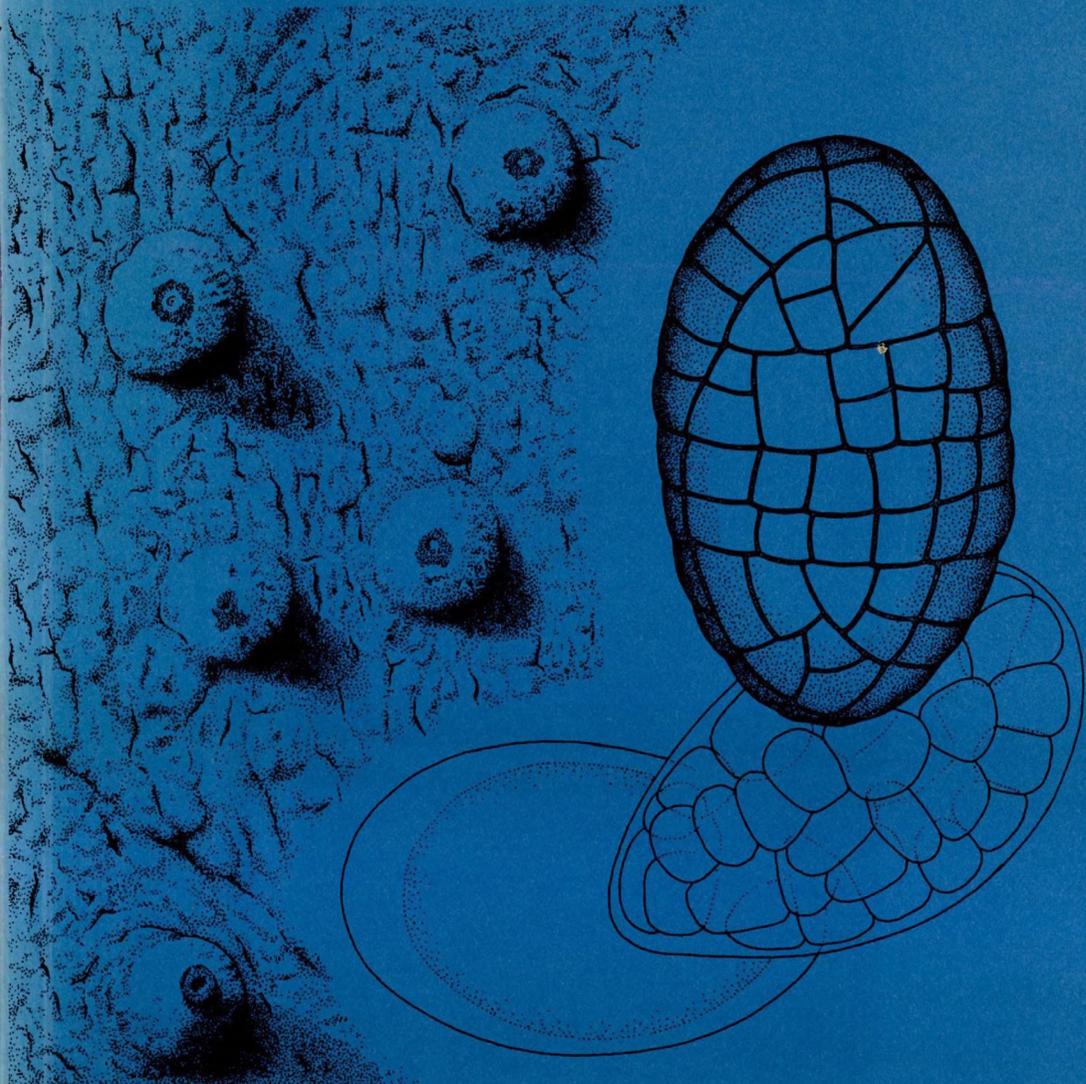


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B. L. S. Bulletin.

# British Lichen Society Bulletin

Number 90 Summer 2002



*Edited by P W Lambley*

## FORTHCOMING BLS MEETINGS

BLENCATHRA, CUMBRIA (*CLADONIA* WORKSHOP)

Tutor Peter James 4 - 10 August 2002

BODMIN, CORNWALL

Leader Peter Lambley 25 - 27 October 2002

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## 2002 MEMBERSHIP AND SUBSCRIPTION RATES

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

**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

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**US dollar renewal membership subscriptions** should be sent to S R Clayden, New Brunswick Museum, 277 Douglas Avenue, Saint John, New Brunswick, E2K 1E5, Canada.

**Overseas members** may pay by transfer to Girobank, Lyndon House, 62 Hagley Road, Birmingham, B16 8PE, UK, Sort Code 72 00 00 - account name 'British Lichen Society' - account number 24 161 4007 or to The National Westminster Bank plc King's Parade Branch, 10 St Bene't, CAMBRIDGE, CB2 3PU, UK. Sort Code 60-04-23 - account name 'British Lichen Society' - account number 54489938.

**Changes of address** should be notified to the Assistant Treasurer at least six weeks in advance.

**Applications for membership** should be made to The Secretary, The British Lichen Society, c/o The Natural History Museum, Cromwell Road, London, SW7 5BD, or through the Society's website at <http://www.theBLS.org.uk>

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**SUBMISSION DEADLINE** - Winter Bulletin September 14.

Cover artwork *Polyblastia cruenta* by Alan Orange.

## EPIPHYTIC LICHENS IN LONDON

The 1995 Environment Act placed a duty on Local Authorities to review and assess air quality in the UK. The Air Quality Regulations (DETR, 2000) set health based Objectives for seven primary pollutants to be achieved by 2005. Where monitoring and modelling by Local Authorities demonstrated that the health based Objectives (less stringent than the vegetation Objectives) were unlikely to be met a Local Authority was required to declare an Air Quality Management Area (AQMA). Twenty nine of the thirty three London boroughs declared AQMAs in 2001 for nitrogen dioxide. The Objective for nitrogen dioxide is set at  $40 \text{ ug/m}^3$  (21ppb) as an annual mean. Concentrations of nitrogen dioxide ( $\text{NO}_2$ ) have changed little over the past thirty years but the source of the pollutant has shifted from stack height to ground level with over 50% of total emissions in London from road transport. The primary emission is in the form of nitric oxide (95%) and is usually rapidly oxidised to  $\text{NO}_2$  quite close to the roadside. However the oxidation rate is mainly dependent upon the availability of ozone which is frequently depleted in central urban areas slowing down the reaction and maintaining elevated levels of NO. NO and  $\text{NO}_2$  are collectively referred to as  $\text{NO}_x$ .

The areas of highest  $\text{NO}_x$  in London are found in the central boroughs and along main arterial roads (Table 1). The impact of NO on lichens is poorly quantified but Standards to protect sensitive species and ecosystems from  $\text{NO}_x$  and sulphur dioxide ( $\text{SO}_2$ ) have been determined based on current knowledge and incorporated into the Air Quality Strategy and EU Air Quality Framework Directive (96/62/EC). Oxides of nitrogen are set at  $30 \text{ ug/m}^3$  (16 ppb) as an annual mean and measured as nitrogen dioxide therefore underestimating the exposure in regions of high NO. For sulphur dioxide a  $20 \text{ ug/m}^3$  (8 ppb) winter and annual mean was agreed. These Objectives are current but do not apply in urban environments.

No London borough is declaring an AQMA for sulphur dioxide because annual average concentrations are generally below  $10 \text{ ug/m}^3$  (4 ppb) (GLA, 2002). This compares sharply with the ambient high of  $350 \text{ ug/m}^3$  (140 ppb) in 1963 at a time when only one epiphytic species was recorded in central London, *Lecanora dispersa* (Laundon, 1970). The present pollution climate is quite different and preliminary results from a small survey in Regents Park on 22 January 2002 (DEFRA, 2002) carried out by Linda Davies, Peter James, Feliciano Cirimele and William Purvis recorded 38 corticolous species mainly on relatively young *Quercus* (25-35 years) including several not seen for many decades: *Pleurosticta acetabulum*, *Parmelina tiliacea*, *Flavoparmelia soredians*, *Lecanora carpinea* and *L. albella* (*L. pallida*), referred to by Laundon (1970) as a toxiphobous lichen lost after the main impact of industrialisation in the middle of the nineteenth century. Laundon (1970) records as catastrophic the decline

from 50 bark species prior to 1950 to just nine epiphytes across the whole of London in 1967. The nine he recorded were: *Amandinea punctata*, *Chaenotheca ferruginea*, *Cladonia coniocraea*, *C. fimbriata*, *Lecanora conizaeoides*, *Hypogymnia physodes*, *Lepraria incana*, *Ochrolechia androgyna*, and *Scoliciosporum chlorococcum*.

	Annual mean concentrations of NO <sub>2</sub> (ug/m <sup>3</sup> )			
	2000	1999	1998	1997
Central London Roadside				
Camden	63	66	64	70
Marylebone Rd*	92	91	92	95
Cromwell Rd	88	92	82	n/a
Southwark*	63	75	54	75
Tower Hamlets*	65	70	65	71
Suburban Background				
Bexley	35	36	40	42
Greenwich	33	36	33	39
Brent	36	37	34	40

Table 1. Annual Mean concentrations of NO<sub>2</sub> (AEA Technology, 2002)\* DEFRA survey sites in central London

Hawksworth and McManus identified 17 species on bark and wood in Regents Park (Hawksworth, 1989) in 1988: + not seen in the present pilot survey

*Amandinea punctata*  
*Candelariella vitellina*  
*Evernia prunastri*  
*Hypogymnia physodes*  
*Physcia tenella*  
*Lecanora conizaeoides*  
*L. dispersa*  
*Physcia adscendens*  
*P. tribacia*+

*Parmelia subaurifera*  
*P. sulcata*  
*Phaeophyscia orbicularis*  
*Platismatia glauca*+  
*Rinodina exigua*+  
*Scoliciosporum chlorococcum*  
*Xanthoria candelaria*  
*X. parietina*

The 2002 pilot survey of 10 young oaks in Regents Park yielded<sup>1</sup>:

<i>Amandinea punctata</i>	<i>L. expallens</i>	<i>Physcia tenella</i>
<i>Bacidia delicata</i>	<i>L. symmicta</i>	<i>Physconia grisea</i>
<i>Candelaria concolour</i>	<i>Lecidella elaeochroma</i>	<i>Pleurosticta acetabulum</i>
<i>Evernia prunastri</i>	<i>Lepraria incana</i>	<i>Punctelia subrudecta</i>
<i>Flavoparmelia caperata</i>	<i>Melanelia subaurifera</i>	<i>Ramalina farinacea</i>
<i>F. soredians</i>	<i>Parmelia saxatilis</i>	<i>Rinodina gennarii</i>
<i>Hypogymnia physodes</i>	<i>P. sulcata</i>	<i>Scoliciosporum</i>
<i>Lecanora albella</i>	<i>Parmelina tiliacea</i>	<i>chlorococcum</i>
<i>L. carpinea</i>	<i>Parmotrema chinense</i>	<i>Xanthoria candelaria</i>
<i>L. chlorotera</i>	<i>Phaeophyscia orbicularis</i>	<i>X. parietina</i>
<i>L. dispersa</i>	<i>Physcia adscendens</i>	<i>X. polycarpa</i>

Other species recorded in this pilot survey of Regents Park:

Lichen:

*Candelariella reflexa*, *C. vitellina*, *Chrysothrix candelaris*, *Lecanora conizaeoides*,  
*Physcia aipolia*, *Rinodina subexigua*

Algae: *Desmococcus viridis*

Bryophytes: *Eurhynchium praelongum*

Fungi: *Lachnella alboviolascens*

Regents Park is one of six sites selected for a pilot study commissioned by DEFRA to review lichen distribution in London under the current pollution climate. The other sites are in Southwark, Tower Hamlets, Bromley, Harrow and Enfield. Several interesting species have been recorded including *Strangospora pinicola*.

The change in species diversity requires careful evaluation in the light of changing atmospheric conditions, in particular the impact of continuous exposure to anthropogenic sources of nitrogen.

P.W. James (NHM), O.W. Purvis (NHM), L. Davies (Imperial College, London)

## JANUARY 2002 MEETINGS

### DOUGAL SWINSCOW MEMORIAL LECTURE AND EVENING BUFFET

The evening began with the Dougal Swinscow memorial lecture which was given by Professor David Richardson, Dean of Science at Saint Mary's University, Halifax, Nova Scotia, Canada. Professor Sir David Smith, President of the Linnean Society, welcomed the assembled audience. He explained that the Swinscow Lecture was in memory of Dr Dougal Swinscow who was an editor of the *British Medical Journal* for many years. In 1957 he conceived the idea of a British Lichen Society and was one of its founding members. Citing paragraphs from Dougal's autobiography, Sir David outlined his achievements and his philosophy on life. He commented on the pleasure that Dougal derived from his study of lichens. Professor Mark Seaward then introduced Professor Richardson using slides taken on early field excursion of the British Lichen Society from the time they had first met as students at Nottingham University. He outlined the role that Professor Richardson had played in the society on the editorial board, as President, and as a regular attendee at the Annual General Meeting. Professor Seaward commented upon Professor Richardson's occasionally eccentric characteristics and invited him to present the 2001 Swinscow Lecture.

#### **The Fourth Dougal Swinscow Memorial Lecture**

Professor David H S Richardson

Reflections on lichenology: achievements over the last 40 years and challenges for the future.

The following is a brief summary of the lecture. A written version of the oral presentation was requested by the Editor of the *Canadian Journal of Botany* for publication in volume 80 of the Journal, pp. 101-113.

Very few people set out to be lichenologists but become fascinated by the subject after a series of coincidences. The same applied to me. I was brought up in Devon intending to become a rose-grower and breeder. After becoming a botany student and being made aware of lichens on a field trip, I was lucky enough to discover that a field course on lichens was being given by Dr Ken Alvin at the nearby Slapton Field Centre in Devon.

He kindled an interest and an MSc and Dr Phil were later completed, the latter under the inspiring supervision of Professor, now Sir, David Smith. This led to an interest in lichen reproductive structures and lichen physiology. In my lecture, I outlined the state of knowledge in the mid 1960s and the developments that have taken place since that time.

After a couple of years lecturing at Exeter University, the student with whom I shared a lab with at Oxford University sent me an advertisement from Canada. This sought a mycologist with a research interest in lichens and my friend added the comment 'this sounds like you'. I decided to apply and moved to Sudbury, Ontario, Canada. Opportunities to undertake research in the Arctic followed which made me realise the wonderful work and achievement of Professor Lange and his colleagues. Sudbury also proved to be a fascinating place to undertake research on the impact of air pollution on lichens because this city, the nickel capital of the world, was at that time renowned as a major point source of both sulphur dioxide and metal pollution. Working with a chemist colleague, Dr Evert Nieboer, I had a fascinating time studying the effects of these pollutants on lichens. This area has become a major area of study and the words 'air fit for lichens, water fit for trout' has been a rallying call for environmentalists.

In 1980 I moved to Ireland, a country with a rich lichen flora that, with the passage of time and changes in land use practices, is becoming threatened. On returning to Canada in 1992, but to Nova Scotia rather than Ontario, I found many parallels with Ireland. A rich lichen flora, a small number of lichen experts and increasing exploitation of forests for timber. Threats to the lichen flora, which is still not well known, come from excessive harvesting and aerial spraying of herbicides to suppress broad-leaved trees in the re-growth of coniferous forests. The picture is, however, not totally depressing as new legislation calls for patches of mature forest to be left when forest clear-cuts are implemented by forestry companies or private landowners.

Whilst both attractive lichen-identification books and wonderful lichen web sites are now available to both students and amateur botanists, the future of lichenology is most positively influenced by lichenologists passing on their enthusiasm for the subject on field trips or field courses at field centres. To ensure that the lichen flora of the world has a bright future we need to enlist undergraduate and graduate students through such person to person interaction. The British Lichen Society can play a key role in this area. Success will mean a brighter future for the rich lichen floras around the world because there will be a group of advocates to plead for the conservation of habitats rich in endangered lichen species.

**BRITISH LICHEN SOCIETY**  
**ANNUAL GENERAL MEETING – 12 January 2002.**

The annual general meeting for 2002 was held at 10.30 in the 'Palaeo-Dem' room at the Natural History Museum, Cromwell Rd, London SW7 5BD. Present Dr A. Fletcher (President in the chair), Council and c.110 members.

1. **Apologies for absence:** Dr Brian and Ms Sandy Coppins, Dr Kery Dalby, Mr Trevor Duke, Ms Joy Fildes, Ms Joy Gadsby, Prof. David Hawksworth, Mr Albert Henderson, Ms Sheila and Mr Leslie Street.
2. **Minutes of Annual General meeting 6 January 2001.** Signed as a correct record.
3. **Matters arising.** None.
4. **President's Address.**

The president welcomed the members and thanked everyone for coming. He was sorry to report that during his term of office three lichenologists who had contributed a great deal to the Society had died - Prof. Brian Fox in 2000, a past president and Dr Humphrey Bowen and Dr Ken Alvin in 2001. Mr Robin Munroe had also recently passed away. A brief silence was observed in memory of the departed. Mr Vince Giavarini and Ms Joy Ricketts were thanked for representing the BLS at the funerals.

An extended address was given (see p 12) in which he congratulated the society on an ever-increasing membership and for members' production of an unusually large number of publications during his term. Mr Jeremy Gray was congratulated for setting up the BLS Website.

An innovation was the introduction this year of 'The Ursula Duncan Award'. This was to acknowledge and reward individuals for their outstanding contributions to lichenology in either an International or British context. The title also commemorates Ms Ursula Duncan, an amateur lichenologist who made such memorable contributions to the BLS, lichenology and in encouraging newcomers.

An award for outstanding contributions to International Lichenology was offered to Professor David Richardson and Prof. Mark Seaward made the introduction.

An award for outstanding contributions to British Lichenology was given to Mr Tom Chester and Mr Ivan Pedley made the introduction.

The President presented the awards and certificates, followed by brief acceptance speeches by the recipients. Ms Mary Hickmott photographed the proceedings.

5. **Treasurer's Report.**

The presented accounts were accepted *nem. con.* As Mr Dobson had tendered his resignation at this meeting the vacant position of treasurer was noted. It was also suggested that a change in auditor may be required as the two addresses are best located close together. Mary Hickmott proposed a vote of thanks for all the work done by the auditor Mr Douglas Oliver.

6. **Secretary's Report.**

The Report will published in the Winter *Bulletin*.

7. **Officer's and Committee Chair reports.**

a. **Mapping recorder and archivist.** Prof. Mark Seaward pointed out the importance of sending archival material to him. Ms Mary Hickmott had contributed an album of photographs of people at field and other meetings.

b. **Senior editor (Lichenologist).**

c. **Bulletin editor.** Bumper editions were produced in a new and larger format, including full species lists for field meetings contributed by Ms Janet Simkin and the now rather extended list of New Rare and Interesting Lichens edited by Mr Chris Hitch. Most people welcomed the new larger Bulletin and Prof. Mark Seaward pointed out that this was the only list published for new species recorded in Britain. Dr Kery Dalby's offer to write an obituary of Ken Alvin for the Bulletin was accepted.

d. **Conservation Officer.** Dr Anthony Fletcher presented a written report, to be published in the Bulletin.

e. **Data Committee** was now chaired by Mr Frank Dobson. Prof Mark Seaward was thanked for his chairing the committee previously. Ms Simkin reported that Biobase is now available on the BLS computer at the Natural History Museum and people were encouraged to contribute records.

f. **Education and Promotions committee.** Ms Barbara Hilton produced a written report to appear in the Bulletin. Members were asked to contribute projects for trial at the proposed 'Education workshop' in the summer.

**g. Field meetings Officer.** Mr Ivan Pedley reported successful and enjoyable meetings in Jersey and the *Opegrapha* Workshop in Kingcombe. Mr Simon Davey and Mr Peter James were thanked for leading these meetings.

**h. Librarian.** Prof. David Hawksworth had resigned from the position on his relocation to Spain but notice was received too late for inclusion in the Bulletin. Members interested in the post and in curating the library at Kew were invited to discuss the matter with the President.

**i. Curator.** No report received.

Thanks were extended to Dr Steven Clayden (Regional Treasurer), Mr Jeremy Gray (Assistant Treasurer) and *ex officio* members who did valuable work for the society, including Mr Brian Green (sales) and Mr Don Palmer (Trade distributor).

**8. Field meetings 2002-2003.** Mr Pedley noted that Field meetings in 2002 include Ireland in May to be led by Mr Mike Simms and Mr Howard Fox, a *Cladonia* workshop at Blencathra in July led by Mr Peter James, and a meeting on Bodmin Moor proposed for the autumn. Mr James suggested a meeting in Holland in Spring 2003.

**9. Elections of Officers and four members of Council.**

The following Officers were elected -

*Vice-president* - Dr David Hill, proposed by BLS council, seconded and introduced by Dr Dennis Brown.

*Treasurer* - Dr Bob Hodgson proposed by Council, seconded and introduced by Mr Frank Dobson.

*Auditor* - Mr Anthony Golding proposed by Dr Bob Hodgson, seconded and introduced by Mr Frank Dobson.

With their acceptance to continue and in the absence of alternative nominations the *Serving Officers* were elected *nem. con.*

*Members of Council* - Retiring members including Dr Jeff Bates, Mr Bryan Edwards, Prof. David Hawksworth and Ms Sheila Street were thanked for their support.

The following were duly elected:

Prof. Clifford Smith - proposed by Council, introduced by Mr Peter James and seconded by Ms Pat Wolseley.

Dr Simone Louwhoff - proposed by Council, introduced and seconded by Mr Jack Laundon.

Mr Vince Giavarini - proposed by Council, introduced and seconded by Dr Oliver Gilbert.

Mr Neil Sanderson - proposed by Council, introduced and seconded by Mr Bryan Edwards.

**10. Any Other Business.**

The change in Treasurer necessitated changing the signatories on BLS accounts held by the bank. The new signatories for Mandates were proposed by Dr David Hill seconded by Mr Ray Woods. New National Savings signatories were proposed by Mr Peter James seconded by Mr Don Palmer. The Treasurer, President and Auditor duly signed these.

No field meeting would be held on Sunday 13th January 2002 due to Prof. David Hawksworth's absence because of illness.

International Association for Lichenology dues could now be paid in sterling to the secretary Ms Pat Wolseley. They consist of £29 for the 2001-2004 period providing two newsletters per year.

- 11. Date and Place of the next AGM.** Saturday 11<sup>th</sup> January 2003 at 10.30 in the 'Palaeo-Dem' Room, Natural History Museum, Cromwell Rd, London SW7 5BD.

The meeting closed at 12.45

**The afternoon lecture session was on the theme of Island Hopping.**

Dr Anthony Fletcher began the afternoon with a talk on the **Lichens of the Welsh Islands**. In this talk he concentrated on Bardsey which is has the richest lichen flora because of the wide range of habitats present. It is an island which had a long period, from at least the foundation of the monastic settlements, when it was managed relatively intensively for agriculture before becoming uninhabited in the first part of the 20th century. However, it is now experiencing a revival under the management of the National Trust. He was able to demonstrate through his long spell of monitoring going back to 1977 that these changes were reflected in the lichen communities and that this complex interaction between human activities and lichens was continuing.

This was followed by Peter James speaking about the **Lichens of the Channel Islands** but making references to the Welsh Islands, Lundy and the Isles of Scilly. He was particularly interested in identifying a range of indicator species which could be used to identify the most important sites for maritime lichens. However, as he demonstrated, any list would have to take into account the strong environmental factors which can influence a flora. For example, even within an island as, for example, Lundy, strong geological differences were reflected in different land use and therefore lichen floras. Whilst the neighbouring islands of Sark and Alderney showed the consequences on the lichen flora of very different land use histories.

Professor Clifford Smith then spoke on the **Lichens of the Atlantic Islands** focusing on the fascinating Azores where he was able to draw on his knowledge and experience of the Hawaiian islands to look at how well lichens demonstrated current island biogeographical theories. He began by outlining the geography of the Atlantic islands which stretch from Iceland, through the Azores to the Falklands. They are all volcanic in origin except the Falklands. As with all volcanic islands they are sterile when formed but as the lava weathers it forms a nutrient-rich environment which only lacks nitrogen. Whether in the Atlantic or in the Pacific such volcanic islands demonstrate in most groups classic island biogeography with high endemism, classic adaptive radiation but a depauperate biota. Thus there are 506 lichen species recorded from the 1233 sq km of the Azores compared with 2736 species from the Iberian peninsula. Lichen colonisation compared with other groups is complicated by the need for both the fungal and photobiont components to be dispersed there. This may explain the absence of certain genera for example *Alectoria*, *Bryoria*, *Hypogymnia*, *Lassalia* and *Umbilicaria*. The effect of a small genome in a different environment perhaps with no predators and diseases can lead to rapid evolution into new species. In Hawaii over 90% of the vascular flora is endemic as also in the birds and insects, compared with less than 20% of the lichens. In the Azores the figure is even lower at 2%. Adaptive radiation tends to be high in island ecosystems because ecosystems are very compressed. For example, in the Hawaiian silverswords three genera and 35 species have evolved from a single introduction and there are other examples in the Hawaiian honeycreepers. In contrast there is no example of adaptive radiation in lichens. Low endemism may be due to haploids not being buffered from any deleterious recombinations and therefore may result in death. Lichens are also vulnerable to any mutation which interferes with the symbiosis.

He then described the range of habitats on the island which are largely dictated by altitude from coastal and lowland forest to alpine above 1500m. The middle and cloud forests were very fragmented because of forest clearance and the lowland forest destroyed. Nevertheless there was much of interest still in the lichen flora including endemics such as *Nephroma henssenii* and *N. venosa*.

After tea Dr Simone Louwhoff spoke on the **Lichens of the Pacific Islands** and looked in particular at the distribution of the Parmeliaceae throughout this region. Knowledge of distribution was constantly changing as knowledge of the area was still patchy with some areas well known whilst others were yet hardly explored. Nevertheless it was possible to come up with a broad picture of the situation. In the Parmeliaceae there are at least 1000 species in 61 genera predominately in the southern hemisphere. In the different genera broad preferences were observed for example *Hypotrachyna* were primarily tropical montane whilst *Parmotrema* were temperate tropical. To give some indication of numbers she said there were 42 *Hypotrachyna* in the Pacific of which 37 occurred in Papua New Guinea whilst *Parmotrema* were represented by 62 in the Pacific of which 50 are found in Papua New Guinea. There were clear differences between continental islands like New Caledonia with varied climate and unusual geology and the oceanic islands with limited topography and recent origins. Not surprisingly the larger islands supported greatest species diversity, for instance Papua New Guinea has by far the greatest number reflecting its greater topographical diversity, range of climate and age. She finished by concluding that the factors which determined the richness of the Parmeliaceae were elevation, rainfall, vegetation types. These combined with the age of the landmass and the importance of the proximity of a major landmass and the variations in ability to disperse (vegetatively or sexually).

## PRESIDENTIAL ADDRESS - 2002

Traditionally, this is the place for the retiring President to summarise the society's successes over his two-year term, to point out what remains to be done, and offer some recommendations for the future.

Firstly, I need to report the sad deaths of several members, Professor Brian Fox, a past President, passed away in 2000, followed last year by Dr Ken Alvin, Dr Humphry Bowen and Mr Robin Munroe. Ken you will all remember for his co-authoring the Observer's Book and his active membership of the society in its early days, especially in organising the annual AGM and exhibition meetings at Imperial College. Humphry Bowen was a prominent member of the conservation committee for over 20 years. Robin Munroe was an active fieldworker in Scotland. I would like to thank Joy Ricketts and Vince Giavarini who represented the BLS at the funeral services. It would be nice if we would maintain silence for one minute to recollect these much valued members.

We continue to be a very active and productive society, carrying a lot of influence in environmental circles. Membership and finances appear to be stable. Our journal, *The Lichenologist*, is of international repute, and the *Bulletin* gets thicker with each issue. A busy fieldwork and workshops programme gratifyingly attracts participants from overseas and we are always seeking further ways to involve overseas members. The website has proved especially useful, recording over 6000 hits from January to September 2001. Of especial value to me are the online checklist and synonym list which are updated regularly.

Over the period of my presidency, the society has run taxonomic and ecological workshops in various parts of the country, and an international workshop in 2000 (lichen monitoring), attended prominently by members living overseas. An astonishingly large number of publications has also appeared. Some, though attributed to individuals, have surely drawn on the collective expertise available within the BLS. Recently we have gained general or introductory works by George Barron, Frank Dobson, Oliver Gilbert and William Purvis, and specialist books such as Barbara Benfield's 'Devon Lichen Flora', Alan Orange's 'Lichen Chemistry', and my own 'Lichen Habitat Management', with help from Ray Woods and Pat Wolseley. Pier-Luigi Nimis and Christoff Scheidegger's 'Lichen Monitoring' has just appeared. In addition, two further fascicles of the Atlas have been produced. My apologies if I have left anyone out.

Much of this productivity stems from the particularly large numbers of our members who are active lichenologists. Some serve on our many committees, while others operate alone. I have been concerned that such persons be properly rewarded for their industry, and a step in this direction is the introduction at this AGM of the 'Ursula Duncan Award', which honours those providing outstanding service to the society and lichenology. I will give more about this later.

The society was honoured last night by the biennial Swinscow Lecture being given by Professor David Richardson entitled 'Reflections on Lichenology: Achievements and challenges over the last forty years'.

Turning now to some current issues. The question of 'the state of whole organism biology', raised by Peter Crittenden in his Presidential Address 2000, I am pleased to say, now engages societies much larger than ours. A joint letter was sent to major science journals, pointing out the consequences of neglecting training in 'non-molecular' subjects such as systematics, ecology and physiology in our universities, colleges and museums. I am grateful for Peter's continuing to take the initiative on this. The latest news is that last Monday, 7th January, I received a request for comments to the House of Lords 'Select Committee on Systematics and Biodiversity', to be submitted by 10th January - just three days' notice! So, the issue is now recognised at the highest level but we mustn't relax yet and should continue our efforts until a more secure future for systematics is assured.

We had hoped in this meeting, to include a report on the future Checklist and Flora but this is now being reconsidered following David Hawksworth's relocating to Spain, and his unfortunate illness. I'm sure it will go ahead, but regret it is too early to summarise any proposals.

Turning to the future, I have been mulling over several issues which the incoming council might consider. All of these issues are shared with our sister societies, so we are not alone here. They concern the need to remain aware of change and to be responsive to it. I will offer here some personal observations on just one of these issues. You may disagree with my recommendations, but here goes! I would be interested to share your views.

To a large extent we have been quite successful at responding to change in the past. We were leaders in the 1970s and 1990s with our mapping and recording schemes, the churchyards survey, our outgoing approach to site and species conservation and regular checklists and floras. In the 1990s Jeremy Gray was among the first to start, single-handedly, a society website. We should also note that most societies have yet to produce a National Red Data Book.

But we still need to address the question raised by previous president: 'where is the next generation of lichenologists to come from?' I maintain a positive attitude on this. My own feeling is that unless the value of systematics training is very quickly up-rated, they will not come, in the foreseeable future, from the traditional sources of schools, colleges, universities and museums. In fact, I see the period 1960-1990 as a kind of golden age, when institutions employed professional lichenologists. So, are we reverting to the pre-1960, or even 19th century era, of largely leisured gentleman/gentlewoman amateurs? I think not. My reason is because each year I give some 30-40 talks and events around the country and note that while there is always a good turnout of keen amateurs and retired people, young and enthusiastic people are very much around. But they work outside our traditional institutions - in a different place. In fact, activity and interest in nature conservation in the wider community is burgeoning, yet it seemed almost non-existent in my youth. Jobs are certainly more numerous and competition for them is intense.

I suggest that prospective lichenologists are now employed by the county wildlife trusts, biological records centres, local authority planning departments, environmental managers and local reserve wardens. Lichen-friendly volunteers can be found in the BTCV and the networks of heritage wardens now being set up. Children become intrigued by lichens in extracurricular natural history clubs such as Wildlife Watch and Rockwatch, which I help to organise. I propose therefore, that we look further afield and engage new audiences. As active lichenologists surely we should take on the responsibility to encourage and train others. Why not make a start by infiltrating your local nature conservation scene, parish council, church committee and so on, and spread the word?

In short, I think that our future lichenologists are there and we need to make contact with them. Of course, the modern generation studies in a different way, will do lichenology in a different way, and run the BLS in a different way. I wish them every success.

I would like to finish by offering sincere thanks, alas I cannot mention everyone's name, to the members of council and committees, and indeed all of you who have provided services and help to the society over the past two years.

Thank you for listening to me and thank you for having me. It has been a great honour to serve the society in this way. But I haven't finished my duties yet!

## The Ursula Duncan Award

For some time Council has expressed the desire to reward persons who have rendered valuable service to the society's aims of promoting the study of lichens. Such an award of course, also honours such persons for the merit inherent in their work, and our gratitude to them for performing it.

In entitling the award we also offer a dedication to Ursula Duncan, who would have been a most worthy recipient. Ursula is kindly remembered by many of us. Always an amateur botanist, she was mentor, companion and friend to many of us here today. In the so-called 'lean years', she helped to keep the study of lichens alive, publishing the first identification guidebooks since the 1920s. Finally, she was one of the founder members of the BLS in 1958.

It is my great pleasure to present the first award at this AGM.

The text of the award reads:

"**Ursula K Duncan** (1910-1985), although born in Kensington, London, spent almost all her life at Parkhill, Arbroath, the family's ancestral home. Private tutelage suited her studious nature and wide interests, which blossomed in so many ways: external BA and MA classics from London University, a Licentiate of the Royal Academy of Music, and a remarkable gift for botany. During the second World War she served in the Censorship Department, but following the death of her father in 1943, she took over the management of the family estate. As a botanist she was without parallel, accepting taxonomic challenges afforded by difficult vascular plant groups, as well as bryophytes and lichens in general, the latter at a time when there was an absence of suitable guides to their study and indeed very few British lichenologists. Her three books on the subject, particularly *An Introduction to British Lichens*, played a pivotal role in the revival of lichenology. For this and other contributions to botany she was made an Honorary Member of the British Lichen Society, received the H H Bloomer Award of the Linnean Society and was granted an Honorary Doctorate of Laws of the University of Dundee.

It is most fitting that the British Lichen Society's award should be named after this modest, enthusiastic and gifted botanist who did so much for British lichenology."



Fig. 1. The inscription on the base of the Ursula Duncan Award presented to Tom Chester.



Fig. 2. The President, Dr Anthony Fletcher, presenting the Ursula Duncan Award to Professor David Richardson at the AGM.

The award itself is a large paperweight of polished serpentine rock from Cornwall, with brass engraved plate (Fig. 1). This rock is noteworthy to lichenologists because it supports an especially rare and interesting lichen community found only on the Lizard Peninsula.

Today I would like to present the first award, for outstanding contributions to international lichenology to Professor D H S Richardson, introduced by Professor Mark Seaward (Fig. 2).

The second award, for outstanding contributions to British lichenology goes to Mr T W Chester, introduced by Mr Ivan Pedley.

Dr Anthony Fletcher

### **First Recipients of the Ursula Duncan Award**

#### **David Richardson**

David Richardson has worked tirelessly for lichenology in general and for the British Lichen Society in particular, being at various times its President, a Council Member and Associate Editor of *The Lichenologist*. He has also played a major role in international lichenological affairs, mainly through his unstinting editorial and refereeing roles, providing encouragement to many, both amateur and professional. He has an enviable published output ranging from seminal papers on lichen physiology to more popular works, including *Pollution Monitoring with Lichens*, *The Vanishing Lichens* and *The Biology of Mosses*. For this and his other contributions to science he was recently awarded the prestigious George Lawson Medal of the Canadian Botanical Association. He formerly held the Chair of Botany at Trinity College, Dublin, and is currently Dean of Science at St Mary's University, Halifax, Nova Scotia. He has a string of titles behind his name, including a DSc, and is a Fellow of the Royal Irish Academy. It is fitting that the BLS should honour him with the first Ursula Duncan Award; David, like Ursula, is an enthusiastic and gifted botanist who has done so much to promote lichenology - she would have been delighted to see one of the earlier members of the Society honoured in this way.

Mark Seaward

## Tom Chester

Any society would count itself fortunate to include Tom Chester as a member, and so we are particularly favoured that he has chosen to contribute so fully to the British Lichen Society and to British Lichenology. He possesses those enviable qualities valued by all learned societies - an impressive subject knowledge, a boundless enthusiasm for all its aspects and a preparedness to offer himself as loyal servant. With unwavering support and dedication, he has involved himself in so many aspects of our Society and served on many of its committees, including Council, that it is perhaps wrong to single out one particular attribute for praise, but his greatest contribution has undoubtedly been in the field of churchyard habitats and the associated lichen flora. Soon after he became a member he found that here, in the cemeteries and churchyards so unique to this country, was a habitat whose study had been sorely neglected. Here was the man, possessing all the necessary enthusiasm and interest, to take on the task. And here also was man with an ability to organise others and to do so with a combination of great tact and personal charm, but also with single-mindedness - formidable qualities that together were destined to achieve great things. From the early beginnings, that of merely surveying the lichen flora of the rich churchyards of his county of Northamptonshire, noting their distribution and morphology, information began to flow in from colleagues in adjacent counties, and then from others representing the whole of lowland England. He set challenging goals - the target, that every hectad in lowland England should have at least one churchyard surveyed by the end of the millenium was achieved on time, urged on by his drive and commitment. Now the attention is turned towards the Wales, to the north of England, and to Scotland. The baton has been passed over to others in these areas but he still supports and encourages the pace.

There are few people who are so warmly regarded or who have been finer ambassadors for the work of this Society. To this quintessential gentleman, this prestigious award is a fitting tribute from all his friends and colleagues.

Ivan Pedley

## CONSERVATION OFFICER'S REPORT - 2001

Three meetings of the 29-strong committee were convened in 2001. The year was particularly busy up to September, answering many enquiries and responding to reports from government agencies, conservation bodies and site managers.

The two specialist conservation subgroups also met. One is devoted to implementing and monitoring progress of UK Biodiversity Action Plans (chaired by Dr Stephen Ward), and their well-established Churchyards Subcommittee (chaired by Tom Chester) both continued their invaluable work.

The long-awaited 'Lichen Habitat Management' book has now appeared. It aims, at an affordable price, to help conservation workers and site managers who are not lichen specialists. The proceedings of the Lichen Monitoring workshop held in 2000 should also have appeared by the time this report is published.

A list of the conservation status of British lichens is now available, thanks to Ray Woods and his team. A preliminary report on the English names for lichens was published in the *Bulletin* 88 by Oliver Gilbert and Albert Henderson. Coincidentally lists of Gaelic and North American names appeared in the same issue.

Threats to lichens continue. The issue of pollution from nitrogenous compounds receives increasing comment and we are discussing ways of further documenting and publicising this threat. Damage to lichen communities through historic buildings restoration work is a common enquiry and after seeking advice from Vince Giavarini and myself, the National Trust has published a document 'Plants and Buildings' containing pertinent advice on lichens.

Plantlife continues to work on behalf of lichenology, regularly seeking our advice and commissioning specialist reports. To this end Bryan Edwards has surveyed the status of *Caloplaca aractina*, *Cladonia mediterranea* and *Heterodermia leucomelos* (the latter in Cornwall), and Vince Giavarini surveyed *Lecanactis hemispherica*. We continue to provide advice on specialist topics such as 'important areas for lichens' programme, and soon, the European Plant Conservation Strategy which will direct our government's nature conservation initiatives. Neil Sanderson answered many enquiries on woodland lichens. All members continue to advise and report on lichen conservation matters in various parts of Britain.

A valuable source of information and contacts is provided by the Institute of Biology, but alas, these are too voluminous to deal with satisfactorily at the moment. It is hoped that a representative will come forward who is willing to provide reports back from the IoB's 6-monthly meetings in London.

The sad loss of Dr Humphry Bowen was noted in the *Bulletin* 89. Humphry had supported and served on the conservation committee since the early 1970s until relatively recently and will be much missed.

I wish to thank all members of the conservation committee for their continuing support, and especially to Brian Starkey for attending to the minutes.

Dr Anthony Fletcher

## **EDUCATION AND PROMOTIONS COMMITTEE 2001 REPORT FOR THE AGM OF THE BLS, 12 JANUARY 2002**

**The Education and Promotions Committee** met three times in 2001, in London. Meetings have been well attended by the 15 members: Ann Allen (secretary), Andrew Branson, Tom Chester, Sandy Coppins, Linda Davies, Frank Dobson, Rebecca Farley, Tony Fletcher, Jeremy Gray, Barbara Hilton (chair), Peter James, Alan Orange, William Purvis, Amanda Waterfield, Pat Wolseley.

**Overall Purpose of the Committee:** is to raise awareness and understanding of lichens. At meetings we receive information and plan ways of furthering our aims, for example, through encouraging projects and publications.

**Books:** The most recent publications include: *Microchemical Methods for the Identification of Lichens* (A Orange, P W James and F White) which was a milestone publication, bringing us up-to-date about chemical techniques. Frank Dobson's *Lichens: An Illustrated Guide*, published just about a year ago, was eagerly awaited and is a popular revision of his earlier flora. Frank's *Illustrated Key to Churchyard Lichens* is about to be published in two versions. Frank has also contributed a section on lichens in Richmond Park to the Autumn 2001 *Richmond Park Magazine*, which reaches many members of the public and has produced the *Lichen Identifier* available on CD. As a result of Pat Wolseley's, Christoph Scheidegger's and P-L Nimis' enthusiasm and careful editing *Monitoring with Lichens - Lichen Monitoring* has recently been published. Similarly, the *Habitats Management Book* has just been published, the culmination of much careful work by Tony Fletcher.

**Fact-sheets:** The main thrust of the Committee has been the production of various lichen fact-sheets. We gratefully acknowledge the collaboration of the many colleagues who have contributed or up-dated fact-sheets. All are planned to be on the BLS website. The first fact-sheet on the website is *Lichen References*. *Eutrophication and Lichens* is almost ready for inclusion on the website. Other titles being prepared include: *The Lichens of Ancient Woodland*, and *Air Pollution References*. Annually, Tom Chester updates the *Churchyard Lichens* fact-sheet, also available on the BLS website (thebls.org.uk).

**Projects:** Much progress has continued to be made in two major project areas: **churchyards** (Tom Chester) and **environmental monitoring** (Pat Wolseley). Tom has led workshops, disseminated information and collected data on churchyard lichens through the regional network he has established. Pat has worked with Peter James and Diccon Alexander in the production of an illustrated key to lichens on twigs, suitable for school children, and available in hard copy and on-line. This has benefited from sponsorship by Texaco. Varied projects, developed by **individual schools and colleges**, have benefited from the support of lichenologists, notably Tom Chester and Anthony Fletcher.

**Future directions:** The Committee is mindful of the scope for extending its work in education and the promotion of lichens. We are **considering a workshop for lichenologists and others interested in school projects**. If anyone would like to contribute their ideas on promoting the study of taxonomy, practical fieldwork and publications to help students, kindly make them known to Ann, Barbara or any Committee member.

Warm thanks to all members of the Education and Promotions Committee and to all BLS members who have worked so hard with us over the last year, promoting understanding of lichens.

**Barbara Hilton, for the Education and Promotions Committee**  
(contact at: Beauregard, 5 Alscott Gardens, Alverdiscott,  
BARNSTAPLE, Devon EX31 3PT  
e-mail [bphilton@eclipse.co.uk](mailto:bphilton@eclipse.co.uk))

## BIOBASE

The BioBase project has made good progress since last summer. 28 copies have now been issued for local recording, and the system is being used regularly to record BLS field meetings.

### **New release**

16 people attended the BioBase workshop on 29th October 2001, and provided valuable feedback and suggestions for the new version of the system. This was released in time for the AGM in January, and has been well received. It included significant changes to both the software and code tables, and all BioBase users should apply the upgrade to their systems if they have not already done so. Guidelines for the Use of BioBase in Lichen Recording were issued at the same time, to be used alongside the more technical User Guide, and the test system and tutorial were also revised.

### **Central database**

BioBase users have been asked to resubmit all their records to the central BLS database once they have had a chance to review them and take advantage of the new code tables. The central database is being rebuilt as these records come in, and the distribution of the 3433 sites received so far is shown on the map (Fig. 1). This include two databases, supplied by Don Smith and David Newman, that have been converted from other systems and together contributed records for more than 2000 sites, mostly churchyards, in Kent and the north of England.

There must be other databases of lichen records held on personal computers, and I am keen to get these valuable records copied and converted to the standard BioBase format. This will ensure that the data is safeguarded for the future and included in the central BLS database, as well as making it easy for the recorders to use BioBase themselves in the future if they wish. Records will also be passed on to the Mapping Scheme if this has not already been done. If you have a computerised database in any form, however large or small, do please get in touch with me. I would also be interested to know of any large collections of record cards that have not yet been computerised, but perhaps should be.

## Future projects

We are now able to look to the future, and there will be much discussion over the coming months on how we should best concentrate our resources to build up the central database of site-based records. Several aspects have already been considered:

- Local recording using BioBase, with more active users than now
- Recording field meetings with BioBase, and distributing the records to those present
- Conversion of existing computerised databases
- Published records such as "New, Rare and Interesting" and local floras
- Site based records submitted to the mapping scheme
- Records reviewed and collated as part of the work done to produce map fascicles
- Records for habitats of conservation importance
- Herbarium collections

Clearly we cannot do all these at once. Some are manageable within our own resources, but others could attract funding as larger projects. Any offers of help, data or advice will be welcome (telephone 01661 823233, or e-mail [j.m.simkin@ncl.ac.uk](mailto:j.m.simkin@ncl.ac.uk)).

Finally, we are continuing to keep in touch with the National Biodiversity Network. Mark Seaward and I attended their first conference for national societies and recording schemes in November, and we hope to work with them more closely as the BioBase project gains momentum. It was useful and encouraging to meet with our opposite numbers in other societies and hear about their recording projects and how they are managing them. Our experience varied a great deal, and there was much discussion of the relative merits of the various recording systems. A good overview of the NBN can be found on their website <http://www.nbn.org.uk/>.

Writing this has made me realise how much we have achieved in the last year, in getting the BioBase project to this stage. Most of the technical work has now been done and the system is ready to be put to work. Increasing its use as a tool to support local recording is a vital part of this, but that is up to you. Personally I find that I use BioBase almost every day, if only to check on a record or answer a local enquiry. That said, I can't wait to get back out into the field and start recording lichens again!

Janet Simkin

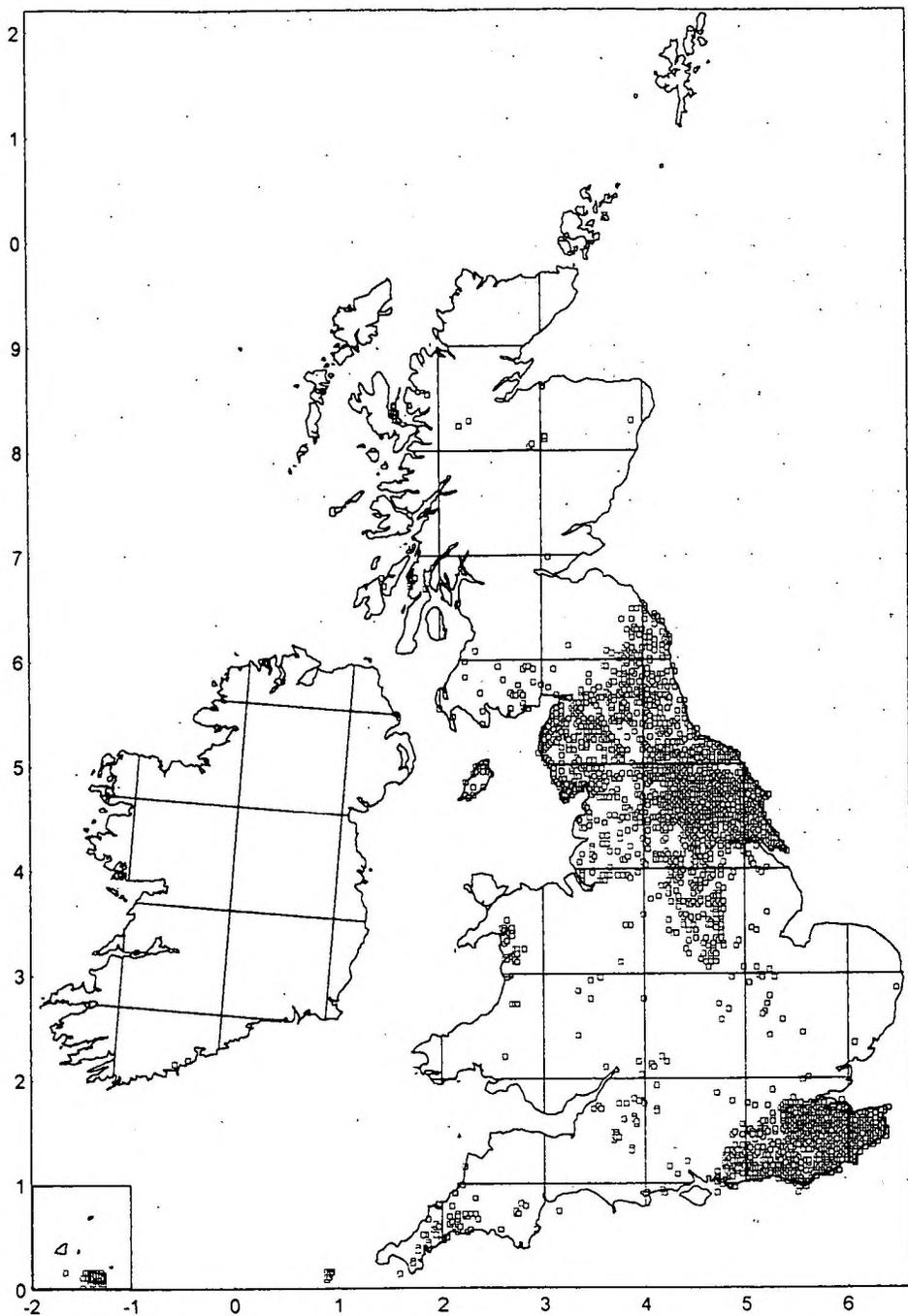


Fig. 1

## REVISION OF THE LICHEN FLORA OF GREAT BRITAIN AND IRELAND: HOW YOU CAN HELP

Supplies of the current Flora are dwindling fast so it has been decided to produce a revised edition. The new Checklist generated by Brian Coppins, due out in mid-May, shows that around 130 additional taxa, discovered since 1992, will need to be incorporated, and taxonomic research has rendered the inclusion of around 50 new genera necessary. To bring our Flora into line with thinking in most other countries the need to split the larger parmelioid and cetrarioid genera is finally being accepted. The new Flora, in addition to being 'right up to date' will be better illustrated, the keys should be easier to use, and there will be improved information on the world distribution of species. Funding is being investigated, meanwhile the BLS is putting £10,000 into the project (which it hopes to recover via sales), which should get it well underway. A Flora Committee has been assembled, at a recent meeting the majority of genera were apportioned for the production of first drafts some of which, it is hoped, will be sent abroad to work experts for final checking.

An exciting development is that in addition to producing a hard copy (book) version an electronic version will be worked on providing public access to a larger database of flora-related information including images, distribution maps and alternative keys. This version has the advantage that it can be continually updated.

Members can help get this vital project off to a flying start by sending any errors, omissions or weaknesses they are aware of in the current Flora to O L Gilbert, 42 Tom Lane, Sheffield, S10 3PB, UK, who will pass them on to the relevant people. It is important that this is done immediately; please act now even if you have only one or two observations to make.

Oliver Gilbert

### **CORRECTION - SPRING FIELD MEETING JERSEY BULLETIN 89**

P60 line 19 should read Fiquet not Fliquet.

## EARLY NOTICE ABOUT THE BLS AGM 10th & 11th January 2003

This will be held in London (venue details will appear in the Winter 2002 issue of the Bulletin, where a full programme of events will also be published).

### Exhibition

It is proposed to encourage members to submit posters, exhibits or demonstrations on any aspect of lichenology with which they have been engaged. This will enable appreciation by the wider membership of what activities have been going on within the Society over the last year. Items for display can be simple or sophisticated, for example, of local or national projects, discovery of new species, Biodiversity Action Plans, photographic monitoring, uses of lichens, unusual species, locations or habitats, etc.

Please let the Secretary know by December 1st 2002 if you are intending to display an exhibit or poster, giving the title of the exhibit, and approximately how much space you will need (table and/or display board). Exhibits are to be set up on Friday 10th January, 2003.

It is intended that there will be time set aside for viewing the exhibits on both Friday evening and on Saturday. Those submitting display items will be given opportunity to speak for a few minutes on their display, and answer questions.

The Friday evening events will also include a buffet supper (details later in the Winter Bulletin), plus a Lichen Quiz devised by the indefatigable Oliver Gilbert. There will also be opportunity for members to show a small number of photographic slides relating to lichenological experiences of the past year.

### Annual General Meeting

Details to be published in the *Winter Bulletin*.

### The Lecture Session

On Saturday afternoon 11th January 2003. This promises to be both entertaining and fascinating. Although the theme of 'Where the British Lichen Society is going with data, maps, names and biodiversity' may not initially appear to be appealing, the four speakers will reveal hidden and fascinating facts and insights on aspects of data gathering, unravelling the mysteries of why names change and the problems and pitfalls of investigating Biodiversity Action Plan species.

## **Starting from Scratch - The History of the British Lichen Society Mapping Scheme.**

**Professor Mark Seaward**

This will chart the early beginnings of gathering data to start making distribution maps of the British flora, maps which today we almost take for granted and yet are fundamental to our understanding and interpretation of the 1700 or so lichen taxa of the British Isles. And where do we go from here?

## **What's in a name? - taxonomy, nomenclature and all that jazz.**

**Dr Brian Coppins**

With the publication of the new Checklist, there are the inevitable groans about all the name changes. Why do names have to change? This is not a dry and dusty rattling of old bones, nor the permickety tweaking of familiar species for sophisticated new techniques, but a fascinating detective story, throwing up surprising links between early collectors and modern methods of species analysis. And through it all runs the thread of the quirks and personalities of those who had the courage or temerity to pronounce a name.

## **At The Sharp End - Lichens and Biodiversity Action Plans**

**Bryan Edwards and Vince Giavarini**

Lichens deemed worthy of special study as Biodiversity Action Plan species are selected through careful analysis of accumulated data and distribution maps, with reference to literature, modern records and herbarium collections, thus combining the disciplines described by the two earlier speakers. The field work is fun, but, is all as it at first seems?

## **KNUSTON COURSE**

The sixth weekend residential course *Exploring Churchyard Lichens* will take place on 27-29 September. Further details are given in the Field Meetings insert and I can provide you with a booking form. As well as being a useful introduction for beginners, the course should help existing members to brush up and extend their identification skills. The course maximum is twelve and, whereas in the early years it was over-subscribed, more recently numbers have declined and consequently this September may be your last opportunity to participate. In the past, a goodly number of members have attended, three returning for a second time. Knuston Hall is a delightful venue and it is worth coming along for the food alone!

Tom Chester

**NEOFUSCELIA LUTEONOTATA, NEW TO THE BRITISH ISLES, AND  
NOTES ON THE *N. PULLA* GROUP**

Since 1993 PME-B has sent to BJC several intriguing collections from populations of the *Neofuscelia* (*Parmelia*) *pulla* group, growing on roofs in Suffolk. The material included the isidiate *N. verruculifera*, as well as two non-isidiate 'morphs'. The two morphs were distinguished by the colour of their underside, black in one (but tan near the lobe tips) and pale tan to brown (but never black) throughout in the other. The latter morph also had a greater tendency to be more loosely attached, to have an apparently thicker thallus because of its imbricate lobes, and be more crinkly in appearance. It was tentatively identified as *N. luteonotata* (J. Steiner) Essl., pending a more critical examination, especially of thallus chemistry. This was subsequently carried out by LS as a mini-revision during her MSc Course in the Biodiversity and Taxonomy of Plants at Edinburgh University and the Royal Botanic Garden Edinburgh.

The mini-revision involved the chemical and morphological examination of 53 collections from the Edinburgh herbarium (E), including 43 of non-isidiate collections in the *Parmelia delisei* and *P. pulla* agg. folders. Additional collections included selected examples of the isidiate *N. loxodes* and *N. verruculifera* as well as the similar, but unrelated, *Melanelia disjuncta*. The chemical analysis was by TLC, following Orange *et al.* (2001), using solvent systems A, C and G, and *Cladonia portentosa* and *Fuscidea kochiana* as controls for perlatolic and divaricatic acids, respectively.

The chemistry of the principal species is summarized in Table 1, although some rarely occurring minor accessory substances are not included.

Table 1. Thallus chemistry of British species of *Neofuscelia* and *Melanelia disjuncta*

	perlatolic	stenosporic	divaricatic	glomelliferic	glomellic	gyrophoric	TE1	TE3
<i>N. delisei</i>	+			+	+	±		
<i>N. loxodes</i>	+			+	+	±		
<i>N. pulla</i> Race 1		+ maj	+			±	±	±
<i>N. pulla</i> Race 2		+	+ maj				+	
<i>N. luteonotata</i>		+ maj	+			±	±	±
<i>N. verruculifera</i>		±	+			±	±	
<i>M. disjuncta</i>	+	+				±		

### The chemical races of *N. pulla*

Samples of *N. pulla* Race 1 (stenosporic acid as major) were identified from the following vice-counties: C (Jersey), 4, 25, 27, 49, 52, 73, 103, and an unlocalized specimen from Ireland. Race 2 (divaricatic acid as major) was identified from VCs 4, 48, 75, 92, 107 and 110.

According to Purvis & James (1992: 436), collections of *N. pulla* Race 1 outnumber those of Race 2 by 10:1. This was not confirmed from the material in E, which gave a ratio closer to 2:1. Indeed, no mixed gatherings of the two races were detected, and the two races were not even detected from nearby localities. The only vice-county from which both races were found was VC 4, North Devon: Race 1 from Croyde Bay (grid: 21/43) and Race 2 from The Valley of Rocks (21/74). Multiple collections from nearby localities were all the same race. For example, all collections from Jersey (3 collections), Anglesey (3), the New Galloway area of Kirkcudbrightshire (4) and Suffolk (6) belonged to Race 1, whereas all collections from the islands (South Uist and Lewis) in the Outer Hebrides (6) belonged to Race 2.

Despite there being no identified mixed gatherings, no clear-cut geographical difference in the distribution of either race has emerged from this study. There are some apparently strong tendencies, however, such as only Race 1 being found in Suffolk and Norfolk, and only Race 2 in the Outer Hebrides. This apparent clustering is certainly worthy of further study, including the collection and analysis of multiple samples from populations in different areas where *N. pulla* occurs in local abundance.

Gyrophoric acid was detected in 26% of samples of *N. pulla* Race 1, but was not detected in any sample of Race 2. The significance, if any, of this result is uncertain because gyrophoric acid is generally regarded to be of sporadic occurrence in many species of *Neofuscelia*. In this study, it was detected in 62.5% of the samples of *N. luteonotata* and 40% of those of *N. verruculifera*.

Esslinger (1977) reported two unidentified accessory substances, as often present in *N. pulla*. These are TE1 (at A4, C5) and TE3 (at A4, C3-4). In the analyses of material in E, these two substances were best detected in solvent system C. TE1 was detected in all samples of *N. pulla*, and was also detected in all 5 samples of *N. verruculifera* and most samples of *N. luteonotata*. TE3 was detected in 9 of the 17 samples of *N. pulla* Race 1, and in 4 of the 8 samples of *N. luteonotata*. It was undetected in all samples of *N. pulla* Race 2 and of *N. verruculifera*.

### *Neofuscelia pulla* and *N. delisei*

Of the 9 specimens previously identified in E as '*Parmelia delisei*' by the paler, somewhat yellowish upper surface of the thallus and lack of isidia, 5 were found to belong to *N. pulla*. It would appear that a pale thallus coloration is not a reliable means of separating *N. delisei* from *N. pulla*, merely a hint.

These two taxa were treated as separate species by Purvis & James (1992), but some authors (e.g. Diederich & Sérusiaux 2000, Scholz 2000, Skult 1993) have treated *N. delisei* as a variety of *N. pulla* or just as a chemical race without a taxonomic rank. Given the species concept widely employed in *Neofuscelia* (e.g. by Elix 1994, Esslinger 1977), we prefer not to adopt this approach, and in any case intuitively feel that the two are unlikely to be conspecific. Perhaps future 'molecular' studies on this group will provide better guidance. From the study by LS, a stronger possibility is that *N. delisei* and *N. loxodes* are conspecific, thus concurring with the suspicions expressed by Dobson (2000).

### *Neofuscelia delisei* and *N. loxodes*

Of the 9 collections of '*P. delisei*' mentioned above, the remaining 4 are represented by two collections that actually have isidia and are referable to *N. loxodes*. This leaves two collections, plus one that was previously filed as '*P. pulla*'. All three (from VCs 90 and 104) are small, non-apotheciate specimens and could well be poorly developed *N. loxodes*, and perhaps examples of collector bias and selectivity! Field observations by BJC on the large population of *N. loxodes* on the south-facing basaltic rocks of Traprain Law in East Lothian reveal a gradation of densely isidiate, non-apotheciate specimens through to specimens with numerous apothecia and very few (?if any) isidia. Clearly the taxonomic relationship between *N. delisei* and *N. loxodes* is another avenue for further population/molecular studies.

### *Neofuscelia luteonotata*

All the specimens included in the study by LS were examined for the colour of the underside. Care was required to examine only healthy living lobes and to distinguish the surface of the actual lower cortex from blackened debris from the substratum (especially a problem when the substratum was slate). A pale tan to brown (never truly blackened) under surface was found only in some of the samples from Suffolk. These samples with a pale underside have been determined as *N. luteonotata*. When growing together with *N. pulla*, these samples display no clear-cut differences when the thalli are viewed from above. However, there is a tendency for the thalli of *N. luteonotata* to be less adpressed to the substratum, and to more often have short, imbricate, or sometimes upright projecting, lobes towards the centre of the thallus. In the field, the thalli of *N. luteonotata* tend to have a thicker and darker appearance than do those of *N. pulla*.

All the samples of *N. luteonotata* lack apothecia, but this is of little value in identification as only one of the Suffolk collections of *N. pulla* has apothecia. Indeed, of the British *N. pulla* collections in E, about a third lack apothecia.

All 8 samples of *N. luteonotata* had both stenosporic and divaricatic acid, with the former as the dominant substance; thus equivalent to Race 1 of *N. pulla*. All but one of the samples had the unidentified substance TE1, 4 of the samples had TE3, and 5 samples had gyrophoric acid.

*N. luteonotata* is a poorly known taxon, but apparently widely distributed in Southern Europe. It is also present in northern and southern Africa, southern Australia and New Zealand (Elix 1994, Esslinger 1977, Nimis 1993). The populations in Suffolk represent the northern known limit by far, although it has possibly been overlooked as *N. pulla* in adjacent mainland Europe, and should be sought for there, especially on roof slates. The discovery of *N. luteonotata* on roof tiles in Suffolk is comparable with the discovery at about the same time, and in the same habitat, of *Xanthoparmelia protomatrae* (*BLS Bulletin* 73: 61 and 77: 40), although that species is known as far north as southern Scandinavia. It is quite possible that both species are relatively recent immigrants to Britain.

#### **Specimens of *N. luteonotata* (all in E):**

VC 25, East Suffolk: Framsdon Baptist Church, 62/192.607, on slates on E and W sides of garage roof, with *N. pulla*, 10 vii 1993, *P M Earland-Bennett*; Framsdon Baptist Church, 62/192.607, slate roof of shed, with *N. pulla*, *Buellia badia* and *Xanthoria calcicola*, 21 ix 1993, *P M Earland-Bennett*, *C J B Hitch* & *P Cayton*; Debenham, Low Road, 62/174.629, on slate roof of outhouse in town centre, with *Candelariella vitellina*, *Neofuscelia verruculifera* and *Xanthoparmelia mougeotii*, 1993, *P M Earland-Bennett*, *C J B Hitch* & *P Cayton*; Little Bealings, 62/230.474, on slate roof of bungalow, associated with *Candelariella vitellina*, *Neofuscelia verruculifera* and *Xanthoparmelia mougeotii*, 5 xii 1995, *P M Earland-Bennett* & *C J B Hitch*; Pettistree, 62/298.542, S-facing roof of bungalow, associated with *Candelariella vitellina* and *Xanthoparmelia mougeotii*, in large quantity covering most of the roof, 11 v 1996, *P M Earland-Bennett* & *C J B Hitch*. VC 26, West Suffolk: Norton, behind The Manse, 52/957.656, siliceous tile roof of shed, associated with *Buellia aethlaea*, *Candelariella vitellina*, *Neofuscelia verruculifera* and *Xanthoparmelia mougeotii*, 28 viii 1996, *P M Earland-Bennett* & *C J B Hitch*; *ibid.*, The Village Stores, 52/957.658, NNE-facing slate roof of shop, 15 v 1998, *P M Earland-Bennett* & *C J B Hitch*.

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Brian J Coppins, Louise Seed and Peter M Earland-Bennett

### DO YOU LIKE LICHEN SUBJECTS ENOUGH TO SHARE THEM?

Urgently needed: good quality slide donations of named lichens for the collection held at the British Mycological Society. Find a use for your duplicated exposures!

Slides of crustose, foliose and fruticose species typical of saxicolous, corticolous and terricolous habitats are all welcome, in close-up and in their natural situations. Any showing lichenological features (eg soredia, isidia) and microscopic features (eg asci, spores, paraphyses) would be appreciated.

The contact is Gill Butterfill, Manager, BMS Slide Collection, Mycology Section - Herbarium, Royal Botanic Gardens, Kew, Surrey, TW9 3AE. The slide collection is available to BLS members needing illustrations for lectures. To borrow slides give two weeks' notice. Loan is for a maximum of four weeks and the only cost is postage, met by the borrower. Several lichenologists have enquired but the lichen stock is very slim: let's make this a worthwhile resource.

## A PRELIMINARY LICHEN CONSERVATION PROTOCOL FOR CIVIL ENGINEERING PROJECTS

Ecological assessment is a pre-requisite of many civil engineering operations. The appearance of lichen (and bryophyte) species on amendments to Schedule 8 of the Wildlife and Countryside Act (1981) has led to the need to consider lower plant floras in such assessments. The additional driving force for the conservation of biodiversity provided by the Countryside and Rights of Way Act (2000) and the publication of National and Local Species Action Plans for certain taxa, has now engendered an interesting lichenological challenge.

It is almost inevitable that any civil engineering operations, and the ground disturbance they cause, will have an impact upon the lichen floras in their vicinity. The generation of dust (inherent to construction, earth moving and haulage) and its subsequent deposition on surfaces, can alter nutrient levels, pH and light availability in the microenvironments in which lichens live. The abrasion and removal of the surfaces upon which lichens grow is another potential source of loss and the disturbance and alteration of humidity gradients and surface drainage can be significant. In the latter case, subtle changes to the microdrainage of wall and rock surfaces and the modification of splash regimes can detrimentally affect their microflora (e.g. see National Species Action Plan for *Calicium corynellum* - UK Biodiversity Group 1999). A series of generic protocols is therefore necessary which may be applied to any civil engineering situation where lichen (and other lower plant) floras may be disturbed.

The time-consuming, and therefore expensive, nature of lichen survey work, and the shortage of experienced lichenologists, means that certain 'rules of thumb' must be developed if a pragmatic and applicable suite of conservation precautions is to be successfully applied to the majority of civil engineering projects (e.g. road construction, building development, flood defence works). The following 'Preliminary Conservation Protocol' is proposed as a building point, though it is acknowledged that, for practical reasons of safety and other non-ecological exigencies, it may not be possible to implement it in its entirety, in all situations. In some cases, other environmental imperatives, such as those relating to the preservation of cultural heritage, may require significant consideration and then some professional ecological discretion is likely to be necessary.

## Preliminary Conservation Protocol (Lichens)

The following protocol is intended to provide ecologists involved in civil engineering projects with a method of approach to assessing the importance of a proposed development site to lichens. The three-stage site assessment assumes competence in botanical survey but allows for variation in ability to identify lichens (a reflection of reality in the botanical field) and therefore provides various 'drop-out' points at which the site ecologist can decide to recruit more specialist expertise. The three stages, detailed below, are:

- i. Desk Study (Stage 1)
- ii. Lichen Habitat Survey (Stage 2)
- iii. Phase 2 Lichen Species Survey (Stage 3)

Part iv of the protocol provides recommended best practice precautions for project design and management.

Stages 1 and 2 of the survey programme can provide much useful data of value in selecting, or refining, route or development options and in minimising the risk of endangering the most 'sensitive' (see below) lichen habitats or communities. These stages may be carried out by a trained field botanist with a superficial knowledge of the British lichen flora and represent the minimum that should be carried out for any scheme. They should be completed in advance of project design and before routes or development options have been finalised. The precautions detailed under Part iv, however, should be taken irrespective of the detail of lichen survey which has been carried out.

- i. Desk Study (Stage 1)

A desk study should be carried out, at an early stage in project development (before project design), to ascertain the likelihood of the presence of any of the following groups of lichen species at the site concerned. These species, and the assemblages and habitats within which they are known to occur, will be referred to as 'sensitive' for the purposes of the present protocol.

- Those species protected under Schedule 8 of the Wildlife and Countryside Act (1981) and any *amendments*;
- Those species identified within Church *et alia* (1996) Red Data Books of Britain and Ireland: Lichens, Volume 1: Britain (and any subsequent editions);
- Those species benefiting from a national species action plan or species statement under the UK Biodiversity Group's Tranche 2 Action Plans.

- Those species identified in any regional or local biodiversity action plan relevant to the area concerned e.g. Biodiversity Action Plan for Gloucestershire (species action plan for *Bacidia incompta*).
- Those species identified under section 74 of the Countryside and Rights of Way Act (2000) by the Secretary of State (as respects England) or the National Assembly for Wales (as respects Wales) as being of principal importance to the purpose of conserving biological diversity, in accordance with the United Nations Environmental Programme Convention on Biological Diversity of 1992, and thereby published on a list of such species.
- Any other lichen species which subsequently become protected under UK or European legislation.

The desk study should involve an examination of published sources and consultation with the British Lichen Society (especially the Local Lichen Recorder), the appropriate Statutory Nature Conservation Body, and relevant local biological records centres and Wildlife Trusts.

If the desk study indicates the presence of any 'sensitive' species, then note of this should be fed into the scheme design process with a view to avoiding loss of, or damage to, the lichen communities concerned and possible infringement of conservation or biodiversity legislation. This may necessitate careful selection, or modification, of alignments or other aspects of project design including the initial consideration of building materials which may act as potential lichen substrates. Discovery of the presence of any 'sensitive' species, at any stage, will necessitate the need for consultation with the Statutory Nature Conservation Body appropriate for the geographical location concerned.

## ii. Lichen Habitat Survey (Stage 2)

A lichen habitat survey should then be carried out (before project design), to identify the major lichen habitat groups present, e.g. tree trunks (woodland, parkland, isolated trees, age of trees and bark types including texture and pH should be noted), native rock surfaces, man-made surfaces (including, tombstones, concrete, brick and roofing materials), soil surfaces and aquatic habitats (refer to the series of papers edited by Fletcher (2001) for useful guidance on the range of habitats exploited by lichens). This may be carried out in conjunction with a Phase 1 habitat survey (*sensu* Nature Conservancy Council 1990), thus providing a useful baseline plan on which to work and register target notes. If the presence of any 'sensitive' species has been indicated by the desk study then their locations, if known, should be indicated on the ensuing plan and its confidentiality highlighted. At this stage, the surveyor may make an assessment of the relative diversity of the lichen floras at the site as a whole compared

to other geographical regions or between different parts of the site. Such an assessment will however require some awareness of the relative abundance of different lichen genera in different environments.

### iii. Phase 2 Lichen Species Survey (Stage 3)

Following stages 1 and 2, a more detailed phase 2 lichen survey should be carried out if the desk study and the nature of the habitats identified in stage 2 suggest that 'sensitive' species, or their habitats are, or could be, present. If the need for stage 3 work is so indicated, then again, this should be carried out before scheme design. A knowledge of relative air pollution levels and the effects these have on lichen floras as indicated by The Hawksworth-Rose pollution scale (1970; 1976), and reference to the Lichen Atlas of the British Isles (ed. Seaward 1995 *et seq.*) will contribute to this assessment. Use of the Revised Index of Ecological Continuity (RIEC - Rose, 1976) and The New Index of Ecological Continuity (NIEC - Rose 1992) will be useful and/or necessary in the context of certain woodlands. Further guidance is provided by Hodgetts (1992). Wolseley and Coppins in Fletcher (2001) provide a discussion of lichen monitoring methods.

The phase 2 assessment should be carried out by a qualified botanist with training in lichen identification and an understanding of lichen habitats. Particular attention should be paid to gathering information on the location of, and methods needed to protect, any 'sensitive' lichen species present.

### iv. Best Practice Project Design and Management Precautions

The following is a list of recommended steps and precautions intended to assist civil engineering designers and contractors in minimising the effects their works may have upon lichen communities in the vicinity of development sites. It is important to note however that the most appropriate suite of measures needed to protect lower plant assemblages may vary depending upon the vagaries of locality, habitat and project. The list should not be considered exhaustive and cannot be regarded as an alternative for professional ecological advice and consultation with the appropriate Statutory Nature Conservation Body.

- If lichen surveys have not been undertaken, then wherever possible, protect any trees along the route from bark damage which may result from construction activity. Fencing may be appropriate and/or necessary at some sites.

- Where the removal of trees becomes necessary, examine the bark flora in advance for the presence of threatened or protected ('sensitive') lichen species (as defined by the above list of documents). Should any be found then take appropriate measures. This may involve modification of designs to protect the tree concerned (the simplest option in ecological terms) or translocation of certain lichens. This should be carried out in consultation with a botanist trained in lichen work and the appropriate Statutory Nature Conservation Body.

The science of lichen translocation is still in its infancy and though successful attempts have been made (e.g. see Gilbert 1977; 2000), this is not a simple or quick option. The need for detailed consideration of receptor site (i.e. the site to which a species is to be translocated) suitability, and practical methodology, is of paramount importance to probability of success. Where other alternatives for conservation exist, translocation should be regarded as a 'last resort'.

- Any trees supporting assemblages of lichens ascribable to the natural forest climax *Lobarion pulmonariae* Community (see James, Hawksworth and Rose 1977) should be subject to particular care. This community contains a very large number of species of lichens and is considered to be in decline (e.g. see Rose in Bates and Farmer 1992).
- It should be an aim in any civil engineering projects to retain and protect both smooth barked (hazel, *Corylus avellana*; holly, *Ilex aquifolium*; rowan, *Sorbus aucuparia*;) and rough barked (Ash, *Fraxinus excelsior*; Elder, *Sambucus nigra*; Oak, *Quercus* spp.; Sycamore, *Acer pseudoplatanus*;) trees and shrubs. Specimens of the existing local range of ages, sizes and bark pH should also be retained as these characteristics govern the range of lichen species which may be supported. New trees, of suitable species and provenance, should be included at appropriate sites within any landscaping scheme to provide substrates for the further development of local lichen assemblages.
- Avoid the destruction of lichen covered rock outcrops and form new areas suitable for lichen colonisation. Where outcrops have to be destroyed, or scarred, have them checked in advance by a lichenologist for the presence of threatened or protected ('sensitive') species or unusual assemblages. If such are found, the modification of designs to protect the site should again be considered and the issues discussed with the appropriate Statutory Nature Conservation Body. As for tree bark floras, translocation may be an option in some cases.

- Where drystone walls have to be dismantled, their lichen flora should be assessed in advance by a lichenologist. Where 'sensitive' species are identified, conservation measures should be adopted as detailed for rock outcrops above. Where these are not present, but the lichen flora is considered diverse by local standards, then, where practicable, reuse the existing stone in the creation of new linear features on site. Though the inevitable alteration of microclimates will lead to the loss of existing assemblages on any wall feature disturbed, retention and reuse of the stone will at least enable the retention of the indigenous propagule film and the preservation of common lichen species of local provenance. There is then the potential for a similar wall flora to regenerate. Care can be taken to try to recreate some of the microenvironments lost by creating such new features along similar alignments, and of similar aspect, to the original and under similar regimes of shade/insolation and humidity (e.g. in direct sunlight or under overhanging trees).
- Where buildings, bridges or other man-made structures have to be demolished, have any surface lichen flora assessed by a lichenologist in advance of any disturbance. Where 'sensitive' species are identified, adopt the conservation measures detailed for rock outcrops above.
- Where areas of heathland, unimproved pasture or other, semi-natural grassland or low vegetation are likely to be disturbed or removed for the purposes of a scheme have their lichen flora assessed by a lichenologist in advance of any disturbance. Where 'sensitive' species are identified, adopt the conservation measures detailed for rock outcrops above. Designs should be developed, selected and refined with a view to minimising deleterious impacts on such habitats and, as a last resort, the efficacy of grassland translocation by macroturving as a mean of conserving turf lichens should be considered.
- Where wetlands, watercourses, or waterbodies, exist in the vicinity of a scheme the diversity of their aquatic lichen flora should be assessed by a lichenologist. Where possible any watercourse found to support a diverse or 'sensitive' aquatic assemblage should be avoided by design. Where this is not possible, the following precautions are recommended:

Avoid culverting or the exclusion of light from the water column.  
 Avoid disturbance to aquatic and marginal rock communities.  
 Avoid changes in water depth or flow-rate.  
 Avoid silt disturbance, especially with regard to permanent modification to silt loads within the water column.

Avoid chemical contamination of the water column through changes to received run-off or accidental spillage.

Avoid changes to water temperature and/or quality (including dissolved oxygen concentrations). (The sensitivity of some aquatic lichens to water temperature is discussed by Glime in Bates and Farmer 1992).

- Finally, it is emphasised that lichens sometimes colonise unusual habitats including mine-waste, plastic, pipe bedding and metal. There is a need in any ecological assessment to expect lichen species to appear in unexpected situations and to be aware of potential biodiversity issues which may arise accordingly.

These precautions may be used, in some cases, as mitigating measures to minimise the impacts of certain civil engineering projects on the lichen floras in their vicinity or area of influence. They would not however be wholly relevant to the amelioration of certain effects, for instance those resulting from air quality changes. Measures such as dust and emission control will be important for certain types of operation. Construction impacts likely to have an effect on local lichen floras can conceivably include the deposition of cement, soil or aggregate dust on the surfaces (or in water courses) where lichens grow. The sensitivity of certain lichen species and assemblages to substrate pH, nutrient enrichment and light availability has been discussed by a number of workers e.g. see Rose, Brown, Glime (in Bates and Farmer 1992). The deposition of dust or sediment on the surfaces of lichens themselves can lead to coating, reduced exposure to light and consequent loss of photosynthetic efficiency potentially resulting in death. The effects of reduced light availability, due to increased silt loads, on certain aquatic *Verrucaria* and *Collema* species is considered by Glime (in Bates and Farmer 1992). Glime postulates that disturbances resulting from mining or logging could eliminate some of these species from a site by changing the light available to them. Excessive exposure to dust, vehicle exhaust or smoke might be expected to have similar deleterious effects on terrestrial species. The dousing of aggregate loads and haulage roads in dry weather and the control of site machinery may be advisable in some cases with a view to minimising such impacts.

In some cases, the need to develop specific management regimes for areas affected by civil engineering operations may be necessary and, in such cases, useful specific guidance for particular lichen habitats is provided in the series of conference papers edited by Fletcher (2001).

## Conclusions

Awareness of the need to protect lower plants during civil engineering and development works has been raised by the publication of national and local species biodiversity action plans and increased legislative protection of wildlife. The present protocol has been designed as a starting point for the development of guidance orientated towards those involved in such projects. It seeks to draw attention to the range of design precautions which may be taken to minimise detrimental impacts upon local lichen floras and to recommend some approaches to the mitigation of such effects. Clearly this attempt should be regarded as a starting point and comments and criticism are welcomed with a view to honing the draft.

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Gwynedd Council, Highways and Engineering Department  
WynThomasGordonLewis

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### MEETING ANNOUNCEMENT

The British Mycological Society will be holding a meeting entitled "where has my fungus gone?" on Saturday 16 November at the Jodrell Laboratory at Kew. The meeting aims to explain how modern molecular biology techniques are using a knowledge of DNA sequence to reassess and examine traditional fungal taxonomy. The meeting will cater for a wide variety of backgrounds and is open to BMS members and non-members. There is no registration fee. So if you want to know why some lichen names are being changed, or where has my lichen gone? Then you are welcome to attend. For further information please contact Paul Dyer@Nottingham.ac.uk

Paul Dyer

## AUTUMN FIELD MEETING 2001: CHURCH STRETTON

"What are those blue remembered hills, ... ..  
That is the land of lost content"

A E Housman

Borderlands have always had a special interest for the naturalist. It is here that the familiar and predictable species lose their certainty and doubts begin to take over; but here is also where there is a growing anticipation of new discoveries and understanding. The Welsh Marches evoke all these feelings in abundance and nowhere is this more so than the Church Stretton area of Shropshire. Here is found a wonderful variety of geomorphology, with hills and valleys combining to form scenery of extraordinary beauty. The hills, though modest in stature, have a presence and balance that seeks to out do the more imposing peaks of the Welsh uplands to the west. The geology is ancient and varied and includes Pre-Cambrian volcanics and sediments that are amongst the oldest rocks in Great Britain, for this was a centre of tectonic activity some 580 million years ago. The effects of these earth movements is still noticeable as the Craven Arms Fault running north-east, south-west across the area and picked out by a line of hills – The Wrekin, The Lawley, Caer Caradoc and Ragleth. The Ordovician and Silurian eras (first recognised in this area and named after local tribes who fought to slow the Roman advance from the east) saw the laying down of limestones and sandstones of basic pH. These have become uplifted and eroded to form the distinctive scarp and dip slopes of View Edge and Wenlock Edge. The complexity of acidic and basic rocks in such a small area hints at a lichen flora of similar variety and it was with this expectation that members of the BLS assembled for the autumn field meeting at Upper House Farm, Hopton Castle, to the south of Church Stretton. The Society has visited this area in the past – to Preston Montford (Lewis 1963) and Ludlow (Gilbert and Lambley 1982), so the general flora is generally well known. In addition a number of parklands and woods have been more thoroughly surveyed and some notable lichen species recorded. The itinerary over the weekend was designed to visit new sites and also to look at a number of rarities in Walcot Wood.

**Saturday 27th October. Caer Caradoc (SO 471948) The Wenlock Edge – Ippikin's Rock (SO569965) Diddlebury Church St Peter's (SO 508854)**

A wonderful day, full of lasting memories. The weather was glorious, with clear skies and warm sunshine. **Caer Caradoc** was approached from the west by ascending a stream issuing from spring lines below the steep flank of the hill. The aquatic species *Verrucaria aquatilis* and *V. praetermissa* were present on boulders in the stream bed, in spite of obvious signs of silting from the slopes above. Ash trees *Fraxinus excelsior*,

on the banks, supported a limited flora of common species and also *Chaenotheca ferruginea*, *Lecanactis abietina* and *Ochrolechia subviridis*. At the source the group contoured across a remarkable series of extrusive volcanic rocks that included basalt, andesite and rhyolite, and finally ascended the southern ridge to outcrops of tuff, culminating in Three Fingers Rock. These ancient lavas and pyroclastic deposits exhibit a range of acidities and it was initially hoped to recognise differences in lichen flora associated with each substratum. The general saxicolous flora was found to be very good with all the niches associated with montane rock outcrops - bird perching sites, exposed faces etc. being fully exploited. *Parmelia disjuncta* was found growing with *P. glabratula* subsp. *fuliginosa* and *P. verruculifera*. This association is also present on the Pre-Cambrian volcanics of the Charnwood Forest and it would be interesting to see if this is a feature of The Malvern Hills, on the Herefordshire-Worcestershire border (parts of which are the same geological age). *Lasallia pustulata* was common on damp sloping west facing rocks. A good *Cladonia* community was found on the grassland of the summit ridge, with all the common montane species being present in abundance. Fourteen members of this genus were recorded during the morning.

The open woodland on the lower slopes, of ash and oak *Quercus* sp. with hawthorn *Crataegus monogyna* and elder *Sambucus nigra*, was also looked at during the morning and whilst not spectacular contained a number of interesting species. *Cladonia parasitica* occupied its typical niche, a decaying tree bole, and there were associations indicating moderate eutrophication on many of the oak branches. These species included members of the *Xanthorion*, *Candelaria reflexa* and *C. xanthostigma*. *Phlyctis agelaea* was recorded on ash.

The descent down the wet and treacherous western slopes almost took on the mantle of an alpine mountain tragedy, but the ladies led us down like sure-footed chamois, and the gentlemen, "looked well to each step", and followed, less confidently, and at times more unsteadily, but with no less determination to get to the bottom. In this gravity was the great helper! We were rejoined by a colleague who had "broken ranks" at the beginning and had chosen to climb directly to the summit. He returned with tales of magnificent panoramas and invigorating mountain air and wistfully confided that he would have driven all those tedious miles from home just for this experience and this day!

Luncheon was taken at an inn on the crest of the **Wenlock Edge**. A management, eager for our patronage, when approached two weeks previous to our visit was less enamoured with our appearance on the day - the reason? - a visit from the media had judged the hospitality and food to be sublime and most of the population of Shropshire

seemed to be present to pass their own judgement on this accolade. Undismayed by this, food was eaten alfresco, and was no worse for that.

The afternoon was spent surveying the rock outcrops of The Edge. After the uplands of Caer Caradoc this unbroken face of Silurian limestone running northeast-southwest, was a complete contrast. Wenlock limestone is composed of reef knolls of ancient corals embedded in a matrix of eroded detritus. The strata have been tilted by earth movements to form a scarp and dip slope, the scarp clothed in secondary woodland and scrub that casts an unhappy shade (as far as the lichen flora is concerned) over the rock outcrops. A small exposure, SO 573968, previously visited in 1961 during the BLS field meeting to Ludlow, is now impoverished and eroded by the feet of numerous visitors eager to experience one of the few uninterrupted views westwards to the Welsh hills. A lay-by only a few metres away compounds the problem by further encouraging the public to stop and, sadly, a continued reduction in the diversity of the lichens seems inevitable.

Fortunately a second and more extensive outcrop was discovered to the south, with easy access from the inn. Included in this exposure was **Ippikin's Rock**, a buttress of limestone offering not only fine views but also a much healthier lichen flora. The ledges below the edge are difficult to access for all but the most determined and because of this the flora is relatively untouched.

An interesting example of hypertrophication was present in the form of calcined bone fragments filling many of the crevices in the west facing exposure, the result (judging from the quantity) of several human cremations. A small thallus of *Collema crispum* had a distinctive 'frosted' appearance as a result of this treatment.

A path down from the edge allowed access to the base of the crags where much more shaded and humid conditions prevailed. *Lepraria lesdainii* and *L. lobificans* were common growing in darker recesses and clothing moss cushions and *Leproplaca chrysodeta* was abundant. *L. xantholyta* was present but was not as frequent, perhaps indicating a greater need of this species for higher illumination.

These two exposures of limestone appear to be unique on the 14 miles of the scarp as no other naturally exposed sites were located in spite of previous reconnoitres and two full visits to the area. An active quarry to the north, above Much Wenlock, is laying bare great areas of rock but it will require many years for this to gain a mature flora. The two older sites are in urgent need of sensitive management of the surrounding woodland if their importance is not to be lost. This should include selective thinning of vegetation and in the case of Ippikin's Rock, complete removal of ivy (*Hedera helix*) covering the southern face.



Fig. 1. The party in the Carding Mill Valley, Autumn Field Meeting 2002.

During the late afternoon a churchyard was visited as the final site of the day. **St Peter's, Diddlebury**, is a lovely building in an enchanting location, with numerous Saxon features testifying to its antiquity. Only an hour stay was possible - too brief a period to do anything other than record the more obvious species. Important features were the eight species of *Parmeliae* recorded in the yard. These included three with yellow grey-green appearance: *Flavoparmelia caperata*, *Xanthoparmelia conspersa* and *X. mougeotii*. *Acrocordia salweyi* was common on the western boundary wall and on other walls in the yard. *Psilolechia leprosa* was associated with copper run off from a grill over a south-facing window. A form of *Lecanora conferta* with small brown fruits lacking any signs of pruina, and with a dramatic C+ orange reaction that included the margins, was common on the sandstone of the east wall. This brown morph is noticeably commoner as one moves westwards from the Midlands, through Staffordshire and Shropshire towards mid-Wales, and is associated with more siliceous substrata. Within the *L. conferta* complex there is probably more than one entity and further study is needed. The pruinose characteristic, so helpful in identifying it on the lime mortar and ironstone of the Midland counties, particularly Northamptonshire, becomes less certain towards the west. Only the C+ yellow-orange reaction of the brown-fruited forms indicates their affinity but, even with this chemistry, the intensity of this reaction sets it apart.

#### **Sunday 28th October. The Long Mynd – Carding Mill Valley (SO 441949) and Walcot Wood (SO345839)**

A morning, if anything, even more dramatic and more lovely than the previous day, with a cooler autumnal 'nip' to the air and white mist hanging in horizontal veils on the hill slopes and shrouding the valley bottoms. The tops of trees floated on the mist in a surreal world, their appearance mere faint reflections, almost without substance. To the west of the Craven Arms Fault the great bare upland of **The Long Mynd** was bathed in morning sunshine, its bracken covered slopes all russet and gold. The underlying Pre-Cambrian geology of this hill (sedimentary grits, flags and conglomerates) have been exposed on the shoulders and steep sides of the v-shaped valleys or 'gutters' cut by streams flowing down its flanks.

The rock outcrop towering above the upper car park of **Carding Mill Valley** drew our attention and after a short stiff climb we were rewarded with a fine acid flora of considerable interest, and not a little confusion! The exposed spur had well illuminated faces that provided numerous well-defined niches. The flora was if anything more montane than that found on Caer Caradoc on the previous day, with *Lecidea lithophila* making an appearance, *Porpidia macrocarpa* more in evidence, and upland species such as *Lepraria caesioalba*, *Fuscidea cyathoides* and *F. kochiana* frequent. *Tephromela grumosa* was found in abundance with individual thalli over 10cm across.

It was growing with *Porpidia tuberculosa* and also with smaller rosettes of *P. soresidzodes*, two species with which it may be confused. Even more uncertainty was posed by *Pertusaria corallina*, growing with great vigour on horizontal surfaces at the top of the outcrop. All the individual colonies gave an uncharacteristic and dramatic K+ yellow changing to blood red (cf. *P. pseudocorallina*). Identification was later confirmed by TLC.

A path contoured down into the main valley and the stream was followed up to Light Spout, a geographical 'nick point'. Concrete breakwaters constructed across the stream in order to control its flow supported a rich calcicole flora that included *Caloplaca crenulatella*, and the bed of the stream had a number of aquatic species. The waterfall was so photogenic that the party willingly lined up before it to be 'digitised' for posterity, but its lichen flora was disappointing and less worthy of record. On the return, however, *Arthrorhaphis citrinella* was discovered on outcrops above the stream. Its name was so loudly exchanged between members of the party that the passing public were stopped in their tracks, except, that is, for a family who were hurried on by a matriarch obviously unsure that our activities were seemly! This was the exception however, and during the walk back a very select cross section of society (an aircraft pilot, a vicar, a city bond dealer, and a mother who had lost her family!) introduced themselves and announced their curiosity. It would seem that fame might be associated with a hand lens, a thick copy of The Flora, and a dishevelled appearance! Their concern however, went a long way in dispelling the myth that members of the public are not interested in lichens. The mother passed by again some time later, thankfully reunited with her family, and excitedly said, "I have told the family all about them!", whilst pointing to the rosettes on the rocks. If only it were that easy!

Late afternoon, and once more fed and watered, the party visited Walcot Wood. In spite of its small size (a little over eight hectares) this wood contains ancient oaks that support one of the richest epiphytic floras in the west midlands. Its position, on the slopes of a sheltered valley, has protected it from the more debilitating effects of urban pollution from the Birmingham conurbation to the east. It has been surveyed by a number of eminent lichenologists over the years – the most recent being Sandy and Brian Coppins in 1997. It was hoped that they would be able to meet us in the wood and give us a guided tour of the rarities – but it was not to be! A tedious journey from Scotland delayed their arrival until dusk and failing light prevented any further exploration. Despite this setback forty species were recorded by the party which, considering the late hour and the difficult terrain, was creditable. We thank Peter Cary, Property Manager The National Trust South Shropshire Hills, and Fiona Gomersall, who has written a guide to the wood, for meeting us at Walcot and giving their support.

The final evening was a grand occasion; a delicious meal, the very best of company and conversation and, as a finale, Jeremy and Simon presented photographic slides of the finest quality. To both we extend our thanks for a stunning visual experience.

And so on this highest of notes the weekend came to a close. We are grateful to our host, Mrs Williams, for making our stay such a pleasant experience. After the battering we received last year, the Gods had listened to our lamentations and pleas for clemency, and provided weather of exceptional quality with warm unbroken sunshine and gentle zephyrs. But it was the wonderful Shropshire landscape that, above all, sealed the success. There were few of us who did not carry away lasting memories of these lovely hills and their lichen flora or leave without regrets and 'lost content'.

The BioBase meeting on the following day was judged by all to be a most valuable and productive experience. Difficulties were smoothed away, and problems were solved. To Janet Simkin, for her excellent presentation and also her patience to those of us who are still perpetual beginners in this field, we offer our sincere thanks.

Ivan Pedley

#### References:

Coppins, A M and B J (April 1997). Walcot – National Trust property. An unpublished lichen survey and management plan carried out for the National Trust.

Gilbert, O L and Lambley, P W. Field meeting at Ludlow. *Lichenologist* 14:185-188.

Lewis, D H (1963). Field meeting at Preston Montford. *Lichenologist* 2:190-194.

#### Members who attended the field meeting:

Ann Allen, Lesley Balfe, Ishpi Blatchley, Martin Butler, Tom Chester, Heather Colls, Brian and Sandy Coppins, Simon and Amanda Davey, Frank Dobson, Trevor Duke, Jeremy Gray, Andrew Harris, Barbara Hilton, Ivan Pedley, Joy Ricketts, Ken Sandell, Janet Simkin, Amanda Waterfield, Ray Woods

I must thank Sandy and Brian Coppins for permission to use their Walcot Wood survey and, particularly, for allowing the full list of species that they recorded in April 1997 to be included in this write up. We are also indebted to Brian for determining a number of critical taxa.

Autumn Field Meeting 2001: Church Stretton

Sites and Species List

Wen. Ed. Wenlock Edge-Ippikin's Rock (SO 569965) Didd. Ch. Diddlebury Church (SO 508854) Caer Car. Caer Caradoc (SO 471948) Card. Val. Carding Mill Valley (SO 441949) Walcot. Walcot Wood (SO 345839)

All the species listed for Walcott Wood were recorded by A.M. and B.J. Coppins in 1997. Those marked (o) were re-found by the members attending the field meeting. (c) = calcareous substratum. (ct.) = corticolous substratum

Species	Wen. Ed.	Didd. Ch	Caer Car	Card. Val	Walcot
<i>Acarospora fuscata</i>		o	o	o	
<i>sinopica</i>			o		
<i>Acrocordia conoidea</i>	o				
<i>salweyi</i>	o	o			
<i>Agonimia tristicula</i>	o				
<i>Amandinia punctata</i>			o		o
<i>Anisomeridium biforme</i>					+
<i>nyssaegenum</i>					+
<i>Arthonia didyma</i>					+
<i>impolita</i>					o
<i>muscigena</i>					+
<i>punctiformis</i>					+
<i>spadicea</i>					o
<i>Arthopyrenia lapponina</i>					+
<i>punctiformis</i>					+
<i>salicis</i>					+
<i>Arthrorhaphis citrinella</i>				o	
<i>Aspicilia caesiocinerea</i>		o			
<i>calcareae</i>		o		o c.	
<i>contorta</i>		o		o c.	
<i>Bacidia biatorina</i>					+
<i>delicata</i>	o				
<i>naegelii</i>					+
<i>rubella</i>			o		+
<i>sabuletorum</i>	o	o		o	
<i>Baeomyces rufus</i>				o	+
<i>Buellia aethalea</i>		o	o	o	
<i>griseovirens</i>					+
<i>ocellata</i>		o			
<i>schaereni</i>					+
<i>Belonia nidarosiensis</i>	o				
<i>Calicium glaucellum</i>					+
<i>salicinum</i>					+
<i>viride</i>					o
<i>Caloplaca aurantia</i>	o				
<i>citrina</i>		o		o c.	
<i>crenularia</i>		o			
<i>crenulatella</i>				o c.	

<i>flavescens</i>	o	o			
<i>holocarpa</i>		o			
<i>lucifuga</i>					+
<i>obscurella</i>					+
<i>saxicola</i>		o			
<i>teicholyta</i>	o				
<i>variabilis</i>	o				
<b><i>Candelariella aurella</i></b>		o			
<i>coralliza</i>			o		
<i>reflexa</i>			o	o	o
<i>vitellina</i> f. <i>vitellina</i>		o	o	o	+
<i>xanthostigma</i>			o		+
<b><i>Catillaria alba</i></b>					+
<i>chalybeia</i>		o			
<i>lenticularis</i>		o			
<b><i>Cetraria chlorophylla</i></b>					+
<b><i>Chaenotheca brachypoda</i></b>					+
<i>chrysocephala</i>					+
<i>ferruginea</i>			o		+
<i>hispidula</i>					+
<i>stemonea</i>					+
<i>trichialis</i>					+
<b><i>Chaenothecopsis</i> aff. <i>Nigra</i></b>					+
<i>savonica</i>					+
<b><i>Chrysothrix candelaris</i></b>					o
<i>flavovirens</i>					+
<b><i>Cladonia cervicornis</i> subsp. <i>c.</i></b>				o	
<i>chlorophaea</i>		o	o	o	+
<i>ciliata</i> var. <i>tenuis</i>			o		
<i>coniocraea</i>		o	o		+
<i>diversa</i>			o	o	
<i>fimbriata</i>		o			+
<i>floerkeana</i>			o		
<i>foliacea</i>			o		
<i>furcata</i>			o	o	
<i>macilenta</i>			o		+
<i>parasitica</i>			o		+
<i>polydactyla</i>					+
<i>portentosa</i>			o		
<i>pyxidata</i>	o	o	o	o	
<i>rangiformis</i>			o		
<i>squamosa</i>					+
<i>subulata</i>			o		
<i>uncialis</i> subsp. <i>biunc.</i>			o	o	
<b><i>Clauzadea immersa</i></b>	o				
<b><i>Cliostomum griffithii</i></b>					o
<b><i>Collema auriforme</i></b>	o				
<i>crispum</i>		o		o c.	
<i>fuscovirens</i>		o			
<i>tenax</i> var. <i>ceranoides</i>		o			
<b><i>Cyphelium inquinans</i></b>			o		+

<i>Dimerella pineti</i>					+
<i>Diploicia canescens</i>	o	o			o
<i>Diploschistes muscorum</i>				o	
<i>scruposus</i>		o		o	
<i>Diplotomma alboatrum</i>		o			
<i>Dirina massiliensis f. sorediata</i>		o			
<i>Enterographa crassa</i>					+
<i>Evernia prunastri</i>			o		o
<i>Fellhaneropsis vezdaea</i>					+
<i>Flavoparmelia caperata</i>		o			
<i>Fuscidea cyathoides</i> var. c.					
<i>kochiana</i>				o	
<i>lightfootii</i>					+
<i>praeruptorum</i>				o	
<i>Graphis scripta</i>					+
<i>Gyalecta jenensis</i> var. <i>jenensis</i>	o				
<i>truncigena</i>					o
<i>Gyalideopsis anastomosans</i>					+
<i>Hymenelia lacustris</i>				o	
<i>Hypocnomyce scalaris</i>		o			+
<i>Hypogymnia physodes</i>		o		o ct.	o
<i>tubulosa</i>		o			+
<i>Hypotrachyna revoluta</i>			o		
<i>Imshaugia aleurites</i>					+
<i>Lasallia pustulata</i>			o	o	
<i>Lecanactis abietina</i>			o		+
<i>lyncea</i>					+
<i>premnea</i>					o
<i>Lecania cyrtella</i>					+
<i>erysibe</i>		o			
<i>Lecanora albescens</i>		o			
<i>campestris</i>		o			
<i>carpinea</i>					+
<i>chlarotera</i>			o	o ct.	o
<i>conferta</i>		o			
<i>conizaeoides</i>		o		o ct.	+
<i>crenulata</i>	o	o			
<i>dispersa</i>		o		o c.	
<i>expallens</i>		o	o		+
<i>gangaleoides</i>		o			
<i>intricata</i>				o	
<i>jamesii</i>					+
<i>muralis</i>	o	o			
<i>persimilis</i>					+
<i>polytropa</i>	o.	o	o	o	
<i>pulicaris</i>					+
<i>rupicola</i> var. <i>rupicola</i>			o	o	
<i>saligna</i>					+
<i>soralifera</i>			o	o	
<i>sulphurea</i>		o			
<i>Lecidea fuscoatra</i>		o		o	g

<i>lithophila</i>				o	
<i>nylanderi</i>					+
<b><i>Lecidella elaeochroma</i> f. <i>elaeo.</i></b>			o		
<i>scabra</i>		o		o	
<i>stigmatea</i>		o		o c.	
<b><i>Lepraria caesia</i>alb</b>				o	
<i>incana</i> s.lat.		o	o	o	+
<i>jackii</i>					+
<i>lesdainii</i>	o	o			
<i>lobificans</i>	o		o		o
<i>rigidula</i>					+
<b><i>Leproloma vouauxii</i></b>	o				+
<b><i>Leproplaca chrysodeta</i></b>	o				
<i>xantholyta</i>	o				
<b><i>Leptogium gelatinosum</i></b>	o	o			
<b><i>Leptorhaphis</i> sp</b>					+
<b><i>Macentina stigonemoides</i></b>	o				
<b><i>Melanelia disjuncta</i></b>			o		
<i>elegantula</i>					o
<i>exasperata</i>			o		
<i>exasperatula</i>					+
<i>glabratula</i> subsp. f		o			
<i>glabratula</i> subsp g.					+
<i>laciniatula</i>					+
<i>subaurifera</i>			o		+
<b><i>Melaspilea ochrothalamia</i></b>					+
<b><i>Micarea denigrata</i></b>					+
<i>lignana</i>				o	
<i>melaena</i>					+
<i>nitschkeana</i>					+
<i>prasina</i>					+
<b><i>Microcalicium ahlneri</i></b>					+
<b><i>Miriqidica leucophaea</i></b>			o	o	
<b><i>Mycoblastus sterilis</i></b>					+
<b><i>Mycoporum quercus</i></b>					+
<b><i>Neofuscelia loxodes</i></b>				o	
<i>verruculifera</i>		o	o	o	
<b><i>Normandina pulchella</i></b>	o				o
<b><i>Ochrolechia androgyna</i></b>			o	o	+
<i>inversa</i>					o
<i>parella</i>		o			
<i>subviridis</i>			o		o
<i>turneri</i>					o
<b><i>Opegrapha atra</i></b>					o
<i>calcareae</i>	o				
<i>herbarum</i>					+
<i>multipuncta</i>					+
<i>ochrocheila</i>					+
<i>varia</i>					+
<i>vermicellifera</i>					+
<i>vulgata</i>					+

<i>Pachyphiale carneola</i>					o
<i>Parmelia saxatilis</i>		o	o	o ct.	+
<i>sulcata</i>		o	o	o ct.	o
<i>Parmelina tiliacea</i>					+
<i>Parmeliopsis ambigua</i>			o		+
<i>Peltigera lactucifolia</i>			o		
<i>membranacea</i>	o		o	o	
<i>praetextata</i>					+
<i>Pertusaria albescens</i> var. <i>alb.</i>					o
<i>albescens</i> var. <i>cor.</i>		o	o	o	+
<i>amara</i> f. <i>amara</i>		o	o		+
<i>coccodes</i>					+
<i>corallina</i>				o k+r	
<i>flavida</i>					o
<i>hemisphaerica</i>					+
<i>hymenea</i>			o		o
<i>leioplaca</i>			o		+
<i>pertusa</i>					+
<i>Phaeophyscia orbicularis</i>	o	o			+
<i>Phlyctis agelaea</i>			o		
<i>argena</i>		o	o		o
<i>Physcia adscendens</i>		o	o		o
<i>aipolia</i>			o		o
<i>caesia</i>		o			
<i>stellaris</i>					+
<i>tenella</i> subsp. <i>tenella</i>	o	o	o		o
<i>Physconia distorta</i>					o
<i>enteroxantha</i>					+
<i>gnsea</i>		o			
<i>perisidiosa</i>					+
<i>Placynthiella icmalea</i>				o c.	o
<i>Placynthium nigrum</i>	o				
<i>Platismatia glauca</i>			o		o
<i>Porina aenea</i>					+
<i>Porpidia cinereoatra</i>				o	
<i>crustulata</i>			o	o	
<i>macrocarpa</i>			o	o	
<i>soredizodes</i>		o	o	o	
<i>tuberculosa</i>		o	o	o	
<i>Protoblastenia incrustans</i>	o				
<i>rupestris</i>	o	o		o c.	
<i>Protoparmelia badia</i>			o		
<i>oleagina</i>					+
<i>Pseudevernia furfuracea</i>					+
<i>Psilolechia leprosa</i>		o			
<i>lucida</i>		o			+
<i>Punctelia subrudecta</i>					+
<i>Pyrrhospora quemea</i>					o
<i>Ramalina farinacea</i>			o		o
<i>Rhizocarpon concentricum</i>		o			
<i>distinctum</i>				o	

<i>geographicum</i>			o	o	
<i>reductum</i>		o	o	o	
<b>Rinodina gennarii</b>		o			
<i>teichophila</i>		o			
<b>Schismatomma cretaceum</b>					o
<i>decolorans</i>					o
<b>Scoliciosporum chlorococcum</b>					+
<i>umbrinum</i>		o			
<b>Staurothete fissa</b>			o		
<b>Tephromela atra</b>		o	o	o	
<i>grumosa</i>			o	o c.	
<b>Thelidium incavatum</b>	o				
<i>papulare f. papulare</i>	o				
<b>Thelotrema lepadinum</b>					o
<b>Toninia aromatica</b>		o			
<b>Trapelia coarctata</b>		o	o	o	
<i>involuta</i>			o	o	
<i>placodioides</i>			o		
<b>Trapeliopsis flexuosa</b>					+
<b>Usnea hirta</b>					+
<i>subfloridana</i>			o		o
<b>Umbilicaria polymorpha</b>				o	
<b>Verrucaria aquatilis</b>			o	o	
<i>baldensis</i>	o				
<i>caerulea</i>	o				
<i>hochstetteri</i>	o			o c.	
<i>muralis</i>	o	o		o c.	
<i>nigrescens</i>	o	o		o c.	
<i>praetermissa</i>			o		
<i>viridula</i>	o			o c.	
<b>Xanthoparmelia conspersa</b>		o		o	
<i>mougeotii</i>		o			
<b>Xanthoria candelaria</b>			o		+
<i>parietina</i>	o	o	o		o
<i>polycarpa</i>			o		o
<i>ulophyllodes</i>					+

## SMALL ECOLOGICAL PROJECT REPORT: ASPEN WOODS IN STRATHSPEY

Stands of pure aspen (*Populus tremula*) are relatively uncommon in Britain and those in Strathspey in the Scottish Highlands represent some of the largest and best examples in the UK. Numerous invertebrates and cryptogams are closely associated with, if not dependent upon, these aspen stands, providing evidence of the very long ecological continuity of these woodlands of which only 40 ha may remain in Scotland. The survey selected six of the largest woods with structures varying from young and dense to old, open and park-like; it was carried out by Brian and Sandy Coppins and Les and Sheila Street.

The results exceeded expectation with 172 lichen taxa (plus 14 lichenicolous fungi) recorded of which 134 species were epiphytic on aspen. Four species were new to Britain, 11 were Red Data Book or nationally rare, and 29 nationally scarce. Collectively these represent an exceptional addition to Britain's lichen flora and mark out this specialised and hitherto neglected woodland habitat as one of the more interesting and ancient ecosystems in Britain. The new lichens tend to be on the small side, but to make up for this, most were present in considerable quantity. *Caloplaca ahtii* was on the bark plates of mature trees in aspen-birch-juniper pasture woodland; it resembles *C. obscurella*. *Rinodina laevigata* was locally abundant on branches in Abernethy Forest, care needs to be taken to distinguish it from *R. sophodes*. At three sites *Arthonia patellulata* was on the smooth bark of branches which is also the habitat of *Lecanora populicola*, last seen 190 years ago in east Norfolk. Near Rothiemurchus, *L. populicola* was supporting yellow apothecia of *Candelariella superdistans*, never before seen in Britain.

The above are the new species but equally exciting are their associates, which include RDB species such as *Schismatomma graphidioides* and *Caloplaca flavorubescens*. The latter was most unexpected, as elsewhere in the UK it is a species of cultural landscapes characteristic of old wayside and parkland ash trees (*Fraxinus excelsior*) where the bark is enriched by dust and manure from grazing animals. In such sites the species has experienced a rapid decline due to air pollution, agricultural enrichment and the death of host trees. The Speyside aspen woods hold no such threats, and are now believed to support the largest populations of this lichen in the British Isles. Another unusual feature is that *Caloplaca flavorubescens* is present on young trees.

This is the first phase of the project, further work will involve more detailed autecological studies.

Brian Coppins, Leslie and Sheila Street

## LISTING HEADSTONES

"You may put 'em on the list - you may put 'em on the list;  
And they'll none of 'em be missed - they'll none if 'em be missed."

W S Gilbert *The Mikado*

Over the years, there have been many and varied threats to the existence of lichens on tombstones, including the ravages of ivy, chemical spraying, reuse of the stone because of space limitations, removal or resiting to facilitate mowing, and scrubbing clean by over-enthusiastic family history societies or out-of-work students (see *Bulletin* 80:31). The most recent and perhaps the most worrying was first brought to my attention by Frank Dobson when he heard a radio broadcast about the dangerous state of many headstones. One council had, apparently, decided to cover the more vulnerable with orange plastic bags as a warning sign prior to flattening them. Soon after, the Society received a letter from Ian Bennallick of the recently formed Cornwall Botanical Group to the effect that the county council had sent a directive to all district councils that closed churchyards and cemeteries (for which they were legally responsible) had to be surveyed urgently and any dangerous headstones laid low. Fortunately, Ian, while knowing little about lichens, was perceptive enough to realise the threat and sufficiently diligent to write to all concerned. He pointed out that headstones may carry important communities and that surveys ought to be carried out by the BLS prior to any action. I contacted Ian by email and he has sent me copies of all the predictably non-committal replies received. Carol Simpson, the Living Churchyards representative in Cornwall, has also taken up the cause at a diocesan meeting and met with an equally lukewarm response, safety being regarded as paramount. Others in the BLS have subsequently been alerted including Sandy Coppins (President), Tony Fletcher (Conservation Officer), Peter James (*Plantlife*), Ishpi Blatchley (Churchyards rep. on the Conservation Committee), Ann Allen (SW co-ordinator for the Churchyards Project) and Jeremy Gray, (Diocesan rep.). Tony has written to Ian, while Sandy has sent a most useful, detailed response to the Truro Diocese. Ann has kindly kept me informed of developments and, with Barbara Hilton, is trying to ensure that as many as possible of the yards involved are surveyed. They have already visited a number on the Lizard to the south of the River Helford.

Hardly had I had a chance to draw breath when Colin Pope sent me a cutting from the Isle of Wight County Press (8 March), The headline this time was 'Headstones said to be a health risk!' A risk assessment of 24,000 gravestones on the island was to be carried out by the fire and public safety committee and spot checks suggested that as many as 1 in 10 were unsafe particularly to children, and old ladies who 'lean on them to get up'. The saga was thus repeating itself, this time with Colin, Sheila and Les Street, and Dr Simon Young, the warden of Newtown NNR, involved. As I write, the

situation changes by the day and I dread to think what will ensue if every council and diocese throughout the land follows suit.

I have received some reassurance from Diana Evans, my own local Diocesan Advisory Committee secretary, who pointed out that no headstone could be removed or re-sited without a faculty and these were issued by Peterborough only in exceptional circumstances. None had currently been applied for. Before action could be taken, it was also a legal requirement to try to trace living relatives, as they were obliged to meet any expenditure. This may necessitate a notice in the church porch and something like a three-month waiting period. Mrs Evans also led me to believe that, when a churchyard is closed for burials, while the maintenance of the grass, trees and boundaries was undertaken by the appropriate council, the upkeep of the church fabric and memorials remained the responsibility of the Parochial Church Council.

As a Society, we need to be prepared with suitable arguments and plans of action. I understand that there have been fatalities (including children) in recent years as a result of falling headstones. Consequently, there is clearly an obligation on the part of those responsible for safety to carry out checks and institute remedial action where necessary. It is equally important also that the BLS should, wherever possible, carry out surveys prior to any action being taken that might irreparably damage the associated lichen communities. This won't be easy because there are so few of us who have the required time and expertise. I shall publicise the problem in the next edition of *Stone Chat* (which will come out well before this article) so that an early warning network can be established by means of our diocesan representatives. It is equally important to create a red data list of the most threatened churchyard lichens and to ensure, as much as we are able, that these are conserved. Fortunately, Biodiversity Action Plans are already in place for *Physcia clementei* on headstones in Northamptonshire.

I would value any help or positive suggestions from any readers. In the meantime, could I add just a few further personal reactions:

If my mathematics is correct, it is probable that since the Churchyards Project was inaugurated more than half a million headstones will have been examined at extremely close quarters by BLS members without, as far as I know, any danger to life or limb. We don't generally steer clear of tilting stones because often these carry the most interesting communities. The recently discovered *Parmelia soledians* in my local yard, for example, is on the upper face of a sandstone headstone with a 60 degree list (see *Bulletin* 86:51) and a few years ago I reported finding *Bacidia arceutina* on the shaded, obverse face of a similarly tilting ironstone at Helmdon (see *Bulletin* 69:32). Stones such as these, mostly at least a century old, are well-embedded and are not put in place until at least nine months after a burial so that the ground has had time to settle. I

have learnt from a local mason that ideally a quarter of the stone's length should be below ground. Subsequent tilting may be due to soil slippage if the churchyard is on a slope or may also be caused by the roots of trees (another reason for our cool response to the planting of millennium yews). Whatever the reason, because of the initial anchoring, I have never known such a tilt to result in a topple. I moved to Evenley almost exactly thirty years ago and first visited the churchyard soon afterwards. Unless my memory is conveniently playing tricks, two headstones were listing heavily at around 40 degrees. Today, they appear not to have moved even part of a degree - not a minute in over a quarter of a century! The few stones that I have ever found to be unsafe are more recent and relatively less bulky limestone headstones or marble crosses that are not embedded at all but have been cemented to a basal stone and have become insecure at the join.

The responses of councils so far seem to imply that they have neither the time nor money to resurrect the stones and render them stable. I would have thought that, with firmly embedded stones, uprooting them and laying them down would be almost as onerous a task as uprighting them and firming the ground around them. And, unless they are to be set on another stone base or in prepared ground like a ledger, they will rapidly deteriorate due to weathering and be both an obstacle to mowing and an additional hazard for people to fall over. The only times I have been close to injuring myself in churchyards is when I have stumbled over low kerbs or similar structures that have become overgrown and obscured from view by inadequate management.

Suitable warning signs, less garish than orange bags, might be an interim measure, although these may still be out of keeping with the churchscape and may not attract the attention of children. Occasionally, I have come across damaged stones held together by metal braces. Perhaps, someone could design and manufacture an inexpensive, unobtrusive and adjustable set of clamps that could hold a listing stone in place. If, as is assumed, one in every ten headstones throughout the country requires such remedial action, there would be no shortage of business!

While I fully understand the anxieties in regard to dangers in such public and freely accessible places, it is foolish to think that one can make provision for all eventualities, otherwise hard hats would have to be issued at the lych gate to protect from possible falling masonry and, in the wider context, all ponds and lakes drained for fear of drowning! For a more balanced approach to such matters, I would suggest that all parties concerned should consult the Churchyards Handbook published by the Council for the Care of Churches. The third edition written in 1988 by Peter Burman and The Very Rev. Henry Stapleton, Dean of Carlisle, is especially supportive of churchyards as havens for wildlife, including lichens. Their point of view is summed up in the concluding words of the first chapter:

"The care of the churchyard embraces many of the factors which most closely touch our present generation - a concern for conservation, both of wild life and our artistic and architectural heritage; a concern with visual values, and for good design; a need for solitude and beauty, away from the pressures and difficulties of life; a desire for significance, and a resolution of the interdependent mysteries of life and death. To be responsible for a churchyard, large or small, should be seen as an opportunity and a privilege, and as a way of relating to the wider community." (p13) \*

Tom Chester

\* **Footnote:** Having closed the curtain on what appears to be merely the first act of an on-going saga, my attention has been drawn by Jeremy Gray to a most useful and encouraging document *Paradise Preserved* on the English Heritage website ([www.english-heritage.co.uk](http://www.english-heritage.co.uk)). While referring specifically to unsafe headstones in cemeteries, it states that the laying down of "monuments of architectural or historic interest" is not acceptable as a permanent measure and suggests rather that such stones should be cordoned-off or temporarily propped until measures can be taken to conserve their "special interest and integrity". We must endeavour to see that headstones of 'lichen-interest' are equally valued. (TC)

## REVISED CHURCHYARD MAPPING CARD

By the time you read this, a revised mapping card should have been completed. The front will list 195 species, taxonomically updated, and there will be separate columns for church and churchyard records. The back will include boxes for BioBase card and site numbers. **Because of this link to BioBase, however minimal the information you choose to include, it is essential from now on that the guidelines are strictly followed.** The basic procedures are outlined on the card. A supply will be printed and available from me in return for an A4 s.a.e. Copies can also be downloaded from the website.

Tom Chester

## LICHEN FLORA OF DEVON PUBLISHED

It is nearly 120 years since the previous *Lichen Flora of Devon* was published, at that time around 500 lichens were known from the county. Today, that number is well in excess of 900 making it the richest county in England, and in Great Britain, second only to Perthshire. This gives some idea of the application required from Barbara Benfield in bringing such a project to fruition. She has devoted the last 20 years to exploring the woods, moors, outcrops, rivers, coastline and man-made habitats of Devon to produce what could form a model for other county floras. It is softback, A4 in size with a perfect binding, has an attractive coloured cover, contains a few colour plates and is just over a hundred pages long.

Visitors to Devon will find it proves an invaluable guide in helping to locate the richer lichen sites, a yardstick by which to gauge the importance of any records they make, and it provides a fascinating account of how the lichen flora was gradually discovered and has changed with time. For me, the degree of lichen impoverished experienced in this highly rural county on the Atlantic fringe of Europe was a revelation. A succession of recorders, since 1793, give an insight into these changes such as the gradual decline of *Anaptychia ciliaris*, *Degelia plumbea*, *Pannaria rubiginosa* and *Teloschistes flavicans* from common to rare, the size of *Ramalina fraxinea* dropping from 30 cm in length in 1829 to a maximum of 8 cm today, and the cessation of regular fruiting by *Parmelia perlata*. While this flora was in preparation a sharp decline in the vigour and distribution of many epiphytic lichens including Bryorias, corticolous Collemas, *Lobaria amplissima*, *L. scrobiculata* and *Usnea florida* was noticed. The same is true for certain saxicolous species on Dartmoor. It would have been useful to be told something about the changing status of *Lecanora conizaeoides* over the last 20 years. For those who relish a challenge a list of 15 macrolichens believed to be extinct in the county is supplied. A long term value of local floras is that they form a base for the assessment of change, so the detail this flora provides is to be welcomed, and has never been of greater importance.

A thirty-page introductory section takes the reader through the history of lichenology in Devon, its climate and physical features, and supplies an account of the communities present where the emphasis is on what makes the south-west distinctive. There is an inventory of the lichens present in 44 woods and parks. The rest of the flora is a catalogue summarising the ecology and distribution of each lichen. At the end of each entry there is a record of the number of squares in which the species has been seen pre and post 1980 which is preferable to the more usual date of 1960. Species with notable distributions have a map. For the rarer species individual sites, collectors and dates are given, this reveals the considerable number of lichenologists who have worked in Devon such as Swinscow, Hawksworth, James, Rose, Giavarini and,

particularly recently, Brian and Sandy (nee O'Dare) Coppins. Much of this was contract work, a relatively new source of records for county floras.

This attractively produced and modestly priced volume is aimed at more than lichenologists. It was also designed to appeal and prove useful to land managers such as National Park Authorities, the National Trust, English Nature, the Devon Wildlife Trust, Forest Enterprise and planners everywhere. For this reason conservation matters and national rankings are emphasised. The author is to be congratulated on producing what is an outstanding advertisement for lichens.

*The Lichen Flora of Devon*. B. Benfield. Pp 103. 2001. Published privately by the author and available from G. Benfield, Penspool Cottage, Plymtree, Cullompton, Devon, EX15 2JY, UK. Price £7 + £1 p&p to BLS members; £10 + £1 p&p to non-members. P&P £1 for UK, £2 for Europe, £4 for rest of the world. No ISBN number.

Oliver Gilbert

### WANTED TO PURCHASE

The *Lichenologist* Vol 17 part 3 (1985) and Vol 18 part 4 (1986).

Please contact: Dr S L Thrower, Ballaquaggan Cottage, Douglas Road, Ballasalla, Isle of Man, IM9 3AD; e-mail [throw@mcb.net](mailto:throw@mcb.net); Tel: 01624 822786.

## LICHENS IN LITERATURE

This place has been my home now for ten years and more, and wherever the changes of my life may lead me in the future it will remain my spiritual home until I die, a house to which one returns not with the certainty of welcoming fellow human beings, nor with the expectation of comfort and ease, but to a familiarity in which every lichen-covered rock and rowan tree show known and reassuring faces.

Opening paragraph of Ring of Bright Water Gavin Maxwell 1960  
Contributed by Peter Earland-Bennett

On Canna (Island) It was equally unlucky for sailors or fishermen to wear anything that was dyed with croftle as it was believed that the lichen would be attracted to the coastal rocks on which it grew.

Eigg, The Story of an Island, Dressler, C 1998  
Contributed by Ian Pennie

A tired swimmer in the waves of time  
I throw my hands up: let the surface close:  
Sink down the centuries to another clime,  
And buried find the castle and the rose  
    Buried in time and sleep,  
    So drowsy, overgrown,  
That here the moss is green upon the stone,  
    And lichen stains the keep.

Extract from Sissinghurst, V Sackville-West  
Contributed by Chris Young

## LICHENS UNDER OCCUPATION

During a recent visit to the Herbarium of the University of Hamburg Botanical Institute (HBG), its Keeper, Dr Tassilo Feuerer, drew my attention to a small but interesting collection of lichens from Guernsey. The material had been collected in 1942 by A Nierschalk, a soldier of the German occupation force garrisoned on that island. The specimens had been forwarded to Albert Schumacher (1893-1975), and possibly C F E Erichsen (1867-1945) for identification, and then accessed into Erichsen's Collection two years before to his death; Erichsen's Collection was initially donated to Muzeum Altona, before eventually coming to HBG in August 1945.

(Further biographical details are to be found at: [http://www.biologie.uni-hamburg.de/ialb/herbar/hgb\\_02.htm](http://www.biologie.uni-hamburg.de/ialb/herbar/hgb_02.htm).)

A detailed search of Hamburg's extensive Herbarium has not yet been undertaken, but the following eight packets have so far come to light:

*Cladonia rangiformis*

south coast on cliffs with *Opioglossum lusitanicum*, April 1942

*Parmelia caperata*

south coast, rocks above tide line, March 1942

*Ramalina cuspidata*

south coast, rocks, March 1942

*Ramalina siliquosa*

south coast, rocks, March 1942 [2 packets]

*Roccella fuciformis*

south-west coast, rocks, 10.3.1942

south coast, rocks, 10.3.1942 [specimen 21 cm long]

*loc. non cit.*, 10.3.1942 [a curious form having the chemical reactions of *R. fuciformis*, but the habit of *R. phycopsis*]

Although the above list of lichens may not look all that exciting, the unusual circumstances under which they were gathered merit special mention: what we see today are the fruits of a peaceful pastime pursued by an observant soldier during an unhappy episode in European history.

Mark Seaward

## LICHENS ON PLASTIC NET

During field work in Nepal, in December 2000, one of the author (AD) collected the lichens found growing on plastic net used for fence in the nursery plots of Royal Botanic Garden, Kathmandu. The plastic net appears quite old and torn, with accumulation of dust on its threads. The net bears luxuriant growth of eleven species of lichen on its horizontal face (Table 1, Fig. 1).

The foliose forms affixed to the threads by their central part of the thallus, the marginal area of the lobes were more or less free from the substratum. The crustose forms (*Pertusaria*, *Micarea* and *Lecanora*) were closely adpressed to the threads in a beaded manner. The granular isidiate *Xanthoria candelaria* and small lobed *Phaeophyscia hispidula*, also covered the whole plastic threads like woven flowers in a garland.

Reports of occurrence of *Bacidia umbrina*, *Micarea nitschkeana* and *Physcia caesia* on wholly synthetic organic materials are available (Brightman and Seaward, 1977). Sipman (1994) reported 12 foliicolous lichen on plastic tape from French Guinea. The plastic net is of common use as a fence material in gardens, nursery and farms. The occurrence of lichens on plastic net in Royal Botanic Garden, Kathmandu, may be due to the damp and moist microclimatic condition and the moisture retaining capacity of the plastic threads which were dust laden and retain moisture within its threads. The lichen species reported to occur on plastic net were also colonized abundantly in the area on all available substrates.

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Table 1: Lichen species growing on plastic net in Royal Botanic Garden, Kathmandu, Nepal

- |   |   |
|---|---|
| 1. <i>Heterodermia diademata</i> (Taylor) Awasthi | 7. <i>Parmotrema tinctorum</i> (Nyl.) Hale          |
| 2. <i>Heterodermia firmula</i> (Nyl.) Trevisan    | 8. <i>Pertusaria</i> sp.                            |
| 3. <i>Heterodermia incana</i> (Stirton) Awasthi   | 9. <i>Phaeophyscia endococcina</i> (Koerber) Moberg |
| 4. <i>Lecanora flavidofusca</i> Muell. Arg.       | 10. <i>Phaeophyscia hispidula</i> (Ach.) Essl.      |
| 5. <i>Micarea</i> sp.                             | 11. <i>Xanthoria candelaria</i> (L.) Am.            |
| 6. <i>Parmotrema nilgherrense</i> (Nyl.) Hale     |   |

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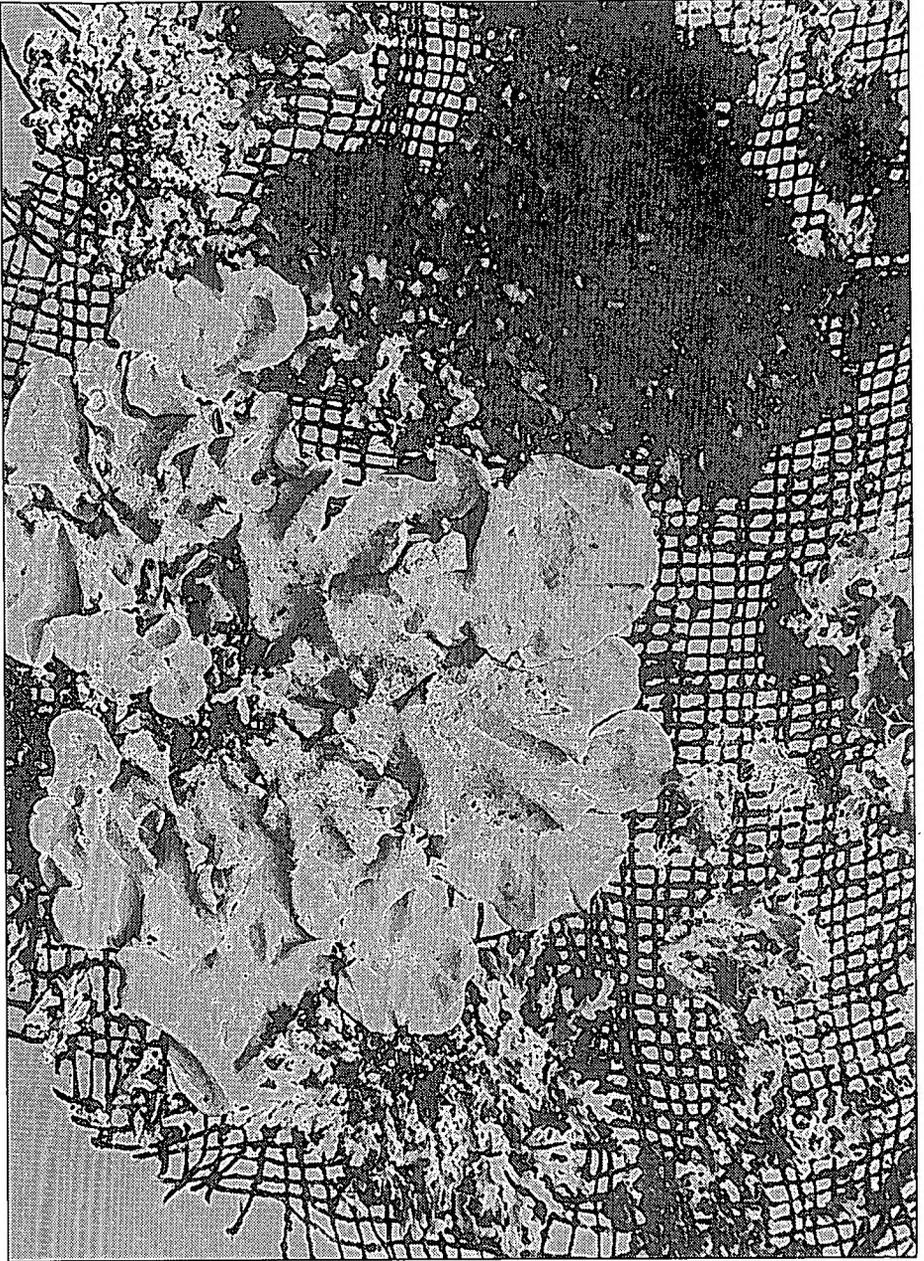


Fig. 1. A piece of plastic net with lichen colonisation.

## SLOVAK LICHENOLOGY IN 2001

We opened the season with a two-day "*Appertio Anni Lichenologici*" in the early April 2001. The activities of the previous year were reviewed and Anna Guttová, Anna Lackovièová, Eva Lisická, Viera Orthová and Ivan Pišút gave lectures. The seminar was followed by a field trip to the Malé Karpaty Mts.

A new version of the Red List of Lichens of Slovakia was published in order to coordinate the criteria of threat used in the red lists published up to date with those in the version 3.1 IUCN of the year 2001. The Red List of Slovak lichens includes altogether 573 species: 90 extinct, 138 critically endangered, 48 endangered, 169 vulnerable, 114 near threatened and 14 data deficient (see Pišút et al. 2001).

Joint work with Sergey Kondratyuk on the lichens of the Eastern Carpathians Mts and evaluation of quality of particular areas and regions was carried out.

Anna Guttová was awarded "Sillinger's Award" for young scientific workers by the Slovak Botanical Society for her contribution to the discipline.

The exhibition "Lichens - an Endangered Partnership", by Eva Lisická, was on show in the towns of Levice and Turèiansky Svätý Martin.

At the end of August we met with our Czech colleagues in the Pieniny National Park, at the very border to Poland. Thanks to our excellent hostess Anna Guttová and the pleasant weather, we spent a few unforgettable days. Besides the lichenological field trips, rafting the river Dunajec and a visit to the nearby castle Niedzica, Poland, were included into the program too.

In November the "*Vindemia Lichenologica*" traditionally closed the season. Our guest was Jana Kocourková from Prague, who gave a very interesting lecture on lichenicolous fungi. The next day an excursion to a protected peat bog in Malé Karpaty Mts followed. Some interesting finds of lichenicolous fungi, new to Slovakia were made.

### **Selected papers from 2000 and 2001:**

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Eva Lisická

## CZECH LICHENOLOGY IN 2001

The previous year 2000 was rich in meaningful anniversaries of two of the leading persons of Czech lichenology, Zdeněk Cernohorský (\*1910) and Antonín Vezda (\*1920). Unfortunately, sad news reached us at the end of last Summer: Professor Cernohorský died on 5th September in Prague (obituary see in *BLS Bulletin* p....).

The regular spring field meeting of the Bryological and Lichenological Section was organised in eastern Bohemia (Nové Místo n. Metují, 50 participants included 4 colleagues from Poland and one from Austria). The autumn field meeting was held in south Moravia (Mikulov, 37 participants included 2 Polish lichenologists). Several one-day excursions for students were also undertaken.

In the newsletter *Bryonora* 27 there is an article on a proposal for including lichens into the EU project NATURA 2000. (Lackovičová et al., p. 2-9). Also information on collections of cryptogams and vascular plants in the herbarium of the Institute of Botany, Slovak Academy of Sciences, Bratislava (SAV) (Guttová et Peniašteková, p. 9-13).

In *Bryonora* 28, additions to the Czech and Slovak lichenological bibliography are included.

A small lichenological exhibition 'Mysterious world of lichens' by J Halda and Z Palice (originally presented in 1996 at Museum in Deštné in Orlické hory Mts) was presented last year in south Bohemia (Regional Museum in Sobislav and Veselí n. Lužnicí).

Web presentation was prepared (<http://www.natur.cuni.cz/CBS/bryoindex.htm>) including information on present activities as well as basic data on history, reports etc. At present, web pages are available in Czech language only.

Jirí Liška

**ZDENEK CERNOHORSKÝ**  
**1910 - 2001**

Professor Emeritus at the Charles University, Prague, died eight months after his 90th birthday on September 5 in Prague.

Zdenik Cernohorský was born on December 27, 1910 in Chroustovice near Chrudim (East Bohemia). He graduated from the Charles University, Prague, in 1933 with specialisation in lichenology, particularly lichen sociology. After studying at university, he taught at various schools (primary school in Chroustovice and later on secondary schools in Český Krumlov, Melník and Praha). He started his professional career after WWII at the University of Agriculture and Forestry, from where he moved to the Paedagogical Faculty and after 1959 to the Faculty of Sciences, Charles University where he retired in 1977.

Professor Cernohorský is known as the co-author of a key to Czechoslovak macrolichens (Cernohorský, Nádvorník and Servít 1956), for using fluorescence analysis in lichen identification, and for a series of taxonomical and chorological studies in yellow *Rhizocarpon* species. However, Zdenik Cernohorský devoted his interest, activities and work to all branches of botany, especially anatomy (a monograph of seeds of *Cruciferae*), morphology (a textbook with eight editions!) and education. Last, but not least, he was active in organizing and managing science, through the Czechoslovak Botanical Society which he served as the chairman for 12 years and was the editor-in-chief of the journal of the Society, *Preslia* for 27 years and in academic functions serving as Vice-Chancellor and Dean.

Professor Cernohorský was an excellent teacher. He always encouraged talented young people and watched them in a paternal way. His language and rhetorical capabilities as well as happy manner helped to make good contacts with many colleagues abroad. Unfortunately, he spent most of his life in a period when travelling abroad was difficult; and he was therefore not able to establish as many contacts as he might have liked. Still he was able to make use of each of the few journeys he made abroad both for educational and personal contacts. He had strong friendships with many other lichenologists in other countries (e.g. Á. Löve, J. Poelt, G. Clauzade). Zdenik Cernohorský was a person of high personal integrity. His life journey was not easy, but he lived it both with honour and humility. He will be greatly missed by all generations of Czech and Slovak botanists.

Jirí Liška

**OBITUARY**  
**ROBIN C MUNRO**  
**1926 - 2001**

Robin was born in the Perthshire village of Dunning in 1926 and started school there, but in 1936 the family moved to Dollar where he completed his education at Dollar Academy. When war broke out in September 1939, both he and his brother joined the Air Training Corps at the school and volunteered for pilot training. However, by the time he was called up the airforce had more trainee pilots than they knew what to do with and as an alternative he joined the Parachute Regiment seeing active service in Palestine in a peacekeeping role when the new state of Israel was set up.

After demobilisation, he began an agricultural course at Reading University, but due to a mix up over exam results, was unable to finish and so spent the next twenty five years or so as a tea planter in Malawi. It was on one of his spells of leave that he first took an interest in lichens. He had gone to Skye and was sitting by the sea looking at the scenery and said to himself "What is that yellow stuff growing over the rocks?" He went over to look at them but was not happy with what he saw. On his return to Portree he bought a magnifying glass and never looked back from then on.

After Robin left Africa, he ran a carry-out food shop in Forfar for a number of years, but eventually retired from that and devoted all his time to lichens, especially in Angus. A daunting task as it meant following in the footsteps of Ursula Duncan. By this time he had got to grips with sufficient knowledge of Esperanto to be able to use *Likenoj de Okcidenta Eŭropo* by Clauzade and Roux, which he found invaluable. He also established a good relationship with Brian Coppins, for whom he had the highest regard and to whom he owed so much, for the help and encouragement that Brian gave him.

I was very lucky to be a friend of Robin. He first contacted me when he wrote regarding *Sarcopyrenia gibba* which was a species then unknown to him and attended my Kindrogan course in 1987. We corresponded regularly, but I was often flummoxed by what he sent me to identify. Robin did not have any interest in keeping specimens as he was very observant and had an amazing memory. In fact at the end of each year he used to throw out all the bits he had gathered with the 4lb club-hammer which he regularly carried. Fortunately I managed to extract most of the important material, and built up a herbarium of his gatherings of 6-700 packets. He and his brother were excellent photographers and I also managed to acquire a number of his close up photographs of lichens.



Robin Munro 1926-2001

Robin was small of stature, but tough and wiry and had scant regard for his safety. In the fields he would think nothing of hammering his chisel into a rock face and clambering onto that to get at a lichen which had been out of reach. He also had no hesitation in walking long distances, once doing a round trip of at least 10 miles to collect *Placynthium pleuriseptatum* for me on a large lump of rock which probably weighed 10lb. The only thing that really riled him was Scottish summer flies. Getting to a site was always a daunting experience for his passengers as he drove his Fiat Punto like a sports car not wishing to waste a second. He hardly ever stopped to eat other than perhaps chocolate and always drank from a hillside burn - a policy I adopted with some trepidation.

He was serious minded but every so often his face would crease up into a silent grin, when he made or saw a joke. He did not necessarily have a lot to say, but he did ask searching questions about the specimens he sent me. Hopefully he was not too frustrated by my evasive replies, because of my lack of knowledge or time to examine them properly.

Robin died in December 2001 of cancer and although he suffered a certain amount of discomfort latterly, did not have to endure any great pain. His last words to his brother were "Make sure that Richard Brinklow gets all the lichen stuff, on his computer."

I C Munroe & C J B Hitch

**OBITUARY**  
**K L ALVIN PHD, FLS**

I joined the Department of Botany at Imperial College, London, in 1960 to find "The Two Kens" (Alvin and Kershaw) already in post. We had been selected by Prof W O James to enlarge the expertise within his department with each making his own individual contributions, in contrast to the present practice of expanding ever more high-powered research teams. Kershaw later left the college to cross the pond, but Ken Alvin remained at Imperial.

He was born on 20 May 1927, and graduated with 1st class honours in Botany from Birkbeck College, London, where he became as Assistant Lecturer before moving to Imperial College in 1959 as a Lecturer in Botany. In 1970 he was elevated to Senior Lecturer. He served on numerous academic and scientific committees (with special links to the Linnean Society of London), and was a founder member of the British Lichen Society.

He had a marked sense of propriety and the way things should be done. Entirely in keeping, he regularly attended the Linnean Society Dining Club. He was meticulous in speech and in text, and I saw he was visibly discomforted by the language of some of our less constrained colleagues. These characteristics often masked his chuckling and infectious sense of humour which surfaced when relaxed and fully at ease. I greatly respected his honesty together with his finely balanced sense of fairness, and he was understandably much upset when an academic referee of one of his papers took his ideas and published them in his own name (I have had a similar experience). He became Senior Tutor to undergraduate students in the Department, and achieved great rapport with them and also with research students who speak enthusiastically of his enthusiasm and involvement with their own study projects. Each felt that he or she was making a real personal discovery rather than just doing the donkey work for someone higher up the academic ladder.

Although we lived 60 miles apart on opposite sides of London and personal contacts were mainly restricted to College matters in South Kensington, shared experiences in teaching practical classes, and company on field courses led to him becoming my closest colleague and friend at Imperial. I taught him how to walk without fear across summer snow beds on a field course in the Norwegian mountains, and my wife Claire subsequently proved to him the necessary interdependence between the botanist and the illustrator. We recall that he was much mystified by her initial drawing of the soralia of *Physcia adscendens* for the endpapers for **The Observer's Book of Lichens** (second edition 1977) - she hadn't depicted the 'helmets' because they'd been eaten off her specimen and he hadn't realised that she didn't know they should be there. The

first edition (1963) of this excellent small book (a starting point for so many lichenologists) was written jointly with Ken Kershaw, but incomprehensibly has long been out of print. Alvin was responsible for the text and photographs, Kershaw for the paintings (Claire replaced some of the less successful illustrations with new ones of her own for the revised second edition, published in Alvin's name alone).

His interests in lichenology started when teaching Birkbeck students on field courses in the Isle of Man, and as his understanding of lichen taxonomy grew the majority of his identifications have stood the test of time. He presented his lichen herbarium to me, and I in turn passed most of it on to the Society (*Bulletin* 69, 35). He worked without the full taxonomic overview that we now have for lichens (see his comments in *Bulletin* 53, 17) and puzzles then were often puzzles for lichenology as a whole; nowadays they are more likely to be just steps in an individual's personal learning curve, with the framework being set out before us by others.

Ken's involvement in lichenology was however quite secondary to his main botanical interests which lay in palaeobotany, and especially in the Mesozoic predecessors of the present-day conifers. He commissioned Claire's first botanical illustrations, a reconstruction of *Weichselia reticulata* and later *Pseudofrenelopsis parceramosa*, with the two of them trying tentative models on paper (phyllotaxis was tested in 3-D using rolled-up listings of my failed Fortran computer programs). These studies were based on his meticulous attention to detail and his ability to visualise fragmental remains as actual living plants. In contrast he surely had a blind spot in the areas of computing and numerical methods and it was here that I was able to assist him in our joint analytical papers.

On one of his early excursions, to Studland in Dorset, I collected a plant of *Osmunda regalis* (the concept of 'conservation' had barely been invented); it grew well in our Surrey garden, and now thrives in Perthshire as a living memory of a valued friend, and colleague in lichenology. He died on 28 December 2001. He is survived by his wife Tina, one son and two daughters.

D H Dalby

## BRITISH ISLES LIST OF LICHENS AND LICHENICOLOUS FUNGI

There is no update in this *Bulletin* as a revised Checklist is expected to be published in the Summer. A Lichen List and Syn. List based on the Checklist will be made available, and updated on the BLS website.

Jeremy Gray

## NEW, RARE AND INTERESTING LICHENS

Contributions to this section are always welcome. Please submit entries to Chris Hitch, Orchella Lodge, 14 Hawthorn Close, Knodishall, Saxmundham, Suffolk, IP17 1XW, 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) (*please add letters for the 100 km squares to aid Biobase and Recorder 2000 users*), altitude (alt), where applicable, in metres (m), date, comments. Determined/confirmed by. New to/the. Finally recorder. An authority with date after species is only indicated when the record is new to the British Isles. Records of lichens listed in the *RDB* are particularly welcome, even from previously known localities. *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.*

### New to the British Isles:

*Taeniolella rolfi* Diederich & Zhurb. (1997): forming abundant soralia-like galls on *Coelocaulon* (*Cetraria*) *aculeatum*, on lead-contaminated soil, Nanthead lead mine, c7 km east-southeast of Alston, VC 70, Cumberland, GR 35(NY)/78-43-, alt c470 m, July 1979. Originally collected as a sorediate morph of *C. aculeatum*. Microscopical examination of the soralia revealed abundant brown, granular verrucose hyphae and 0-1-septate, catenate conidia, c9.5-12 x 4.5-5µm. For full description and further notes see Diederich & Zhurbenko (1997, 2001), as cited in Literature Pertaining in this *Bulletin*.  
**B J Coppins**

*Thelocarpon saxicola* (Zahlbr.) H. Magn. (1935): on rock in small underhang below horizontal *Quercus* trunk, with *Micarea tuberculata* and *Psilolechia lucida*, near Digyf, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-53-, alt c330 m. November 2001.  
**B J & A M Coppins**

### Other Records:

*Alectoria sarmentosa*: in canopy of fallen *Betula* and on trunk of large *Pinus*, valley of Allt a'Chuirn, Beinn Eithe NNR, VC 105, West Ross, GR 28(NH)/00-60-, alt 170 m, April 2001. First record from the Loch Maree pinewoods.  
**B J & A M Coppins**

*Alectoria sarmentosa* subsp. *sarmentosa*: (i) on vertical sandstone faces at Echo Crag, VC 67, South Northumberland, GR 36(NT)/74-04-, alt 460 m, August 2001. Previously recorded by Oliver Gilbert in 1976; (ii) on vertical face of a large boulder on Great Dour, VC 67, Northumberland, GR 36(NT)/79-03-, alt 400 m, October 2001. Third English record.

**Janet Simkin**

*Alectoria sarmentosa* subsp. *vexillifera*: amongst heather at Echo Crag, VC 67, South Northumberland, GR 36(NT)/74-04-, alt 460 m, October 2001. One of two English sites, first recorded by Oliver Gilbert in 1976.

**Janet Simkin**

*Arthonia endlicheri*: on Silurian shale rock underhang, near waterfall, Allt Rhyd y Groes NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-48-, alt c180 m, November 2001. New county record.  
**B J & A M Coppins and R G Woods**

*Arthonia ligniaria*: on decorticate *Quercus* branch; with *Micarea misella*, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-53-, alt c320 m, November 2001. New county record.  
**B J & A M Coppins**

*Arthonia mediella*: on moss in dry vertical crevice in low rock outcrop (Silurian shale), Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-54-, alt c315 m, November 2001. New to Wales.  
**B J & A M Coppins**

*Arthonia pulvinata*: on rendered brickwork of north wall of church, Theberton, VC 25, East Suffolk, GR 62(TM)/43-65-, June 2001. This is the first saxicolous record of this species in Suffolk.  
**V Giavarini & C J B Hitch**

*Arthopyrenia viridescens*: on *Corylus* in damp hedgerow beside minor road, Pwllcenawon, west of Capel Bangor, VC 46, Cardiganshire, GR 22(SN)/63-64-, alt 25 m, August 2001. First vice county record.  
**S P & H A Chambers**

*Bacidia incompta*: on bark of dead *Ulmus glabra*, east side of Papan Water, by footpath from Garvald to Stoneypath Tower, VC 82, East Lothian, GR 36(NT)/593710, alt 120 m, January 2001. This is the second record from this hectad on a dead elm, suggesting that this BAP species may have been much more common in East Lothian than the absence of records prior to the latest onset of Dutch elm disease would suggest.  
**B J Coppins**

*Bacidia subcircumspecta*: on fence-post at edge of woodland, valley of River Conon, Uig, Skye, VC 104, North Ebeudes, GR 18(NG)/40-63-, alt 60 m, June 2001. **A M & B J Coppins**

*Biatora epixanthoides*: on trunk of *Quercus* by path, Allt Rhyd y Groes NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt 175 m, November 2001. New county record.  
**B J & A M Coppins**

*Candelariella aurella* f. *smaragdula*: a largish thallus on oolitic limestone headstone in old cemetery area, Bungay, VC 25, East Suffolk, GR 62(TM)/34-88-, June 2001. Second Suffolk record.  
**P M Earland-Bennett & C J B Hitch**

*Catapyreneum cinereum*: on eroded soil/rock patch in close-cropped cliff-top turf, RSPB Reserve, Lack Point, Rathlin Island, VC H39, Antrim, GR 34(D)/10-52-, September 2001. New to Northern Ireland.  
**M J Simms**

*Cecidonia xenophana*: on *Porpidia* sp. on low rock outcrop (Silurian shale), Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-54-, alt c315 m, November 2001. New county record.  
**B J & A M Coppins**

*Cetrelia olivetorum* s. lat.: on trunk of *Fraxinus* by path at edge of woodland, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-48-, alt c170 m, November 2001. New county record.

**B J & A M Coppins**

*Cladonia norvegica*: on mossy *Betula* trunk, Tynygarth, Cwm Einion, VC 46, Cardiganshire, GR 22(SN)/69-94-, alt 80 m, December 2000. Confirmed by A Orange.

**S P Chambers**

*Collema bachmanianum*: on compacted gravelly soil in urban wasteland, Handford Road, Ipswich, VC 25, East Suffolk, GR 62(TM)/15-44-, March 2000. New to Suffolk.

**P M Earland-Bennett & C J B Hitch**

*Collema fragile*: occasional in seepage tracks below limestone solution hollows on flat slabs lying in grassland, Bwrdd Arthur, Llanddona, VC 52, Anglesey, GR 23(SH)/58-81-, alt 164 m, March 2002. Present on five large slabs scattered over an area c25 x 8 m. New to Anglesey.

**S P Chambers**

*Cornutispora ciliata*: on *Xanthoria polycarpa* agg. on wooden handrail of ornamental wooden bridge, Needham Lake, Needham Market, VC 25, East Suffolk, GR 62(TM)/09-54-, October 2001.

**P M Earland-Bennett & C J B Hitch**

(ii) on *Pertusaria multipuncta* on *Corylus*, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-74-, alt c220 m, November 2001. New to Wales.

**B J & A M Coppins**

*Coppinsia minutissima*: over metal-rich soil mound on former industrial site, Pluck Lake, Swansea, VC 41, Glamorgan, GR 21(SS)/67-95-, alt 10 m, April 2001.

**S P Chambers**

*Degelia ligulata*: on near vertical, damp, northwest facing Old Red Sandstone rockface half way up a sea cliff. Gateholm Island, Marloes, VC 45, Pembrokeshire, GR 12(SM)/77-07-, November 2001. Confirmed by B J Coppins. The second record for this species on seacliffs in Pembrokeshire and found in an area where *D. atlantica* had previously been reported. The possibility must exist that all the previous records of this latter species from this extremely oceanic part of Wales might more properly be of this *D. ligulata*.

**R G Woods**

*Dictyonema interuptum*: overgrowing *Isothecium myosuroides* and rarely *Sticta fuliginosa* (where itself overgrown occasionally by *Cladonia* sp. squamules to create 4 layers of epiphytes involving, with the photobionts, 7 species!), *Plagiochila* cf. *spinulosa* and *Frullania* sp., the whole assemblage on the trunk of a mature sycamore in cliff woodland, east of Gardner's Cottage, Dorlin, Acharacle, VC 97, Westernness, GR 17(NM)/66-71-, September 2001. Confirmed by B J Coppins. Possibly the first record since the 19th century in this area, but probably regularly overlooked. Mosses apparently matted with blue-green cyanobacterium filaments should be carefully turned over to reveal the china-white underside of this unusual basidiolichen.

**R G Woods**

*Eopyrenula avellanae*: on *Corylus* by stream, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-52-, November 2001. New county record.

**B J & A M Coppins**

*Eopyrenula grandicula*: on sheltered *Corylus* trunk at edge of old woodland, Ynyshir, VC 46, Cardiganshire, GR 22(SN)/68-96-, alt 10 m, October 2001. New to Cardiganshire.

**S P Chambers**

(ii) on *Corylus* by path, Allt Rhyd y Groes NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-48-, alt c195 m, November 2001. New county record.

**B J & A M Coppins**

*Fellhanera bouteillei*: on the recurved tips of *Larix kaempferi* cone scales and the wings of seeds within, on dust impregnated low branch, Atlantic Close (former industrial site), Swansea, VC 41, Glamorgan, GR 21(SS)/67-96-, alt 15 m, April 2001. Another interesting niche for this species.

**S P Chambers**

*Fuscidea gothoburgensis*: on vertical side of large boulder, East of Llyn Cau, Cadair Idris, VC 48, Merionethshire, GR 23(SH)/72-12-, alt 390 m, March 2002. First vice county record.

**S P Chambers & S R Davey**

*Fuscidea lightfootii*: on base of young planted *Fraxinus* in copse, Alton Water, Stutton, VC 25, East Suffolk, GR 62(TM)/15-35-, July 2001. Determined by B J Coppins. An anomalous record for the area, and it could have been brought in with the tree. New to Suffolk.

**C J B Hitch & P M Earland-Bennett**

*Lecanactis premnea*: several thalli on deeply furrowed trunk of *Tilia platyphyllos* in open parkland, north end of Belvoir Park, Belfast, VC H39, Antrim, GR 33(J)/33-69-, May 2001. Barely 4 km from Belfast city centre! Another example was spotted by Howard Fox on the 'Derramore Oak', 0.9 km to the south-west, in 1997.

**M J Simms**

*Lecania baeomma*: on base of east-facing red brick wall, Crescent Road, Aldeburgh, VC 25, East Suffolk, GR 62(TM)/46-56-, March 2001. Determined by B J Coppins. New to Suffolk.

**P M Earland-Bennett & C J B Hitch**

*Lecania suavis*: on mortar infill of north wall of derelict outer shell of church, Covehithe, VC 25, East Suffolk, GR 62(TM)/52-81-, June 2001. Determined by B J Coppins. First modern Suffolk record (see *Br. Lichen Soc. Bulletin* 88:71, 2001).

**V Giavarini & C J B Hitch**

*Lecanora perisimilis*: (i) on top of sunny dead *Quercus* branch in Xanthorion community, Martlesham Heath, VC 25, East Suffolk, GR 62(TM)/24-45-, May 2001; (ii) on dead branch of mature *Salix* by reservoir, Alton Water, Tattingstone, VC 25, East Suffolk, GR 62(TM)/13-27-, July 2001. Determined by B J Coppins. New to Suffolk.

**C J B Hitch & P M Earland-Bennett**

*Lecanora polytropa*: on the Millstone Grit pedestal of a copper sundial - the lichen had turned a vivid green where it had received metal run-off, ornamental grounds of Ripley Castle, nr Harrogate, VC 64, Mid-west Yorkshire, GR 44(SE)/28-60-, alt 90 m, March 2002.

**O L Gilbert & A Henderson**

*Lecanora strobilina*: on lower parts of trunks of block-planted *Larix* above old gorge woodland, Tynygarth, Cwm Einion, VC 46, Cardiganshire, GR 22(SN)/69-94-, alt 90 m, April 2000. Determined by B J Coppins. New to Cardiganshire. **S P Chambers**

*Lecidea sanguineoatra*: colonising damp, peaty, cliff top turf, on an area of recently burnt coastal heath, near Pen Brush, Strumble Head, VC 45, Pembrokeshire, GR 12(SM)/88-39-, July 2001. An unusual terricolous occurrence for a species more usually associated with old mossy *Quercus* in ancient woodland. **S P Chambers**

*Lecidea turgidula*: on lignum of standing decorticate *Quercus* trunk, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-52-, alt c340 m, October 2001. New county record. **B J & A M Coppins**

*Lempholemma botryosum*: on south-facing granite outcrop subject to calcareous flushing, Migdale Rock, Spinningdale, VC 107, East Sutherland, GR 28(NH)/65-90-, May 2001. **B J & A M Coppins**

*Lepraria atlantica*: on Silurian shale rock underhang, near waterfall, Allt Rhyd y Groes NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-48-, alt c180 m, November 2001. New county record. **B J & A M Coppins**

*Leptogium byssinum*: on soil by track, with *Catapyrenium squamulosum*, Traprain Law quarry, VC 82, East Lothian, GR 36(NT)/58-74-, alt 100 m, August 2001. New to the Lothians and second British record. This species has more the aspect of a diminutive *Moelleropsis nebulosa* rather than a *Leptogium*. [NB: material supporting the Suffolk record, reported in *Bulletin* 88:71 (2001), is *L. subtile*.] **B J Coppins**

*Lobaria virens*: (i) Stours Kinara, Hoy, VC 111, Orkney Islands, GR 310(HY)/18-01-, August 1970. Collected by E R Bullard. Determined by D H Dalby. Sterile, but with pycnidia. New to the vice county. **D H Dalby**

(ii) on inner sheltered face of crevice in boulder, Hill of Clibberswick, 2 km east of Haroldswick, Unst, VC 112, Shetland Isles, GR 412(HP)/65-12-, alt c60 m, August 1999. Pycnidia present, but no apothecia. The crevice itself is locally very sheltered, but the boulder stands on an extremely open and windswept, south-facing hillside. Previously only known from Fair Isle. New to the Shetland Isles. **D H Dalby**

*Micarea adnata*: on *Quercus* trunk by path, at edge of former enclosure, Allt Rhyd y Groes NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt 180 m, November 2001. New county record. **A M & B J Coppins**

*Micarea stipitata*: on *Quercus* trunks, Allt Rhyd y Gros NNR, Llandovery, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt 200-240 m, November 2001. New county record. **A M & B J Coppins and R G Woods**

*Micarea subviridescens*: abundant on trunk of large *Quercus*, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-52-, alt c330 m, October 2001. Prasinic acid by TLC. First corticolous record of this rather rare member of the *M. prasina* group.

**B J & A M Coppins**

*Micarea tuberculata*: on rock in small underhang below horizontal *Quercus* trunk, near Digny, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-53-, alt c330 m, November 2001. New county record.

**B J & A M Coppins**

*Micarea viridileprosa*: on base of young *Pinus* and base of a fence post, pine plantation by Allt Dorchaig, Coille na Glas-Leitir, Beinn Eighe NNR, VC 105, West Ross, GR 28(NH)/01-63-, alt 20 m, April 2001. New county record.

**B J & A M Coppins**

(ii) on *Quercus* trunks, above waterfall, Alt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt c220 m; on *Betula* trunk at GR 22(SN)/75-48-, alt c180 m, November 2001. New county records.

**B J & A M Coppins**

*Microcalicium ahlneri*: on lignum exposed by splitting away of large bough of an old *Quercus*, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-52-, alt c330 m, October 2001. New to Wales.

**B J & A M Coppins and A Waterfield**

*Moelleropsis humida*: on large northeast-facing lightly covered soil bank by road, VC 25, East Suffolk, GR 62(TM)/30-60-, May 2001. Determined by B J Coppins. New to Suffolk.

**C J B Hitch & P M Earland Bennett**

*Moelleropsis nebulosa*: on eroded soil/rock patch in close-cropped cliff-topturf, RSPB Reserve, Lack Point and cliff-top east of gully into Altandivan Bay, Rathlin Island, VC H39, Antrim, GR 34(D)/11-52-, September 2001. New to Northern Ireland.

**M J Simms**

*Opegrapha areniseda*: on mortar and unrendered stonework of north wall of church, Theberton, VC 25, East Suffolk, GR 62(TM)/43-65-, June 2001. This is the first saxicolous record of this species in Suffolk.

**V Giavarini & C J B Hitch**

*Opegrapha fumosa*: on five *Quercus* trunks, west side of Loch Coille-Bharr, Knapdale Forest, Kintyre, VC 101, GR 16(NR)/78-89-, October 2001. New to Kintyre and only the 5th hectad record for Scotland, being previously known from VCs 97 and 105.

**A M & B J Coppins**

*Pannaria mediterranea*: abundant on fallen trunk of *Populus tremula*, Clais Eich, Abernethy Forest, VC 96, East Inverness-shire, GR 38(NJ)/01-13-, alt 350 m, June 2001. A rather eastern locality at an unusually high altitude.

**B J Coppins and L & S Street**

*Parmelia arnoldii*: on *Quercus* branches, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-44-, alt c230 m, November 2001. New county record.

**B J & A M Coppins and R G Woods**

*Parmelia laciniatula*: on low branch of large *Acer pseudoplatanus* at woodland edge adjacent to wetland, Shooter's Island, Quoile NNR, VC H38, Down, GR 33(J)/49-47-, February 2002. New to Ireland.

**M J Simms**

*Parmelia soledians*: numerous thalli on south-facing, weathered, wooden pallet fence, Coursetown House, Athy, VC H19, Kildare, GR 21(S)/65-95-, August 2001. First record for Leinster, with only a handful of other records from Ireland. Overlooked by Howard Fox despite this being his parents' farm! (The cobbler is often the worst shod man in town CH).

**M J Simms**

*Parmelia tiliacea*: one thallus on west side of trunk of *Tilia*, on green, outside old cemetery, Monimail, VC 85, Fife, GR 37(NO)/29-14-, alt 70 m, November 2001. New county record.

**B J & A M Coppins**

*Parmelia tinctoria*: abundant and fertile, carpeting extremely hard, horizontal, granite flagstones, along 50 m of sea wall, Vazon Bay, Guernsey, UTM Grid WV/2--8--, April 2001.

**S P Chambers**

*Parmelia ulophylla*: on *Salix* by pond, Monimail, VC 85, Fife, GR 37(NO)/29-14-, alt 70 m, November 2001. New county record.

**B J & A M Coppins**

*Parmeliella testacea*: on *Corylus* and *Fraxinus* by loch shore, at bottom of north-facing slope with conifer plantation, Callelochan, south side of Loch Tay, c5.5 km southwest Kenmore, VC 88, Mid Perthshire, GR 27(NN)/72-42-, alt 110-120 m, January 2001. An unusually eastern record.

**A M & B J Coppins**

*Peltigera neckeri*: amongst cut grass and moss in bordered tomb, Bungay Cemetery, VC 25, East Suffolk, GR 62(TM)/34-88-, May 2001. Confirmed by B J Coppins. Second Suffolk record.

**C J B Hitch & P M Earland-Bennett**

*Phoma cytospora*: on *Evernia prunastri* on *Alnus*, Urquhart Bay Wood, Drumnadrochit, VC 96, Easterness, GR 28(NH)/51-29-, alt 15 m, May 2001. Apparently a new host; some of the *Evernia* thalli were also infected by *Lichenocodium erodens*.

**B J & AM Coppins**

*Placynthiella dasaea*: on lignum of standing decorticate *Quercus* trunk, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-52-, alt c340 m, October 2001. New county record.

**B J & A M Coppins**

*Placynthiella oligotropha*: over intermittently flushed peaty soil on a south-facing rock ledge, in *Ulex gallii* - *Erica cinerea* heath, Craigypistyll, East of Bont-goch, VC 46, Cardiganshire, GR 22(SN)/71-85-, alt 400 m, September 2001. New to Cardiganshire.

**S P Chambers**

*Platismatia glauca*: on *Salix* in willow-birch carr, by Spinningdale Burn, Migdale Woods, Spinningdale, VC 107, East Sutherland, GR 28(NH)/66-90-, alt 25 m, June 2001. With apothecia.

**B J & A M Coppins**

*Platismatia norvegica*: on a large sandstone boulder at Echo Crag, VC 67, South Northumberland, GR 36(NT)/74-04-, alt 460 m, October 2001. New to Northumberland.

**Janet Simkin**

*Polycoccum arnoldii*: on *Diploschistes scruposus*: near Digyf, Nant Irfon NNR, Abergwesyn, Llanwrtyd Wells, VC 42, Breconshire, GR 22(SN)/84-53-, alt c320 m, November 2001. New to Wales.

**B J & A M Coppins**

*Protoparmelia atriseda*: two patches on a south-facing, steeply inclined igneous Ordovician outcrop, near Caerbach, Tal y Fan, Conwy, VC 49, Caernarvonshire, GR 23(SH)/74-72-, alt 420 m, October 2001.

**S P Chambers**

*Psilolechia clavulifera*: on Silurian shale rock underhang, near waterfall, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-48-, alt c180 m, November 2001. New county record.

**B J & A M Coppins**

*Ptychographa xylographoides*: on fallen decorticate trunk of *Quercus* by path, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt c240 m, November 2001. New county record.

**B J & A M Coppins**

*Pyrenula* aff. *microtheca*: near base of old *Quercus*, with *Thelotrema lepadinum*, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt c300 m, November 2001. New to Wales.

**B J & A M Coppins and R G Woods**

*Ramalina capitata*: (i) on six gritstone memorials in churchyard, Great Sturton, VC 54, North Lincolnshire, GR 53(TF)/21-76-, April 2001; small to minute, but distinctive, thalli found mainly on apices of gravestones. (ii) on apices of five gritstone memorials in churchyard, South Willingham, VC 54, North Lincolnshire, GR 53(TF)/19-83-, April 2001; abundant and well developed thalli on two gravestones, and five small thalli distributed over remaining three. (iii) on east-facing slates on church porch roof, Wispington, VC 54, North Lincolnshire, GR 53(TF)/20-71-, April 2001; confirmed by B J Coppins. (iv) on roadside *Fraxinus*, northwest of Wispington, VC 54, North Lincolnshire, GR 53(TF)/20-72-, April 2001; confirmed by B J Coppins, according to whom this belongs to a form sometimes called *R. strepsilis*. Further records of this rare lichen from sites close to its first discovery in England (see *Br. Lichen Soc. Bulletin* 83:52, 1998) - a biogeographical anomaly!

**M R D Seaward**

*Rimularia limborina*: on top of basalt cobble on cliff-top drystone wall (boundary wall of RSPB Reserve), c150 m west of gully into Altachuile Bay, Rathlin Island, VC H39, Antrim, GR 34(D)/14-52-, September 2001. New to Northern Ireland.

**M J Simms**

*Rinodina efflorescens*: on bark, but partly overgrowing *Parmelia sulcata*, on trunk of *Alnus glutinosa*, by stream through pine plantation, Allt Dorchaig, Caille na Glas-Leitir, Beinn Eighe NNR, VC 105, West Ross, GR 28(NH)/01-63-, alt 20 m, April 2001. With apothecia, which have not been previously reported from the British Isles.

**A M & B J Coppins**

*Rinodina interpolata*: on southeast-facing granitic rock outcrop, Abriachan Wood (south), c7 km northeast of Drumadrochit, VC 96, East Inverness-shire, GR 28(NH)/56-34-, alt c150 m, May 2001.  
**B J & A M Coppins**

*Scoliciosporum curvatum*: on *Rhododendron* leaves in wooded garden, Monimail, VC 85, Fife, GR 37(NO)/29-14-, alt 70 m, November 2001. New county record. **B J & A M Coppins**  
(ii) on *Camellia* leaves of a large bush in garden of derelict cottage, Dol-y-cae, Minfford, VC 48, Merionethshire, GR 23(SH)/72-11-, alt 100 m, November 2001.

**S P Chambers & S R Davey**

*Stereocaulon vesuvianum*: rarely seen fertile material of this lichen in the herbarium of F H Brightman (deceased) at the South London Botanical Institute, Y Gribin, VC 48, Merionethshire, GR 23(SH)/84-17-, August 1955.  
**C J B Hitch**

*Telogalla olivieri* (Vouaux) Nik. Hoffm. Hafellner (2000) (= *Guignardia olivieri* (Vouaux) Sacc.): (i) on *Xanthoria parietina* on basic stone of bridge parapet over stream by the coast, Red Dwarf Bay, VC 52, Anglesey, GR 23(SH)/53-80-, September 2000. New to Wales.

**C J B Hitch**

(ii) on *X. parietina* on three sandstone headstones, Bungay cemetery, VC 25, East Suffolk, GR 62(TM)/34-88-, May 2001 and an older area, June 2001. New to the county.

**P M Earland-Bennett & C J B Hitch**

(iii) on *X. parietina* on buttress of southeast corner of church, Billockby, VC 27, GR 63(TG)/42-13-, October 2001. New to Norfolk.  
**C J B Hitch**

*Trapeliopsis flexuosa*: on fallen decorticate *Quercus* trunk, Allt Rhyd y Groes NNR, Llandoverly, VC 44, Carmarthenshire, GR 22(SN)/76-47-, alt 180 m, November 2001. New county record.  
**B J & A M Coppins**

*Unguiculariopsis lesdainii*: on *Lecanora saligna* on lignum of fallen *Ulmus* bole, Otley Bottom, VC 25, East Suffolk, GR 62(TM)/20-54-, December 1996. Determined by B J Coppins. Third British record and new to Suffolk.  
**C J B Hitch**

*Veizdaea retigera*: on thallus of *Peltigera rufescens* on sand ridge amongst salt marsh, Belhaven Bay, Dunbar, VC 82, East Lothian, GR 36(NT)/64-79-, February 2002. New to southeast Scotland.  
**A M Coppins**

*Xanthoria ulophyllodes*: abundant on flints and surrounding cement of south wall of derelict outer shell of church, Covehithe, VC 25, East Suffolk, GR 62(TM)/52-81-, June 2001.  
**C J B Hitch**

## MORE ON VERNACULAR LICHEN NAMES

Roger Rosentreter from Idaho has sent a paper on the Swedish names of lichen genera that occur in North America translated into English. Like us he sees the use of common names as a way of encouraging wider interest in lichens, by taking the subject a stage further for beginners than lumping them all under the motley umbrella of 'lichen', if and when interest develops, the scientific names will then gradually be learnt. He proposes a binomial system of common names reflecting generic relationships, with *Acarospora* species known as 'Cracked lichens', *Aspicilia* species as 'Rim lichens', etc. This is a more formal system than that proposed for Britain. Rosentreter *et al.* (1993) suggest that only the more popular or important lichens require a common name and these should reflect morphology rather than habitat as the latter can vary.

This Swedish list, following Moberg (1985), contains few surprises. The Caliciales are split into *Calicium* 'Nail lichens', *Chaenotheca* 'Needle lichens', *Coniocybe* 'Pin lichens' and *Cyphelium* 'Soot lichens'. One name we would probably choose not to adopt is 'Road shoulder lichen' for *Trapelia*, a reference to the psuedothalline margin of the apothecia which is formed during its eruption through the thallus as this breaks apart, supposedly like asphalt on a road shoulder. Moberg may have had his tongue in cheek when he coined that one.

A cultural phenomenon explains the name of *Stereocaulon paschale* 'Easter lichen', a species only recently dropped from the British checklist. Its connection with Easter is not apparent outside Sweden, where it is customary to celebrate Easter with the forced budding of birch twigs for use as decoration. The dark brown cephalodia of this species resemble the buds of birch twigs.

A Scottish correspondent has written requesting vernacular names for a number of uncommon lichens occurring in his area. Following the principles outlined in *Bulletin* 88 we pointed out that only five of the 16 species concerned have, or are ever likely to have, vernacular names and that the worst thing that could happen is for every Tom, Dick and Harry to employ themselves in coining such names.

Rosentreter, R, Smithman, L C & DeBolt, A (1993) Swedish names translated to English. *Evansia* 10: 104-111.

Moberg, R (1985) Lavar med svenska namn. *Svensk. Bot. Tidskr.* 79: 221-236.

Oliver Gilbert and Albert Henderson

**FRANCIS ROSE AND HIS CONTRIBUTION TO BRITISH BOTANY:  
80th BIRTHDAY CONFERENCE**

**Saturday 15 June 2002: 11.00 a.m. – 4.00 p.m.**

**Reardon-Smith lecture theatre, National Museum of Wales, Cardiff**

Francis Rose was 80 years old in September 2001, and is widely regarded as one of Britain's most outstanding botanists. We are holding a conference to celebrate the enormous breadth of his contribution to British botany and length of time over which he has worked. The conference will take the form of a series of short talks on aspects of his work by those who he has inspired and worked with, trying to cover the range of his interests. The programme is as follows:

- D Bellamy: Francis Rose, an appreciation.  
C A Stace: Francis Rose and the vascular flora  
P James: Francis Rose and lichens  
G Bates: Francis Rose and bryophytes  
P Marren: Francis Rose and local floras  
D Lang: Francis Rose and orchids  
(speaker to be confirmed) Francis Rose: The continental connection  
O Gilbert: Francis Rose, lichens and air pollution  
(speakers to be confirmed): Francis Rose's contribution to conservation including  
Plantlife, local authorities, Wildlife Trusts and statutory agencies.  
A Jackson: Francis Rose and Wealden sandrocks conservation  
P Harding: Francis Rose and parks  
D Streeeter: The Francis Rose notebooks project  
T Rich: Francis Rose collections and archive at National Museum of Wales

All are welcome to join us on the day from 10.30 onwards. The conference will be free, and there is no need to book, simply turn up! Further details are available from me.

Tim Rich, Department of Biodiversity and Systematic Biology, National Museum & Gallery, Cardiff CF10 3NP. Email: [tim.rich@nmgw.ac.uk](mailto:tim.rich@nmgw.ac.uk)

**SUBMISSION DEADLINE**

Please would intending contributors to the Winter 2002 issue of the Bulletin submit their copy to the Editor by 14 September. It would be helpful but by no means essential for authors of longer articles prepared on a word processor to supply a copy on a 3.5" floppy disc in addition to the hard copy. This can be Word Perfect, MS Word, RTF or any format from an Apple Mackintosh. Alternatively it can be sent by e-mail to [plambley@aol.com](mailto:plambley@aol.com), preferably in Word Perfect, MS Word or RTF.

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### Publications

#### *Bulletin* back numbers

Nos 61-65, 67, 72, 75, 78-82, Index 1-70 each ..... £1.00  
*The Lichen Flora of Great Britain and Ireland* (1992) edited by Purvis, Coppins, Hawksworth, James and Moore.  
for members ..... £35.00  
for non-members ..... £55.00

#### *Lichen Atlas of the British Isles* edited by Seaward

Fascicle 1 (47 species of *Parmelia*) - out of stock

Fascicle 2 (*Cladonia* Part 1: 59 species)

for members ..... £7.50  
for non-members ..... £8.50

Fascicle 3: The Foliose Physciaceae (*Anaptychia*, *Heterodermia*, *Hyperphyscia*, *Phaeophyscia*, *Physcia*, *Physconia*, *Tornabea*), *Arctomia*, *Lobaria*, *Massalongia*, *Pseudocyphellaria*, *Psoroma*, *Solorina*, *Sticta*, *Teloschistes*

for members ..... £7.50  
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Fascicle 4: *Cavernularia*, *Degelia*, *Lepraria*, *Leproloma*, *Moelleropsis*, *Pannaria*, *Parmeliella* for members ..... £7.50

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Fascicle 5: <i>Aquatic lichens and Cladonia (part 2)</i>	
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Fascicle 6: <i>Caloplaca</i>	
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A4 4-ring binder (6cm spine) to hold Fascicles (only one left)	
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Identification of (UK) <i>Parmelia</i> Ach. on CD-Rom - ISBN 0 9523049 4 5	
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Microchemical Methods for the identification of Lichens	
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Proceedings of the symposium 'Taxonomy, Evolution and Classification of Lichens and related Fungi - London 10-11 January 1998' (reprinted from <i>The Lichenologist</i> Vol 30)	
for members . . . . .	£8.00
for non-members . . . . .	£12.00

<i>Bibliographic Guide to the Lichen Floras of the World</i> (second edition) by Hawksworth and Ahti (reprint from <i>The Lichenologist</i> Vol. 22 Part 1).	
each .....	£2.00
<i>Checklist of British Lichen-forming, Lichenicolous and Allied Fungi</i> by Hawksworth, James and Coppins (1980).	
each .....	£2.00
<i>Checklist of Lichens of Great Britain and Ireland</i> (Updated Supplement to Bulletin 72) by Purvis, Coppins and James (1994).	
for members .....	£3.50
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<i>Mapping Cards: General, Churchyard, Woodland, Mines, Coastal, Urban, Chalk and Limestone, Moorland</i> .....	free
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