

BRITISH BRYOLOGICAL SOCIETY

PRESIDENT: MRS J. A. PATON, M.Sc., F.L.S.

BULLETIN

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NOTES FROM THE SECRETARY

I start with my usual plea: if you haven't yet paid your subscription for 1977 and intend remaining a member of the BBS, please send it now to our Treasurer, Dr W. D. Foster, Department of Pathology, Macclesfield Hospital, Prestbury Road, Macclesfield, Cheshire, SK10 3BL. You will already be on the Stop List - which means that you are not currently receiving the Journal of Bryology. The last part to be published was vol. 9 part 3.

I end by drawing everyone's attention to the AGM and Paper-Reading Meeting, 1977 that is to be held in Leicester. Please send your accommodation bookings by 1 September at the latest to Dr J. G. Duckett for this meeting.

REPORTS OF OFFICERS FOR 1976.

(a) SECRETARY'S REPORT

By the end of 1976 our membership totalled 490 (422 Ordinary & Junior, 10 Honorary, 13 Family, 36 Institutional and 9 Exchange), a small increase over the total a year before. So I think I can confidently say we are on the mend after our last increase in subscription rates which, as might have been expected, caused a small initial drop in membership. I regret to have to record the death, in August, of our distinguished member Dr. C.E.B. Bonner of Geneva who had belonged to our Society since 1947.

The year has again been an active one and has seen the usual range of meetings. The Spring Field Meeting was based on Knutsford, Cheshire, and the Summer Field Meeting on Melrose, Roxburghshire; both are deemed to have been successes in spite of considerable air pollution in the Cheshire area and drought in Roxburghshire, and thanks are due to Derek Foster and David Long respectively for so successfully engineering the arrangements as to take account of these adverse conditions.

One of the highlights of the year was the Annual General Meeting and Paper-reading Meeting, held in the University College of North Wales, Bangor in September. The Meeting, in the words of Jeff Duckett who expertly organized it, got off to a fine start with the special retirement dinner for Professor Paul Richards, C.B.E., an event which proved a delightful reunion for over 60 bryologists from all parts of the world. Paddy Coker was yet again host for the Taxonomic Workshop in November, held at the Thames Polytechnic, where some of our less experienced members (and others!) were introduced to the techniques of liverwort and moss identification by Jean Paton and Jeff Duckett.

In Council there have been fewer changes during the year than in 1975. But a significant step forward has been the creation of the new post of Conservation Officer to which Paddy Coker was elected at the A.G.M. Jean Paton, having served us long and well as Recorder for Hepatics - actually since 1960! - decided to retire at the end of the year; but fortunately Martin Corley has stepped into the breach.

Giles Clarke, who has held the office of Bibliographer for only one year, has already made what will probably be a significant change in the presentation of bryological literature in the Journal: he has decided to produce a list twice a year instead of the traditional once.

Two other important events in 1976 were the production of the long-awaited membership list, distributed to all members, and the introduction of a long-deserved cover for the Bulletin.

There has recently been a cry from many quarters, especially from younger members, for Dixon's Handbook, now difficult to obtain. But it is pleasing to report that Tony Smith has now completed his new British Moss Flora, illustrated by his wife Ruth, which is at the Printers. So it may not be long now before Dixon becomes a curiosity.

Yet again I wish to thank all members of Council for their unstinting help and continued support during the year.

A.R. Perry.
March, 1977

(b) TREASURER'S REPORT

Unfortunately, owing to the late arrival of the accounts from our publishers, it has not yet been possible to draw up a balance sheet for 1976. This will, however, be done as soon as possible.

W. D. Foster,
June, 1977.

(c) EDITORS' REPORT

With the larger number of pages allowed in recent issues of the Journal, we have no longer had to hold over any papers on grounds of space. As in previous years, of the papers submitted, only about one in ten is found unacceptable, although many have to be returned for revision in the light of referees' comments. The IBM type setting and litho printing has been a success, though there is much variation from paper to paper in the number of printers' errors. A recurrent, though minor, criticism is the difficulty of distinguishing bold-face type from Roman in the small print, such as in the bibliography. There has been some confusion over the use of bold Roman or bold italics for plant names in headings. In future, unless the remainder of the heading is also in bold face, we plan to use bold Roman type in accordance with accepted nomenclatural procedure.

H. L. K. Whitehouse,
H. J. B. Birks,
March, 1977

(d) REPORT OF THE RECORDER OF MOSSES

Moss recording in 1976 has been uneventful, with the main concentration of records coming from south Scotland and Wales. Though the meeting of the Society in England produced a number of new records, the emphasis there was perhaps more on quality than on quantity. The following table gives an indication of some of the main trends. An "old" species (Column 1) is one included in Dixon's Handbook.

	Old spp.	New spp.	Vars.	Total additions	()	[]	Delete	Total removals
England	33	16	10	59	38	6	1	45
Wales	18	11	8	37	2	2	3	7
Scotland	41	20	14	75	5	16	4	25
Ireland	11	3	3	17	0	3	1	4
Total	103	50	35	188	45	27	9	81

On this basis, the rates of addition per vice-county per annum can be calculated as Wales 3.1, Scotland 1.8, England 1.0, Ireland 0.4. It is regrettable that Ireland, the most under-recorded area, should continue to receive so little attention.

In addition to the above, the recorder has received a number of specimens of

undescribed species and of species not at present on the British list. Most of these are bulbiliferous Pohlias and Bryums, which will be described in Dr. Smith's forthcoming moss flora, if not before. In addition, Mr. Corley sent a very distinct tuberous Bryum, which Dr. Whitehouse tells me has been found on several previous occasions. Dr. Duckett sent a "Bryum capillare agg", which was reported as B. elegans on the Newtown meeting. On closer inspection it proves to be a distinct taxon, probably an undescribed species.

M. O. Hill,
Jan. 1977

(e) REPORT OF THE RECORDER FOR HEPATICS

The number of new vice-county records received in 1976 was 99, from the usual number of about two dozen contributors. The number of records was not only considerably less than the 138 received in the previous year, but lower than in any other year that I have been Recorder; the greatest number was 438 in 1967. It now seems unlikely that high annual totals will be achieved again unless B.B.S. members make a concerted effort to explore counties in central Ireland. In this, my last Report, I would like to thank the many people who took the trouble to send me new vice-county records and amendments for the Census Catalogue during the last 17 years, and to wish my successor, Martin Corley, a profitable term of office.

Jean A. Paton,
January, 1977.

(f) LIBRARIAN'S REPORT (1 January to 31 December 1976)

Sales:	Census Catalogues	80
	Transactions (parts)	56
	B.B.S. Reports	3
	Bulletins	5

Loans: 18 loans of books/separates, 5 loans of sets of slides,
8 calls on the xeroxing service.

Sales are down on last year, mainly because in the previous year two people bought virtually complete sets of Transactions which boosted the numbers. The librarian is having a great deal of trouble with members who send too little money to cover postage on sales orders, thus necessitating double the correspondence. Would members ordering sales items please realise that postal charges are rising rapidly, and cover their orders; either by sending a little extra which can then be refunded, or request that any monies left over be donated to the society. Now that the shelf-catalogue is available and members can see what books the library holds, can we make a plea for donations of books to the library? A number of important bryological books have been published in recent years which the library does not possess. If anyone feels that certain of these books are a must for the library the librarian would be pleased to consider specific suggestions which can then be forwarded to council.

Kenneth J. Adams,
March, 1977.

(g) BIBLIOGRAPHER'S REPORT

Two lists of current bryological literature have been produced this year, one for each part of the Journal, and it is proposed to do the same in future years.

This year has seen the publication of an exceptionally large number of papers dealing with bryophytes and over 1,000 have been listed. The recent trend for bryophytes to be used increasingly as experimental material in a wide range of fields seems to be continuing.

As always, it is very easy to miss papers with a substantial bryological content if there is no mention of bryophytes in the title. I would be very grateful to members if they could send me details of papers of this sort or, indeed, of any others that might have been overlooked.

G. C. S. Clarke,
December, 1976.

(h) CURATOR'S REPORT

278 mosses and 132 hepatics were received from the Recorders and have been incorporated. A total of 180 specimens was lent to the following recipients: M. O. Hill (84), Royal Botanic Gardens, Edinburgh (78), E. W. Bentley (25), M. F. V. Corley (13). The only B. B. S. visitor was Mrs Joan Appleyard.

The herbarium was listed, with its new abbreviation BBSUK, in Bryophytorum Bibliotheca Band 8 (1976), Bryological Herbaria, A Guide to the Bryological Herbaria of the World, by Zennoske Iwatsuki, Dale H. Vitt & S. Robert Gradstein. Being geographically arranged, the entry is under CARDIFF.

S. G. Harrison,
March, 1977.

(i) MAPPING SECRETARY'S REPORT

There was a marked drop in the number of field record cards in 1976 compared with previous years. Following complaints from the Biological Records Centre about the dirty and trampled-on appearance of some of the B. B. S. cards I must ask if members would be kind enough to send in only clean copies as the effort of my transferring records to virgin cards is very great. Also it would help if members would refrain from using Biological Records Centre cards. It is not that they are in competition with us but simply that the layout of the cards differs, making the rapid extraction of records difficult.

A. J. E. Smith,
February, 1977.

(j) MEETINGS SECRETARY'S REPORT

The Society held four meetings in 1976, with attendance closely following the pattern seen in previous years. All but the summer meeting were well attended. It was particularly gratifying to see a large turn out for the paper reading and AGM at Bangor, N. Wales, since this involved most members with more travel than usual for this meeting. University accommodation (not to mention an excellent reception) contributed greatly to the success of the Bangor meeting and I am pleased to report that the practice will be continued for the 1977 AGM at Leicester University.

Jeffrey G. Duckett,
February, 1977.

PROCEEDINGS OF THE BRITISH BRYOLOGICAL SOCIETY

THE SPRING MEETING 1977, WAREHAM

The spring meeting was held from 30 March to 6 April at Wareham in Dorset (v.-c. 9), with an excursion on the final day to the New Forest (v.-c. 11). About 30 members attended the meeting, but numbers were substantially lower on several days.

31 March. In deplorable weather the cars set off for Swanage, and as members ascended Ballard Down, a cold wind blighted their bryology. Nevertheless, in the shelter of an elder thicket, a few plants of interest were found - Cryphaea heteromalla, Leptodon smithii, Orthotrichum tenellum, Tortula papillosa, Zygodon conoideus and Cololejeunea minutissima. Defeated by the wind, the party crossed the road to Godlingston Hill, recording calcicoles including Bryum torquescens, Phascum curvicolle, Pottia recta, Pleurochaete squarrosa, Scorpiurium circinatum, Seligeria calcarea and S. paucifolia. Shelter was found in a pub for lunch, but the afternoon brought no improvement in the weather. Godlingston Heath had a poor bryophyte flora, but with some bog specialites including Sphagnum pulchrum, Cladopodiella fluitans and (sterile) Cephalozia macrostachya. Dr Pitkin, scuffling in some wet woodland, found Cryptothallus mirabilis.

1 April. The morning took us to Morden Bog, where the weather was wet and high water levels made it hard to see mosses. Nine species of Sphagnum were encountered, and a little Ptilidium pulcherrimum on sallow. In the afternoon, several members went to Piddles Wood in the north of the county, an ancient oak wood on non-calcareous clays, which had a characteristic flora including Dicranum majus, Hylocomium brevirostre, Rhytidiadelphus loreus and Scapania nemorea. Other members visited the banks of the River Stour by Hod Hill, recording Bryum donianum, Cinclidotus mucronatus, Leptodon smithii c.fr. and Tortula latifolia c.fr. Lower down the Stour, near Durweston, another party recorded Bryum flaccidum, Zygodon viridissimus var. vulgaris, Metzgeria fruticulosa s.str. and M. temperata.

2 April. First stop was Oakers Wood near Moreton, an ancient oak wood on non-calcareous soil. The bryophytes of the wood were not remarkable, but members were pleased to see Pulmonaria longifolia in some quantity. Dr. Whitehouse found an arable field with Bryum klinggraeffii, Funaria fascicularis, Riccia glauca and R. sorocarpa. Briants Puddle Heath, nearby, supported Bryum bornholmense and Calypogeia sphagnicola. Portland, in the afternoon, was well known bryologically and not expected to produce anything new; but Bryum canariense and Cololejeunea rossettiana at Church Ope Cove were new for the county. Other finds were much as on previous occasions (cf. Trans. BBS, 1970, p. 213), but we missed Southbya nigrella in spite of careful searching. In the evening a council meeting was held at Furzebrook Research Station.

3 April. On the Free Day, parties went in various directions. One member went to Durlston Head near Swanage, recording Pottia crinita, P. heimii, P. wilsonii and Pterygoneurum ovatum. Another party visited the Army Ranges near Tyneham. The country was pleasant; the bryophytes unremarkable. Much of the grassland was little grazed and subject to fires. Nevertheless, Rhytidiadelphus loreus was unexpectedly found in chalk grassland among the ramparts of Flowers Barrow. Only after examining it did members observe that it was guarded by unexploded shells, two intact and one with explosive spilling out. Moving on rapidly, the same party visited heathland on the Ranges near Povington, where Mr. Wallace found Dicranum spurium,

and stopped by Great Wood, Creech, where he found Eurhynchium schleicheri. Other members visited the South Haven peninsula near Studland, recording Brachythecium mildeanum and Cryptothallus mirabilis. To complete the diversity of the Free Day there was also a visit to the New Forest, where Isopterygium seligeri and Lepidozia sylvatica were found in Mark Ash Wood, and Fossombronina pusilla var. maritima, Frullania fragilifolia and Pallavicinia lyellii at Wood Crates.

4 April. First stop was Newton Heath, where there were old clay pits among planted conifers. The spoil was evidently toxic, and the flora consequently limited. Drepanocladus fluitans c.fr., Cephaloziella starkei, Lophozia bicrenata, and confusingly inter-mixed Cladopodiella fluitans and Gymnocolea inflata were observed in the pits. Tritomania exsectiformis was seen on sandy peaty banks by a forest road. In the afternoon, Chapman's Pool, Purbeck provided more diversity, with Eurhynchium megapolitanum, Pottia crinita, P. davalliana, P. lanceolata, P. recta, P. starkeana, Rhynchostegiella curviseta, Tortella nitida, Tortula marginata, T. vahlana and Cololejeunea minutissima.

5 April. The final excursion, to the New Forest, began with an examination of Wilverley Bog, which supported Splachnum ampullaceum, Calypogeia sphagnicola, Cephalozia macrostachya (female), Cladopodiella fluitans, Lepidozia setacea, Riccardia latifrons and nine species of Sphagnum, including S. contortum, S. subsecundum s. str. and S. teres. Finally, we went to the Rufus Stone, like Portland a famous bryophyte locality. Local specialities Hyocomium flagellare, Zygodon forsteri, Z. viridissimus var. vulgaris, and Saccogyna viticulosa were duly refound; Polytrichum aurantiacum was detected new to the vice-county.

The Society had visited Wareham in 1930 and made a very similar range of excursions. Then, they were later in the month and the weather had been better. "Sitting still on the sunny hillside" wrote Miss Armitage (Bryologist, May 1931, p. 45) "it was pretty to watch the lizards twinkling in and out of some fallen logs, and tiger beetles in the grass." Our own experiences were more of driving rain and sloshing about in wellies. But the area has retained its bryophytes. Low air pollution leaves Leptodon smithii, Leucodon sciuroides, Cryphaea heteromalla and Lejeunea ulicina still common on trees. The heaths still have abundant Campylopus brevipilus and Sphagnum pulchrum; Cladopodiella fluitans is still frequent. The drought of 1976 had caused a few bad fires; Hartland Moor was burnt to a frazzle. But on the whole its effects were not visible except in the New Forest, where there had been massive mortality of Pellia epiphylla along streamsides, with only slight recovery in the subsequent wet winter.

M.O. HILL

CONTRIBUTIONS FOR THE NEXT BULLETIN

SHOULD REACH THE SECRETARY

BY 1st DECEMBER, 1977

FUTURE MEETINGS OF THE SOCIETY

(a) Annual General Meeting and Paper-Reading Meeting, 1977: University of Leicester, 1-2 October. Local Secretary: Dr. C.A. Stace, Department of Botany, The University, Leicester LE2 2NA.

For this meeting the University of Leicester has allowed us to use accommodation in Beaumont Hall, Stoughton Drive, Leicester, LE2 2NA, situated in the Botanic Gardens (which includes a bryophyte house!) two miles south of the University and will also be providing a reception for BBS members on the Saturday evening. Costs for accommodation are :- Inclusive cost for the whole weekend (Fri. evening - Mon. morning) - £18.25. Bed and Breakfast - £3.25. Lunch - £1.45 (packed on Sunday, £1.15). Dinner - £1.85.

Since we have to book in advance please contact Dr. Duckett for full details and send your bookings by 1st September AT THE LATEST. Please note that meals will be available for those who are not staying at Beaumont Hall, but these must also be booked in advance.

The paper-reading meeting will take place on 1st October in Beaumont Hall and this will be followed at 1650 hrs by the Annual General Meeting. After dinner there will be the reception. Members who would like to display exhibits should contact Dr. Stace or Dr. Duckett regarding their requirements for space and facilities.

Amongst those who have agreed to speak at this meeting are :-

Dr. M.E. Newton (Stalybridge, Cheshire): "Environmental factors controlling sexual reproduction in mosses of the genus Mnium".

D. Glyn Jones (Nature Conservancy Council, Aberystwyth): "Aspects of the growth and development of Sphagnum cuspidatum Ehrh".

Dr. D.J. Boatman (University of Hull): "The culture of Sphagnum protonema".

Dr. M.C.F. Proctor (University of Exeter): "Structure, function and environment in some poikilohydric bryophytes".

A. Burton and Professor P. Peterson (Chelsea College and Westfield College, London University): "Metal accumulation in aquatic bryophytes".

Dr. S.R. Edwards (The Museum, Manchester): "Taxonomic implications of cell patterns in haplolepidous moss peristomes".

Dr. J. Gorham (Portsmouth Polytechnic): "Recent research on Lunularic acid".

The Annual General Meeting will be held in Beaumont Hall on 1 October at 1650 hrs.

ANNUAL GENERAL MEETING, LEICESTER, 1977

A G E N D A

1. Apologies for absence
2. Minutes of the last A.G.M., Bangor, 1976 (see Bulletin 29)
3. Matters arising
4. Officers' Reports for 1976 (see pp. 2-6 of this Bulletin)
 - (a) Secretary
 - (b) Treasurer
 - (c) Editor
 - (d) Recorder for Mosses
 - (e) Recorder for Hepatics
 - (f) Librarian
 - (g) Bibliographer
 - (h) Curator
 - (i) Mapping Secretary
 - (j) Meetings Secretary
5. Conservation
6. Election of Officers 1978-79
 - (a) Vice-President
 - (b) Editor(s) (Drs. Whitehouse & Birks are resigning at the end of 1977)
 - (c) Others
7. Election of three members of Council (Mr. Collins, Mr. Long, Miss Lucking, Dr. Proctor and Mrs Side retire at the end of 1977)
8. Place and date of Annual General Meeting, 1978
9. Other meetings in 1978 and 1979
10. Any other business

On Sunday, 2 October, Dr. M.R.D. Seaward (University of Bradford) has kindly offered to lead a field excursion into South Lincolnshire v. -c. 53 (The BBS has NEVER visited this vice-county!). Locations it is hoped to visit are limestone grassland, Holywell; sand over limestone, Witham-on-the-Hill; railway cuttings, Castle Bytham; and woodland in the Irnham area.

(b) Taxonomic Workshop, 1977: Oxford University, 19-20 November. Local Secretary: Dr. Sarah Watkinson, Botany School, South Parks Road, Oxford.

This year's topic will be :-

1. Identification of mosses from rhizoidal gemmae (H.L.K. Whitehouse).
2. Campylopus and other long-leaved mosses (M.F.V. Corley).

As at the three previous Workshops the first day will be devoted to the handling of material for microscopic study and will be followed by a day in the field. This meeting has been arranged specifically to assist beginners and those who lack confidence in naming and examining bryophytes. Members intending participating in all or part of the meeting should write to Dr. Watkinson for further information.

(c) Easter Field Meeting, 1978: Carmarthen, 5-12 April. Local Secretary: A.R. Perry, National Museum of Wales, Cardiff.

Accommodation has been reserved at Trinity College, Carmarthen. This is

admirably situated for a bryological week as it allows easy access to coastal dunes and to mountains. All bookings must be done through the local Secretary: details of the week will appear in the next Bulletin.

(d) International Symposium and Summer Field Meeting, 1978: University College of North Wales, Bangor. 16-26 August. Local Secretary: Dr. J.G. Duckett, School of Plant Biology, University College of North Wales, Bangor.

The format of this meeting will be :-

17-19 August. The BBS jointly with the Systematics Association - International Symposium on Modern Approaches to Bryophyte Systematics.

The symposium will contain reviews of the current state of taxonomy in different bryophyte groups and in diverse phytogeographical regions. Major contributions on climatic adaptation, pollution, chromosome cytology, asexual propagules, spore morphology and conducting tissues will highlight inter-relationships between traditional taxonomy and experimental bryophyte disciplines. Hitherto, unreviewed areas such as chemotaxonomy, peristome ultrastructure and comparative spermatology should reveal exciting new information on the higher orders of classification and possible phylogenetic relationships between bryophytes and other archigoniata groups.

Lectures will take place in the School of Plant Biology on Thursday 17th, Friday 18th and Saturday 19th August.

Publication. All pages will be published jointly by the BBS and the Systematics Association in a special symposium volume.

Accommodation has been booked at Plas Gwyn, Hall of Residence, 10 minutes walk from the School of Plant Biology. All rooms at Plas Gwyn are single; each is equipped with a washbasin and there are showers and baths on each corridor.

19 August - The 1978 AGM.

20-26 August - Field Excursions: Immediately following the symposium there will be a week of field excursions in Snowdonia and on Anglesey.

This meeting is being widely advertised both in Britain and abroad. Overseas bryologists are warmly invited to attend.

Further details will appear in Bulletin 31 or may be obtained from the local secretary.

DIXON'S BRITISH MOSS HERBARIUM

H. N. Dixon's herbarium of British mosses, until recently held at Kew as a representative collection, has now been transferred on permanent loan to the British Museum (Natural History). It is intended, at least for the present, to keep this collection separate from the main bryophyte herbarium (in which Dixon's exotic mosses are already incorporated). Availability for loan and examination will be the same as for herbarium specimens generally. The entry for the British Museum (Natural History) in Bryological Herbaria, Bryophytorum Bibliotheca 8, 67-8 (1976) should be amended accordingly.

A. Eddy and A. J. Harrington, Department of Botany, British Museum (Natural History), Cromwell Road, London, SW7 5BD.

NEW VICE-COUNTY RECORDS AND AMENDMENTS TO THE
CENSUS CATALOGUES

All undated records are based on specimens collected in 1976.

HEPATICAE
Mrs. J. A. PATON

The names and numbers follow Paton, Census Catalogue of British Hepatics ed. 4 (1965).

- 1/3. Anthoceros laevis, place 38 in () (Laflin, 1971).
- 8/1. Marchantia polymorpha ♂ var. alpestris, silt on S. bank of R. Tweed nr The Law, S.W. of Kelso (80), Paton (B.B.S. exc.).
- 10/4. Riccia warnstorffii, place 19 in [] (Adams, 1975); ditchbank, Killiemor, Loch na Keal, Mull (103), Corley.
- 10/9. R. nigrella, place 49 in [] (Paton, 1976).
- 10/12. R. canaliculata, bare mud by lake, Brown Moss nr Whitchurch (40), Duckett, 1975.
- 10/13A. R. cavernosa, mud on bank of reservoir at Langley nr Macclesfield (58), Foster.
- 12/1. Riccardia incurvata, layby in lane 2 miles N. of Glentrool village (73), Paton; gravel by Black Burn nr Newcastleton (80), Chamberlain & Long; damp gravel in roadside quarry nr Achagarvel, N. of Lochaline (97), Long; soil on wide ledge, E.-facing rocky slope, Creag Bhàn (98), Paton.
- 12/2. R. multifida, place 21 in () (Kent, 1975).
- 12/4. R. latifrons, on litter in bog nr Kingside L., Buccleuch (79), Long (B.B.S. exc.).
- 13/1. Cryptothallus mirabilis, beneath Sphagnum palustre in oakwood above Kinloch R., Morvern (97), Paton.
- 14/2. Pellia borealis, delete entire entry (Paton & Newton, 1967).
- 14/3. P. neesiana, marsh beside stream E. of Craigenreoch, Barr (75), Paton; damp ditch in Salix/Betula carr, Gordon Moss (81) Long; bog between Hilltown and Rathfriland (H. 38), C.H. Waddell & H.W. Lett, 1887 (DBN).
- 15/2. Metzgeria fruticulosa, elder in marshy woodland, Panshanger Park, E. of Welwyn Garden City (20), Bloom; elder, Kirkhope Linns, Ettrickbridge End (79), Townsend (B.B.S. exc.); tree bole in woodland garden, Larrochmore nr Arisaig (97), Long, 1972.
- 16/1. Pallavicinia lyellii, place 18 in () (Adams, 1975); nr Bantry (H. 3 in ()), Miss E. Hutchins, before 1815 (BM).
- 17/1. Moerckia flotoviana, base-rich flush by Black Burn above Newcastleton (80), Long & Chamberlain.

- 20/3. Fossombronina incurva, silt beside Black Burn N.W. of Newcastle-ton (80), Paton (B.B.S. exc.); mud by stream, S. side of L. Arianas, Morvern (97), Long.
- 20/5. F. caespitiformis, place H. 34 in [], no specimen traced to support J. Hunter's record from Ned's Point, Buncrana.
- 20/6. F. mittenii, delete entire entry (Paton, 1973).
- 20/8. F. pusilla, damp clods, Dod Burn S. of Hawick (80), Appleyard (B.B.S. exc.).
- 20/9. F. wondraczekii, ruts in wet rides, Bericote Wood, Ashow (38), T. Laflin, 1965 (BIRM).
- 20/10. F. loitlesbergeri, delete entire entry (Paton, 1973).
- 27/1. Ptilidium ciliare, place 21 in () (Kent, 1975).
- 28/1. Trichocolea tomentella, Glencurran valley nr Castletown, (H. 9), Kirby.
- 30/2. Bazzania tricenata, Hermanlaw Burn, Yarrow (79), Corner.
- 31/1. Lepidozia pinnata, among moss on rock, Coed Hafod nr Betws-y-Coed (50), Southorn.
- 31/5. L. trichoclados, peaty bank, Moor of Drumwalt, N. of Mochrum L. (74), Paton.
- 31/6. L. sylvatica, peat on gritstone boulder, Ravens Gill below Ravens Nest, S. of Patley Bridge (64), Paton; peat hag below The Knee of Cairnsmore of Fleet (73), Paton; peaty bank, bog W. of Dornal, Colmonell (75), Paton; peat on slope, Gleann an Fiadh, Glencoe (98), Long.
- 33/1. Calypogeia neesiana α var. neesiana, delete 63, specimen is var. meylanii; delete 64 and 66, specimens from Bolton Woods (NMW) and from Beldon Burn (herb. E.M. Loble) are var. meylanii; amongst litter in bog nr Kingside L., Buccleuch (79), Paton (B.B.S. exc.); β var. meylanii, grit rocks, Widdup, Hebden Bridge (63), A. Turner, 1936 (GL); peaty bank under Calluna, Moor of Drumwalt, N. of Mochrum L. (74), Paton; peat on boulder ca. 2800ft alt., N. corrie, Lochnagar (92), Paton, 1968; peat on rocks nr Farquhar's Point, Ardtoe, Ardnamurchan (97), Paton, 1967; peaty bank nr Allt nan Caorach, Glen Glass (106), Paton, 1968 (B.B.S. exc.); delete H. 1 and replace with H. 2 (Horses Glen, Mangerton is in N. Kerry).
- 33/2. C. muellerana, base of Osmunda regalis tussocks by "Water Garden", Botanic Gardens, Cambridge (29), Birks, 1973.
- 33/3. C. trichomanis, wet peaty hill top at 1900 ft. alt., Eastside Heights, Moorfoot Hills (78), Long & Chamberlain; wet peaty hill top at 1900 ft. alt., Eastside Heights, Moorfoot Hills (83), Long & Chamberlain.
- 33/5. C. sphagnicola, on Sphagnum magellanicum, Moor of Drumwalt,

- N. of Mochrum L. (74), Paton; on Sphagnum in bog nr Kingside L., Buccleuch (79), Paton (B.B.S. exc.); amongst Sphagnum, Dogden Moss nr Greenlaw (81), Long (B.B.S. exc.).
- 33/6. C. suecica, rotten log in woodland E. of L. Choille-Bharr nr Crinan (101), Kenneth, 1971; log on slope above ravine below L. Meig, Strath Conon (106), Paton, 1968 (B.B.S. exc.).
- 33/7. C. arguta, soil on shaded bank, Richard's Cleugh nr Camptown, Jed Water (80), Long (B.B.S. exc.).
- 34/4. Lophozia alpestris, rock on W. bank of Medwyn Water, Pentland Hills (77), Paton.
- 34/8. L. capitata, moist sand in partly flooded sandpit, Rudheath, N.W. of Middlewich (58), Jones (B.B.S. exc.).
- 35/2. Leiocolea badensis, soil on limestone waste from copper mine, Ecton Hill nr Butterton (39), Paton (B.B.S. exc.); rocks above W. bank of Medwyn Water, Pentland Hills (77), Paton.
- 35/3. L. muelleri, damp soil in limestone quarry, Ecton Hill, nr Butterton (39), Corley (B.B.S. exc.).
- 36/3. Barbilophozia attenuata, place 18 in () (Adams. 1975).
- 36/8. B. barbata, top of boulder in wood, Carsaig Bay, Mull (103), Corley.
- 39/2. Sphenolobus minutus, shaded sandstone rock face by Black Burn above Newcastleton (80), Long & Chamberlain; delete H. 39, locality on which record was probably based (White River Glen) is in H. 38, comm. Synnott.
- 41/1. Eremonotus myriocarpus, wet rocks in ravine, Allt Mor, Loch na Keal, Mull (103), Corley.
- 46/6. Solenostoma sphaerocarpum, rocks in R. Dane nr Gradbach E. of Wincle (39), Appleyard (B.B.S. exc.).
- 47/1. Plectocolea obovata, delete H. 6, specimen on which record was probably based (DBN) is too poor to determine; delete H. 16, specimen from Kylemore on which record was probably based is Nardia scalaris (DBN).
- 47/2. P. subelliptica, base-rich bank beside stream below Inner Hill, Teviot Valley (80), Paton (B.B.S. exc.); damp earthy bank in ravine, N. side of Scarba (102), Corley; damp vertical rock face by waterfall, Abhainn Doire Dhubhaig, Loch na Keal, Mull (103), Corley.
- 47/4. P. paroica, vertical rock by R. Dane nr Wincle (39), Hill (B.B.S. exc.).
- 52/9. Marsupella funckii, silt on stone in Polran Burn, Clatteringshaws L. (73), Paton.
- 52/11. M. emarginata, boulders in R. Dane at Danesbridge nr Wincle (39),

Corley (B. B. S. exc.).

- 52/12. M. aquatica, delete 47, specimen from Bwlch-y-groes is M. emarginata.
- 52/13. M. sphacelata, soft rock on shore of Clatteringshaws L. nr Darnaw Burn (73), Paton.
- 56/2. Plagiochila asplenioides β var. major, bank in old limestone quarry, Ecton Hill nr Butterton (39), Paton (B. B. S. exc.); delete H. 10, the 1951 record from above Silvermines refers to var. asplenioides.
- 57/5. Lophocolea fragrans, dead tree stump, roadside nr bridge S. of Clonough Bridge, S. E. of Coolgreany (H. 12), Perry, 1975 (B. B. S. exc.).
- 62/3. Cephaloziella subdentata, amongst Sphagnum, Dogden Moss N. W. of Greenlaw (81), Paton (B. B. S. exc.).
- 62/5. C. hampeana, Bog of Allen, Geashill (H. 18), H. W. Lett, 1892 (DBN).
- 62/7. C. stellulifera, waste from Burn of Sorrow copper mine nr Dollar (87), J. Proctor.
- 62/9. C. starkei, soil by path on raised beach, Carsaig Bay, Mull (103), Corley.
- 62/12. C. integerrima, place 26 in [], no specimen traced to support Watts' record from Lakenheath.
- 63/3. Cephalozia pleniceps, on Sphagnum and litter in bog nr Kingside L., Buccleuch (79), Paton (B. B. S. exc.).
- 63/4. C. loitlesbergeri, on Sphagnum in bog nr Kingside L., Buccleuch (79), Paton (B. B. S. exc.).
- 63/5. C. connivens, wet peaty ground at margin of pool, Pooley Fields, Alvecote (38), T. Laflin, 1965 (BIRM).
- 63/6. C. hibernica, place H. 40 in [], no specimen traced to support Lett & Waddell's record from Downhill.
- 63/9. C. macrostachya, bog on Moor of Drumwalt, N. of Mochrum L. (74), Paton.
- 63/10. C. catenulata, peat hag, Craig Hill N. W. of Gatehouse of Fleet Halt (73), Paton; peaty bank, Moor of Drumwalt, N. of Mochrum L. (74), Paton; peaty bank, bog W. of L. Dornal, Colmonell (75), Paton.
- 63/11. C. leucantha, peaty bank, bog W. of L. Dornal, Colmonell (75), Paton; delete H. 2, locality on which record was probably based (Mt. Eagle) is in H. 1, comm. Synnott.
- 64/1. Cladopodiella francisci, delete H. 6 and H. 35, not present in gatherings on which records were probably based (DBN).

- 65/1. Nowellia curvifolia, log on N.W. side of mill dam on R. Etherow, Campstall, Marple (58), Bescoby.
- 69/3. Diplophyllum obtusifolium, damp sandy bank in woodland, Weybourne Heath (27), E.L. Swann, 1970 (Supplement to Flora of Norfolk, 1975); bank by forest road, Caeo Forest (44), Hill & Jones; soil excavated from forestry ditch, Allt Socaich, Glencoe (98), Long.
- 70/2. Scapania cuspiduligera, base-rich conglomerate by Logan Burn Waterfalls, Pentland Hills (83), Long.
- 70/5. S. curta, pathway in a wood, The Warren, (c.per.) 1904, and quarry nr St. John's Common (c.per.) 1917, both nr Crowborough (14), W.E. Nicholson (CGE) comm. Perry; moist clay track in Angley Wood, W. of Cranbrook (16), Paton, 1972.
- 70/6. S. scandica, gravelly stream bank E. of Craigenreoch, Barr (75), Paton; damp slope by stream below Inner Hill, Teviot Valley (80), Long (B.B.S. exc.).
- 70/8. S. irrigua, marshy ground near tunnel, old railway cutting, Kimberley (56), Henley, 1975.
- 70/9. S. umbrosa, peat under Calluna, moorland nr Cloroge, S.E. side of Mt. Leinster (H. 12), Perry, 1975 (B.B.S. exc.).
- 70/10. S. aequiloba, delete 52, the specimen is S. aspera.
- 70/11. S. aspera, limestone rocks above Caerhoslligwy, Llanelugrad Parish (52), E.F. Warburg, 1964 (BBSUK); base-rich rock face in ravine below Langlee Crag nr Wooler (68), Long; rock ledge in Buck Cleuch gorge, Buccleuch (79), Long (B.B.S. exc.).
- 70/16. S. undulata, place 18 in () (Adams, 1975).
- 70/20. S. compacta, steep bank by woodland pool, Wilton Brail nr Great Bedwyn (7), Appleyard.
- 71/1. Radula complanata, place 21 in () (Kent, 1975).
- 73/1. Porella laevigata, shaded recess under limestone boulder, High Edge, S. of Buxton (57), Long (B.B.S. exc.).
- 73/3. P. platyphylla, rocks in wood nr Cong (H. 16), D. McArdle, 1906 (DBN); delete H. 27, record may have been based on material from H. 16 (McArdle, 1907).
- 75/1. Lejeunea cavifolia, seepage on vertical basalt face, N. bank of R. Coquet, Linbriggs, Cheviot Hills (68), Long.
- 75/3. L. lamacerina β var. azorica, rock by R. Dane, Winkle (39), Hill (B.B.S. exc.); rocks beside Bradley Burn, Gorrenberry, Hermitage Water (80), Paton (B.B.S. exc.); shaded vertical rock face in humid ravine, Pease Dean (81), Long.
- 77/1. Harpalejeunea ovata, basic rock on E. bank of R. Conwy nr Betws-y-Coed (50), Benoit.

- 78/2. Cololejeunea rossettiana, shaded gorge at Gorrenbury, Hermitage Water (80), Long (B.B. S. exc.).
- 81/1. Jubula hutchinsiae, damp shaded rocks in deep wooded sandstone ravine ca. 200ft alt., Fairlie Glen (75), Ratcliffe.
- 82/2. Frullania germana, place 43 and H. 38 in [] (Birks & Ratcliffe, 1976).
- 82/5. F. dilatata, place 21 in () (Kent, 1975).

MUSCI

M. O. HILL

The names and numbers follow Warburg, Census Catalogue of British Mosses, ed. 3 (1963).

- 1/4. Sphagnum imbricatum, Blind Moss, Ashkirk (80), Corner; Dogden Moss (81), Corner.
- 1/15. S. tenellum, place 18 and 19 in () (Adams, 1975).
- 1/17. S. contortum, existing record for 79 is in v. -c. 80, replace by - calcareous bank, Longhope Burn, Ettrick Water (79), Paton, 1971: β var. platyphyllum, record for 88 is not erroneous, pace Distr. Map, J. Bryol. 9, 116, being - Methven (88), Dr. Nicholl, 1857 (E); depression in Molinia bog, Glen Coe (98), Hill.
- 1/18. S. subsecundum α var. subsecundum, distribution should read - 3, 5, 11, 12, 27, 28, 47-50, 69, 70, 73-75, 86-90, 96-98, 106 (Bull. Br. bryol. Soc. 26, 24-5): β var. inundatum, place 19 in () (Adams, 1975).
- 1/21. S. robustum, woodland near Danebridge, Wincle (39), Corley; bank by stream, Dale of Goyt (58), Appleyard & Milnes-Smith.
- 1/22. S. fuscum, delete 48, 49 (specimens, MANCH, are wrongly named); place H. 2 in [] (Distr. Map, J. Bryol. 9, 118).
- 1/29. S. molle, place 112 in [] (Hill & Paton, 1976).
- 3/2. Atrichum undulatum β var. minus, rotten stump in conifer forest, Darnaway Forest (95), Richter.
- 3/3. A. angustatum, place 19 in () (Adams, 1975).
- 3/4. A. tenellum, damp ground, disused sand pit, Rudheath, Northwich (58), Perry; exposed gravel, margin of Clatteringshaws Loch nr Pulan Burn (73), Paton.
- 5/2. Polytrichum aloides β var. minimum, shaded shaley bank nr Afon Twymyn, 2 miles NE of Dylife (47), Perry, 1975.
- 7/1. Diphyscium foliosum, rock crevices by stream, Goyt valley (58),

- Corley; crevice in rock, streambank, Mt. Leinster (H. 13), Synott, 1975.
- 8/5. Fissidens incurvus, thin soil overlying sloping base-rich strata, coast nr Bilsdean (82), Long.
- 8/6. F. algarvicus, bare clay bank, Harlech Cliff (48), Benoît, 1975.
- 8/12* F. celticus, bank above streamlet in oakwood Nant Melyn, N. of Llandovery (44), Paton.
- 10/1. Archidium alternifolium, Epping Forest nr the Great Bog (18) in (), E. Forster, 1800 (Adams, 1975); see also English Botany, 30, 2107 (1810)); track into old quarry NE of Clauchaneasy, Cree Valley (73), Paton; roadside gravel, Pallis Bridge nr Wicklow Gap, W. of Coolgreany (H. 12), Perry, 1975.
- 12/2. Ditrichum pusillum, Brassica field, Llanfihangel y Pennant (48), Whitehouse, 1975; stubblefield, Henbury cum Pexall, W. of Macclesfield (58), Whitehouse.
- 12/3. D. heteromallum, place 19 in () (Adams, 1975).
- 12/4. D. lineare, bank of track through conifer plantation, Fronfelen, Corris (47), Benoît.
- 12/7. D. flexicaule, place 19 in () (Adams, 1975).
- 13/1. Distichium capillaceum, calcareous mortar, bridge 1 mile NE of Knock Brandon, Camolin (H. 12), Perry, 1975.
- 13/2. D. inclinatum, fissure in calcareous rock, N. end of tunnel, old railway cutting, Kimberley (56), Henley; limestone rocks, 600 m alt., N. side of Beinn Dubhchraig, Tyndrum (87), Stirling.
- 17/2. Seligeria pusilla, crumbling agglomerate rock face by Black Burn, at foot of Long Gill, Newcastleton (80), Long & Chamberlain.
- 19/1. Blindia acuta, boulder by Bosley reservoir (58), Long.
- 21/1*. Aongstroemia longipes, damp gravelly ground nr old quarry, 300m alt., S. side of Ben Vane, Loch Sloy (99), Stirling.
- 24/4. Cynodontium jenneri, shaded rock face, Smailholm Craigs (80), Long.
- 29/7. Dicranum strictum, tree stump, Rolf's Wood, Iwerne Minster (9), Milnes-Smith & Gardiner; rotten log, mine N. of Avonbank, SE of Grangemouth (86), Chamberlain & Long.
- 29/8. D. scottianum, rock, Coed Hafod, Betws-y-Coed (50), Southorn.
- 29/12. D. bonjeanii, place 19 in () (Adams, 1975).
- 29/12*. D. leioneuron, in Sphagnum tussock by small stream, Ardifuir, N side of L. Crinan (98), Corley.
- 30/3. Dicranodontium denudatum, open moorland N. of Ladyside Heights,

- Moorfoot Hills (83), Chamberlain & Long.
- 31/1. Campylopus subulatus, gravelly track, Nant Iechyd, Cwm Dimbath (41), Perry, 1974.
- 33/2. Leucobryum juniperoideum, rocky bank, loch side, Ardvorlich, L. Lomond (99), Stirling.
- 35/1. Tortula ruralis, delete 112 (Hill & Paton, 1976).
- 35/6. T. laevipila β var. laevipiliformis, Prunus trunk, Cil-Cewydd Bridge (47), Paton & Long, 1975.
- 35/8. T. papillosa, place 19 in () (Adams, 1975); Prunus trunk, Cil-Cewydd Bridge (47), Long & Paton, 1975.
- 35/10. T. subulata β var. subinermis, rotting log nr R. Wye, Wye Dale, E. of Buxton (57), Paton; tree base by R. Ribble, Bradford Bridge, Clitheroe (59), Blockeel, 1975.
- 35/13. T. marginata, shaded wall by pond, Astonbury (20), Bloom.
- 35/14. T. stanfordensis, soil patches in damp sloping pasture, dean nr Thornton (82), Long & Chamberlain; bare soil under Salix by Water of Leith nr Canonmills (83), Long - new to Scotland.
- 35/16. T. cuneifolia, place 19 in () (Adams, 1975).
- 36/1. Aloina brevirostris, calcareous track, Plumley Limebeds Reserve, SW of Knutsford (58), Paton.
- 36/4. A. aloides, wall, Friog Cliff, between Dolgellau and Tywyn (48), Benoît, 1975.
- 38/1. Pterygoneurum ovatum, place 112 in [] (Hill & Paton, 1976).
- 40/3. Pottia heimii, place 18 in () (Adams, 1975).
- 40/4. P. intermedia, place 18 in () (Adams, 1975).
- 40/6. P. crinita α var. crinita, roadside wall by sea, Clones Strand, SE of Coolgreany (H. 12), Perry, 1975.
- 40/7. P. wilsonii, place 19 in () (Adams, 1975).
- 40/11. P. starkeana, place 19 in () (Adams, 1975); leadmine waste, Snailbeach (40), Duckett et al., 1975; broken limestone turf, Llanymynech Hill (47), Duckett, 1975.
- 41/2. Phascum cuspidatum, place 112 in [] (Hill & Paton, 1976).
- 42/1. Acaulon muticum, place 18 in () (Adams, 1975).
- 43/3. Cinclidotus mucronatus, roots of elm and sycamore by R. Ribble, Clitheroe (59), Blockeel.
- 44/1. Barbula convoluta β var. commutata, roadside wall, NE side of Tara Hill, S. of Coolgreany (H. 12), Perry, 1975.

- 44/6. B. acuta, short broken turf, Hackhurst Downs (17), Duckett.
- 44/12. B. rigidula, churchyard, Cranford (21), Milnes-Smith & Gardiner.
- 44/16. B. tophacea, damp sand, gravel pit by the Sheepwalk, between Shepperton and Chertsey (21), Townsend, 1967.
- 45/2. Gymnostomum recurvirostrum, walls of ruined buildings, old lead works, Vale of Glendasan, WNW of Laragh (H. 20), Perry, 1975.
- 47/1. Eucladium verticillatum, place 19 in () (Admas, 1975).
- 51/4. Trichostomum crispulum, limestone rocks above stream, Kirkhope Linns, Ettrickbridge End (79), Townsend; rock crevices, Black Burn, Newcastleton (80), Appleyard: β var. elatum, shaded rock beside Ettrick Water above Ettrickbridge End (79), Paton.
- 51/5. T. brachydontium, rocks by Ettrick Water, Ettrickbridge End (79), Paton; hedgebank on coast, Duffcarrick Rocks, N. of Courtown (H. 12), Paton, 1975.
- 52/1A Weissia perssonii, soil on roadside bank, Killiemore, Loch na Keal, Mull (103), Corley.
- 52/4. W. rutilans, place 112 in [] (Hill & Paton, 1976).
- 52/11. W. crispa β var. aciculata, rose bed, Treborth Botanic Garden (49), Duckett, 1975.
- 54/1. Coscinodon cribrosus, roadside siliceous rocks S of Ceibwr Bay, Moylegrove (45), Perry, 1973; rocks in roadside quarry between Nantglyn and Cyffylliog (50), Hill, 1973.
- 55/3. Grimmia conferta, basalt boulder below NW crags, Beinn na h-Uamha, Morvern (97), Paton.
- 55/7. G. alpicola α var. alpicola, rocks by river, R. Nant, Tailor's Leap (98), Corley.
- 55/7*. G. agassizii, dolerite rocks in fast-flowing stretches of R. Tees below Cow Green Reservoir (66), N.T.H. Holmes - new to England.
- 55/13. G. doniana β var. arenaria, forming small compact tufts on dry SE-facing rocks nr Thornthwaite (70), Birks - new to England.
- 55/21. G. orbicularis, ragstone wall, Knole Park, Sevenoaks (16), Wallace.
- 55/26. G. stirtonii, on rocks, Smailholm Craigs (80), Long; stones by L of Clumlie, Boddam, S. Mainland (112), Hill, 1974; granite boulders, wall of old building, Cloroge, Mt. Leinster (H. 12), Perry, 1975.
- 55/27. G. muehlenbeckii, basalt rocks, cliff above Inninmore Bay, Morvern (97), Corley.
- 56/7. Rhacomitrium canescens, place 19 in () (Adams, 1975).

- 58/2A. Funaria pulchella, flat ledge in limestone quarry, Verne Yeates, Portland (9), O'Shea, 1969; bare ground below cliffs, Great Orme's Head (49), O'Shea & Duckett, 1973.
- 58/4. F. fascicularis, place 112 in [] (Hill & Paton, 1976).
- 59/1. Physcomitrium pyriforme, mud, streamside, Standen Hall, Clitheroe (59), Blockeel.
- 62/2. Ephemerum sessile, margin of reservoir S of Talybont-on-Usk (42), Paton.
- 62/6. E. serratum α var. serratum, sandy area, occasionally sub - merged, SW end of Hawes Water (69), Perry, 1969; wet field by Dod Burn, S of Hawick (80), Appleyard: β var. minutissimum, clay bank, pasture nr Ash Brook, S of Winsford (58), Corley; soil in grass-clover ley, Tullich, Kilmelford (98), Corley.
- 64/1. Tayloria lingulata, place 87, 98, 108 in [] (Distr. Map, J. Bryol. 9, 120).
- 64/2. T. longicolla, remove dagger; place 87, 88, 92, 96, 105 in (); place 66 in [] (Distr. Map, J. Bryol. 9, 121).
- 69/2. Tetraphis browniana, damp shaded sandstone rock face, Inveravon nr Grangemouth (84), Chamberlain & Long.
- 71/2. Orthodontium lineare, conifer stump, Cao Forest (44), Jones & Hill; rotten wood by Menai Straits, Treborth (49), Hill; trunk of old birch, Gamescleuch, Ettrick (79), Corner.
- 73/7. Pohlia drummondii, mine waste, Tresavean, W of Lanner (1), Paton, 1975; gravelly track, old china clay works, Temple, 1966; gravelly path, Appleslade Enclosure, New Forest (11), Paton, 1958; bank of Afon Tywi below Craig Gallt-y-Berau, N of Llandovery (44), Paton; stony margin, Clatteringshaws Loch nr Polran Burn (73), Paton; old quarry, lane N of Stinchar Bridge, Carrick Forest (75), Paton; limestone cliff ledge, Craig Mhor, Glen Tilt (89), Long, 1975; beside Burn of Dalanut, W of Sandwick, Yell (112), Paton, 1974; stream bank S of Lough Inn, W of Moville, Inishowen (H. 34), Paton, 1969; track, Slieve League (H. 35), Corley, 1970.
- 73/8. P. gracilis, with other Pohlia spp, track in old sand quarry, Glen-shalloch Forest, N of Newton Stewart (73), Paton.
- 73/10. P. bulbifera, margin of reservoir S of Talybont-on-Usk (42), Paton; existing record for 47 is incorrectly named, replace by - margin of reservoir, L. Vyrnwy (47), Hill, 1975; fine gravel, shore of base-poor lake, Llyn Dinas, Beddgelert (49), Benoît; track into old quarry NE of Clauchaneasy, Cree Valley (73), Paton.
- 73/13B. P. lutescens, soil on uprooted stump, Clay House Farm, Tabley, Knutsford (58), Corley; bank by Mersey nr Urmston (59), Whitehouse; compacted soil, bank by farm track E of Eskdale Green (70), Perry, 1974; soily crevices among boulders, Clava Cairns, Culloden Moor Station (96), Perry, 1970; bank by layby, nr Glenmallon, L. Long (99), Corley.

- 73/14. Pohlia wahlenbergii γ var. calcareae, delete 49, specimen is var. wahlenbergii, conf. Smith.
- 73/15. P. delicatula, by stream, Kirkhope Linns, Ettrickbridge End (79), Townsend.
- 76/2. Anomobryum concinnum, base-rich rock by Ettrick Water above Ettrickbridge End (79), Paton.
- 77/4. Bryum pendulum, damp ground, old airfield, Spring Hill House, Molesworth (31), Finch; mortared wall, Machynlleth station (47), Benoit.
- 77/8. B. inclinatum, garden soil in tub, Barton Road, Cambridge (29), Hill; coal yard, disused railway station, Penybont nr Llanyblodwel (47), Benoit.
- 77/15. B. schleicheri, delete 112, specimen (BM) is incorrectly named.
- 77/19. B. pseudotriquetrum α var. pseudotriquetrum, damp stony ground, old airfield, Spring Hill House, Molesworth (31), Finch: β var. bimum, place 18 in () (Adams, 1975).
- 77/21. B. pallescens, copper mine detritus, Ecton Hill, Butterton (39), Corley; lead mine waste, Tylwch, S of Llanidloes (47), Hill; existing record for 51 is wrongly named, replace by - rubbly dump, Ffrwd, Caergwle (51), Hill, 1973.
- 77/22. B. intermedium, damp sand, gravel pit by the Sheepwalk, between Shepperton and Chertsey (21), Townsend, 1967; bare ground, marl pits, Ddôl (51), Hill, 1972; delete 112, record due to Edmondston (1845) does not refer to the modern taxon.
- 77/23. B. caespiticium, place 112 in [] (Hill & Paton, 1976).
- 77/27. B. radiculosum, damp brickwork by stream, Thornton Burn, Thorntonloch (82), Long; damp sandstone wall nr Inverness railway station (96), Long.
- 77/27A. B. tenuisetum, margin of reservoir, L Vyrnwy (47), Hill, 1975.
- 77/28. B. microerythrocarpum, bare soil by track, E side of Scarba (102), Corley.
- 77/28*. B. bornholmense, bank nr reservoir, Horse Bridge, nr Leek (39), Hill; margin of reservoir, L Vyrnwy (47), Hill, 1975.
- 77/29. B. rubens, soil in hedgebank, Tittesford Reservoir, Leek (39), Corley; margin of arable field, Mark Hill, SE of Gatehouse of Fleet (73), Paton.
- 77/29*. B. ruderales, chalky bank of track, Great Wishford, Wilton (8), Corley.
- 77/30. B. klinggraeffii, below overhang on vertical bank of R. Mersey nr Urmston (59), Whitehouse.
- 77/30*. B. violaceum, cattle-grazed field of grass and dead Brassica, Mossbrow, Warburton (58), Whitehouse.

- 77/31. B. sauteri, bare soil by track, Carsaig Bay, Mull (103), Corley.
- 77/34. B. alpinum β var. viride, exposed rock, Darnaw Burn, Clattering-shaws Loch, W of New Galloway (73), Paton; exposed rocks, stream E of Craigenreoch, Barr (75), Paton.
- 77/35*. B. riparium, damp soil below rocks, E side of Scarba (102), Corley.
- 77/36. B. donianum, sheltered stream bank, cliffs nr West Tarbert, Mull of Galloway (74), Paton - new to Scotland.
- 77/37. B. capillare β var. rufifolium, calciferous sandstone dyke by stream, S bank of R Coquet, Linshiels (67), Long.
- 77/37A. B. elegans, limestone rocks, cliffs of Craig Mhor, 450m alt., Glen Tilt (89), Long, 1975.
- 77/37C. B. flaccidum, old elder, Wallingwells Wood, Carlton-in-Lindrick (56), Blockeel; elder by Harthorpe Burn, Skirl Naked, Wooler (68), Long.
- 77/37E. B. torquescens, soil among grasses on Magnesian Limestone, Brockdale, Wentbridge (63), Blockeel.
- 79/4. Mnium marginatum, place 112 in [] (Hill & Paton, 1976).
- 79/8. M. medium, damp overgrown scree, 800 m alt., facing NE, Coire Ardair, Creag Meagaidh, Loch Laggan (97), Corley, 1967.
- 79/10. M. affine, damp ground under Pseudotsuga by R Annell nr Cao (44), Hill; limestone boulder, shaded sycamore woodland, S side of Barafundle Bay, E of Bosherton (45), Perry 1973; turf cliff slope N of lighthouse, Mull of Galloway (74), Paton.
- 79/11. M. rugicum, marsh by Afon Cothi, Bwlch-y-rhiw (44), Hill; flush, W bank, Medwin Water, Pentland Hills (77), Gardiner; marsh by Kingside Loch, Buccleuch (79), Lucking.
- 79/12. M. seligeri, place 18 in () (Adams, 1975); bog nr road, Yellowford Cross Roads, N of Rathvilly (H. 13), Perry, 1975.
- 79/15. M. pseudopunctatum, place 18 in () (Adams, 1975).
- 87/2. Bartramia pomiformis, place 18 in () (Adams, 1975); place 112 in [] (Hill & Paton, 1976).
- 90/4. Philonotis capillaris, place 112 in [] (Hill & Paton, 1976).
- 90/6. P. calcarea, flush W bank of Medwin Water, Pentland Hills (77), Long.
- 95/1. Glypomitrium daviesii, place 45 and H. 15 in []; delete H. 34 (Distr. Map, J. Bryol. 9, 122).
- 97/2. Zygodon conoideus, place 19 in () (Adams, 1975).
- 98/2. Orthotrichum anomalum, concrete wall, Newton Stewart (74), Paton.
- 98/3. O. cupulatum, rocks in stream, Buccleuch (79), Hill.

- 98/5. O. affine, place 112 in [] (Hill & Paton. 1976).
- 98/10. O. sprucei, root of sycamore by R Aire W of Skipton (63) Blockeel.
- 98/13. O. pallens, delete 19 (Adams, 1975).
- 98/14. O. tenellum, concrete of bridge, Gwar-Cwm, NE of Talybont (46), Hill & Benoit; ash trunk, Black Burn (80), Chamberlain & Long.
- 101/1. Climacium dendroides, place 18 in () (Adams, 1975).
- 103/1. Cryphaea heteromalla, elder by old quarry above Brungerley Bridge, Clitheroe (59), Blockeel; elder by small wood, Kirkhope Linns, Ettrickbridge End (79), Townsend.
- 104/1. Leucodon sciuroides, place 18 in () (Adams, 1975).
- 106/1. Pterogonium gracile, oak S of Ashengrove, Apestown (10), Rose & Wallace.
- 109/3. Neckera pumila, place 18 and 19 in () (Adams, 1975).
- 112/1. Daltonia splachnoides, horizontal tree bole close to water in wooded ravine, Ardgour (97), Long.
- 113/1. Hookeria lucens, place 18 in () (Adams, 1975).
- 121/1. Heterocladium heteropterum β var. flaccidum, shaded rocks above Bradley Burn, Gorrenberry, Hermitage Water (80), Paton.
- 123/1. Thuidium abietinum, place 19 in () (Adams, 1975).
- 123/4. T. delicatulum, roadside gravel, Pallis Bridge, Wicklow Gap, W of Coolgreany (H. 12), Perry, 1975.
- 123/5. T. philibertii, place 19 in () (Adams, 1975).
- 123/6. T. recognitum, limestone rock ledge NE of Lochan an t-Sluic, upper Glen Feshie, Kingussie (96), Townsend, 1975.
- 125/1. Cratoneuron filicinum γ var. fallax, ground and small stones in flush, Empshott, Petersfield (12), O'Shea, 1971.
- 125/2. C. commutatum α var. commutatum, place 19 in () (Adams, 1975): β var. falcatum, place 18 in () (Adams, 1975).
- 126/6. Campylium calcareum, delete 112, record of "Hypnum polymorphum" due to Edmondston (1845) refers to Hooker & Taylor's concept of the plant, viz. C. chrysophyllum.
- 128/2. Hygroamblystegium fluviatile, stone in stream nr bridge S of Clonough Bridge, Coolgreany (H. 12), Perry, 1975.
- 129/3. Amblystegium kochii, on wood bordering canal, Church Minshull (58), Appleyard; open area of upper saltmarsh, Sandgate (69), Adam.
- 130/2. Amblystegiella sprucei, base-rich sandstone by stream, foot of Rough Gill, Black Burn nr Newcastleton (80), Long & Chamberlain.

- 131/4. Drepanocladus fluitans β var. falcatus, gritstone wall nr Greens (39), Appleyard.
- 131/5. D. exannulatus α var. exannulatus, base-rich flush SE of Plym-limon (47), Hill, 1974; marsh, Cors Bodwrog (52), Hill, 1974; marsh by Skutes Water, Fetlar (112), Hill & Paton, 1974: β var. rotae, streamside by small bog below limestone cliffs, Craig y Cilau, Llangattock (42), Perry, 1975; flush, moors S of Gwytherin (50), Hill, 1972; moist soil, margin of Clatteringshaws Loch nr Darnaw Burn W of New Galloway (73), Paton; flush by moorland stream, Croghan, S side of Mt. (H. 12), Perry, 1975.
- 131/6. D. revolvens α var. revolvens, Parsonage Moor, Cothill (22), Perry, 1970.
- 131/8. D. uncinatus, floor of old quarry, Cumber Vale 4 miles NE of Carnew (H. 12), Perry, 1975.
- 134/1. Acrocladium stramineum, place 18 and 19 in () (Adams, 1975).
- 134/3. A. cordifolium, bog nr Yellowford Cross Roads, Rathvilly (H. 13), Perry, 1975.
- 137/3. Camptothecium nitens, delete 79, existing record is in v. -c. 80, comm. Corner.
- 138/4. Brachythecium salebrosum, place 18 in () (Adams, 1975).
- 139/1. Scleropodium caespitosum, damp stones below brick wall, out-buildings of Osterley House (21), Milnes-Smith & Gardiner; rocks by R. Tweed, between Melrose and Kelso (80), Appleyard.
- 139/2. S. tourretii, track on cliffs nr West Tarbert, Mull of Galloway (74), Paton.
- 140/1. Cirriphyllum piliferum, marshy ground by stream, E side of Scarba (102), Corley.
- 141/5. Eurhynchium swartzii β var. rigidum, Hackhurst Down, Shere (17), Paton & Wallace.
- 141/7. E. speciosum, place 18 in [] (Adams, 1975).
- 142/1. Rhynchostegiella pumila, shaded bank by track, Tara Hill, Coolgreany (H. 12), Perry, 1975.
- 142/4. R. tenella, basic breccia in shaded ravine, Medwyn House, West Linton (78), Long.
- 145/1. Entodon concinnus, place 19 in () (Adams, 1975).
- 148/3. Isopterygium pulchellum, place 112 in [] (Hill & Paton, 1976).
- 149/1. Plagiothecium latebricola, old hazel stool, Mochdre, Newtown (47), Pitkin, 1975; place 45, 56, 87, 105 in [] (Distr. Map, J. Bryol. 9, 123).
- 149/6. P. curvifolium, stump in spruce plantation, Caoe Forest (44), Jones.

- 149/7. P. laetum, shaded soil overlying millstone grit by stream, Black Brook, Gradbach, Wincle (39), Long; bank above stream, Goyt Valley, Buxton (57), Hill.
- 151/1. Pylaisia polyantha, place 19 in () (Admas, 1975); old elder nr Llanuwchllyn (48), Benoit.
- 154/1. Hypnum cupressiforme ♂ var. mamillatum, old oak, Caoe (44), Hill; rock in woodland, Glentroot (73), P.A. Stevens; rotten log, humid ravine, Pease Den (81), Long; birch in small ravine, E side of Scarba (102), Corley: ♂ var. ericetorum, place 19 in [] (Adams, 1975): ♂ var. tectorum, place 18 in [] (Adams, 1975; bank in field, Yellowford Cross Roads, Rathvilly (H. 13), Perry, 1975.
- 154/2. H. imponens, peat bog on Thorniecleuch Hill, Ale Moor (79), Corner.
- 154/5. H. callichroum, Pont-y-Glyn (50) in (), H. O. Mitten, 1867 (BM); Nant-y-Ffrith, Wrexham (51) in (), J. C. Wilson, 1914 (BM).
- 155/1. Ptilium cristacastrensis, cushion about 1 m diam among other mosses, Corsican Pine plantation SW of Ickerbuildings, Mundford (28), Whitehouse.
- 160/1. Rhytidadelphus triquetrus, place 18 in () (Adams, 1975).
- 160/3. R. loreus, place 19 in [] (Adams, 1975).
- 161/1. Hylocomium brevirostre, waterfall area, Main Water of Luce, N of New Luce (74), Corner.
- 161/4. H. splendens, place 18 and 19 in () (Adams, 1975).

REFERENCES

- Adams, K. J. (1975). Bryophytes. In Flora of Essex, pp. 229-71, by S. T. Jermyn. Essex Naturalists' Trust Ltd, Colchester.
- Birks, H. J. B. & Ratcliffe, D. A. (1976). Distribution maps of bryophytes in Britain and Ireland -- Frullania germana. J. Bryol. 9, 113.
- Edmondston, T. (1845). Flora of Shetland. Aberdeen.
- Hill, M. O. & Paton, J. A. (1976). The Bryophytes of Shetland. Unpublished report submitted by Institute of Terrestrial Ecology to Nature Conservancy Council. (A copy is available in BBS Library.)
- Kent, D. H. (1975). The Historical Flora of Middlesex, Hepaticae pp. 89-98. The Ray Society, London.
- Laflin, T. (1971). Bryophytes In A Computer-Mapped Flora. A Study of the County of Warwickshire, pp. 654-736, by D. A. Cadbury, J. G. Hawkes & R. C. Readett. London.
- McArdle, D. (1907). Musci and Hepaticae from C. Mayo. Irish Nat. 16, 332-7. (Almost all records are from H. 16).

Paton, J. A. & Newton, M. E. (1967). A cytological study of Pellia epiphylla (L.) Corda in Britain with reference to the status of Pellia borealis Lorbeer. Trans. Br. bryol. Soc. 5, 226-31.

Paton, J. A. (1973). Taxonomic studies in the genus Fossombronina. J. Bryol. 7, 243-52.

Paton, J. A. (1976). Distribution maps of bryophytes in Britain and Ireland -- Riccia nigrella. J. Bryol. 9, 107.

Contributors of records: P. Adams, Mrs. J. Appleyard, P. M. Benoit, Mrs. B. E. Bescoby, H. J. B. Birks, T. L. Blockeel, G. Bloom, D. F. Chamberlain, M. F. V. Corley, R. W. M. Corner, J. G. Duckett, R. A. Finch, W. D. Foster, J. C. Gardiner, Miss P. A. Henley, M. O. Hill, E. W. Jones, A. G. Kenneth, N. Kirby, D. G. Long, Miss H. M. Lucking, Mrs. M. D. Milnes-Smith, B. J. O'Shea, Mrs. J. A. Paton, A. R. Perry, P. H. Pitkin, D. A. Ratcliffe, R. Richter, F. Rose, Dr. A. L. D. Southorn, A. McG. Stirling, D. M. Synnott, C. C. Townsend, E. C. Wallace, H. L. K. Whitehouse.

REVISION OF CENSUS CATALOGUE

Our member Mr M. O. Hill is revising the British distribution of a number of taxa, and would like to examine all available material. Where feasible he will produce distribution maps on the basis of material examined. Would members who are able to help by supplying material please either send it to Mr M. O. Hill, Institute of Terrestrial Ecology, Penrhos Road, Bangor, Gwynedd, LL57 2LQ, or bring it to a BBS meeting (preferably the autumn paper-reading meeting). The following taxa are being revised:

Andreaea rupestris var. acuminata and var. sparsifolia

A. rothii var. crassinervia and var. huntii

Dichodontium flavescens - only fruiting material is of interest

Aloina ambigua - naming in the past has been so unreliable that a complete revision is necessary

A. rigida - several specimens so named have proved to be A. brevinostris

Pottia intermedia

Acaulon muticum var. minus

Weissia crispata

W. tortilis

Rhacomitrium heterostichum var. alopecurum and var. gracilescens

R. canescens - two varieties are now recognized

Mnium marginatum var. dioicum - only material with gametangia is of interest

Philonotis capillaris

P. caespitosa

P. fontana var. tomentella - much misunderstood

Hygrohypnum luridum var. subsphaericarpon

Brachythecium salebrosum - all available material

B. mildeanum - all available material

Rhytidiadelphus squarrosus var. calvescens

NEW EDITIONS OF THE CENSUS CATALOGUES

At the last meeting of the BBS Council it was decided that new editions of the Moss and Hepatic Census Catalogues were now needed and should be produced by the Recorders. Members are therefore urged to send any new records and amendments to the existing lists to the Recorders. The final production will probably be a combined Moss/Hepatic Catalogue.

It will, of course, be a year or two before this becomes available, so in the meantime, in order to stimulate further recording and interest in distribution the existing stocks of the latest editions of the Moss and Hepatic Census Catalogues are being offered at half price – that is 19p plain and 22p interleaved – and may be obtained from the Librarian; please note that postage is extra!

ADDITIONS & AMENDMENTS TO THE MEMBERSHIP LIST

NEW MEMBERS, JANUARY 1977 - JUNE 1977

- BONIFACE, A.D., 40 Pentland Avenue, Chelmsford, Essex. (1977)
BRANDT-PEDERSEN, T., Soevj 15, DK-8870 Langaa, Denmark. (1977)
BREUER, H., D-5308 Rheinbach, Münsterelfaler Str. 19, W. Germany. (1977)
BROUGH, Dr P.R., Basingstoke District Hospital, Aldermaston Road, Basingstoke, Hampshire, RG24 9NA. (1977)
BROWN, S.J., 131 Station Road, Earls Barton, Northampton. (1977)
BUCK, William R., Department of Botany, University of Michigan, Ann Arbor, Michigan 48109, U.S.A. (1977)
CASA SICART, Profesor Creu, Departamento de Botánica, Facultad de Ciencias, Universidad Autónoma de Barcelona, Bellaterra (Barcelona), Spain. (1977)
DE TRUCCO, M/s Gilda, Department of Biology, University of Ottawa, 30 Somerset E., Ottawa, Ontario, Canada. (1977 Junior)
GOYVAERTS, Patrick, Kilcaskan Studio, Gleann-Garbh, Co. Cork, Eire. (1977)
HERRMANN, John, 14 Glynswood, Chalfont St Peter, Bucks., SL9 0DP. (1977)
HORTON, Diana G., Department of Botany, University of Alberta, Edmonton, Alberta, Canada, T6G 2E9. (1977)
HOSE, Thomas A., c/o 1 Marsh Brows, Formby, Liverpool, L37 3PD. (1977)
HUGHES, William E., Department of Biological Sciences, The University, Lancaster. (1977)
MANSANET, Dr Jose M., Catedra de Botánica, Facultad de Ciències, Sección de Biológicas, Paseo al Mar 13, Valencia 10, Spain. (1977)
MITCHLEY, Jonathan, Neuadd Reichel, Ffriddoedd Road, Bangor, Gwynedd, LL57 2DG. (1977 Junior)
NOWAK, Dr Heidemarie, Botanischer Garten und Botanisches Museum Berlin-Dahlem, 1000 Berlin 33, Königin-Luise Strasse 6-8. (1977)
PANNELL, Miss Caroline M., 31 Hayling Rise, Worthing, Sussex, BN13 3AL. (1977 Junior)
PAYNE, A.G., 8 Esslemont Avenue, Aberdeen, AB2 5SL. (1977)
PAYNE, Mrs A.G., 8 Esslemont Avenue, Aberdeen, AB2 5SL. (1977 Family)
PORT, P.J., 189 Ledbury Road, Hereford, HR1 1QD. (1977)
RANKIN, Mrs J.M., Department of Botany, British Museum (Natural History), Cromwell Road London, SW7 5BD. (1977)
RILEY, J.J., 92 Tamworth Lane, Mitcham, Surrey, CR4 1DA. (1977)

LETTER TO THE SECRETARY

From Dr Ursula K. Duncan:

On reading the paper on 'Freehand Sectioning of Bryophytes' by W. D. Foster (Bull. Brit. bry. soc. 29, 21 (1977)), it occurred to me that the old method of cutting sections with split elder-pith might still be useful to those who do not have access to a laboratory, provided that they follow these simple rules: Thoroughly moisten the split pith and press together several leaves which are also well saturated between the two halves. Use a razor-blade with a thin sharp edge and shave off a number of slivers, so small that the leaf sections are hardly visible to the naked eye. Then separate out under the microscope the best leaf section from amongst the débris in the drop of water on the slide. I am convinced that most mistakes occur when the bryologist cuts one section at a time when the result is usually unsatisfactory. To Dr Foster's list of bryophytes which give good results I would add Polytrichum commune and other Polytricha of which it is desired to examine the lamellae on the nerve. -----Yours, etc.

Ursula K. Duncan, Parkhill, Arbroath, Angus, DD11 5RG.

REQUEST FOR MATERIAL

Mr D. G. Long, Royal Botanic Garden, Edinburgh, EH3 5LR, is mapping the distribution of the following species in Britain, and would be grateful for records and particularly loan of specimens for checking to complete the maps:

Scapania degenii
Barbilophozia quadriloba
Lophozia obtusa
Leiocolea gillmanii
Tritomania polita

CHECK LIST OF BRITISH AND IRISH MOSSES

In conjunction with his new British Moss Flora (which at present is with the Printers) Dr A. J. E. Smith has produced a Check List of British and Irish Mosses. Copies of this are available from Dr Smith, School of Plant Biology, University College of North Wales, Bangor, Gwynedd, LL57 2UW, at 25p each post free. Cheques and postal orders should be made payable to "University College of North Wales".

CORRECTION

A correction is required to page 8 of Bulletin 29. Dr M. E. Newton's exhibit was entitled 'Chromosomes of Dicranum strictum', not as stated.

A. R. Perry, Hon. Secretary, National Museum of Wales, Cardiff, CF1 3NP
