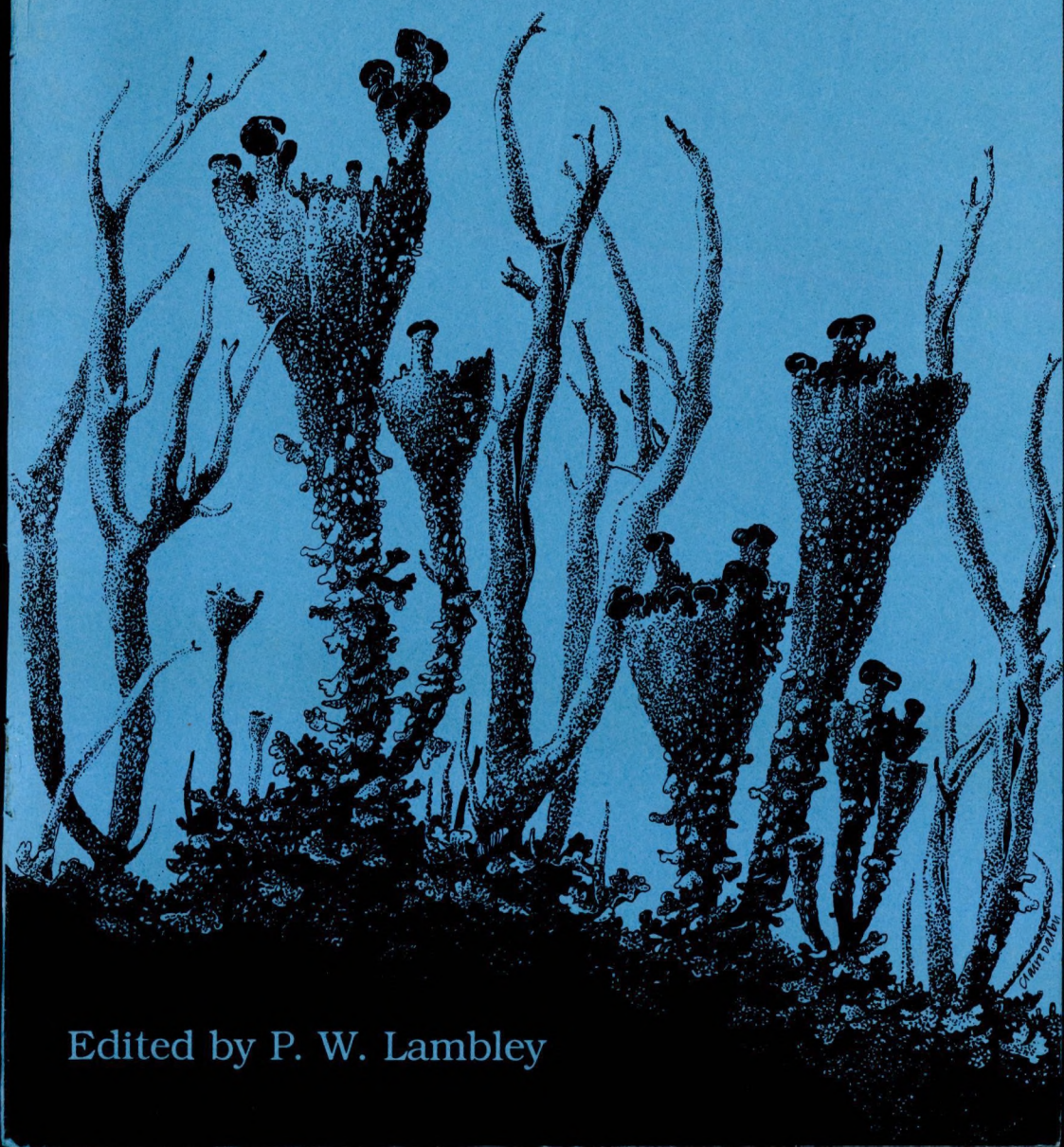


BRITISH LICHEN SOCIETY BULLETIN

No. 82 Summer 1998



Edited by P. W. Lambley

FORTHCOMING BLS MEETINGS

SCOTLAND (Kindrogan) Workshop - <i>Lecanora</i> Leader Peter James	11th - 18th July 1998
SUSSEX SANDROCKS (Wakehurst) Leader Simon Davey	18th - 20th September 1998
WELSH MARCHES (Abergavenny) Leader Ray Woods	23rd - 25th October 1998
ISLES OF SCILLY Leader Peter James	6th - 13th April 1999

1998 MEMBERSHIP AND SUBSCRIPTION RATES

Annual rates except where indicated

(dollar rates are double the sterling rates except where indicated)

ORDINARY MEMBERSHIP for individuals (i.e. not available to institutions) who have signed the Application Form and paid the subscription, being entitled to all publications and facilities of the Society £25.00

LIFE MEMBERSHIP for persons over 60 years of age and having the same entitlement as Ordinary Members (10 times annual rate) £250.00

Each of the categories of **ASSOCIATE** membership enjoys full entitlement to all the facilities of the Society as well as the *Bulletin* but without *The Lichenologist*.

ASSOCIATE MEMBERSHIP £18.50

SENIOR ASSOCIATE MEMBERSHIP for persons over 60 years of age £7.50

JUNIOR ASSOCIATE MEMBERSHIP for persons under 18 years of age,
or full-time students £5.00

FAMILY MEMBERSHIP for persons of the same household as a member, having entitlement to the facilities of the Society but receiving no publications and having no voting rights £5.00

BULLETIN only subscriptions (from Assistant Treasurer) for institutions only £15.00

LICHENOLOGIST only subscriptions (from Academic Press): institutions rate £229.00

Renewal membership subscriptions by sterling cheque, payable to The British Lichen Society, drawn on a UK bank or on a bank with a UK branch or agent should be sent to Mr J M Gray, Assistant Treasurer, British Lichen Society, Penmore, Perranuthnoe, Penzance, Cornwall, TR20 9NF, UK (tel and fax 01736 710616), e-mail: jmgray@argonet.co.uk.

US dollar renewal membership subscriptions should be sent to Dr J W Sheard, Department of Biology, 112 Science Place, University of Saskatchewan, Saskatoon, Saskatchewan, S7N 5E2, Canada.

Overseas members may find it most convenient to pay subscriptions by GIRO (Girobank, Lyndon House, 62 Hagley Road, Birmingham, B16 8PE, UK): the British Lichen Society Giro Number is 24 161 4007.

Applications for membership should be made to The Secretary, The British Lichen Society, c/o The Natural History Museum, Cromwell Road, London, SW7 5BD.

SUBMISSION DEADLINE - 19th September 1998

Cover artwork by Claire Dalby

TAXONOMY, EVOLUTION AND CLASSIFICATION OF LICHENS AND RELATED FUNGI

Joint Symposium

British Lichen Society, Linnean Society, Systematics Association

9th - 11th January, 1998

held at Linnean Society Rooms, Burlington House, Piccadilly London

This was a highly successful meeting organised by Dr Mats Wedin and Dr O William Purvis of the Natural History Museum.

Sixteen lectures were delivered by an international membership on a number of topics designed to explore the present status of classification and inter-relationships of lichenised and some non-lichenised fungi. It was one of the first occasions on which a detailed study of the newer techniques employing cladistic methods based both on morphological phylogenetic approaches and those from molecular biology, had taken place.

The 1998 Dougal Swinscow Memorial Lecture was given by Professor Rosemarie Honegger, of the University of Zurich, entitled "The lichen symbiosis - what is so spectacular about it?". Illustrated with dramatic scanning electron microscope photographs, the interrelationships of the photo- and mycobionts *in situ*, both in desiccated and less desiccated material, were compared. The difference in the mode of collapse of algae (by a form of 'implosion') and fungal hyphae (formation of large gas pockets) was noted. This means, the unusual ability of this plant form to withstand drought was explained.

Towards the end of her presentation she stressed the need for a better recognition of lichenology, and appealed for better support of the subject amongst academic and other educational organizations.

This was followed by a superbly organised buffet in the Linnean Library with suitable liquid refreshment to improve the flow of international lichenological repartee.

The speakers throughout the symposium during the following two days, were from several different countries, with representatives from Austria, Germany, Italy, The Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

It became very clear from the outset that a primary problem for many botanical taxonomists was to define a species within what is, at present, a somewhat unnatural classification. It was hoped that "new" methods might assist lichen classification. Both intrinsic and extrinsic factors are used by different authors to define a species,

and examples of this in *Usnea* were examined by Clerc. The special rôle of species pairs representing primarily sexual and asexual modes of reproduction of lichens was highlighted by Katileena Lohtander and her colleagues, with special reference to *Roccellina capensis*, a South African lichen.

Per Magnus Jørgensen challenged us with the dilemma of naming species which may occur with alternative photobionts, and then look very different, *Lobaria amplissima* being a clear case. *Sticta canariensis* was also discussed and a suggestion was to include the abbreviation *cyan.* or *chlor.* following the name of the appropriate form. *Dendroscocaulon umhausense* was, he felt, a special case which deserved full specific rank until a better way of describing these forms was found.

Thorsten Lumbsch enlivened the audience with a paper on several members of the *Lecanorales*, describing how secondary chemistry was a good species character in some groups (*Lecanora campestris* and similar species) but not so clear a characteristic in others (*Lecanora caesiobubella*). Rikard Sundin concluded, on the basis of his cladistic study, that *Arthonia* is delimited today as an unnatural group, and that several species of *Arthothelium* are more closely related to different groupings within *Arthonia* than to the type species of that genus.

Paul Bridge described the application of molecular biology to the problem of determining species and inter-relationships. He briefly described the way in which the ribosomal DNA gene cluster was used to detect differences in gene sequences between lichen fungi. Two facts emerged which interested this reviewer, (a) that the gene complexity of species recovering from pollution events, eg *Parmelia sulcata*, may be much simpler than the species that was lost due to pollution and (b) it appears that herbarium material some 130 years old could be used to produce the DNA fragments necessary for this type of analysis.

Ana Crespo described the reasoning behind the fragmentation of the older genus *Parmelia* into its many "newer" genera. Using DNA analysis techniques, she suggested that some of these divisions were likely to be justified whilst others were possibly in need of further reappraisal.

Ulf Arup attempted to find out if the large genus of *Lecanora* could in some way be better circumscribed using molecular biological techniques. He was very reticent to subdivide on the evidence he obtained, and even the lobate *Placodium* group, which may have suggested a possible split off, turned out not to be a good criterion. Pier Nimis gave a detailed analysis of the different ways to define genera, but after a lengthy and detailed critical commentary, suggested that more prudence was required by lichenologists when proposing new genera. The use of sub-genera was to be

encouraged. This was particularly supported by audience reaction with an appeal for stability in naming as a general consideration for all databases and for civil applications of lichen data.

Lief Tibell discussed the differences between phylogenetic reconstruction and classification, including arguments against the *a priori* defined 'good' characters and hidden assumptions in methods of analysis.

Katrina Winkä again used molecular studies to study the group *Ostropales* which contain both lichenised and non-lichenised fungi. She noted from these studies that *Conotrema* was closely allied to the *Stictidaceae*, and also that *Graphis* was also in all likelihood in the *Ostropales*. Jan-Eric Mattsson, based on comparisons of DNA sequence work based on a small unit of the ribosomal DNA cluster and ascus structure in the *Parmeliaceae*, concluded that *Vulpicida* (a yellow *Cetraria*), was more closely related to *Cetraria* itself, than to other family members as previous ascus morphology work had implied.

Gerhard Rambold, was unfortunately sick and unable to present his paper, which was presented instead by Mats Wedin. The author had generated a database of some 800 species, primarily for the *Lecanorales*, which contained a wide range of information including substrate preferences, morphological detail, pigmentation, ascospore details, septation, etc.

Heidi Döring gave an account of the ontogeny of the fruit body and used both historical and modern concepts to support her review. She particularly referred to the differentiation of the two families *Candelariaceae* and *Lecanoraceae*, based entirely on chemistry. She demonstrated that ontogeny studies did not support such a distinction. André Aptroot discussed the integration of the lichenised and non-lichenised pyrenocarps into one common system, suggesting that many lichenisation events may have occurred in the evolution of lichens.

During the meeting, an informal dinner was held at the Spaghetti House nearby in Jermyn Street, hosted by the Linnean Society. This was an excellent social evening and many international friendships were made and renewed.

Overall, this was a historic meeting, appropriately housed within the Linnean Society rooms where so many important symposia and lectures in the evolution of the natural sciences have been held in the past. This meeting on lichens will, many felt, be regarded in retrospect as an important milestone in the history of our understanding of lichen systematics.

Brian W. Fox

SECRETARY'S REPORT FOR 1997

Biodiversity and conservation have continued to be high profile activities for our society involving many members during the past year. Members contributed towards production of the *Red Data Book of Britain and Ireland: lichens - Volume 1: Britain*, published in February, a major highlight for the year. A ground-breaking workshop on *Lichens and Habitat Management* was held in Bangor bringing together top level lichen and conservation expertise, providing a stimulating forum for amateur and professional alike. Two principal field meetings were held: a *Caloplaca* workshop led by Peter James at Orierton, Pembrokeshire, and a Dorset meeting led by Bryan Edwards. I would like to thank the leaders and organisers for making these such a success. There have been many local meetings and workshops, especially focusing on churchyard lichens, which have also importantly attracted considerable interest from school children. These would not have been possible without the considerable energy and enthusiasm of Tom Chester and his churchyard team.

There have been a great many other activities. A milestone was production of the first CD-ROM on *Parmelia* bringing together for the first time high quality images (mostly taken by Jeremy Gray), keys and other information to the computer screen with a few clicks of the mouse forming a valuable companion to the Atlas fascicles. A further set of map fascicles (on *Cladonia*) is published and a third is almost complete. Habitat mapping cards are now finished and a decision was taken to start using a system using Biobase for new ecological records for the Society.

We owe special thanks to Peter Crittenden for his sterling work as *Bulletin* editor over the past 7 years and also welcome its new editor, Peter Lambley. The *Lichenologist* also continues to grow from strength to strength, in no small part due to Dennis Brown and his committed editorial team. I would like to thank the retiring members of Council, Tom Chester, Simon Davey, Arthur Lloyd and Neil Sanderson for their valuable contributions to Council and look forward to working with our new members. It has been a pleasure working together with the President, Ray Woods, who has made such a major input into our many activities.

The society's membership is strong and is at an all time high - we currently have 596 members, 533 taking the *Lichenologist*.

William Purvis

CONSERVATION OFFICER'S REPORT - 1997

The major goals for the year were progressed, namely, the Lichen Habitat Management Workshop, general services to the public and Biodiversity Network support (Data services).

Workshop - Lichens and Habitat Management. The year was dominated by preparations for this workshop, held in Bangor. The first of its kind, it brought together experts who have experience of issues relating to lichen conservation and management of sites. It proved to be highly successful, attracting 24 participants, plus a number of day visitors. Some local site managers in North Wales also attended the field meetings. The proceedings will be published as a book, for which 18 chapters are in draft, dealing with a wide range of habitat types in the UK. It is intended that the publication will be produced cheaply enough for ready purchase by a wide variety of site managers, Wildlife Trust wardens, etc. Participants recommended that further workshops should be held dealing, for instance, with site and species monitoring.

Habitats Directive. Advice was given to include new habitats for lichens. 75 additional sites for 'Candidate Special Areas of Conservation' have been proposed by the Department of the Environment. The Biodiversity Steering Group's 'Middle List' of lichens has been prepared. The Wildlife and Countryside Act Quinquennial review added four new lichens to the established Annex 8. But other proposed taxa were excluded, most seriously *Cladina* sect. *Cladina* for which it was felt there was insufficient evidence of threat. Members are hereby asked to provide us with case histories of threats to lichens to help support the case for their inclusion in future threatened species lists.

A special meeting of the Biodiversity Steering Group's '*Collema dichotomum*' Species Action Plan was attended by several members. The group is convened by the Environment Agency.

PLANTLIFE's **Plant Conservation Strategy** was produced. This is the Non-Governmental Organisation's 'alternative' national strategy for plant conservation, paralleling the JNCC strategy of the same name. It is aimed at politicians and policy makers. Fortunately, both documents are in broad agreement - hardly surprising since the same individuals have been involved in preparing them. Lichens have a prominent place in these reports. The Conservation Officer attended the launch of the Lichens Red Data Book in February.

Data continues to be a critical issue. National initiatives now being proposed will, if successful, integrate and network biological recording information from specialist societies and more general groups in the UK. The committee has supported the suggestion that the BLS purchase software for site and species recording. Outstanding surveys include the maritime and woodlands site evaluation reports. It is hoped that these can be progressed during the coming year. Considerable effort on woodland survey and management has been effected, chiefly by the strenuous efforts of Neil Sanderson working on behalf of the committee. Francis Rose distributed explanatory notes to accompany the new Woodland Mapping Card. The churchyard survey report has been given elsewhere; grateful thanks being here extended to Tom Chester and his hard working team for their influential work.

Grants for small ecological projects were approved for surveys of high altitude geological 'fucoid' beds in Sutherland, *Cetraria juniperina*, lake margins, slate waste, electricity pylons and searches for the hopefully not extinct, *Tornabea scutellifera*.

A special report was prepared for the National Trust to help with their programme on conservation of soil types. As ever, numerous requests and 'phone calls were dealt with.

Finally, thanks are extended to the members of the Conservation Committee and to all the members who have helped us with lichen conservation through the year.

Anthony Fletcher

FROM THE ASSISTANT TREASURER

Membership Renewal

Please note that renewal forms are sent to all members with the Winter Bulletin as a matter of expediency. It is not feasible for the mailing house to selectively mail only those whose subscription for the coming year is unpaid. Receipts are sent to all those who pay for life, 5 year or 3 year membership but I fear that these are easily mislaid. If you are unsure of the status of your subscriptions please ask me. Over-payments of subscriptions are refunded to U.K. members but normally held as a credit to overseas members to keep bank charges to a minimum.

Changes of Address

Please note that changes of address should be notified to me, not Academic Press or the Society's Secretary, so that the Society's records can be kept fully up to date.

If you pay your subscription by Giro

It is essential that those members who use this convenient method of payment should please ensure that the name of the sender is entered as the first item in the 'message', as only the first part may appear on the Society's statement. Once again this year the Society has received a number of Giro credits with no comprehensible indication as to whom they are from. Girobank is often unable to give us any information about the originator of such payments.

Proposed New Subscription Rates

Subscription rates are set by the Society for a five year period. The current period is 1995-1999. (Please note that three and five year memberships cannot be started in 1998 or 1999.) New rates must be approved by the Society at an Annual General Meeting, therefore, approval for an increase for the five year period, 1st January 2000 to 31st December 2004, must be sought by Council at the A.G.M. on 9th January 1999. Subscription rates were increased by 33% between 1989 and 1990, by 25% between 1994 and 1995. Council now proposes an increase of approximately 20% for the five year period 2000-2004. The Ordinary Membership rate would be £30.00 (5 years £135, 3 years £85), Associate Membership £22.50, Senior Associate Membership £10.00 but the Family Member and Student rate would remain at £5.00.

Membership Statistics at 31st December 1997

1997 membership **585** (overseas membership 310, U.K. membership 275)

1997 membership

22	Life members
17	Associate members
39	Senior Associate members
6	Junior Associate members
13	Honorary members
486	Ordinary members
2	Family members and
11	Corresponding members'

1996 members unpaid for 1997 37

1997 'Lichenologist' subscribers 532

1996 'Lichenologist' subscribers unpaid for 1997 28

New members during 1997 52

Paying by mandate 114

5 years subs. since 1996 116

3 years subs. since 1996 76

It is encouraging to note that more members joined the Society during 1997 than allowed their subscription to lapse.

Publications and 'Other Items for Sale'

Please note that requests for publications should no longer be addressed to me, but to Will Stevens. The sale of 'Other Items' has been taken over from Elizabeth John by Brian Green. Their addresses are on the relevant pages at the back of this *Bulletin*.

Payments to the Society

It would be appreciated if cheques were made out in favour of 'The British Lichen Society' for subscriptions and purchases, rather than in favour of Officers of the Society as these have to be paid into personal bank accounts, a cheque then having to be drawn for an equivalent sum in favour of the Society.

Late receipt of Publications from the Society

Having conducted a survey of the arrival times of the Society's publications, particularly in Australia and New Zealand, it is evident that there is considerable variation on delays within an individual country. Regretfully, the Society feels that any improvement in the service is beyond its control!

E-mail Addresses

When you next communicate with me please give your e-mail address (if you have one). Experience shows that this is a convenient, speedy and inexpensive way for the Society to communicate with members.

Membership List

In preparation for a new membership list, due to be published with the Winter 1999 Bulletin, I am endeavouring to update my records of names and addresses to show accented letters, such as ü, å, é correctly. I am collecting these from correspondence and membership renewal forms but would be grateful if members would kindly draw to my attention any omissions in Bulletin address labels and correspondence from me during 1998. I regret that Academic Press' computerised address system cannot show accented letters on Lichenologist address labels.

Jeremy Gray

FOR SALE ... THE LICHENOLOGIST Vol. 1 - Vol. 29

This complete set of *The Lichenologist* has been given to the Society for sale by a former member. It is very unusual for a complete set of *The Lichenologist* to become available for purchase as the early volumes were printed in small numbers. Council has agreed that the set should be offered, in the first instance to members, but if not sold, to institutions. Written bids (over £200) should be sent to the Assistant Treasurer to arrive no later than Monday, 31st August 1998 in an envelope clearly marked on the back 'Lichenologist Offer' which will not be opened before 1st September. The highest bidder will be notified by post (or e-mail) and will be responsible for carriage and insurance of what will be a weighty parcel. Payment must be made in sterling.

OVERSEAS MEMBERS' TRAVEL FUND

The BLS is instituting a travel fund for overseas members. The aim is to help and encourage overseas members of the Society to visit the UK primarily to collaborate with UK members in laboratory and/or field research; requests to support visits to use facilities such as herbaria will also be considered, in which case a UK member need not necessarily be involved. Visits to attend conferences will not be supported. The total annual sum available for such awards is £1,000 and the scheme will run for two years in the first instance after which time it will be reviewed. Council considers it preferable that a small number of people are funded to a significant level, if not in full, rather than awarding small sums to a large number of respondents. Unsuccessful applicants can apply again in a subsequent year, and for the same project, unless informed otherwise when the result of the application is announced. Recipients of grants should provide a report on the work undertaken suitable for publication in the *Bulletin* within one year of the visit and the BLS should be acknowledged for their financial contribution in any publications that should result from the work. A copy of any such publication should be lodged with the Society.

Applications should be on **one side of A4 paper** (there are no special forms) stating in the following order: applicant's name, position, full postal and e-mail addresses, fax number, the approximate dates of the visit, details of the travel costs that will be incurred, and the name of the UK collaborator (or person in charge of the herbarium or other facility). A case for support should be made in about half a page (less than 400 words) and should clearly state the aims and objectives of the project, how it will benefit from the collaboration and the expected output. Grants will be awarded partly on the basis of need and applicants should explain what efforts they have made (or will be making) to secure funding from other sources. Applicants should arrange for the UK collaborator to provide a letter of support: this should be sent directly to the society independently of the application.

The closing date for applications for visits during 1999 is **15 November 1998**. All correspondence (i.e. applications, letters of support and submission of subsequent reports and reprints) should be addressed to The Secretary. Successful applicants will receive their grant on arrival at their host institution.

DENNIS BROWN ELECTED AS HONORARY MEMBER

Dennis Brown was elected unanimously as an honorary member of the Society at the AGM in January. His election was proposed by Jack Laundon who said the following:

"I would like to propose Dennis Brown for Honorary Membership. Dennis has done more for the Society than any other person, as well as being a distinguished lichenologist in his own right. Therefore he meets both categories for consideration for this honour, when, according to the Rules only one is strictly necessary. Dennis joined the Society as a junior member way back in 1959 and published his first paper in the *Lichenologist* in 1968. It was on Blakeney Point with his wife Rosemary as co-author. Even before then he kindly stepped into the breach to become Treasurer in 1966, to put right the disorder in the accounts created by Douglas Swinscow. He held this office until 1970 when he was appointed Librarian and Reading Circle Secretary, a position he still maintains. He was Archivist from 1983 until 1996 and has been Senior Editor since 1988. Therefore, Dennis has rendered valuable services to the Society now for over thirty years, often holding several offices at the same time.

Dennis is also closely involved with the politics of Bristol City Council. Evidently he applies his political principles to his editing, because the *Lichenologist* is international in outlook as opposed to being British. He has increased the output from four to six issues each year, which come out on time. There is clearly no more worthy candidate than Dennis Brown."

SMALL ECOLOGICAL GRANTS

Four projects have now been completed under this scheme; interim reports on two of them are given by Vince Giavarini on p. 35 and Olier Gilbert on p. 37. Two of these were held up by unforeseen circumstances; poor weather rendered surveying the fucoid beds north of Loch Maree out of the question and the proximity of nesting peregrines caused the search for *Tornabea scutellifera* to be postponed. A project has recently been approved that involves assessing the current status of four epiphytic lichens which are believed to be rare or declining in Angus (V.C. 90): they are *Anaptychia ciliaris*, *Parmelia acetabulum*, *P. subargentifera* and *Caloplaca luteoalba*. Funds are available to grant aid several more projects that deal with neglected habitats or species. Applications, briefly outlining your topic, should be sent to Dr Oliver Gilbert, 42 Tom Lane, Sheffield, S10 3PB. It is hoped that from now on most copies of the *Bulletin* will carry accounts prepared as a result of these grants.

SILVER MOSS - ORNAMENTAL LICHENS FROM BRAZIL

The economic and practical uses of lichens are manifold (Richardson 1975, 1988, Coppins & Watling 1995). Well known is their use as dyes (Henderson 1984, 1985, Brough 1988), litmus (Moxham 1982a), fixatives/vectors for perfume (Moxham 1980, Richardson 1991, Holmes 1992), for decoration (Kauppi 1979) and as fodder (Richardson 1975). Today, their economic importance is concentrated on the last three purposes (Kauppi 1979, Coppins & Watling 1995). The use of *Cladonia stellaris* as an ornament is well known (Kauppi 1979, Söchting 1984). In Scandinavia, a sustainable exploitation of *C. stellaris* by local landowners, in the boreal forests south of the reindeer husbandry area, has been practised for decades (Kauppi 1979).

During a visit in March 1996 to a market, Bauhaus, Roskildevej in Copenhagen, attention was caught by some greyish lichens for sale in small plastic bags. The bags contained mainly large grey foliose specimens of *Parmotrema*. Two bags with seemingly the highest number of species were bought. The shop assistant explained that the lichens were meant for decoration and were obtained through the wholesale dealer, GASA. A spokesman of this company informed that the lichens, called 'Silver moss', were collected from rock in Brazil by use of scrapers, presumably of a similar construction as that illustrated by Moxham (1982b).

The bags contained the following taxa:

- Cladia aggregata* (Sw.) Nyl.
- Cladonia furfuracea* Vain.
- Cladonia pyxidata* (L.) Hoffm.
- Heterodermia lutescens* (Kurok.) Follm. & Redon
- Hypotrachyna protenta* Hale
- Hypotrachyna* sp.
- Parmotrema dilatatum* (Vain.) Hale
- Parmotrema flavescens* (Kremp.) Hale
- Parmotrema maclayanum* (Müll. Arg.) Hale
- Parmotrema wainioi* (A. L. Sm.) Hale
- Rimelia cetrata* (Ach.) Hale & Fletcher

Rimelia cetrata makes up the bulk of the material. The included lichens belong predominantly to common, or at least locally common, species. In particular *Cladia aggregata*, *Cladonia pyxidata*, *Heterodermia lutescens* and *Rimelia cetrata* are very widespread and are often found in secondary habitats. *Cladia aggregata* occurs throughout most of the Southern Hemisphere, *Cladonia pyxidata* is more or less cosmopolitan, and *Heterodermia lutescens* and *Rimelia cetrata* are widespread

throughout the Tropics. *Cladonia furfuracea*, *Hypotrachyna protenta*, *Parmotrema dilatatum*, *P. flavescens*, *P. macleanum* and *P. wainioi* seem widespread in south-east Brazil, also nowadays after most primary vegetation has disappeared.

This suggests that only common and conspicuous species are collected commercially. Further, that it is unlikely that species will be eradicated, because small and damaged specimens will remain after collecting. However, the easy availability of these lichens in Europe suggests that large quantities are taken away from their habitats in Brazil, and that these habitats may be severely damaged.

In general, collecting of larger quantities, as for commercial purposes, can be a serious threat to lichen populations. A well-known case is the drastic decline in the populations of *Roccella* on the Canary Islands in the beginning of the 19th century, caused by over-exploitation for dye production (Sánchez-Pinto 1995). Also Brightman (1983) and Brightman & Laundon (1985) drew attention to the risk of endangering lichen populations by over-collecting, not only in heavily populated areas like Europe but also in less populated areas, and suggested the substitution of lichens wherever possible; in particular in the case of dyes, where substitutes can be found in vascular plants that can be grown as crops. This is certainly the best solution in cases where human demands exceed the production of natural lichen stands. However, though we as biologists and lovers of nature would rather like to see pure nature, untouched by man, sustainable use may be preferable as it seems to be the only practicable way to preserve nature outside national parks and other protected areas. Commercial use of lichens in a sustainable way by local populations, as with *Cladonia stellaris* in Fennoscandia, may impel local people to protect lichen stands. It seems, however, that collecting in Brazil is more anarchistic, resulting in over-exploitation of the lichen stands. During the IAL Vainio meeting in Brazil, its organiser, Dr Marcelo Marcelli from the Botanical Garden of São Paulo, mentioned the collecting of lichens for commercial purposes in Brazil, and that in certain areas large lichens seem to have declined strongly due to this. Local lichenologists and friends of nature are, therefore, encouraged to examine the extent of the destruction of the lichen stands and if possible encourage local authorities to deal with the matter.

References

- Brightman, F H 1983. Lichen dyes can be abandoned. *British Lichen Society Bulletin* 52: 23-24.
- Brightman, F H & Laundon, J R 1985. *Alternatives to lichen dyes*. British Lichen Society leaflet, 2 pp.

- Brough, S G 1988. Navajo lichen dyes. *Lichenologist* **20**: 279-290.
- Coppins, B J & Watling, R 1995. Lichenized and non-lichenized fungi: folklore and fact. *Bot. J. Scotland* **47**: 249-261.
- Henderson, A 1984. Some memorabilia of the industrial manufacture of the lichen dyestuffs, cudbear and orchil - part 1. *British Lichen Society Bulletin* **55**: 19-21.
- Henderson, A 1985. Some memorabilia of the industrial manufacture of the lichen dyestuffs, cudbear and orchil - part 3. *British Lichen Society Bulletin* **57**: 12-14.
- Holmes, L 1992. Lichens in pot-pourri. *British Lichen Society Bulletin* **70**: 35.
- Kauppi, M 1979. The exploitation of *Cladonia stellaris* in Finland. *Lichenologist* **11**: 85-89.
- Moxham, T H 1980. Lichens and perfume manufacture. *British Lichen Society Bulletin* **47**: 1-2.
- Moxham, T H 1982a. Lichens and litmus. *British Lichen Society Bulletin* **50**: 1-3.
- Moxham, T H 1982b. The use of lichen-scrapers for gathering "Oakmoss". *British Lichen Society Bulletin* **50**: 18-19.
- Richardson, D H S 1975. *The Vanishing Lichens: Their history, biology and importance*. David & Charles, Newton Abbot, London & Vancouver.
- Richardson, D H S 1988. Medicinal and other economic aspects of lichens. - In: *CRC Handbook of Lichenology. Vol. III*. Galun, M. (éd.). CRC Press, Boca Raton, Florida: 93-108.
- Richardson, D H S 1991. A lichen in pot-pourri. *British Lichen Society Bulletin* **69**: 29.
- Sánchez-Pinto, L 1995. A brief history of the Canary weed. In: *Flechten Follmann, Contributions to lichenology in honour of Gerhard Follmann*. Daniels, F J A, Schulz, M & Peine, J. (eds.), Botanical Institute, University of Cologne: 543-551.
- Søchting, U. 1984. Stjerne-Rensdyrlav. *Naturens Verden* 1984(11): 377-382.

Steen N Christensen & Harrie J M Sipman

BRITISH LICHEN SOCIETY SPRING MEETING 1997: DORSET

The 1997 spring meeting from 10th to 18th of May was held in Dorset, based on the coast at Weymouth. Dorset (V.C.9) is a fairly well worked county, but there have been few Lichen Society meetings, the most recent being visits to Portland in 1963 and Oakers Wood in 1985. The aim of this meeting was to visit new or poorly worked localities as well as some of the "hotspots".

Day 1: West Weares, Isle of Portland. 30(SY)682726

The day dawned wet and windy, but soon brightened up. Walking to the undercliff at the eastern end of Chesil Beach, we stopped to look at a wall along the promenade which gave us a good introduction to the common limestone species. Natural limestone boulders on the undercliff itself were much richer. The sun-exposed surfaces were dominated by *Aspicilia calcarea* and *Caloplaca aurantia*, with *Acrocordia conoidea*, *Belonia nidarosiensis*, *Dirina massiliensis* f. *sorediata*, *Opegrapha calcarea* and *Porina linearis* in more sheltered situations. More local species included *Caloplaca cirrochroa*, *Diplotomma epipolium* and *Protoblastenia calva*. Further on a band of chert yielded *Buellia subdisciformis*, *Ochrolechia parella*, *Ramalina siliquosa*, *Rhizocarpon richardii* and *Tephromela atra*. Lunch was taken near the museum at Easton, where we admired luxuriant *Ramalina fraxinea* on the sycamores. In the afternoon we visited the pleasantly sheltered East Weares. Terricolous species were well developed here and included *Bacidia bagliettoana*, *Catapyrenium squamulosum*, *Cladonia foliacea*, *Leptogium gelatinosum*, *Squamarina cartilaginea* and *Toninia sedifolia*. Boulders at Durdle Pier supported *Caloplaca arnoldii*, *Dirina massiliensis* f. *massiliensis*, *D. massiliensis* f. *sorediata*, *Lecanactis grumulosa* and *Roccella phycopsis*.

Day 2: Great Wood, Lulworth Ranges. 30(SY)895818

This hanging ash-hazel woodland on the north side of the Purbeck Ridge had not been looked at in detail before, as it lies within the MoD ranges near Lulworth. Although coppiced in the past, it has not been managed for at least 50 years and revealed a surprisingly good flora. Trying to ignore the overpowering aroma of the ramsons (*Allium ursinum*) we worked the western third of the wood. Old ash and oak standards supported *Arthopyrenia ranunculospora*, *Bacidia biatorina*, *B. viridifarinoso*, *Catillaria atropurpurea*, *Collema subflaccidum*, *Dimerella lutea*, *Lobaria pulmonaria*, *L. virens*, *Loxospora elatina*, *Opegrapha corticola*, *Parmelia crinita*, *Schismatomma niveum* and *Wadeana dendrographa*. The old hazel stems yielded *Arthonia elegans*, *Arthopyrenia viridescens*, *Eopyrenula grandicula*, *Phaeographis dendritica* and *Pyrenula macrospora*.

In the afternoon we moved to the Tyneham valley, also within the range, and met up with Tom Chester who had been surveying the churchyard. Ash trees in the car park supported *Collema subflaccidum*, *Physconia perisidiosa*, fertile *Parmelia glabrata* and most notably, a fine patch of abundantly fertile *P. quercina*.

Day 3: Valley of Stones, Little Bredy. 30(SY)597874

The bottom of this dry chalk valley is littered with sarsen stones which provide the county with one of its few natural acidic rock habitats. Nationally uncommon species included *Buellia saxorum* and *Parmelia delisei*, which was abundant on one rock. County rarities included *Anaptychia runcinata*, *Aspicilia caesiocinerea*, *Candelariella coralliza*, *P. toxodes* and *Porpidia cinereoatra*. Wayside ash and sycamore trees supported *Anaptychia ciliaris*, *A. runcinata* (surprisingly), *Parmelia exasperatula* and *P. pastillifera*.

Further down the valley wayside ash and sycamores supported a rich flora with *Anaptychia ciliaris*, *Candelaria concolor* and *Physcia clementei* all in fruit. *Leptogium teretiusculum*, *Normandina pulchella*, *Parmelia quercina*, and *Usnea articulata* were also noted.

Day 4: Arne RSPB Reserve. 30(SY)972881

Arne Nature Reserve lies on the southern side of Poole Harbour and supports internationally important examples of lowland heathland and mire. There are also small areas of deciduous, which had not previously been looked at for lichens in much detail. Big Wood is an oak-holly woodland with some birch and willow. Parts have been invaded with rhododendron. The old oaks supported a number of old forest indicators including *Arthonia vinosa*, *Arthopyrenia ranunculospora*, *Dimerella lutea*, *Lecanactis subabietina*, *Opegrapha corticola* and *Schismatomma niveum*. Dead wood provided habitat for a number of *Cladonias* including *C. parasitica* and *C. digitata*.

Further south, Slepe Copes, a humid birch-oak-holly wood, supported fine growths of *Usnea* species including fertile *U. ceratina*. Other species of interest included *Loxospora elatina* and *Pachyphiale carneola*.

The afternoon was nicely rounded off with tea and cakes at Leeson House Field Centre near Swanage. Thanks go to Joy Fildes for organising this.

Day 5: Lambert's Castle. 30(SY)370987

This impressive hill fort lies on the Devon border and is one of the highest points in the county. The eastern slope, which provided stunning views over the Marshwood Vale, supports dry heathland with a number of *Cladonia* species including *C. cervicornis* sp. *cervicornis*, *C. ciliata* var. *ciliata*, *C. furcata* and *C. portentosa*, plus

Coelocaulon aculeatum, *Peltigera lactucifolia* and *Placynthiella uliginosa*.

Day 6: Chapmans Pool and Hill Bottom. 30(SY)957762-962778

Chapmans Pool lies on the Purbeck coast and is famous for its fossils which are easily found in the soft Kimmeridge Clay. South of the bay towards St Aldhelm's Head is a wild undercliff running down to the shore. Boulders here supported *Caloplaca marina*, *C. microthallina*, *C. thallincola*, *Lecanora helicopsis*, *Lichina confinis*, *Pyrenocollema halodytes* and *Verrucaria maura*. Many of these maritime species are very local in the county due to the lack of suitable rock. Further from the shore the limestone flora included *Acrocordia conoidea*, *Caloplaca flavovirescens*, *C. lactea* and *Solenopsora candicans*. Chert intrusions produced *Buellia subdisciformis*, *Ramalina siliquosa* and *Rhizocarpon richardii*. On the way back to the cars we stopped to look at the trees and shrubs in Hill Bottom. Of particular interest were *Physcia semipinnata*, *Ramalin calicaris*, and very luxuriant and fertile *R. fraxinea*.

Day 7: Melbury Park, Evershot. 31(ST)570055

This ancient deer park is of international importance for its lichen flora. The party helped with ongoing work by looking in detail at a very rich valley. In the morning we moved all of 150 metres, stopping only for a photo-call under a 750 year old oak named "Billy Wilkins" which supported *Lecanactis premnea*, *Parmelia reddenda*, *Phyllopsora rosei* and *Zamenhofia rosei*. At lunch we were fortunate to see some of the deer, including several Père David's. At the end of the day we had produced a large list, including 30 NIEC species. Also two new species, *Chaenotheca hispidula* and *C. trichialis*, were added to the list for the park.

Day 8: Worth Matravers-Winspit-Seacombe. 30(SY)974777-976760-984766

On the last full day we walked part of the Purbeck coast which provided many different habitats. The wooden fence around the car park in Worth Matravers had frequent *Caloplaca cerina* while *C. variabilis* was on the limestone gatepost. The coastal quarries at Winspit and Seacombe provide valuable habitat for terricolous species including *Catapyrenium squamulosum*, *Cladonia rangiformis*, *Leptogium plicatile*, *L. schraderi* and *Toninia sedifolia*. Limestone pebbles and boulders supported *Caloplaca dalmatica*, *C. lactea*, *Porina linearis*, *Protoblastenia calva* and *Solenopsora candicans*. Bird-perch species included *Caloplaca decipiens* and *Candelariella medians*.

Day 9: Iwerne Courtney Churchyard

On the last morning, the remaining few participants helped Tom Chester and Vince Giavarini with their survey of this very rich church (see below). The new *Endocarpon* on the front wall received much attention. Other species of interest included *Aspicilia caesiocinerea*, *Caloplaca chlorina* (our 20th *Caloplaca* species of the week), *Lecanora*

Thanks go to the Dorset Countryside Service for allowing the use of a room in the evenings. The Bridehead and Ilchester Estates, Ministry of Defence, National Trust and RSPB kindly allowed us access to their sites.

Bryan Edwards

DORSET FIELD MEETING - CHURCHYARDS FOOTNOTE

Sixteen churchyards were visited during the meeting. However, since so much survey work has been carried out in the vice-county in the months preceding and following the meeting, this brief summary considers them in the more general context. Up to four years ago, little was known about the lichens of Dorset churchyards. More recently, a flurry of activity particularly from Humphrey Bowen and Vince Giavarini has produced an immense amount of data which is still being processed. At least 155 sites have now been visited and 307 species positively identified. Currently, this is the highest species figure for any vice-county. There are sixteen sites where more than one hundred species have been recorded and Iwerne Courtney with a total of 160 is vying with Stackpole Elidor in Pembrokeshire for the title of richest churchyard in Britain. As has been pointed out elsewhere, when a high quality calcareous freestone such as the renowned Portland stone is readily available, it may be used for all the stonework at a particular site and this results in a relatively restricted range of species. In Dorset, some of the richest villages and their churchyards sit rather on the Cretaceous Greensand in a sheltered valley below the Jurassic scarp. Because the greensand is not as suitable as the limestone for headstones, it tends to be used mainly for the church buildings themselves and the boundary walls, and the gravestones are constructed from a variety of stones brought in from further afield. There are, apparently, 28 villages built predominantly of greensand and it will be interesting eventually to compare the lichen floras associated with this stone with those of more calcareous areas.

Lecanora pruinosa has been recorded from twelve churchyards in Dorset. Only Hampshire has more site records of this species which as now been found in 40 additional churchyards since it was first re-discovered this century in 1993 at Cricklade in Wiltshire by Keith Palmer and Ishpi Blatchley. To date, the most south-westerly record of *Lecanora pannonica* is at Iwerne Courtney and other species of note in this splendid churchyard include *Thelidium pyrenophorum*, *Gyalideopsis anastomosans* (on wood) and, best of all, a new British *Endocarpon* species abundant on the roadside boundary wall. Another notable Dorset churchyard species is, of course, *Lecanactis hemisphaerica* which occurs in Affpuddle. In contrast, species relatively common in lowland churchyards elsewhere but scarce or overlooked in Dorset include *Lecania türicensis*, *Phaeophyscia nigricans*, *Psilolechia lucida* and *Xanthoria candelaria*.

Tom Chester

CALOPLACA WORKSHOP

Slapton Ley Field Centre, Slapton, 15th August to 22nd August 1997

Peter James led a highly successful workshop devoted to the study of *Caloplaca* and related genera. This meeting was successfully administered by Frank Dobson and twenty four students attended the sessions. In addition, extra-mural activities included badger watching and a slide show on underwater life by Trevor Duke.

At an introductory lecture on *Caloplaca* on the Saturday morning, Peter James outlined the genus and divided the species largely according to substrate type, i.e. maritime, limestone, acid and corticolous. Peter demonstrated many of these species by both specimens from the Natural History Museum and slides of the species taken over many years.

Site 1 Start Point, 20/830371, (15/8/97)

Fourteen species of *Caloplaca* were recorded from this site. The wall leading down from the car park to the headland proved to be very rich. Of particular interest were the two species *Caloplaca dalmatica* and *Caloplaca saxatilis* in several different forms, growing together, so that a direct comparison could be made. Other *Caloplaca* species included *C. crenularia*, *C. flavovirescens*, *C. ceracea*, *C. arenaria*, *C. holocarpa* and *C. citrina*.

Nearer the shore, the species seen included *Caloplaca marina* (dominant), *C. thallicola* and *C. microthallina*, most of which was with its host, *Verrucaria maura*, but in some cases not obviously so. On the higher rocks, *Caloplaca verruculifera* was plentiful. Other species at this level included *Caloplaca littorea*, difficult to find but easily characterised by its markedly isidiate thallus in \pm sheltered crevices.

Other interesting species from the shore rock site included *Rinodina orculariopsis* and *Acarospora impressula*.

Site 2 Bench Tor, 20/670600, 17/8/97

No *Caloplaca* species were found at this site, but many other species were found on the exposed rocks of this tor. Of particular interest were the extensive colonies of *Lasallia pustulata* as well as *Lecidea diducens*, and both C+ and C- forms of *Pseudevernia furfuracea*, and *Rinodina atrocineria*. In a shaded lee of a large boulder, *Parmelia endochlora* and *Parmelia laevigata* were recorded.

Site 3 Berry Head, 20/943566, 18/8/97

This is a disused quarry in limestone area on the sea shore. The *Caloplaca* species found on this site were those more associated with calcicolous habitats. In particular, *Caloplaca aurantia*, *C. citrina*, *C. dalmatica*, *C. flavovirescens*, *C. holocarpa*, *C. ochracea*, and *C. saxicola* were observed on boulders above and within the quarry area. *Rinodina beccariana* (syn. *R. subglaucescens*) was noted on *Armeria* tufts. *Polyblastia gelatinosa* was locally frequent on mosses on the floor of the quarry. A visit to the coastal rocks revealed *Caloplaca marina*, *C. thallicola* and *C. microthallina* in addition, but at much lower levels than on the more acid shorelines.

Of particular note was the presence of *Pyrenocollema halodytes* in many of the seepage tracks of the limestone rocks at the water's edge.

The great diversity in *Caloplaca dalmatica* colonies at this site suggested that several closely related species were involved. Studies on the interpretation of this species and its diversity in continental Europe are clearly needed.

In addition to the lichen interest of the area, the orchid *Spiranthes spiralis* and the Jersey tiger moth were of particular interest.

Site 4 Orley Common 20/824665, 18/8/97

This was a small limestone quarry, within a much larger reserve area. Of particular interest in this quarry was *Caloplaca cirrochroa* in addition to the other calcicolous *Caloplacas*; *Leproplaca xantholyta*, now considered to be a *Caloplaca* by continental authors, was also observed at this site.

Site 5, Bolberry Down, 20/688384, 19/8/97

This is an area of mixed woodland with rock outcrops and sandstone walls. The *Caloplaca* species included *C. arenaria*, *C. citrina*, and *C. crenularia*. Other species of lichens recorded included eleven species of *Parmelia*, including *P. britannica*, *P. tiliacea* and *P. reticulata*. Of particular interest was the presence of *Roccella phycopsis* and *Protoparmelia montagnei* on the sea coast.

Site 6, Peek Moor Gate, Owley, 20/677594, 20/8/97.

Although this was one of the richest and most interesting sites visited, only one species of *Caloplaca* was recorded, namely *C. cerina*. Other notable lichens found were *Dimerella lutea*, *Herteliana taylorii*, *Japewia carrollii*, *Normandina pulchella*, and eighteen species of *Parmelia*, including *P. britannica*, *P. taylorensis* and *P. borrieri*. Also recorded, were *Phyllospora rosei*, *Schismatomma quercicola*, *Acrocordia macrospora*, *Aspicilia grisea*, *Bacidia viridescens* and six different *Usnea* species.

Site 7, Wistman's Wood, 20-612774, 21/8/97

This isolated woodland on Dartmoor has been well-recorded in the past and is of particular interest for its moist cloud-influenced fruticose (*Usnea fragilescens* var. *mollis*, *U. cornuta* and *U. flammea*) and foliose species. However, no *Caloplaca* species were recorded from this site. *Alectoria bicolor* was present in quantity but not *A. smithii* which is possibly now extinct at this site. Other species seen were *Fuscidea gothobergensis* on shaded boulders in wood; *Candelariella coralliza* was also noted on boulders beside the wood.

Churchyard visits.

Slapton churchyard revealed three *Caloplaca* species on the chest tombs, namely *C. crenularia*, *C. ceracea* and *C. arenaria*.

B W Fox and P W James

USNEA USED IN BODY DECORATION IN PAPUA NEW GUINEA

New Guinea tribesmen use a wide range of plant and animal material to decorate themselves for special occasions such as sing sings. This man from the sing sing group Kofika from Upper Asaro in the Eastern Highlands has used *Usnea* sp. extensively to decorate his hair and beard. He was photographed by William Vele, a pupil at Port Moresby International High School, and features for November in the 1998 calendar produced by the school. It is reproduced by their kind permission.

Peter Lambley



RECOVERY OF EPIPHYTIC LICHENS IN THE NETHERLANDS

The Netherlands are known to have a very impoverished lichen flora, largely due to atmospheric pollution. Already in the 1950s Barkman published a map of the Netherlands which showed large areas more or less devoid of epiphytic lichens, the so-called lichen deserts. More recently several authors have noticed the gradual recovery of the lichen vegetation, which can be attributed to major reductions of industrial air pollution. In this, the situation in the Netherlands is comparable to that in Central England.

However, the Netherlands has now an enormous ammonia-problem because of the extremely high numbers of cattle. As a consequence, nitrophytes are very common and often dominant, even on trees with acid bark in large areas of the country.

During the last decade, a detailed grid consisting of a large of relevées (about 6000) has been put in place. Each consists of one or several (usually 10) trees, usually *Quercus* along roads, but in some parts other trees. About 900 relevées have recently been investigated twice. Some observations on this data set, published in Aptroot *et al*, 1997 are repeated here. It contains some detailed calculations about the changes in epiphytic lichens recorded in the Netherlands.

Table I shows the percentages (of 245 epiphytic lichen species) which became more common, remained the same, or decreased. Table II shows the changes in occurrence of the 100 now most common epiphytic lichens in the Netherlands.

It can be seen that only a proportion of the species are recovering (Table I). Many species which were common during the beginning of this century like *Caloplaca ferruginea* and *Lecanora sambuci* are still rare or extinct. However, of the common species, some are expanding very rapidly (Table II). This includes not only ubiquitous, pollutant-tolerant and often nitrophilous species like most *Physcia* and *Xanthoria* species, but also less expected species such as *Parmelia borrieri* and *P. soledians*. Only 10% of the common species are decreasing, most of these being sensitive to ammonia such as *Hypogymnia physodes* and *Evernia prunastri*.

Some species, e.g. *Caloplaca herbidella* and *Parmelia subargentifera*, have even recently been found for the first time in our country, and some others found repeatedly during this monitoring of roadside trees, such as the recently described *Lecanora barkmaniana* and *Protoparmelia hypotremella*, are new to science.

Table I Changes in the occurrence of 245 epiphytic lichen species during three periods. All changes are related to the period 1900-1950. The impoverishment before 1900 is not taken into account. The number of species concerned is given between brackets.

	1950-1980	1980-1990	1990-1995
1995			
increased (>25%) (64)	16 % (38)	23 % (57)	26 %
small changes (67)	24 % (60)	25 % (62)	27 %
decreased (25-50%) (45)	31 % (75)	23 % (56)	19 %
decreased (>50%) (69)	29 % (72)	29 % (70)	28 %

Table II The occurrence of 100 common epiphytic lichen species¹⁾ in the Netherlands during this century and the most recent changes between 1990 and 1995. For each species the mean estimated frequency in 5x5 grid squares is given during four periods²⁾. The recent changes between 1990 and 1995 are based on 904 relevées with 10 trees, investigated after an interval of 5 years between (+100% means twice as much as relevées 5 years earlier).

period:	-/50:	50/80:	80/90:	90/95:	changes 90/95:
<i>Anisomeridium nyssaegenum</i>	4	4	5	7	+>1000%
<i>Arthonia radiata</i>	7	5	6	6	+30%
<i>Arthonia spadicea</i>	5	4	5	6	+600%
<i>Bacidia arnoldiana</i>	3	6	8	9	+300%
# <i>Buellia griseovirens</i>	4	6	7	7	+20%
# <i>Buellia punctata</i>	9	9	9	9	+10%
<i>Calocium viride</i>	7	4	5	5	+50%
<i>Caloplaca obscurella</i>	4	4	5	6	+100%
<i>Caloplaca phlogina</i>	5	4	5	8	+300%
<i>Candelaria concolor</i>	7	5	6	8	+80%
<i>Candelariella reflexa</i>	5	6	7	9	+180%
# <i>Candelariella vitellina</i>	7	8	9	9	+40%
<i>Candelariella xanthostigma</i>	7	5	6	7	+60%

<i>Cetraria chlorophylla</i>	6	5	4	4	-25%
<i>Chaenotheca ferruginea</i>	5	6	7	7	+30%
<i>Chaenotheca trichialis</i>	6	3	5	6	?
<i>Chrysothrix candelaris</i>	7	3	3	4	+400%
# <i>Cladonia chlorophaea</i>	7	7	7	8	+70%
# <i>Cladonia coniocraea</i>	7	8	8	8	+3%
# <i>Cladonia fimbriata</i>	7	7	7	8	+100%
<i>Cliostomum griffithii</i>	4	6	7	8	+70%
<i>Dimerella pineti</i>	4	4	6	7	+250%
# <i>Diploicia canescens</i>	8	7	8	9	+60%
<i>Evernia prunastri</i>	9	9	9	9	-7%
<i>Gyalideopsis anastomosans</i>	0	4	6	8	+500%
# <i>Haematomma ochroleucum</i>	5	5	6	6	+4%
<i>Hyperphyscia adglutinata</i>	7	3	4	6	+900%
<i>Hypocenomyce scalaris</i>	6	6	6	6	-1%
<i>Hypogymnia physodes</i>	9	9	9	8	-25%
<i>Hypogymnia tubulosa</i>	6	5	5	6	+30%
<i>Lecania cyrtella</i>	7	4	5	6	+150%
<i>Lecanora aitema</i>	3	5	4	4	-20%
<i>Lecanora carpinea</i>	9	7	8	9	+60%
<i>Lecanora chlarotera</i>	9	9	9	9	+20%
# <i>Lecanora conizaeoides</i>	9	9	9	8	-40%
# <i>Lecanora dispersa</i>	8	7	9	9	+40%
<i>Lecanora expallens</i>	9	9	9	9	+10%
# <i>Lecanora hageni</i>	8	6	8	9	+400%
# <i>Lecanora horiza</i>	8	5	5	5	?
<i>Lecanora pulicaris</i>	6	6	7	7	+12%
# <i>Lecanora saligna</i>	7	4	5	6	+250%
<i>Lecanora symmicta</i>	9	6	8	9	+20%
<i>Lecidella elaeochroma</i>	9	7	9	9	+80%
<i>Lecidella flavosorediata</i>	0	2	6	7	+300%
# <i>Lepraria incana</i>	9	9	9	9	-4%
# <i>Micarea denigrata</i>	4	4	4	5	?
<i>Micarea nitschkeana</i>	5	6	7	7	?
# <i>Micarea prasina</i>	5	7	7	8	+150%
<i>Ochrolechia androgyna</i>	6	5	6	6	+20%
<i>Opegrapha atra</i>	9	5	6	7	+90%
<i>Opegrapha niveoatra</i>	7	4	5	7	+>1000%
<i>Opegrapha rufescens</i>	6	4	4	5	+>1000%
<i>Opegrapha vermicellifera</i>	7	4	5	7	+90%
<i>Opegrapha vulgata</i>	8	5	6	7	+250%

<i>Parmelia acetabulum</i>	8	8	8	8	-5%
<i>Parmelia borrieri</i>	7	1	2	7	+>1000%
<i>Parmelia caperata</i>	9	4	7	9	+40%
<i>Parmelia coniocarpa</i>	9	3	4	8	+>1000%
<i>Parmelia elegantula</i>	5	3	4	5	+200%
<i>Parmelia exasperatula</i>	7	7	7	7	+30%
<i>Parmelia glabratula</i>	5	4	5	5	+90%
<i>Parmelia laciniatula</i>	3	4	5	5	+25%
<i>Parmelia revoluta</i>	8	4	6	8	+70%
<i>Parmelia saxatilis</i>	7	5	5	5	+15%
<i>Parmelia soredians</i>	3	0	1	8	+>1000%
<i>Parmelia subaurifera</i>	9	8	9	9	+25%
<i>Parmelia subrudecta</i>	8	8	9	9	+25%
<i>Parmelia sulcata</i>	9	9	9	9	+10%
<i>Parmelia tiliacea</i>	7	4	4	5	+75%
<i>Parmeliopsis ambigua</i>	3	4	5	5	+8%
<i>Pertusaria albescens</i>	7	6	6	6	+40%
<i>Pertusaria amara</i>	8	6	6	6	+15%
<i>Pertusaria coccodes</i>	5	5	6	6	+30%
<i>Pertusaria pertusa</i>	7	5	5	5	+20%
# <i>Phaeophyscia orbicularis</i>	6	7	9	9	+90%
<i>Phlyctis argena</i>	8	6	7	7	+15%
# <i>Physcia adscendens</i>	7	7	9	9	+80%
# <i>Physcia caesia</i>	5	7	9	9	+40%
# <i>Physcia dubia</i>	2	5	9	9	+60%
<i>Physcia stellaris</i>	5	3	5	5	?
# <i>Physcia tenella</i>	9	9	9	9	+15%
<i>Physconia distorta</i>	9	5	5	5	?
<i>Physconia enteroxantha</i>	5	5	5	6	+75%
# <i>Physconia grisea</i>	9	8	9	9	+70%
<i>Platismatia glauca</i>	5	5	5	5	-8%
<i>Porina aenea</i>	5	4	5	6	+150%
<i>Protoparmelia oleagina</i>	0	2	5	6	+90%
<i>Pseudevernia furfuracea</i>	6	6	6	6	-12%
<i>Pyrrhospora quernei</i>	4	5	6	7	+70%
<i>Ramalina farinacea</i>	9	8	9	9	+20%
<i>Ramalina fastigiata</i>	9	7	8	8	+15%
<i>Ramalina fraxinea</i>	8	5	4	4	+25%
<i>Rinodina pityrea</i>	0	0	3	7	+>1000%
<i>Schismatomma decolorans</i>	5	5	6	6	+25%
<i>Strangospora pinicola</i>	5	4	5	6	+>1000%

<i>Usnea hirta</i>	7	4	5	5	+15%
<i>Usnea subfloridana</i>	7	5	4	5	+50%
<i>Xanthoria candelaria</i>	8	8	9	9	+12%
# <i>Xanthoria parietina</i>	9	8	9	9	+60%
<i>Xanthoria polycarpa</i>	6	8	9	9	+30%

#= also common on other substrates

explanation:

- 1) Only lichen species are given for which bark is the most important substrate. The data are based only on epiphytic stations.
- 2) The frequency in 5x5 grid squares: 0= absent; 1= 1-3 squares; 2= 4-10; 3= 11-29; 4= 30-79; 5= 80-189; 6= 190-410; 7= 411-710; 8= 711-1210; 9= 1211-1677 squares; 1677 squares equals the whole of the Netherlands.

Reference

Aptroot, A et. al. 1997. Mossen en Korstmossen pp24-42 in K. Veling, L. Verheggen & I. van Halder, Vereniging Flora en Fauna (eds.) *Jaarboek Natuur 1997, De winst-en verliesrekening van de Nederlandse Natuur* Uitgeverij KNNV, Utrecht/VOFF, Wageningen, 272pp.

Kok van Herk & André Aptroot

LICHENOLOGY IN ESTONIA IN 1995-1997

In 1995 a new collective project on Estonian lichen flora was started by a group of lichenologists in Tartu (T. Randlane, A Saag, H. Trass and several students). The aim of this project is to compose a new updated checklist of all the Estonian lichens on the basis of contemporary systematics and species concept. The first checklist was published by Trass in 1970 (in Russian) and is now out of date. The key work "Macrolichens of Estonia", which was printed in 1994 (in Estonian), includes keys and descriptions for 332 macrolichens but excludes the microlichens. These, represented by some 450-500 species in Estonia, are now the main subject of our research. All the herbarium specimens of microlichens in TU (University of Tartu) and some from TBA (Tallinn Botanical Garden) and IE (Institute of Ecology in Tallinn) are being critically revised. At the same time (1996) the database of the lichenological herbarium was started using the program BRAHMS and is now being continuously updated. The new checklist will be finished by the end of 1998. The project has been approved and

financially supported by the Estonian Science Foundation. A number of master and bachelor theses have been already defined or are expected as co-products of that project: these are: "The lichen genera *Amandinea*, *Buellia*, *Diplotomma* and *Rinodina* in Estonia" by Mari Sarv in August 1997; "Lecideoid lichens in Estonia" by Ave Suija in December 1997; "Genus *Lecanora* and allied taxa in Estonia" by Inga Jürjado, and "*Caliciales* in Estonia" by Piret Lõhmus, the latter two expected in spring 1998.

Besides this large project, other topics are being researched by Estonian lichenologists. Prof. em. Hans Trass (Tartu) is carrying out fieldwork on the ecology and flora of virgin forests in Estonia. Andres Saag and Tiina Randlane (Tartu) continue their studies on the cetrarioid lichens, whilst, Marina Temina (Tallinn) defended her candidate degree in 1997 in Jekaterinburg (Russia) on the ecological studies of lichens on limestone outcrops in Northern Estonia. Finally, Heinrich Aasamaa (Tallinn), at the age of 88, actively continues to collect lichens to expand his private herbarium.

Opportunities for international co-operation have greatly increased during the last few years. Eight people from Estonia participated in the IAL3 congress in Salzburg in September, 1996; post- and undergraduate students A. Suija, I. Jürjado and P. Lõhmus visited the herbaria of the University of Helsinki and the University of Latvia in Riga in spring, 1997, to review the Estonian lichens in these collections; Pekka Halonen (Oulu) visited Tartu in January 1997 to look through and verify the identifications of the genus *Usnea*; Arne Thell (Lund) spent some days in Tartu and Tallinn in May, 1997.

The publication "*Folia Cryptogamica Estõnica*", founded in 1972 and printed irregularly for thirty years, was recently resurrected. It is a journal of the Estonian Naturalists' Society which includes papers on mycology, lichenology, bryology and phycology. The journal is open to all persons, but preference is given to contributions connected with Estonia and its neighbouring territories. The first issue (fasc. 31) for five years was published in September 1997, and the journal is now expected to come out annually. The next volume will be printed in May 1998 and is dedicated to the 70th jubilee of Prof. em. Hans Trass.

The lichenological herbarium of TU is estimated to contain about 62,000 specimens at present. The section of Estonian lichens with c. 24,000 specimens is currently under critical investigation. A considerable number of duplicates from the southern hemisphere have kindly been sent to our general lichenological collections by Dr Heinar Streimann from CANB during the last few years.

Tiina Randlane

CZECH LICHENOLOGY IN 1997

The year 1997 was the tenth year of activity of the Bryological and Lichenological Section of the Czech Botanical Society. The establishment of the Section (28.2.1988) was a response to a poor situation in bryology and especially in lichenology in the eighties. Although both disciplines have a long tradition in the present territory of the Czech Republic, the number of lichenologists was decreasing in the last decade. There were no lichenologists working at any university in the Czech Republic at the end of the eighties with the notable absence of any representative of those in middle and younger generations (*Bryonora* 9: 20-27). Consequently, surveys of lichen distribution in the country were rather scarce. The main objects of the new section were to encourage and promote in lichenology among students and botanists, together with the co-ordination of lichenological research. Since its foundation ten years ago the number of members has more than doubled (from 32 to 77 members) and the varied activities are well attended. Now many students at almost all of our universities are interested in lichenology, while post-graduate students will form new centres of lichenology soon. Contacts with lichenological friends and colleagues abroad are very important and valuable. A retrospective view on the last ten years of our Section summarizes the main facts (see *Bryonora* 20: 3-4).

Last year field meetings were organised in western Bohemia (Slavkovský les Mts., 36 participants) in spring and in eastern Moravia (White Carpathians Mts., 43 participants) in autumn as well as several short excursions for students. A small lichenological exhibition "The mysterious world of lichens" by J. Halda (originally displayed in 1996 at the Museum in Deštné in Orlické hory Mts.) travelled in 1997 to the regional museums in Litoměřice and Šumperk.

In the newsletter *Bryonora* 19 there is e.g. an article on the Czech distribution of *Micarea lithinella* by Z. Palice. This lichen species was often overlooked formerly and many new localities were found by the author. A short report on a revisit to some localities in SW Moravia after 40 years by J. Liška, A. Vězda and R. Dětinský highlighted the extinction of many lichens. There was also a short obituary of F. H. Brightman. In *Bryonora* 20, short articles on the rare species *Collema dichotomum* in Bohemia by I. Pišút and on an interesting locality of epiphytic lichens in the Malá Fatra Mts., Slovakia by A. Guttová were published. There was also a list of lichens collected during the 9th Bryological-Lichenological Days and additions to the Czech and Slovak lichenological bibliography.

Jiří Liška and Zdeněk Černohorský

WHO PINCHED THE PARMELIAS?

Since retiring a decade ago, lichen studies around the cliffs, shores and sand dunes of Cumbria, Dumfries & Galloway have become a full time occupation for both of us, extending to Arran & Kintyre, and moving inland to churchyards on a wide scale.

The Rhins of Galloway are a favoured area, lichens abound, the coastal scene is colourful and the quality of the lichen flora first class. Around 16.00 hrs on a summer's day, photographers have their well known locations for excellent shots of the polychrome cliffs at the Mull of Galloway with its sheets of *Caloplaca* etc. in full light. At Corsewall Point, the north end of the Rhins, the cliffs are lower, but in spring, the saxicolous greys and yellows intermix with sea pinks, and if one times it right, with the Seacat or HSS at speed in the background, you have a wonderful picture, and maritime lichen area to study. On a similar scale at the Mull of Kintyre, the south facing cliffside lichen flora sets the scene.

From any of the three points mentioned, one can, on a clear day look across to Northern Ireland, and on several occasions we have wondered what would the churchyards hold, what's on the cliffs and by the shore?

Belfast has been the main shopping town for people of Stranraer and district for many years, and with the introduction of fast ferries, a visit there is easy and so, during 1996, we had a few single lichen safari days in Belfast and Larne. Then in 1997, we and two friends spent four separate weeks in the province: during May, September, October and late November, our object to see what we could find and compare with Galloway and its superb lichen flora.

An hour's crossing on the 'Jetliner' in May brought us down to earth quickly and shocks came fast, until we settled and came to terms with the situation and a host of questions. In order to find some answers we found ourselves returning, as we hope to continue to do during 1998.

Our first church, with its tall spire, was typical in layout of many back across the North Channel, but the lichen flora was dull. However, here we were with much limestone and close to the sea. We left to explore our first glen on a lovely calm, sunny day, going inland to a cross on the map. What would we find? That cross was a church, on its own, no memorials; the building brilliantly painted from top to bottom with enamel paint, the whole site spotless, not a lichen in sight.

Our methodology with field outings, such as these, is based upon the maxim that "two's company, three's a crowd". If it is a leisurely day, then a small group can spend

a pleasurable few hours in much discussion over puzzling species, but for positive field work, two's enough. Planning a route in the evening, our companions Mike Stewart and his wife Susan, would next day, follow that route, say, clockwise, whilst Florence and I would travel anti-clockwise. Initially, no more than an hour at any given site, provides each with four hours provisional study. We do not meet up during the day, but bring together all notes and data during the evening and prepare another route for the following day. The last day we revisit any site with problems encountered during the week. 100ml screw top plastic water sample containers, and 35mm black plastic film containers are used for specimens which are sorted and checked by us all on return home. At that stage we decide on further field work, if required at any particular site, and how and by whom it is undertaken.

Our travels along the Co. Antrim coast and through the lovely glens proceeded along these lines when on our third evening's data compilation it dawned on us that we had not yet seen our old friends *Hypogymnia physodes*, *Parmelia mougeoti*, *P. saxatilis*, and *Xanthoria parietina* anywhere during some 200 miles of travelling.

At the historical site of Layde Church, just north of Cushendall stood another friend in the form of a fine elder tree. In Galloway, just 20 miles away, this coastal tree would be good for red wine, elder champagne, and be covered from head to toe with the brilliant yellows of *Caloplaca/Xanthoria* and greys of *Physcias*, etc. but this fine tree by the old smuggler's coastal pathway, had not the pleasure and companionship of a single thallus - why?

We visited a wide range of churchyard sites throughout Co. Antrim, Co. Londonderry and Co. Tyrone, some came close to our Galloway standards, but many were almost lichen free. At one church, in north Antrim, a major reconstruction had just been completed, and the whole site glistened supreme in new cream paint, the walls of the church freshly stone-dashed with a mixture of hard chalk and basalt, grass close cut, every memorial highly polished and in place, not a single one leaning or broken.

Later we found, at further sites in Co. Antrim and one in Co. Tyrone, how this is achieved. The whole churchyard and church might be closed for up to a year. The church, including the complete spire would be enclosed in scaffolding and plastic sheeting, any repairs undertaken, the building pressure washed and painted from top to bottom - with enamel paint. The churchyard memorials, grass, pathways, driveway, car parks all being upgraded, so that the end product is as new. Headstones are invariably highly polished and clean, as are the roof tiles or slates. Where this was being undertaken we couldn't enter the site. However, despite all the pressure washing, we usually managed to find a few favourites, on completed sites, if only those ground loving species: *Peltigera membranacea* and *P. rufescens*.

The Antrim coast road, in the morning sun is scenically beautiful, massive chalk/limestone cliffs, outcrops interspersed with red sandstone, plenty of good parking places, essential for both photography and searching for lichens - and the emphasis is search.

Along the north Antrim and Londonderry coast, the scenery is equally impressive, with the road running for the most part just away from the coast, north facing and wide open to the full force of the north Atlantic Ocean, and a 2.4 m tidal range, mean spring tide. We saw no lichen zonation, as generally accepted for acidic coastal cliffs and exemplified along the Galloway south facing coast. Along this causeway coast, as the surfers ride the incoming Atlantic swells, close by, headlands of hard cretaceous chalk, the magnificent cliffs of White Park Bay and The White Rocks, are home to a variety of foveolate pyrenocarps. Calcareous sand dune systems support fine displays of *Cladonia*, *Collema*, *Leptogium*, *Peltigera* and *Toninia*, adjoining the golf courses at Portballintrae, Portrush, Portstewart, Castlerock and Benone. On the dolerite offshore stack of Sheep Island, maritime lichens are assured of an ample supply of nutrients from one of the largest cormorant colonies in the British Isles, whilst closer inshore several smaller basalt sea stacks and arches provide considerable interest near Ballintoy. About a mile to the north of Portrush an arcuate chain of low rocky cliffs, known as The Skerries, support a wealth of species swamped by the swell on the specialised local geology known as Portrush Sill and Lias; here meeting uniquely with a much warmer summer water temperature than at any other open coast area in Northern Ireland. How this relates to the lichen flora is one of the aspects we are pursuing.

We had hoped to have studied the basalt cliffs at Downhill, below the Mussenden Temple, but the cliff face was breaking up and work was underway, to prevent the temple itself falling. We therefore turned our attention to the west of Downhill, and Tertiary basalt cliffs, extending 2.5 km to Eagle Hill. At first sight these cliffs/scarps appeared to be virtually lichen free, but as we found our way around the boulders, over the scree, etc., and saw how the north Atlantic spray brought in calcareous sand onto, up and over the cliffs, allowing thrift, sea plantain, etc., to thrive, we recorded a lichen-flora of considerable interest, and began to see signs of zonation. These spectacular inland sea cliffs and those at Binevenagh, 6km south, will certainly repay further study.

Northern Ireland holds many surprises, with the least percentage of woodland in any European country, where one travels miles, with almost lichen-bare trees, and then comes upon superabundance as at Craigagh Wood by the A2 near Cushenden. Similarly in the Sperrin Mountains (resembling parts of the north Pennines) very little

recorded, until, leaving the small market town of Draperstown, we find a couple of mature sycamore trees enveloped with a superb mantle of lichens, and after travelling more miles in this lovely clean air, the area wide open, again without our seeing a sign of a lichen, we turn a corner and the thorn bushes, fences, posts, etc. are covered for about a kilometre or so.

The Portrush/Portstewart/Mallin Head area is reputed to have the cleanest and best air quality in Europe, and the three counties we have explored all exhibit an open clean environment, even close to industrial Belfast. We have given much thought to Dr Francis Rose's studies and the Hawksworth/Rose Zonal scale and note that this is listed as for England & Wales. Why, is it that when we travel across the machairs, along the very busy A75 Euroroute between Newton Stewart and Glenluce, and stop at a layby, the rock outcrops, trees, hedges and fence posts support a luxuriant lichen flora, despite the constant 24 hour heavy traffic load, mainly diesel lorries, and yet in this wonderful clean Northern Ireland climate, it is so difficult to find our *Hypogymnia*, *Parmelia*, and *Xanthoria* stalwarts? It isn't all a sad story though. Can it be that quantity in Galloway has been exchanged for quality in Northern Ireland?

Our love of the coast is balanced by an equal dislike of cities, but surprisingly most interesting find, based upon a tip from Howard Fox turned up in the centre of Belfast. *LICHENOIDES POPULUS* isn't in the 'Flora', it's terrestrial, mobile and positively a Northern Ireland speciality. It has been found near Larne, The Island of Magee and several places in Co. Down. It might be found across the St George's Channel in Wigtownshire this coming summer. Not a single plant, but a small group of enthusiastic lichenologists, within the Belfast Naturalist's Field Club, who meet up just about every month to study local lichens under the wings of Mary Allen and Mike Simms.

In Northern Ireland there is an abundance of the purest air and wind, so whoever pinched the *Parmelias* might like to come up with some answers, or please put them back!!

We would welcome observations from BLS members on comments raised in this article.

Should anyone wish to join in with the Belfast Lichen Group, then please contact Dr Mike Simms, Ulster Museum, Belfast. Tel. 01232 383133.

Norman & Florence Hammond 39 Outgang Road, Aspatria, Carlisle, Cumbria CA5 3HS.

THE CHURCHYARDS PROJECT IN URBES AND SUBURBS

This is being written on the morning after the day before - usually a time for deflation and frustration - 'if only' and 'what might have been'. The day before, Saturday, 14th March, was spent with 30 children, aged from 7 to 14, and over 20 adults in Wolvercote churchyard in the suburbs of Oxford introducing them to lichens. For once, things had gone well - perhaps better than expected. This was due in no small measure to the local organiser, Dr Alison McDonald, who publicised the event so well that people had to be turned away and also provided us with a meeting room inside the churchyard, tables for a display of specimens and books, a screen for the introductory slides, hand lenses and six excellent university binocular microscopes with built-in illumination. Success was also due to Vanessa Winchester, Ivan Pedley and Ken Sandell who came along to provide valuable expertise and moral support, and to Council for generously purchasing some splendid portable display panels for days such as this. These were being used for the first time. I shall be their guardian on the understanding that they are available for use by any members provided that the necessary transportation can be arranged.

The children at Wolvercote were as involved as the adults, immaculately behaved and most perceptive. I was asked, for example, whether, in the southern hemisphere, *Psilolechia lucida* grew mainly on the west faces of sandstone headstones!

The event was supported financially by Rural Action to the extent that there was no course fee and we were able, without charge, to provide every child with a set of four work sheets ('I Spy Through My Little Eye-Glass!') and the adults with other aids to identification. Better still, everyone received a set of three leaflets, each with colour photographs of 12 common churchyard species and accompanying notes. These were based on a sheet from the education pack **Exploring Churchyard Lichens**. The real stars of this enterprise were Jeremy Gray and Frank Dobson who went to immense lengths to provide the illustrations from a mixture of slides and prints scanned on to computer disc and these, in turn, were faithfully reproduced by Parchment Ltd of Oxford. All of this was achieved in double quick time and 300 copies of each were ready just two days before the event.

The first leaflet is based on the original sheet and includes six of the commonest foliose species (*Xanthoria parietina*, *X. calcicola*, *Physcia adscendens*, *P. caesia*, *Phaeophyscia orbicularis* and *Physconia grisea*). The second was produced specifically with Wolvercote in mind, most of the photographs being taken there by Jeremy Gray on a visit to Oxford last December.

The third leaflet illustrates some of the more typical urban churchyard species and was produced for a long term project recently initiated by the Brent Ecology Unit in North London. The plan is to involve local sixth-formers in recording lichens on both trees and stone in the borough and to relate their findings to pollution levels. Frank Dobson and I spent a day at three sites there in December and recorded 26 saxicolous species and 22 corticolous species, including numerous thalli of *Parmelia caperata* and *P. perlata* on trees in Fryent Country Park. In Kingsbury Old churchyard, we found *Lecanora polytropa* and *Amandinea* cf. *punctata* on granite chippings, while, at Paddington Cemetery, *Lecidea fuscoatra* and *Trapelia coarctata* occurred side-by-side on a sandstone ledger.

I returned for two days last week, visiting the two saxicolous sites and making an initial survey of Willesden Cemetery. A more general look at Paddington Cemetery revealed the dominant species to be *Candelariella aurella*, *Lecania erysibe* and *Phaeophyscia orbicularis* together with goodly scatterings of *Lecanora dispersa* agg. 26 species were recorded including *Parmelia mougeotii*, *Cladonia chlorophaea* on soil and well-developed *Phaeophyscia nigricans* (cf. Dorset article p 14). It was also interesting to note that there were at least two headstones on which *C. aurella* was being attacked and destroyed by *Sarcopyrenia gibba*. At Willesden, 28 species were recorded with sandstone kerbs being surprisingly well colonised. There was a good deal of *Lecidella stigmatea* with *Lecidea fuscoatra* and *Trapelia coarctata* side by side.

Because the morning of the second day was so wet, I visited **The Natural Stone Show** at Wembley Exhibition Centre. This is held every other year and the majority of the stands celebrated highly polished imported marbles and granites and the many methods of keeping them in pristine condition by spraying and blasting to kingdom come any organisms such as algae and lichens that had the temerity to colonise them! Tucked away in one corner was the **Living Churchyards Project** with our green churchyard leaflet on display. I received a sympathetic ear from the exhibitors of Purbeck, Portland and York Stone and from the **Dry Stone Wall Association** and even took some orders for the identification leaflets. I think B.L.S. ought to set up stall in March 2000, even if just, as it were, to put the cat among the pigeons.

The churchyards fact sheet continues to be sent out both to non-members and to new members, and is also on the Internet. The suggested newsletter for members (see *Bulletin* 81:24) is also now available. It was first published in February and sent out to officers of the Society and to members who requested it. One of the hardest tasks was to come up with an appropriate title. The two main contenders were **Stone Chat**, and **Saxicola** - which happens to be the Latin name of the genus of birds that includes the stonechat and whinchat! In the end, the more informal title won the day. Hopefully, the four-page newsletter will become a dialogue and it is pleasing already

to have received a number of responses and contributions. Among regular features will be a miscellany of short news items entitled **Chippings** and a rather more in-depth look at particular genus, the first being **Focus on Lecanora**. If you haven't yet received a copy and would like one, please let me know. I must stress, however, that it is intended primarily for members who are **actively involved** in surveying or studying churchyard lichens! The next edition is likely to appear midway between *Bulletins*.

A limited number of the three identification leaflets are also available from me for £1.50, with cheques made payable to 'Tom Chester' and preferably accompanied by an A5 stamped-addressed envelope. As half of the first 300 have already been sold to Wolvecote and Brent, the Society is certain to make a profit on the venture and it is probable that more such simple identification aids will appear in the not too distant future.

Tom Chester
19 Lawyers Close, Evenley, Brackley, Northants, NN13 5SJ

MARGINS OF FRESHWATER LAKES

These investigations provided many exciting and enjoyable moments over the past 12 months. The sites are just as mysterious and unpredictable as the many legends that have been written about them. For example, quite unexpected was the rediscovery of *Lecanora achariana* in North Wales. Not as one might have expected clinging for dear life to a single nutrient enriched boulder, but in healthy abundance colouring the marginal rocks yellow.

Thanks to the grant I was able to carry out a detailed programme of surveys at ten specially selected sites and make more superficial observations at scores of others. During 1997 a week was spent in the Lake District and two long weekends in North Wales. Around 150 lichen taxa were encountered including a widespread and tricky group of dark coloured crustose species with cyanobacteria. I have now developed and tested a record card for freshwater lichens which will eventually be made available to members. Field data has been lodged with the society and an analysis of the findings will be written up for the *Lichenologist* following further work which will extend the studies into Scotland. Incidentally, a dip in the habitat following a hard day of fieldwork is highly recommended.

Vince Giavarini

LICHENS IN KEW GARDENS, RICHMOND, SURREY

In January 1998, Kew Gardens were visited briefly in conjunction with a visit to the herbarium and to the AGM of the British Lichen Society. In contrast to the situation in 1970 (Gilbert 1970) when only one epiphytic species (*Lecanora conizaeoides*) was recorded from the garden, now 25 species were found epiphytically, 24 there together on one single tree. This includes species which are thought to be sensitive to sulphur-dioxide pollution like *Parmelia caperata* and *P. perlata*. From these observations it is apparent that the air pollution in the area has been drastically reduced over the last decades, and that the lichens have reclaimed lost areas. Most of the species mentioned below are new to the grid square (51/17), although 14 epiphytic species were already reported from Kew Gardens by Hawksworth & McManus (1989).

On one single *Fraxinus excelsior* tree near the Palm House:

<i>Athelia arachnoidea</i>	<i>Parmelia caperata</i>
<i>Bacidia arnoldiana</i>	<i>P. perlata</i>
<i>B. delicata</i>	<i>P. subaurifera</i>
<i>Buellia griseovirens</i>	<i>P. subrudecta</i>
<i>B. punctata</i>	<i>P. sulcata</i>
<i>Candelariella reflexa</i>	<i>Phaeophyscia orbicularis</i>
<i>Cladonia coniocraea</i>	<i>Physcia caesia</i>
<i>Evernia prunastri</i>	<i>P. tenella</i>
<i>Lecanora conizaeoides</i>	<i>Rinodina gennarii</i>
<i>L. dispersa</i>	<i>R. pityrea</i> (= <i>colobina</i> auct.)
<i>L. expallens</i>	<i>Xanthoria parietina</i>
<i>Lepraria incana</i>	<i>X. polycarpa</i>

On *Acer platanoides* near Temperate House:
Physconia perisidiosa

On rock in the Rock Garden:

Anisomeridium polypori (= *nyssaegenum*)

Arthonia lapidicola

Bacidia delicata

Caloplaca citrina

C. holocarpa

Candelariella aurella

C. vitellina

Catillaria chalybeia

Collema crispum

C. tenax

Lecania erysibe

L. rabenhorstii

Lecanora albescens

L. campestris

L. dispersa

L. hageni

L. muralis

L. polytropa

Lecidella scabra

L. stigmatea

Lepraria lobificans

Opegrapha rupestris (= *parasitica*)

Porpidia macrocarpa

P. soredizodes

Rinodonia gennarii

Trapelia coarctata

Verrucaria dolosa

V. macrostroma

V. muralis

V. nigrescens

Reference

Gilbert, J L (1970). Kew's lichens. *Journal of the Kew Guild*, 9, no. 76: 38-40.

Hawksworth, D L & McManus, P M. Lichen recolonization in London under conditions of rapidly falling sulphur dioxide levels and the concept of zone skipping. *Botanical Journal of the Linnean Society* 100: 99-109.

André Aptroot

THE GROUND UNDER PYLONS

The National Grid estimate that there are 25,000 pylons in England and Wales with a further 5,000 in Scotland. Investigating the lichens of the 'toxic shadow' produced by water dripping off the metal involves a considerable degree of trespass as it is excessively time-consuming to track down landowners. Seventy randomly chosen sites were examined throughout Britain (England, Scotland and Wales) usually stopping the car by the roadside and heading off with a guilty glance over one's shoulder. Toxicity is greatest under new pylons and is most marked where the soil is acid. Over half the towers had rank vegetation and no lichens under them, these were usually in farmland. The rest had from one to eight species growing on bare-soil, moss, stones or pieces of wood. Metal tolerant species belonging to genera such as *Vezdaea*, *Sarcosagium* and *Steinia* were regularly present and included, under transmission lines crossing Lecht Pass at 620 m in Scotland, the rarely recorded *Stereocaulon glareosum*. A more detailed account of the findings has been prepared for publication.

Oliver Gilbert

RECORDS OF 'PRIORITY' LICHENS - CAN YOU HELP?

Lichens are gaining an increasingly higher profile in conservation initiatives, and it is important that this continue. During the course of our work on behalf of Scottish Natural Heritage and for various local authorities in Scotland, we have encountered many problematical records of rare or endangered ('priority') lichens that have found their way on to the BLS database. We have unravelled many of these problems by re-examining specimens in BM and E (and through the assistance of Alan Orange, some from NMW); consulting relevant literature and unpublished reports; and by delving through the BLS mapping cards, and for this we are especially grateful to Mark Seaward for his help. Nevertheless, we are left with a substantial residue of unsubstantiated records.

Why are there so many problems? Well it's a long and potentially hazardous route from the field record to the BLS database and dot map. Below are some of the sources of confusion arising from human error.

- 1. Misidentification** - this may be a straightforward misidentification, or one that has been overtaken by changing taxonomic concepts (which have been enormous over the past 30 years).
- 2. Misnaming** - i.e. the recorder (or identifier) knows in his or her mind what the species is - but the wrong name is output!
- 3. Nomenclatural changes** - sometimes complicated by refined taxonomic concepts (e.g. records of *Leptogium azureum* auct. and *L. tremelloides* auct. that are now scattered between *L. britannicum*, *L. cochleatum* and *L. cyanescens*).
- 4. Later redeterminations** - not conveyed to the BLS mapping recorder.
- 5. Wrong species is crossed off on mapping card** - usually the one above or below, or one in a different genus with a similar abbreviation on the card.
- 6. Wrong grid reference provided** - either wrong 100 km square, or x and y axes transposed.
- 7. Mapping recorder** - keys in wrong species code or wrong grid reference.

If anyone can enlighten us on any of the problems given below, we would be most grateful. Only with accurate information, can conservation agencies and local authorities be alerted to the rare or endangered lichens in their area, and any necessary action taken to protect or enhance their habitats. Note that not all the problems relate to Scottish records. The locality names following the grid references are suggestions, they may not be the actual localities.

Doubtful records - to be deleted from BLS database if confirmation not forthcoming.

Alectoria ochroleuca: - 28/96 (Culbin Forest).

Anaptychia ciliaris subsp. *mamillata*: 17/76 (L. Sunart).

Aspicilia melanaspis: 16/79 (Knappdale/Jura); 23/65 (Snowdon).

Bacidia incompta: 17/76 (L. Sunart).

Bryonora curvescens: 38/00 (Caimgorms).

Caloplaca luteoalba: 16/34 (SW Islay); 17/78 (Arisaig).

Cladonia peziziformis: 25/05 (near Portpatrick; there is a record from 1894). Can anyone confirm any records from England (other than 51/22)?; the specimen in BM from Lambert's Castle in S Devon (30/39) is not this species.

Collema ceraniscum: 37/27 (Glen Clova).

Degelia ligulata: 17/53 (S Mull; but confirmed for 17/24, Fladda).

Japewia tornoensis: 35/11 (Lake District).

Lecanora epibryon: 29/44 (Ben Hope).

Leptogium cochleatum: 23/46 (Caernarvon/Anglesey); 29/46 (Durness).

Leptogium hildenbrandii: 18/84 (Rassal Ashwood). Listed in field meeting report (*Lichenologist* 3: 169, 1965), but no specimen or later sightings have been traced.

Parmelia acetabulum: 28/82 (Carrbridge - Tomatin).

Pertusaria glomerata: 29/44 (Ben Hope; there is, however, a record on a BLS mapping card and in an unpublished report for 29/45, but curiously no specimens have been traced!); 37/17 (Caenlochan).

Poeltinula cerebrina: 17/83 (Lismore).

Sclerophora nivea: 51/21 (Henfield area).

Synalissa symphorea: 17/84 (Lismore); 25/74 (Kirkcudbrightshire, Dundrennan). NB many specimens are misidents for *Lempholemma botryosum* or *L. cladodes*.

Probably correctly reported records, but without source details. These will be retained on BLS database, but further details required for Action Plans.

Arthothelium dictyosporum: 17/74 (Ardtornish).

Bacidia incompta: 36/83 (Scotland or Northumberland?); 37/76 (St Cyrus).

Biatroridium monasteriense: 17/54 (Mull; cited in Mull Flora only for 17/64).

Caloplaca flavorubescens: 18/84 (Rassal Ashwood); 36/44 (Stowe).

Gyalolepsia scotica: 29/22 (Inchnadamph).

Lecidea antiloga: 28/91 (Abernethy).

Pachyphiale fagicola: 37/19 (Braemar; confirmed for 37/29).

Parmelia acetabulum: 27/65 (Kinloch Rannoch); 37/15 (Bridge of Cally); 37/18 (S of Braemar; confirmed for 37/19); 37/26 (Kirkton of Glenisla); 37/47 (Tarfside, Glen Esk); 37/75 (Montrose).

Peltigera venosa: 25/85 (S of Dalbeattie).

Additional information required.

Anaptychia ciliaris subsp. *mamillata*: we have not traced any herbarium specimens from W Scotland (apart from Barra) - does anyone know of any?

Lecidea erythrophaea: can anyone confirm or report any modern records from England (other than 21/92) or Wales?

Sticta canariensis s. str. (independently growing green morphotype - i.e. not attached to the blue-green morphotype [*'S. dufourii'*]). Confirmed from only 4 squares in Scotland: one on Skye (18/51), one from Argyll (17/82) and two from Kintyre (16/71 and 16/77). Can anyone add to these?

A special thank you to all those who have already given their help.

Please address replies by post to us at Royal Botanic Garden Edinburgh, Inverleith Row, Edinburgh EH3 5LR, or by e-mail to <B.Coppins@rbge.org.uk>.

Brian & Sandy Coppins

LICHENS IN LITERATURE: 2 'RURAL RIDES' BY WILLIAM COBBETT

'The land just about here does seem to be really bad. The face of the country is naked. The few scrubbed trees that now and then meet the eye, and even the quick-sets are covered with a yellow moss.'

Describing the countryside around Huntingdon in 1822.

Humphrey Bowen

THE WOODLANDERS BY THOMAS HARDY

'On older trees still than these huge lobes of fungi grew like lungs. Here, as everywhere, the Unfulfilled Intention, which makes life what it is, was as obvious as it could be among the depraved crowds of a city slum. The leaf was deformed, the curve was crippled, the taper was interrupted; the lichen ate the vigour of the stalk, and the ivy slowly strangled to death the promising sapling.'

Published in 1887. Chapter 7.

Peter Lambley

BRITISH WATERWAYS AND LICHENS

British Waterways manages over 2000 miles of canal in England, Wales and Scotland. Extending throughout the network are canal structures such as the canal itself, bridges, lock cottages, lock gates, warehouses and milestones, passing through rural and urban environments.

British Waterways' environmental teams are becoming increasingly interested in lichen flora associated with these structures. In addition to drawing up guidelines for canal managers on cleaning or repairing masonry work, we are keen to find out more about lichen communities on canals.

To gain a broad impression of the species of lichen present, we are hoping to carry out lichen surveys of canal structures, sampling canals with differing stone substrata, altitude and past and present pollution levels.

We would be very grateful to receive any records or information that BLS members might hold for lichens on canals. We would also welcome the support of members who would like to carry out lichen surveys of canal structures in their locality. If members are interested in carrying out lichen surveys on canals it would be helpful if they could contact us beforehand to avoid duplication of effort.

Please send all correspondence and records to Claire Leather, British Waterways, Environmental & Scientific Services, Llanthony Warehouse, Gloucester Docks, Gloucester, GL1 2EJ. Tel: 01452 318040. Fax: 01452 318077. Claire@canalecology.demon.uk.

'LICHENS' BOOKLET STILL AVAILABLE

The booklet "Lichens" by Jack R. Laundon, published by Shire in 1986, was sold out by 1996. Almost 7,500 copies had been purchased. Fortunately a limited number of new copies are still available from the author at 14, Victory Avenue, Morden, Surrey, SM4 6DL, price £3.00 including postage. The book was written to demonstrate what makes lichens tick!

Jack Laundon

NEW, RARE AND INTERESTING BRITISH LICHEN AND LICHENICOLOUS FUNGUS 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 [from 1997, nomenclature to follow that given in the Appendix, see *Bulletin* 79, which is based on the *Biological Records Centre Instructions for Recorders*, ITE, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, PE17 2LS, 1974], Grid Reference (GR), altitude (alt.), where applicable, in metres (m), date, comments and recorder. An authority with date after species is only indicated when the record is new to the British Isles. *In the interest of accuracy, typescript is much appreciated. Please use only one side of the paper. Copy should reach the subeditor at least a fortnight before the deadline for the Bulletin.* Records of lichens listed in the *RDB* are particularly welcome, even from previously known localities.

Abrothallus cladoniae: on thallus of *Cladonia ciliata* var. *ciliata*, Culbin Forest, VC 95, Morayshire, GR28/99-63-, October 1995. New to Scotland.

B J Coppins

Adelolecia pilati: on south-facing boulders, Yr Wyloer, Gilfach, VC43, Radnorshire, GR 22/95-71-, alt. 250-350 m, October 1997. The collections have a thicker thallus (with zeorin) and smaller apothecia than is typical and correspond to subsp. *pachythallina* ad.int., known also from Scotland and Iceland. Determined by B.J. Coppins, A M Fryday and G Rambold.

S P Chambers

Arthonia almquistii: on thallus and soralia of *Porpidia soredizodes*, on north-facing basalt outcrop, Traprain Law, East Linton, VC 82, East Lothian (Haddington), GR 36/58-74-, alt. 100 m, February 1998. New host and new to Scotland.

B J Coppins

Arthonia endlicheri: on sheltered, vertical north-facing basalt outcrop under trees, in slight underhang with *Dirina massiliensis* f. *sorediata*. Rockcliffe Heughs, North Berwick, VC 82, East Lothian (Haddington), GR 36/55-81-, alt. 150 m, March 1998. New to Scotland.

B J Coppins

Bacidia trachona: luxuriant, fertile material on walls of derelict cottage in old-woodland, Afon Drywi, VC 46, Cardiganshire, GR 22/42-60-, alt. 20 m, March 1997. Confirmed by B J Coppins.

S P Chambers

Buellia sequax (syn. *B. abstracta*): on little fragments of old red sandstone lodged in crevices of coastal rock outcrops, Priest's Nose, Manorbier, VC 45, Pembrokeshire, GR 21/05-97-, July 1997. First mainland British record. Previously known only from the Scilly Isles. Should be sought elsewhere on the Pembrokeshire Coast (and islands) and Cornwall. This tiny species might be dismissed as a '*Catillaria*' in the field. Confirmed by C Scheidegger.

S P Chambers

Byssoloma marginatum: on stems of *Hedera* up big *Fraxinus* in old woodland, Afon Drywi, VC 46, Cardiganshire, GR 22/42-60-, alt. 20 m, March 1997. New to Wales. Determined by B J Coppins.

S P Chambers

Caloplaca cerina: for details see under *Leptogium gelatinosum*.

P M Earland-Bennett

Caloplaca crenulatella: scarce on calcareous paving slab of patio in garden of 14 Victory Avenue, Morden, VC 17, Surrey, GR 51/26-67-, July 1994. Second British record. This and recent European records suggest that this lichen is a pioneer species of concrete surfaces.

J R Laundon

: on concrete block in gully beside road, Wickham Market, VC 25, East Suffolk, GR 62/30-55-, May 1997. New to Suffolk and third British record.

P M Earland-Bennett

: on concrete of disused runway of wartime airfield in arable land, Leiston, VC25, East Suffolk, GR 62/42-63-, September 1997.

C J B Hitch and A Henderson

:frequent on the concrete surface of disused runways of the following wartime aerodromes: (i) Gamston, VC 56, Nottinghamshire, GR 43/69-76-, October 1997; (ii) Skipwith, VC 61, South-east Yorkshire, GR 44/64-36-, October 1997; (iii) Burn, VC 61, South-east Yorkshire, GR 44/60-28-, October 1997. Determined by J R Laundon. Since then seen at a further three airfields in Nottinghamshire, Lincolnshire and Yorkshire.

O L Gilbert and A Henderson

Carbonea supersparsa: on *Lecanora polytropa* on top edges of thin, shale slabs by track, Gilfach, VC 43, Radnorshire, GR 22/96-71-, alt. 250 m, September 1997. Second Welsh record.

S P Chambers

Carbonea vitellinaria: on thin crusts of depauperate *Candelariella vitellina* on boulder, Gilfach, VC 43, Radnorshire, GR 22/95-71-, alt. 300 m, February 1998. New to Radnorshire.

S P Chambers

Carbonea vorticosa: on large shale boulder, Gilfach, VC 43, Radnorshire, GR 22/95-71-, alt. 300 m, January 1998. New to Radnorshire. Confirmed by A M Fryday.

S P Chambers.

Cercidospora cladoniicola Alstrup (1997): (i) on thallus of *Cladonia portentosa*, affecting a clump c.30 cm in diameter, Flanders Moss, VC 87, West Perthshire with Clackmannan, GR 26/6--9--, September 1998, collected by B J Coppins and F Rose: (ii) on *Cladonia cf. mitis*, Culbin Forest, VC 95, Morayshire, GR 38/02-64-, October 1995, collected by B. J. Coppins. New to the British Isles. The tiny black perithecia have cylindrical asci, hyaline 3-septate ascospores, c. 15 x 4.5 μ m, and slender, branched paraphyses. See entry for Alstrup (1997) in 'Literature pertaining' in this *Bulletin*.

B J Coppins

Chaenotheca furfuracea: for details see under *Psilolechia clavulifera*.

P M Earland-Bennett

Chaenotheca stemonea: well developed on shaded, craggy bank of an aged *Quercus*, Sideland (Radnorshire Wildlife Trust Reserve), VC 43, Radnorshire, GR 32/10-63-, alt. 250 m, November 1997. Third Welsh record. Confirmed by A. Orange.

S P Chambers

Cladonia azorica: for details see under *Lettauia cladoniicola*.

A Orange

Clauzadeana macula: occasional on south-facing rocks, Yr Wyloer, Gilfach, VC 43, Radnorshire, GR 22/95-71-, alt. 250-350 m, November 1997. First VC 43 record.

S P Chambers

Collema tenax: for details see under *Leptogium biatorinum*.

P M Earland-Bennett

Didymella sphinctrinoides: on ascocarps of *Lecanora albescens* on septarian nodule in Roman city wall, Colchester, VC 19, North Essex, GR 52/99-25-, May 1993. New to the county.

P M Earland-Bennett

Endocarpon adscendens: on low, unshaded rocks by outfall of artificial pond, St Fagans Castle, Museum of Welsh Life, St Fagans, VC 41, Glamorgan, GR 31/11-77-, January 1997. Confirms the continued existence of this species, last recorded here (as *E. pusillum*) by Arthur Wade in 1947.

A Orange

Epigloea bactrospora Zukal (1890): on algal scum over moribund hypnoid moss on horizontal branch of *Corylus*, Ballachuan Hazelwood, Seil, VC 98, Argyll Main, GR 17/76-14-, alt. 20-30 m. December 1997. New to the British Isles. Distinguished by its 30-60-spored asci, and bacilliform, 1-septate ascospores, c. 6-10 x 1.5 μm , which do not have apical appendages.

B J and A M Coppins

Epigloea filifera Dobbeler (1984): on eroding bank of metal-polluted river shingle, Afon Ystwyth, Grogwynion, VC 46, Cardiganshire, GR 22/69-71-, alt. 130 m, March 1996. New to the British Isles. Associated with *Placynthiella hyporhoda* and *Vezdaea acicularis*. Distinguished by the 1-septate spores, c. 11-16 x 3.5-4.5 μm , 8/ascus, with filiform end appendages (like *E. medioincrassata*) c. 3-7 μm long. Determined by B J Coppins.

S. P. Chambers

Fuscidea austera: frequent on gritstone boulders, Lawrence Field, Padley, VC 57, Derbyshire, GR 43/25-80-, January 1998.

P Ardron

Kalaallia reactiva Alstrup & D. Hawksw. (1990): two collections identified on thalli of *Hymenelia lacustris* (i) on rocks by Abhainn na Fuirneis, Letterewe Woods, VC 105, West Ross, GR 18/95-70-, alt. 15-45 m, June 1986, collected by B J Coppins and R. G. Woods; (ii) on rocks by River Barle, Ashwick Wood, north-west of Dulverton, VC5, North Somerset, GR 21/89-29-, alt. 170 m, March 1997, collected by A M and B J Coppins. New to the British Isles.

B J Coppins

Lecanactis latebrarum: at base of sheltered, vertical, north-facing basalt outcrop under trees, in slight underhang, Rockcliffe Heughs, North Berwick, VC 82, East Lothian, GR 36/55-81-, alt. 150 m, March 1998. New to south-east Scotland.

B J Coppins

Lecania cyrtellina: (i) on dead *Ulmus glabra*, Sideland, VC 43, Radnorshire, GR 32/10-63-, alt. 250 m, November 1997; (ii) on base of hedgerow *Sambucus nigra*, Burfa Bog, VC 43, Radnorshire, GR 32/27-61-, alt. 180 m, December 1997. Confirmed by A. Orange. First vice-county records.

S P Chambers

Lecanora xanthostoma Cl. Roux ex Fröberg (1997). This newly described species is represented from England and Scotland from the following specimens in E.: (i) on Carboniferous Limestone outcrop, Little Dale Beck, near Winterscales, VC 65, north-west Yorkshire, GR 34/75-80-, alt. c. 320 m, August 1993, collected B J Coppins and A M O'Dare; (ii) on limestone boulder, Knock Quarry, VC 69, Westmorland with North Lancashire, GR 35/69-29-, alt. 457 m, July 1979, collected by B J Coppins; (iii) on south-west facing limestone, abundant on horizontal surfaces, Melmerby Low Scar, VC 70, Cumberland, GR 35/62(-3)-38-, alt. c. 450 m, July 1997, collected by B J Coppins; (iv) on limestone, Craig Leek, 4 km east-northeast of Braemar, VC 92, South Aberdeenshire, GR 37/18-92, May 1984, collected by B J Coppins *et al*; (v) on south-facing, calcareous basalt, Quirang, Trotternish Ridge, Isle of Skye, VC 104, North Ebeudes, GR 18/4--5---, alt. c. 300 m, May 1987, collected by B J Coppins. A member of the *L. dispersa* group with an endolithic thallus, and rather large apothecia with a somewhat tumid, finely farinose, non-crenulate margin that has an olivaceous tinge, and reacts Kf+ yellow to light orange and KCf+ yellow to light orange (vinetorum + ?aotearon by TLC). See Fröberg (1997) in 'Literature Pertaining' in this Bulletin.

B J Coppins

Leightoniomyces phillipsii: erumpent from a sterile crust of goniocysts resembling *Vezdaea leprosa* on metal-polluted, fine, river gravels, Afon Ystwyth, Llanfarian, VC 46, Cardiganshire, GR 22/58-77-, alt. 30 m, April 1997. New to Cardiganshire. If the identification of the host is correct, this is another example of specificity to lichens with *Leptosira* as the photobiont. Determined by B J Coppins.

S P Chambers

Lepraria nylanderiana Kümmerl. & Leuckert (1995): on base-rich rock face, Jacob's Ladder, Devil's Bridge, VC 46, Cardiganshire, GR 22/74-77-, February 1998. New to the British Isles. A pale grey species containing thamnolic and roccellic acids.

A Orange and P Wolseley

Leptogium biatorinum: on sandy soil at edge of path near sea-wall, with *Collema tenax*, Canvey Island, VC 18, South Essex, GR 51/79-82-, June 1993. Determined by B J Coppins. New to Essex,

P M Earland-Bennett

Leptogium gelatinosum: on sandy soil of sand-spit, with *Caloplaca cerina*, Colne Point, VC 19, North Essex, GR 62/10-12-, July 1994. New to Essex.

P M Earland-Bennett and J F Skinner

Lettauia cladoniicola D. Hawksw. & R. Sant. (1990): on dying bases of podetia of *Cladonia azorica*, 3.5 km north-west of Betws-y-coed, VC 49, Caernarvonshire, GR 23/77-59-, December 1997. New to the British Isles.

A Orange

Melaspilea interjecta: on smooth, water-worn rocks at edge of upland stream, Nant Irfon, Abergwesyn, VC 42, Breconshire, GR 22/83-55-, alt. 330 m, November 1997. When the apothecia are very gyrose it can mimic *Polysporina* and be possibly overlooked as such.

S P Chambers and A M Fryday

Miriquidica atrofulva: fertile on metal-rich boulder, Glen Taitneach, VC 89, East Perthshire, GR 37/08-74-, December 1997.

R C Munro

Moelleropsis nebulosa: on well drained bank in area of old lead mine workings, Slit Westgate, Weardale, VC 66, Durham, GR 35/90-39-, alt. 330 m, March 1998. Confirmed by A M Fryday. New to the county.

D E McCutcheon

Nectria rubefaciens Ellis & Everh.: on *Parmelia sulcata* on trunk of *Quercus*, Wortham Ling, VC 25, East Suffolk, GR 62/08-79-, December 1997. New to the British Isles.

P M Earland-Bennett and C J B Hitch

Parmelia laciniatula: with apothecia, on branches of parkland *Fagus sylvatica*, Hafod, VC 46, Cardiganshire, GR 22/76-73-, alt. 235 m, March 1996. Not previously known fertile. Confirmed by F Rose and B J Coppins.

S P Chambers

Parmelia quercina: small, colonising thalli on *Liriodendron tulipifera*, Plas Crug Avenue, Aberystwyth, VC 46, Cardiganshire, GR 22/58-81-, December 1997. This species is at present doing well in its Cardiganshire localities.

S P Chambers

Parmelia sulcata: fertile on sloping willow bough by edge of old railway line, Thorpeness, VC 25, East Suffolk, GR 62/46-59-, October 1997.

D F Strauss

Parmelia verruculifera: fertile on north-facing slates of low farm building, Friston, VC 25, East Suffolk, GR 62/41-60-, September 1997.

P M Earland-Bennett and C J B Hitch

Peltigera venosa: rare, on heavy metal shingle by River North Tyne at Williamston, VC 67, South Northumberland, GR 35/6--5--, November 1997, confirmed by O L Gilbert. Second record from heavy metal sites in the Northern Pennines.

E C Smith

Pertusaria ophthalmiza: on small branches of previously coppiced *Quercus petraea*, Coed Cefnennarth (North), VC 43, Radnorshire, GR 22/96-75-, alt. 350 m, November 1997. New to Radnorshire. Confirmed by A Orange.

S P Chambers

Placynthiella hyporhoda: for details see under *Epigloea filifera*.

S P Chambers

Plectocarpon scrobiculatae: on *Lobaria scrobiculata*, Barnluasgan Hazelwood, Knapdale Forest, VC 101, Kintyre, GR 16/79-91-, September 1997. Second British record.

B J and A M Coppins

Polyblastia agraria: on track-bed of disused railway, Gilfach, VC 43, Radnorshire, GR 22/95-71, alt. 250 m, January 1998. New to Radnorshire.

S P Chambers

Polycoccum peltigerae: on *Peltigera didactyla* and *P. canina* in dune slack, Ynyslas, (Dyfi NNR), VC 46, Cardiganshire, GR 22/60-93-, May 1997. New to Cardiganshire. Determined by B J Coppins.

S P Chambers

Pronectria anisospora: on *Hypogymnia physodes* on twigs of *Malus*, New Forest, VC 11, South Hampshire, GR 41/26-07-, February 1998. Determined by D L Hawksworth. New to England.

P M Earland-Bennett *et al.*

Pronectria fissuriprodiens Etayo (1996): on moribund, older parts of thallus of *Lobaria pulmonaria* on *Corylus*, Ballachuan Hazelwood, Seil, VC 98, Argyll Main, GR 17/75-14-, alt. 20 m, December 1997. New to the British Isles.

B J and A M Coppins

Psilolechia clavulifera: on soil on vertical bank of stream, amongst tree roots and rabbit burrows, with *Chaenotheca furfuracea*, Pickers Ditch, Clacton-on-Sea, VC 19, North Essex, GR 62/18-16-, June 1994. New to East Anglia.

P M Earland Bennett

Refractohilum pluriseptatum Etayo & Roux (1997): on unidentified, sterile crust with *Trentepohlia* as photobiont, on mature *Quercus*, Falls Wood, Invermoriston, VC 96, East Inverness-shire (with Nairn), GR 28/42-16-, alt. c. 30 m, June 1996. New to the British Isles. This hyaline hyphomycete has large, 3-7 septate conidia, 17-31 x 5-7 μm on very long conidiophores up to c. 100 μm long. It was originally found on *Pachyphiale carneola* in northern Spain. See paper by Roux *et al.* in 'Literature Pertaining' in this *Bulletin*.

B J and A M Coppins

Rhizocarpon simillimum: (i) on cliff rocks in glen, Glen Esk, VC 90, Angus (Forfar), GR 37/40-83-, September 1997. Determined by A M Fryday. Fourth British record; (ii) on metal-rich rock on south-facing slope, Ben Gulabin, VC 89, East Perthshire, GR 37/09-71-, December 1997. Determined by A M Fryday.

R C Munro

:scattered on well-lit boulders on Yr Wyloer, Gilfach, VC 43, Radnorshire, GR 22/95-71-, alt. 340 m, December 1997. New to Wales. Confirmed by A M Fryday.
S P Chambers

Rhizocarpon submodestum (Vainio) Vainio (1922): occasional on well-lit shale boulders, Yr Wiloer, Gilfach, VC 43, Radnorshire, GR 22/96-71-, alt. 300 m, October 1997. New to the British Isles. The material matches Vainio's original description in having a K+ purple exciple and epihymenium. Scottish collections previously referred to this name [see *Bulletin* 76 (1995)] have K- apothecial pigments, slightly smaller spores, a thinner thecium and appear to be a separate entity. Determined by A M Fryday.

S P Chambers

Rhizocarpon subpostumum (Nyl) Arnold (1887): on the side of a boulder, slightly overhanging, above Loch Lee, VC 90, Angus (Forfar), GR 37/41-79-, September 1997. Determined by A. M. Fryday. New to the British Isles.

R C Munro

Rimularia insularis: on thallus of *Lecanora rupicola*, on west-facing basalt outcrop, Traprain Law, East Linton, VC 82, East Lothian, GR 36/57-74-, alt. 130 m, February 1998. New to the Lothians.

B J Coppins

Rinodina conradii: on calcareous, sandy, coastal turf, with *Bacidia bagliettoana* and *Chromatochlamys muscorum*, Yellow Craigs, Dirleton, VC 82, East Lothian, GR 36/51-05-, alt. 10 m, February 1998. New to the Lothians.

B J and A M Coppins

Rinodina efflorescens: in bough fork of *Quercus*, Pentrosfa mire, VC 43, Radnorshire, GR 32/05-59-, alt. 215 m, October 1997. Determined by A Orange. New to Radnorshire.

S P Chambers

Rinodina orculariopsis: on siliceous stone in mortared wall of cottage, near Llethr, Llanwrthwl, VC 42, Breconshire, GR 22/97-62-, alt. 230 m, October 1997. New to Brecon. Confirmed by A Orange.

I Blatchley, S P Chambers and R G Woods

Rinodina pityrea: common but sterile on septarian nodules of Roman city wall, Colchester, VC19, North Essex, GR 52/99-25-, May 1993. Determined by B J Coppins. New to Essex.

P M Earland-Bennett

Sagediopsis barbara (Th.Fr) R. Sant. & Triebel (1989): on thallus of *Porpidia* cf. *glaucophaea*, Dounalt, Glen Doll, VC 90, Angus, GR 37/24-76-, Alt. 600 m, 1997. New to the British Isles. This entity was determined (RCM) as *Gongylia nadvornikii* and confirmed, with updated nomenclature, by B J Coppins.

R C Munro

Sarcopyrenia gibba: towards tops of concrete posts dating from c. 1947, around cutting of disused railway, Gilfach, VC 43, Radnorshire, GR 22/96-71-, alt. 320 m, February 1998. New to Radnorshire.

S P Chambers

Sphaerophorus fragilis: one large cushion on top of a gritstone boulder, Lawrence Field, Padley, VC57, Derbyshire, GR 43/25-80-, November 1997. First county record.

O L Gilbert

Syzygospora physciacearum: on *Physcia tribacia* on trunk of *Acer pseudoplatanus*, Dummer, VC 12, North Hampshire, GR 41/58-46-, February 1998. Confirmed by B J Coppins.

P M Earland-Bennett and C J B Hitch

Teloschistes flavicans: colony of some 30 plants in coastal limestone grassland, Saddle Point, Stackpole, VC 45, Pembrokeshire, GR 11/98-93-, July 1997. Was thought to be extinct here in Stackpole National Nature Reserve.

S P Chambers

Trapelia corticola: abundantly fertile on the base of an old *Fagus sylvatica* by road, Pwllpeiran, Cwmystwyth, VC 46, Cardiganshire, GR 22/77-75, alt. 300 m, January 1996. Confirmed by B J Coppins.

S P Chambers

Tremella lobariacearum Diederich & M. S. Christ. (1996): on *Lobaria pulmonaria* on *Fagus* trunk, Ballachuan Hazelwood, Seil, VC 98, Argyll Main, GR 17/76-15-, alt. 20 m, December 1997. New to the British Isles.

B J and A M Coppins

Unguiculariopsis lettauii: abundant on thallus of *Evernia prunastri*, Cawdor Wood, VC 96, East Inverness-shire (with Nairn), GR 28/84-49-, September 1996.

B J and A M Coppins

Usnea glabrata: on alder, Decoy Lake, Orielson Estate, VC 45, Pembrokeshire, GR 11/95-99-, July 1972. Determined by A. Orange (November 1997). New to Wales.

A R Perry

Verrucaria pachyderma (Arnold) Arnold (1880): on unshaded rocks in stream, Ceunant Llennyrch National Nature Reserve, Maentwrog, VC 48, Merionethshire, GR 23/66-38-, July 1995. New to the British Isles.

A Orange

LITERATURE PERTAINING TO BRITISH LICHENS - 23

Lichenologist 29(5) was published on 7th October 1997, 29(6) on 17th December 1997, and 30(1) on 16th February 1998.

Taxa prefixed by * are additions to the checklists of lichens and lichenicolous fungi for Britain and Ireland. Aside comments in square brackets are mine.

NB. Authors of articles on British and Irish lichens, especially those including records and ecological observations, are requested to send or lend me a copy so that it can be listed here. This is particularly important for articles in local journals and newsletters, and magazines.

I am especially grateful to Ishpi Blatchley for sending me relevant extracts from past issues of the *Orpington Field Club Magazine*, and to Mr J. L. Bramley and the Kent Field Club for sending me past issues of their Bulletin. Since 1989, the latter contains a wealth of lichen information (largely from the pen of Keith Palmer). Much of this is primarily of local interest, but there are many references to Red Data Book lichens and other 'priority species' of national significance, and interesting ecological observations.

ALSTRUP, V 1997. New lichenicolous fungi found on the NLF meeting in Norway 1993. *Graphis Scripta* 8: 25-29. Includes description of *Cercidospora cladonicola* Alstrup, which is reported as new to British Isles in 'New, rare and interesting' in this Bulletin.

BADMIN, J 1992. In "Outdoor meetings". Quex Park. *Bull. Kent Field Club* 37: 20-21 (1992). A few lichens mentioned.

BLATCHLEY, I 1991-1995. [Field meeting reports.] Lichens at Knole Park. *Orpington Field Club Magazine* August 1991: 5-7 (1991); Igtham Churchyard. *Ibid.* May 1994, excursions: 1-2 (1994); Bromley Hill Cemetery. *Ibid.* 27: 12-13 (1996). Include many records and observations from excursions in Kent.

BOOTH, F 1992. In "Outdoor meetings". Oare Marshes KTNC Reserve. *Bull. Kent Field Club* 37: 33-34 (1992). A few lichens mentioned.

CLERC, P 1991. *Usnea madeirensis* Mot. (ascomycète lichénisé): une espèce méconnue Europe et de l'Amérique du Nord. *Candollea* 46: 427-438. Includes illustrations, map of world distribution, and British records.

COPPINS, B J & COPPINS, A M 1997. Coastal hazelwoods and their lichens. *Native Woodlands Discussion Group Newsletter* 22(2): 27-29. A brief account of the importance to biodiversity of this lichen-rich habitat, which is almost unique to western Scotland. [See article below by Peter Quelch.]

DICKSON, G. & LEONARD, A (eds) 1996. *Fungi of the New Forest: A Mycota*. British Mycological Society. Pp. i-xxii, 1-201, + 8 pages of colour plates. ISBN 0-9527704-1-5. In this checklist, lichenized and lichenicolous fungi are integrated with non-lichenized fungi in a systematic arrangement. Each entry includes at least a brief note on abundance, habitat and substrata, and sometimes more. The introductory section includes a short chapter on lichens by Neil Sanderson (pp. xviii-xix). The colour plates do not include any lichens.

EKMAN, S 1997. The genus *Cliostomum* revisited. In TIBELL & HEDBERG 1997: 17-28 (see below). A preliminary outline of the genus, with six accepted species. Four occur in the British Isles: *C. corrugatum*, *C. griffithii*, *C. flavidulum* Hafellner & Kalb (1992) (syn. *Lecanora navarrensensis* Etayo) and *C. tenerum* (Nyl.) Coppins & S. Ekman (syn. *Lecanora tenera* Nyl.).

FRÖBERG, L 1997. Variation in the *Lecanora dispersa* group in South Sweden. In TIBELL & HEDBERG 1997: 29-34 (see below). Six species are treated, with colour photographs. [The newly described *Lecanora xanthostoma* Cl. Roux ex Fröberg is also known from England and Scotland -see 'New, rare and interesting' in this Bulletin.]

GILBERT, O L 1997. The lichens of Ecclesall Woods 1993: a baseline survey. *In: The Natural History of Eccleshall Woods, Part I*, by I D Rotherham & M Jones (eds). *Peak District Journal of History and Archaeology, Special Publ.* 1: 25–39. A careful search in these 'polluted' woods near Sheffield in S Yorkshire revealed 42 lichens, 15 of which were recorded from only one or two trees.

HAFELLNER, J 1997. A world monograph of *Brigantiaea* (lichenized Ascomycotina, Lecanorales). *In* TIBELL & HEDBERG 1997: 35–74 (see below). Includes description, illustrations (exciple structure) and world distribution map for the single British species, *B. fuscolutea*.

HARADA, H 1997. *Megaspora verrucosa* (lichenized Ascomycetes; Megasporaceae) newly found in Japan. *Hikobia* 12: 221–225. Includes good habit and anatomical photographs.

JAMES, P W, ALLEN, A & HILTON, B 1997. The lichen flora of Lundy: II The communities. *Ann. Rep. Lundy Field Soc.* 47: 93–126 + 1 colour plate. A detailed account of the island's lichen communities, with several diagrams and tables. An additional 33 taxa are reported, bringing the total for the island to 348. The colour plate depicts a slate gravestone with wonderfully, well-delimited lichen thalli.

LUMBSCH, H T 1997. Systematic studies in the suborder Agyriineae (Lecanorales). *J. Hattori Bot. Lab.* 83: 1–73. As affects the arrangement of British lichens, the suborder Agyriineae is newly circumscribed to include the following families (and genera): *Agyriaceae* (*Agyrium*, *Lithographa*, *Placopsis*, *Placynthiella*, *Ptychographa*, *Rimularia*, *Trapelia*, *Trapeliopsis*, *Xylographa*), **Elixiaaceae* Lumbsch (**Elixia* Lumbsch) and *Schaereriaceae* (*Schaereria*). The *Rimulariaceae*, *Saccomorpaceae* and *Trapeliaceae* are included in the *Agyriaceae*. The new genus *Elixia* is described to accommodate *E. flexella* (Ach.) Lumbsch (syn. *Ptychographa flexella* (Ach.) Coppins). The systematic position of the genus *Wadeana* is yet to be resolved, but it is excluded from the Agyriineae.

LUMBSCH, H T 1997. A comparison of ascoma ontogeny supports the inclusion of the *Eigleraceae* in the *Hymeneliaceae* (Lecanorales). *Bryologist* 100: 180–192. A re-evaluation of the systematic position of *Eiglera*, with particular attention to ascomatal ontogeny, supported by many LM photographs.

LUMBSCH, H T, PLÜMPER, M, GUDERLEY, R & FEIGE, G B 1997. The corticolous species of *Lecanora* sensu stricto with pruinose discs. *In* TIBELL & HEDBERG 1997: 131–162 (see below). Twelve species are treated, including three

that occur in the British Isles: *L. albella* (*L. pallida* auct.), *L. carpinea* and *L. intumescens*. [It is possible that other species may occur as well, especially *L. leptyroides*, which differs from *L. carpinea* in having an ecorticate thalline exciple.]

LUTZONI, F M 1997. Phylogeny of lichen- and non-lichen-forming omphalinoid mushrooms and the utility of testing for combinability among multiple data sets. *Syst. Biol.* **46**: 373-406. Phylogenetic analyses of 'molecular' data (from nuclear ribosomal DNA) show the genera *Omphalina* and *Gerronema* to be polyphyletic, but that the five lichenized species of *Omphalina* form a monophyletic group.

MOBERG, R & PURVIS, O W 1997. Studies on the lichens of the Azores. Part 4. The genus *Heterodermia*. In TIBELL & HEDBERG 1997: 187-194 (see below). *Heterodermia propagulifera* (Vain.) Dey is considered to be a synonym of *H. japonica* (Sato) Swinscow & Krog.

NIMIS, P L & TRETACH M 1997. A revision of *Tornabea*, a genus of fruticose lichens new to North America. *Bryologist* **100**: 217-225. The genus is found to be monospecific, and habit and anatomical photographs and distribution maps are provided for the single species, *T. scutellifera*.

NORDIN, A 1997. Ascospore characters in *Physciaceae*: an ultrastructural study. In TIBELL & HEDBERG 1997: 195-208 (see below). A useful contribution to the interpretation of the variation of ascospore structure seen in *Buellia*, *Diplotomma*, *Physcia*, *Rinodina*, etc.

PALMER, K 1989-1995. In "Outdoor meetings" [or similar title] in the following: *Bull. Kent Field Club* **34**: 5-21 (1989): Leeds & Boughton Monchelsea churchyards (pp 7-8); Wall tour at West Malling (pp 19-20). *Ibid.* **35**: 9-31 (1990): Winter excursions 1988-89 (pp 9-13); Larkey Valley Wood (pp 14-15); Knole Park (pp 19-21). *Ibid.* **36**: 10-25 (1991): Lichen meetings: Winter 1989-90 (pp 10-13); Annual wall tour, Ivy Hatch (pp 16-18). *Ibid.* **37**: 9-34 (1992): Winter lichen meetings: 1990-1991 (pp 9-11); Dungeness (p 11); Hatch Park, Marsham (pp 14-15); Bitchet Common (pp 27-28); Thanet churches (pp 32-33). *Ibid.* **38**: 10-26 (1993): Winter lichen meetings: 1991-1992 (pp 10-11); Biddenden Churchyard (p 13); Brenley [Brenchley] Churchyard (p 18); Chilham Churchyard (p 24-25). *Ibid.* **39**: 10-31 (1994): Three West Kent churchyards (p 11); Edenbridge Churchyard (p 12); Boughton Monchelsea Churchyard (pp 12-13); Northbourne & Tilmanstone churchyards (pp 13-14); Benenden Churchyard (p 14); Woodnesborough and Worth churchyards (pp 30-31). *Ibid.* **40**: 11-32 (1995): Stelling Minnis Common (pp 14-15); Chart Sutton and East Sutton churchyards (p 15); Lamberhurst Churchyard (pp 20-21); Rusthall.

churchyard (pp 23–24); *Cladonia* workshop at Sevenoaks (p 26); Alkham Church (pp 31–32); Hougham Church (p 32).

PALMER, K 1997. In "Reports of outdoor meetings 1996". *Bull. Kent Field Club* **42**: 10–41. Many lichens reported and commented on, mainly from churchyards: Challock Churchyard and Waltham Churchyard (pp 11–12); Sibton Park, Lyminge (pp 16–17); Matfield Churchyard and Brenchley Wood (pp 25–27); Denton Churchyard and Wooton Churchyard (pp 40–41).

PALMER, K 1989–1995. Lichen notes. *Bull. Kent Field Club* **34**: 25–27 (1989). *Ibid.* **35**: 33–34 (1990). *Ibid.* **36**: 28–30 (1991). *Ibid.* **37**: 35–37 (1992). *Ibid.* **38**: 27–29 (1993). *Ibid.* **39**: 38–40 (1994). *Ibid.* **40**: 37–40 (1995). Reports of lichenological activity in the county for the previous year, including many interesting finds and observations.

PALMER, K 1997. Lichen notes 1996. *Bull. Kent Field Club* **41**: 54–59. More valuable records and observations from Kent. This report is appended with distribution maps within the county for *Caloplaca ruderum* and *Solenopsora candicans*.

PITT, J. 1989–1990. In "Outdoor meetings": Wealden walk east of Headcorn. *Bull. Kent Field Club* **34**: 5–6 (1989); Spong Wood KTNC Reserve. *Ibid.* **35**: 17 (1990).

PITT, J 1995. [Field meeting report.] Queens Down Warren KTNC Reserve. *Orpington Field Club Magazine* **August 1991**, excursions: 2–4 (1991). Includes records of several chalk grassland and corticolous lichens, from a nature reserve in Kent.

QUELCH, P 1997. Western hazelwoods - management for biodiversity. *Native Woodlands Discussion Group Newsletter* **22(2)**: 25–27. Management guidelines for this important but neglected habitat which is exceptionally rich in oceanic bryophytes and lichens. [Companion article to that by Coppins & Coppins, above.]

ROUX, C, ETAYO, J, BRICAUD, O & LE COEUR, D 1997. *Les Refractohilum* (hyphomycètes, moliniacés) à conidies pluriseptées en Europe et au Canada. *Can. J. Bot.* **75**: 1592–1600. Includes the type description of the lichenicolous *Refractohilum pluriseptatum* Etayo & Cl. Roux, which is reported from Scotland in 'New, rare and interesting' in this *Bulletin*.

SANDERSON, N 1996 - see above under DICKSON, G & LEONARD, A (eds) 1996.

- SEAWARD, M R D 1997. Mosses, liverworts and lichens. *Trans. Lincs. Nat. Un.* **24**: 112–113. This 'annual report' of recording in Lincolnshire includes 19 species new to the county.
- SEAWARD, M R D & BISHOP, R H 1997. Lichens of Lighthouse Island, Co. Down. *Ir. Nat. J.* **25**: 359–365. A brief site description is accompanied by a list of 114 species, four new to Co. Down.
- TAPLIN, J 1990. In "Outdoor meetings". Barham Marsh KTNC Reserve. *Bull. Kent Field Club* **35**: 25 (1990). Includes report of *Caloplaca teicholyta* with apothecia.
- TEHLER, A 1997. *Synnesia* (Arthoniales, Euascomycetidae). *Flora Neotropica Monograph* **74**: 1–49. A world revision of the genus that includes *S. myrticola* (Fée) Tehler from the British Isles. [NB: the transfer of this species from *Chiodecton* was made by Tehler in 1993, not in this work.] A habitus photograph is included.
- TIBELL, L 1997. Anamorphs in mazaediate lichenized fungi and the *Mycocaliciaceae* ("Caliciales s. lat."). In TIBELL & HEDBERG 1997: 291–322 (see below). A detailed treatment in which the taxonomic, phylogenetic and biological implications of the results are discussed, including data to support a placement of the *Caliciaceae* and *Sphaerophoraceae* in the Lecanorales.
- TIBELL, L & HEDBERG, I (eds) 1997. Lichen studies dedicated to Rolf Santesson. *Symb. Bot. Upsal.* **32** (1): 1–337. [ISBN 91-554-4108-4.] A collection of 19 papers published in honour of Professor Santesson's 80th birthday. Many of the papers are relevant to the British lichen flora - the most pertinent being included in this listing.
- TRIEBEL, D, WEDIN, M & RAMBOLD, G 1997. The genus *Scutula* (lichenicolous ascomycetes, Lecanorales): species on the *Peltigera canina* and *P. horizontalis* groups. In TIBELL & HEDBERG 1997: 323–337 (see above). Four species are treated [including two that have been reported from the British Isles: *S. epiblastematica* (Wallr.) Rehm and *S. miliaris* (Wallr.) Trevis.]. All species have two conidial states, with one species (*S. dedicata*) having three. The macroconidial state is referred to *Karsteniomyces* D. Hawksw. and the mesoconidial state to *Libertiella* Speg. & Roum.
- WETMORE, C M 1997. The typification of *Caloplaca chlorina*. *Bryologist* **100**: 170. This neotypification supports the recent use of the name *C. chlorina* (Flot.) H. Olivier by northern European authors, with *C. isidiigera* Vezda being a synonym.

Brian Coppins

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Orange, pyrenocarpous lichens; O W Purvis, lichens on metal-rich rocks; F Rose, critical woodland lichens
(epiphytes only); C Sheidegger, *Buellia*; L Tibell, Caliciales, *s. lat.*; E Tindal, *Toninia*, *Psora* and
Hypocnomyce; T Tønsgberg, corticolous sterile crusts.

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BULLETIN 82. Issued by the British Lichen Society (Registered Charity No 228850), c/o Department of Botany, Natural History Museum, Cromwell Road, London, SW7 5BD (Telephone 0171 938 8852). Edited by P W Lambley, The Cottage, Elsing Road, Lyng, Norwich, NR9 5RR. The views of contributors are not necessarily those held by the British Lichen Society.

Printed by DESA Ltd, Nottingham.

ISSN 0300 - 4562

