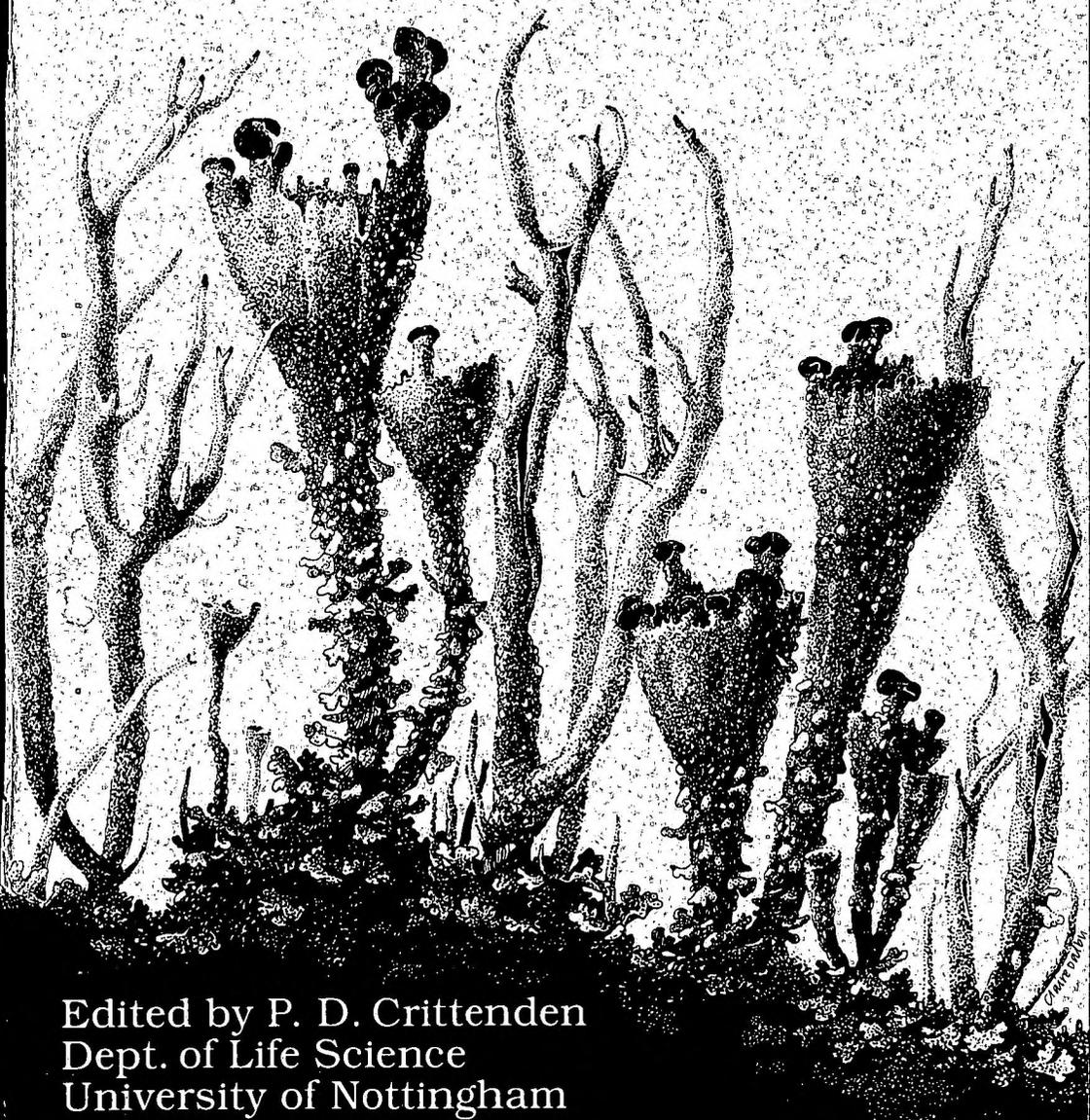


BRITISH LICHEN SOCIETY BULLETIN

No. 76 Summer 1995



Edited by P. D. Crittenden
Dept. of Life Science
University of Nottingham

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SUBMISSION DEADLINE

Please would intending contributors to the Winter 1995 issue of the *Bulletin* submit their copy to the Editor by 16 September. It would be helpful, but by no means essential, for authors of longer articles prepared on a word processor to supply a copy on a 3.5" floppy disc, in addition to the hard copy. This can be in MS.DOS Word Perfect or any format from an Apple Macintosh.

Cover artwork by Claire Dalby

THE BRITISH SPECIES OF *LEPRARIA* AND *LEPROLOMA*: CHEMISTRY AND IDENTIFICATION

Most lichenologists do not accept that chemical characters should be used as the basis for separation of species, unless supported by morphological differences. However, chemical characters are given considerable weight in *Lepraria*, as this is regarded as a form-genus comprising morphologically reduced, perhaps unrelated taxa which have lost the capacity for sexual reproduction. While many of the species in *Lepraria* can be recognised in the field with a good degree of accuracy by characters such as thallus colour and the form of the granules, thin-layer chromatography (TLC) is usually necessary for reliable identification.

The following notes derive from material prepared for a workshop on TLC, held at the National Museum of Wales, Cardiff, in November 1994, which used *Lepraria* and *Leproloma* as experimental material. It is hoped that the table and chromatograms will be useful to those with access to TLC; in addition a provisional key to the taxa which does not use TLC is presented.

Taxonomy

Keys to the species are provided by Laundon (1989, 1992) and Tønsberg (1992). Four species additional to those mentioned by Laundon are now accepted as British:

Lepraria crassissima: pale grey with a bluish tinge; contains divaricatic acid, and also substantial amounts of nordivaricatic acid which gives a distinctive C + red reaction; uncommon on rock.

Lepraria elobata: a blue-grey species which contains stictic acid complex, zeorin, atranorin, and often rangiformic acid; probably widespread on bark and rock.

Lepraria jackii: contains roccellic acid and atranorin, often also with rangiformic acid and other fatty acids; locally abundant on bark, less frequently on rock.

Lepraria rigidula: pale grey, contains the fatty acid 'rigidula-unknown', granules with distinctive long projecting hyphae; frequent on rock and bark.

Note: *Lepraria jackii* and *L. rigidula* were included in *Leproloma cacuminum* by Laundon (1992), but they are sufficiently distinct in chemistry, ecology and (at least in the case of *L. rigidula*) morphology to be treated as separate species for the present.

Morphological characters in *Lepraria* and *Leproloma* are provided by colour, presence or absence of lobes, thallus stratified or not, size range of granules, and the degree to which hyphae project from the granule surface.

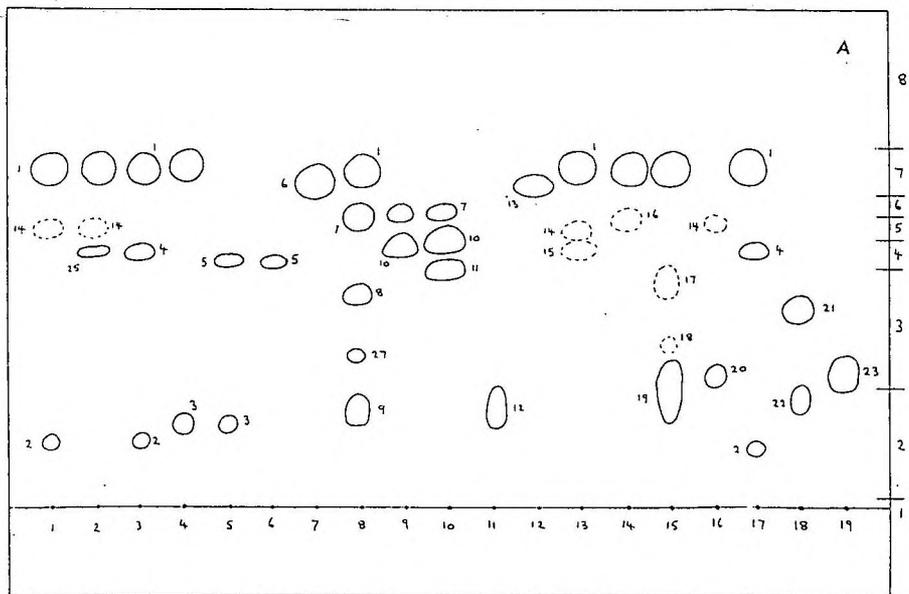
Chemistry

The chemistry of the British species is summarised in Table 1. Chromatograms which include the major substances are shown in Figure 1. All the British taxa can be distinguished using either solvent system A or G, except *Lepraria jackii* and *L. rigidula* which are best separated in G. Separation of the fatty acids in *L. jackii* is best carried out by running each sample in both G and C (not shown here). Some species of *Lepraria* and *Leproloma* contain angardianic acid, but this fatty acid is indistinguishable from roccellic acid by TLC. Details of solvent systems and techniques are given in White & James (1985).

Figure 1. Chromatograms in solvent systems A (above) and G (below). Dotted lines indicate fatty acids. Rf classes are indicated on the right.

Species: 1, 2. *Lepraria caesiaalba*, 3. controls, 4. *Lepraria nivalis*, 5. *Lepraria eburnea*, 6. *Lepraria frigida*, 7. *Lecanora* sp., 8. *Lepraria lobificans*, 9. *Lepraria incana*, 10. *Lepraria crassissima*, 11. *Lepraria umbricola*, 12. *Lepraria lesdainii*, 13. *Lepraria jackii*, 14. *Lepraria rigidula*, 15. *Leproloma cacuminum*, 16. *Leproloma membranaceum*, 17. controls, 18. *Leproloma vouauxii*, 19. *Leproloma diffusum*.

Compounds: 1. atranorin, 2. fumarprotocetraric acid, 3. protocetraric acid, 4. norstictic acid, 5. alectorialic acid, 6. usnic acid, 7. zeorin, 8. stictic acid, 9. constictic acid, 10. divaricatic acid, 11. nordivaricatic acid, 12. thamnolic acid, 13. lesdainin, 14. roccellic acid, 15. unidentified fatty acid, 16. rigidula- unknown, 17. rangiformic acid, 18. norrangiformic acid, 19. porphyritic acid, 20. pannaric acid, 21. pannaric acid-2-methylester, 22. unknown, 23. oxypannaric acid-2-methylester, 24. satellite to alectorialic acid, 25. psoromic acid, 26. 2'-0-demethylpsoromic acid, 27. satellite of stictic acid.



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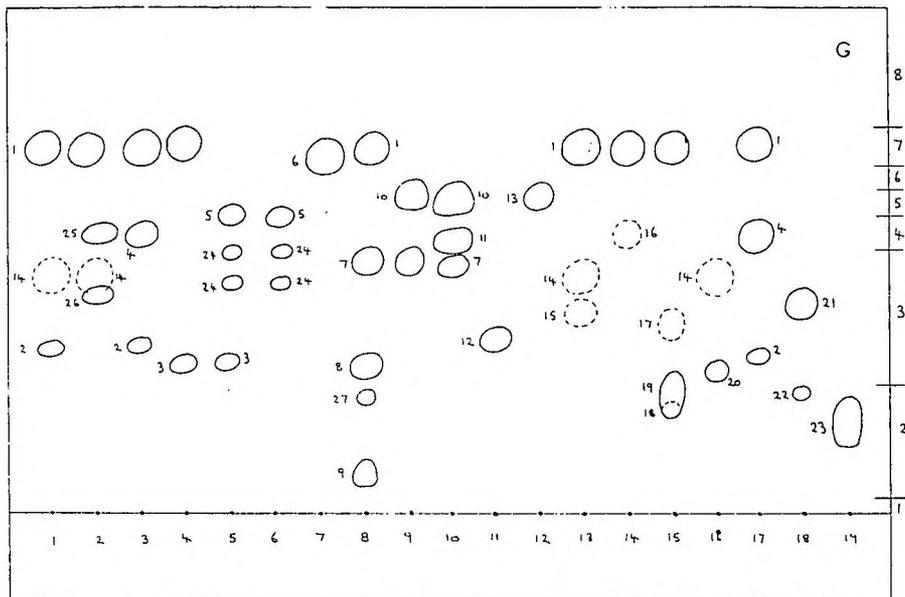


Figure 1.

Provisional key to *Lepraria* and *Leproloma*, not using data from TLC.

The following key is a first attempt at identification using only morphology, spot tests, and microcrystal tests. Construction of such a key is difficult, as microcrystal tests are often not particularly distinctive in these genera, because some of the species have more than one compound present at once, and because the occasional presence of accessory compounds may give atypical reactions. It may never be possible to determine accurately all the taxa without TLC, but the author would be pleased to hear of any corrections or improvements to this key.

The key relies heavily on spot tests which are best observed under a dissecting microscope. They should be carried out on acetone extracts of the thallus spotted onto filter paper (many are difficult to see on the intact thallus). For the KC reaction, add a small amount of K, then a small amount of C on top of it; a positive reaction appears as a fleeting 'blush' of a pinkish or orange-pink colour.

A 1% solution of ferric chloride (FeCl_3) in water gives results which may be useful, though further specimens need to be studied. A positive reaction has been obtained with all those species containing aromatic lichen substances except for those with only atranorin and/or porphyric acid. Atranorin has been reported to give a reddish-violet reaction but it has not been possible to confirm this, and the apparent lack of reaction with atranorin has been used in the key. The following results have been observed: 1. no reaction or at most a faint brownish colour (*L. jackii*, *L. lesdainii*, *L. rigidula*, *Leproloma cacuminum*), 2. dull pink (most species), 3. dull pinkish-violet to dull violet (*L. umbricola*), 4. dull grey brown with pinkish tinge (*L. diffusum*), 5. grey (*Leproloma membranaceum*, *L. vouauxii*). In practice, reactions 2, 3 and 4 may not be distinguishable from each other, but reaction 5 appears to be useful in indicating *L. vouauxii*.

GE = microcrystal reagent of glycerol: glacial acetic acid 1:3; $\text{Ba}(\text{OH})_2$ = saturated solution of barium hydroxide in water. (Used for thamnolic acid.)

1. Negative with all four reagents; thallus green, soft; growing on calcareous rocks; in GE forming moss-like branching patterns of minute crystals **L. lesdainii**
 - Nearly always positive with one of the reagents; if negative, then thallus not green and not on calcareous rock 2

2. Reactions C- to + pink or red, KC + orange-pink to red, K- to + yellow (the KC reaction is different to that obtained by K alone). 3
 - Reactions C- to + yellow to orange-brown, KC- to + orange brown, K- to + yellow to yellow-brown or orange (if there is a KC reaction it is not pinkish and it is similar to that obtained by K alone). 5

3. Reactions PD - (C + red, K- , KC-) **Lepraria crassissima**
 - Reactions PD + yellow to orange (C- to + orange-pink, K- to + yellow), specimens turning herbarium packets pink after a few years (alectorialic acid) 4

4. Thallus forming rosettes in habitats not sheltered from rain, granules usually without projecting hyphae **Lepraria neglecta**
 - Thallus in habitats sheltered from rain, granules with shortly projecting hyphae **Lepraria eburnea** and **Lepraria frigida**

5. FeCl₃ - (at most faintly brownish), K and PD + yellow (sometimes faint) 6
 - FeCl₃ + pink, violet, grey or grey-brown, often PD + orange 10

6. Thallus forming rosettes in habitats not sheltered from rain, granules usually without projecting hyphae **Lepruloma cacuminum**
 - Thallus growing in habitats sheltered from rain, granules with shortly projecting hyphae 7

7. Acetone extracts with a distinct yellow pigment (K- or masked by pigment, KC + yellow, PD + yellow); granules fine; often forming extensive pale yellowish colonies in deeply sheltered rock overhangs **Lecanora** sp.

- Acetone extracts without distinct yellow pigment; granules fine to coarse, on rock or bark 8

8. Granules relatively coarse, up to 200-300 μm wide, with \pm straight, conspicuously projecting hyphae at least 60 μm long

Lepraria rigidula

- Granules relatively fine, up to c. 100 μm wide, with only shortly projecting hyphae 9

9. With very fine, straight, hair-like crystals in GE, often in radiating clusters (porphyrilic acid) (in addition to flat, very thin plates and/or branching patterns of small crystals due to fatty acids); usually on rock (or soil) **Leproloma cacuminum**

- Without fine hair-like crystals in GE (but crystals of fatty acids are present); frequent on bark, occasional on rock **Lepraria jackii** (The crystals of porphyrilic acid may be difficult to detect in practice, as they may be in small quantity, accompanied by more abundant crystals of fatty acids. *Haematomma ochroleucum* is a convenient control for porphyrilic acid.)

10. Thallus forming rosettes in habitats not sheltered from rain, granules usually without projecting hyphae (reactions K- or + yellow, C- , PD- to + orange, FeCl_3 + pink) **Lepraria caesioalba**

- Thallus diffuse or delimited, in habitats sheltered from rain 11

11. FeCl_3 + greyish, PD + orange 12

- FeCl_3 + pink to grey brown or violet 13

12. Thallus distinctly lobed (medulla not conspicuously exposed, hypothallus well-developed) **Leproloma membranaceum**
- Thallus not or only obscurely lobed (medulla usually conspicuously exposed, hypothallus poorly developed) **Leproloma vouauxii**
13. Reactions K- , C- , PD- (FeCl₃ + pinkish); granules fine, with shortly projecting hyphae, thallus usually tinged distinctly bluish-grey **Lepraria incana**
- Reactions K + or PD + 14
14. K + violet red (parietin), thallus often tinged dull orange **Lepraria incana**
- K- to + yellow or orange 15
15. Thallus whitish, delimited, on calcareous rock (K- or + yellow, PD + orange) **Lepraria nivalis**
- Thallus not delimited 16
16. Thallus strongly yellow (an acetone-insoluble pigment) **Leproloma diffusum** var. **chrysodetoides**
- Thallus whitish to cream, pale grey, bluish grey or green 17
17. K + bright yellow (thamnolic acid), (PD + orange, FeCl₃ + dull violet to dull pinkish-violet), greenish species of acidic substrata, in Ba(OH)₂ producing clusters of boat-shaped crystals **Lepraria umbricola**
- K + yellow (less vivid colour) 18

18. Thallus granules fine, with shortly projecting hyphae, medulla not or scarcely differentiated, thallus pale grey to bluish-grey

Lepraria elobata

- Thallus granules with short or long projecting hyphae, medulla present 19

19. Thallus often with a bluish-grey tinge (FeCl_3 + pinkish)

Lepraria lobificans

- Thallus white to cream (FeCl_3 + dirty grey brown with pinkish tinge)

Leproloma diffusum

(These species look different in the field and it should be possible to devise microcrystal tests to separate them.)

References:

Laundon, J.R. (1989) The species of *Leproloma* - the name for the *Lepraria membranacea* group. *Lichenologist* 21: 1-22.

Laundon, J.R. (1992) *Lepraria* in the British Isles. *Lichenologist* 24: 315-350.

Tønsberg, T. (1992) The sorediate and isidiate, corticolous, crustose lichens in Norway. *Sommerfeltia* 14: 1-331.

White, F.J. & James, P.W. (1985) A new guide to microchemical techniques for the identification of lichen substances. *British Lichen Society Bulletin* 57 (suppl.).

Alan Orange

Professor Josef Poelt

Just as this Bulletin was going to press we received the sad news of the death of Josef Poelt. He was an Honorary Member of this Society and one of the most eminent figures in contemporary lichenology. A full obituary will follow in a Society publication.

PRESIDENT'S REPORT FOR 1994

It is my great pleasure to report that the Society is now as strong as at any time in its history. It has already established itself as an internationally important Society. We are now in a very healthy position to explore new ventures and to consolidate its future. I shall not deal with the details of our achievements. Our individual Officers' Reports will cover these issues. I want to look forward to what I and the members of Council conceive should be the future aims and ambitions of the Society.

The study of lichens today is an international activity. This is reflected in our high proportion of foreign members. We have already set a high standard by the publication of the Lichen Flora of Great Britain and Ireland. The first 900 copies were rapidly sold. It was necessary to produce an extra 900 copies this last year to help to satisfy the demand.

Coupled with this has been the production of a new checklist and a brand new mapping card.

It is clear that the first major aim of the Society will be the acquisition of lichen data, in a more detailed site-associated and time-associated manner. It is necessary to know where our lichens are and what is happening to them at any given time. To find and record this knowledge requires further developments to build on the already highly successful mapping programme undertaken by Mark Seaward in Bradford. To rationalise and organise some of the practical questions raised by the Council, additional specialised expertise and longer time is needed to discuss such matters. A **Data Committee** was therefore set up, from members of Council and active members of the Society. Its mandate is to tackle the many issues involved, including computer storage, intercommunication of data collectors and the production of more specific, site-related mapping cards based on the highly successful enterprise of Tom Chester's Churchyards Mapping Scheme. The objectives of this committee will be to thrash out the practicalities and needs of the Society to undertake this work efficiently. This will significantly reduce the time needed for the Council itself to try to solve these matters in the time available to it. This subcommittee will continuously interact with the Council to seek its approval. Already new site-related mapping cards have and are being drafted and will soon be available to members.

The second main aim will be to educate and attract new young members and to educate the public through publicity. These aspects had been occupying more and more time on the Council agendas, and again time did not permit adequate discussion and progress to be made of the many issues involved. This included the construction of lichen posters, generation of publicity material, and seeking representation on and coordination with education and publicity matters of other groups. A working group, an **Education and Promotions Committee** was established on the 5th December and we are fortunate to have Peter James, who has an international knowledge and experience in these fields, to chair this committee. Its first task will be to generate the posters and publicity needed to attract young persons and new members, and to provide appropriate support material identified by the Council and by the Conservation Committee. Again, this committee will closely interact with the Council to ensure ratification of its activities.

The **Conservation Committee** is already highly effective and succeeds in representing the Society within the many areas of public and industrial exploitation which could affect the health and well-being of lichens throughout the countryside.

Central to all our activities is our ability to know at any time, the status of lichens throughout the country. The Mapping Scheme pioneered at Bradford by Mark Seaward has now been given a further boost. It is intended that a dossier of maps, high-grade illustrations and taxonomic characters of each species in the British Isles will be an on-going project for the Society in the months and years to come. It will provide an in-depth mine of information about the special characteristics, distribution (both local and world-wide), identification features, and chemistry of each species, in a form which can be continuously modified as the conception of the species changes.

Today, it has been possible to launch the first fascicles and distribution maps of all the known species of *Parmelia* in this country, due to the sterling efforts of Francis Rose, Mark Seaward, Frank Dobson and Peter James over the last few months. More members will be drawn into the preparation of these fascicles in the future. It will be my aim, with the support of the Council to see the first batch of high grade colour photographs and drawings needed to interleave with each of these species by next year's AGM. It is hoped that we shall soon announce the method of competition between members to provide the

high grade photographs needed. They will be judged by a small panel of experts for their sharpness and scientific accuracy. The four ringed dossier form of this Atlas will provide a means of establishing your own photographic reference 'herbarium' and should prove invaluable to those members who do not presently have such access. We are hoping that the successful development of this format will help to set a standard for future developments internationally.

One of our founder members Dr Dougal Swinscow, most sadly passed away in 1993. To commemorate his considerable achievements, the Council felt that it was appropriate to create a Dougal Swinscow Memorial Lecture. This would enable us to invite famous international lichenologists to contribute to our AGMs, and hence increase our international contact. By unanimous agreement, it was felt that Professor Per Magnus Jørgenson would be an appropriate person to give the first lecture at our next AGM. He has kindly agreed to consider this. The details of his lecture will hopefully be announced shortly.

I am looking forward to an exciting New Year in our lichenological ventures with the prospect of much more involvement in the membership of the Society as a whole. The new mapping incentive should help to encourage new initiatives in our field meetings and workshops in the future. I am looking forward to exploring and exploiting the considerable talents which I know are latent in our Society and provide the means of its tangible expression in the future.

The present composition of the two new committees which the Council elected as advisory units to assist its work are:

Data Committee:-

President (chairman), Secretary, Treasurer, Assistant Treasurer, Dr Brian Coppins, Mr Peter James, Mr Tom Chester, Dr Anthony Fletcher, Dr Oliver Gilbert, Professor D L Hawksworth, Mr Alan Orange, Dr Francis Rose, Professor Mark Seaward.

Education and Promotions Committee:-

Mr Peter James (chairman), President, Secretary, Treasurer, Assistant Treasurer, Mr Tom Chester, Dr Val Cooper, Dr Anthony Fletcher, Mr Keith Palmer.

The purpose of these working committees is to discuss in greater detail items brought up in Council which require more in depth

discussion, so that a clear decision can be made at the next Council meeting. Their membership is flexible and is at present by Council invitation, but any serious offers of help would be much appreciated. In particular for the Education and Promotion Committee, help to design and make displays for public presentation would be much appreciated. The aim is to involve the talents within the membership to a greater extent in an advisory capacity.

Brian W Fox

JANUARY MEETINGS 1995

Evening buffet and book sale

The buffet held on the evening of Friday 6 January at the Royal Entomological Society was once again an enjoyable event attracting some 30 people, including this year a greater international presence with Peter Scholz from Germany and Ulrick Søbcting and family from Denmark. Owing to David and Patricia Galloway's return to New Zealand we had reluctantly a change of caterer, although Cafe Suze provided an excellent lamb tagine or vegetarian casserole with chocolate roulade and cream to follow for desert. A selection of slides from all over the world were shown to whet one's appetite for the coming field season and a few lichenological texts were auctioned by Mark Seaward.

ANNUAL GENERAL MEETING - 7 January 1995

The Annual General Meeting for 1994 was held at 10.30 in the Demonstration Room, Department of Palaeontology, The Natural History Museum, Cromwell Rd, London SW7 5BD. Present:- Professor B W Fox (President in the Chair) and 42 members.

1. Apologies for Absence.

Received from Dr P D Crittenden, Dr D H Brown, Dr B J Coppins, Dr J H Looney and P W James.

2. Minutes of Annual General Meeting 8 January 1994.

These were signed as a correct record.

3. Matters Arising.

None.

4. Officers' Reports.

The Treasurer, *Bulletin* Editor, Conservation Officer and Curator had published their reports in the Winter *Bulletin*. The President and Secretary gave their reports and these will be published separately in the *Bulletin*. The reports of the Senior Editor, Librarian and Archivist were read out by the Secretary and these will be also published in the *Bulletin*.

Matters arising from the Reports.

a) Treasurer's Report.

Mr F S Dobson reported that the Society held assets between £73-£74,000, although subscription revenue was awaited. £500 was being donated towards the Royal Botanic Garden Edinburgh for Heron Wood Cryptogamic Sanctuary at Dawyck. A new Nancy Wallace-Alice Burnet fund had been established following a generous £3000 donation to enable members to attend field meetings (see *Bulletin* 75:33). Expenditure had also been incurred in production of general and churchyard mapping cards.

b) Senior Editor's Report.

In response Professor Hawksworth stressed the need for the *Lichenologist* to be able to respond rapidly to submitted papers and avoid excessive delays of over nine months for publication.

c) Mapping Recorder's Report.

Professor Seaward reported that a first run of 250 fascicles covering the genus *Parmelia* at a cheap cost to avoid the necessity to photocopy. Subscription forms are available to purchase future fascicles, at an estimated £5.00-£6.00 each. Dr Rose made a plea for other members to take on additional species and contact the data committee. He also reported on the intention to produce accompanying colour plates, estimated to cost £8.00 for 48 pages with three colours per page.

d) Librarian and Archivist's Report.

It was agreed that due to pressure of work, that Professor Seaward should take over the Archives collection from Dr Dennis Brown. Further discussions with Dr Brown were to be made to try to accommodate the Society library.

5. Meetings 1993-1994.

The 1994 meetings described in the *Bulletin* had been most successful and Mr T Duke was warmly thanked for his efforts. An Anglesey

coastal survey field meeting, summer workshop on *Cladonia* in Pembrokeshire and Autumn Clwyd field meeting are planned.

(There was a short break for coffee.)

6. Election of Officers.

Vice President: following the departure of David Galloway for New Zealand who had agreed to serve Council as a foreign corresponding member, Mr R G Woods had been nominated for Vice President. This decision by Council was unanimously supported by the membership present.

Members of Council: Mr P Earland-Bennett, Dr F Blatchley, Mr P Lambly and Dr F Rose were elected nem. con. Mr T W Chester, Mrs A M O'Dare, Mr K Palmer and Mr K Sandell were retiring from Council and were thanked for their support.

All Officers and members of Council were elected nem. con.

7. Any other business.

Mrs M Hickmott asked the outcome of the questionnaire concerning venue for AGM. The Secretary reported the response, although varied, had been too low (19 replies) to allow a meaningful analysis. Professor Seaward stressed the organisational problems associated with having AGMs in different venues.

Professor Richardson announced the Symbiosis Conference was now to be held in New York and the 6th International Mycological Conference in Jerusalem in 1998. He encouraged the Society to liaise internationally with local organisers. Dr. V Winchester asked if the Bulletin could not publish more details on foreign lichen field meetings which might be of interest to the membership.

8. Date and place of next AGM.

Saturday 6 January 1995, The Natural History Museum, London.

The meeting closed at 13.10.

Exhibitions and Lecture Meetings.

There were few exhibits on this occasion. A selection of photographs of lichens were on display by Francis Rose, as were some of Mary Hickmott's of lichenologists in the field. The activity of the church-yard's group was evident from a display of maps (reproduced later in this *Bulletin*) and a

selection of newspaper clippings portraying the importance of churchyards for conservation of lichens and other organisms.

The numbers attending the afternoon lecture section swelled considerably and those attending were treated to a most stimulating set of lectures on the theme '*Lichen micro-environments*'. Sadly Brian Coppins was unable to attend to present his contribution on 'Watch your niches' which is eagerly awaited for a future occasion. The three speakers therefore were able to deliver their talks in a more relaxed fashion also enabling greater discussion. Once again Oliver Gilbert surprised all by his studies into yet another neglected lichen habitat in Britain and Elizabeth John gave a lucid and interesting presentation on how ecophysiological studies may help explain the occurrence of saxicolous communities in the Rocky Mountains. The session concluded with Vanessa Winchester presenting some preliminary results from an elegant survey in which she is using lichens to date raised beaches in Sweden. Synopses of two of these talks are published in this *Bulletin*.

OFFICERS' REPORTS

Secretary's Report for 1994

The study of lichens today is truly an international activity. This is reflected in our growing membership which includes a high proportion of foreign members. We have already set a high standard by the publication of the *Lichen Flora of Great Britain and Ireland*. The first 900 copies were rapidly sold and we have now printed a further 900 this year to help satisfy the demand. So far, 103 copies have been sold. Leading on from this, we have now produced a new checklist and general mapping card. A revised colour prospectus to sell the BLS is imminent, as well as several other initiatives of which you have already heard from our President.

On Friday 7 January, 32 people attended a buffet, slide show and book sale held at the Royal Entomological Society of London, and on Saturday 8 January, the Annual General Meeting was held in the NHM. In the afternoon there was a lecture session on the theme 'Threatened Habitats'. Council met on three occasions in January, April and September. Major field meetings were held in Rutland, Ireland and the Malvern Hills, ably led by Tony Fletcher, Howard Fox

and Oliver Gilbert respectively. A successful autumn TLC workshop was also held by Alan Orange at Cardiff. I would like to thank all the leaders and organisers for their tremendous effort.

Four issues of *The Lichenologist* amounting to 397 pages were produced under the Senior Editorship of Dr Brown, and two issues of the *Bulletin* totalling 129 pages by Dr Crittenden.

Lastly, I would like to thank one kind benefactor who prefers to remain anonymous. Through her generosity the Nancy Wallace - Alice Burnet fund has been established to support members who would like to attend BLS field meetings but for whom finances would be difficult. Further information on how to apply to the fund is given in the Winter *Bulletin*. There can be no doubt that the continued success of the Society is going to very much depend on encouraging a younger generation and this is one of many ways in which this can be done.

The Society currently has 580 members, 45 new members having joined during 1994.

Report from the Librarian and Archivist

There has been relatively little activity in 1994. Some of the reasons for this are as follows: (1) The limited number of additions such as reprints and reports acquired as donations from the authors; (2) the few book purchases following requests by members, usually with a delay before the original request can be satisfied; (3) the problem of satisfying requests for popular items, of which earlier users often delay returning items; (4) requests for items that we do not possess, sometimes due to incorrect claims in other publications.

While it would be nice to be able to satisfy requests for 'all you have on pollution', or 'anything mentioning species X', these are usually only satisfied if there appears to have been some preliminary work done before making such blanket requests. Requests for photocopies of long lists of items from many sources also take considerable time to accumulate and dispatch. The final, major problem causing delays has been a severely increased burden of work experienced by Dennis Brown.

It would, therefore, appear to be appropriate to seek a new person for this post. What is required is someone with approximately 90 to 100

feet of bookshelf space, access to an inexpensive photocopier, and access to a computer on which to put the BLS Library catalogue. Unfortunately, the current catalogue employs a relatively demanding programme, which should be changed during the year to a more accessible and user-friendly system occupying less memory. The possibility of putting the catalogue on a second-hand portable computer is being investigated.

Anyone interested in taking on this BLS duty should, in the first instance, approach Dennis Brown, with the realisation that he, as Senior Editor of *The Lichenologist*, may prove to be the most frequent user!

Members are reminded that the Archives, as well as the Library and photographic slide collection, depend on donations of suitable items. The collection now contains many (but not all) unpublished reports of site surveys and listings from specific areas.

Report from the Senior Editor of *The Lichenologist*

The 1994 activities of *The Lichenologist* are either already published or part of the continuous on-going process that cannot easily be divided into annual events. As ever, I am greatly indebted to the other editors and referees, who have helped maintain the high academic standards set by this journal. This is, perhaps, a good time to state again that, despite living in a period when mercenary standards are frequently considered normal, these people all give of their time and experience without any financial reward. It is also gratifying to put on the record that many authors have made appreciative comments about the detailed and critical, but positive, comments made by reviewers and these have often resulted in the authors making substantial revisions to their manuscripts. When reviewers make critical comments, it would certainly be easier to reject a manuscript. However, this can often mean that it appears, unchanged, in another journal. Although encouraging manuscript revision can mean a lot more work for myself and other editors, I am sure that there are overall benefits for readers, authors and editors by using this more positive approach.

In 1994 the rates of manuscript submission and acceptance or rejection were much as in previous years. Quoting actual numbers is probably not helpful both because: (a) we receive manuscripts of varying lengths but have a finite number of pages to fill and (b) it is not always clear

how to categorise manuscripts undergoing substantial revisions. The enthusiasm of authors to submit good articles to *The Lichenologist* has begun to result in increasing delays before publication. Fortunately, the recent subscription increase has enabled us to move to six 80-page issues being produced from this year. I now wonder how soon it will be before we need to consider further expansions: I suspect that the availability of editorial time, rather than the cost to members, may ultimately prove to be the critical factor!

During 1995 we expect to devote one issue to a number of articles presented at the 1994 International Mycological Congress. Feedback from readers about other 'thematic' issues indicates that such issues have been popular. As Senior Editor, I appreciate letters and comments on the current *Lichenologist* and am very willing to discuss the format and content of possible contributions with authors. I am especially keen to help new authors publish in this journal.

ADVANCE NOTICE

The customary social evening on 5 January, before the AGM to be held on 6 January, will take a different form next year. The first Swinscow Memorial lecture will be given by Professor Per Magnus Jørgenson in the lecture theatre of the Linnean Society at Burlington House, Piccadilly, followed by a buffet in the library. The lecture will be a joint meeting with the Linnean Society and open to Fellows of the Linnean. This will be an opportunity to meet and encourage new members for our Society!

Further details will be advertised in the *Winter Bulletin*.

GRANTS FOR STUDENTS AND MEMBERS

Students and members may find difficulty in affording the costs of attending our field meetings. We would like to remind them that they are eligible for a small grant to assist them to stay at the headquarters hotel at official British Lichen Society field meetings.

This is through the generosity of the Nancy Wallace-Alice Burnett fund. Anyone wishing to apply for this support should first write to Frank Dobson, the Treasurer of the Society. His address will be found on the inside back cover of this Bulletin.

Brian Fox

INFORMAL FIELD MEETING

Francis Rose has proposed that an informal field meeting be held on Saturday 7 October 1995 to visit Hincheslea Wood (grid reference for parking 270 013). Later to visit the heathland at Shappen Hill (grid reference for parking at Burley 214 028) where there is an unusual sorediate *Cladonia* that appears to be related to *Cladonia strepsilis*.

Anyone who is interested in such a visit please contact Francis Rose (tel: 01730 893478).

AUTHORS WANTED FOR THE ATLAS

Any member wishing to assist with the writing of details of the legends for any particular genus intended for the *Atlas* should contact me (Brian W Fox), initially with details of the preferred genera to check for duplication of effort.

This initial data, written in standard formats, will then be typed on disc, duplicated and circulated to experts within the Society for any corrections, additions or deletions, but the initial service would be much appreciated. If you are interested, please contact me with details of which genera you would like to tackle.

The following have already volunteered as follows:-

Oliver Gilbert and Alan Fryday:- montane *Fuscidea*, *Cladonia*.
Francis Rose:- Physciaceae (*Physcia*, *Physconia*, *Hyperphyscia*, *Phaeophyscia*), Lobariaceae (*Lobaria*, *Sticta*, *Pannaria*, *Parmeliella*).
Peter James:- *Nephroma*, *Peltigera*, *Usnea*.
Tom Chester:- *Lecanora pannonica*, *L. pruinosa*, *Psilolechia leprosa*, *Rinodina calcarea*.

The initial manuscript copies of the formats should be sent to me for transcription on to disc before sending to Bradford for initial editing prior to circulation for further modifications.

CHURCHYARD PROJECT

MILLENNIUM OBJECTIVES

In the last *Bulletin*, I concluded the Quinquennial Report with five possible objectives for the next five years. More than one colleague has told me subsequently that, whereas the last four were eminently attainable, the first 'that every church and cemetery in the land and all persons connected and related to them should be made aware of the importance of lichens and their conservation' - was something of a pipedream! Perhaps it is, although I am inclined to agree with Browning that 'a man's reach should exceed his grasp'! If we are able to convey our essential message to someone of influence in every diocese and wildlife trust, we will be well on the way to realising it. I am pleased to be able to report that Ishpi Blatchley, recently elected to Council, has agreed to act as Conservation Co-ordinator for the project and to liaise especially with those groups of people whose churchyard interests could possibly conflict with our own, such as Family History Societies and Diocesan architects. From now on any queries or correspondence pertaining to churchyard lichen conservation should, in the first instance, be passed on to Ishpi. This will give me more time to focus on building up a database of lowland records and developing more educational materials.

I have recently replaced my old Amstrad computer with a Gateway 2000 and, until the Society has a viable alternative, I shall be transferring existing records to an Access database. I am indebted to David Newman, whose expertise is making this possible and helping us to realise the third objective - 'that all existing information is fed into a relational database capable of producing, among other things, effective distribution maps'.

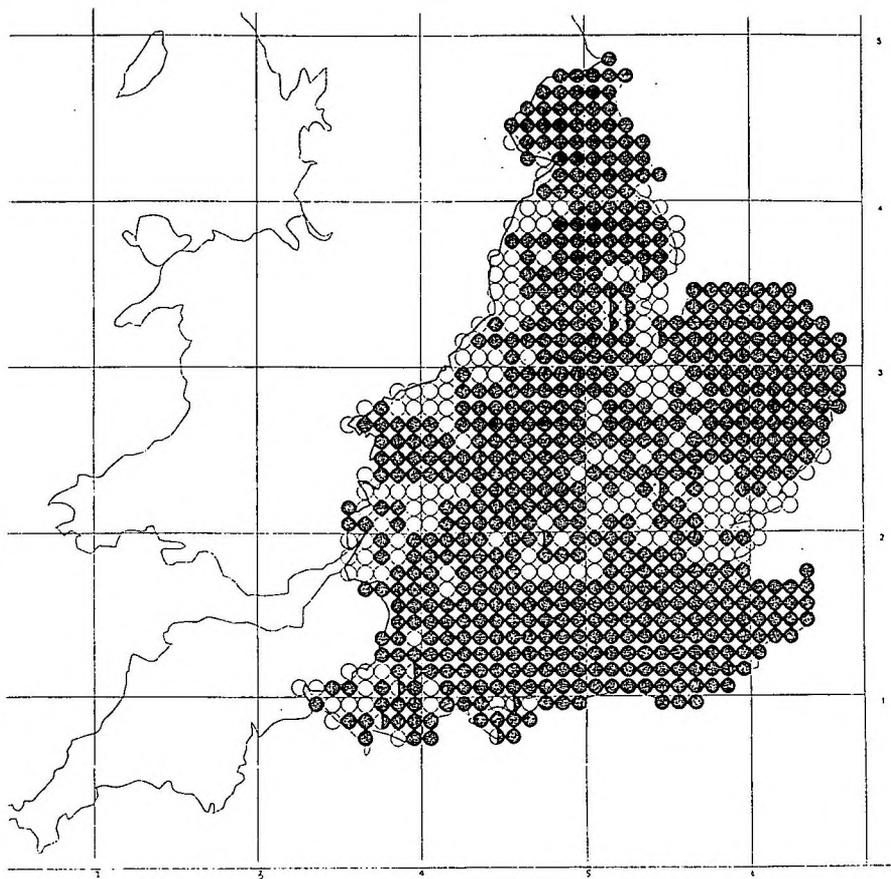
While the fourth objective - 'an article in *The Lichenologist*' is still some way off, you will discover as you read on that we are also making good progress with the other two.

Site Recording in Lowland England

The second objective was to survey at least one churchyard in every 10k square in lowland England. In the last *Bulletin*, I pointed out that there were approximately 780 such squares and that 550 had

received this minimal coverage. In a display at the AGM, I was able to show that there are, in fact, 791 squares in the designated area and that, in 621 of these, at least one church had been thoroughly surveyed (●) and, in a further 13 (⊙), a site had been briefly surveyed. This represented a coverage of almost 80%. In bold lettering beside the map, I wrote:

'With your help, most of the remaining 157 circles can be filled in within the next two years. If there are empty circles near your home, please make a New Year's Resolution to go out and survey at least one churchyard, even if you record only the more obvious species.'



Churchyard Project: 10 k square map of lowland England showing the current progress in site recording.

I hope that everyone who reads this will look at the accompanying map carefully and then take up the challenge. A stamped-addressed envelope to me will provide you with some mapping cards and churchyard leaflets (see *Bulletin* 75:31). If you are able to establish a local contact and pass on a leaflet, you will also be helping to realise objective one. Even if, on the mapping card, you haven't time to give full substrate and habitat details, please indicate clearly any species that are not saxicolous by putting lig. cort., ter., etc. It helps also if all species found on the church itself are indicated by a small black dot to the left of the tick column. Please remember to send copies of all lists to Mark Seaward at Bradford.

EXPLORING CHURCHYARD LICHENS

I am delighted to announce that, barring accidents, by the time you read this, a trial pack of educational project materials (final objective!) will have been produced with the above title and will be available free of charge for use by schools and youth groups such as Watch, Guides, Scouts etc. The pack will consist of the following:

1 Four folded project leaflets of A5 size entitled 'What do Lichens Grow on?', 'How Fast Do Lichens Grow?', 'What Happens When Two Lichens Meet?' and 'Where do Leafy Lichens Grow?' These will be aimed at the upper primary and lower secondary age and ability range (National Curriculum Key Stages 2-3).

2 A set of teachers' notes for the above.

3 Two further more advanced projects (based on the second and third themes above) for older, more able students.

4 A leaflet entitled 'Rocks in the Graveyard' written and illustrated by Dr Eric Robinson of the Geologists' Association.

5 A leaflet entitled 'Identifying Churchyard Lichens'. The inner pages will consist of 10 colour prints of common churchyard lichens and two general shots of sandstone and limestone headstones to show how they differ visually. The outer pages will consist of tabulated identification notes.

6 A set of free hand-out leaflets mainly from the Church and Conservation Project at Stoneleigh and including 'Churchyard

Lichens', 'Geology in the Churchyard', 'Nature in Churchyards: Conservation Guidelines', a Geology 'Thumbs-up' guide and a BLS prospectus.

7 A questionnaire.

8 An explanatory letter.

We plan to distribute the pack as widely as possible throughout the country to primary schools, secondary schools and youth groups. This is where you come in! **We urgently need twenty of you to volunteer to receive up to 10 packs each, to distribute them in your local area, and to try to ensure that there is some eventual feedback either by means of the questionnaire or more informally.** My name, address and telephone number will be on the letter and the teachers' notes and any questions specific to the projects can be addressed directly to me. However, it would be helpful if your name and telephone number can be included in the letter as the local contact. How and when the packs are passed on will be up to you. Ideally, we would like them sent out as soon as possible so that some of the projects can be attempted this coming summer. We hope to have all the comments in as soon as possible after the end of the Summer Term, July 1996. It would be much appreciated if you could generally monitor progress and ensure that we get some kind of feedback. In the longer term, we hope to produce a more comprehensive and high quality set of teaching aids to be sold nationally. **We would also appreciate your help in finding a sponsor for this major project. If you feel you can participate by passing on even one pack, all you have to do is contact me at 19 Lawyers Close, Evenley, Brackley, Northants NN13 5SJ (Tel: 01280 702918).**

The pack is just one of the initiatives of the newly-formed Education Committee. A sub-committee consisting of Val Cooper, Eve Dennis*, Tony Fletcher, Keith Palmer, Eric Robinson* and myself met in Banbury on 14 January to work out the details. We were able to congratulate Eve who received a well-deserved MBE in the New Year's Honours.

* Eve Dennis (retired director of the Church & Conservation Project)

* Eric Robinson (Geologists' Association)

Phase Two Co-ordinators

A map showing the Phase One: Lowland Area and the three Phase Two: Upland Areas was displayed at the AGM, together with the names and addresses of the respective co-ordinators. I have been asked to put this information in the *Bulletin* for all members to see. Please note that there has been one important change since January. Just before going to press, I learnt that Sheila Street's husband, an RSPB officer, was to move up in the world from the Somerset Levels to Insh in the Cairngorms. Fortunately however, at very short notice, Barbara Benfield has agreed to take on the co-ordinating role for the South-west. I would like to thank Sheila for all the help she has given us and wish her well in her new, elevated station. Perhaps, when she has settled in, she may be willing to take on a similar role for Scotland! We also need Phase Three co-ordinators for Wales and Ireland. The current co-ordinators for Upland England are as follows:

SW Peninsular/Scilly & Channel Islands:



Barbara Benfield, Penspool Cottage, Plymtree, Cullompton, Devon
EX15 2JY.

Welsh Borders/West Midlands/Derbyshire:



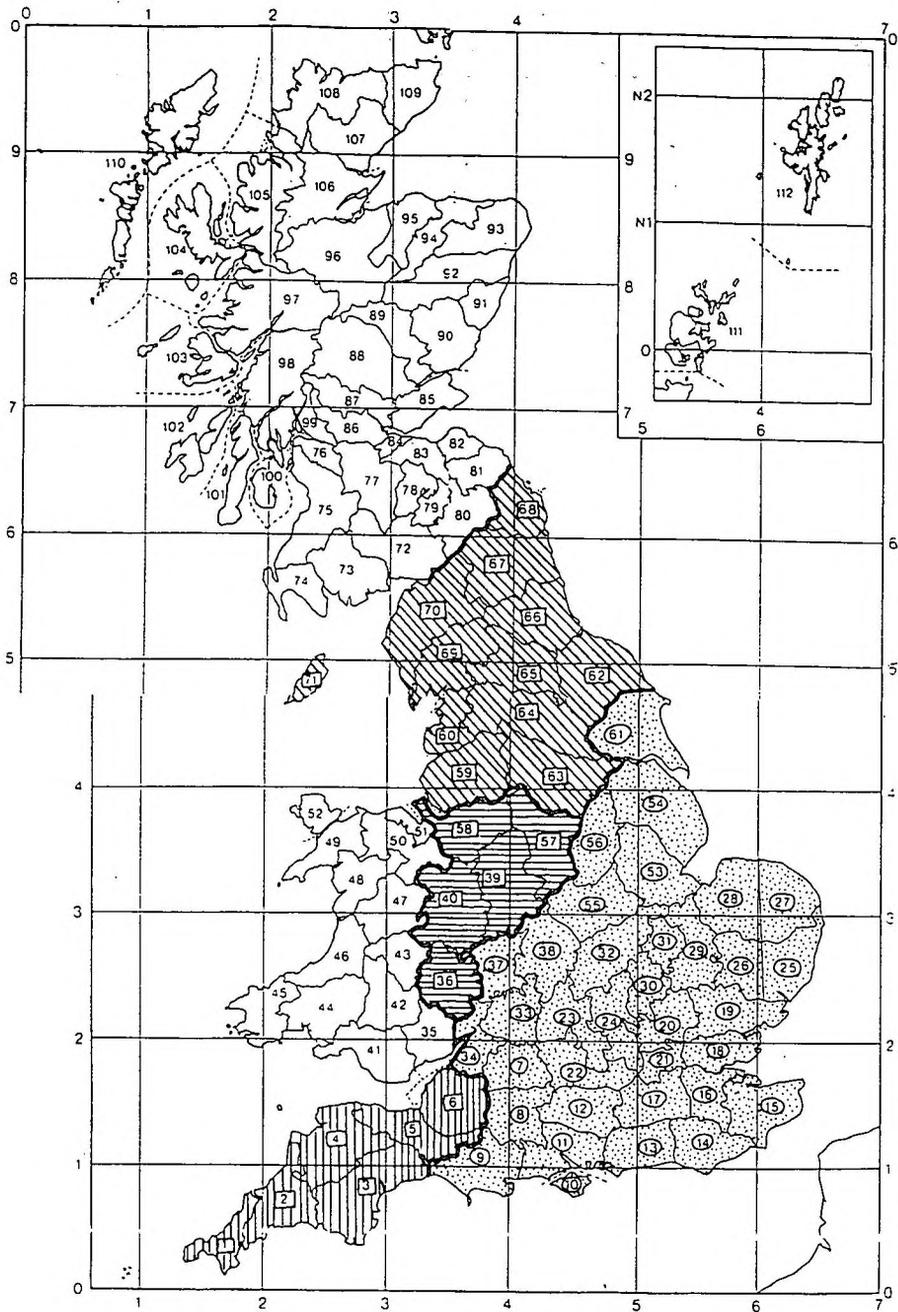
John Walton, 6 Allens Close, Baddesley Ensor, Atherstone,
Warwickshire CV9 2DB

Northern England/Isle of Man:



Don Smith, Westland, Westfields, Kirkbymoorside, York, Yorkshire
YO6 6AG.

I shall continue to co-ordinate the 35 lowland vice-counties (stippled area). Each co-ordinator will keep an up-to-date list of site and species records for his or her area. Please help by sending completed mapping cards to the appropriate person.



Churchyard Project: Vice-county map showing the Phase One: lowland area and the three Phase Two: upland areas.

Talepiece

For a few days last May, I enjoyed the hospitality of Bill Casey and his wife, Cath, in North Worcestershire. On our final day together, in pouring rain, Bill and I attempted to survey his home churchyard of Stoke Prior. We were suitably togged out in our waterproofs and Bill was wearing his ethnic hat (a trilby with a brim cut off so that he could more easily see through his hand-lens). We were crouching at ground level examining some low slabs, when we suddenly realised that the vicar was standing over us. With a wry smile on his face as he recognised Bill, he told us that he had been summoned to church by a lady who had knocked on his door and informed him that there were two strange men in the churchyard dressed all in green and that they were bending down and kissing the gravestones. She added nervously, 'I think they may be devil-worshippers!'

Tom Chester

Field meetings to be led by Tom Chester

Two or three times a week, including some Saturdays, between June and November Tom Chester will be surveying churchyards in the northern half of Northamptonshire. If you wish to join him at any time, please ring him on 01280 702918.

Oxford, Saturday 21 October 10.30 am

This combined day field meeting with the Geologists' Association will provide an opportunity to examine the relationships between lichens and stone types and help with the identification of both.

Meet at Hollywell Cemetery between St. Cross Church and St. Margaret's College (and at intersection of St. Cross Road and Longwall Street). After a pub lunch, the afternoon itinerary will probably include a walk "up the hill" to Headington Churchyard.

Leaders: Tom Chester (BLS)
Eric Robinson (GA).

For further information ring:
General - Tom Chester (01280 702918)
Parking, buses - Vanessa Winchester (01865 57600)

WORKSHOP MEETING ON THIN-LAYER CHROMATOGRAPHY AND *LEPRARIA*

This meeting was held at the Department of Botany, University of Wales, Cardiff on 11-13 November 1994.

Eight members enjoyed this well organised and fulfilling meeting, arranged by Alan Orange. Much work and preparation enabled all members not only to produce perfect thin layer plates, but to enjoy the excitement of their interpretation. To choose '*Lepraria*' as a test material was shrewd and added enormously to the enjoyment. Suddenly, instead of just *Lepraria incana* and for limestone country gentlefolk, *Lepraria 'crassissima'*, we realised that we had a galaxy of new species such as *Leproloma diffusum*, *Lepraria lesdainii*, *L. lobificans*, *L. rigidula*, and maybe even *L. jackii* named after our famous founder member *Lepraria* enthusiast, as well in our collections. Very good samples of most of the known British species of *Lepraria* and *Leproloma* were available. These were not only for members to use for tlc but also to be able to compare morphological features that could perhaps distinguish them in the field.

Not content with success in thin layer chromatography, microcrystalline tests were demonstrated and very successfully applied to *Cladonia*. Is this a foretaste of the next workshop to be held in August 1995?

The accommodation arrangements organised by Brian and Sandy at Plas Llanmihangel matched the success of the laboratory arrangements. This is a sixteenth century manor house being carefully restored by Sue and David Beer with enthusiasm for well-trodden stone staircases, turrets and secretive panel doors. The workshop dinner was exclusively arranged in an Elizabethan banqueting hall, lit by oil lamps and candlelight, in front of a huge, ten foot wide log fire. It was just magic!

Brian W Fox

AN OPPORTUNITY FOR THE PHOTOGRAPHERS OF THE SOCIETY TO SHOW THEIR SKILLS:-

High grade, razor sharp coloured images of *Parmelia* species, are required by the Data Committee of the BLS for selection as colour reproductions to interleave with the Atlas currently being constructed. The images should be chosen to present the lichen in its most easily identifiable state, and to distinguish, by appropriate enhancement, the subtle features which are used to characterise the species. In some cases, it may be necessary to present the latter as good line drawings. It is expected that two to three coloured images and a drawing are used on a single page intended to be interleaved. Either colour slides or prints (standard size) would be acceptable. Could you please inform Dr Purvis what you may have available for this scheme but please DO NOT send any photographic material in the first instance. Photographs and drawings will be selected by a small panel of senior experts based on scientific accuracy, resolution and other appropriate characteristics required for identification and selected material will be fully accredited to the originator in the Atlas.

The choice of *Parmelia* initially is simply to get the system off the ground, and to complement the maps already published. However, if other species have been similarly represented, the loose-leaved form of the Atlas could allow the production of photographs ahead of the maps.

Brian Fox

AN APOLOGY

We must apologise for the lateness of this issue of the *Bulletin*. Peter Crittenden, as editor of the BLS *Bulletin*, has always done an excellent job of making sure that the *Bulletin* is interesting, error free and on time. He is on sabbatical leave in the Antarctic and will return to this country by the end of the year. We regret that some of the temporary arrangements made for the *Bulletin* during his absence have proved difficult. We are sorry for any errors and omissions that occur in this issue and also for the necessity to carry over to the winter issue some articles that have been submitted.

Frank Dobson

NIGHT ON A BARE MOUNTAIN

A problem with studying the lichen flora of late snow-beds is that it is under snow for much of the year. Even in the best years a proper survey of the most persistent Scottish snow-beds is only possible from mid-July until the snow falls around the second half of September and when, as in 1994, conditions conspire to delay significant melting well into the summer there is no option but to head for the hills in mid-September and hope for the best.

So it was that Oliver Gilbert and I found ourselves, with some trepidation, heading for the central highlands on the 12 September last year. Our destination was Craeg Meagaidh a National Nature Reserve owned by Scottish Natural Heritage with Aberader Farm House, at its foot, serving as both offices and accommodation for volunteers and visiting scientists. I had fond memories of Aberader having stayed there in the days of the Nature Conservancy Council when it was very spartan with stone floors, ancient furniture and a huge open fire. All gone! Central heating, fitted kitchens and carpets have given it all the atmosphere of a modern community centre.

However, it served our purposes in providing a base and the following morning we headed up the mountain with two SNH volunteers helping to carry our tents and provisions. The plan was to camp at the head of Coire Ardair, at around 600m, and make daily excursions to our selected snow bed, another two hours away, at 1100m. Our camp site seemed idyllic, a small patch of green beside a coire lochan completely surrounded by towering cliffs. After we had set up camp Oliver decided he'd done enough for a while but I set off to recce the snow-bed, heading for the nick in the sky-line known as 'the window' which is the only way out of the coire onto the higher ground.

I soon noted the bright blue discoloration of some *Cladonia squamules* which indicated the presence of the recently described, *Arthrorhaphis aeruginosa*, and just before reaching 'the window' I saw the small yellow thallus of *Lecanora leptacina* - the first snow-bed specialist. Pressing on I reached 'the window' and passed through into a different world. Stretched out before me was a high-level dissected plateau of rocky crags and peaks, snow beds, lochs, grass and boulders. The cloud was swirling around the summit of Craeg Meagaidh so, taking a bearing on the snow-bed, I set off. The next hour was magical; one

moment I could see half way across Scotland (or so it seemed) the next I was in a world only a few metres in diameter as the clouds engulfed me; ptarmigan, red deer and mountain hare all passed close by. The lichens were not outstanding but *Lecidea paupercula*, *Micarea paratropa* (syn. *M. subviolascens*), *Miriquidica griseoatra*, *Ochrolechia inaequatula* and *Solorina crocea* (with its parasite *Rhagodostoma lichenicola*) kept me interested.

The snow-bed I was heading for had been recommended to us by a bryologist as one of the richest in Scotland: I can report that it is also excellent for lichens. Whole boulders were covered with a community dominated by *Euopsis pulvinata*, *Lecanora leptacina*, *Lecidea caesiocrata*, *Lecidella bullata*, *Lepraria neglecta*, *Micarea paratropa*, *Miriquidica griseoatra*, *Stereocaulon tornense*, *Toninia squalescens* and the strange 'little brown job' which occurs beside virtually every snow-bed in Scotland but the identity of which, even to genus, is a complete mystery. Suitably encouraged I returned to our camp site and joined Oliver on a tour of the loch. Together we produced a respectable list which included *Lecanactis abscondita*, *Rhizocarpon copelandii* and *Sporastatia polyspora*. Congratulating ourselves on a successful first day and with high expectations we dined on pasta and soup and as it got dark at about 8pm returned to our tents with the soothing sound of water lapping against the shore of the loch and the less reassuring sound of rain pattering on nylon.

Next morning the rain had stopped, but there was cloud in 'the window' and it was very cold. Reluctant to venture from our sleeping bags we ate our breakfast of muesli and tea while still inside them before setting off in full winter clothing of five or six layers plus hats and gloves. 'The window' was thick with cloud and I was glad I had taken a bearing on the snow-bed the day before. However, the clouds soon rolled back and Oliver was as impressed by the landscape as I had been and immediately christened the area 'the arctic slope'. We reached the snow-bed and set to work on a transect from its upper edge into the surrounding *Nardus* grassland. This was slow work and, in a temperature marginally above freezing and a fresh wind, not particularly pleasant but we just managed to keep warm and the lichens were interesting enough to take our minds off the worst of the weather. The dominant species were *Porpidia crustulata* (or was it *P. thompsonii*?), *Rhizocarpon 'colludens'* (usually considered a synonym of *R. hochstetteri*) and *Stereocaulon tornense* along with frequent

Micarea paratropa and *M. turfosa*. A small pyrenocarp overgrowing bryophytes was later identified as *Polyblastia gothica* (second modern British record) and a *Micarea* on small pebbles as the rare *M. marginata*. By 4 o'clock we had completed ten quadrats and decided to call it a day. Back at the tents we had an excellent meal of soup and pasta and stripped down to three layers of clothing for the night.

Next morning we woke to the sound of rain on our tents and looking out saw heavy drizzle and cloud well down the cliffs. Ever optimistic we decided to review the situation at half hourly intervals but at 12.30, with no improvement, the wind having strengthened to gale force and still in our sleeping bags we had to admit defeat. My tent was reasonably waterproof so I was just frustrated with our inactivity but Oliver's leaked quite badly and he was kept busy bailing-out water and trying to keep things dry. He reports that each strong gust of wind buffeted his tent and produced a fine aerosol which made everything damp. Fortunately the gale was blowing up the coire so the sheets of spray coming off the loch were heading away from us.

At 3.30 pm it stopped raining so, eager for some exercise, I decided to climb on to a nearby ridge. Going up with the gale behind me I had to hold on to rocks to stop my ascent if I wanted to inspect a lichen, while on the ridge the wind was so strong that I was knocked off my feet several times and had to fling myself to the ground to avoid being blown away. The lichens were typical for an exposed ridge but I collected a *Lecidea* with heavily pruinose apothecia and a K+red thallus which I had seen before in a number of places and provisionally identified as *L. lithophiloides* and an apparently undescribed *Rhizocarpon* with a scurfy brown thallus which is only known from the tops of Scottish mountains and on disused metal-mines in Wales. After ten minutes I decided it was time to head back down. Easier said than done. I couldn't get near the edge of the ridge as the wind blew me back; even on hands and knees! The only way I could get down was to crawl backwards on my stomach towards the edge, lower myself over and hope I was in the right place for a safe descent. Fortunately, I was close and with a bit of slipping and sliding I regained more sheltered ground. Returning to our camp site I discovered that Oliver had also had an exciting time. He had been for a walk around the loch and was watching the wind whip up plumes of water 'several 100ft high' when he noticed that both our tents had blown down. It wasn't a serious problem, however, and they were soon

re-erected although their already suspect waterproofness was further compromised.

That night we only dozed as violently flapping tents, heavy rain and enormous rushes of wind sweeping up the coire prevented deep sleep. In the early hours, the wind changed direction and I could hear huge waves breaking on the shore beside my tent. Convinced that I was about to be swept away I peered out with a torch but the edge of the loch was still several feet away and I was in no danger.

We woke to similar conditions as the day before but with the added distraction of fresh snow on the crags above us. At 11.30 the weather brightened enough for us to set off but before we reached 'the window' we were engulfed in a blizzard. Aware that this was probably our last chance of visiting the snow-bed that year we pressed on and as we reached 'the arctic slope' the weather cleared. Although our snow-bed was free of fresh snow the gale-force wind and extreme cold made detailed work impossible so Oliver prepared a vegetation map of the area and I made relevés of the snow-bed community on the adjacent boulder-field. After three hours we were uncomfortably cold and with more snow falling decided to head back. Coming down from 'the window' we could only see one tent and on approaching closer realised that Oliver's had been flattened again. We feared broken poles, which would have meant a hazardous retreat back to Aberader by head-torch, but managed to repair everything and although Oliver bailed-out several pints of water he had taken the precaution of stowing everything in plastic bags so his clothes and sleeping bag were still dry. Soon we were cooking soup and pasta and feeling relatively comfortable.

Another restless night followed and as the morning showed no improvement it was obviously time to break camp and head home. With the occasional look back and the thought that I, at least, would have to return next year to finish the work we trekked back down the coire. Aberader seemed like heaven; we learnt that the winds there had been measured at 40 mph so must have been at least double that where we were! Clean clothes and hot water made us feel human again so we headed for Dalwhinnie and my traditional post-expedition meal at the Ben Alder Cafe. An hour later we were on the road south and with blue skies above us and a warm sun shining through the windows of the car we were soon talking about a return visit.

Alan Fryday

LETTER FROM AN OVERSEAS CORRESPONDENT

Czech Lichenology in 1994

The programme of the Section was extended last year for two other events: a determination course and a spring field-meeting. The first determination course was devoted to *Cladonia* genus, which is for non-specialists often difficult due to the high variability of specimens. The course was instructed by I Pišút on 19 March for 16 students with concentration on species of the Czech and Slovak flora. Several excursions for students (on 15-17 April) near Český Krumlov in S Bohemia and on 23 April near Prague) were led by J Liška. A spring field-meeting was organised by B Gruna in the Prodyjí/Thayatal National Park (S Moravia). Twenty people visited during the weekend 13-15 May xerophilous localities, boulder fields and a large Callunetum. A traditional late summer meeting organised by M Zmrhalová in Loučná n.D. (Jeseníky mountains in N Moravia). A total of 25 bryologists and lichenologists (also P Scholz from Germany) visited localities in the mountain crevice as well as an old forest reservation in valley with relicts of epiphytic lichen flora.

The total number of members of the Section increased to 62. Two issues of the *Bryonora* newsletter were published. Number 13 contains an article on *Catapyrenium pilosellum*, a new lichen for the Czech flora with a key on lichens with similar thallus by J Horáková, another article on new species for the Slovak/Czech lichen floras (*Acrocordia cavata*, *Hypocenomyce caradocensis* and *H. leucococca*) by E Lisická, checklist/synopsis of the genus *Cladonia* in the Czech and Slovak Republics (J Liška and I Pišút) and translation of A Orange's key to the *Cladonia chlorophaea* group in Europe from BLS *Bulletin*. In number 14 were published a key to Umbilicariaceae in central Europe with short notes on their ecology and distribution and a bibliography of Czech and Slovak lichenologists. Also a reminder of the 60th birthday in 1995 of I Pišút and portraits of the Lichenological Society of Japan and the Society of Australasian Lichenologists were published.

In 1994 two students of lichenology graduated: R Dětinský at Charles University, Prague (thesis on lichen bioindication in the Šumava Mountains, south Bohemia) and B Gruna at Masaryk University, Brno (thesis on lichen flora of the Podyjí National Park). Also other students of lichenology are now at university in Prague.

Jiří Liška and Zdeněk Černohorský

LICHENS, ICE, AND CHANGE: A SWEDISH SUMMER

Lichens have been used to date rock surfaces for the last 40 years. However, the technique has problems derived from uncertain premises. It thus occurred to me that a better approach could be to look at lichens population dynamics. Populations on boulders change their shape in terms of size frequencies as they age. The pattern of the distribution is largely controlled by the available growing space on the boulder, with colonisation declining as the surface becomes covered; a lichen mosaic then forms and there is a large competitive battle for survival.

As colonisation increases the outline curve describing the size frequency distribution is exponential; the curve declines towards a skewed bell shape as colonisation declines and mortality takes over. In old age, 'tail' of the bell distribution becomes 'gap toothed' and attenuated. The average size of the population also changes and the height of peak frequencies are reduced as competition increases and mortality takes its toll. If a population has been disturbed by movement or rock weathering thus releasing fresh surfaces, then the curve may possess two or more peaks or show no consistent shape. In effect, two or more populations have become intermixed.

In the Summer of 1994 I visited a boulder beach on the Swedish side of the Bothnian Gulf about 150 km south of Umeå. The beach, stretching about 600m inland, rises in giant steps (or beach terraces) to some 45m above sea level with an average boulder size of around 50cm. The lichen community on the coastal boulders is unusual and becomes rapidly older as one walks uphill from the water. *Rhizocarpon alpicola* is dominant although this species is not usually found outside high mountain areas where it grows on the lower sides of boulders in places where snow lingers into the summer. Measurement of its single septate spores showed that they are 43 x 17µm, larger than any previously recorded for the species.

A dating framework was provided using the old lichen dating method based on size/age correlations of single largest diameter lichens on local gravestones. Growth rates are supplied by drawing an envelope curve around largest measurements through time. Verification of the curves was provided by fitting the largest lichen sizes taken from dated repair work on a number of coastal installations. The size.age

correlations fitted the growth curves perfectly, and the growth rates provided some surprises. Previous estimates for the growth rates of yellow-green *Rhizocarpon* species in Northern Sweden vary between 0.25-0.35mm/yr. The *R. alpicola* growth rates were approximately double this (0.49-0.57). However, these rates are not unusual in the context of more southerly climates. In Scotland I found rates between 0.36-0.52mm/yr and in the Western Alps between 0.29-0.6mm/yr.

It is hoped that the largest lichen sizes and the mean sizes of the population distributions will make it possible to date the formation of the beach terraces to particularly bad winters. In addition, it would be useful to be able to date a number of archaeological constructions on the beach.

The findings so far are:

1. The discovery of *Rhizocarpon alpicola* at sea level with larger than large spores.
2. An approximately doubled growth rate in a species whose growth rate in the region was thought to be more or less invariant.
3. The possibility of dating coastline features using a mixture of old and new lichen dating techniques.

Vanessa Winchester

Lichen Zonation in limestone streams: A synopsis of the AGM talk by Oliver Gilbert

Dr. Gilbert reported his recent studies of the lichen flora of chalk and limestone streams. The flora involves around 50 species many of which are rarely recorded specialists restricted to this habitat. The lichen communities are present as a series of overlapping bands related to length of submergence. These have been named the submerged, fluvial mesic, fluvial xeric and fluvial terrestrial zones. The richest sites for submerged species are head waters, especially around springs but the fluvial mesic zone is richest overall. Active tufa deposition and disturbance of the stream bed are detrimental to aquatic lichens. An investigation of the influence of water quality suggested that suspended solids (silt) and moderate eutrophication significantly reduce lichen diversity.

LICHENS, LONG-TAILED TITS AND AIR POLLUTION

Michael Hansell's note on Lichen, Long-tailed Tits and "Velcro", although addressed to lichen experts, covered a subject in which I have been interested for some time. In preparing the text for "A Breeding Bird Atlas of Cheshire and Wirral", I was puzzled by the scarcity of Chaffinches in the Mersey valley eastward from Ellesmere Port. The penny dropped when the map for Long-tailed Tits became available. Both species build their nests from trailing mosses, decorating them with lichen fragments if these are available. Both species are surprisingly scarce not just in the Mersey lowlands, but also in a belt continuing eastward across Greater Manchester (Holland *et al* 1984). Air quality in this area was atrocious in the early part of this century. The anomaly in their distributions seemed to be an effect of air pollution. However both species were common over much of Cheshire where foliose lichens were effectively absent. Throughout lowland Cheshire, in some thirty disused or predated nests of the two species examined during the mid 1980s, I found no lichen whatsoever. In Macclesfield Forest, in Lyme Park and at Higher Disley however (sites in the Pennine foothills), Chaffinch nests contained fragments of *Hypogymnia physodes* and *Parmelia saxatillis*. At Wincle, on the Staffordshire border, I watched a pair of Long-tailed Tits placing fragments of these same two lichens on the outside of their nest.

Both bird species, so far as my limited experience suggests, collect mosses and lichens from the trunks and horizontal branches of trees rather than from the ground. Until very recently, lichens have been available in quantity only in the Pennine foothills. Over most of Cheshire there is no difficulty for the birds in finding suitable mosses, but in the Mersey valley shortage of epiphytic nest material seems to be a limiting factor. Savidge (1963) listed 67 moss species which had not been seen since 1900 in south Lancashire (to which the Mersey valley largely belonged prior to 1974), and the Bryophyte Atlas (Hill *et al*, 1991, 1992, 1994) shows gaps there in the distribution of many common species, e.g. *Lophocolea bidentata*, *Pellia epiphylla*, *Tortula muralis*, *Grimmia pulvinata*, *Schistidium apocarpum*, *Eurhynchium praelongum* and *Hypnum cupressiforme*. Absence of such species on a coarse grid of 10 km squares gives some idea of the likely scarcity of bryophyte species of structural value. Casual acquaintance with the area suggests that trees with epiphytic mosses remain scarce,

particularly the trailing pleurocarpous species useful to the birds. Oakes (1953) knew of no nesting by Long-tailed Tits in Lancashire south of the Ribble since 1912. In the 19th century there were records of Chaffinches in south Lancashire building their nests from cotton waste (Holland *et al*, 1984), this perhaps providing a more readily available substitute for moss in some localities even then.

Lichen and bryophyte floras are improving in the area, and already there are signs that the birds are responding. By 1990, willows at the Wildfowl and Wetland Trust site at Martin Mere were well covered in lichens including such pollution-sensitive species as *Parmelia caperata*, *P. revoluta*, *P. subrudecta* and *Physcia aipolia*. The mosses *Ulota* and *Orthotrichum* are now widespread on willows, elders and other trees in Cheshire, and even into the Manchester suburbs, while the liverwort *Frullania* is creeping across the Cheshire Plain from the south-west. The British Trust for Ornithology's Atlas showed Long-tailed Tits to have bred in some 17 Lancastrian 10 km squares south of the Ribble between 1968 and 1972. In 1987 there were several reports of Long-tailed Tits in Runcorn, where the species had long been uncommon or absent, and in 1984 a pair nested at Penington Flash, Leigh, for the first time on record. Birds have since returned to the Mersey valley around Sale. The New Atlas of Breeding Birds, which presents results of a repeat national survey between 1988 and 1991, contains fascinating abundance maps which show that both species remain uncommon in the Mersey valley. A map showing changes in distribution since 1968-1971 shows a cluster of new Long-tailed Tit breeding records in south Lancashire.

In 1990 the author was shown a Long-tailed Tit nest at Rostherne Mere National Nature Reserve which had various lichen fragments fastened onto its exterior. These included bits of *Parmelia sulcata* and the first record of *P. revoluta* from the reserve! Why should birds resume the use of lichens in an area which has lacked the appropriate species for so long? (It is possible that the birds had wandered in from elsewhere).

I too have been puzzled as to the purpose of the lichen covering. One Chaffinch nest built in a fork of a hawthorn at Higher Disley was conspicuously spotted with grey fragments collected from oak and ash trees nearby - very few lichens yet grow on hawthorn in the vicinity. The nest was ripped out by a predator within two days. An

acquaintance who found several tree nests near Northwich in 1980 reported that all, and several in the terminal shoots of pine branches, were ripped apart by predators. *Lecanora conizaeoides* was the only lichen present in any quantity in that wood.

While many Long-tailed Tits nest in thorny scrub in open country, their original habitat was probably in woodland, and nests in the fork of an oak or other tree are not uncommon. Campbell & Ferguson-Lees (1972:375) in their guide to birds' nests state "Watching necessary for tree-nesting pairs as lichen exterior beautifully blended to bark and nest looks like thickening of fork." I suspect that the use of lichen originated in ancient times when tree nests were the rule, lichen cover was more complete than in many areas today, and camouflage would have been effective.

Jonathan Guest

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SURVEYS OF HAMPSHIRE CHURCHYARDS

For some years I have been working with Ken Sandell (with help of course from Tom Chester) on the churchyards of Hampshire. Well over 200 of these have now been visited at least once, some several times. Besides recording the lichens present, I have become very interested in the question of ecological continuity. The question that has intrigued me very much is whether there are saxicolous lichens that, in this part of England at least, are 'faithful', or nearly so, to medieval stonework. I am coming to the conclusion that many are largely so restricted, so that the concept of an 'Index of Ecological Continuity' for old stonework could be produced comparable to the REIC and the NIEC for our ancient woodlands.

In this study, mere numerical richness in species is not the key factor. A 19th century churchyard or cemetery, with its great variety of substrates, may have a very large number of species present, but many of these most certainly have arrived fairly recently, and reflect the diversity, rather than the age of the habitat.

It is suggested that some at least of the lichens in the list below are strongly correlated with the occurrence of unrestored (or sensitively restored) medieval stonework, or very early brickwork on Hants. sites:

<i>Acrocordia salweyi</i>	<i>Lecania turicensis</i>
<i>Agonimia tristicula</i>	<i>Lecanora conferta</i>
<i>Caloplaca aurantia</i>	<i>pruinosa</i>
<i> cirrochroa</i>	<i>Leptogium plicatile</i>
<i> dalmatica</i>	<i> teretiusculum*</i>
<i> holocarpa</i>	<i>Lempholemma polyanthes</i>
<i> lactea</i>	<i>Leproplaca xantholyta</i>
<i> variabilis*</i>	<i>Opegrapha saxatilis</i>
<i>Clauzadea monticola</i>	<i>Ramalina canariensis</i>
<i>Dirina massiliensis f. sorediata</i>	<i> lacera</i>
<i>Gyalecta jenensis*</i>	<i> siliquosa</i>
<i>Hymenelia prevostii*</i>	<i>Verrucaria macrostoma</i>

Some of these* today are mainly found on the horizontal surfaces of very old chest-tombs and always close to existing (or former) medieval stonework, but may well have colonised the 17th or early 18th century chest tombs from medieval stonework. They are rarely found on more

recent stonework, and all occur on medieval stonework in such places as the ruins of medieval abbeys. All also occur in other counties on natural limestone rocks.

I put forward these ideas tentatively to stimulate research and discussion, in the hope that we may be able in due course to establish indices (perhaps regional ones) of ecological continuity for lichens of old stonework. Much more analysis is required. The Victorian restorers of our old churches have clearly destroyed a great deal!

The repointing of medieval walls, (which is necessary for conservation of the buildings) does not normally exterminate these rarer species if carried out carefully. Some recolonisation has been seen to occur from adjacent surfaces. The BLS should be able to give advice on this matter.

Francis Rose

FROM THE ASSISTANT TREASURER

Delays in receiving *The Lichenologist*

Annual subscriptions are due on 1 January but a number of members who renewed their 1995 membership after this date have experienced a delay, in some cases over two months, in receiving copies of *The Lichenologist* already published this year. I understand from Academic Press that this is because of 'system problems with catch-up labels'. I only became aware of this when members contacted me, and too many of you have had to do so. I have asked Academic Press to write to you.

In order to reduce further delay in despatching parts of *The Lichenologist* already published, which you expect to receive after paying subscriptions, **please send claims, in future, direct to Academic Press.**

Membership List

The most recent Membership List was published as a Supplement to the Winter 1991 *Bulletin*. It is hoped to publish a new List with the next *Bulletin*. Your address, as it appears on the label of this *Bulletin*, will be used. You have probably thrown it away by now but if you think it was incorrect in any way please let me know!

Jeremy Gray

SOUTH-EAST REGIONAL FIELD MEETINGS

Snave and Brookland Churchyards

The village of Snave on Romney Marsh is no more than a gathering of half a dozen houses flanking a wide grass path leading to the gate of a now redundant church. It is beautified in spring by clumps of daffodils, both alongside the path and within the churchyard itself and indeed it was on a warm early spring day in mid-March that a small group of BLS members met there to survey the lichen flora. Unusually for south-eastern England it is the flora of the trees and fences that holds the greatest interest here. Both Ashes are endowed with *Parmelia tiliacea* and one of them also with a large patch of *Pertusaria flavida*. Fertile *Parmelia acetabulum* was spreading from Ash on to nearby Laburnum although *P. perlata* was confined to the former tree. Commoner *Parmelia* species in the yard, including *P. soledians*, were frequent on wood, trees and rock. Other corticolous species included *Pertusaria coccodes* near the base of an Ash, *Physcia tribacia* on Sycamore, *Hyperphyscia adglutinata* on Horse Chestnut, *Ramalina fastigiata*, *R. canariensis* and *Opegrapha atra*.

The wooden boundary fences held abundant *Imshaugia aleurites*, which is something of a Romney Marsh 'special', as well as *Cladonia macilenta*, *Hypocenomyce scalaris*, *Ochrolechia turneri*, *Pertusaria amara* and a single thallus of *Physconia enteroxantha*. The saxicolous flora of Snave includes the previously much-overlooked *Lecanora conferta* and the curious terete-lobed form of *Xanthoria candelaria* growing in full sun on an east-facing window ledge. This form seems distinct both morphologically and ecologically from the usual *X. candelaria* of the nutrient enriched tops of acidic memorials. Here it joins the community associated with warm, dry sunny conditions.

We moved on to Brookland in the afternoon, well known for its detached wooden belfry the timbers of which however have been recently replaced, so no lignicolous paradise here! Instead the graveyard plays host to some unusual Kent churchyard species such as *Rhizocarpon distinctum*, *Rinodina teichophila*, *Aspicilia caesiocinerea* and *Acarospora cervina*. *Lecanora conferta* was found to be present here too while the boundary wall had many tufts of *Leptogium schraderi*. However less helpful was a large piece of

Peltigera overgrowing moss on a low tomb. A full half-hour was spent examining this specimen which seemed to have characteristics of several different *Peltigera* species and a confident identification eluded us.

Pembury Old Church and Tudeley Wood

This was a joint meeting held on 23 April in West Kent within a short distance of the busy A21 road with the south-east regional group of the British Bryological Society. The members of both groups worked well in the morning together at the churchyard, less so in the afternoon when a wide, damp, rutted woodland ride held attractions for the bryologists not shared by the lichenologists present. The parties therefore tended to split each to "do their own thing". The lichen flora of this wood is generally poor, there being relatively few ancient trees. Never the less *Pertusaria hemisphaerica* is abundant on one old oak while another tree near the woodland edge has been colonised by *Parmelia perlata*, a species sensitive to air pollution but whose steady recolonisation in recent years is a clear indication of falling pollution levels. Elsewhere the community typical of acidified bark was in evidence with *Ochrolechia androgyna*, *Platismatia glauca*, *Parmelia saxatilis* and so on. However there was also a range of stump-inhabiting *Cladonia* species for participants to wrestle with.

Earlier in the day Pembury Old Churchyard had yielded *Lecanora conferta* on the wall of the church, *Lepraria lobificans* on another shaded wall, saxicolous *Hypogymnia tubulosa*, *Phlyctis argena* and *Xanthoria polycarpa*, *Sarcopyrenia gibba*, *Micarea erratica*, *Cladonia macilentata* on a sandstone headstone and *Imshaugia aleurites* on a fence post. Three species of *Trapelia* were growing, typically, on a low damp flat slab, and allowing of a close comparison by the members present. They were *T. coarctata*, *T. involuta* and *T. placodioides*. Also permitting juxtaposed comparison on the vertical faces of both limestone and acid headstones were the two varieties of *Haematomma ochroleucum*, the regular var. *porphyrium* and the rarer (in the south) var. *ochroleucum*.

Keith Palmer

FIELD MEETING TO NONSUCH PARK AND ST MARY'S CHURCH, EWELL, SURREY

A field meeting was held on 8 January 1995 to follow the AGM on the previous day. Nonsuch Park was chosen for this visit as it is the subject of an ongoing survey for many groups of organisms. A report of this survey to date appeared in a recent edition of *The London Naturalist* 74: 1994 pp 77-142. This included a lichen list that was obtained during a short visit made in 1993. This produced a list of 41 species but it was clear that a closer examination, especially of the house and walled garden, would greatly extend this list.

A group of members therefore assembled at the park on a damp and rather miserable morning. We were joined by Dr June Chatfield (the co-ordinator of the Nonsuch survey) and a number of local naturalists. We discovered that two enthusiastic BLS members (Ishpi Blatchley and Keith Palmer) had been working at the site since dawn and had already greatly extended the previous lichen list.

The park formed part of the Little Park attached to Henry VIII's Nonsuch Palace and was surrounded by farm land until the rapid urban development of London's suburbs in the early 1930s. The two adjoining areas of Cherry Orchard and Warren Farm were cultivated until recently but are now overgrown with lush vegetation and are therefore of little lichenological interest. An earlier farmhouse in the park was incorporated into the large house that was built in the early 19th century. This house and the surrounding parkland were purchased by the Surrey County Council in 1937. The remainder of the area is open parkland with isolated trees and areas of secondary woodland. The upper chalk in the south is on the highest point of the site which then drops down through a layer of the Thanet sand to alluvium and finally London clay. The drainage from the chalk causes these lower layers to be very damp and the trees along the drainage ditches and around the ponds have the most varied lichen flora of the park.

A group of willows at the round pond now has several pollution sensitive species that had been absent or overlooked in the 1993 survey. In the earlier survey *Parmelia caperata* and *P. revoluta* were present but in 1995 there were also two small thalli of *Usnea subfloridana* and, as is now becoming usual in the outer London parks, *P. perlata*.

The old wall to the garden is constructed of brick with flint and chalk and is partially overgrown with ivy. This proved to be the best site investigated in the park and 28 different species were recorded from this wall. These included four species of *Cladonia*: *C. coniocraea*, *C. fimbriata*, *C. pyxidata* and *C. pocillum*, this last species being much parasitised by *Diploschistes muscorum*.

A fairly brief survey of the limestone window sills to the house together with a stone urn and the base of a sundial produced a list of 18 species all of which are frequently found in this part of London. These species included *Caloplaca flavovirescens*, *Sarcogyne regularis* and *Verrucaria glaucina*.

A large iron plant trough bore *Candelariella vitellina*, *Catillaria chalybeia*, *Lecanora muralis*, *L. polytropa*, *Lecidella scabra* and *Scoliosporum umbrinum*.

The party then moved to St Mary's Church, Ewell. As it was by then raining hard, a break was taken for lunch at a nearby pub. The rain had eased off after we had eaten and a short visit was made to the church. This site has a very large churchyard on both sides of the road. The present church was built in 1848 but the old part of the churchyard still has the perpendicular tower from the earlier church. As dusk was approaching the party broke up leaving Isphi Blatchley still working on the churchyard. A total of 39 species was found. This is a good list for this area but, due to the large size of the churchyard and the short time available, even common species such as *Xanthoria parietina* were not recorded. A return visit is definitely required.

Lichens recorded during the field meeting, compiled from members' information and lists supplied by I Blatchley, F Dobson, K Palmer and P Scholz.

Lichens recorded from Nonsuch Park (including mansion and walled garden)

<i>Acrocordia salweyi</i>	<i>holocarpa</i>	<i>Cladonia chlorophaea</i>
<i>Agonimia tristicula</i>	<i>teicholyta</i>	<i>coniocraea</i>
<i>Bacidia sabuletorum</i>	<i>Candelariella aurella</i>	<i>fimbriata</i>
<i>Buellia punctata</i>	<i>medians</i>	<i>pocillum</i>
<i>Caloplaca citrina</i>	<i>reflexa</i>	<i>pyxidata</i>
<i>flavescens</i>	<i>vitellina</i>	<i>squamosa</i>
<i>flavovirescens</i>	<i>Catillaria chalybeia</i>	

<i>Cliostomum griffithii</i>	<i>Lepraria incana</i>	<i>Porpidia tuberculosa</i>
<i>Diploicia canescens</i>	<i>lesdainii</i>	<i>Psilolechia lucida</i>
<i>Diploschistes muscorum</i>	<i>Leproloma vouauxii</i>	<i>Ramalina farinacea</i>
<i>Evernia prunastri</i>	<i>Leptogium teretiusculum</i>	<i>Rinodina gennarii sophodes</i>
<i>Hyperphyscia adglutinata</i>	<i>Micarea denigrata prasina</i>	<i>Sarcogyne regularis</i>
<i>Hypocenomyce scalaris</i>	<i>Mycoblastus sterilis</i>	<i>Scoliciosporum chlorococcum umbrinum</i>
<i>Hypogymnia physodes</i>	<i>Parmelia caperata perlata</i>	<i>Toninia aromatica</i>
<i>Lecania erysibe</i>	<i>revoluta</i>	<i>Trapelia coarctata involuta</i>
<i>Lecanora albescens campestris</i>	<i>subaurifera</i>	<i>Trapeliopsis flexuosa</i>
<i>chlarotera</i>	<i>subrudecta</i>	<i>Usnea subfloridana</i>
<i>conizaeoides dispersa</i>	<i>sulcata</i>	<i>Verrucaria glaucina hochstetteri</i>
<i>expallens muralis</i>	<i>Parmeliopsis ambigua</i>	<i>macrostoma nigrescens</i>
<i>polytropa saligna</i>	<i>Phaeophyscia orbicularis</i>	<i>viridula</i>
<i>symmicta</i>	<i>Physcia adscendens aipolia</i>	<i>Xanthoria calcicola candelaria</i>
<i>Lecidella elaeochroma scabra</i>	<i>caesia</i>	<i>elegans parietina</i>
<i>stigmatea</i>	<i>dubia</i>	<i>polycarpa</i>
	<i>tenella</i>	
	<i>Physconia grisea</i>	

85 species

Lichens recorded at St Mary's Church Ewell by members and from the list compiled by I Blatchley

<i>Acrocordia salweyi</i>	<i>conizaeoides</i>	<i>Psilolechia lucida</i>
<i>Aspicilia calcarea</i>	<i>dispersa</i>	<i>Rhizocarpon obscuratum</i>
<i>Buellia aethalea</i>	<i>muralis</i>	<i>Scoliciosporum umbrinum</i>
<i>Caloplaca citrina flavescens</i>	<i>polytropa</i>	<i>Toninia aromatica</i>
<i>teicholyta</i>	<i>Lecidella scabra stigmatea</i>	<i>Trapelia coarctata involuta</i>
<i>Candelariella aurella medians</i>	<i>Lepraria incana</i>	<i>Verrucaria baldensis macrostoma</i>
<i>vitellina</i>	<i>Leproloma vouauxii</i>	<i>f. furfuracea muralis</i>
<i>Catillaria chalybeia</i>	<i>Parmelia mougeotii</i>	<i>viridula</i>
<i>Cladonia chlorophaea</i>	<i>Phaeophyscia orbicularis</i>	
<i>Diploicia canescens</i>	<i>Physcia adscendens caesia</i>	
<i>Lecania erysibe</i>	<i>Physconia grisea</i>	
<i>Lecanora albescens campestris</i>	<i>Porpidia tuberculosa</i>	

40 taxa

Frank Dobson

NEW, RARE AND INTERESTING BRITISH LICHEN RECORDS

(Contributions to this section are always welcome. Please submit entries to Chris Hitch, The Whin, Wadd Lane, Snape, Saxmundham, Suffolk IP17 1QY, in the form of species, habitat, locality, VC no., VC name, Grid Reference (GR), altitude, where applicable, in metres (m), date, comments and recorder. An authority with date after species is included only when the record is new to the British Isles. *In the interests of accuracy, typescript is much appreciated. Please use one side of the paper only.*)

Acremonium lichenicola W Gams (1971): on algal crust with *Athelia arachnoidea* on brick on path, Naunton Hall Farm, Rendlesham, VC 25, East Suffolk, GR 62/32-53-, February 1992. Determined R Watling and B J Coppins. New to the British Isles.

P M Earland-Bennett

Arthothelium orbilliferum: on *Ilex* at edge of ravine, Abhainn Alligin, Inveralligan, Torridon, VC 105, West Ross, GR 18/83-57-, 1994. A northerly extension of range for this rare oceanic species.

B J Coppins & A M O'Dare

Aspicilia subcircinata: on limestone chest tomb, Ellingham churchyard, VC 11, South Hants, GR 41/14-08, 1994; On old brick wall, opposite Michael Mersh Churchyard, VC 11, South Hants, GR 41/34-26-, 1995: New to Hampshire.

F Rose & K A Sandell

Bacidia igniarii: on *Quercus* trunk, 9 km ENE of Ballater, Dinnet Oakwood NNR, VC 92, South Aberdeen, GR 37/4—9—, 1994. Second British record.

B J Coppins, A M O'Dare & G Kantvilas

Bacidia trachona: fertile, in underhang in woodland, by Allt Dearg, Torridon, VC 105, West Ross, GR 18/88-57-, 1974. In Britain, previously known with apothecia only from Cornwall and the Channel Islands.

B J Coppins & A M O'Dare

Bacidia viridifarinosa: on very shaded roots of *Fraxinus* in bank of stream, Pickers Ditch, Clacton-on-Sea, VC 19, North Essex, GR 62/18-16-, June 1994.

P M Earland-Bennett

Baeomyces placophyllus: silty soil in wide rock crevice, between Ronas Hill and Mid Field, Northmavine, Mainland, VC 112, Shetland, GR

N41/30-83-, alt. 370 m., July 1994; silty soil on surface bared by weathering, low cliff above shore, Clousta, Aithsting, Mainland VC 112, Shetland, GR N41/30-56-, alt. 3 m, July 1994. New to Shetland. Very contrasted elevations, but on similar substrates and both free from competition.

D H Dalby

Belonia nidarosiensis: metamorphic limestone rock face in shaded situation, White Ness, Mainland, VC 112, Shetland, GR N41/38-44-, July 1994. Confirmed P M Jørgensen. Second record for Shetland. This (and another gathering from about 2 km south) are both sterile; we agree on using this name but cannot be wholly certain in the absence of apothecia. The first record (P W James, Vidlin, Mainland, GR N41/48-67-, 1980, in BM) is fertile.

D H Dalby

Buellia papillata (Sommerf) Tuck: over bryophytes in species-rich montane heath, Ruadh-stac Beag, Bienn Eighe NNR, VC 105, West Ross, GR 18/97-61-, alt 875 m June 1994. New to the British Isles. This species closely resembles *B. insignis* but has spores 18-22 μ m long and lacks oil droplets in the hymenium. Associated species include *Arctomia delicatula*, *Brigantiaea fuscolutea*, *Gyalideopsis scotica*, *Micarea incrassata*, *Rinodina mniaraea*, *Sagiolechia rhexoblephara* and *Schadonia fecunda*. Determined J Poelt.

A Fryday

Caloplaca britannica: sheltered crevices on landwards-facing rock face, headland 1km SSW of Nibon, Northmavine, Mainland, VC 112, Shetland, GR N41/30-1-2-, July 1994. On *Verrucaria maura*, associated with *Caloplaca verruculifera*, *Lecania aipospila* and *L. erysibe*. Confirmed by R Santesson. New to Shetland.

D H Dalby

Caloplaca cerina: on decaying *Sueda* stems at ground level on consolidated sand and shingle, Colne Point, VC 19, North Essex, GR 62/10-12-, July 1994.

P M Earland-Bennett and J F Skinner

Caloplaca crenularia: on sandstone wall on seafront, Clacton-on-Sea, VC 19, North Essex, GR 62/17-14, June 1994. Also on sandstone tomb, Clacton-on-Sea, VC 19, North Essex, GR 62/18-16, June 1994.

P M Earland-Bennett

Caloplaca cirrochroa: on limestone ruins of Abbey Church, S aspect, Beaulieu Abbey, VC 11, S Hants, 41/38-02-, 1995. New to Hampshire.

F Rose

Catillaria neuschildii: on *Quercus* trunk, 9 km ENE of Ballater, Dinnet Oakwood NNR, VC 92, South Aberdeen, GR 37/4—9—, 1994.

B J Coppins, A M O'Dare & G Kantvilas

Chaenotheca brachypoda: on shaded trunk on *Sambucus* in small wood, Bran End, VC 19, North Essex, GR 52/65-25-, May 1994.

P M Earland-Bennett and J F Skinner

Chaenotheca furfuracea: on shaded vertical bank of stream amongst tree roots, Pickers Ditch, Clacton-on-Sea, VC 19, North Essex, GR 62/18-16-, June 1994.

P M Earland-Bennett

Degelia ligulata: on vertical side of gully in rocky headland with *D. atlantica*, Rubha na h-Airde Glaise, Torridon, VC 105, West Ross, GR 18/80-56-, 1994. The northermost known locality for this recently described species.

B J Coppins, A M Fryday & A M O'Dare

Dermatocarpon arnoldianum: on granite rocks by edge of lake, SW end of Lough Fad, SE of Naran, VC H35, West Donegal, GR G/72-97-. New to Ireland. Determined B J Coppins.

N F Stewart

Dermatocarpon rivulorum: on \pm inundated rocks at the edge of lochan, Loch Coire na Caimhe, Liathach, Torridon, VC 105, West Ross, GR 18/92-58-, alt 530 m June 1994. Confirmed as a British species (see *Flora* p. 232). The combination of a thin thallus and long ascospores is diagnostic. Associated species include *Phaeophyscia endococcina*. *D. arnoldianum* is also confirmed as a British species having been recorded from Wales (Snowdonia), and Ireland (Brandon Mountain and Donegal)

A Fryday

Fellhanera bouteillei: on granite chippings in granite border tomb, Stratford St Andrew ch, VC 25, East Suffolk, GR 62/35-60-, April 1994. Determined B J Coppins. New to Suffolk.

C J B Hitch and P N Cayton

Fuscidea praeruptorum: on west face of sloping sandstone tomb, Sibton ch, VC 25, East Suffolk, GR 62/36-69-, June 1993. Confirmed B J Coppins. New to Suffolk.

C J B Hitch and P N Cayton

Gyalecta foveolaris: amongst mosses on small ledge on metamorphic limestone outcrop; Snarra Ness, E of Sandness, Mainland, VC 112, Shetland, GR N41/23-57-, August 1988. Confirmed by B J Coppins. Second record for Shetland, in very different habitat from first (P W James and O W Purvis, hartzbergite soil on cliff edge, Norwick, Unst, GR N42/66-14-, 1983, BM and E).

D H Dalby

Gyalideopsis anastomosans: on fallen *Quercus* in ancient wood, Staverton Thicks, VC 25, East Suffolk, GR 62/35-50-, May 1994. Most thalli only with hyphophores, but one thallus with 'squashed wine-gum' ascomata - a very rare occurrence in this part of England.

P M Earland-Bennett and C J B Hitch

Gyalidiopsis scotica: Over bryophytes on slightly basic rock Twll Du, Cwm Idwal, VC 49, Caernarvon, GR 23/63-58-, alt 550m, June 1994. New to Wales. Also recorded in Cwm Glas Mawr GR 23/62-56-, and near Llyn Glas GR 23/61-55-, in October 1995 by S Chambers and A Fryday.

A Fryday

Hypocenomyce anthracophila: on lignum of large standing decorticate *Pinus* in relic pine forest, SW of Garve Bridge, Guisachan Forest, VC 96, Easternness, GR/2—2—, alt. 250 m, 1994. Second British locality.

B J Coppins, A M O'Dare & S Kondratjuk

Lecanora atromarginata (Magn.) Hertel & Rambold: this is the correct name for the species described in 'The Flora' as *Lecanora marginata* (p 309). It differs from *L. marginata* sens. str. chemically, in containing stictic acid instead of atranorin, and in having immersed apothecia. *L. marginata* ssp *elata* (which lacks usnic acid) is known from a number of sites in the Breadalbane Mountains, including Ben Lawers, but there appear to be no British records of ssp *marginata* (cf New, Rare and Interesting British Lichen Records in *Bulletin* 70). Determined G Rambold.

A Fryday

Lecanora conferta: on old plaster or crumbling limestone walls of old churches, Winchester Cathedral, GR 41/48-29-, 1994; Droxford Church, GR 41/60-18-, 1994; St Cross Church, GR 41/47-27-, 1995 all VC 11. The Droxford plant had only the thalline margins C + O; the others had the discs C + O. *L. conferta* seems to be an aggregate species containing more than one taxon.

T Chester, F Rose & K A Sandell

Lecanora hypoptella (Nyl.) Frummann (1963) [syn. *L. symmictiza* (nyl.) Hedl.]: on bark of old *Larix*, East Mealour, Lawers, Loch Tay, VC 88, Mid-Perthshire, GR 27/68-41-, alt. 470 m, 1989. New to British Isles. Determined B J Coppins.

A Fryday

Lecanora pruinoso: This species has now been found in further sites in Hants; Winchester Cathedral, VC 11, S Hants, GR 41/48-29-, 1994; Romsey Abbey, VC 11, S Hants, GR 41/35-21-, 1995; St Cross Church, VC 11, S Hants, GR 41/47-27-, 1995 Headbourne Worthy Church, VC 12, N Hants, GR 41/48-32-, 1995; Barton Stacey Church, VC 12, N Hants, GR 41/43-41-, 1995. All sites are on medieval stonework (also brickwork at St Cross) on churches of Saxon to medieval dates, mostly on vertical N or E facing walls, but also on buttresses or nearby chest tombs. It is usually abundant locally. It may prove to be frequent locally in central S England when surveys are more complete and has surely been overlooked.

F Rose & K A Sandell

Lecidea doliiformis: on underside of branch on ground in ancient wood, Staverton Thicks, VC 25, East Suffolk, GR 62/35-50-, May 1994.

P M Earland-Bennett and C J B Hitch

Lecidea doliiformis: on inside of large old hollow *Quercus* at side of road, Long Melford, VC 26, West Suffolk, GR 52/85-46-, April 1994.

P M Earland-Bennett

Lecidea luteoatra Nyl: on fine-grained acidic rocks and boulders, especially granite and quartzite, throughout the Scottish Highlands, mostly above 800 m (Ben More Assynt, Beinn Eighe, Cairngorm, Ben Avon, Ben Lawers NR, etc.). New to the British Isles. This species was included in the 1980 checklist but British specimens were considered to be *L. lapicida* and it appears as a synonym of that species in 'The Flora' and the 1993 checklist. It is, however, a distinct species

differing from *L. lapicida* most noticeably in containing usnic acid, giving the thallus a pale yellow colour, and in lacking an I+blue medulla.

A Fryday

Lempholemma radiatum: On wet basic rocks. Cwm Glas-bach, Llanberis, VC 49, Caernarvon, alt 500 m, October 1994. GR 23/60-56-. New to Wales. Only previously recorded in Britain from the Scottish Highlands.

A Fryday

Lempholemma polyanthes: with *Leptogium plicatile* on damp footing on N side of chest tomb, Barton Stacey church, VC 12, N Hants, GR 41/43-41-, 1995. New to Hampshire but easily overlooked: on mortar on W side of church, Beaulieu Abbey, VC 11, S Hants, GR 41/38-02-, 1995.

F Rose

Lepraria borealis Lohtander & Tønsberg (1994): over mosses on N-facing rocks in pasture, Hailes Castle, East Linton, VC 82, East Lothian, GR 36/57-75-, alt 30m, 1991. Also, associated with *Cystocoleus ebeneus* on boulder, N side of Craigendarroch Hill, Ballater, VC 92, South Aberdeen, GR 37/36-96-. alt. 290 m, 1994. New to British Isles. This species has a whitish thallus with a lobate margin resembling *L. caesiocalba* and *L. neglecta*, but contains atranorin, rangiformic acid and norrangiformic acid. This species was treated as '*Lepraria* sp. A' by Tønsberg (*Sommerfeltia* 14: 208, 1992) and is formally described in Lohtander (1994); see 'Literature Pertaining' in this issue.

B J Coppins & A M O'Dare

Lepraria elobata Tønsb (1992): on trunks of *Pinus contorta* in plantation, 4 km north of Pontneddfechan, VC 42, Brecon, GR 22/91-11-, November 1994, A Orange 10152 (NMW). New to British Isles. Apparently widespread in Wales in a variety of habitats including bark, rocks in semi-natural woodland, and soil. Contains stictic acid complex, zeorin, atranorin, and often also rangiformis acid. Resembles *L. incana* in the field but often paler.

A Orange

Lepraria rigidula: on Millstone Grit boulder beside stream, Scar Wood, Goathland, VC 62, East Yorkshire, GR 45/81-00-, May 1975.

P M Earland-Bennett

Lepraria rigidula: on algal-covered dead moss over Borrowdale Volcanic rock with *Cystocoleus ebeneus*, Silver Point, Ullswater, VC 69, Westmorland, GR 35/39-18-, October 1975. Collected by Professor H P Moon.

P M Earland-Bennett

Macentina stigonemoides: fertile material on large old *Sambucus* associated only with *Anisomeridium nyssaegenum*, Bran End, VC 19, North Essex, GR 52/65-25-, May 1994. Fertile material also on shaded *Sambucus*, Cockaynes Wood, Alresford, VC 19, North Essex, GR 62/05-21-. 1994.

P M Earland-Bennett & J F Skinner

Micarea elachista (Körber) Coppins & R Sant. (1983): on lignum at base of large standing decorticate *Pinus* in relict pine forest, SW of Garve Bridge, Guisachan Forest, VC 96, Easternness, GR 28/2—2—, alt 250 m, 1994. New to British Isles.

B J Coppins, A M O'Dare & S Kondratjuk

Micarea myriocarpa: on flint under *Carpinus* roots in clay soil by stream and also on *Carpinus* roots themselves, Great Bull Wood, Hockley Woods, Hockley, VC 18, South Essex, GR 51/83-92-, March 1994. The specimens on the *Carpinus* roots were associated with *Arthonia spadicea*, *Chaenotheca furfuracea*, *Lepraria lobificans*, *Micarea prasina* and *Opegrapha ochrocheila*.

P M Earland-Bennett

Moelleropsis humida: on small mound of calcareous soil tipped near roadside, with *Peltigera didactyla* and *Vezdaea rheocarpa*, 4 km NNW of Penderyn, VC 42, Brecon, GR 22/96-12-, March 1995. A Orange 10225 (NMW) New to Wales.

A Orange

Ochrolechia inaequatula: Over bryophytes on block scree. Cwmglas Mawr, Ysgolion Duon, VC 49, Caernarvon, GR 23/66-63-. alt 600 m, October 1994. New to Wales.

A Fryday

Opegrapha multipuncta: very abundant on trunks of spruce trees in plantation, Busta, Brae, Mainland, VC 112, Shetland, GR N41/34-66-, July 1994. Second record for Shetland (for first - and type description - see B J Coppins *et al.*, *Lichenologist*, 24:365-6, 1992), but also found in

three other localities on willows and sycamore; doubtless widespread but overlooked.

D H Dalby

Opegrapha xerica: on ancient *Quercus* with *Lecanactis premnea*, Sudbourne, VC 25, East Suffolk, GR 62/41-51-. February 1990. Also on large old *Quercus* and *Hedera* in great quantity together with *Arthonia impolita* and *Lecanactis premnea*, parkland of Darsham House, Darsham, VC 25, East Suffolk, GR 62/41-69-, July 1990. Determined B J Coppins.

P M Earland-Bennett

Opegrapha xerica: on ancient *Taxus* in churchyards, VC 12, N Hants, Farringdon, GR 41/71-35-, 1993; Long Sutton, 41/73-47-, 1995: New to Hants.

F Rose

Parmelia acetabulum: several thalli on old roadside *Fraxinus*, Lindsell, VC 19, North Essex, GR 52/65-27-, April 1994. This is the first modern record of this species for Essex. The tree has a particularly interesting 'relict' flora, but is almost ready to fall over. Also a single thallus on *Sambucus* branch, Clacton-on-Sea, VC 19, North Essex, July 1994.

P M Earland-Bennett

Peltigera degenii: Barmouth, VC 48, Merioneth, GR 23/61-, November 1905, Coll E Pattison (NHM). There are also specimens in NHM from VC 48, GR 23/72-24-, 1994, and VC 29, Caernarvon, GR 23/55-61-, 1965. New to Wales.

A Orange

Peltigera polydactyla: on slightly calcareous mudstone rocks at top of floor zone of River Wye, Llanstephan, VC 43, Radnor, GR 32/10-41-, September 1994, A Orange 10101 & R G Woods (NHM). First confirmed record from Wales.

A Orange

Physcia dubia: on top of acidic tomb in Farndale ch, VC 62, North-East York, GR 44/67-97-, August 1977. A single apothecium was discovered and proved that British material is fertile.

C J B Hitch

Physcia dubia: on boundary wall of Weybread ch, VC 25, East Suffolk, GR 62/24-80-, July 1986. This was the first sighting in Suffolk for abundantly fertile material.

C J B Hitch

Physcia dubia: on fallen roof timbers of derelict farm building, Holton St Mary, VC 25, East Suffolk, GR 62/05-37-, August 1977. This is the second site for fertile material in Suffolk.

C J B Hitch & P N Cayton

Physcia tribacioides: on *Salix alba* by stream in parkland, Clovelly, Bideford, VC 4, North Devon, GR 21/31-25-, 1994. New to North Devon.

B J Coppins & A M O'Dare

Physcia tribacioides: abundant on *Acer pseudoplatanus* in churchyard, Landrake, VC 2, E Cornwall, GR 20/37-60-, 1995.

F Rose

Polyblastia terrestris: On basic rocks. Cwm Glas, Llanberis, VC 49, Caernarvon, GR 23/61-55-, alt 750 m, October 1994. New to Wales. Only previously recorded in Britain from the Scottish Highlands.

A Fryday & S Chambers

Porina borreri var. *leptospora*: on *Ilex* and on *Hedera* on old *Quercus*, in woodland, Clovelly, Bideford, VC 4, North Devon, GR 21/30-26-. 1994. New to England.

B J Coppins & A M O'Dare

Porina guaranitica: on mossy base of old *Quercus* by woodland track, Clovelly, Bideford, VC 4, North Devon, GR 21/30-26-. 1994. New to England.

B J Coppins & A M O'Dare

Pyrenidium hetairizans: parasitic on *Verrucaria hydrela* in Muckle Falloch burn, VC 90, Forfar, GR 37/4174, alt 600 m, donated August 1989, and in a tributary of the Burn of Glenmoye, VC 90, Forfar, GR 37/39-65-, alt 26 m, donated May 1991. R C M has recorded it in 1994 as well. D L Hawksworth says in a letter of 1991 . . . 'It is discussed in the 1986 number of my 'notes' and yours would appear to be the second collection ever' . . . It may not be as rare as was first thought.

R C Munro & C J B Hitch

Ramonia dictyospora: on *Quercus* trunk, E of Tucker's Bridge, Arlington, VC 4, North Devon, GR 21/60-39-, 1994. New to Devon.

B J Coppins & A M O'Dare

Ramonia interjecta: on *Sambucus*, Cockaynes Wood, Alresford, VC 19, North Essex, GR 62/05-21-, 1994. This recently described species is widespread in Essex and Suffolk on *Sambucus* and *Salix* in damp situations.

P M Earland-Bennett & J F Skinner

Ramonia interjecta: on *Sambucus*, Pipers Vale, Ipswich, VC 25, East Suffolk, GR 62/17-41-, January 1995. Also on dead prostrate *Salix*, Ipswich, VC 25, East Suffolk, GR 62/17-43-, January 1995.

P M Earland-Bennett

Rhizocarpon submodestum (Vainio) Vainio: on large flat acidic schist pebbles imbedded in soil in damp north-facing coire. Glas Maoi, VC 92, South Aberdeen, GR 37/16-77-, September 1991. New to the British Isles. Forming small, ± orbicular patches less than 1 cm diam. with a well developed, pale grey thallus containing stictic acid. Spores colourless, persistently 3-septate.

A Fryday

Rinodina colobinoides (Nyl.) Zahlbr. (1931): on trunk of large *Quercus* in parkland, Clovelly Park, Bideford, VC 4, North Devon, GR 21/30-25, 1994. New to British Isles; second record for Europe, previously known from Portugal. For description see *Lichenologist* 27: 3-24, 1995. The Devon specimen agrees with the Portuguese material in having a rather poorly developed, sorediate rather than blastidiate thallus. Confirmed H Mayrhofer.

B J Coppins & A M O'Dare

Rinodina degeliana Coppins (1983): sterile, on *Quercus* trunk, 9 km ENE of Ballater, Dinnet Oakwood NNR, VC 92, South Aberdeen, GR 37/4—9—, 1994. New to the British Isles. See original description in *Lichenologist* 15: 147-150, and also Tønsberg in *Sommerfeltia* 14: 1-331, 1992. Elsewhere known from Norway, Sweden and eastern USA (Maine).

B J Coppins, A M O'Dare & G Kantvilas

Rinodina fimbriata Körber: on the top of a low flat sandstone boulder in tarn. Brandon Mountain, VC H1, South Kerry, GR H01/5—0—, alt 400 m, May 1994. New to the British Isles. This species has spores similar to *R. teichophila* but has immersed apothecia without a distinct thalline margin and grows on semi-inundated rocks. Confirmed H Mayrhofer.

A Fryday & O Gilbert

Rinodina flavosoralifera: on *Quercus*, Twenty Shilling Wood, Comrie, VC 88, Mid-Perthshire, GR 27/76-22-, 1988; on *Quercus*, Milton Wood, 5.5 km N of Blairgowrie, VC 89, East Perthshire, GR 37/1—5—, 1991 & 1994. New to Scotland.

B J Coppins & A M O'Dare

Roccella phycopsis: on *Quercus* in parkland, Clovelly, Bideford, VC 4, North Devon, GR 21/31-25-, 1994. Seen in abundance on two parkland oaks, and with two thalli on a third oak.

B J Coppins, A M O'Dare & N F Stewart

Stereocaulon vesuvianum var. *symphycheileoides*: on top of brick garden wall with *Scoliciosporum umbrinum*, Ipswich, VC 25, East Suffolk, GR 62/18-43-, January 1995. This sorediate variety is much more common than the non-sorediate *S. vesuvianum* var. *vesuvianum* in Ipswich on brick walls. Other species commonly associated with it are *Stereocaulon pileatum* (fertile at two locations) and *Trapelia* spp. (*T. coarctata*, *T. obtegens*, *T. placodioides* and less commonly *T. involuta*). *Acarospora* spp., *Baeomyces rufus*, *Lecidea fuscoatra* and *Stereocaulon nanodes* are among many other species that may also be present.

P M Earland-Bennett

Strangospora pinicola: on decorticated part of *Fagus* bole, Clacton-on-Sea, VC 19, North Essex, GR 62/18-15-, August 1994.

P M Earland-Bennett

Thelomma ocellatum: on fence posts around the northside of the Loch of Forfar, VC 90, Forfar, GR 37/43-50-, March 1989, and now it has spread to picnic tables in the Loch of Forfar Country Park, March 1995.

R C Munro and C J B Hitch

Toninia aromatica: on trunk of large *Quercus* in parkland, Clovelly Park, Bideford, VC 4, North Devon, GR 21/30-25-, 1994. A rare

corticolous occurrence of this species. The same tree also had *Rinodina colobinoides* (see above) and large patches of *Lobaria amplissima*.

B J Coppins & A M O'Dare

Toninia rosulata: over bryophytes on vertical east-facing mica-schist crag. Above Lochan nan Cat, Ben Lawers NNR, VC 88, Mid-Perthshire, GR 27/64-42-, alt 800 m, August 1994. First modern British record. Associated species include *Acarospora rhizobola*, *Psora globifera* and *P. rubiformis*. Confirmed E Tindal.

A Fryday

Trapelia coarctata: well-developed on sandy soil of upturned *Betula* in wood (not a saxicolous substrate in sight!), Norsey Wood, VC 18, South Essex, GR 51/68-95-, May 1994.

P M Earland-Bennett

Umbilicaria polyrrhiza: fertile, on exposed rocks, Leacan Bàna, NE of Rubha na h-Airde Glaise, Torridon, VC 105, West Ross, GR 18/81-57-, 1994. In Britain, this species rarely produces apothecia.

B J Coppins, A Fryday & A M O'Dare

Verrucaria bryoctona: on soil over low tomb in old cemetery, Clacton-on-Sea, VC 19, North Essex, GR 62/18-16-, June 1994.

P M Earland-Bennett

Verrucaria papillosa: on sandstone block of bridge over Pickers Ditch, Clacton-on-Sea, VC 19, North Essex, GR 62/17-17-, July 1994.

P M Earland-Bennett

Verrucaria simplex: on carstone pebble beside A1 road, Little Ponton, VC 53, South Lincolnshire, GR 43/92-31-, October 1993.

P M Earland-Bennett

Verrucaria simplex: on moccasin shoe at edge of pond, Clare, VC 26, West Suffolk, GR 52/77-45-, March 1994.

P M Earland-Bennett, C J B Hitch & P Cayton

Wentiomycetes lichenicola (Hansf) D Hawksw ssp. *bouteillei* Bricaud, Roux & Sérusiaux (1994): lichenicolous fungus on *Bacidia* sp. on bone, Morlais Hill, VC 41, Glamorgan, GR 32/04-09-, March 1987, A Orange

4720 (NHM, IMI). Also on bone, Ainsdale dry dunes, VC 59, South Lancaster, GR 34/2—1— or 34/3—1—, July 1950, coll G Salisbury (slide in BM). New to British Isles. The latter specimen is the basis of the incorrect British record of *Thelidium minimum*.

A Orange

LITERATURE PERTAINING TO BRITISH LICHENS - 17

Lichenologist 26(4) was published on 7 November 1994, and 27(1) on 6 February 1995, and 27(2) on 15 March 1995.

Taxa prefixed by * are additions to the checklist for Britain and Ireland. Aside comments in square brackets are mine.

BOOM, van den, BRAND, M, DIEDERICH, APTROOT, A & SERUSIAUX 1994. Report of a lichenological field meeting in Luxembourg. *Bull. Soc. Nat. Luxemb.* 95: 145-176. The new combination *Lecania naegelii* (Hepp) Diederich & v.d. Boom (syn. *Bacidia naegelii*) is proposed, and *Lepraria crassissima* (Hue) Lettau (1958) is shown to be a distinct species [which is known from the British Isles], and not a synonym of *L. incana*.

BRODO, I M, OWE-LARSSON, B & LUMBSCH, H T 1994. The sorediate, saxicolous species of the *Lecanora subfusca* group in Europe. *Nordic J. Bot.* 14: 451-461. Includes descriptions, photographs and European distribution maps of *L. caesiosora* (syn. *L. cenisia* var. *soredians* Suza), *L. campestris* subsp. *dolomitica* and *L. pannonica*, and a key to species treated as well as the sorediate species of *Tephromela*. *Lecanora caesiosora* is shown to have three morphotypes; all of which occur in Britain.

DIEDERICH, P & ETAYO, J 1994. Taxonomic notes on the genus *Plectocarpon* (lichenicolous Ascomycotina). *Nordic J. Bot.* 14: 589-600. Five species are newly described, of which two occur in Scotland: *P. sampaiana* Diederich & Etayo (on *Pannaria sampaiana* from Glen Nevis, VC 97) and *P. scrobiculatae* (on *Lobaria scrobiculata* from Skye and Raasay, VC 104).

FRYDAY, A 1994. Notes on the lichen flora of Lewis and Harris. *Hebridean Naturalist* 12: 23-29. Over 200 lichens were recorded during a survey, primarily concerned with the lichen flora of the higher ground; the 53 species newly recorded for the Outer Hebrides (VC 110) are tabulated.

GIRALT, M & MAYRHOFER, H 1994. Four corticolous species of the genus *Rinodina* (lichenized Ascomycetes, Physciaceae) containing atranorin in southern Europe and adjacent regions. *Nova Hedwigia* 59: 129-142. Includes treatments of *R. exigua* and *R. roboris*, with a map of the European distribution for the latter.

HAFELLNER, J 1994. Beiträge zu einen Prodrromus der lichenicolen Pilze Österreichs' und angrenzender Gebiete. I. Einige neue oder seltene Arten. *Herzogia* 10: 1-28. This includes a key to European, lichenicolous species of *Opegrapha*, and the combination *O. zwackhii* (Massal. ex Zwackh.) Källsten (syn. *Leciographa zwackhii*) is validated. [Also included are several newly described lichenicolous fungi that are likely to occur in the British Isles.]

JONES, D, MUEHLCHEN, A & YOUNG, M 1994. Calcium-rich crystals associated with apothecia of crustose lichens on sandstone. *Biom mineralization Newsletter* 1994 p. 3. A study of crystalline deposits encrusting *Baeomyces rufus*, *Lecanora dispersa* and *Trapelia coarctata* growing on sandstones from quarries and building stone. Includes SEM micrographs of unusual spherical clusters of tabular and bladed crystals (whewellite).

JØRGENSEN, P M 1994. Studies in the lichen family Pannariaceae VI: the taxonomy and phylogeography of *Pannaria* s. lat. *J. Hattori Bot. Lab.* 76: 197—206. The genus *Pannaria* is divided into two genera. The new genus *Fuscopannaria* P.M. Jørg. accomodates the species with a squamulose to crustose, usually brownish thallus, which usually contains fatty acids and terpenes, and asci that have an amyloid apical plug. The new combinations do not include any changes in specific epithets; the British species are: *F. ignobilis* (Anzi) P.M. Jørg., *F. leucophaea* (Vahl) P.M. Jørg., *F. mediterranea* (C. Tav.) P.M. Jørg., *F. praetermissa* (Nyl.) P.M. Jørg. and *F. sampaiana* (C. Tav.) P.M. Jørg.

JØRGENSEN, P M, JAMES, P W & JARVIS, C E 1994. Linnaean lichen names and their typification. *Bot. J. Linn. Soc.* 115: 261-405. The typification of the 109 names of lichens described by Linnaeus is discussed. [These include the names for many British lichens. Until recently this long-awaited, scholarly work would have resulted in several unfortunate name changes - thus putting good work into disrepute! However, with the new (Tokyo) Botanical Code now in operation, there should be no changes. The authors have recently published formal proposals in *Taxon* to save the potentially affected names.]

KNOPH, J-G & LEUCKERT, C 1994. Chemotaxonomic studies in the saxicolous species of the lichen genus *Lecidella* (Lecanorales, Lecanoraceae) in America. *Nova Hedwigia* 59: 455-508. Includes a key to all saxicolous species of the genus.

LOHTANDER, K 1994: The genus *Lepraria* in Finland. *Ann. Bot. Fennici* 31: 223-231. Eleven species are treated, one of which, *Lepraria borealis* Lohtander & Tønsberg, is newly described. [This species has been identified from Scotland - see 'New, Rare and Interesting' in this issue.]

SCHEIDEGGER, C 1991. Phylogeography of the genus *Buellia* (Physciaceae, Lecanorales) in Mediterranean Europe. *Botanika Chronika* 10: 211-220. European distribution maps are given for *B. saxorum*, *B. subdisciformis* and *B. (Hafellia) leptoclinoides*.

SEAWARD, M R D 1994. *Checklist of Yorkshire Lichens*. Specially bound reprint from *Proc. Leeds Phil. Lit. Soc., Sci. Sect.* **11**(5): 85-120; ISBN 1-870737-09-1. [Available from The Leeds Philosophical and Literary Society Ltd., City Museum, Calverley Street, Leeds LS1 3AA, price £4.25; - or for BLS members only, from the author, price £2.50]. Over 800 taxa (778 lichen species) are enumerated, of which 130 are based on old records and 239 have been discovered since 1956. For each species, the number of old and modern 10km grid records is provided.

SEAWARD, M R D 1994. Bryology and lichenology. *Trans. Lincs. Nat. Un.* **23**: 153-155. Reports 33 species from Lincolnshire, including eight new county records.

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STENROOS, S 1994. Configuration and location of pycnidia in the lichen genus *Cladonia*, section *Cocciferae*. *Nova Hedwigia* **59**: 537-544. The location and ontogeny of pycnidia are shown to be useful characters at different taxonomic levels.

VITIKAINEN, O 1994. Taxonomic revision of *Peltigera* (lichenized Ascomycotina) in Europe. *Acta Botanica Fennica* **152**: 1-96. Includes illustrated accounts of all the British species, together with European distribution maps. Especially helpful are low power scanning electron micrographs of rhizines. The name *Peltigera hymenina* is reinstated for *P. lactucifolia*, whose basionym (*Lichen lactucifolius* With.) is to be proposed for formal rejection.

WOODWARD, S F 1992. *Swithland Wood: a Study of its History and Vegetation*. Leicestershire Museums, Arts and Records Service [LMARS Publication No. 116]. 230 pp. Includes a short section on the lichens of this wood in Charnwood Forest by S F WOODWARD and A FLETCHER, listing 57 species.

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