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BRITISH BRYOLOGICAL SOCIETY

PRESIDENT: PROF. P. W. RICEARDS

BULLETIN

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CONTENTS

Notes from the Secretary	1
Future Meetings of the Society	2
Other Meeting in 1979	3
Provisional Atlas of Bryophytes of the British Isles	3
The Moss Flora of Britain and Ireland - errata	3
E.B.S. Mapping Scheme	4
Additions and Amendments to the Membership List	5
Mobile Homes for Mosses	6
A SHORT GERMAN-ENGLISH BRYOLOGICAL GLOSSARY	
By M. A. Pearman	7
THE HISTORY OF THE MOSS EXCHANGE CLUB	
By W. D. Foster	19

NOTES FROM THE SECRETARY

Membership subscriptions became due on January 1st so that members who are in arrears should send their subscriptions now to the Treasurer, Dr W. D. Foster, Department of Pathology, Macclesfield Hospital, Prestbury Road, Macclesfield, Cheshire, SK10 3BL, in order to ensure that their names remain on the mailing list for the Journal of Bryology, and also to prevent unnecessary administrative efforts. I would like to remind members that subscriptions remain unchanged for the current year and at present stand at Ordinary Membership £6.00, Junior Membership £3.00 and Family Membership £1.00. Cheques should be made out to "British Bryological Society". North American members are again reminded that they should pay their subscriptions by a bankers draft or money order payable in sterling.

The U.K. National Serials Data Centre has assigned an International Standard Serial Number (ISSN) to the Bulletin. This will be found on the front cover. This is a unique code for the identification of serial publications, which can be used wherever information on serials needs to be recorded or communicated.

FUTURE MEETINGS OF THE SOCIETY

(a) Spring Field Meeting, 1979: Ludlow, 4 - 11 April. Local Secretary: Mr Michael Pearman, 44 Goldiclie Road, Sutton Coldfield, West Midlands, B73 5PG. Headquarters: The Blue Boar, Town Centre, Ludlow. (B & B. 1978 £4). This is one of the cheapest and at the same time most comfortable hotels in Ludlow. Members are urged to book early since accommodation is limited. The local secretary can provide a list of alternative accommodation. Full details of the programme will be available from the local secretary.

(b) Summer Field Meeting, 1979: Ireland, 18 August - 1 September. Local Secretary: Donal Synnott, National Botanic Gardens, Glasnevin, Dublin 9. Tel: 01-374388, 01-377596

18 - 25 August, Limerick

Headquarters: The Glentworth Hotel, Glentworth St., Limerick City.

Limerick is not well known bryologically. Dumortiera is recorded from the Galtee Mts. in the south east. There ought to be good Atlantic species in places like the Clare Glens on the Tipperary border. The lowland limestone areas of the county have scarcely been looked at. It is hoped that the vice-county census for Limerick and N. Tipperary will be considerably improved by the E.B.S. visit.

25 August - 1 September, Glengarriff

Headquarters: Gold Links Hotel, Glengarriff

Glengarriff is in the Ellen Hutchins country "near Bantry". type locality for Jubula hutchinsiae, Leiocolea bantriensis and Plagiochila atlantica, to mention but a few. With Killarney only 38 miles away, the character of the flora is very much an Atlantic one. In 1955 the following vice-county records were collected from the N.E. slope of Lackawee - Radula carringtonii, R. holtii, R. voluta, Lejeunea holtii, L. diversiloba, Aphanolejeunea microscopica, Cephalozia leucantha, Solenostoma cordifolium and Metzgeria hamata. Cyclodictyon laete-virens is recorded from Hungry Hill. Fissidens celticus is frequent in the woods. Glengarriff woods, Cloonee Lakes, Uragh Wood, Puleen Cove, Caha Mts., and Gougane Barra, are all promising.

Thackeray wrote of Glengarriff, "Were such a bay lying upon English shores it would be a world's wonder. Perhaps if it were on the Mediterranean or Baltic, English travellers would flock to it in hundreds". In the event of such a rush, early booking is advised.

(c) Annual General Meeting and Paper Reading, 1979: Manchester University, 21 - 23 September. Local Secretary: Dr. M.E. Newton, Shaw Bank, 143 Mottram Old Road, Stalybridge, Cheshire, SK15 2SZ., and Dept. of Genetics, University of Leeds, LS2 9JT.

Accommodation has been reserved in a Hall of Residence, Hulme Hall, where the lectures will also take place. It is hoped that as many members as possible will take advantage of the opportunity to stay in hall. All bedrooms are fitted with washbasins and with full board the cost for the weekend will be about £16. Bar facilities will also be available. On the Sunday there will be a field excursion into South Lancashire.

(d) Taxonomic Workshop, November 1979: Queen Mary College,
University of London.

(e) Spring 1980: S.W. Wales, Pembroke or Haverfordwest.

(f) Summer 1980: Co. Durham.

OTHER MEETING IN 1979

Bryology Course at Kindrogan

3 - 10 October, Kindrogan Field Centre, Enochdhu,
Blairgowrie, Perthshire PH10 7PG.

Bryophytes, Brian Brookes.

This course at Kindrogan is run by our member, Brian Brookes, who is Warden, and it is particularly suitable for beginners. Individuals and small groups are welcome at Kindrogan either to participate in advertised courses or on an assisted basis. The fee for the Bryophyte course is £56 which includes board, accommodation and all academic facilities. Copies of the full programme and further details of all 1979 courses are available from the above address.

PROVISIONAL ATLAS OF BRYOPHYTES OF THE BRITISH ISLES

A provisional atlas of 105 commoner species of bryophytes was published by the Natural Environmental Research Council at the beginning of November 1978. The format of the maps differs somewhat from those earlier provisional atlases published by N.E.R.C. for other groups. A number of the maps show the effect of climate, substrate or atmospheric pollution. Copies of the atlas are available from Dr. A.J.E. Smith, School of Plant Biology, University College of North Wales, Bangor, Gwynedd, LL57 2UW price £3.00 plus 40p p. & p. Please make cheques payable to the British Bryological Society.

A set of transparent overlays for use with this atlas, entitled "Overlays of Environmental and other Factors for use with Biological Records Centre Distribution Maps", is available for £2.00 from I.T.E., Biological Records Centre, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, PE17 2LS. The overlay maps are: altitude, geology, rivers, upland moorland, western oakwoods, February minimum temperatures, January mean temperatures, July mean temperatures, annual rainfall, rain days, vice-county boundaries and current county boundaries.

THE MOSS FLORA OF BRITAIN AND IRELAND - ERRATA

An errata list of "The Moss Flora of Britain and Ireland" has been compiled and is available, on receipt of a stamped addressed envelope, from :-

Dr. A.J.E. Smith,
School of Plant Biology,
University College of North Wales,
BANGOR, Gwynedd. LL57 2UW, U.K.

B.B.S. MAPPING SCHEME

If the mapping scheme is to be completed by the end of 1982 as was suggested in the January 1978 Bulletin there must be a marked increase in field activity. In that Bulletin I said it would be necessary to record in 130 unworked and 220 underworked squares per annum in Britain. From the figures below it is evident that during 1978 there was an increase in well-worked squares of only 36 and a decrease in unworked squares of 57, approximately 25% of the required total. The situation in Britain and Ireland at the end of 1978 was as follows (end of 1977 figures in brackets):

Well-worked squares	Under-worked squares	Unworked squares	Total
BRITAIN			
926 (890)	1120 (1099)	587 (644)	2633
IRELAND			
47 (47)	325 (320)	575 (580)	947

The present vice-comital situation is as follows:

- vice-counties which are well-worked or in the process of being worked:
1, 2, 5-17, 29, 31, 38, 41, 47-54, 63, 66-68, 71, 81-84, 90, 91, 95, 99-101, 104, 112.
- vice-counties from which there has been some recording but from which more data are required:
3, 4, 18-20, 22-24, 27, 28, 35, 36, 42, 43, 46, 55, 57, 59, 60, parts of Yorkshire, 69, 70, 72-80, 85-89, 97, 98, 102, 103, 105, 106, 108, 109, 111.
- Seriously under-worked vice-counties:
21, 25, 26, 32-34, 37, 39, 40, 44, 45, 56, 58, parts of Yorkshire, 75, 92-94, 96, 107, 110.

YOUR HELP IS REQUIRED !

Do not be inhibited because you are a beginner or inexperienced. For many squares such commonplace and easily recognisable species as Ceratodon purpureus, Mnium hornum, Hypnum cupressiforme and Diplophyllum albicans are unrecorded. Recording bryophytes systematically in 10km grid squares is one of the best ways of becoming expert at identification.

Maps of commoner species in the Provisional Distribution Atlas, although to some extent reflecting bryological activity, do nonetheless indicate that the situation is being reached in which for some species at least meaningful maps are being produced. The aim is to do this for all British bryophytes. To attain this end YOUR HELP IS REQUIRED in field recording.

TWO OTHER REQUESTS:

- I am sent from time to time un-named collections of bryophytes, identification of which is a time consuming process.

Are there any members who would be willing to undertake this task ?

2. If you have record cards which you are unlikely to add further records to, will you please return them (only about half the record cards sold have ever been returned with records on them !).

Field record cards and revised instructions for their use are available from me at 40p for 10.

School of Plant Biology,
University College of North Wales,
BANGOR, Gwynedd, LL57 2UW.

A.J.E. Smith.

ADDITIONS AND AMENDMENTS TO THE MEMBERSHIP LIST

NEW MEMBERS TO FEBRUARY, 1979

- AEDERRAHMAN, Salim, School of Plant Biology, University College of North Wales, Memorial Buildings, Bangor, Gwynedd, LL57 2UW. (1979 Junior)
- ATKINSON, C. J., School of Plant Biology, University College of North Wales, Memorial Buildings, Bangor, Gwynedd, LL57 2UW. (1979)
- CAVALIER-SMITH, Dr T., Biophysics Department, University of London, King's College, 26-29 Drury Lane, London, WC2B 5RL. (1979)
- GLADING, Paul R., Department of Plant Science, University College, P.O. Box 78, Cardiff, CF1 1XL. (1979 Junior)
- JOYCE, Miss Anna R., Botany Department, University of Aberdeen, St Machar Drive, Aberdeen, AB9 2UD. (1979 Junior)
- MHIC DAEID, Dr E. Caroline, 12 Coolmine Close, Clonsilla, Co. Dublin, Ireland. (1979)
- MURPHY, Matt, Sherkin Island Field Study Centre, Sherkin Island, Co. Cork, Ireland. (1978)
- PENNELL, F. G., 24 St Georges Road, Bedford, MK40 2LS. (1979)
- PETERKEN, Mrs S. M., Greenacre, Wood Lane, Oundle, Peterborough. (1979)
- RUSSELL, Shaun, Botany Department, Fort Hare University, Private Bag 314, Alice 5701, South Africa. (1979)
- SIMO, Doctora Rosa Maria, Departamento de Botanica, Facultad de Ciencias, Oviedo, Spain. (1979)
- SMITH, B.M., Flat 3, 10 Church Road, Canton, Cardiff, CF5 1NY. (1978 Junior)
- SMITH, R. A., 50 Greenfield Avenue, Kettering, Northants., NN15 7LL. (1979)
- TOUW, Dr A., Rijksherbarium, Schelpenkade 6, Leiden, Netherlands. (1978)
- WILBERFORCE, Peter W., Little Yaffles, Womenswold, Nr. Canterbury, Kent. (1979)
- WILKINS, Paul, Hatherly Laboratories, Prince of Wales Road, Exeter, EX4 4PS. ((1973) 1978)

CHANGES OF ADDRESS AND TITLE

- BINES, Dr T. J., Nature Conservancy Council, 33 Eskdale Terrace,
Newcastle upon Tyne, NE2 4DN.
DUCKETT, Prof. J. G., Plant Biology and Microbiology, Queen Mary
College, Mile End Road, London, E1 4NS.
GORHAM, Dr J., Department of Biochemistry and Soil Science,
University College of North Wales, Deiniol Road, Bangor,
Gwynedd.
HARTMAN, Forrest A., P.O. Box 7650, Ann Arbor, Michigan 48107,
U. S. A.
JEFFERY, Barry G., 14 Church Road, Stevington, Bedfordshire,
MK43 7QB.
MACKINTOSH, Miss Jane, Nature Conservancy Council, 12 Hope Terrace,
Edinburgh, EH9 2AS.
MERRY, David G., 1 Arthur Street, Redditch, Worcs., B98 8LH.
ODGAARD, Bent, Rådhusvaenget 4, 3. th, DK-2770 Kastrup, Denmark.
PETTY, Stephen J., The Manse, Kielder, Hexham, Northumberland.

DEATH

- WATSON, Alan, Ivy Cottage, Torpenhow, Carlisle, Cumbria.

RESIGNATIONS

- CAULFEILD-BROWNE, P., Exeter.
HECTOR, Miss W. E., London EC1 YOSN.
KUSEL, Miss J. M., London W.14.
WILLMOT, A., Allestree, Derby.

MOBILE HOMES FOR MOSSES

As my old Herald estate was not worth trading in for the £100 I was offered for it, patched and reprieved it chugs the 12 miles or so into college each day and gives the row of Bryum argenteum on the rear bumper a good dose of East End lead, sulphur dioxide, oil and general muck.

My Bryum argenteum has not yet sported a capsule (the pollution seems to be highly contraceptive), but I am reminded of a trip to Tunbridge Wells many years ago when we came across an active but aged Morris Traveller (of the half-timbered var. maxima) exhibiting severe symptoms of gutted percha around the windows. The local mosses had come to the rescue however and sealed the bare canvas threads with a fine growth of Ceratodon, Tortula muralis, Bryum argenteum and even a few tufts of Grimmia pulvinata, all save the Ceratodon besporting a fine crop of capsules.

Can anyone score better than 4 species on a still active car? A special prize is offered for a moss that has a capsule to prove it is possible on the back of a mini with an M.O.T. certificate.

ANONYMOSS

The British Bryological Society was founded fifty-six years ago by a re-organisation of a much older society, the Moss Exchange Club, which had been started as long ago as 1896. Thus the two societies have a combined history of over eighty years so that an attempt to give some account of their history is not premature. The only history of the Society is Miss Eleonora Armitage's 'A short account of the Moss Exchange Club and the British Bryological Society' first published in 1944, and which Miss Armitage obligingly had reprinted in 1956, so that the Secretary could give a copy to every new member. This short pamphlet is written in the form of annals extracted from the annual reports of the Society and carries the story down to 1939. In D.E. Allen's otherwise excellent history of natural history in Great Britain, The Naturalist in Britain, bryology is not so much as mentioned. It is the purpose of this article to give an account of the history of our parent society, the Moss Exchange Club (M.E.C.) from its foundation to its metamorphosis to the British Bryological Society in the summer of 1922.

The M.E.C. was founded by the initiative of C.H. Waddell although doubtless he had discussed the project with his friend H.W. Lett. Both men were clergymen in the Church of Ireland and natives of Co. Down. In 1896 Waddell was thirty-eight years old whilst Lett was twenty-two years his senior. They were botanists with wide interests, Waddell favouring especially such critical groups as brambles and hawkweeds; but their chief common interest was in bryophytes, particularly hepatics. At the end of 1895 Waddell submitted notes to three journals, Science Gossip, the Irish Naturalist and the Journal of Botany proposing the establishment of a bryophyte exchange club on lines similar to those already in existence for flowering plants. Waddell believed that the want of such a club hindered the advance of bryology in Great Britain. Such a club, he thought, could promote greater knowledge of the distribution of bryophytes and prepare the way for a much-needed new edition of the London Catalogue of British Mosses and Hepatics as well as be of great assistance to beginners. Waddell asked that interested bryologists get in touch with him. He felt that at least thirty active members would be needed for a successful society geared to undertake a wide study of British bryophytes and, should sufficient interest be shown in his scheme, he proposed to get in touch with 'some of our leaders in bryology'. Failing this a smaller number of members would be adequate for an exchange club. Waddell's proposal was warmly supported by H.N. Dixon who was about to publish the first edition of his Student's Handbook of British Mosses, although he pointed to a possible danger - that such a club might 'tend towards the extermination of our rarer species'. Botanists were just becoming conservation-minded and at a recent meeting of the British Association 'botanical exchange clubs' and the 'injudicious action of botanists' had been charged with destructive effects on the British flora. However, Waddell replied that one of the rules of his club would be that great care be taken not to exterminate species, beginners would be cautioned and localities, particularly near towns, would 'not be too definitely published'.

In the event twenty-three members enrolled in 1896. The subscription was one shilling a year and Waddell acted as Secretary, Treasurer and Distributor. In the autumn of that year a distribution of over two thousand packets of bryophytes was made.

What sort of people were the founding members of the M.E.C. ? As botanists most were of at least modest distinction but the range of bryological competence seems to have been wide. There were undoubted experts such as Dixon, Macvicar, Binstead and Lett, and others such as Barker, Nicholson, Waddell and Miss Arm-

itage, the only woman member, were clearly pretty knowledgeable. Yet for several years Waddell was to complain that the greatest defect of the club was the high proportion of incorrectly named specimens submitted for exchange: some members at least can hardly have been much more than beginners. Their ages ranged from the twenty year old A.B. Jackson to the fifty-eight year old W.H. Lett; most were about the mid-point of life. Of those with known professions four were clergymen, two were solicitors and two doctors. The one academic, Barker, was a professor of mathematics and was to found the chair of cryptogamic botany at Manchester University. As to their geographical distribution, Northern Ireland was well-served with four members and likewise the southern environs of Manchester harboured another four. Five members spanned the Welsh Marches, six more lived in the south-east of England and three more stretched across Scotland from Kirkcaldy to Invermoldart.

Waddell's first Annual Report as Secretary, dated November 13, 1896, was circulated by post in manuscript. Of his total receipts of £1.3.0d he still had 3/1 in hand - the club was solvent. But, as no treasurer has had to do since, Waddell proposed a five-fold increase in subscription so that each member might be supplied with a new catalogue of mosses and hepatics, a club desiderata list and an annual report. A disciplinarian at heart, Waddell devoted almost a third of his report to instructions for the proper making of packets and the clear marking of members' desiderata lists; it was to be some years before such details were satisfactorily attended to, and packets not made from such unsuitable material as newspaper or even toilet paper, were clearly labelled, and Dixon could no longer make remarks such as 'there is too much of Ingleton and too little of the specimen, I cannot make anything of it'.

During the next year of the club's existence, or rather in the interval between November 1896 and June 1897 when Waddell submitted his second Annual Report, a number of administrative matters and questions of policy emerged. The club had lost but one of its members (the only one who was, in fact, to go on to be a professor of botany) but had gained seven new ones. Furthermore Waddell had received enquiries from a number of people who, on reflection, did not join the club. They were mostly beginners who had little 'stock' to offer for exchange purposes and who thought the club would be of little help to them in naming their specimens. Waddell suggested that some might like to organise a beginner's section. In the meantime he asked members willing to assist beginners to write their names in the notebook in which he circulated the Annual Report. On another page members who themselves felt the need of help were invited to write their names. It is clear that there was a lack of proficiency in the hepatics for although Barker, Nicholson, Dixon, Benson, Hamilton and Jackson offered to be 'helpers' they all limited themselves to mosses; only Miss Armitage offered to help with mosses and hepatics ('not critical'). On the other hand five members, including such experienced ones as Ingham and Hamilton, wanted help with hepatics. Waddell pasted into his report some pages from a London bookseller's catalogue offering bryological books for sale which he had critically annotated. One valuable suggestion, which was immediately implemented, came from Dixon who proposed that members should write comments on the specimens they had received in the exchange in a pocket notebook which could be circulated by post. This, it was felt, would be useful in correcting inaccurate naming of specimens. But members were also encouraged to write about anything to do with the club's activities or any bryological projects they had in mind. Some quite lively and interesting discussions were thus generated and, since man can hardly put pen to paper without revealing something of himself, these jottings give glimpses of the character of the writers. Thus one gets the impression that, for example, Nicholson was urbane, Horrell conceited and Dixon tolerant and modest. Indeed Dixon could even be gallant for when Miss Armitage submitted a specimen of *Dicranella heteromalla* as *Pleuroidium alternifolium* he remarked, 'a very well carried out and successful attempt on the part of *Dicranella heteromalla* male plant to pass for *P. alternifolium*'.

The Distributor's task was a heavy one. Each member of the club was issued with a printed list of bryophytes on which to mark his 'desiderata' which he sent, together with his own contribution of specimens, to the Distributor by a certain date. In the early years of the club parcels had to be in by March 31. During the next few weeks the Distributor would be busy endeavouring to fill the member's desiderata from the total stock of packets in his hands. Members were supposed to be supplied with their own wants in a manner commensurate with the quality and quantity of their contribution; but the exchange was always conducted in a liberal manner and some members received far more than in strict justice they should have done. The number of specimens contributed by different members varied greatly. A few members failed to send in any packets whilst others might send two or three hundred. In any event the Distributor would find himself handling two to three thousand packets. It is hardly surprising that Meldrum described his duties as 'somewhat monopolising'. After a few years the surplus of material was something of a problem - it was not easy for example, to dispose of fifty packets of *Aulacomnium androgynum* even given away to encourage beginners. At first members were asked to send in twenty packets of any rare species, ten of a less rare one and but six of the more common species but this was later reduced to twelve for rare species 'unless it abounds as we do not want to encourage waste', and proportionally for the less rare species. Waddell also suggested that no member send in more than two hundred and fifty packets. Later the system of submitting 'oblata' lists from which the Distributor could select was introduced to help reduce the bulk of unwanted material. In January 1899 it was suggested that there should be frequent changes of Distributor and at the end of the year J.A. Wheldon undertook to act as Distributor and Treasurer. From then on the office of Distributor was generally held for two years. In 1900 it was decided to change the date of the distribution to early in the year since, as Wheldon pointed out, under the existing arrangements the Distributor 'receives the parcels, and then has the work of distribution to undertake during April and May, when outdoor work is commencing to demand attention'. Furthermore those members interested in flowering plants had no wish to receive a large parcel of bryophytes at the beginning of summer.

The Distributor's job involved far more than being a mere sorting post office. Although the club did not vouch for the correct naming of specimens it is clear that the Distributor did do a certain amount of checking of identifications, as well as sending off specimens, of which he himself was uncertain, to a referee. In addition to specimens sent for distribution quite a large number were sent in purely for identification.

Very often, at least in the early years, some specimens submitted were unsatisfactory in various ways - inadequate in quantity, not properly cleaned and prepared for the herbarium, or the packet not properly labelled - and the membership had to be exhorted and bullied in the circulating notebook and in the Annual Report to mend its ways; at one point Waddell warned that unless things improved unsatisfactory specimens would either be destroyed or marked 'Inadequate' and returned to the sender.

From the first there was a clear need for a beginner's section of the M.E.C. Waddell brought up the suggestion in his report for 1897 but said he had no time to organise it himself. In the following year he called for a volunteer to run such a branch of the club but it was not until the autumn of 1899 that a new member, E.C. Horrell, undertook the task - this 'useful but troublesome work', as Waddell put it. During his few years membership of the M.E.C. Horrell was one of its most enthusiastic, knowledgeable and active members. There is, however, little doubt that he put people's backs up - his long-winded, dogmatic contributions to the circulating notebook are even irritating to the reader today. When he finally left the club at the end of 1904,

despite his signal services as a referee, as the organiser of the beginner's section and, in particular, in making Warnstorff's system for *Sphagnum* available to members, by publishing summaries of his papers in English and contributing long articles to the notebook, his departure went quite unnoticed.

The beginner's section or Section II as it was usually called was an immediate success; no less than forty-five persons joined. Through the generosity of members of the senior section it was possible to make the first distribution of bryophytes in January 1900 when all received a parcel. Horrell, however, did not favour Waddell's generous policy with regard to distribution and so, at the second distribution, in June 1901, only those members who had sent a parcel received anything in return. The beginner's section at first contained a high proportion of people who must have joined impulsively and who never really took up bryology seriously so that, in the notebook for 1900, Waddell reckoned the membership as only thirty and by 1903, when D.A. Jones became Secretary of Section II, there were only twenty-five active members who benefited from the distribution. In the same year Section I numbered thirty members. The beginners had got off to a good start and they continued to flourish. Indeed, in the end, the establishment of a separate section for beginners was to be fatal to the senior section for although it was anticipated that, after a few years' apprenticeship, beginners would move on to become members of Section I, this, in fact, did not happen. Section II developed into a vigorous society in its own right. Its constitution and activities were modelled closely on that of the senior section and, within a few years, it was doing work very much on the same level as Section I. Its members contributed their share of new vice-county records and one of them, G.R. Savery, discovered *Fissidens algarvicus* new to Britain.

In 1906 Section II began to print its own annual reports and, in 1907, commenced a circulating notebook. In 1906 there were twenty-nine members in Section II including four women. Eight of them were also members of Section I but the quality of the purely Section II membership was high for many of them went on to make significant contributions to botany. In the same year 2695 packets were sent in for distribution. But that many of the members were not very knowledgeable, at least in the early years, is evident from the large number of specimens, often several hundreds, that were sent in for identification.

The need for a panel of expert referees was soon apparent to Waddell. He found that many of the specimens sent in for exchange were incorrectly named and most of the bryophytes sent in for naming were but common species. In the beginning many members were evidently not experts. Most of the queries Waddell found himself able to deal with but he also got Dixon, Binstead and Barker to agree to act as referees for mosses. He himself, particularly with the help of his neighbour Lett, was able to handle the hepatics. In 1899 Waddell attempted to get all specimens sent in for exchange checked by a referee - a large number of errors was uncovered. The number of referees needed to be increased and the services of bryologists outside the club, such as R. Braithwaite, were used in addition to Barker, Horrell, Ingham, Meldrum, Macvicar, Nicholson and Dixon. By 1915 the work of refereeing had become formalised so that Meldrum, Nicholson, Ingham and Wheldon divided the different genera of mosses between them, Knight and Jones dealt with the hepatics and Dixon and Macvicar acted as 'referee-in-chief' for mosses and hepatics respectively, an arrangement which continued to the end of the club's existence.

The work involved in refereeing could be very heavy particularly when Section II might submit several hundred specimens a year specifically for identification. The beginners themselves felt this and, in 1907, proposed to recruit their own referees from among their own members. Although it was noted that 'a referee must stand head and shoulders above his fellows if his verdict is to

be accepted with respect' it was thought that members might 'volunteer to devote special attention to certain groups of plants and give mutual assistance in these special groups'. Seven members volunteered to act; W.R. Sherrin, who confessed that he made great use of referees himself, offered to deal with Sphagnum, S.J. Jones undertook the hepatics, whilst J.B. Duncan, W. Bellerby, W.H. Burrell, A. Brinkman and D.A. Jones each undertook other groups. The more critical plants were to be referred to one of the referees-in-chief 'during their slack season'.

Soon after the foundation of the M.E.C. some members raised the possibility of arranging an exchange with foreign bryologists. Binstead was particularly keen and included some Norwegian gatherings in his first contribution to the exchange. Furthermore Waddell received several applications from abroad on this subject. However, Waddell felt that although some time in the future, a separate section with its own 'foreign secretary' might be established, 'at the present time we must confine ourselves to British plants'. Nonetheless, in the circulating notebook for 1897, members interested in exchanging foreign material were invited to write their names and state their requirements - nine members responded. A main objective was to obtain rare British species from a foreign source but some, such as Dixon, Ingham and Binstead, wanted more exotic bryophytes. Binstead already had a herbarium of some 1400 named species of tropical mosses. There already existed at least two bryophyte exchange clubs on the continent but Waddell did not favour them and, in the 1899 notebook, wrote 'Solemn warning to bryologists - don't join any continental exchange club for cryptogams without being assured that the advantages are not all on one side. Some have done so to their cost and are feeling sore on the matter'. It seems that the Vienna club was extremely slow in making any return for material sent and would not reply to letters. But Wheldon acknowledged that, in the end, he received 'an excellent parcel of mosses' and so, too, did Nicholson but only after a long delay.

In 1901 Nicholson tried to form a 'Foreign Section'. He wrote to eight foreign bryologists and eventually received favourable replies from seven of them. One difficulty was that the foreigners were generally only interested in very rare British species and another was that Nicholson was not prepared to devote much time to organising the section. In 1902 the first exchange took place but only three of the foreign members sent parcels. Furthermore it was obvious from their desiderata lists that very few suitable specimens would be received in the general exchange material. Nicholson had therefore to apply 'to some of our more active members' in order to gather some special specimens so that he could offer a fair exchange. The foreigners were satisfied but Nicholson regarded the procedure as 'too tedious and expensive to be carried out on a large scale'.

Binstead wrote, lamenting that 'no one seems to show any desire to become acquainted with the extensive moss flora of the tropics' and asked that members with friends resident in the tropics get them to collect specimens and divide them with him in exchange for named exotic species in his own collection. But the foreign section never seems to have been a great success. In 1903 Nicholson gave up the task of organising it and Lett agreed to take it on for one year, as Ingham, who had by this time succeeded Waddell as Secretary, had no time for the job. However, despite the fact that no less than eighteen members expressed interest and were willing to pay an additional subscription, a scheme never got off the ground and, in 1904, Ingham wrote that 'as the Vienna exchange seems to have taken on a new lease of life, and as there are difficulties in the way of forming a foreign exchange of our own, I think it best to defer this matter for the present'.

Always more than a 'mere exchange club' the members of the M.E.C. worked

seriously to enlarge knowledge of the British bryophyte flora and some of their contributions to the bryological literature, to a great extent stimulated by the club's activities, merit attention. In the eighty years before the founding of the M.E.C. the bryophytes of Britain had been studied as intensively as any in the world and considerable literature produced. Hooker and Taylor's Muscologia Britannica, first published in 1818, had gone into its third edition, as had Wilson's Bryologia Britannica in 1855, and was an accurate and comprehensive account of the British mosses. Waddell considered it in some ways 'the best book which has been written on mosses'; it could still be had for three guineas. Braithwaite was steadily bringing out his British Moss Flora but it was not to be completed until 1905. In the very year of the club's foundation Dixon published his Student's Handbook of British Mosses which was immediately regarded as the most up-to-date and authoritative account of the subject. It was all that the British muscologist needed and must have quite cut the ground from beneath Braithwaite's incomplete treatise.

However, the hepaticologist was not so well-served. It is true that it was still possible to pick up Hooker's British Jungermanniae for a mere £9 but this had come out in 1816. There was no accurate, comprehensive and up-to-date book on British hepatics. It was known that Pearson was working at his Hepaticae of the British Isles on the same generous lines as Braithwaite's moss flora but this was not to see light of day until 1902. In the meantime the best available book was M.C.Cooke's Handbook of British Hepaticae which had been published in 1894. It was very inaccurate and to be used with care but, nonetheless, it must have been useful.

In attempting to build up as complete as possible herbaria the members of the M.E.C. badly needed an up-to-date list of all known British bryophytes. The best available was the second edition of The London catalogue of British Mosses and Hepatics which had been published by the Botanical Record Club in 1881. This was a pioneer attempt to produce a census catalogue of British bryophytes based on the Watsonian vice-counties although, owing to the paucity of information, distribution had only been recorded on the basis of the eighteen Watsonian provinces. In August 1897 Waddell published his Moss Exchange Club Catalogue of British Hepatics - an eight page pamphlet costing sixpence. For the sake of convenience and economy the club decided to use Dixon's Handbook Catalogue of British Mosses which had been compiled 'at the request of numerous correspondents'. But Waddell was at pains to point out it had 'been adopted only as being the best existing complete catalogue of the kind for exchange purposes. It does not imply that as a club we adopt its classification and nomenclature as the best'.

In February 1898 Horrell published in the Journal of Botany, a paper on 'The distribution of British mosses' in which he pointed out the desirability of working out the distribution of mosses on the basis of the Watsonian vice-counties. He had made an exhaustive study of the literature and found fairly good lists for fifty of the one hundred and twelve vice-counties. He asked for the assistance of bryologists and hoped to be able to complete a census in about three years. But the publication of a moss census catalogue took much longer than had been estimated. In 1905 Ingham drew members' attention to the need for such a catalogue pointing out that Rule II of the club gave 'the working up of the county distribution as one of the objects of the club'. The next year Ingham got together a committee in which Barker was the most active member, to work on the catalogue but, in 1907, Barker fell ill and had to give up all work; he died just before the moss census catalogue was published in 1908. The catalogue sold well so that only just over £3 had to be set against club funds and they still had 175 unsold copies in stock. In 1905 Macvicar undertook to produce an up-to-date hepatic census catalogue and this too sold well. The way was now open for the continuous work on bryophyte distribution which

still goes on today. The Secretary kept an interleaved copy of each catalogue and members were encouraged to send in new vice-county records along with a voucher specimen. A second edition of the hepatic catalogue was published in 1913 but sales were disappointing. In 1918 Ingham proposed the publication of a second edition of the moss catalogue, for which he had an enormous number of new records, but this project never came to fruition during the club's lifetime.

In 1901 Horrell published a series of papers in the Journal of Botany in which he summarised Warnstorf's system of classification of Sphagnum. He also availed himself of the circulating notebook to introduce Warnstorf's system to club members. On the whole the membership was grateful, but Horrell's rather authoritarian and excessively didactic presentation clearly irritated some members. When Barker, although admitting that he was 'in the pathetic condition of wondering where we are' presumes, though 'with much diffidence and bumptiousness born of ignorance', tried to raise a few queries he was treated to a long extract of a paper from Hedwigia in the original German.

In the autumn of 1902 Lett published, at his own expense, his book Hepaticae of the British Islands which contained a full description of all the known species. Such a work was much needed to complement Dixon's Handbook and the layout of Lett's book was obviously modelled on Dixon but, in addition, included vice-county distributions of each species. There were no illustrations. It was easy for Macvicar, in reviewing the book, to be critical and point to numerous factual errors, but the errors were not such as would render the book useless to most students. Waddell regarded his colleague's book as 'useful as a popular introduction'. Despite this lack of enthusiasm among the experts Lett's book soon came into general use and enjoyed a useful life for a decade.

In 1902 W.H. Pearson, a Manchester business man and amateur bryologist, brought out his Hepaticae of the British Isles - the fruit of 'the scanty leisure of a busy commercial life'. Pearson was never an ordinary member of the M.E.C. but, in 1908, was elected an Honorary Member in recognition of his services to bryology. Although his book gave detailed descriptions and figures of all known British hepatics it was not well-adapted to the requirements of the average student; it contained no keys and was expensive. There thus remained a need for a book of the calibre of Dixon's moss handbook such as was finally supplied by S.M. Macvicar in 1912 with the publication of his Student's Handbook of British Hepaticae - this eagerly awaited work was looked forward to as 'the open-sesame for the British student of this difficult subject'. These works are but some of the publications by members of the M.E.C. but they amply indicate that the club was indeed something more than a 'mere exchange club'.

For the first fifteen years of its existence the membership of the M.E.C. grew steadily. In 1898 there were thirty-six members which Waddell thought to be enough because of the great labour involved in making a distribution to a larger number. Nonetheless, by 1910 there were forty-five members - the maximum figure reached. At the end of 1902 Waddell announced in the circulating notebook that he intended to resign the secretaryship, 'want of time not any loss of interest' being his reason. He had persuaded W. Ingham, a forty-nine year old inspector of schools in York, to take on the job. Ingham was to serve the club as Secretary until within a few months of his death in 1923.

In 1905 Rinstead was made an Honorary Member of the M.E.C., the first to be so distinguished. Honorary membership was to be a rarely granted distinction. During the whole of the club's existence only five persons were so honoured - Macvicar in 1907, Pearson in 1908 and Bagnall in 1909, and then no further Honorary Members were elected until Ingham just before he died. One curious omission from the list of Honorary Members is surely the name of R. Braithwaite. Braithwaite was in his seventies when the club was founded but he was still hard at work on his moss flora the final part of which only appeared in 1905. Dixon recorded that Braithwaite was 'not a great field botanist' but acknowledged early encouragement from him without which his own interest in bryology might easily have succumbed. Braithwaite lived on till 1917 and it is hard to understand why he was not considered worthy of an honour freely given to Pearson.

The decline of the M.E.C., or at least the senior section, coincided

roughly with the outbreak of the First World War but it is doubtful if that catastrophe had much to do with it; the members themselves were no longer young and it seems that only one actually served in the armed forces. In 1914 there were still forty-three members in Section I and but thirty-one in Section II, whereas by 1920 the membership of Section I had dropped to thirty-nine and that of Section II had risen to fifty (and included a young man by the name of P.W. Richards). But the fact was, as the distributor wrote in 1916, as far as the senior section at any rate was concerned, the club had 'almost accomplished its immediate object: for most of the members now appear to have well-stocked herbaria, containing all bryophytes likely to be met with in ordinary districts'. And, he went on, 'one is tempted to wonder whether ultimately the Moss Exchange Club might not form a more ambitious aim, and be reconstituted in some such footing as the Mycological Society, or the Sullivant Moss Society of America'.

The reports and the circulating notebook contain many expressions by members of the pleasure derived from being brought into contact with each other although through the medium of the post office. Occasionally a couple of members did meet and bryologise together, but, although living in the hey-day of the railway system and the bicycle, with the countryside unspoiled and uncrowded, no attempt was ever made to hold a general meeting of the club. It was not that the idea had never been mooted; as far back as 1907 W. Bellerby, a member of Section II, had written in the notebook 'why not have an annual meeting in some central Midland town to which all members could attend, to be preceded by a district bryological excursion. We should become personally acquainted and being all hearty good fellows (being ardent naturalists) we should be mutually benefitted and could air our views etc., elect our officers and so promote the general interests of the moss club'. The idea received scant support though the reasons advanced against it were no better than the alleged difficulty of finding a place and a time generally convenient.

During the last ten years of the M.E.C., and particularly in the period of transition into the British Bryological Society, an important role in the club's affairs was played by its solitary woman member, Eleonora Armitage. Miss Armitage acted as distributor for 1913, 1917, 1919 and 1921. Her reports have a freshness and enthusiasm all their own; in the midst of war she could quote from a letter written by a botanist in Sumatra in 1820, 'I think there few people who have the means of being independent of circumstances than ourselves and such as, like us, can turn from any prospect however dark, to that of nature, which is always the same, fresh and bright'. And, wrote Miss Armitage, 'in the happier years to come may we look forward to pleasant gatherings of members in some choice botanical hunting-ground in these islands'. In July 1914 Miss Armitage had acted as local secretary for the first summer field meeting of the British Ecological Society at Ross-on-Wye and so had some experience of organising a field meeting. When Ingham was ill Miss Armitage, in addition to acting as Distributor, took on, temporarily, the job of Secretary. As D.A. Jones, the first Secretary of the B.B.S. remarked of Miss Armitage, in his first annual report, 'thanks to her courtesy and tact, she proved a safe guide during a critical period'.

Wheldon, the Treasurer, in his report for 1921, noted that 'the sudden illness of Mr Ingham during the winter had precipitated the impending crisis in the affairs of the club'. The past few years had been 'anxious ones because of the fall in membership (although it had hardly been catastrophic) and increased working expenses'. But most of all, since 1907, Section II had 'become virtually a separate society'. This schism was evidently 'a source of weakness - instead of strength to British bryology'. Miss Armitage ended her report as Distributor by saying 'it is hoped that many members of Section I and II of the club will be able to forgather at Dolgelly during August (1922) under Mr Jones' leadership when an advantageous reorganisation may be discussed and arranged'. At this meeting the British Bryological Society was born.

REFERENCES. The main sources for this article are the printed Annual Reports of the Moss Exchange Club and the Manuscript circulating notebooks which are in the library of the British Bryological Society.