindrica, soil on hedge bank, High Kelling, near Holt (27), Corley.
- 49.23 Bryoerythrophyllum caledonicum, on wet calcareous ledges in gully, An Chul Choire, Aonach Beag (97), Rothero.
- 50.1 Gymnostomum calcareum, with Leiocolea muelleri, base-rich soil, flush above road, Loch Kishorn (105), Paton & P.E. Stanley.
- 51.1 Gyroweisia tenuis, previous records from v.-c. 41 are referable to Gymnostomum calcareum and G. luisieri (NMW) - replace with: at base of

- stone ornament in garden, Talygarn, south of Pontyclun, Whitehouse, 1985 (first found by A.R. Perry); on old lime mortar inside disused kiln on raised beach, Wallog (46), Bates; damp calcareous NE facing sandstone/brickwork, Powis Castle (47), Benoit; on basic conglomerate rock face, Water of Ailnack gorge, above Delnabo, Tomintoul (94), Long & Paton.
- 51A.1 Leptobarbula berica, mortar of damp stone bridge over stream, St Mawgan, near Newquay (1), Paton, 1961 (BBSUK); side of brick wall, Highway House, Lower Froyle (12), Crundwell, 1982; stone pavement in Woolbeding churchyard (13), J.C. Gardiner, 1969; on brickwork of main road bridge over R. Brede at Sedlescombe Street (14), R.A. Finch, 1966, and on red brick wall of shop by main road, Sedlescombe (14), Townsend, 1980; Merstham churchyard (17), J.C. Gardiner, 1974; damp wall, gardens of Hampton Court (21), J.C. Gardiner & M. Milnes-Smith, 1977 (BBSUK); vertical stone by small stream, Notcutt's Nursery, Woodbridge (25), Appleyard, 1981 (BBSUK); North-facing wall kept moist by overflow pipe, Corn Exchange, King's Lynn (28), J.G. Duckett, 1967; on sloping top of large limestone boulder in wooded area near Ketton Quarry (55), Whitehouse, and about 10 m. from previous site, on stone c. 45 x 25 cm. embedded in E facing slope under ash saplings (55), Preston; growing in the bowl of what appeared to be an old stone font in the churchyard of St German's church, Winestead, near Patrington (61), R. Lewis, 1948 (BBSUK); detached stones (Permian), S side of R. Went, Brocodale Reserve (63), G.A. Shaw, 1972, and on moist stonework by drain, Wentbridge church (63), Blockeel.
- 54.3 Weissia perssonii, rock crevice on hillside, above Lochana' Tana, S side of Loch Tarbert, Jura (102), Corley; on turf of sea cliff, near Point of Stoer (108), Woods, 1985.
- 54.6 W. microstoma a var. microstoma, among rocks, W slope of Lissoughter, Connemara (H.16), Bouman, 1985.
- 54.11 W. sterilis, side of path, chalk grassland, Stockbridge Down (12), Crundwell.
- 55.1 Oxystegus sinuosus, with Zygodon viridissimus on sides of deep stone gutter, at base of S wall of Burton church, N of Lincoln (54), Whitehouse.
- 55.3 O. hibernicus, on basic shady rock face, Stob Glas ridge, An Caisteal (87), Long, 1981.
- 56.2 Trichostomum brachydontium, on soil under trees on chalk bank, Brantingham Dale, South Cave (61), Blockeel & Wall.
- 57.2 Tortella tortuosa, on Roman Wall, Silchester (12), F. Rose & Crundwell.
- 57.3 T. flavovirens b var. glareicola, damp rock crevices by stream on upper seashore, Wallog (46), Bates.
- 59.1 Trichostomopsis umbrosa, on mortar of brick-walled pit, Little Wittenham church (22), Bloom; at base of exterior wall of Herb Garden, in shade, Thornham Magna, near Eye (25), Smith; on damp church wall, in zone just above band of Lunularia at base, Elveden church (26), Preston & Whitehouse.
- 64.9 Grimmia ovalis, on rock slabs and outcrops, Traprain Law (82), E.V. Watson, 1963, comm. Jury.
- 66.6 Racomitrium affine, on boulder on moorland, Dubh Chreag, W of Craighouse, Jura (102), Corley; on rock, W slope of Lissoughter, Connemara (H.16), Bouman, 1985.
- 66.10 R. ericoides, stony road verge, east of Leadhills (77), Yeo & S. Shea.
- 66.11 R. elongatum, on calcareous track, Weeting Heath, 3 km. NW of Brandon (28), Whitehouse & Hill; crumbling stony slope, Water of Ailnack gorge, above Delnabo, Tomintoul (94), Long & Paton; on gravelly footpath, Allt a'Mhuilinn, Ben Nevis (97), Long.
- 68.1 Glypomitrium daviesii, on large boulder in huge block scree, Coire Gabhail, Glencoe (98), Rothero; in crevice of boulder, W of Carraig Mhor, Gulf of Corrievreckan, Jura (102), Corley.

- 72.1 Physcomitrium pyriforme, bare soil in pasture, Great Cumbrae (100), Cocking.
- 75.1 Ephemerum recurvifolium, newly felled area in woodland, north-west of Vernham Dean (12), Crundwell; bare calcareous earth on anthill, Warboys Railway Cutting (31), Hodgetts, 1985.
- 78.2 Tetraplodon mnioides, raised bog, Leaha (H.17), Grogan & C. Douglas, 1985.
- 84.1 Leptobryum pyriforme, bare peat on raised bog, Lisnageeragh (H.17), Grogan & C. Douglas, 1985.
- 85.1 Pohlia elongata b ssp. elongata var. acuminata, beside the Bizzle Burn, Cheviot (68), E.V. Watson, 1963, comm. Jury.
- 85.6 Pohlia drummondii, on sandy loam in crevice of streamside boulder, Ease Gill (60), Wigginton.
- 85.8 P. andalusica (P. rothii, sensu A.J.E. Smith), on bare soil at foot of cliff at 600 m. alt., Cadha Dearg, W side of Seana Bhraigh (105), Corley, 1984, det. A.J. Shaw, new to Scotland.
- 85.9 P. bulbifera, exposed silt, Carreg-Ddu Reservoir, Elan valley (43), Fisk; soil exposure on stream bank, Hindburn (60), Wigginton; soil on edge of loch, Loch a'Bhaile Margaith, Jura (102), Corley & P.H. Pitkin.
- 85.11 P. camptotrachela, exposed silt, Carreg-Ddu Reservoir, Elan valley (43), Fisk; soil in marshy field, near Courhoor Lough, Cleggan (H.16), Long.
- 85.12 P. muyldermansii, with Pohlia elongata in deep crevice of overhanging cliff, high above Llyn Llygad, Rheidol, Plynlimon (46), Bates; moist grit on low cliff by moorland stream, Ashop Clough, High Peak (57), Blockeel; on clay soil in seepage area on steep bank in pasture, Stocks (64), Wigginton.
- 85.17 P. wahlenbergii a var. wahlenbergii, on wet burned ground in woodland clearing, Thornham Magna estate, near Eye (25), Smith.
- 86.1 Epiphytergium tozeri, on moist loam on shaded stream bank, Allt a'Mhuilinn, above Craighouse, Jura (102), Corley & P.H. Pitkin.
- 89.9 Bryum pallens b var. fallax, wet rocks in river gorge, R. North Esk, The Burn, near Edzell (91), U. Duncan, 1957. comm. Jury.
- 89.14 B. algovicum var. rutheanum, soil at quarry, Ketton Quarry (55), Jackson.
- 89.23 B. flaccidum, on bark, woodland on bank of R. Torne, Hirst Priory, near Crowle (54), Wall; bark of elder on waste ground, by R. Dee, Ecclestone (58), Fisk, 1985.
- 89.26 B. creberrimum, on site of bonfire, near Bach-y-Graig, Llandrindod Wells (43), Orange, 1985.
- 89.27 B. pallescens, in mortared crevice on wall, Blaen Rhestr, Llansantffraed Cwmdeuddwr, near Rhayader (43), Orange; on soil in crevice of slate scar, Catlow Fell, Bowland (64), Wigginton; at edge of roadway on bridge, Inverlussa, Jura (102), Corley.
- 89.31 B. alpinum, wet gravel pit, near King's Oak, Epping Forest (18 in ()), E. Forster, c. 1800 (BM), comm. Adams.
- 89.40 B. dunense, floor of chalk pit, motor bike wheel ruts and bare chalk, Halnaker Chalkpit, near Chichester (13), Matcham; sandy upper saltmarsh, Dovey Junction (47), Benoit.
- 89.42 B. radiculosum, mortar of building, north of Leadhills (77), Yeo & S. Shea; mortar of old wall, Cleggan Farm (H. 16), Long.
- 89.43 B. ruderale, flower bed, Inverewe Garden (105), Whitehouse.
- 89.46 B. sauteri, bare soil in pasture, Great Cumbrae (100), Cocking.
- 89.47 B. tenuisetum, exposed mud, Lindley Wood Reservoir, north of Otley (64), Crundwell et al.
- 89.48 B. microerythrocarpum, moist soil at edge of beanfield, Linacre Reservoirs, Chesterfield (57), Blockeel; wheat field, Gairloch (97), Whitehouse; fallow field and garden, South Erradale (105), Whitehouse.
- 89.50 B. rubens, flower bed, Inverewe Garden (105), Whitehouse.
- 91.2 Mnium thomsonii, crevice of limestone rocks on north facing slope, near Coldeaton Bridge, Dovedale (57), Blockeel.

- 92.1 Cinclidium stygium, in basic flush, mixed with Bryum pseudotriquetrum, N facing coire, Bheinn Mhor (98), Rothero, 1985.
- 93.3 Rhizomnium pseudopunctatum, in base-rich flush, small valley near Delnabo, Tomintoul (94), Long & Paton.
- 94.2 Plagiomnium affine, amongst grass, under hedge on sandy soil, Thorpe Bassett (61), O.M. Crowson, 1960, comm. Jury.
- 94.3 P. elatum, in marshy ground, Ardfern, S side of Lowlandman's Bay, Jura (102), Corley.
- 95.1 Pseudobryum cinclidioides, mossy spring on N facing slope, E ridge of Mullach Coire Mhic Fhearchair (105), Long.
- 99.1 Amblyodon dealbatus, wet flushed slope on basic schist cliff, W. cliffs of Druim Mor, Caenlochan Glen (90), Long & B.M. Murray, 1985.
- 102.4 Bartramia ithyphylla, crevices on moist cliff by moorland stream, Ashop Clough, High Peak (57), Blockeel.
- 105.4 Philonotis caespitosa, wet base of greensand bank, lane to Lake Farm, nr. Bohemia, Rookley, Isle of Wight (10 in ()), Percy Long, 1933 (Herb. Isle of Wight Natural History & Archaeological Society), comm. Snow; wet gravel at base of dripping wall, near the Bishop's Glen, Dunoon (98), Field, 1973.
- 105.6 P. tomentella, more or less basic soil in block scree, An Chul Choire, Aonach Beag (97), Rothero.
- 109.2 Zygodon baumgartneri, growing with Homalothecium sericeum on trunk of leaning ash in wet wood, 1 km. NW of the church, West Woodhay (22), Bates, 1985.
- 109.3 Z. conoideus, on elder by stream, Allt a'Mhuilinn, just above Craighouse, Jura (102), Corley & P.H. Pitkin.
- 110.9 Orthotrichum sprucei, on trunks of alder trees, by R. Severn between Bewdley and Stourport (37), Blockeel.
- 110.11 O. cupulatum a var. cupulatum, with O. anomalum on stone gutter around base of outside wall of church, Elveden church (26), Preston & Whitehouse; mortar in wall of railway bridge, Warboys Railway Cutting (31), Hodgetts.
- 110.18 O. pulchellum, on bark of large Acer campestre in wood, Pingle Wood, Warboys (31), Preston; on elder inside ruined cottage, Knockrome, S of Lowlandman's Bay, Jura (102), Corley.
- 111.2 Ulotia drummondii, on birch trunk, ravine below Loch a'Bhaile-Mhargaidh, W of Craighouse, Jura (102), Corley & P.H. Pitkin.
- 111.6 U. phyllantha, on bark of old elder, in ditch of Devil's Ditch, NW of Newmarket Road (29), Richards.
- 113.1 Fontinalis antipyretica c var. gigantea, in fenland drain, Stow Bardolph (28), C.J. Lowe, comm. Wigginton; on stones in burn, Tyne Water, Lothain Bridge, near Ford (83), Long; backwater of R. Spey, W of Dalnapot, near Bridge of Avon (95), Paton.
- 116.1 Leucodon sciuroides a var. sciuroides, on mature Fraxinus excelsior, by road opposite entrance to Mine, near Eastgate (66), Wigginton, comm. Graham.
- 128.1 Myurella julacea b var. scabrifolia, basic rock clefts by river, Water of Ailnack gorge, above Delnabo, Tomintoul (94), Long & Paton (E).
- 130.1 Habrodon perpusillus, on bole of Tilia x europaea SW of Vaynor church, Vaynor (42), Perry.
- 136.1 Anomodon longifolius, on shaded Magnesian Limestone, Anston Stones Wood, South Anston (63), Blockeel.
- 136.3 A. viticulosus, shaded rocks by dyke, near Marine Station, Isle of Cumbrae (100), S. Waters, comm. Cocking.
- 137.5 Thuidium recognitum, in limestone turf, burn above Glengour, Fort William (97), Long.
- 140.3 Campylium polygamum, sandy upper saltmarsh, Dovey Junction (47), Benoit.
- 141.3 Amblystegium tenax, on basic rocks in river, R. Awe, Inverawe (98), Rothero.
- 141.8 A. compactum, on basic dyke intrusion into surrounding schist, raised

- beach cave, Lochranza, Isle of Arran (100), Church.
- 143.1 Drepanocladus aduncus, St Michael's Pool, Bleddfa (43), Port, 1985.
- 143.4 D. fluitans a var. fluitans, in flush with Sphagnum auriculatum, c. 1400 ft., Vagar Hill, Dorstone (36), Port.
- 143.5 D. exannulatus b var. rotae, moorland flush, Kingslaw, near Whitley Chapel, Hexham (67), E.V. Watson, 1980, comm. Jury; in flush between scree and stream, S of Lochana Tana, W of Lagg, Jura (102), Corley.
- 143.7 D. vernicosus, wet area with Juncus and Calliargon by road, W side of Lough Mask (H.16), Jury, F.J. Rumsey & D.A. Webb, 1983.
- 146.1 Calliargon stramineum, flush on raised bog, Monivea (H.17), Grogan & C. Douglas, 1985; minerotrophic soak, Clara Bog (H.18), O'Connell.
- 150.4 Brachythecium salebrosum, on bank of ditch in boulder clay wood, Thornham Magna, near Eye (25), Smith.
- 150.5 B. mildeanum, on log in Birdshedge Grove on the water meadows, Thornham Magna, near Eye (25), Smith.
- 150.7 B. rivulare, flushed area along channel on raised bog, Clontymullen (H.24), Grogan & C. Douglas.
- 150.8 B. starkei, on boulder beside loch, Loch Luchd, Seana Braigh, Strath Mulzie (106), Corley & P.H. Pitkin.
- 152.1 Scleropodium cespitans, on willow, Birdshedge Grove on the water meadows, Thornham Magna, near Eye (25), Smith.
- 153.2 Cirriphyllum cirrosum, ledge on basic crag in E facing gully, Coire Ghranda, Beinn Dearg (106), Rothero.
- 155.6 Eurhynchium swartzii b var. rigidum, on calcareous soil in scrub, adjacent to Imber road, Imber, Salisbury Plain (8), Porley.
- 156.1 Rhynchostegiella tenella a var. tenella, base of sandstone gravestone, Upwood churchyard (31), Hodgetts, 1985.
- 159.1 Plagiothecium latebricola, on rotting log in wood, Archers Wood (31), Hodgetts.
- 159.4 P. ruthei, base of partially submerged Carex tussock, Welches Common, Barlavington, near Petworth (13), Matcham.
- 159.6 P. laetum, on branch on bank by track, on NW side of Gray Hill, above Wentwood Reservoir, NE of Newport (35), Perry, 1984.
- 160.2 Herzogiella seligeri, decaying stump in beech plantation, West Woods, near Marlborough (7), Stern.
- 161.2 Isopterygium elegans, clayey soil in wood, Archers Wood (31), Hodgetts.
- 168.4 Hypnum mammillatum, Mossymere Wood, Itteringham (27), Appleyard; on gritstone boulder in oak woodland, Padley Wood, Nether Padly (57), Blockeel; on a log by the river, Arnecliffe Wood (62), E.V. Watson, 1967, comm. Jury.
- 175.1 Hylocomium brevirostre, among boulders by loch, Loch Luchd, Seana Bhraigh, Strath Mulzie (106), Corley & P.H. Pitkin.

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MOSS GARDENS OF BRITAIN: A GARDEN IN THE COTSWOLDS

by
Graham Walters

It is something of a puzzle why there is almost no history of moss gardening in Britain. The passion for foreign plants starting with the showy imports of the Tradescants in the 17th century and the tendency of designers thus to turn their backs on native species have been to the detriment of British gardens.

There has always been an overriding urge to grow flowers. Foliage has been the poor relation, only finding favour during the Fern Craze in the late 19th to early 20th centuries when some gardeners relinquished colour for a short time and considered form and texture.

The appreciation of mosses seems to be limited nowadays mainly to a botanical standpoint rather than an aesthetic one. Until now the only British gardens known to grow and tend mosses outdoors have been the Savill Garden at Windsor and Sutton Place at Guildford. It was therefore a great pleasure in 1983 to discover the existence of a garden where moss is given pride of place.

A Japanese garden was started in 1963 near Burford in the Cotswolds by a barrister. Working with a full-time gardener and a designer he laboured at weekends to create what is now probably one of the best Japanese gardens in Europe. For reasons of privacy the exact location is not divulged here.

At its centre is a single story dwelling of Cotswold stone featuring single pitch roofs to mirror the vernacular architecture of the district. This house fits perfectly into its surroundings. At one end is a pond fed by a pre-existing stream. The whole garden is enclosed by walls and hedges which must combine with the water to give a relatively high humidity level.

Once the basic earthworks and hard landscape features were completed the owner set about adding the moss which he collected locally, beginning by covering whole areas with the intention of achieving an instant effect. The mosses, however, failed to establish, being unsuited to the conditions. Taking moss from the wall is an ecologically unsound method of creating a moss garden anyway and is not to be encouraged. The practical solution, and one more in tune with Japanese garden philosophy, was to remove the weeds as they arose and allow the moss to arrive by itself. A few small pieces were taken from the owner's land adjoining the garden to fill in where needed. By the end of the first year a reasonable cover was achieved.

Irrigation is by pop-up sprinklers of the type used on golf greens. The moss was originally watered very frequently but the gardener found that a suitable effect could be accomplished using only two sessions a day.

Weeds are controlled by applying a weak solution of paraquat or glyphosate when they are at the seedling stage. They are then removed by a light brushing which is part of the regular maintenance schedule. Interestingly the constant compaction due to this operation seems to have a beneficial effect on the growth of the moss also greening it up, a similar effect to rolling the turf on a bowling green. Hepatics have proved a problem, sometimes covering quite large areas. Paraquat has been found to be an unpredictable control but spot treatment with a strong solution of glyphosate seems to be better. Paraquat has a tendency to turn the moss brown but the owner has found he can minimise this by putting fertilizer in the same mixture.

Of pests, birds, especially Blackbirds, are the major problem. The most difficult time of year is March when they pick at the moss and turn it over.

They appear to be looking for insects and the owner has had some success using insecticides. This problem has necessitated the use of netting which is erected as soon as the autumn leaves have been cleared, and dismantled in about May. It is even so not a wholly successful method, some cunning birds being able to find ways in and under.

British moss gardening is in its infancy with much work yet to be done. I am undertaking limited experiments on vegetative propagation and weed control and would welcome communications from any interested members.

Species List of species present in garden.

Barbula hornschiuchiana
B. cylindrica
B. recurvirostra
B. convoluta
Ceratodon purpureus
Eurhynchium praelongum

Brachythecium rutabulum
Oxystegus sinuosus
Amblystegium serpens
Neckera complanata
Calliergon cuspidatum
Homalothecium sericeum?

CHEMISTRY AND CHEMICAL TAXONOMY OF BRYOPHYTES

INTERNATIONAL PSE-SYMPOSIUM

A symposium on chemistry and chemical taxonomy of bryophytes will be held at the Universität des Saarlandes, Saarbrücken (Federal Republic of Germany) from August 31st to September 2nd, 1988. At this meeting a comprehensive review of research on bryophyte chemistry including most recent developments will be made. The programme provides sections on structural chemistry, biochemical aspects, biological and pharmaceutical active compounds, accumulation of xenobiotics in context with air pollution, chemical capacity of bryophytic tissue cultures and chemo-taxonomical aspects. Lectures will be by many authorities working in these fields. There will also be the possibility of poster presentations and a limited number of additional lectures. The definite programme with all details will be issued at the latest at the beginning of 1988. Further enquiries should be made to the organizers.

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