



British Lichen Society *Bulletin*



BRITISH LICHEN SOCIETY OFFICERS AND CONTACTS 2008

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Winter 2008

Welcome to the Winter 2008 BLS Bulletin. As always the issue is packed with information, articles, pictures and the occasional spot of lichenological humour. 2008 has been a very busy year for the Society – not least because of the 50th Anniversary celebrations at Nettlecombe Hall at the beginning of the year. Three successful field meetings have taken place, and there have been exciting developments in both the data and educational arenas. See the relevant committee reports for more information.

Lichenology has always been a poor relation of the more charismatic branches of biology, and its study in Britain is now almost exclusively the domain of the amateur (in the best and most positive sense of the word). Our national institutions continue to be starved of funds to employ taxonomic specialists, and this situation has come to the attention yet again of the House of Lords. A third report on the state of systematics in the UK has been published, and we can only hope that despite the dire state of the world economy, that it has greater impact than the first two for lichenology. Tony Fletcher gave evidence to the HoL committee on behalf of the BLS, and his report is included in this *Bulletin*.

On a happier note, there are two articles in this issue by Katie Grundy and Louise Olley reporting on field activities part-funded by the BLS. One describes participation in a lichen course at Kindrogan, and the other (complete with graphic details!) of fieldwork in Nepal. It's clear that both participants got a lot out of their projects. The Society does not have a bottomless pit of funds to support lichenological activities, but it does provide grants for Small Ecological Projects and similar activities, and maintains a modest travel fund for overseas members. See the BLS website for more information. A report for the Bulletin is expected in return!

As always, please consider contributing articles, letters, images etc. for the *Bulletin*. Tell us about the lichens in your area – do you have a favourite place? Are the lichens well protected or are conservation measures necessary? And what else can the BLS do to support you and your lichen obsession? And finally, please do consider whether you can help the Society by participating in Council or as an officer of the BLS – your assistance will be very much appreciated by the existing stalwarts!

Paul Cannon, BLS *Bulletin* editor: email p.cannon@cabi.org

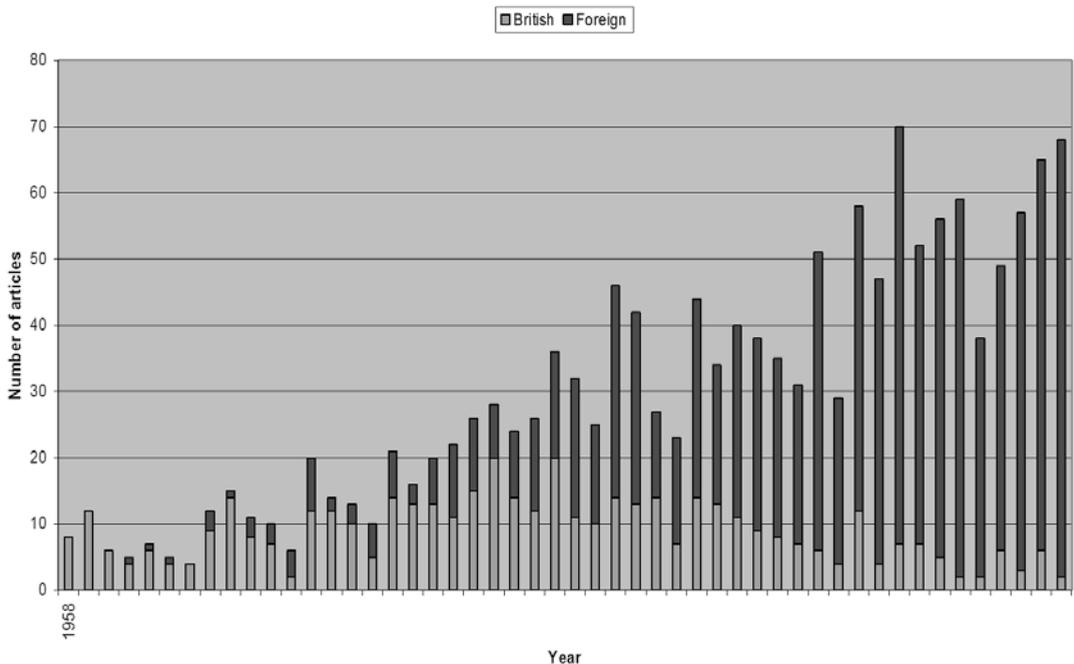
Front cover: Reindeer feeding on lichens at the Highland Wildlife Park, near Kingussie, Scotland.

Taxonomists – An Endangered Species

For some years there has been mounting concern about the decline in taxonomy and systematics in the UK. The general opinion is that taxonomists are ageing and retiring while younger people are not being trained to replace them. In addition, there is declining support for taxonomy in institutions such as universities and museums and as staff retire or leave they are not replaced. This concern is repeated across all biological disciplines, not just lichens. It appears that the expertise for identifying most of the UK's organisms now lies in the amateur sector. This is not to decry the value of amateurs and their work, but is it wise for delivery of national biodiversity policy to be dependent on them?

From the BLS point of view, professional lichenology has been in serious decline for some years. Prof. Sir David Smith raised this in an article in *Bull. Br. Lichen Soc.* (1997) **80**: 1-5. Peter Crittenden made it the topic of his Presidential address in January 2002. Peter and I had been agitating for some time before that, and had discussions with our sister botanical societies leading to a joint letter to the

Articles in The Lichenologist 1958-2007



Government Chief Scientist and the scientific press. We would like to feel that this stimulated the House of Lords enquiry of 2002. Peter noted in his address that a high point was reached in the late 1960's and 1970's, with university academics and many research students (including ourselves) supporting a growing number of amateurs. But now, nearly 40 years on, we have reached a stage where there are no lichen taxonomists left in British universities and no research students. Museums have also

suffered drastic losses in lichenology staff. Sadly, by early 2009 there will be only one professional lichen taxonomist left in the UK. An illustration of the decline in UK research activity can be seen from the enumeration of articles published in *The Lichenologist* over the period 1958-2007. The chart [see previous page] shows that those articles originating from UK-based authors have declined from 100% to less than 5% over the 50 years of the Society's history.

With our amateurs and retired professionals ageing and becoming less active, who will train future consultants, amateurs and children and enthuse students? How will the UK's biodiversity programmes fare? Who will run the British Lichen Society?

Systematics and Taxonomy in the House of Lords

On 13th August the House of Lords Select Committee on Science and Taxonomy published its report *Systematics and Taxonomy: Follow-up*. It can be read on <http://www.publications.parliament.uk/pa/ld/ldsctech.htm> and is available from HM Stationery Office.

The House of Lords seems to be greatly interested in systematics and taxonomy, having had three enquiries with publication of the following reports -

1992 The Dainton Report (*Systematic Biology Research*: HL paper 22)

2002 The Walmsley Report (*What on Earth? The Threat to the Science Underpinning Conservation*: HL Paper 118, published June 2003)

2008 Presumed title 'The Houndwood Report' (*Systematics and Taxonomy: Follow-up*: HL paper 162, published 13th August 2008).

Since giving written evidence to the House of Lords 2002 enquiry, I have continued to press for information on progress towards implementing the 2002 recommendations through the Institute of Biology and the Biosciences Federation. It was gratifying to see the same concern expressed by the HL which has stimulated their latest enquiry. Again, on behalf of the BLS I gave written evidence to the 2008 enquiry and the evidence is printed in full in this latest HL report, along with all other written and oral evidences. The 2008 report is very long, at 386 pages. Pp 1-56 give the actual report, while a further 330 pages are transcripts and reprints of oral and written evidence. The BLS evidence is on pp 208-214. Two questions formed the basis of this 2008 enquiry:

1. Is systematic biology in the UK in a fit state to generate the essential taxonomic information required to understand ecosystem services?
2. Has the UK the skills available to understand and predict the impact of climate change on biodiversity?

"Ecosystem Services" is a recent concept defined as "*the benefits we derive from natural ecosystems*". This idea sets the context for the current debate on

environment sustainability. It may be worth adding that “taxonomy” deals with the naming of species and taxa while “systematics” is the ordering and classification of these names.

The HL concludes that “*the state of systematics and taxonomy in the UK, both in terms of the professional taxonomic community and volunteers (amateurs) is unsatisfactory – in some areas, such as mycology, to the point of crisis*”. It is proposed that there be more dialogue between users and producers of taxonomy, that recruitment to the discipline be stimulated, and schools take steps creatively to incorporate issues such as biodiversity and environment into curricula. A welcome is given, with appropriate cautions, to recent developments such as molecular approaches to taxonomy and web-based taxonomy.

It is encouraging, but also depressing, that the overwhelming conclusion from those giving evidence is that, while taxonomy and systematics is in drastic decline in the UK, our protests remain largely unheard by Government and Research Councils. The HL report says emphatically “*we find this worrying*”. Part of the problem, it is suggested, is the fragmentation of responsibility for systematic biology within the government. In brief; no department admits a responsibility for this area. HL therefore recommends that the recently created Department for Innovation, Universities and Skills (DIUS) should exercise this leadership.

30 pages of measured discussion of the evidence are given. These summarise previous reports and give a valuable overview. In particular, it reviews the rather mixed progress attained since the 2002 report. This had been followed by a Government response with a number of organisations being targeted for action. HL notes the benefits that some national institutions have gained and the introduction of the BBSRC – CoSys funding scheme (Collaborative Scheme for Systematics Research). However, the recommendations for actions by the HEFCE and DEFRA were not taken up. Because of this many of the issues raised in the 2002 report are revisited in this 2008 report. The HL report is particularly insistent that the state of systematics and taxonomy in the UK is of world-wide significance because of our commitments to actions on biodiversity and climate change. It also makes the point that there is concern internationally, referred to as the “taxonomic impediment”, which affects the International Convention on Biodiversity (CBD).

The HL report chapter 7 lists 26 recommendations and proposes various agencies for actions. Here is a brief summary of those itemised that I feel are most relevant to the BLS membership (my comments are in brackets). The HL website, noted above, is recommended for full details.

- 7.2 Measuring progress towards halting the decline in biodiversity and monitoring change are key international obligations which require baseline knowledge.
- 7.3 Systematic biology underpins our understanding of the natural world. A decline in taxonomy & systematics will impact on the Government’s ability to deliver many policy goals.

- 7.4 Numbers and recruitment trends of taxonomists need ascertaining by NERC.
- 7.5 The major taxonomic institutions will not be able to meet the future demand for taxonomy. Users and producers of taxonomy should be in better dialogue (facilitated by the Research Councils).
- 7.6 The importance of voluntary action is recognised. However, this is patchy and is *“tending against non-charismatic organisms (i.e., lichens) and in favour of the charismatic”*. While voluntary action is currently promoted by Government it needs to show more leadership, *“giving particular attention to those sectors which cover the less charismatic species”*. (Here is a clear go-ahead for the BLS)
- 7.7 Recruitment needs stimulating towards new volunteers and researchers.
- 7.8 School curricula should include taxonomy together with field studies and biological recording.
- 7.9 The Government-supported *“Renaissance in the Regions”* programme, providing additional resources for regional museums, should ensure continuity of funding to sustain curation, taxonomic and outreach work. (This highlights the role of regional museums)
- 7.10 A periodic event should be provided to foster personal networking between professional and voluntary taxonomists, the NBN, and other stakeholders.
- 7.11 Pilot studies in web-based taxonomy should be undertaken. The taxonomic community should lead on this, funded by BBSRC and NERC, as a *“high strategic priority”*.
- 7.13 Major taxonomic institutions are too slow in digitising collections and in making them available on the internet.
- 7.15 Research councils should provide funding for large-scale taxonomic datasets.
- 7.17 NERC should support research into metagenomics and traditional morphological taxonomy.
- 7.18 DEFRA should support NBN with longer-term funding. NERC needs to be clearer in setting out its aims with regard to taxonomy funding.
- 7.20 Production of field guides and keys should be better co-ordinated and funded.
- 7.21 The decline of CABI is particularly worrying in view of its role in the stability of fungal systematics. Government should ensure its continuance.
- 7.22 Lack of awareness of taxonomy by Government research councils is *“very worrying”*.
- 7.23 The Research Assessment Exercise (RAE) criteria do not favour systematics and should be replaced. (This is the system by which university departments are rated according to their research quality and hence receive government funding).
- 7.25 Similarly, the Environment Research Funders Forum should identify trends in the state of systematics and taxonomy when making their review.
- 7.26 Finally, there should be a lead government department responsible for systematic biology and that DIUS should take on that role.

To conclude, the report is very well-written and is packed with useful and interesting information from the societies which dominate or make use of taxonomy in the UK. Some individuals were also consulted. Most gratifyingly, we are all singing from the

same hymn sheet, and are often in harmony. However, one recommendation made in the 2002 report, that taxonomy-based societies should do more to promote their subjects, is not repeated. Certainly the Linnean Society and Systematics Association have launched an annual public debate, and the BBSRC CoSyst initiative has already been mentioned, but what else? Here is a message for the British Lichen Society - we should do more to promote our interests. I also note that the HL presumption seems to be that allocating research council responsibilities and funding would go a long way to solving the problem. I take issue with this idea, that the problem can be solved by throwing money at it. Instead, I suggest that it is a deeper issue – society's diminished respect for learning. The decline in taxonomy and the supply of taxonomists is paralleled by the decline in connoisseurship in the arts, the absence of young members from scientific and local natural history societies, and so on. To me, the search for knowledge is the joy of original discovery and exploration and is a creative activity. Modern society seems to encourage the view that all knowledge already exists and can be looked-up on television or by googling on the internet. To solve the taxonomist-supply problem we need to change the way society thinks about knowledge and learning and improve respect for its discoverers and providers.

So, what next? The report and its recommendations will go to HM Government and will be responded to. I would expect most of the HL recommendations to be accepted, with the exception of those which criticise its departments. It may well be that the newly formed DIUS will be asked to take on many of the recommendations. But will extra money be diverted for this task? Unfortunately, with an economic recession imminent, and a national election in a year or two, I'm not optimistic. But, do we need to wait for Government and others to take action? Can't we recognise changing conditions and adapt?

To finish, what started as a review of the House of Lords report, here are some ideas for consideration:

- Actively maintain the role of the BLS as the centre for lichenology in the UK.
- Set aside resources for promoting our subject, especially in schools, colleges, museums, wildlife trusts, etc.
- Revitalise interest in local natural history and societies.
- Promote lichen research outside traditional institutions such as universities and museums. Why not encourage industry? Find private sponsors for research.
- Research new audiences and reach out to them.
- Review our traditional outlets for promoting lichenology, are they effective in the modern age?
- Adopt new technology and ways of working, especially for data collection and dissemination. Some examples of creative use of new technology include texting, pod-casts, interactive websites, lichen blogs, photo competitions, and so on.

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A Strategic Approach to Lichen Identification

The BLS contains a wealth of expertise, shared between amateur and professional lichenologists, novice and expert. This article however does not celebrate this capital of knowledge, but instead explores the resourcefulness and ingenuity we display when confronted with challenges. We have drawn upon the experience of BLS members in order to construct this strategic approach to lichen identification.

Strategy 1: Denial

- i. I see no lichens.
- ii. Decide that today you will simply appreciate their beauty.

Strategy 2: Creativity

- i. Optimistically combine lichen hunting with sailing, hot-air ballooning, caving or crochet.

Strategy 3: Incompetence

- i. Forget your collection packets. You may choose to stow specimens in your pockets, but it is unlikely that they will survive the inevitable trip through the washing machine.
- ii. Collect tiny, unidentifiable scraps.
- iii. Lose your sample. If not accomplished by poor handling on site, this may be facilitated by mixing very small samples in the same collection packet as larger specimens.
- iv. Fail to record the location of collection, after which there is really very little point in identifying them.
- v. Forget to freeze the sample so that, months later, all that remains is dead mites and their poo.
- vi. Open the packet carelessly so the bits are catapulted across the room, ultimately ending up in landfill.
- vii. Get rough when trying to section the last apothecium. So it flicks off somewhere.

Strategy 4: Back-to-Basics

- i. The pictures in Dobson are always worth a flick through...

Strategy 5: Deviousness

- i. Pass your sample off on someone else.
- ii. Only collect specimens already identified by another person.

Strategy 6: Alcohol

- i. Have another beer and see if things get clearer (repeat as necessary).

Strategy 7: Wishful Thinking

- i. Construct a pile of all your hard-to-ID specimens, so that you can return to them later. This gives you a false sense of achievement.

Strategy 8: The Inevitable

- i. Ask Brian.

We hope that these guidelines will help to reduce the reliance on unnecessary and long-winded steps in the pursuit of an identification, such as the use of keys, chemical reactions, thin layer chromatography and the examination of spores and will lead to a decrease in diagnosed cases of Lichen Anxiety Syndrome.

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A Wonderful Time to be a Lichenologist

Some observations about lichen colonisation in the English Midlands

I understand that people whose life is spent mostly in a desert learn to ignore from an early age mirages, those beguiling illusions that promise relief from privation. Similarly a lichenologist, whose studies have been eked out in what was for many years the Midland “lichen desert”, may be forgiven for being sceptical of any specimen that appears different than the commonplace or one growing well outside its normal range. When, a few years ago, corticolous lichens began to first appear on ash, willow and alder, the natural assumption, when seeking a determination, was to go for the mundane. Any corticolous yellow-green parmelioid was taken to be *Flavoparmelia caperata* (but still with considerable rejoicing!); *Lecanora* apothecia on a white thallus were recorded as belonging to *Lecanora chlarotera*, without too many qualms; any leafy *Physcia* with abundant apothecia and clasping the nodes of ash twigs was naturally thought to be *Physcia aipolia*; and so on. When, however, what was thought to be *F. caperata* growing on the wooden seat of my children’s garden swing, was tested a few years ago with K and was found to be *F. soredians*, many kilometres from its closest site (in Northamptonshire, on a sandstone headstone in the late Tom Chester’s village church), then a much more discerning approach to all new lichen colonists was adopted. If *F. soredians* could turn up well outside its traditional range then anything might be possible.

Two further records of this lichen turned up in my parish, both from the local rifle range, and both on a windblown ash. As one who has lived by an open fire since birth and who still looks forward to the first hint of autumn when our hearth is once more a crackling focal point of light and warmth that dispels the feeling that we are about to enter winter’s long, cold, dark tunnel, I have found an absorbing pastime. A hand lens has become the normal apparel for an evening, and bottles of C, K, and P adorned the mantle piece. Every log fed into the wood burner is keenly worked over and often by the end of the evening the pile of logs, “not to be burnt until lichens are sampled”, seemed hardly smaller than the original stack. As you may surmise, last winter there was some family discontent about all this, and my loved ones did become increasingly “pinched” in appearance and took to wearing more clothes than

was usual. Happily there was also the mixed blessing that my son's then current girl friend, never the most endearing of sights, became less of a visitor!

To return to the science, over a number of weeks the results of this endeavour was surprising. A small thallus of *Lecanora carpinea* was the first notable find, and then *L. persimilis*, in abundance. Two small growths of *Ramalina lacera* had me reaching for that "excisable liquid" that Scotland is justifiably famous for, and then, promoting an even greater risk of liver failure, several thalli of *Physcia stellaris*. This species is showing a remarkable rate of growth—three samples destined for the Leicestershire collection were all well over 5cm in length by 3cm wide, with the largest approaching 7cm. These samples were from branches that could be accurately dated by counting tree rings and girdle scars (all branches were in the range of 9 to 11 years). Initials of *Physcia stellaris* are found on the trees after about 4 years, which makes age of these thalli between 5 and 7 years, which converts to an amazing longitudinal growth rate of well over 1 cm per year. It all indicates that anything might possibly grow in the one barren canopy above our heads, and that the mind prepared is the mind that extends the present boundaries of knowledge. Oh! to pack a chain saw in the equipment bag!

As lichenologists we seem to have a perverse need always to have some great environmental evil to worry about. First it was sulphur dioxide and acid rain, now it is nitrogen enrichment and global warming—all very worthy of study, but for me the glass (or rather the Quaich) is half full not half empty; and it is a remarkable time to be a lichenologist!

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Edward Whymper and Lichens

Lichens are often the most prominent form of life at high altitudes, yet mountaineers have rarely paid them any attention. In most mountaineering books you will look in vain for even the word lichen; at best you may find some banal phrase like "*Beyond a foreground of dark firs, lichen-draped birch and rhododendrons ... tower immense ice peaks in every quarter*". (From *The Ascent of Everest*, by Sir John Hunt, and the only mention of lichens in the whole book.)

Edward Whymper is remembered today mainly for his first ascent of the Matterhorn, in 1865 when he was aged 25. He described this ascent, and his earlier Alpine climbs in his book *Scrambles Amongst the Alps*, which is still a good read. He was clearly a man of broad interests, and although at this early stage in his life his attention was directed mainly towards matters of geology, meteorology, glaciation and human health, he did not entirely ignore botany or even lichens. In a long footnote in chapter 5 he describes the vascular plants growing on the Matterhorn, and also remarks, perceptively: "*Very few lichens are seen on the higher parts of this*

mountain; their rarity is due, doubtless, to the constant disintegration of the rocks, and the consequent exposure of fresh surfaces".

In 1880 he visited Ecuador, and as well as making several first ascents, he researched the effect of altitude on humans, demonstrated the former existence of stone-age cultures in the region, and somehow found time to study the flora and fauna as well. Unfortunately, his book *Travels amongst the Great Andes of the Equator* is rarely read today, so the breadth of his interests is not well known, and his awareness of lichens seems not to have been noticed by lichenologists.

Lichens appear at numerous places in this later book. In chapter 3, which describes the first ascent of Chimborazo, we find: "I found at this place, on rocks in situ at the base of the cliffs, patches of the lichen *Lecanora subfusca* L., spread over a considerable area. This was the highest point at which any lichen was obtained upon Chimborazo ... and it (18,500 feet) is the greatest elevation at which anything ... vegetable .. has been found in either of the Americas."



Whymper's engraving of his fall on the Matterhorn in 1862 (looking for lichens again? - Ed.)

Concerning the summit of Corazon (chapter 5): "I collected five lichens ... these were growing upon the very apex of the mountain, and ... it was clear that ... [they] ... might have attained a considerably greater elevation if there had been higher ground in the vicinity."

For Cotopaxi (chapter 7): "... there were lichens upon the lava belonging to the genera *Stereocaulon* and *Lecanora*..."

Concerning a lava stream on Antisana (chapter 10): "The surface was extremely rugged, and bore an amazing quantity of the lichen *Usnea florida* Fries."

For Pichincha (chapter 11): "The whole of the summit ridge ... bore a large quantity of lichens (*Gyrophora* sp., *Lecidea* sp. and *Neuropogon melaxanthus* Nyl.)."

Concerning a valley on the lower slopes of Sara-urcu (chapter 13): "... the chief botanical feature of the valley ... was the extraordinary manner in which the twigs and branches of such trees as were there were laden - almost stifled - with the lichen *Usnea barbata* Fries."

Concerning the summit of Cotacachi (chapter 14): "There was abundance of the lichen *Stereocaulon turgescens* Nyl., and of the moss *Grimmia ovata* Web. & Mohr ... Examples of these two genera were frequently seen closely against or surrounded by snow (15,000 - 16,600 feet), and it was not unusual to find them in such a position."

On Carihuairazo: "Our peak terminated in a snow cone ... with a little patch of rock peeping out ... bearing some lichens (*Lecidea* and *Lecanora*)."

In chapter 18, which describes the second ascent of Chimborazo, a footnote

lists all the lichens collected on that mountain: "*Parmelia near centrifuga*, *Umbilicaria* sp. ?, *Neuropogon melaxanthus* Nyl., *Alectoria divergens* Ach., *A. ochroleuca* Nyl., *Lecidea geographica* Fr., *Stereocaulon* sp.?, *Gyrophora* or perhaps *Endocarpon* sp.?, *Lecanora* (section *Squamaria*), *Lecanora* (section *Placodium*), and *L. subfusca* L.". [I have omitted the details of locality and altitude that Whymper provided for each species.]

Near the end of the book, he presents a brief summary of his scientific results for the general reader. (A full account of those results was published elsewhere.) On lichens, he writes: "*Species of fifteen genera of lichens were collected in the interior of Ecuador, out of which eight (those marked by asterisks in the footnote) were obtained at 15,000 feet or higher.*" The footnote reads: **Alectoria*, *Baeomyces*, *Cladonia*, **Gyrophora*, **Lecanora*, **Lecidea*, *Leptogium*, **Neuropogon*, **Parmelia*, *Physcia*, *Ramalina*, **Stereocaulon*, *Sticta*, **Umbilicaria* and *Usnea*.

Whymper definitely recognised the lichens, or at least most of them, himself. In those groups of organisms where determinations were made by others he says so explicitly, but except for a single note on *Lecanora subfusca* he does not make any such statement for lichens.

Clearly, what we have here is not a description of focused study of lichens by an experienced lichenologist. However, it is a remarkable contribution nonetheless, especially for someone who made no claims to botanical expertise, and who went to Ecuador for reasons unrelated to botany. How many professional botanists today could recognise 15 genera of lichens? How many could have done so in 1880?

One wonders from what source Whymper derived his knowledge of lichens. He was by profession an engraver, concerned with illustrations for books, and so would probably have been more aware of the world of books, and of what was being published in Britain, than most people. Several important lichen Floras had been published in the 20 years before he went to Ecuador: Mudd's *A manual of British Lichens* (1861), Crombie's *A monograph of British Lichens* (1870), and Leighton's *The Lichen Flora of Great Britain, Ireland and the Channel Islands* (1871, with later editions in 1872 and 1879). It seems reasonable to suppose that one or more of these was the source of his knowledge. If this is correct – and I think it probably is – it highlights the importance of works of this sort; they are the only way that the knowledge of specialists can be made available to others. No doubt *The Lichen Flora of Great Britain and Ireland* has played a similar role since it appeared in 1992, and perhaps historians a century from now will amuse themselves in tracing how far, and into what unlikely channels, its influence has extended.

[I have quoted chapters throughout, not pages, because there exist different editions of Whymper's books.]

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Ethnobotanical use of *Stereocaulon macrocephalum* in Meghalaya

Lichens are the most successful symbiotic organisms in nature, dominating 8% or more of the earth's terrestrial area. India is a rich centre of lichen diversity. Out of 2080 species of lichens reported from India (Pinokiyo & Singh, 2004), 850 species are recorded from NE India (Bujarbarua *et al.*, 2000).



Stereocaulon macrocephalum collected from Umtyngar (alt. 1800m), East Khasi Hills, Meghalaya, India (NEHU 172).

Many lichens have been reported for their use in traditional medicines the world over. In India, lichens have been used as traditional remedies for various ailments (Salkani & Upreti, 1992; Negi & Kareem, 1996; Lal & Upreti, 1995; Lal, 1998). In Meghalaya, no use of lichens in traditional medicines has been documented until now. Ethnobotanical studies conducted in the East Khasi Hills district have identified one species of lichen which is used in local traditional medicine, *Stereocaulon macrocephalum* Müll. Arg. Its vernacular name is “niut maw” and it has a known distribution on rock surfaces in the region including the montane Indian states of Sikkim and Uttaranchal, and also Nepal.

The species is used as follows: mature thalli are collected from the rock surfaces and properly cleaned to remove sand and dust particles. Then they

are dried under the sun. For treating burns on any part of the body, a small amount of the dry lichen material is heated over fire in a frying pan until it becomes hard and brownish. The contents are ground to fine powder and the powder is applied locally on burns with blisters or pus exudate. The lichen appears to have antiseptic properties, and is valued as a preparation to accelerate the healing process.

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A further article stimulated by the LichenIreland project (see BLS Bulletin, Summer 2008) is reproduced below, with permission from the Irish Times Weekend Review.

Raiders Of The Lost Lichen Strike Gold

It was seven feet up in an old, gnarled and very prickly white-thorn in a winter-flooded pasture in south Cork. In summer the leaves would have hidden it, but on a bare winter branch the golden-eye lichen, *Teloschistes chrysophthalmus*, positively glowed – fluttering its eyelashes, one might almost say, at a thoroughly gobsmacked English lichenologist.

I wrote here a couple of weeks ago on the progress of *LichenIreland*, the intensive, 26-county survey of a somewhat neglected legion of our flora. But it is worth coming back to the subject to celebrate something as beautiful – and exceedingly rare – as the golden-eye, and to thank Vince Giavarini from Dorset and

Robert Thompson, Ulster's gifted nature photographer, for sticking his stepladder deep in the mud to climb to sprays of thalli bearing fruits, the size of bright sovereigns. They have added the 1208th species to the island's lichen database.

Golden-eye, as Giavarini says, is not only one of the world's most attractive species, but "*the Holy Grail of the lichen world for which bottles of malt whiskey have been offered as an enticement to searchers*". It has also not been seen in Ireland for 150 years. By extraordinary coincidence, last year produced two similar discoveries – one in an orchard in Herefordshire and the other on Guernsey, in the Channel Islands – both, significantly, after a similar sort of absence.

The Cork lichens are perhaps three or four years old, and it is well worth visiting the website of Guernsey's Natural History Society – www.societe.org.gg/press/20071203_lichen.html to see the golden-eye in its fully developed glory. The President of the Society spotted it on a bush during a walk on the island's cliffs. While the scientists aren't swearing to it, the fact that the species is more at home in the Mediterranean makes the finds a clear candidate as a sign of global warming. But the lifestyle of a lichen makes its dispersal a distinctly chancy affair.

A lichen is not a plant but a symbiotic partnership of a fungus with a colony of algae or cyanobacteria (sometimes both). It reproduces in two ways – by windblown spores from the fungus that meet up by chance with the right algal or bacterial partner, or, more reliably, by ejecting particles in which cells of both partners are bonded, called soredia, that also fly on the wind.

LichenIreland (find it at www.habitas.org.uk) is funded from north and south but co-ordinated at the Ulster Museum, where Dr Damian McFerran runs the already extensive CEDAR nature database. He enlisted lichenologists from the UK to help Irish fieldworkers record the distribution of perhaps 50 – 100 species in each of the island's 10 km squares. Even after three years and some 17,000 records, there are still more than 200 squares without any lichens on the database. There are particular gaps on the coasts and uplands, and the woodlands are still waiting for a systematic search. It may take another two years, but Ireland's richness in lichens, born of clean air and moist winds, is worth the effort.

Michael Viney

Irish Times Weekend Review, 26 January 2008

Observations on changes in the lichen flora of Bergen between 1971 and 2008

While on a recent visit to Bergen to present the Quaich to Per Magnus Jørgensen as a mark of his election to honorary membership of the BLS, I had the opportunity to walk around Bergen and look at epiphytic lichens on trees in a number of different areas in and around the town. The city is incredibly green and many trees have been

planted in the town, especially lime trees, including older trees in the district where Per Magnus lives in Storetsveit, and some planted rather recently below the University. If you travel on the Fløibanen to Fløyen (the hill north of and above Bergen), there are plenty of tracks between the birch and spruce trees with views to the fjord and its islands, but I went there rather late in the evening so did not spend long looking at the lichens!

At first I was just interested to see what lichens were on the trees in different areas of the city, but on discussing my finds with Astri Botnen, she showed me a thesis on lichens on *Betula pubescens* in the Bergen valley made in 1971 by Jorunn Øxnevad Lie. This provided the information I could use to show changes in the lichen community over 37 years. With Astri's help I found sites in the thesis that were near to the sites that I had visited. There are still a few crusts remaining to be identified and UV- *Lepraria* specimens that need the chemistry doing, but as all *Lepraria*'s were called *L. incana* in 1971, this is of secondary importance. However even the simple species list in Table 1 shows some dramatic changes in the lichen flora of this city. Although nitrogen-sensitive acidophyte species were still present in most sites in 1971, such as *Hypogymnia physodes*, *Parmelia saxatilis*, *Platismatia glauca* and *Usnea subfloridana*, in 2008 these were only present on the hills and outskirts of the city (by the airport) and absent from the city centre. I did not find *Lecanora conizaeoides* in any site, although Tor Tonsberg said that it was still present in a few parts of the city. In 1971 it was frequent in many sites. Instead there are now lichens that we would regard as nitrogen-tolerant including; *Phaeophyscia orbicularis**, *P.nigricans**, *Physcia caesia**, *P. stellaris* and *P. tenella*, *Physconia enteroxantha** together with crusts *Amandinea punctata** and *Lecidella elaeochroma**, all of these with * being new records since 1971. In 1971 *Xanthoria parietina* was recorded in a maritime site on one of the islands, but I did not find this species in the sites that I visited in 2008. The most typical acidophyte flora was found on the oaks near the airport which is situated on the edge of the Fjord. These lists represent brief visits to the sites and cannot be regarded as more than a sample of the species that could be there.

The change from nitrogen-sensitive species to nitrogen-tolerant species in the city suggests that atmospheric conditions in 2008 are very different to those in 1971. I do not have records of the atmospheric conditions in and around Bergen, and the surrounding countryside does not appear to be highly agricultural. However in the city there is now a considerable volume of traffic which would contribute to increasing NO_x and NH₃, the latter from catalytic converters and the population. The nitrogen-tolerant species are also all warm climate species and this may be another factor in the increase of these species in cities here and in other parts of Europe.

I hope that in the future someone may be stimulated to repeat the survey done by Jorunn Øxnevad Lie, and to compare it with changes in climatic and atmospheric conditions, as this northern city may provide some of the clues as to the factors that drive changes in species of urban sites.

I would like to thank the lichenologists in Bergen who made my stay so enjoyable; Per Magnus Jørgensen, Astri Botnen, Tor Tonsberg and Louise Lindblom.

Species found on trees in Bergen in 1971 and 2008. Bp – *Betula pendula*, Fs – *Fagus sylvatica*, Sa – *Sorbus aucuparia*, Qp - *Quercus petraea*

Sites	Nygards-gatn	Vetrisalan	Stoetsveit	Minde	Floyen	Floyen	Trees near airport
	2008	1971	2008	1971	2008	1971	2008
Plant associate	<i>Tilia</i>	Bp	<i>Tilia</i> , Bp	Bp, Sa	Bp, <i>Picea</i>	Fs, Bp	Qp
<i>Amandinea punctata</i> *	+						
<i>Bryoria fuscescens</i>						+	
<i>Candelaria concolor</i> *			+				
<i>Candelariella reflexa</i> *	+						
<i>Cladonia chlorophaea</i>		+	+		+	+	+
<i>Cladonia coccifera</i>				+			
<i>Cladonia coniocraea</i>		+	+	+	+	+	+
<i>Cladonia macilentia</i>				+		+	
<i>Cladonia polydactyla</i>				+			
<i>Cladonia squamosa</i>				+		+	
<i>Evernia prunastri</i> *			+		+		+
<i>Graphis scripta</i> *							+
<i>Hypogymnia physodes</i>		+	+	+	+		+
<i>Hypogymnia tubulosa</i> *			+		+		
<i>Lecanora carpinea</i> *	+						
<i>Lecanora chlarotera</i>	+	+		+	+	+	+
<i>Lecanora conizaeoides</i>		+				+	
<i>Lecidella elaeochroma</i>	+	+		+			+
<i>Lepraria spp.</i>			+	+	+	+	
<i>Melanelixia fuliginosa subsp. glabratula</i>	+	+	+	+	+	+	+
<i>Melanelixia subaurifera</i> *							+
<i>Melanohalea exasperata</i>	+		+				
<i>Ochrolechia androgyna</i> *							+
<i>Parmelia saxatilis</i>		+	+	+	+	+	+
<i>Parmelia sulcata</i>		+	+	+	+	+	+
<i>Parmelina pastilifera</i> *			+				
<i>Parmeliopsis ambigua</i>		+	+	+	+	+	
<i>Pertusaria amara</i> *							+

Sites	Nygards-gatn	Vetrisalan	Storetsveit	Minde	Floyen	Floyen	Trees near airport
	2008	1971	2008	1971	2008	1971	2008
Plant associate	<i>Tilia</i>	Bp	<i>Tilia</i> , Bp	Bp, Sa	Bp, <i>Picea</i>	Fs, Bp	Qp
<i>Pertusaria pertusa</i> *							+
<i>Phaeophyscia nigricans</i> *	+						
<i>Phaeophyscia orbicularis</i> *	+						
<i>Phlyctis argena</i> *			+				
<i>Physcia caesia</i> *	+						
<i>Physcia stellaris</i> *	+						
<i>Physcia tenella</i> *	+						
<i>Physconia enteroxantha</i> *	+						
<i>Platismatia glauca</i>		+	+	+	+	+	+
<i>Pseuevernia furfuracea</i>		+		+	+	+	+
<i>Ramalina furfuracea</i>							+
<i>Usnea subfloridana</i>					+	+	+

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Presentation of Honorary Membership of the BLS to Professor Per Magnus Jørgensen

I was in Norway at the University of Bergen on 26th August 2008 to fulfil my last role as president of the British Lichen Society. This included presenting Professor Per Magnus Jørgensen with the engraved pewter quaich as a mark of the award of honorary membership of the BLS in January 2008 (see last Bulletin) for his support of the BLS and the *Lichenologist* over many years.

It turned out to be a very special occasion made so by Dr Siri Jansen, director of the Museum, and a real celebration of Per Magnus' special contributions to international lichenology and the University of Bergen. It was held in the house named after Knut Faegri, a former director of the Department of Botany. The elegant house built by Bergen shipowners in 1888 overlooks the town and is next to the Botanical garden which Per Magnus looked after for many years.



Participants in the presentation: from left to right; Per H Salvesen, Ingvar Byrkjedal, Tor Tønberg, Gerd, Helena, and Per Magnus Jørgensen, John Birks, Hilary Birks, vice chancellor of the University of Bergen - Berit Rokne Hanestad, Pat Wolseley, Bente Alver. Photograph by Terhi Pousi

It was a wonderful opportunity to do this in a place where everyone who knew and worked with Per Magnus could join in the occasion. Siri had laid on a delicious buffet lunch for around 40 people so that we had a chance to meet each other before the speeches began. As the honorary membership of the BLS had been the stimulus for this celebration I had to begin with his contribution to the BLS, his long term membership and involvement with the society, where he was a familiar person to members on workshops and field meetings as well as in the *Lichenologist*, and finally to hand over the Scottish quaich or drinking cup engraved with his name. Dr Tor Tønberg followed with an account of his contributions to lichenology, with other speeches by members of the Department of Natural History and the deputy chancellor of the University all in Norwegian, and finally by John Birks, whom you will meet at the next AGM. All these were accompanied by much humour and laughter from all the people who had come to celebrate Per Magnus' achievements and his contributions to so many people's lives.

His response to the BLS (see below) was accompanied by a gift of his *Nordic Lichen Flora. Volume 3. Cyanolichens* to members of the BLS. I will hold this copy in the Lichen section at the Natural History Museum in the cupboard with the Society's Swinscow *Lichenologist* volumes for members to consult until we find a home for the library.

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Per Magnus Jørgensen's response

Ladies and gentlemen – Dear Pat!

I am deeply moved by this honour and the fact that you as a result of my poor mobility have come across the North Sea to present me with this pewter drinking cup.

I actually believe, I am the one who should have honoured the BLS on their 50th anniversary. When I started my interest in lichens in the 1960's no one here in Bergen had worked with the group since the days of Johan Havaas. I happened fortunately to meet the legendary Swedish lichenologist Gunnar Degelius who greatly inspired me to continue work on our rich and interesting lichen flora. I soon discovered that in the west there was a society which could offer a lot for a beginner like me.

I would like to believe that I joined the society 40 years ago, when it was ten years old. I can't prove this, but the oldest volume I have of the society's famous journal *The Lichenologist* is the third issue of volume three that was published in November 1967.

It is certain, however, that I had the great pleasure to get to know some of the founders of the society: Peter James, Jack Laundon and Dougal Swinscow, and take part in excursions as well as meetings. The society was just wonderful for someone in my position, a perfect mixture of amateurs and experts who had a common interest in lichens. I especially remember Mary Hickmott, one of the enthusiastic amateurs, who on one occasion said to me: "you see, my lichenology is of a social nature." I was therefore particularly happy to see that she had been present at the meeting when the society decided to make me an honorary member, remembering me as being "endlessly patient to the perpetual beginner".

I for my part learnt a lot from those who had more experience in the field than me. It was a place for finding new things and sharing knowledge, and that is a most important aspect of botany and scientific activity in general.

In this spirit, I have the pleasure to present the society with volume three of the *Nordic Lichen Flora*, where I have tried to write down all I know about that difficult group of lichens generally known as the "small black ones", in the hope that someone will find it useful.

Per Magnus Jørgensen

Watchword – Lichens Reach 100,000 Young People!

A double-page spread on lichens is featured in the next edition of *Watchword* magazine, produced by The Wildlife Trusts for members of *Watch*, its club aimed at those aged 16 or younger who are nature-sleuths or young environmentalists. As the UK's leading environmental action club for young people, *Watch* has over 100,000 members! The publishers of *Watchword* rightly see lichens as providing the scope for young people to become nature detectives, to take environmental action and to make

a future for wildlife. They describe the magazine as 'jam-packed with wildlife stories which will capture the wildest imagination and fascinating facts that will amaze even the biggest nature nuts'. And lichens are being included, alongside other fascinating stories, thanks to Frank Dobson!

The double-page spread Frank has provided is packed with eye-catching pictures and text to show the colour and interest of common lichens. Remember to tell the young people you know about *Watch* and help them to appreciate the significance and fun they can have, looking at lichens. Some may already be Solarsavvy, Hedgyheads or Buzzbrains, but how many know lichen-lore and can tell, from 20 metres or more, which stones in a churchyard are limestone, just by looking at the colours of lichens growing on them?

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Lichen-Time in the *Church Times*

A reader's query in the *Church Times* about lichens appearing on an asphalt shingle roof elicited a very helpful response from Ishpi Blatchley. She explained that:

“Lichens do no harm to asphalt shingle; so why remove them? Lichens are fascinating living organisms, and are capable of living in 'extreme' environments, as their presence on the asphalt shingle demonstrates. Presumably this roof belongs to a church or adjacent building. Lichens are part of God's creation, and surely the Church should be pro-active in conserving all his creations. The lichens may protect the sand surface of the asphalt shingle from abrasion, erosion, and frost action. They would certainly beautify them, particularly if you are lucky enough to get the lovely orange patches of *Xanthoria* spp.... On a more practical note: if they are removed by fungicide, they will return.”

Ishpi also explained that lichens provide a good talking-point. Many indicate good air quality, and their presence should be greeted with enthusiasm. Her reminder to enjoy lichens in the churchyard is helpful to all readers of the *Church Times*, and the general public. The colour and texture of lichens embroider and enhance the appearance of the church and its surroundings. Without them, would Longfellow have written his *Memories*? And a reminder, for more detailed information about the conservation of lichens in churchyards, look in the churchyard section on the BLS website: www.thebls.org.uk.

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New Biosciences Federation report on learned societies and publishing

The Biosciences Federation (BSF) published a report in July with the results of several questionnaires they conducted earlier this year. Thanks to all those of you who took part in the researcher questionnaire. The survey and report were carried out by the BSF's Journals Committee, which is chaired by Sue Thorn of the Society for Endocrinology. The full report can be seen at http://www.bsf.ac.uk/journals/BSF_survey_report_July_2008_FINAL.pdf. Some key details are included below as a taster.

You get more out of your society financially than you put in

You probably knew that already, but we can now show that the UK university system as a whole gets more money from bioscience societies than it spends with those societies in journal subscriptions. The survey showed that, for the 23 societies who responded, they put 2.16 times as much money into the UK university system by way of grants, meeting support and other educational services than they take out by way of journal subscription and licence fees. The societies analysed contributed almost £4M of such support in the last year. You might want to make sure your Vice-Chancellor is aware of that in the light of some of the more radical Open Access people who want only a free repository system which would probably cause the collapse of most journals and of the support that their owner societies provide.

In addition, the report shows that all the societies provide free access to much of their journal material, usually after 12 months, although many also make selected material available earlier than that, e.g. review articles.

Most of the societies allow researchers to self-archive free in an institutional or other repository (eg PubMed Central) after a delay. Most of them would allow immediate self-archiving on payment of a fee. Many of the publishers would carry out the deposit for the author, especially where a fee is paid.

Do you really know what Open Access is?

The survey of researchers, which had 1349 usable responses, showed substantial confusion about what Open Access (OA) means. Many respondents seemed unable to tell the difference between online journals that are free at the point of use (because the library has paid a subscription fee) and Open Access ones, where all the material is free. Almost half the OA journals respondents said they read, and a third of those they published in, were not OA journals at all.

Only around 15% of the respondents had tried to access OA publication funds from their institutions or research funders to pay for author-side charges. Of these 53% had found it very difficult or fairly difficult. Sue Thorn and Steve Byford are taking part in a Universities UK working group to try to resolve this issue.

Interestingly, as regards self-archived material (usually an earlier version, such as the author's submitted manuscript), only 3.5% of respondents said they access this

version if they have access to the final published version, and 67% rarely or never access the self-archived version even if they don't have access to the published version.

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Kindrogan – a journey from complete to only partial ignorance

With the less widely studied (I try not to use the term obscure) taxa, about which there is little knowledge and enthusiasm in the general populace, opportunities for learning and inspiration are largely restricted to courses and societal meetings. It takes a leap of faith to attend such an event, not knowing what you are letting yourself in for, but I personally made the leap, and in retrospect, am very glad I made the decision to start out in lichenology.

Having grown up within a 10 mile radius of Manchester, lichens were largely an academic concept to me until I joined the Edinburgh University conservation society (called the Dirty Weekenders) and embarked upon a rhododendron-bashing bothy in the Highlands. I was completely overawed by the epiphytic flora, much to the bemusement of my fellows. Two years down the line, my reaction to lichens was very little changed, and so I decided that I had either to see a psychiatrist, or apply myself to learning lichen ID.

As I am sure you can gather, the lichens won out: and so I applied to the BLS for part-funding (for which I am most grateful), gave myself a week's worth of holiday from my dissertation, and embarked upon the Field Studies Council lichen course at Kindrogan in Perthshire. A week-long course may seem a bit extreme for a complete beginner, but at least by the end of it (if I survived that long) I would know whether lichens were something I wished to persist with or not.

Kindrogan is a picturesque old building in a wonderful spot, the grounds providing interesting and varied walks alongside a river, through woodland or up onto moors. It also offers easy access to the Cairngorms by minibus. Upon arrival, I was happy to discover that my fellow course attendees were without exception friendly, and that although some of those attending were already very knowledgeable on the subject of lichens, I was not the only one starting from scratch. There were quite a few hobbyists, along with several rangers, ecologists, foresters and researchers. To my chagrin, I was also relieved to find that a beard was by no means a pre-requisite of the course. We were very lucky not only to have two tutors,

freelance lichenologist John Douglass and retired geologist Peder Aspen, but also to have the expertise of Brian and Sandy Coppins on which to draw.

On the first full day, we explored the grounds of Kindrogan. We spent some time around a pair of old sycamores, with a few of us beginners cajoling Sandy into telling us what things were, with Sandy doing her best to get us to take samples back to the lab and key them out. The group subsequently split, with the sensible beginners returning to the lab to consolidate, and the more knowledgeable students and rebel beginners (myself included) continuing around the grounds. We slowly got to grips with the common foliose epiphytes, and were proud of the genera we were picking up (*Evernia*; *Pseudevernia*; *Ramalina*; *Platismatia*; *Xanthoria* etc.). Having never before noted the presence of saxicolous lichens however, the bridge proved one step too far, and after experiencing mild hysteria, I decided that they could wait until another week.

On subsequent days we travelled further afield. At Braemar, we investigated the lichens growing on Scots pine and those on the boulders of a scree slope (some of which were so interesting I classified them as honorary epiphytes and hence allowed myself to learn them). I found myself fascinated by the *Cladonias*, in spite of the fact that several people had helpfully warned me off them. At the top of the scree, we were privileged to be introduced to a very rare *Rhizocarpon*, which, thanks to Peder, I will always remember as *Rhizocarpon footballii*. We saw some truly lovely species that day, such as *Icmadophila ericetorum*, *Peltigera britannica* and *Sphaerophorus globosus*.

One day we travelled to Glen Quoich, a fragment of Caledonian pinewood on Mar Lodge estate, near to Braemar, where we spent much of the day scrutinising a wooden bridge and a notably species rich boulder. We might not have got very far from the car park, but then, we didn't need to. Another day we explored a riparian hazelwood and met *Lobaria*, *Graphis*, *Degelia* and *Leptogium*, among others, and spent a time on a stone bridge which boasted a good view down the glen. We were also introduced to *Cladonia botrytes* surveying one day. Based on the fact that it was nigh-on impossible to locate on a tree stump on which its presence was known, we guessed that it is probably under-recorded.

In the evenings we had the pleasure of an excellent three course meal, followed by a lecture: on the first night we were introduced to general biology and terminology, and subsequently to coastal, mine spoil and churchyard lichenology. The remainder of the day was left open for lab work, with tutors on hand to aid in the use of the microscopes and keys, although they were also very helpful in deciphering horribly mis-spelled and scrawled species names in field notebooks. Encouraged by the comradely atmosphere, many of us would stay working late into the night.

At the end of the week, we were subjected to a lichen ID quiz to illustrate how much we had learnt, and John prepared for us an evocative presentation of our best photographs from the week. The tutors were excellent throughout, patient to the pace of the beginners, but also in possession of a wealth of expertise for the more knowledgeable students to draw upon, making the course highly valuable to all, regardless of prior exposure to lichen identification.

I personally found Kindrogan an excellent gateway into the world of lichenology: not only did I survive the week, but it granted me a solid grasp of the basics and inspired me to learn more.

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Lichens of Nepal Expedition 2007

This report provides a summary of the 2007 lichen collecting expedition to Langtang & Shivapuri National Parks, supported by a small grant from the BLS. Those participating were Louise Olley and Andrew Cross (Royal Botanic Garden, Edinburgh) and Lokendra Raj Sharma, Mohan Joshi and Binod Regmi (Department of Plant Resources, Kathmandu and Department of National Parks & Wildlife Conservation). Of the 1220 specimens collected, 112 have so far been positively identified to species level and around 60% of the total to genus. So far, at least ten species are considered new to Nepal, including *Hypogymnia alpina* Awasthi, *Haematomma wattii* (Stirton) Zahlbr., *Cryptothecia striata* G. Thor and *Psilolechia lucida* (Ach.) Choisy. Species of *Japewia* and *Biatora* may well be new to science.



Map of expedition location

Background

The last checklist (Sharma, *Enumeration of the Lichens of Nepal*, 1995) reported 465 species from 79 genera known from Nepal, and a more recent literature survey reveals an increase to 771 species belonging to 167 genera. Lichenologists

estimate that at least 2000 lichen species should occur in Nepal, and over 50 of Nepal's 75 districts still remain unexplored. Many difficulties are faced by Nepali researchers (such as the lack of international botanical journals and type specimens) so few students/scientists feel encouraged to embrace calls to undertake biodiversity inventories and to monitor and conserve biological diversity. It is hoped that this collecting expedition will provide further impetus for the study of the diversity of Nepal's lichens, to improve conservation and encourage publications in local scientific journals.

Expedition field notes (accompanied by extracts from Louise Olley's personal diary)

Day 1 - Friday September 14

Bus from Kathmandu to Dunche. When crossing the landslip area before Dunche we collected a specimen of cf *Lepraria* sp. from the dry underhang of a rock face alongside the road. We collected a *Heterodermia* from low shrubs on the rocks whilst fending off leeches.

"All along the trail we were coming across precipitous muddy and rocky landslides, each one seemingly bigger than the last. I wish we had taken photographs but we didn't because we were so mud-covered and wet, it didn't even cross our minds."

Day 2 - Saturday September 15

Dunche to Thulo Syabru (arriving well after dark). Along the road from Dunche to Barku, we collected a few small specimens from a medium-sized *Pinus roxburgii*, the only time we collected from this species as it doesn't appear to get much higher. After Barku (our lunchtime stop) we left the road and joined the trail up to the ridge line and then along a trail to Thulo Syabru. Initially we went up through farmland and open woodland. Some of the oak stands had the appearance of pasture woodland. We found a *Pannaria* on an older *Quercus*. The woodlands above Barku are south-facing and have some potential for lichens.

"When it rains the leeches head straight onto the path (when they're not hanging off the foliage). The first person is safe from them but with each subsequent walker the pheromones that attract the leeches gets stronger and stronger so everyone tries to be at the front". "I stopped to tie my laces and had to flick off 15 tiny leeches almost immediately. They move incredibly fast and are very difficult to handle as they attach straight on to your hands and fingers.".... "Went through 2 litres of water by 3PM and still have no desire to pee!"

Day 3 - Sunday September 16

Thulo Syabru to Bamboo (arriving early evening). Collections from trackside trees, in lower temperate mixed broad-leaf trees. Primarily *Quercus semecarpifolia* and *Alnus nepalensis*, also *Acer* sp. Some collections from wayside boulders near Thulo Syabru. We walked down through farmland (some abandoned), to a bridge across a tributary of Langtang River. On the far side of the bridge, along the valley side with exposed wayside boulders and tall cliffs we collected specimens from some boulders and exposed soil. From the junction of this side of the valley we dropped down towards the Langtang River, descending through uncultivated bamboo woodland on very steep north-facing slopes. Once down at the river level we trekked along the Langtang trail through lower temperate woodland with *Alnus glutinosa*, *Quercus* sp., *Acer* sp. and a host of other tree species. Some of the trees were large and the forest appeared to be relatively undisturbed being some distance away from settlements. We collected our first *Pyrenula* from this lower temperate woodland. Many of the trees had their trunks covered in mosses and liverworts, often leaving no room for lichens.

"We were heading down to about 1720m by the Langtang Khola, an enormous and beautiful river with gushing white waters, vast boulders and a path that led across a long suspension bridge and under a waterfall. Poor Andy was carrying my umbrella and it broke under the pressure of the water, leaving him completely soaked and the rest of us in fits of laughter."

Day 4 - Monday September 17

Bamboo to Ghoda Tabela (Ghoratabela). This was a very long day's walking as we went up over 1200 metres. We crossed the river upstream from Bamboo and went along the south facing slope trekking up the main Langtang trail. Woodland on the southern side continued from day 3 with *Alnus*, *Quercus* & *Acer* etc – essentially lower temperate woodland. Once over the river, the woodland opened out to younger woodland and scrub in places. Close to Ghoda Tabela we went through mixed woodland with *Tsuga dumetorum* on the other side of the valley. This type of forest is very shaded, dark and humid but we arrived too late in the evening to explore it. We collected some twig flora species off some scrub on the edge of a clearing (probably an old abandoned field) close to Ghoda Tabela Lodge. Collections also from *Alnus nepalense* and *Viburnum* sp.

“Today was an incredible climb but because we were collecting on the way and kept stopping we didn't notice the gruelling nature of it till near the end. As usual, I managed to drink nearly 4 litres of water. All systems so far are fine now that I have Compeed on my blister. No need even for a rub down with Deep Heat. The only down side is that I don't sleep as well as I had hoped considering the amount of energy we expend during the day.”

Day 5 - Tuesday September 18

Day at Ghoda Tabela (Ghoratabela). Collections from rocky pasture plus trees and shrubs (upper temperate mixed broad-leaf) around Ghoda Tabela including *Sorbus cuspidata*, *Quercus semecarpifolia*, *Viburnum* sp., *Daphne papyracea*, *Zanthoxylum nepalense*, *Abies* and *Rhododendron* spp. The afternoon was spent collating collections and writing up packets. By a Buddhist prayer wheel we found a large *Sorbus cuspidata* with *Dimerella lutea*? The tree appeared to be capable of supporting the local equivalent of a Lobarion community.

*“We were out collecting by 9AM and realised pretty quickly that we were right next to a mosquito pool/breeding ground and no amount of repellent was going to protect us. It was the most foul two hours of collecting in drizzle and mosquitoes and I got bitten and frustrated scrabbling around between the three prevalent species *Zanthoxylum*, *Berberis* & *Mahonia*, all extremely spiny!”*

Day 6 - Wednesday September 19

Ghoda Tabela (Ghoratabela) to Langtang. Collection from trees and shrubs adjacent to track including *Sorbus cuspidata* and *Zanthoxylum nepalense*. Also in open glades in upper temperate mixed broad leaf forest and stones of old settlement. Soon after leaving Ghoda Tabela we went through a boulder field covered with a thicket of *Zanthoxylum nepalense*. The main stems supported both crustose species (e.g. *Haematomma*) and foliose species (e.g. *Nephroma*, *Umbilicaria*). The trail continued up through pastures, scrub and patchy woodland on the same side of the valley as the settlements. The north facing slopes are less accessible because of the river and remain wooded.

“This morning I had Tibetan tea for the first time (salty tea with oodles of yak butter fat), it was wonderful. Today was also the most fabulous and easiest of day treks. Mostly the path was gentle, there were few mosquitoes, the weather was mostly sunny (only about an hour of mist and rain) and the views were utterly spectacular, it just seems to get better and better”....

Day 7 - Thursday September 20

Langtang to Kyangin Gompa. Collections from trees and shrubs south of the Langtang River. The lower slopes had been cleared of their woodland and reverted to scrub and patches of abandoned pasture, with young *Larix* recolonising these areas. The only good lichen habitat here was the scree slope part way through the boulders although we did find some nice *Peltigera* on the *Rhododendron* heath on the slopes above the bridge. We also did some collecting on and between boulders in pastures and on soil by the stream.

“Finally Kaijin Gompa came into sight and we were assured by nomadic Yak farmers that there was a bridge (Hurray!) By this time I was fully into my altitude headache and had to stop every 10-15 minutes to recover my breath. The temperature had dropped and the mist had come down and after our 6AM start it felt like sheer drudgery.”... “pounding headache is gradually worsening, incredible fatigue, waves of nausea with a cold sweat on my upper lip. Breathing is heavy and I have a burning hot face and head like having caught the sun, don’t want to move.”

Day 8 - Friday September 21

Kyangin Gompa. I was ill with mild altitude sickness and was forced to stay behind. Collections by the others from a magnificent old-growth birch woodland extending almost from the valley floor up to the tree line on the north facing slopes was by far the most exciting bit of habitat so far on the expedition. The woodland included a mixture of broad-leaved species including *Sorbus microphylla*, *Rhododendron campanulatum* and *Ribes*. *Abies spectabilis* was present (on the ridges) but was very rare. The birch had long strands of *Usnea* cf. *longissima*. The valley floor and lowest slopes had long been cleared of trees and were now a mixture of pastures and low *Rhododendron* heath (mostly *R. lepidotum*). The woodland area we entered was the most accessible part from the Langtang Bridge. Once in the wood, we could see large mature *Betula utilis*, some pollarded and lopped, lichens were everywhere. The first mature birch, with a girth of over two metres took about half an hour to go over.

“It is now nearly 2.30PM and I am feeling much better, the air is cold and it has been cloudy all day with a few drops of rain. I am waiting for the cloud to rise so I can take my second look at the huge glacier. Like the Grand Canyon, its awesomeness cannot be fully appreciated until you see it for real. It is utterly breathtaking and no photograph can ever fully do it justice. I feel very privileged to have seen one. Being here is like being on top of the world.”

Day 9 - Saturday September 22

Kyangin Gompa to Kyangin Ri. Collections from grassland, scrub and boulders, earth and rock in snow patches, on slopes of Kyangin Ri up to approx 4600m. Also from open grazed juniper & yak pasture with *Rhododendron* & *Cassiope/Juniperus* scrub. I had recovered well from the previous day’s altitude sickness and we all set off for the alpine pastures, struggling up a very steep slope outside the village to get to a ridge at 4600m. After a short rest in the thin air, we set off from the ridge aiming to get to a saddle and then drop back into a valley just as the mist came down. Andy saw a relict piece of scrub just below the ridge on a steep, soft, rather unstable slope. As we had gone far ahead he grabbed as many species as he could from the ground and from a small shrubby *Rhododendron* ? *alpinum*. The valley down was a mixture of grazed low shrubland with boulders and pastures but near the top we walked through

an extraordinary eroded sandscape. The boulders had good lichens and despite the cold we collected our way back down the valley.

“They breed a half way cow – the father is a yak and the mother is a cow and unfortunately the result is an animal that looks like a mild mannered cow but has the aggressive temperament of a yak. It yields better milk apparently. Some have the excess hair and others don’t so you can’t tell what’s what. Suffice to say I am avoiding contact with all meandering cows, just in case!”

Day 10 - September 23

Kyangin Gompa to valley floor of Langtang River. Collections from open grazed *Rhododendron/Cassiope/Juniperus* heath. We set off up the valley to see what habitat lay beyond the village. We collected in *Rhododendron* scrub and boulders on the valley floor picking up various species of *Cladonia*, *Stereocaulon*, *Umbilicaria* and *Lasallia*. We wanted to cross the river to get to the upper part of the birch wood on the opposite side but after our guide tested the depth of the water we found it would be impossible to cross so we continued up along the northern side adding various *Rhizoplaca*, *Lecanora* and other specimens to our collection. After an hour or so we saw that the habitat was unlikely to improve. We were exhausted from the previous day’s collecting so finished early to work on the collections.

“The Japanese tourists celebrated a 70th Birthday and then very ceremoniously in typical Japanese elegance, handed out porter tips in beautifully folded origami paper, cheering each porter in turn. We joined in the celebrations and were offered a sponge birthday cake which we shared with our porters – who on the whole, thought it was horrible. As the evening went on, traditional Nepali dancing broke out but by this time I had retired with two large paracetamol and a pair of ear plugs.”

Day 11 - September 24

Kyangin Gompa to Ghoda Tabela. Rain. Collections from birch wood south of Langtang River. Species collected from included *Abies spectabilis*, *Betula utilis*, *Rhododendron campanulatum* and *Sorbus microphylla*. It was a very wet one hour’s walk over to the birch wood and we worked our way up an exposed ridge line south of where the others had collected before. We picked out a couple of mature *Abies* amongst the birch on the ridge and aimed straight for them. We followed the trail along the spine of the ridge which was relatively open and collected from open *Rhododendron lepidotum* heath, thereafter from *Betula utilis* and *Sorbus microphylla*. *Rhododendron campanulatum* was abundant in the understory but not a good host. *Usnea* cf. *longissima* hung down in long trails from the branches on the edge of the wood. We collected many pinhead lichens and foliose species (*Lobaria*, *Nephroma*, *Umbilicaria*) plus *Graphis*, *Gyalecta*, *Ramalina* and *Lecanora*, as well as many unidentified specimens.

“The rain didn’t stop for one minute which made writing up the packets in the field very difficult. We couldn’t use umbrellas in the wood so we all got pretty soaked, thankfully the rain has kept the mossies away (I’ve only just recovered from the last bites) but if the rain continues tomorrow we will be in trouble as we are headed through leech territory again”. “Thankfully I’ve regained all my energy. My legs feel incredibly strong again, my headache has completely gone and I feel alert and interested in everything.”

Day 12 - September 25

Ghoda Tabela to Thulo Syabru. Very heavy rain all day. Long trek, no collecting. Got into Thulo Syabru after dark.

“Woke up at 6.30AM to torrential rain. We started trekking late at 9-ish and the rain didn’t let up. I was fine until on the opposite side of the river we noticed the largest land slide I have ever seen and quite frankly it terrified me. We had one really hairy landslide to pass which sent adrenalin through me so fast that when I was across and safe my body felt so depleted of energy I nearly fell over. I walked for hours soaking wet through to the skin, sweating and cold with a soaking woolly hat. I sporadically ran on adrenalin for the whole day as we had to pass each tricky patch. Eventually we arrived at our destination in the dark and absolutely soaked through.”

Day 13 - September 26

Thulo Syabru. Collections from a *Pinus wallichiana* stand west of Thulo Syabru. Some lichens collected from *Pyrus pashia*. Andy, Binod and Mohan headed off to a stand of *P. wallichiana* on the north facing slope a short walk along the trail from Thulo Syabru leading back to Dunche. The *Pinus* were mostly young trees with a dense *Rhododendron* understory intermixed with other broad-leaved shrubs such as *Pyrus pashia*. One *Pyrus* had a very interesting looking smooth bark lichen flora so they collected as much of it as they could. Specimens collected on this day included several pinheads, *Chrysothrix*, various graphidion species and a crustose species with bright red lecideine fruits.

“My hair is so dirty I think it is beginning to clean itself!”.....“It is now 4PM, packets are more or less up to date but still drying and I am hoping that the others are safe and will be back before dark. This afternoon I managed to get through to the UK on the satellite phone. It was such luxury and so lovely to hear my Dad’s voice.”

Day 14 - September 27

Thulo Syabru to Shin Gompa (Chandanbari). Collections from old-growth *Abies spectabilis* wood along the ridge line from Danda Tea Shop. *Icmadophila*, pink pinhead, *Pyrenula*, *Sulcaria*, graphidion species and *Chrysothrix*. The group set off and went up the hill to the top of the ridge line. We went through a *Quercus* woodland and collected *Baeomyces*, *Sticta*, *Collema* and *Peltigera*. The woodland had large *Quercus semecarpifolia* with an understory that included several *Acer* species. This woodland gave way to farmland at the top of the ridge, where we had lunch. We collected from *Sorbus cuspidata* trees left standing in the clearings and pastures below the ridge. The *Abies* stands near the farmstead had a lot of younger trees but as we got further away the trees got older. We became very excited when I spotted a bright yellow *Sulcaria virens* hanging high from a large old *Abies*. Some of the trees were huge but as light was fading we had little opportunity to collect. Pinheads feature strongly on *Abies* and we found another pink/purple one! We also collected from huge swathes of a yellow ? *Chrysothrix*, and found various graphidion species and a *Pyrenula*.

*“After a bad start, my love of lichens kicked in and I forgot about my troubles and just started collecting. The views were obscured by cloud all day but the lack of sunshine and rain made it a perfect walking/collecting day. We walked through the most beautiful *Abies* forest followed by a gorgeous, pink *Rhododendron barbatum* wood with peeling pink bark and huge hairy petioles. They were fairy trails so utterly picturesque; I could never have imagined such places.”*

Day 15 - September 28

Shin Gompa to Laurebina. Collections of several interesting looking crustose lichens from *Abies spectabilis* wood & lignin on north side of ridge. We walked uphill through patchy scrub and young woodland all within easy reach of the settlement and we collected a few soil lichens from a muddy/mossy bank. Not far along the trail we went over the top of the ridge line and started trekking along the north facing slope through mature *Abies* woodland. This was a great habitat and worth more collecting attention. Sadly, heavy rain came in just before lunchtime and we had to stop. We sheltered in a lodge for a long time by a warm stove before moving off to get to the isolated lodge at Laurebina. We were all very wet on arrival but fortunately there was a good stove and we managed to get the lichens partly dry. Some collecting also from *Viburnum erubescens* (possibly a *Dimerella*), *Cotoneaster* and *Berberis*.

*“After a lovely evening at Shin Gompa I slept very badly in yet another slanting bed and woke to hear a rumour that Maoists might cause a bus strike for three days. Rain started 10 mins after leaving for collecting but Andy managed to chivvy me along and in the afternoon he bought me a Tibetan bracelet to go with my Tibetan necklace”... “At lunch time we were at our third viewpoint stop and we still couldn’t see more than 30m in front of us for cloud and mist. We really have no concept at the moment of how high we are. We saw few birds and animals because of the rain but we did see another wild *Delphinium*. Lots of mushrooms including chanterelles collected by our guides and eaten for lunch where I saw a 2.5 year old still being breastfed – practically unheard of in the UK!!!”... “My hair is now seriously grim but thankfully it is cold most of the time so it’s hidden under my woolly hat.”*

Day 16 - September 29

Laurebina to Gosainkund. Very heavy rain. No collections. We headed up to Gosainkund in driving rain and sleet. During the walk we passed many interesting lichens on rocks but the weather prohibited us from stopping for more than a moment.

“No let up in rain and arrived absolutely soaking after having had to give up the brolly at the pass for fear of it blowing away – or worse still – taking me with it.”... “Vague views through the cloud and mist gave us some idea of our height and a distant waterfall roared beneath us. Sadly it was far too cold and wet to admire the scenery.”... “We arrived sodden and frozen to the core. The hotel is as cold and damp on the inside as it is on the outside! We all huddled round a poorly working stove but Andy and I got progressively colder and since my woolly hat and socks were sodden I was quite prepared to part with 750 rupees for a Tibetan hat and long socks which are wonderfully warm”... “My hair is too revolting to describe through in a perverse kind of way I rather like being a little wild and smelly – an odd sense of freedom from the obsessively sanitized west.”

Day 17 - September 30

Gosainkund to Ghopte. Crossing the Lauribinayak Pass at 4610m. Heavy rain from midday. Little collecting. We spoke about collecting at Gosainkund but given that our clothes were still wet and that rain or snow could return at any moment we decided to push on. We set off early and the porters broke a trail through the snow over the pass. Once over the pass, the slopes were pretty steep and the woodland near the track didn’t seem very old. We collected a few specimens from some older *Juniper* trees but otherwise the day was spent trekking to Ghopte. Only a minute *Umbilicaria*, a tiny brown foliose sp. and a crustose lichen were collected.

"The scenery was amazing until the rain clouds started to form. Sadly most of my snow photos were overexposed because I forgot to use the snow option built into the camera. Luckily Andy and Mohan got some good ones."

Day 18 - October 1

Ghopte to Mangengoth. Collections from upper temperate woodland. Species collected from included *Abies spectabilis*, *Rhododendron* spp. and mature *Juniperus squamatus*. We passed through a *Rhododendron barbatum* stand and open mixed woodland. After lunch we went through a *Juniperus squamatus* woodland where we found new lichens not seen before. We found a *Solorina* on soil on a boulder, sharing its habitat with an odd thallose liverwort and our first *Micarea*.

"Today started very cold but hotted up. Our first rain free days for over a week thankfully, as last night I had condensation drips on my sleeping bag and face and to top it all someone missed the toilet – very grim, the moon and stars last night were absolutely amazing though."

Day 19 - October 2

Mangengoth to Gul Bhanjyang (Gulphu). Collections from *Abies spectabilis* and *Rhododendron* sp. on side of ravine south of Mangengoth alongside trail, also from wayside trees (e.g. *Myrica esculenta*) and shrubs (e.g. *Rhododendron* and *Berberis*). The trail went alongside a gully and mixed woodland which was good for lichens. We collected more *Sulcaria* and took habitat photographs while the others went deeper into the woods where there were great tussocks of *Cladonia*. We then climbed out of the valley and the trail passed through mature mixed woodland with occasional *Abies*. As we approached the fringes of the Langtang National Park the scene became more agricultural with woodland (exploited *Quercus semecarpifolia*) shifting to pastures. The slopes at the edge of the park were wooded, steep and with badly eroded gullies. Finally we left the park and descended through farmland towards the village of Gul Bhanjyang.

"Today was a hard slog mainly down hill on exposed clay which would have been a slippery nightmare if it had been raining. We saw a snake and I saw my first buffalo close up. Andy finally succumbed and bought us both a Snickers bar. Never has chocolate tasted so good"... "Tonight I drank my third millet distilled alcohol and then braved a look at my feet. Both big toes are now very black and I am wondering if I will lose the nails!"

Day 20 - October 3

Gul Bhanjyang to Chisapani. Main collection from soil exposures on gully sides. An epic walk through farmland from one side of the valley to the other, down and up through terraced fields. Very little time to collect.

"Today was a great day but sadly we did hardly any collecting as we had to walk all the way through to Shivipuri. I woke to discover my mountain lassitude ('Rum doodle's euphemism for hangover) had lifted and I ate a four-egg and onion omelette, a honey and lemon pancake and my usual gallon of Tibetan/milk tea. Today I saw a huge, no, massive, grub (a potato pest I'm told) it was the size of a large fat finger - eeew! Shortly after I passed a man cultivating his soil with an enormous sharp scythe-like instrument but he was in bare feet! I watched him work while I ate two huge slices of a cucumber the size of a marrow."

Day 21 - October 4

Shivapuri National Park near Chisapani. Collections from young woodland and scrub on a circular walk. Fairly disturbed habitat. We set off along the vehicle track out of Chisapani. The soil exposures of the cutting supported a crustose lichen with black lecidine fruits which we added to our collection. After half an hour or so we left the vehicle track and set off on a foot trail. This trail took us through wetland pastures fringed with scrub. The shrub lichen flora was diverse and we collected from different species of shrubs including *Viburnum*, which appeared to support the richest lichen flora and we found *Normandina* on it in two locations. After lunch the party thinned out along the trail and we collected as best we could from young dense woodland, which on the whole was poor in species.

“We were lucky enough to be escorted off the main path by the local warden so we managed to see the national reserve properly. We saw a green pigeon (higher than its usual range) and we saw several wonderfully bright and hairy caterpillars, porcupine prints and the scat of a common leopard.”

Day 22 - October 5

Shivapuri National Park. Chisapani to Sundarijal. Collections from wayside trees, woodland and scrub on track from Chisapani to Sundarijal. Species collected from include *Viburnum* cf *erubescens*, *Quercus semecarpifolia* and *Lyonia ovalifolia*. We walked out of the field to meet the bus on the fringes of Kathmandu. We were all out of packets but we couldn't resist collecting from a stand of well-lit *Viburnum* amongst pastures in a glade, especially as we saw a *Pyrenula* on one of the branches. One large hollowed out oak on the trail invited exploration and two species were collected from the lignum.

“ We passed children walking home from school clearing cobwebs from the paths with long poles with dusters on the top. School children were also harvesting pathside herbs. I felt deeply sad to be leaving but at the same time I was so mentally tired that all I could do was look forward to a good hot shower.”

Conclusion

Despite bad weather and the distances covered, the results of the expedition far exceeded expectations for a first visit to Nepal and the 1190 specimens collected were more than twice that expected. We also have a photographic record of the journey with over 500 habitat photographs. The collections will be identified and divided at the Royal Botanic Garden Edinburgh, with the top set sent to the Department of Plant Resources in Kathmandu. The expedition has highlighted areas that are valuable, accessible and which need more attention. It is my hope that in the future with collaboration we will make use of this information for more targeted explorations.

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Lichens as space travellers

Lichens are well known as inhabitants of the most inhospitable places on Earth, but maybe – just maybe – they are even more widely distributed than we realize. There is currently interest amongst astrobiologists in the potential for organisms being bounced off their home by meteor impacts and travelling through space to colonize new planets – a process called lithopanspermia. We now have experimental evidence that lichens can survive the extreme impact pressures caused by meteorite impact, as a result of recent research in Germany (Horneck *et al.*, 2008).

In this work, colonies of organisms known to survive extreme conditions on Earth were studied, including spores of the bacterium *Bacillus subtilis*, the endolithic [living within rock] cyanobacterium *Chroococcidiopsis* and thalli and ascomata of our old friend *Xanthoria elegans*. They were crushed between simulated Martian rock layers with physical forces known to be exerted by Martian meteorites (between 5-50 GPa), and with momentary temperature increases of up to 1000°C. To give an idea of the forces involved, the samples were hit by a high explosive-propelled metal plate travelling at between 0.5 km and 2.6km per second. Rather more exciting experimental methods than most lichenologists can access....

Following this rather extreme maltreatment, the sample colonies were analyzed for signs of life using various methods including culture and colony counts, and nucleic acid staining using the DNA-binding dye DAPI. For the *Xanthoria*, vital staining (indicating metabolic activity) was used along with a confocal laser scanning microscope (i.e. a very sophisticated hand lens!) So, what were the results? Spores of *Bacillus subtilis* survived (about 1 per 1000) at a shock of 40GPa, but no life was detected after impact at 50GPa. The *Chroococcidiopsis* cells could only survive momentary pressures of around 10GPa – so this species is unlikely to have travelled far. Amazingly, however, some ascospores of *Xanthoria elegans* (hooray!) survived everything the scientists could throw at them, and were even reported to germinate after an impact of 50GPa.

But surely no lichen could survive the journey through space, in high vacuum and bombarded by cosmic rays. Some other research says otherwise. An article in *Astrobiology Magazine* (Mullen, 2005) interviewed the Spanish biologist Rosa de la Torre, who led an experiment that sent thalli of *Rhizocarpon geographicum* and *Xanthoria elegans* into space aboard the European Space Agency's Foton M2 mission. This incorporated the Biopan experimental facility (Anon., 2008) which is essentially a chamber containing biological samples with a door on the outside of the space probe that can be opened to expose the contents to the harsh space environment. Rosa and her colleagues exposed their lichen samples to vacuum, extraterrestrial radiation, and extreme temperatures for two weeks. Essentially the lichens laughed at this treatment. Clearly photosynthesis was going to be a problem (no CO₂), so the thalli entered a dormant condition. Once back on Earth they simply woke up again as if nothing had happened, with photosynthesis levels indistinguishable from those measured before their trip. Clearly a two-week exposure in low Earth orbit is rather different from the months in deep space needed to travel between planets, but it seems that interplanetary travel is not completely out of the question.

So, it seems that it is possible that one lichen at least might survive a major meteorite impact, not only being able to start up Life on Earth again after planetary catastrophe, but also potentially being able to colonize new planets. Maybe Mars is the *Xanthoria*-orange rather than the Red Planet? And are all the lichen species on Earth really terrestrial in origin? Perhaps that explains those unexpected molecular phylogenetic analyses.... And if there are lichens on other planets, maybe there are little green lichenologists studying them, and perhaps we need to expand our mapping scheme rather further than at present. How much is the BLS subscription in Galactic Credits?

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If all of this seems far-fetched, others (with far more fertile imagination than I) have dreamt of lichens on Mars.

The following is an extract from "*Where Have All the Space Aliens Gone? Long Time Passing...*" by Don Webb (<http://www.bewilderingstories.com/issue11/aliens.html>):

In the far, far future, a new technological society emerges on Earth, one not based primarily on metals. Verdigris, chief coordinator for spaceflight, surveys his crew's handiwork: "Balloons in place... supplies... habitats... all is green. Let us waft into the stratosphere and thence beyond, through space, to bring verdant life to our rusty neighbour, Mars." And so the intrepid pioneers set forth on a long and leafy cruise between planets.

One fine Martian day, some evolved lichens sleepily extend ocular pseudopods to witness a long series of strange objects descend gently onto the surface of their planet. "Spaceships!" exclaims a lichen telepathically. "Truly something out of *Bewildering Stories!*" "But dig that strange green color. Not unlike that of the photosynthesizing aliens that Heinchen imagined in '*Red Hummocks of Mars.*'" The lichens ogle with fascinated orbs as strangely mobile creatures emerge from the alien vessels

Churchyard News

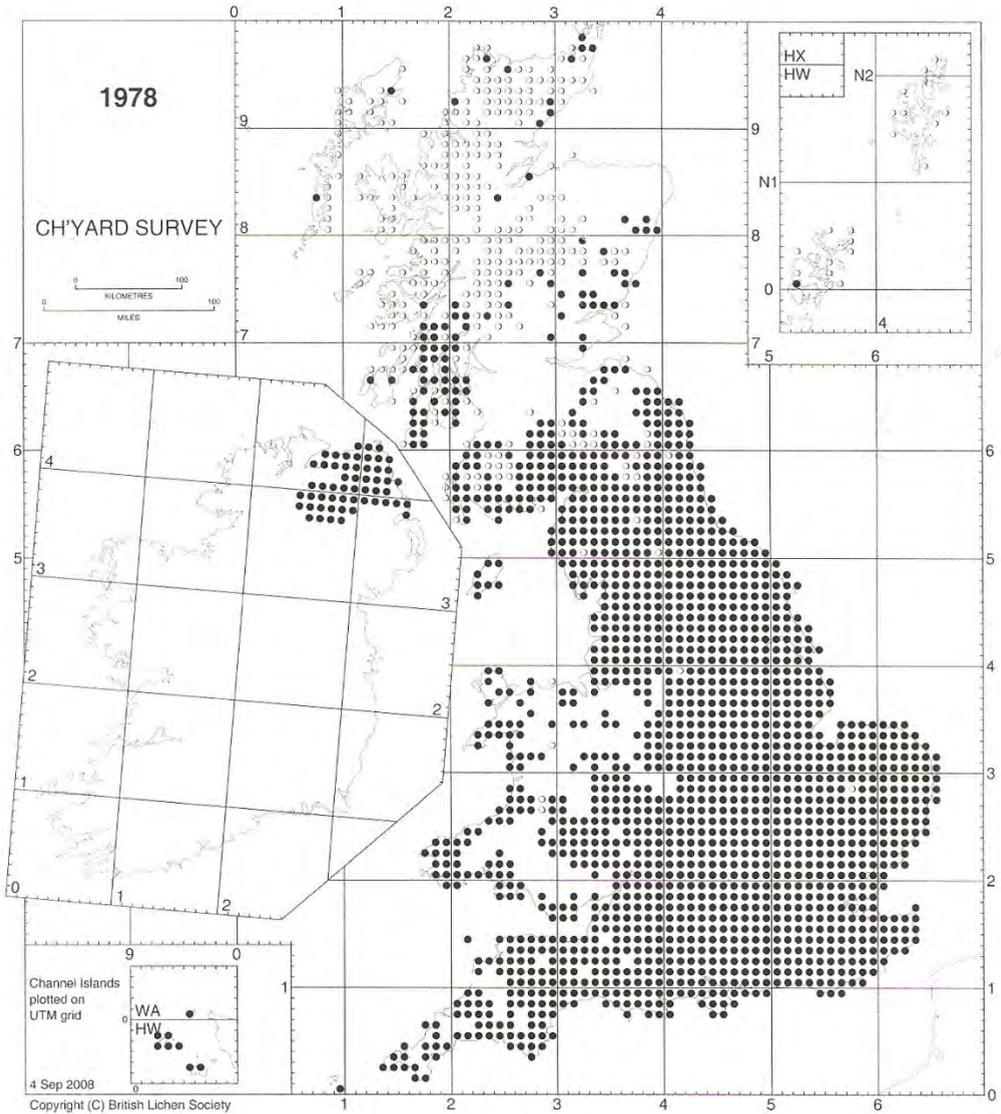
The Churchyard Survey Updated

Following the great success of the Lowland Churchyard Survey under the direction of the late Tom Chester (its aim being that of surveying at least one church or cemetery in every hectad [10x10km] of the lowland counties of England), the efforts of a number of members has extended coverage to other areas of the British Isles. The updated map not only summarises the present situation but is published to encourage others to visit squares which require a churchyard/cemetery survey. For those who have never considered these habitats there is no better time to start since the lichen flora of many ecclesiastical sites is improving, a number of excellent publications exist to support identification, and a network of experienced lichenologists throughout the country will help and advise. Churchyard Mapping Cards are available to download from the BLS website. A copy of the completed survey card should be sent to my address (48 Woodlands Drive, Groby, Leicester. LE6 0BQ) or as an email attachment (ivan.pedley@gmail.com). An additional copy sent to The Mapping Recorder would be appreciated.

The information on the map is derived from the Landranger 1:50,000 series OS maps. Open circles indicate that no church or cemetery is marked on the map for that hectad. Black circles are squares in which at least one church or cemetery has been surveyed. Blank areas of the map contain hectads where at least one church or cemetery is marked on the OS map but no survey has been attempted i.e. these squares need visiting!

Clearly there are limitations with dot maps such as the one above, the most significant being that some of the surveyed squares have received only one visit, whilst others, such as those in Worcestershire, Lincolnshire and Midland counties, have had all the churches surveyed in particular hectads – sometimes on several occasions; and, of course, the dots do not indicate the significance of the flora in that square – Melsetter Kirk on the island of Hoy has 14 recorded species whilst St Brelade on Jersey has well over 200 and yet both are recorded with the same symbol. But a single visit to a hectad is a start; the first step to a complete coverage. Many of these sites have been there for centuries and will be there for many more - they will be wailing for the lichenologist in the future. They are waiting for you now!

Ivan Pedley & Mark Seaward



Status of the BLS churchyard survey, 2008

***Llimonaea soreciata* –again!**

When asked for my views on some point or other requiring considered judgement, I have never been one to follow that cautious adage that “it is better to appear stupid than to open ones mouth and confirm the fact.” I have found it far more entertaining to be the amusement of others and, of course, “to make sport of them in my turn.” Even so, I should have been aware that my article about *Llimonaea soreciata* in the previous Bulletin was more than capable of making the unwary writer look foolish. I should have checked my facts; I should have read the “New, Rare and Interesting” section of The Bulletin! *L. soreciata* WAS new to Wales (S.P. Chambers, Bulletin **102**, p. 32) but not, as I thought, new to the British Isles. It had been found previously in South Devon (B. Benfield, B.W. Edwards & C.J.B. Hitch, Bulletin **101**, p. 80) although not in a churchyard. Its distribution became more clear during the particularly enjoyable field meeting in Cornwall organised by The President, where it was found in every yard surveyed during the week (see the account of that meeting in this Bulletin). Prior to the meeting I also visited Perranuthnoe church, SW53-29-, just down the coast from the Falmouth Field Meeting, and confirmed that the “pink *Dirina*” recorded several years ago was indeed *Llimonaea*. Here it was growing in abundance with *Dirina*.

A further extension to its range was recently recorded from Norfolk by Peter Lambley at Martham church, TG 455185, and by myself at Stokesby, TG 435105, during a delightful weekend on The Broads and I now understand from Brian Coppins that it has been found in Scotland, though again not in a churchyard and removed a little from the coast. Since the last Bulletin I have visited all the yards in The Midlands where I had previously recorded a pink form of *Dirina*, and at all these only *Dirina* was found so the present distribution of *L. soreciata* indicates that, whilst not strictly a coastal species, it is found within a few miles of the sea. Having now seen many examples of *Llimonaea*, often adjacent to *Dirina*, the consistent difference between the two is the farinose nature of the soralia in *Llimonaea*. The pink colouration and the dark prothallus may be absent or not apparent when growing on soft mortar. At its best, on the knapped flints of a Norfolk church it is a very beautiful species, the soft pink being emphasised by the broad charcoal grey prothallus.

Staffordshire

During a recent visit with Peter James to four Staffordshire churchyards just to the north of Birmingham two species new to the county were recorded, *Lecidea lithophila* and *Xylographa vitiligo*. Two of the yards had been surveyed some 12 years before and whereas the saxicolous flora seems to have changed little, perhaps with the early colonisers *Buellia aethalea*, *B. ocellata* and *Lecanora orosthea* being more in evidence, the corticolous flora was noticeably

improved—following the general trend that is occurring throughout the Midlands. One notable feature of two of the churches was the abundance of *Pertusaria lactescens*—often forming very large sterile crusts on flat sandstone ledgers and also the tops of table tombs. Why a species so obvious in many Midland yards has been largely ignored until comparatively recently is remarkable. Perhaps it is because it is usually present as a sterile crust and most of us turn a “Nelsonian eye” to such things!

Acarospora rufescens

This species may be overlooked in churchyards because, when dry, it does not look like a typical member of the genus. It has a smooth, thin, dark brown thallus and the fruits are often difficult to distinguish. “Cracked mud” is one description that summarises its overall “jizz,” and of course, it is C-K-. It seems to be particularly at home on the exposed upper surface of fine grained basic sandstone headstones, particularly on mid to late 20th century interments. It also has that remarkable property of being easier to identify in the wet! Most lichenologists give up on saxicolous surveys at the first sign of rain, not through personal discomfort – although that might be a factor – but rather because, for even the most familiar species, the morphology changes so dramatically that mistakes are easily made and need for caution always produces an incomplete survey. On a visit to St Mary’s church at Bearley in Warwickshire with Peter James we were caught in a rain shower – enough to wet the mosaic of species on a large sandstone ledger tomb that we were passing at the time, and to make most of them completely undiscernable. A scatter of distinct orange brown thalli caught our attention against the overall glistening grey colour of *Porpidia tuberculosa* and wet “crud” (where would we be as naturalists without such a descriptive word!). Under the hand lens the wet thallus was seen to have become translucent and the ostioles of the perithecia looked bright orange - red enclosed within very distinct “rufous” areoles. A species, in the wet, not to be mistaken with anything else and, unlike its rather dowdy appearance when dry, strangely very beautiful!

Ivan Pedley

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Literature Pertaining to British Lichens – 43

Lichenologist **40**(2) was published on 7 May 2008, **40**(3) on 20 June 2008, and **40**(4) on 17 July 2008. [NB: in Part 4, the verso pages, 270–328 and 338–362, have an incorrect running head with “Vol. 39”.]

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

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

APTROOT, A. 2006. *Mycosphaerella and its anamorphs: 2. Conspectus of Mycosphaerella*. CBS Biodiversity Series 5. Utrecht: Centraalbureau voor Schimmelcultures. Pp 231. ISBN-13: 978-90-70351-60-1. Includes notes on 12 lichenicolous fungal names and two lichen names that have at some time been referred to *Mycosphaerella* or *Sphaerella*. British taxa are: *Sphaerellothecium araneosum*, *Stigmatidium arthoniae* [given as *Pharcidia arthoniae*], *Mycosphaerella cookei* (= *Muellerella lichenicola*), *Zwackhiomyces dispersus* [given as *Pharcidia dispersa*], *Stigmatidium hageniae*, *Sphaerella innata* (= *Arthopyrenia allogena*), *Sphaerella psorae* (= *Arthopyrenia allogena*), *Sphaerella thallophila* (= *Anisomeridium biforme*).

ATIENZA, V. & HAWKSWORTH, D.L. 2008. *Lichenothelia renobalesiana* sp. nov. (*Lichenotheliaceae*), for a lichenicolous ascomycete confused with *Polycoccum opulentum* (*Dacampiaceae*). *Lichenologist* **40**: 87–96. **Lichenothelia renobalesiana* D. Hawksw. & V. Atienza is newly described and illustrated from Spain and England (Devon and Somerset), growing on endolithic *Verrucariaceae* on limestone.

BLATCHLEY, I [F R] 2008. Lichen report 2007. *Annual Report Orpington Field Club* **48**: 11–16. Reports on lichen recording in and around the borough, with special emphasis on changes at two sites recorded over several year: a wall at Elmstead Woods station (5 times during 1956–2007), and various habitats at Ruxley Gravel Pits (4 times during 1965–2007). At the latter there has been a large increase in corticolous species since 1988.

BLATCHLEY, I [F R] 2008. In “Reports of outdoor meetings 2007”. *Bull. Kent Field Club* **53**: 16–42: Leeds Churchyard (p 18–19). Eighty-six species were recorded, and notes are provided for the more notable finds.

BRITTON, A. 2008. *The Montane Heathland Lichen Guide*. Aberdeen: The Macaulay Institute. 50 pp. A user-friendly guide to the common or more conspicuous lichens of prostrate montane shrub and moss heaths in the mountains of Scotland, England and Wales. About 27 species are treated in detail, with colour photographs, descriptions, habitat notes, comparisons with similar species and distribution maps. The introduction has a guide to collecting and identifying lichens, a short glossary, and a guide to further reading and help. For the ecologically minded, a table is provided of the lichens most commonly

found in each of the main montane plant communities of the National Vegetation Classification (NVC).

- CANDOUSSAU, F., BOQUERAS, M., GÓMEZ-BOLEA, A., LÆSSØE, T., LOWEN, R., ROGERS, J.D., ROSSMAN, A.Y. & SAMUELS, G.J. 2007. Observations on *Neobarya*, including new species and new combinations. *Sydowia* **59**: 179–215. In this revision of **Neobarya* Lowen (1986) four of the 10 treated species are lichenicolous. These include the new species **N. peltigerae* Lowen, Boqueras & Gómez-Bolea, which is reported from “Dunnett Wood” [= Dunnet Forest], Caithness, growing on *Peltigera membranacea*. [In addition, there are two unidentified, lichenicolous collections of *Neobarya* from England in E.]
- CLERC, P. & TRUONG, C. 2008. The non-sorediate and non-isidiate *Parmelina* species (lichenized ascomycetes, *Parmeliaceae*) in Switzerland – *Parmelina atricha* (Nyl.) P. Clerc reinstated in the European lichen Flora. *Sauteria* **15**: 175–194. The separation of the corticolous *P. carporrhizans* and *P. quercina* is discussed, and a key for the European species of *Parmelina* is provided.
- COPPINS, B.J. & APTROOT, A. 2008. New species and combinations in *The Lichens of the British Isles*. *Lichenologist* **40**: 363–374. The following new species are described: **Anisomeridium robustum* Orange, Coppins & Aptroot, **Antennulariella lichenisata* Coppins & Aptroot, **Fellhanera duplex* Coppins & Aptroot, **Gyalideopsis crenulata* Coppins & Aptroot, **Micarea farinosa* Coppins & Aptroot and **Xerotrema quercicola* Coppins & Aptroot. The following new combinations concerning British and Irish species are proposed: **Bacidia squamellosa* (S. Ekman) Coppins & Aptroot (syn.: *Bacidia coralloidea* Coppins ad int.; *Bacidina squamellosa* S. Ekman), *Catillaria lobariicola* (Alstrup) Coppins & Aptroot (syn. *Scutula lobariicola*), *Collemopsidium arenisedum* (A.L. Sm.) Coppins & Aptroot (syn. *Pyrenocollema arenisedum*), *C. argilospilum* (Nyl.) Coppins & Aptroot (syn. *Pyrenocollema argilospilum*), *C. caesium* (Nyl.) Coppins & Aptroot (syn. *Pyrenocollema caesium*), *C. monense* (Wheldon) Coppins & Aptroot (syn. *Pyrenocollema monense*), *C. subarenisedum* (G. Salisb.) Coppins & Aptroot (syn. *Pyrenocollema subarenisedum*), *Miriquidica pycnocarpa* f. *sorediata* (Coppins & Fryday) Coppins & Aptroot syn. *Lecidea pycnocarpa* f. *sorediata*), *Pyrenocarpon thelostomum* (Ach. ex J. Harriman) Coppins & Aptroot (syn. *Pyrenocarpon flotowianum* (Hepp) Trevis; *Thrombium thelostomum*), *Topeliopsis azorica* (P. James & Purvis) Coppins & Aptroot (syn. *Ramonia azorica*), and *Verrucaria nigrescens* f. *tectorum* (A. Massal.) Coppins & Aptroot (syn. *Verrucaria tectorum* (A. Massal.) Körb.).
- COPPINS, B.J., BERGER, F. & ERTZ, D. 2008. *Opegrapha trochodes*, a new widely distributed corticolous species. *Sauteria* **15**: 195–204. The new species, **Opegrapha trochodes* Coppins, F. Berger & Ertz, is characterized by its mainly rounded, umbonate to gyrose apothecia and 3-septate ascospores. It is known from Africa, Asia, Austria, and in the British Isles from Wales and SW England.

- FRYDAY, A. 2008. The genus *Fuscidea* (*Fuscideaceae*, lichenized Ascomycota) in North America. *Lichenologist* **40**: 295–328. This treatment deals with several British taxa, and some British specimens are cited.
- GAYA, E., NAVARRO-ROSINÉS, P., LLIMONA, X., HLADUN, N. & LUTZONI, F. 2008. Phylogenetic reassessment of the *Teloschistaceae* (lichen-forming Ascomycota, *Lecanoromycetes*). *Mycological Research* **112**: 528–546. The polyphyly of *Caloplaca*, *Fulgensia*, *Xanthoria* and possibly *Teloschistes* is confirmed. Several well-defined clades were resolved, including those represented by *C. aurantia* and *C. chlorina*. Nomenclatural changes are not made because several species groups are not as yet sufficiently well supported.
- GOODMAN, N. (ed.) 2007. *Dawson Turner. A Norfolk Antiquary and his Remarkable Family*. Chichester: Phillimore, ISBN 978-1-86077-445-4, 180 pp. Seven chapters on this influential, late 18th/early 19th century polymath. There is some mention of his lichenological involvements, as well as several other lichenologists of the time, e.g. William Borrer, James Brodie, Hugh Davies, William and Joseph Hooker, Ellen Hutchins, Charles Lyell and James Edward Smith.
- GUEIDAN, C. & ROUX, C. 2007. *Verrucaria calciseda* DC. Néotypification, description et transfer dans le genre *Bagliettoa*. *Bull. Soc. linn. Provence* **58**: 181–194. *Verrucaria calciseda* is neotypified with a specimen which accords with the usual concept of this species. It is treated in the genus *Bagliettoa* as *B. calciseda* (DC.) Gueidan & Cl. Roux.
- IHLEN, P.G. & WEDIN, M. 2008. An annotated key to the lichenicolous Ascomycota (including mitosporic anamorphs) of Sweden. *Nova Hedwigia* **86**: 275–365. This key includes 298 ascomycetes plus 65 mitosporic fungi, the majority of which are to be found in the British Isles. It is supplemented by many photomicrographs, some taxonomic notes, an index to taxa, a host index and an extensive bibliography.
- JØRGENSEN, P.M. 2008. *Vahliella*, a new lichen genus. *Lichenologist* **40**: 221–225. The genus *Vahliella* P.M. Jørg. is introduced to accommodate the type species, *V. leucophaea* (Vahl) P.M. Jørg. (syn. *Fuscopannaria leucophaea*), as well as *V. atlantica* (P.M. Jørg. & P.W. James) P.M. Jørg. (syn. *Fuscopannaria atlantica*) and six other, non-British species.
- KANTVILAS, G. 2008. Observations on some Tasmanian species of the lichen genus *Megalaria* (Lecanorales: *Megalariaceae*). *Muelleria* **26**: 64–71. Includes a detailed description of *M. laureri*, with drawings of ascospores and ascus apex.
- MUGGIA, L., GRUBE, M. & TRETJACH, M. 2008. A combined molecular and morphological approach to species delimitation in black-fruited, endolithic *Caloplaca*: high genetic and low morphological diversity. *Mycological Research* **112**: 36–49. The results confirm the specific distinction of some often confused, morphologically similar taxa, e.g. *C. alociza* and *C. albopruinosa* (*C. agardhiana* auct.; not British), and *C. chalybaea* and *C. variabilis*.
- MUGGIA, L., HAFELLNER, J., WIRTZ, N., HAWKSWORTH, D.L. & GRUBE, M. 2008. The sterile microfilamentous lichenized fungi *Cystocoleus ebeneus* and *Racodium rupestre* are relatives of plant pathogens and clinically important

- dothidealean fungi. *Mycological Research* **112**: 50–56. Both species are shown to be ascomycetes belonging to the *Dothideomycetes*, but are not closely related.
- NAVARRO-ROSINÉS, P., ROUX, C. & GUEIDAN, C. 2007. La genroj *Verrucula* kaj *Verruculopsis* (Verrucariaceae, Verrucariales). *Bull. Soc. linn. Provence* **58**: 133–180. A morphological, anatomical, biological and phylogenetic study of the *Verrucaria helveticorum* group, mostly parasitic on *Caloplaca* species with anthraquinones and to *Xanthoria elegans*, results in the recognition of two genera: *Verrucula* J. Steiner (1896) and the newly described *Verruculopsis* Gueidan, Nav.-Ros. & Cl. Roux. The former genus is represented in the British Isles by *Verrucula latericola* (Erichsen) Nav.-Ros. & Cl. Roux. (syn. *Verrucaria latericola*), although this needs to be confirmed by a critical re-appraisal of British material. It is possible that some other of the newly recognized species are involved, e.g. *Verrucula maritima* Nav.-Ros. & Cl. Roux on *Caloplaca maritima*. The genus *Verruculopsis* is represented, at least in Ireland, by *V. flavescens* Gueidan, Nav.-Ros. & Cl. Roux, with a specimen on *Caloplaca flavescens* being cited from The Burren in Co. Clare. In addition, two species of *Verrucaria* are transferred to *Placopyrenium* Breuss (1987): *P. canellum* (Nyl.) Gueidan & Cl. Roux (syn. *V. canella*) and *P. fuscillum* (Turner) Gueidan & Cl. Roux (syn. *V. fuscilla*).
- PALMER, K 2008. Lichen report 2007. *Bull. Kent Field Club* **53**: 56–57. A report of lichenological investigations and notable finds in the county. Includes records and notes from Leeds Churchyard, Romney Marsh, Downe Community Orchard, Holwood House, Swattenden near Cranbrook, Canterbury, Langton Green, Dunorlan Park in Tunbridge Wells, Charing Church, and Smarden Church. These notes include revisits to find notable species, such as *Dermatocarpon miniatum* and *Lecanora pruinosa*.
- PETERKEN, G. 2008. *Wye Valley*. The New Naturalist Library. London: HarperCollins, 466 pp. A New Naturalist regional volume mainly covering an area of the Lower Wye Valley from Hereford to Chepstow. Lichens are given a section (pp 355–357), mainly dealing with wooded habitats, but lichens on stonework and gravestones are mentioned elsewhere (e.g. pp 290–291, 300).
- PRESLAND, J. 2007. *Conserving the Flora of Limestone Dry Stone Walls*. Salisbury: Wiltshire Natural History Publications Trust. 12 pp plus illustrated covers. A booklet emphasising the importance of these walls and giving management advice. [Although not of critical importance to the thrust of the booklet, the lichen information suffers from not being checked: e.g. the photo of *Lecanora campestris* is of *Aspicilia calcarea*.]
- PRINTZEN, C., SPRIBILLE, T. & TØNSBERG, T. 2008. *Myochroidea*, a new genus of corticolous, crustose lichens to accommodate the *Lecidea leprosula* group. *Lichenologist* **40**: 195–207. The new genus *Myochroidea* Printzen, T. Sprib. & Tønsberg accommodates four species, including *M. porphyrospoda* (Anzi) Printzen, T. Sprib. & Tønsberg (syn. *Lecidea porphyrospoda*).
- PURVIS, O.W., SEAWARD, M.R.D. & LOPPI, S. (eds) 2007. Lichens in a changing pollution environment. *Environmental Pollution* **146**(2): 291–399. A set

- of 14 papers, a few relating to studies in the British Isles. [Not seen – reported in *Mycological Research* **112**: 2–3.]
- SANTESSON, R. 2008. Fungi Lichenicoli Exsiccati. Fasc. 15 & 16 (Nos 351–400). *Thunbergia* **36**: 1–29. Includes two records of lichenicolous fungi from Scotland (*Plectocarpon lichenum* and *P. scrobiculatae*).
- SAVIĆ, S. & TIBELL, L. 2008. *Atla*, a new genus in the *Verrucariaceae* (*Verrucariales*). *Lichenologist* **40**: 269–282. Supported by molecular studies, a group of large-spored *Polyblastia* are placed in the new genus *Atla* S. Savić & Tibell. British representatives are *A. alpina* S. Savić & Tibell and *A. wheldonii* (Travis) S. Savić & Tibell (syn. *P. wheldonii*). [British collections of the former were included within the previously broad concept of *Polyblastia theleodes*. Other species in this group are to be treated in forthcoming papers in the genera *Henrica* B. de Lesd. and *Sporodictyon* A. Massal.].
- SEAWARD, M.R.D. 2008. Checklist of Yorkshire lichens. *Naturalist* **133**: 33–53. This checklist enumerates 923 taxa, 849 of which are consistently or facultatively lichenized fungi, and 74 are lichenicolous and non-lichenized fungi. Of the 923 taxa recorded over the past 300 years, 112 are based solely on old records, the majority of which are presumed extinct. Of the 737 extant taxa, 304 have been newly discovered since 1956. For each taxon entry there are two numbers: the first gives the total number of hectads in which the taxon has been recorded [maximum of 195], the second (in parentheses) the number of hectads from which it has disappeared.
- SÉRUSIAUX, E. & COPPINS, B.J. 2008. *Pyrenula acutispora* in western Europe, Macaronesia and British Columbia (Canada). *Sauteria* **15**: 521–528. *Pyrenula acutispora* Kalb & Hafellner (1992) is the correct name for what in Britain has been called '*P. aff. microtheca*'.
- ŚLIWA, L. 2007. A revision of the *Lecanora dispersa* complex in North America. *Polish Botanical Journal* **52**: 1–70. Although a revision of the N. American taxa, the introductory pages on anatomy and morphology, etc., are essential reading for any student of this difficult group, and many species occurring in the British Isles are treated and illustrated, namely *L. agardhiana*, *L. albescens*, *L. andrewii*, *L. crenulata*, *L. dispersa*, *L. fugiens*, *L. hagenii*, *L. persimilis*, *L. salina*, *L. sambuci*, *L. semipallida* and *L. zosteræ*.
- ŚLIWA, L. 2007. *Lecanora semipallida*, the correct name for *L. xanthostoma* and a reappraisal of *L. flotoviana* (Lecanoraceae, Ascomycotina). *Polish Botanical Journal* **52**: 71–79. The name *L. flotoviana* is shown to have been misapplied, and most specimens under that name should be referred to *L. semipallida* H. Magn. (1940), a synonym of which is *L. xanthostoma*.

B.J. Coppins
Royal Botanic Garden Edinburgh

New, Rare and Interesting Lichens

Contributions to this section are always welcome. Submit entries to Chris Hitch, Orchella Lodge, 14, Hawthorn Close, Knodishall, Saxmundham, Suffolk, IP17 1QY, in the form of species, habitat, locality, VC no, VC name, (from 1997, nomenclature to follow that given in the appendix, see BLS *Bulletin* 79, which is based on the Biological Record Centre for instructions for Recorders, ITE, Monks Wood Experimental Station, Abbots Ripton, PE17 2LS, 1974). Grid Ref (GR) (please add letters for the 100km squares to aid BioBase and Recorder 2000 users), altitude (alt), where applicable in metres (m), date (month and year). NRI records should now include details of what the entry represents, e.g. specimen in Herb. E, Hitch etc., with accession number where applicable, field record or photograph, to allow for future verification if necessary or to aid paper/report writing. Determined/confirmed by, Comments, New to/the, Finally recorder. An authority with date after species is only required when the species is new to the British Isles. Records of lichens listed in the RDB are particularly welcome, even from previously known localities. In the interests of accuracy, the data can be sent to me on e-mail, my address is cjbh.orchldge@freeuk.com, or if not, then typescript. Copy should reach the subeditor at least a fortnight before the deadline for the *Bulletin*. Please read these instructions carefully.

New to the British Isles

Anisomeridium robustum Orange, Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2499**.

Antennulariella lichenisata Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2500**.

Bacidia squamellosa (S. Ekman) Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. Known previously under the unpublished name *Bacidia coralloidea* Coppins ad int. **BLS no. 1732**.

Fellhanera duplex Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2504**.

Gyalideopsis crenulata Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2505**.

Lichenothelia renobalesiana D. Hawksw. & V. Atienza (2008): for details see *Lichenologist* **40**: 87–96. **BLS no. 2519**.

Llimoniella fuscatae Hafellner & Obermayer (2007): on *Acarospora fuscata* on top of boulder, central part of Yr Wyloer, Gilfach Farm, north of Rhayader, VC 43, Radnorshire, GR 22 (SN)/956.717, alt 330 m, December 1997. Herb. S.P. Chambers (E). Determined by P. Diederich. Recently described from Austria and Germany. It has sessile, black lecideine apothecia, 0.2–0.4 mm diameter, with branched paraphyses and broadly ellipsoid ascospores 9–12 × 5.5–7.5 µm in size. For full description and illustrations see Hafellner & Obermayer in *Mitt. naturwiss. Ver. Steiermark* **136**: 5–59 (2007). **BLS no. 2498.** *S.P. Chambers & B.J. Coppins*

Micarea farinosa Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2507.**

Micarea prasinella (Jatta) I.M. Lamb (1953): on *Hypnum cupressiforme* growing over roots and rock below larch tree, Dundonnell River ravine, Dundonnell Woods SSSI, VC 105, West Ross, GR 28(NH)/121.846, alt 90–100 m, April 2008. Collected by David Genney. Herb. Coppins 22577 (E). Also new to Europe. **BLS no. 2508.**

B.J. Coppins

Mycoporum sparsellum Nyl. (1867): on *Corylus* in Baleachdrach area, Islay, VC 102, South Ebuades, GR 16(NR)/4--6--, July 1992. Herb. Coppins 15065 (E). **BLS no. 2509.** See also **Other Records.** *B.J. Coppins & A.M. Coppins*

Xerotrema quercicola Coppins & Aptroot (2008): for details see *Lichenologist* **40**: 363–374. **BLS no. 2518.**

Other Records

Acarospora macrospora subsp. *macrospora*: (i) on a west facing limestone cliff, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9852.7897, alt 510 m, June 2008. Herb Sanderson 1137; (ii) on northwest-facing limestone cliff, Creag Mhor, *ibid.*, GR27(NN)/9368.7407, alt 500 m, June 2008. Field records. Two new sites for this Near Threatened species *N.A. Sanderson, A.M. Cross & P. Aspen*

Arthonia ligniaria: (i) on ball clay spoil, Chudleigh Knighton VC 3, South Devon GR 20(SX)/841.757, January 2008. Determined by B.J.Coppins. Herb. Benfield. (ii) on china clay spoil, Wotter, Lee Moor, VC 3, South Devon, GR 20(SX)/558.623, March 2008. New to southwest England. *B. Benfield*

Bacidia fuscoviridis: on shaded siliceous blocks in mortared retaining wall below the A470(T), Ganllwyd, near Gelligemlyn, north of Dolgellau, VC 48, Merionethshire, GR 23(SH)/730.227, alt 40 m, March 2008. Field record. New to the vice-county. *S.P. Chambers & S.R. Davey*

Bacidia herbarum: (i) on moss on limestone grit on ledge on northwest-facing limestone cliff, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9837.7875, alt 390 m, June 2008. Herb Sanderson 1131. (ii) on lime

encrusted *Saxifraga oppositifolia* stem, on limestone outcrop, Creag Mhor, *ibid.*, GR27(NN)/9434.7445, alt 640 m, June 2008. Herb Sanderson 1138. Two new sites for this Data Deficient RDB species. *N.A. Sanderson, A.M. Cross & P. Aspen*

Bacidia incompta: large patches in rain tracks on exposed lignum on an ancient *Fagus* pollard, in relic *Quercus* – *Fagus* – *Ilex* pasture woodland, South Ambersham, VC 13, West Sussex, GR 41(SU)/9116.2022, May 2008. Field Record. Second modern record for this Vulnerable and BAP lichen for the vice-county. *N.A. Sanderson*

Bacidia subincompta: in wound track, associated with *Sclerophora peronella* on ancient broken *Betula pubescens* ssp. *tortuosa* in *Betula pubescens* dominated pasture woodland, Sròn Peallaig, Allt Fèith Làir, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9960.7947, alt 450 m, June 2008. Herb Sanderson 1127. New 10km grid square record for a Vulnerable species. *N.A. Sanderson, A.M. Cross & P. Aspen*

Brigantiaea fuscolutea: on moss on limestone ledge of northwest-facing limestone cliff, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9832.7875, alt 480 m, June 2008. Herb Sanderson 1133. A new site for this Near Threatened species.

N.A. Sanderson, A.M. Cross & P. Aspen

Buellia erubescens: on ancient *Salix caprea* ssp. *sphacelata*, in *Betula pubescens* dominated pasture woodland in ravine, Allt Fèith Làir, Glen Tilt, VC 89, East Perthshire, GR 28(NO)/0037.7962, alt 520 m, June 2008. Herb Sanderson 1142. First vice-county record. *N.A. Sanderson, A.M. Cross & P. Aspen*

Chaenotheca chlorella: associated with *Chaenotheca brachypoda* and *Opegrapha niveoatra* on inclined *Fraxinus* at edge of churchyard, Stanway, VC 19, North Essex, GR 52(TL)/940.243, May 2008. Herb. **STD** and duplicate in PMEB. Confirmed by B.J. Coppins. First county record for this RDB species. *P.M. Earland-Bennett & J.F. Skinner*

Chaenotheca hispidula: dry bark of old *Quercus*, in woodland within parkland, Duns Wood, Highclere Park SSSI, VC 12, North Hampshire, GR 41(SU)/454.604, May 2008. Field Record. New to the vice county. *N.A. Sanderson*

— —: on dry bark of ancient *Fraxinus*, boundary tree on river bank, Capp's Bridge, Knepp Castle, VC 13, West Sussex, GR51(TQ)/1510.2169. Field Record. First modern record for this lichen. *N.A. Sanderson, A.M. Cross & P. Aspen*

Chaenotheca stemonea: growing deep in bark cracks on dry side of old *Quercus*, accompanied by *Chaenotheca trichialis*, which grew higher up inside the bark crevice, at edge of woodland at base of ravine slope, The Slaughter, English Bicknor, VC 34, West Gloucestershire, GR 32(SO)/556.146, May 2008. Herb Sanderson 1119. New to the vice- county. *N.A. Sanderson*

— —: dry bark on old *Quercus*, in parkland, east of Duns Mere, Highclere Park SSSI, VC12, North Hampshire, GR 41(SU)/4584.6007, May 2008. Field Record. Second record for the vice-county. *N.A. Sanderson*

Chaenotheca trichialis: growing in bark cracks on dry side of old *Quercus*, accompanied by *Chaenotheca stemonea*, which grew deeper inside the bark crevices, at edge of woodland at base of ravine slope, The Slaughter, English Bicknor, VC 34, West Gloucestershire, GR 32(SO)/556.146. May 2008. Herb Sanderson 1119. New to the vice-county. *N.A. Sanderson*

— —: dry bark on ancient *Quercus*, in relic *Quercus* – *Fagus* – *Ilex* pasture woodland, South Ambersham, VC13, West Sussex, GR 41(SU)/912.202, May 2008. A rare species in the county and the first record for the county since 1991. *N.A. Sanderson*

Chaenothecopsis nigra: parasitising *Chaenotheca chrysocephala*, on exposed lignum of old *Sorbus aucuparia* in *Betula pubescens* dominated pasture woodland, Gleann Mòr, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9960.7914, alt 440 m, June 2008. Herb. Sanderson 1140. New to the vice-county. *N.A. Sanderson, A.M. Cross & P. Aspen*

— —: on dry bark of ancient *Quercus* in ancient parkland, Tree 5228, Croft Castle, VC 36, Herefordshire, GR 32(SO)/442.658, May 2008. Herb. Sanderson 1144. New to the vice-county. *N.A. Sanderson*

Chrysothrix chlorina: (i) on rock under overhang of quartzite cliff in ravine, Gleann Mòr, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9962.7909, alt 450 m, June 2008. Herb Sanderson 1139. (ii) on rock under overhanging quartzite outcrop above stream, Slochd Dal Mhoraisd, *ibid.*, GR 27(NN)/9083.7203, alt 280 m, June 2008. (iii) on rock under overhang of quartzite cliff in ravine, Buailagan Wood, *ibid.*, GR 27(NN)/9050.7188, alt 260 m, June 2008. This species is new to the vice-county.

N.A. Sanderson, A.M. Cross & P. Aspen

Cladonia deformis: on large, fallen decorticate *Pinus* trunk beside river, in native pinewood, Glen Quoich, Mar Forest, Braemar, VC 92, South Aberdeenshire, GR 37(NO)/106.919, alt 380 m, April 2006, collected by Brian Ballinger, Coppins 22157 (E), and April 2007 by B.J. Coppins, Coppins 22292 (E). These collections confirm *C. deformis* as a British species, all previous localized records being misidentifications of *C. sulphurina*. *B.J. Coppins*

Cliostomum flavidulum: on mature *Quercus*, on the boundary of ancient woodland, Butcher's Wood, Uckfield, VC 14, East Sussex, GR 51(TQ)/460.217, May 2008. Field record. New to the vice-county. *N.A. Sanderson*

Cliostomum tenerum: for details, see under *Cresponia premnea* subsp. *saxicola*.

Cresponia premnea var. *saxicola*: on gritty Ordovician sandstone in dry underhang, with *Cliostomum tenerum*, *Lecanora praepostera* & *Llimonaea soreliata*, on sea cliff exposure, Penbryn cliffs, VC 46, Cardiganshire, GR 22(SN)/297.528, alt 80 m, July 2008. Herb. SPC. An unusual maritime occurrence in the *Sclerophytetum circumscriptae* association. *R.G. Woods & S.P. Chambers*

Dermatocarpon intestiniforme: on sandstone ledge in fluvial mesic zone, Kilmaley River, Kilmaley graveyard, 10 km west of Ennis, VC H9, Clare, GR 11(R)/25-74-. June 2001. Herb. BEL. Very few records for Ireland. *M.J. Simms*

Dimerella lutea: abundant on base rich bark of mature *Quercus*, on glade edge in woodland, within parkland, Duns Wood, Highclere Park SSSI, VC 12, North Hampshire, GR 41(SU)/4536.6048, May 2008. Field Record. New to North Hampshire and a considerable extension to its existing known range, it being 50 km to the nearest existing records. This species appears also to be currently undergoing a population explosion in the New Forest; presumably either climate or air quality is improving for this species.
N.A. Sanderson

Diploschistes gypsaceus: beneath overhanging top of limestone wall in churchyard, Tyrellspass, VC H23, West Meath, GR 22 (N)/41-37-, February 2008. Field photograph. Very few records for this species in Ireland outside of the Burren.
M.J. Simms

Fuscopannaria ignobilis: on three old *Fraxinus* trees, in *Betula pendula* – *Fraxinus* – *Quercus* pasture woodland, Craiganour Woods, Loch Rannoch, VC 88, Mid Perthshire, 27(NN)/6217.5902, 27(NN)/6225.5906 and 27(NN)/6222.5901, June 2008. Field record. Three more trees found in a new area of these woods, bringing the total number of trees in this woodland complex known to support this Vulnerable RDB & BAP lichen to eight.
N.A. Sanderson, A.M. Cross & P. Aspen

Gregorella humida: sterile thalli covering a square metre, on clay hillock in old quarry, Stanway, VC 19, North Essex, GR 52(TL)/948.240, May 2008. Herb. **STD** and duplicate in **PMEB**. Determined by B. J. Coppins. New to the county.
P.M. Earland-Bennett & J.F. Skinner

Gyalecta ulmi: (i) on moss on limestone ledges on northwest- and west-facing limestone cliffs, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9837.7875, 27(NN)9839.7876, 27(NN)9841.7875 and 27(NN)9844.7894, alt. 390 – 490 m, June 2008. Herb Sanderson 1132. (ii) several large patches on moss on downward sloping limestone ledge under an overhang, Creag Mhor, *ibid.*, GR27(NN)/9368.7407, alt 500 m, June 2008. Field record. Two new sites for this Endangered and BAP species. The Creag an Duibh site appears to support one of the largest known colonies of this species in Britain. It is frequent over tens of metres of cliff at the first grid reference with smaller but substantial colonies with numerous thalli at other grid references. The large limestone cliff at Creag an Duibh was not fully explored and more colonies doubtlessly exist here. Similarly only a small part of the vast limestone cliff at Creag Mhor was examined.
N.A. Sanderson, A.M. Cross & P. Aspen

Halecania spodomela: on schist boulder on hillside above Treanbeg road, southwest flank of Buckoogh, VC H27, West Mayo, GR 03(F)/984.009, alt 280 m, August 2008. Field record. New to the vice-county and second Irish record.
S.P. Chambers & H.F. Clow

Intralichen baccisporus: on thallus of *Diploicia canescens* on Roman tile of south wall of fort, Burgh Castle, VC 25, East Suffolk, GR 63(TG)/475.046, March 2008. Herb. CJBH. Second county record of this taxon on *Diploicia canescens*.
P.M. Earland- Bennett & C.J.B. Hitch

Julella sericea: on ancient *Betula* pollard, in *Betula pendula* – *Fraxinus* – *Quercus* pasture woodland, Craiganour Woods, Loch Rannoch, VC 88, Mid Perthshire, GR 27(NN)/6211.5900, alt 220 m, June 2008. Herb. Sanderson 1121 (E). Determined by B J Coppins. He (BJC) reported that the specimen had pycnidia with brown, 3-septate conidia, 11-13 x 4.5-4.7 µm. Such conidia were mentioned by Lahm in the 1880s (for the synonym or closely related *J. fallaciosus*) but the report had been considered to be from another fungus. However, in this collection, the pycnidial wall is the same green colour as the perithecial wall so Lahm could have been correct. New to Scotland and second British record. N.A. Sanderson, A.M. Cross & P. Aspen

Lecanora compallens: in dry bark crevices on trunk of freestanding *Fraxinus excelsior* in sheep pasture, near Rhosgoch, southwest of Llanilar, VC 46, Cardiganshire, GR22(SN)/608736, alt 166 m, February 2008. Herb. SPC. Confirmed by A. Orange (usnic acid & zeorin by TLC). New to Wales. S.P. Chambers

Lecanora conferta: several thalli on weathered perspex information board, Bronte Homeland, Knockiveagh, VC H38, Down, GR 33 (J)/17-37-. July 2008. Field photographs. First recent record for Ireland, though not the usual substrate! A. Meredith & M.J. Simms

Lecanora hagenii: on *Sambucus* trunk, Two Tree Island, Leigh-on-Sea, VC 18, South Essex, GR 51(TQ)/827.853, April 2008. Herb. STD and duplicate in PMEB. Determined by B. J. Coppins. New to the county. P.M. Earland-Bennett

Lecanora praepostera: for details, see under *Cresponia premnea* subsp. *saxicola*.

Lecanora subcarnea: locally frequent on slightly recessed vertical dolerite (Whinsill) faces at foot of crag, Holwick Scar, VC 65, North West Yorkshire, GR 35(NY)/901.269, alt 300 m, July 2007. Field record. New to the vice-county. S.P. Chambers

Lecidea promixta: on irrigated gritstone shelf at ground level in disused quarry, Bryniau, Merthyr Tydfil, VC 41, Glamorgan, GR 32(SO)/057.090, alt 350 m, May 2008. Herb. SPC. New to the vice-county. S.P. Chambers

Leptorhaphis atomaria: on trunk of *Populus tremula* on cliff in *Betula pubescens* dominated ravine woodland, Sròn Peallaig, Allt Fèith Làir, VC 89, East Perthshire, GR 27(NN)/9973.7934, alt 460 m, June 2008. Herb. Sanderson 1141. A new vice-county record for this Nationally Scarce aspen specialist. N.A. Sanderson, A.M. Cross & P. Aspen

Llimonaea soredata: for details, see under *Cresponia premnea* subsp. *saxicola*.

Lobaria scrobiculata: locally common in *Corylus* woodland, Kilcorney Glebe, the Burren, VC H9, Clare, GR 12 (M)/22-00-. May 2008. Field photographs. New to the Burren and the vice-county. M.J. Simms

Megaspora verrucosa: (i) on moss on ledges of limestone cliffs and rocks, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9843.7874, 27(NN)/9832.7875 and 27(NN)/ 9855.7896, alt 480 – 534 m, June 2008. (ii) on a

limestone outcrop, Creag Mhor, *ibid.*, GR 27(NN)/9392.7427, alt 540 m, June 2008. Field records. Two new sites for this Near Threatened species.

N.A. Sanderson, A.M. Cross & P. Aspen

Micarea myriocarpa: on boulder scree in disused quarry, Bryniau, Merthyr Tydfil, VC 41, Glamorgan, GR 32(SO)/058.090, alt 360 m, May 2008. Herb. SPC. New to the vice-county.

S.P. Chambers

Micarea pycnidiophora: on two *Alnus* trees, in woodland within parkland, Duns Wood, Highclere Park SSSI, VC 12, North Hampshire, GR 41(SU)/454.604 and 41(SU)4543.6054, May 2008. Field Record. A new site for this species and the first record from the Thames Basin. The site is highly threatened by *Rhododendron*, with the additional problem of the invasion originating from rare early hybrid plantings. Solutions are being developed within the SSSI, involving trimming back the *Rhododendron* from older tree trunks along the walks to retain both lichen and horticultural interest.

N.A. Sanderson

— —: on ancient *Ilex*, with *Mycoporum lacteum*, in an ancient *Ilex* grove, on shallow acid soils over a sandrock outcrop, northeast of Lake Wood, Ukfield, VC 14, East Sussex, GR 51(TQ)/4607.2181, May 2008. Herb. Sanderson 1145. A new site for this Near Threatened lichen.

N.A. Sanderson

Mycocalicium subtile: on lignum of fallen and propped up *Quercus* limb, in *Betula pendula* – *Fraxinus* – *Quercus* pasture woodland, Craiganour Woods, Loch Rannoch, VC 88, Mid Perthshire, GR 27(NN)/6217.5909, alt 220 m, June 2008. Herb. Sanderson 1122. First record for the vice-county.

N.A. Sanderson, A.M. Cross & P. Aspen

Mycoporum lacteum: on ancient *Ilex* with *Micarea pycnidiophora*., in ancient *Ilex* grove on shallow acid soils over a sandrock outcrop, northeast of Lake Wood, Ukfield, VC 14, East Sussex, GR 51(TQ)/4608.2180, May 2008. Herb. Sanderson 1145. The only other record was a 19th century record for Sheffield Park within the same 10km national grid square. First modern record for this Near Threatened species for the county.

N.A. Sanderson

Mycoporum sparsellum: at Struidh Wood, Laig to Kildonnan SSSI, Eigg, VC 104, North Ebudes, GR 17(NM)/493.880, May 2000. Herb. Coppins 19222 (E). See also **New to the British Isles.**

B.J. Coppins & A.M. Coppins

Peltigera polydactylon: on large mossy calcareous riverside boulder (1 m diameter), River Liddel (south bank), Blae Pot, Penton, VC 70, Cumberland, GR 35(NY)/4313.7713, alt 50 m, March 2008. Herb. D. J. Clarke. Confirmed by M.R.D. Seaward. New to the vice-county.

D.J. Clarke

— —: on large calcareous riverside boulder (>1 m diameter), River Liddel (north bank), Penton, VC 72, Dumfriess-shire, GR 35(NY)/4322.7749, alt 50 m, March 2008.

D.J. Clarke

Peltigera polydactylon: on large mossy calcareous boulder (>1 m diameter), River Irthing (west bank), Gilsland VC 70, Cumberland, GR 35(NY)/6396.6814, alt 140 m, April 2008. *D.J. Clarke*

Pertusaria melanochlora: several patches on flushed southeast-facing Ordovician crag, Drybedd, north of Dyffryn Castell, VC 46, Cardiganshire, GR 22(SN)/774.825, alt 450 m, March 2008. Herb. SPC. New to the vice-county and second modern Welsh record. *S.P. Chambers*

Phaeocalicium praecedens: on *Populus tremula* twigs, in *Betula pubescens* dominated ravine woodland, Sròn Peallaig, Allt Fèith Làir, VC 89, East Perthshire, GR 27(NN)/996.796 & 27(NN)09973.7934, alt 450 – 460 m, June 2008. Herb Sanderson 1126. A new vice-county record for this Near Threatened species.

N.A. Sanderson, A.M. Cross & P. Aspen

Phaeopyxis punctum: apothecia growing on *Cladonia squamules* (*C. pyxidata?*), in slight path in mown dry heath, Caesar's Camp, Bourley, VC 17, Surrey GR 41(SU)/8336.5003, August 2008. Herb. Sanderson 1146. Determined by B. J. Coppins. Appears to be the first record for England for this lichenicolous fungi.

A.M. Cross & N.A. Sanderson

Placynthiella hyporhoda: on china clay spoil at Smallhanger Waste, Dartmoor, VC 3 South Devon GR 20(SX)/574.594, March 2008. Determined by B.J. Coppins. New to southwest England. *B.Benfield*

Polycoccum pulvinatum: on fertile *Physcia caesia* on top of concrete posts of fencing around mast enclosure, Mynydd Llanybydder, VC 44, Carmarthenshire, GR 22(SN)/535.393, alt 405 m, March 2008. Herb. SPC. New to the vice-county.

S.P. Chambers

Porina rosei: on base-rich flushed bark of an old *Quercus*, in high forest on limestone ravine slope, The Slaughter, English Bicknor, VC 34, West Gloucestershire, GR 32(SO)/5565.1430, May 2008. Herb. Sanderson 1143. Second record for the vice-county for this Near Threatened species. *N.A. Sanderson*

Porpidia contraponenda: locally frequent on flushed east-facing vertical faces at top of crag, Cerrig Gwalch, north of Rhayader, VC 43, Radnorshire, GR 22(SN)/934.710, alt 420 m, May 2008. Field record. New to the vice-county. *S.P. Chambers*

Pseudocyphellaria crocata: on *Corylus* in mature *Corylus* woodland, Fahee North, the Burren, VC H9, Clare, GR 11(R)/30-99-. March 2008. Field photographs. Third record for the Burren, where it appears to occur widely at low abundance.

M.J. Simms

Ptychographa xylographoides: on lignum of fallen and propped up *Quercus* limb, in *Betula pendula* – *Fraxinus* – *Quercus* pasture woodland, Craiganour Woods, Loch Rannoch, VC 88, Mid Perthshire, GR 27(NN)/6217.5909, alt 220 m, June 2008. Herb. Sanderson 1122. New 10km grid square for this Near Threatened species.

N.A. Sanderson, A.M. Cross & P Aspen

Pyrenidium actinellum: on *Baeomyces rufus* on damp china clay spoil, Smallhanger Waste, Dartmoor, VC 3, South Devon GR 20(SX)/574 594, March 2008. Determined by B. J. Coppins. New to southwest England. *B. Benfield*

— —: on *Baeomyces rufus* in the Glynn Valley, Bodmin Moor, VC 2 East Cornwall, GR 20(SX)/145.716 August 2008. New to the county. *B. Benfield*

Pyrenula hibernica: on trunk of recently dead *Sorbus* in woodland, south side of Mullagh More, the Burren National Park, VC H9, Clare, GR 11(R)/ 95-33-. May 2008. Herb. M. J. Simms. First record for Ireland outside of Kerry and West Galway. *M.J. Simms*

Sclerophora peronella: in wound track associated with *Bacidia subincompta* of ancient broken *Betula pubescens* subsp. *tortuosa* in *Betula pubescens* dominated pasture woodland, Sròn Peallaig, Allt Fèith Làir, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9960.7947, alt 450 m, June 2008. Field record. New 10km square for this Near Threatened species. *N.A. Sanderson, A.M. Cross & P. Aspen*

Scutula tuberculosa (name change for *S. krempelhuberi*): parasitic on *Solorina saccata*, on ledge of northwest-facing limestone cliff, Creag an Duibh, Glen Tilt, VC 89, East Perthshire, GR 27(NN)/9837.7875, alt 390 m, June 2008. Herb. Sanderson 1130. A new vice-county record for a rarely recorded parasite.

N.A. Sanderson, A.M. Cross & P. Aspen

Stenocybe pullatula: on *Alnus* twigs, in woodland within parkland, Duns Wood, Highclere Park SSSI, VC 12, North Hampshire, GR 41(SU)/454.604, May 2008. Field Record. A new site and a considerable extension northeast of its existing known range and new to the Thames Basin. *N.A. Sanderson*

Strigula jamesii: on base-rich bark of *Quercus petraea* trunk, with *Opegrapha trochodes ad int.*, in wooded gorge of Afon Rheidol opposite Derwen, VC 46, Cardiganshire, GR 22(SN)/736.773, alt 70m, August 2007. Herb. SPC. Confirmed by A. Orange. New to the vice-county. *S.P. Chambers*

Thelidium minutulum: on soil associated with *Collema limosum*, Barling, VC 18, South Essex, GR 51(TQ)/936.896, April 2008. Herb. **STD**. New to the county.

P.M. Earland-Bennett

Umbilicaria polyphylla: (i) on large boulder below North Tor, Slieve Bearnagh, Mourne Mountains, VC H38, Down, GR 33(J)/31-28-, September 2008. Field photograph; (ii) on edge of granite crag, Diamond Rocks, *ibid.*, GR 33(J)/32-28-, September 2008. Only one previous record for Northern Ireland. *M.J. Simms*

Umbilicaria torrefacta: on edge of granite crag, Diamond Rocks, Mourne Mountains, VC H38, Down, GR 33(J)/32-28-. September 2008. Field photograph. New to Northern Ireland. *M.J. Simms*

Xanthoparmelia tinctina: a single thallus about 15 cm diam on sandstone plinth of tomb in full sun in churchyard, Lympstone, VC 3, South Devon, GR 10(SX)/99-84-May 2008. Field record and Herb. Benfield. New to the county.

Corrigenda

I am indebted to Bernard Abbott for pointing out an error in the last issue of NRI (*BLS Bulletin* 102 p, 26), viz *Pronectria oligospora* Lowen (1995) should read *Pronectria oligospora* Lowen & Rogerson (1995).

Compiled by Chris Hitch
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British Isles List of Lichens and Lichenicolous Fungi

September 2008 update to list

The fully corrected and inclusive list will be available on the BLS web site, <http://www.theBLS.org.uk> both as text and as a .csv file as well as this update (and previous updates to the list originally published on 22nd March 1999). The additions and corrections have also been made to the BioBase for Lichens species dictionary, and an updated BIOTAB file is available to users from Janet Simkin.

We are indebted to Alan Orange, André Aptroot, Neil Sanderson, Emmanuël Sérusiaux, and other checklist users, for bringing several of the required changes to our notice. Anyone encountering difficulties regarding nomenclature or BLS code numbers, please contact one of us, as below.

Brian Coppins (nomenclature, spelling, authorities, dates of publication):
b.coppins@rbge.org.uk or lichensEL@btinternet.com

Mark Seaward (allocation of BLS numbers and abbreviations):
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Janet Simkin (Recorder, BioBase and spreadsheet species dictionaries):
janetsimkin@btinternet.com

Add:		
150	<i>Ameliella andreaeicola</i> ##	<i>Amel andr</i> ##
52	<i>Ameliella grisea</i> ##	<i>Amel gris</i> ##
2499	<i>Anisomeridium robustum</i>	<i>Anis robu</i>
2500	<i>Antennulariella lichenisata</i>	<i>Ante lich</i>
2494	<i>Atla alpina</i>	<i>Atla alpi</i>
2501	<i>Bacidia sipmanii</i> ##	<i>Baci sipm</i> ##
1732	<i>Bacidia squamellosa</i>	<i>Baci squa</i>
2502	<i>Bacidia sulphurella</i>	<i>Baci sulp</i>
2497	<i>Byssoloma diderichii</i>	<i>Byss died</i>
2503	<i>Caloplaca albolutescens</i>	<i>Calo albo</i>
2487	<i>Endococcus verrucosus</i> #	<i>Endococ verrucosus</i> #

Add:		
2491	<i>Enterographa brezhonega</i> #	<i>Ente brez</i> #
2504	<i>Fellhanera duplex</i>	<i>Fellhanera dupl</i>
2505	<i>Gyalideopsis crenulata</i>	<i>Gyalideop cren</i>
2521	<i>Lecanora albellula</i> var. <i>macropycnidiate</i>	<i>Lecanora albellula m</i>
2520	<i>Lecanora coppinsii</i>	<i>Lecanora copp</i>
2506	<i>Lecanora hybocarpa</i>	<i>Lecanora hyboc</i>
2488	<i>Lecidea pullata</i>	<i>Lecidea pull</i>
2519	<i>Lichenothelia renobalesiana</i> #	<i>Lichenoth reno</i> #
2498	<i>Llimoniella fuscatae</i> #	<i>Llimoniel fusc</i> #
2507	<i>Micarea farinosa</i>	<i>Mica fari</i>
2508	<i>Micarea prasinella</i>	<i>Mica prasinel</i>
2489	<i>Micarea vulpinaris</i>	<i>Mica vulp</i>
2509	<i>Mycoporum sparsellum</i> ##	<i>Mycopo spar</i> ##
2523	<i>Neobarya peltigerae</i> ##	<i>Neobar pelt</i> ##
2510	<i>Opegrapha trochodes</i>	<i>Opeg troc</i>
2511	<i>Parmotrema pseudoreticulatum</i> ##	<i>Parmotr pseu</i> ##
2522	<i>Placynthium anemoideum</i>	<i>Placynthium anem</i>
2495	<i>Polyblastia theleodes</i>	<i>Polyblastia thel</i>
2492	<i>Pronectria oligospora</i> #	<i>Pronectria oligo</i> #
2490	<i>Reconditella physconiarum</i> #	<i>Reco phys</i> #
2493	<i>Roselliniopsis ventosa</i> #	<i>Roselliniop vent</i> #
2512	<i>Verrucaria andesiatica</i>	<i>Verrucar ande</i>
2513	<i>Verrucaria</i> cf. <i>crustulosa</i> ##	<i>Verrucar crus</i> ##
2514	<i>Verrucaria nigrescens</i> f. <i>tectorum</i>	<i>Verrucar nigr tect</i>
2515	<i>Verrucaria sublobulata</i>	<i>Verrucar subl</i>
2516	<i>Verrucula maritimaria</i> ##	<i>Verrucula mari</i> ##
2517	<i>Verruculopsis flavescentaria</i> ##	<i>Verruculop flav</i> ##
2518	<i>Xerotrema quercicola</i> ##	<i>Xero quer</i> ##

Delete (correct name or notes given below, as applicable):					
Delete:			Replace with:		
1946	<i>Lauderlindsaya borreri</i> #	<i>Laud borr</i> #	920	<i>Normandina pulchella</i>	<i>Norm pulc</i>
712	<i>Lecanora xanthostoma</i>	<i>Lecanora xant</i>	610	<i>Lecanora semipallida</i>	<i>Lecanora semi</i>
924	<i>Ochrolechia inversa</i>	<i>Ochr inve</i>	628	<i>Lecanora alboflavida</i>	<i>Lecanora albofl</i>
1206	<i>Psorotichia diffundens</i>	<i>Psorot diff</i>	1184	<i>Porocyphus coccodes</i>	<i>Poroc cocc</i>
1207	<i>Psorotichia pyrenopsoides</i>	<i>Psorot pyre</i>	1184	<i>Porocyphus coccodes</i>	<i>Poroc cocc</i>

Change of genus (sometimes also species epithet):					
Change from:			Replace with:		
1653	<i>Biatora carneoalbida</i>	<i>Biatora carneoalbida</i>	1653	<i>Mycobilimbica carneoalbida</i>	<i>Mycobili carn</i>
146	<i>Biatora epixanthoides</i>	<i>Biatora epix'oides</i>	146	<i>Mycobilimbica epixanthoides</i>	<i>Mycobili epix</i>
320	<i>Biatora sphaeroides</i>	<i>Biatora spha</i>	320	<i>Mycobilimbica pilularis</i>	<i>Mycobili pilu</i>
160	<i>Biatora tetramera</i>	<i>Biatora tetr</i>	160	<i>Mycobilimbica tetramera</i>	<i>Mycobili tetr</i>
2432	<i>Fuscopannaria atlantica</i>	<i>Fuscopann atla</i>	2432	<i>Vahliella atlantica</i>	<i>Vahl atla</i>
977	<i>Fuscopannaria leucophaea</i>	<i>Fuscopann leuc</i>	977	<i>Vahliella leucophaea</i>	<i>Vahl leuc</i>
547	<i>Gyalideopsis anastomosans</i>	<i>Gyalideop anas</i>	547	<i>Jamesiella anastomosans</i>	<i>Jame anas</i>
549	<i>Gyalideopsis scotica</i>	<i>Gyalideop scot</i>	549	<i>Jamesiella scotica</i>	<i>Jame scot</i>

Change of genus (sometimes also species epithet):					
Change from:			Replace with:		
1835	<i>Lauderlindsaya acroglypta</i>	<i>Laud acro</i>	1835	<i>Normandina acroglypta</i>	<i>Norm acro</i>
310	<i>Lecania hyalina</i>	<i>Lecania hyal</i>	310	<i>Biatora globulosa</i>	<i>Biatora glob</i>
1988	<i>Lecidea porphyrospoda</i>	<i>Lecidea porp</i>	1988	<i>Myochroidea porphyrospoda</i>	<i>Myoch porp</i>
766	<i>Lecidea pycnocarpa</i> f. <i>pycnocarpa</i>	<i>Lecidea pycn pycn</i>	766	<i>Miriquidica pycnocarpa</i> f. <i>pycnocarpa</i>	<i>Miri pycn pycn</i>
1771	<i>Lecidea pycnocarpa</i> f. <i>sorediata</i>	<i>Lecidea pycn sore</i>		<i>Miriquidica pycnocarpa</i> f. <i>sorediata</i>	<i>Miri pycn sore</i>
831	<i>Leptogium byssinum</i>	<i>Leptog byss</i>	831	<i>Epiphloea byssina</i>	<i>Epiph byss</i>
1164	<i>Polyblastia wheldonii</i>	<i>Polyblastia whel</i>	1164	<i>Atla wheldonii</i>	<i>Atla whel</i>
1202	<i>Psora lurida</i>	<i>Psora luri</i>	1202	<i>Romjularia lurida</i>	<i>Romj luri</i>
1889	<i>Pyrenocollema arenisedum</i>	<i>Pyrenoco aren</i>	1889	<i>Collemopsidium arenisedum</i>	<i>Collemop aren</i>
77	<i>Pyrenocollema argilospilum</i>	<i>Pyrenoco argi</i>	77	<i>Collemopsidium argilospilum</i>	<i>Collemop argil</i>
79	<i>Pyrenocollema caesium</i>	<i>Pyrenoco caes</i>	79	<i>Collemopsidium caesium</i>	<i>Collemop caes</i>
83	<i>Pyrenocollema elegans</i>	<i>Pyrenoco eleg</i>	83	<i>Collemopsidium elegans</i>	<i>Collemop eleg</i>
85	<i>Pyrenocollema halodytes</i>	<i>Pyrenoco halo</i>	85	<i>Collemopsidium foveolatum</i>	<i>Collemop fove</i>
86	<i>Pyrenocollema monense</i>	<i>Pyrenoco mone</i>	86	<i>Collemopsidium monense</i>	<i>Collemop mone</i>
87	<i>Pyrenocollema orustense</i>	<i>Pyrenoco orus</i>	87	<i>Collemopsidium halodytes</i>	<i>Collemop halo</i>
88	<i>Pyrenocollema pelvetiae</i>	<i>Pyrenoco pelv</i>	88	<i>Collemopsidium pelvetiae</i>	<i>Collemop pelv</i>
1890	<i>Pyrenocollema strontianense</i>	<i>Pyrenoco stron</i>	1890	<i>Collemopsidium angermannicum</i>	<i>Collemop anger</i>
92	<i>Pyrenocollema subarenisedum</i>	<i>Pyrenoco suba</i>	92	<i>Collemopsidium subarenisedum</i>	<i>Collemop suba</i>
93	<i>Pyrenocollema sublitorale</i>	<i>Pyrenoco sublit</i>	93	<i>Collemopsidium sublitorale</i>	<i>Collemop sublit</i>
2420	<i>Ramonia azorica</i>	<i>Ramonia azor</i>	2420	<i>Topeliopsis azorica</i>	<i>Tope azor</i>
2476	<i>Scutula lobariicola</i> #	<i>Scut lobariic</i> #	2476	<i>Catillaria lobariicola</i> #	<i>Catil loba</i> #
1813	<i>Thrombium thelostomum</i>	<i>Thro thel</i>	1813	<i>Pyrenocarpon thelostomum</i>	<i>Pyrenocar thel</i>

Change of epithet:					
Change from:			Replace with:		
1732	<i>Bacidia coralloidea</i> ##	<i>Baci cora</i> ##	1732	<i>Bacidia squamellosa</i>	<i>Baci squa</i>
498	<i>Diplotomma venustum</i>	<i>Diplot venu</i>	498	<i>Diplotomma hedinii</i>	<i>Diplot hedi</i>
610	<i>Lecanora flotoviana</i>	<i>Lecanora flot</i>	610	<i>Lecanora semipallida</i>	<i>Lecanora semi</i>
1141	<i>Placynthium pluriseptatum</i>	<i>Placynthium plur</i>	1141	<i>Placynthium dolichoterum</i>	<i>Placynthium doli</i>
1162	<i>Polyblastia theleodes</i>	<i>Polyblastia thel</i>	1162	<i>Polyblastia schaeeriana</i>	<i>Polyblastia scha</i>
1796	<i>Pterygiopsis coracodiza</i>	<i>Pter cora</i>	1796	<i>Pterygiopsis concordatula</i>	<i>Pter conc</i>
1496	<i>Verrucaria hydrela</i>	<i>Verr hydr</i>	1496	<i>Verrucaria denudata</i>	<i>Verrucar denu</i>

Change of abbreviation					
Change from:			Replace with:		
2297	<i>Endococcus verrucosporus</i> #	<i>Endococ verr</i> #	2297	<i>Endococcus verrucosporus</i> #	<i>Endococ verrucosp</i> #
665	<i>Lecanora albellula</i>	<i>Lecanora albellula</i>	665	<i>Lecanora albellula</i> var. <i>albellula</i>	<i>Lecanora albellula a</i>
601	<i>Lecanora hypoptella</i>	<i>Lecanora hypo</i>	601	<i>Lecanora hypoptella</i>	<i>Lecanora hypoptel</i>
731	<i>Lecidea hypopta</i>	<i>Lecidea hypop</i>	731	<i>Lecidea hypopta</i>	<i>Lecidea hypopta</i>
2466	<i>Llimonaea soreciata</i>	<i>Llim sore</i>	2466	<i>Llimonaea soreciata</i>	<i>Llimonaea sore</i>
887	<i>Micarea prasina</i> s. lat.	<i>Mica pras s.l.</i>	887	<i>Micarea prasina</i> s. lat.	<i>Mica prasina s.l.</i>
2360	<i>Micarea prasina</i> s. str.	<i>Mica prasina s.s.</i>	2360	<i>Micarea prasina</i> s. str.	<i>Mica pras s.s.</i>
2127	<i>Neolamya peltigerae</i> #	<i>Neol pelt</i> #	2127	<i>Neolamya peltigerae</i> #	<i>Neolam pelt</i> #
1806	<i>Sporastatia polyspora</i>	<i>Spor poly</i>	1806	<i>Sporastatia polyspora</i>	<i>Sporas poly</i>
1807	<i>Sporastatia testudinea</i>	<i>Spor test</i>	1807	<i>Sporastatia testudinea</i>	<i>Sporas test</i>
	<i>Verrucaria</i> *	<i>Verr</i>		<i>Verrucaria</i>	<i>Verrucar</i>
1510	<i>Verrucaria nigrescens</i>	<i>Verr nigr</i>	1510	<i>Verrucaria nigrescens</i> f. <i>nigrescens</i>	<i>Verr nigr nigr</i>

* This change applies to all taxa in the genus *Verrucaria*

Corrected spelling etc.: altered or added text <u>underlined</u>			
1688	<i>Miriquidica garovaglioi</i>	<i>Miri garo</i>	

B.J. Coppins, M.R.D. Seaward & J. Simkin

The Autumn Field Meeting 2007: Charnwood Forest

This account is dedicated to the memory of Bridget Ozanne whose quiet charm and considerable ability graced our field meetings and made them better by her presence.

The Charnwood Forest rises as a swell of ancient rocks from the Midland Plain some 7km north-west of Leicester. It is a landscape of craggy summits outcropping above hillsides of bracken, *Pteridium aquilinum*, and gorse, *Ulex europaeus*; of scattered woods set within dry stone walls; and of clear streams lined with alders, *Alnus glutinosa*. Its special character is due to the underlying geology, for here are some of the oldest rocks in the UK, dating from the Pre-Cambrian era nearly 700 million years ago. Man has exploited the various granites and slates that outcrop across the region for centuries and, although many of the quarries are now no longer commercially viable, the area is still the nearest hard rock source to London and the practice of winning this rock continues today. Having said this, it is a measure of the madness of the global economy that granite from the Far East has recently been laid in Leicester city

centre, much to the disgust of local quarry workers, and causing a furious discussion in the local press about the size of the subsequent carbon “Bigfoot” stamped so needlessly upon a world already, like Robinson Crusoe, uneasy at the meaning of such footprints.

The local igneous rocks are acidic in nature and this is reflected in the acidophilous saxicolous flora that has developed on the natural outcrops and in a number of uneconomic quarries since their closure.

For those more interested in corticolous species, the word “Forest” in the title is misleading. Prolonged exploitation of the original thickly wooded “Forest of Arden” that once covered the area has left only scattered remnants and, until recently, these remaining woods have supported a very limited flora. However, dramatic improvements have occurred over the past 20 years or so, with lichen colonisation taking place at an unprecedented rate, and this continues – it is an exciting time to be a lichenologist in this area!

In places across “The Forest” the modern landscape makes way for an altogether more ancient one that predates the enclosure acts—areas such as Bradgate Park would still be recognisable as her home by Lady Jane Grey, the tragic 9-day English queen, and Groby Pool would seem unchanged to the great naturalists Alfred R. Wallace and F.W. Bates, who we know stood on its margins in the nineteenth century planning their great adventures to Amazonia.

The hotel chosen as a base was very welcoming, although at times the boiler seemed to reflect the rigours of an energy-strapped world by providing cold showers (with no alternative!), and situated to the east of the city and the chosen itinerary sites, it involved the party in the daily excitement of negotiating the city ring-road, a factor described by one member in the party as perhaps a deliberate ploy by the leader to reduce numbers! For several drivers this morning challenge was described as being like a trip on a “Magic Roundabout” where the exit seemed to change daily.

The itinerary for the weekend was chosen in order to give a brief glimpse of the many habitats that exist in the area; but many other promising sites are here to interest the visiting lichenologist.

Friday 5th October

The Leicester Botanic Garden: SK 615013

For those who arrived early to the meeting the afternoon was not to be one of rest and relaxation but involved a survey of The Botanic Garden. Our departure from the hotel was viewed from the windows with some envy by members of Council who were settling in for a long afternoon of debate and decision making, and the “escapees” did little to endear themselves to the executive by waving merrily at the bleak faces and, for those with energy to spare and youth on their side, attempting to skip!

The garden was developed on its present site in 1947 and at 16 acres is not large by major city standards, but it does possess an interesting mosaic of habitats, together with a charm that makes up for perhaps a lack of grandeur. It also provides a wonderful escape from the bustle of the city to the west. The garden was formed by amalgamating the grounds of four fine houses built early in the last century for Leicester's rich and famous (including that of a "Mr Fox" who made his fortune out of the manufacture of sweets particularly favoured by polar bears!) and is now part of the university.

During the survey all the major features were looked at, including the rock garden of Carboniferous limestone and the sunken garden; the surrounds of a formal pool and also a rich variety of trees. A very respectable total number of lichens was recorded (94 species), one that reflects a marked improvement in the lichen flora since the last visit but also the importance of having Brian Coppins in the party!! Perhaps the main revelations centred on the Carboniferous limestone rockery. The genus *Collema* was well represented with *C. auriforme*, *C. crispum* var. *crispum*, *C. fuscovirens*, *C. tenax* var. *tenax*, and also *Leptogium turgidum*. Other notable county records included *Acrocordia salweyi* (NCR—new county record), *Clauzadea monticola* (NCR), *Protoblastenia calva* (NCR), *Thelidium decipiens* and *T. papulare* (NCR), and *Petractis clausa* (second county record). On other substrata the following were of interest: *Bacidia arnoldiana*, *B. chlorotricula* on *Rhododendron* sp., and *B. saxenii* on a rusty iron "artwork"—you know the type, if it were on your front lawn the council would insist on its removal as being unsightly, but in this setting and supporting this lichen, tolerable—perhaps! Barbara Benfield, one who is always capable of squeezing one last record from a site, found *Fellhanera viridisorediata* (NCR) on box, *Buxus sempervirens*.

The evening included an introductory talk by the leader (generously well-received), with slides, that summarised the essential nature of the sites to be visited during the weekend and the lichens of particular interest that would be seen. It was followed by the usual murmur of conversation and laughter that is traditional amongst close friends who have not seen each other for several months and which is surely one of the most precious things about these meetings.

Saturday 6th October

Ulverscroft Nature Reserve: SK 489125

This 140 acre Wildlife Trust Reserve contains many of the characteristic landscape features and habitats that are typical of the Charnwood Forest. A ridge of Precambrian diorite outcrops as the summit of the reserve at 246 metres and the rounded corners and weathered faces of these outcrops indicate that quarrying has not been a recent feature. This ecological

continuity is further underlined by the presence of a rich but rather vulnerable community of saxicolous species adapted to siliceous exposed rock. The notable species recorded during our visit included two species of the genus *Umbilicaria* (*U. deusta* and *U. polyphylla*). These are rare in Leicestershire with just a handful of sites and on this reserve they are localised on a small area of diorite; both seem to be decreasing, probably due to the shading effect of a mature holly, *Ilex aquifolium*, to the south-west. It is suggested that this tree is progressively thinned and finally removed. The acid soil about the summit rocks supported a remarkable number of *Cladonia* spp. Twelve species were recorded including *C. digitata*, *C. polydactyla*, *C. ramulosa* and *C. subulata*. In addition to the two *Umbilicaria* “jewels” of the county saxicolous flora mentioned previously, the diorite supported *Aspicilia grisea*, *Diploschistes scruposus*, *Porpidia cinereoatra* and *Tephromela grumosa*. *Rimularia intercedens* (NCR) and *R. furvella* were identified by Brian; both are probably overlooked in the county.

The oaks about these rocks supported a pleasing number of recent colonisers that included *Chaenotheca ferruginea*, *Cyrtidula quercus*, *Parmotrema perlatum* and *Usnea subfloridana*.

At this point a number in the party begged to be excused from visiting the next site. Their excuse? England were playing a ball game against one of our previous colonies, which involving kicking and throwing about an elliptical bag of air, at considerable risk to life and limb of all taking part – including the spectators, and they were keen to watch the anticipated blood-letting on TV. Those that remained expressed sympathy for people so addicted!

Bradgate Park: SK 523117

“Nec defuerunt qui fictis mentionisque terroribus vera pericula augrunt”

“There were people, too, who added to the real perils by inventing fictitious dangers”.

Pliny the Younger. Pompeii, August AD 79.

We have all been guilty of this; exaggeration; to make a story more engaging, or a danger survived, more terrible. In the case of Pliny, he had just experienced the eruption of Vesuvius, the destruction of the sea port of Herculaneum, and his father’s death by heart failure at the trauma of it all. Perhaps in a way I have also been guilty of the same embellishment in my description of the perils of the Leicester ring-road system. But Pre-Cambrian Bradgate Park needs no embellishment to make its early history more dramatic or its birth a more terrible delivery, for its midwife was a volcano just as cataclysmic as Vesuvius.

Visualise, if you are able, a shallow tropical sea, but the time is 600 million years ago, with the sun blotted out by dense choking ash clouds and everywhere there is “darkness at noon”. To the north-east through the stygian

gloom is the awesome red glow of a volcano blasting hot ash and magma “bombs” high into the atmosphere and sending pyroclastic flows rolling far out across the surrounding ocean. This was Bradgate’s formation, its baptism in fire.

Today, by contrast, all was peace and calm; the sun was shining and the ash that had settled on the bed of that ancient Precambrian sea and hardened with time, rose in front of the group as a series of bedded outcrops to a summit crowned by a round tower, “Old John” – named after a family retainer who was accidentally killed on the hill top. A few of the group sported fashionable sun glasses, others summer clothing and floppy hats, no-one had resorted to tying pillows to protect their heads as Pliny had been forced to do to survive the rain of hot pumice.

The park has been visited by so many eminent lichenologists since the 19th century; and with a flora published in 1966 by David Hawksworth and M Wallpole, it might be assumed that nothing of interest had been left for our present group to discover. This proved to be far from the case.

The park is surrounded by a wall built of random blocks of tuff and diorite, which is of great interest and antiquity, with parts dating from the 17th century – perhaps earlier. Sections of these walls are important lichen habitats, particularly those bonded together by lime-mortar – some of which still remains – and this base enrichment affecting the surrounding acid walling stones has encouraged the development of an impressive climax community. At a distance the oldest sections look lime-washed, the colour due to a mosaic of pale species dominated by *Lecanora rupicola* and *Lecanora gangaleoides*. Jack Laundon surveyed these walls in 1978 and concluded that the associated lichen flora could be used to distinguish sections of different ages (but not absolute dates). He also estimated that the climax *Lecanoretum rupicolae* community needed at least 200 years to have developed. His subsequent paper did much to spark my interest in lichenology.

The Society, with noses pressed against this wall, seemed to be just as fascinated as presumably Jack was all those years ago, that it was possible to recognise, from the relative abundance of the lichen cover, sections of walling that have been rebuilt at different times over the years as they have been successively breached by falling trees, or by natural collapse (particularly adjacent to gate jambs), or a result of general maintenance.

Many of the party could have spent more time on the boundary walls but, with a hill to climb and further discoveries ahead, we climbed to the summit. We were rewarded by a fine view, more discoveries, and then moved on to The Sliding Stone Outcrops and luncheon. This spot, looking out across the Midland Plain to the southwest, must be one of the great contemplative viewpoints in Leicestershire and judging from the amount of crematorial ashes scattered amongst the stones must harbour a multitude of contented

wraiths. As one who prefers my spirits enclosed in a bottle, it should be pointed out that the constant addition of human bone meal to this area is bound in time to affect its flora.

Luncheon over, the group spent time surveying and photographing. *Arctoparmelia incurva* was found to be common – here it is close to its most southerly distribution in England. Bird-perching rocks had a topping of *Xanthoria candelaria*, their remaining surfaces completely devoid of lichens due to the toxic nature of these droppings. Other rocks in the area presented an astounding mosaic of species. Of interest were *Buellia aethalea*, *B. ocellata* and *B. stellulata* within a few cm of each other. Two Parmelioid species that often confuse the beginner, *Melanelixia fuliginosa* subsp. *fuliginosa* and *Xanthoparmelia verruculifera* were also found conveniently adjacent to each other, as were *Rhizocarpon geographicum* and *R. lecanorinum*. The genus *Cladonia* was much in evidence and *Cetraria aculeata* was a frequent record. A remarkable slab, sloping to the south east, was covered in the Umbilicaretum pustulae community, the climax on these water washed rocks. A smaller secluded outcrop below this “ramp” at SK53315.10944 supported *Pertusaria aspergilla* together with a small but interesting *Cladonia* heath. Throughout our endeavours we were watched with interest by two red deer stags, *Cervus elaphus*, with full stag-royal antlers, resting in the bracken below the outcrops.

St Leonard Church, Swithland: SK554128

The final site of the day. St Leonard is a 13th century church of rubble granite and tuff under a Charnwood slate roof. Window and door surrounds are of sandstone and this siliceous (acid) geology has been “sweetened” by lime mortar that in part extends as a render to large areas of the walls. The small yard had memorials of varied geology and this factor had increased the number of lichens recorded to a very respectable total. The social history of the local slate industry was reflected in the antiquity of a number of headstones – the oldest dating from 1673 (the second oldest in Leicestershire and the oldest still extant in a yard, the oldest being removed to inside its church for safety). From the middle of the 18th century cheaper and easier-to-work Welsh slate made its presence in Leicestershire and the Charnwood industry was bankrupt. A huge slate chest tomb to Sir John Danvers, 1745, was surveyed – positioned across the churchyard boundary in order that his dog could be buried with him but outside holy ground. Two reliefs, one of the arts of peace: ploughing and building, the other of the arts of war: a ship and a fortress, presented a *tour de force* of the 16th century slate carver’s artistry and were much admired by The Society members.

In failing light 60 species were recorded, a very creditable total for a granite and sandstone Leicestershire church and yard. Notable records included *Pertusaria lactescens* (K+yellow [immediately] rapidly changing to

blood red), the metallophyte *Psilolechia leprosa* under a copper lantern by the main door (this species was fertile, rarely recorded as such in any of The Midlands yards). *Buellia badia*, determined by Brian Coppins, on a north facing sandstone window sill, was a new county record and only the second record for any UK church. One of the church leaders who opened the building for our visit was justifiably thrilled by the significance of her small parish church and promised to look after the lichens.

The day was completed to everyone's satisfaction by a substantial meal eaten at a communal table, where food quantity perhaps made up for quality, but of course, merriment and quantities of wine soon dulled the critical pallet. The management, thrilled by a full restaurant and no doubt by the obvious civilised nature of the clientele, were moved to take photographs of the fine scene for their next brochure. If the poor cameraman, who was obviously used to a language other than English, had paused to take the advice (concerning angles, lighting, exposure etc.) offered by almost every person in the room—no doubt to ensure that these individuals were caught at their very best – we would still be sitting at the table!

A smaller adjacent room was hosting a “Murder Mystery” evening, whatever that meant! It seemed to involve everyone present at the “murder” in considerable uproar! Whatever or whoever was being “done to death” was the subject of dreadful abuse and derision! But let us not be too critical, only those in the BLS positioned close to the communicating door were aware of such things, the BLS themselves showing that they were more than capable of matching any such furore! It was, in hindsight, a memorable way to end a remarkable day.

Sunday 7th October 2008

The parish of Groby: The Rifle Range, The Pool, Diorite Exposures and Quarries.

The Rifle Range: SK 525078

A lovely morning: sunshine, high white clouds and pleasantly warm, and a keen and eager Society assembled for the day's excitements.

The rifle range is laid out in a disused quarry and dates from the 1930's. Its management has encouraged a notable assemblage of higher plants that are rare in the county, including common twayblade, *Listera ovata*, and musk mallow, *Malva mochata*. Stories of live ammunition littering the soil and of course the prospect of flying lead, have deterred the excesses now associated with public trespass and the area has been left to nature. The geology is fascinating (the range may become a RIGS site in the near future) with fine, and accessible, exposures of an unconformity between Precambrian diorite and Triassic sandstone (350 million years of geology has been “lost” by earlier erosion between these two formations).

An adjacent small woodland is one of the “hot spots” of lichen colonisation in Leicestershire with recent appearances by *Flavoparmelia soredians*, *Physcia stellaris* (both the first sites in the county) and scarce members of the genus *Lecanora*. *Dimerella pineti* was added to the list for the site by a sharp eyed Peter Lambley who was surveying the trees adjacent to the 100 yards range. A fine exposure of diorite was covered in *Opegrapha gyrocarpa* and *Micarea erratica*.

An unusual habitat that fascinated the group was the soil in front of the firing points, which was contaminated with copper leachate from discarded brass cartridge cases and zinc from the galvanised cover sheltering the shooting positions. *Psilolechia leprosa* was on the concrete base and *Vezdaea leprosa* was found fertile on bryophytes covering the toxic soil, and was photographed by all; *V. aestivalis* has been previously recorded here.

The sight of shooters, who up to this point had been patiently interested in our activities, assembling rifles and meticulously arranging lines of very dangerous looking ammunition a few feet away from the party ensured that, for once, few were reluctant to move on and all obeyed the leader when it was hinted that our presence was no longer welcome!!!

The Groby Pool car park: SK524079

Adjacent to the rifle range is a car park for Groby Pool and this was to be our next site. The landscape architect who designed the facility in 1992 had little realisation that he was creating a remarkably interesting lichen habitat. Many of the trees planted as saplings were ash, *Fraxinus excelsior*, and *Acer* spp. Far more interesting has been the effect of the hard landscaping that was built into the design; in this case four huge blocks of diorite from the quarry close by – one supporting the date of the opening ceremony and so introducing a degree of lichenometry into the survey. Now 16 years later the trees are covered in an abundance of the common corticolous species (the Xanthorion much in evidence) but also with a number of species that are uncommon in Leicestershire, all responding to the open situation, the nature of the porophyte and of course air quality. Likewise the granite blocks have developed an interesting cover and the nutrient enrichment provided by bird perching and honeydew from the canopy of *Acer* spp. has encouraged several species to grow that are not typical of acid stone substrata. Interesting finds on the diorite included *Xanthoria elegans* and *Phaeophyscia nigricans*, and on the trees *Lecanora carpinea*.

Groby Pool: SK 524083

This 12 ha pool was for many years trumpeted as the largest natural body of water in Leicestershire. In the 1980's Carol David, a research student investigating pollen profiles in core samples from the bottom, concluded it to

date from the 12th century, created by the monks of a local Abbey. It is the home of many bird species and as we arrived a male Ruddy Duck *Oxyura jamaicensis* was on the far side keeping well away – and with a price tag of several hundreds of pounds on its head to prevent it breeding with the endangered European species White-headed Duck *O. leucocephala* – one can hardly blame its caution.

The underlying diorite is exposed as a flat area of foreshore and The Society were soon on hands and knees looking at the remarkable effects of eutrophication on a grand scale – in this case due to another American visitor, the Canada Goose *Branta canadensis*. *Lecanora muralis* was the dominant lichen species, covering almost 100% of the rock exposures. Further from the water the rocks supported a greater diversity of species with *Acarospora fuscata*, *A. smaragdula*, *Aspicilia caesiocinerea*, *Miriquidica leucophaea* and *Xanthoparmelia mougeotii* being notable finds; also *Rimularia furvella*.

We all have a favourite habitat and if we are honest it is usually related to how little physical exertion is required in its survey. The south wall of a church is always pleasant, the damp gloomy drain associated with the north wall is less so! Likewise the eastern revetment to the pool is in the “I could stay here all day” category. It is a waist-high structure of rubble diorite topped with roughly cut local slate and bonded by mortar. This combination has encouraged acidophytes and basiphilous species to grow adjacent to each other and with warm rock to lean on it soon proved difficult to move The Society to pastures new!

The genus *Caloplaca* was particularly well represented and within a few minutes most people could distinguish between the main, but “tricky”, species that are invariably found on mortar and concrete – i.e. the soresiate continuum of *Caloplaca arcis*, *C. citrina* and *C. flavocitrina*, with *C. crenulatella* as a non-soresiate companion. This mortar also supported *Collema auriforme* and *C. crispum*, their only site during the week-end (discounting the Botanic Garden).

Diorite Exposures: SK 517090

North of The Pool an ancient trackway rises to Whitegates Quarry, last worked during the last war but surmounted by natural outcrops of diorite, which from their appearance of eroded surfaces and corners probably have never been quarried. The Society surveyed a climax community containing many of the acidophytes recorded previously on tuff but with additional species that seem to be specific to diorite. *Protoparmelia badia* was a new find for the weekend and *Diposchistes scruposus* and *Pertusaria amara* forma *amara* were recorded, as they were at Ulverscroft on the first morning. Three lignicolous species of interest were found on a decaying stump, *Hypocenomyce*

scalaris, *Micarea melaena* and *Cladonia parasitica*, all additions to the weekend total.

The Alter Stones: SK485108

This was the final site, poised high above the Leicestershire countryside, its elevated position perhaps emphasizing the importance of its most notable occupant, *Melanelia disjuncta*. This is one of only a handful of sites in The Midlands for this species and the recent acquisition of The Stones by the local authorities will hopefully ensure its future safety. *M. disjuncta* was found growing with *Melanelixia fuliginosa* subsp. *fuliginosa* and the adjacent thalli made their distinguishing features particularly easy to appreciate and to separate – the charcoal grey, less shiny thallus of *M. disjuncta* with its more scattered isidia and white pseudocyphellae being diagnostic. *Lecanora epanora* was located on a mortar and tuff wall below the rocks.

The meeting ended on this high note and farewells were exchanged with obvious regrets. These Autumn Meetings seem to be far too transient and yet, by their very nature, are packed with incident and interest. My thanks must go to all who attended for being so appreciative and particularly to Ishpi Blatchley, David Hill, Steve Price, Frank Dobson and Brian Coppins who sent in lists of species –especially to Brian for his overarching “Quality Control” and identification of unusual and critical finds. Until the next occasion!

Members attending the meeting:

Peter Lambley, Tony Fletcher, Brian Coppins, David Hill, Jeremy Grey, Frank Dobson, Steven Price, Ishpi Blatchley, Barbara Benfield, Sheila Street, Robin Crump, Brian and Fiona Gale, Simon and Amanda Davey, John Jones, Pamela Jackson, Jill Lang, Amanda Waterfield, Mike Sutcliffe, Ken Sandell, Lesley Balfe, Janet Simkin and myself. My apologies for anyone that I have omitted from the list.

References:

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Ivan Pedley

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Species list from Charnwood Forest field meeting, October 2007	Leicester Botanic Garden	Ulverscroft	Bradgate				Swithland St Leonard's Church	Groby				Alterstones Diorite Quarry
			Car park	Walls	Sliding Stone	Dale Wood		Rifle range	Pool Car park	Groby Pool		
(N) =New to County												
<i>Acarospora fuscata</i>	Sd	D		+	+	+	+		+	D	+	+
<i>smaragdula</i>										D		
<i>Acrocordia salweyi (N)</i>	Lm			mo								
<i>Agonimia tristicula</i>	Lm br											
<i>Amandinea punctata</i>								x	lig Fx			Q
<i>Arctoparmelia incurva</i>		D		+	+							
<i>Arthonia punctiformis</i>		Q										
<i>Aspicilia caesiocinerea</i>						+				D		
<i>calcareo</i>	Lm						+	x		mo		
<i>contorta</i> subsp. <i>hoffmanniana</i>	Co									mo		
<i>grisea</i>		D										
<i>Bacidia amoldiana</i>	+											
<i>chlorotricula</i>	Rh											
<i>inundata</i>		+										
<i>saxenii</i>	Ir											
<i>Baeomyces rufus</i>		D										
<i>Belonia nidarosensis</i>		D										
<i>Bilimbia sabulatorum</i>	Lm br											
<i>Botryolepraria lesdainii</i>				mo		+						
<i>Buellia aethalea</i>		D	Tf	+	+	+	+	xxx	+	D	+	+
<i>badia (N)</i>							Sd, ws >N					
<i>ocellata</i>					+					D		
<i>stellulata</i>				+		+						
<i>Calicium viride</i>		x										
<i>Caloplaca arcis</i>	co		mo					x		mo		
<i>citrina</i>	mo			+			+	+		mo		wl mo
<i>chlorina</i>	co											
<i>Caloplaca crenulatella</i>	co							+	D	mo		mo
<i>flavescens</i>	mo						+			mo		
<i>flavocitrina</i>				+				x				wl mo
<i>holocarpa</i>	co			+	+	+			D	mo		mo
<i>lactea</i>	Lm											
<i>saxicola</i>	co						+					

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			Car park	Walls	Sliding Stone	Dale Wood		Rifle range	Pool Car park	Groby Pool	Diorite Quarry	
(N) =New to County												
<i>Dimerella pineti</i>									+			
<i>Diploicia canescens</i>									+			
<i>Diploschistes scruposus</i>		D									+	
<i>Diplotomma albostratum</i>									+			
<i>Evernia prunastri</i>	Ac	Q							x	Ac		
<i>Fellhanera viridisorediata (N)</i>	Bx fert											
<i>Flavoparmelia caperata</i>	Ac	Q	Be						x	Ac		
<i>soredians</i>									x			
<i>Fuscidea lightfootii</i>		x										
<i>Gyalideopsis anastomosans</i>		x										
<i>Hypoceno-myce scalaris</i>											lig	
<i>Hypogymnia physodes</i>	Ac	Q	Ca, Be						x	Ac		
<i>tubulosa</i>	Ac	Q	Be						x	Ac		
<i>Hypotrachyna revoluta</i>	Ac	Q							x	Ac		
<i>Lasallia pustulata</i>					+	+						
<i>Lecania erysibe</i>	co		mo	mo				+		D	mo	
<i>hutchinsiae</i>	co											
<i>Lecanora albescens</i>	Lm co		mo	+				+	x		mo	mo
<i>campestris</i> subsp. <i>campestris</i>	co							+			mo	
<i>carpinea</i>									x			
<i>chlarotera</i>	Ac		Ca						x	Ac		Q
<i>confusa</i>	Fx								x			
<i>conferta</i>								+				
<i>compallens</i>	Ac Fx	x	Ca									
<i>conizaeoides</i>	Q	Q						+	+	lig		
<i>crenulata</i>	Lm											
<i>dispersa</i>	mo co		mo	+				+	+	D	mo	mo
<i>expallens</i>	Ac	Q	Ca						x	Ac		
<i>gangaleoides</i>				+								
<i>intricata</i>						+		x				
<i>muralis</i>	co		D					+		D	D	mo
<i>orosthea</i>				+	+			+				+
<i>persimilis</i>									x	Ac	Fx	
<i>polytropa</i>	sd	D	D	+	+	+	+	+	x	D	D	+

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				Car park	Walls	Sliding Stone	Dale Wood		Rifle range	Pool Car park	Groby Pool		
(N) =New to County													
<i>Lecanora</i>	<i>rupicola</i> var. <i>rupicola</i>		D		+		+	+					+
	<i>saligna</i>									lig			
	<i>semipallida</i>	co											
	<i>soralifera</i>		D			+	+	+				+	+
	<i>sulphurea</i>		D		+			+					
	<i>symnicta</i>	Fx							+	Fx			
<i>Lecidea</i>	<i>fuscoatra</i>		D			+	+	+			D		+
	<i>lithophila</i>		D										
<i>Lecidella</i>	<i>elaechroma</i> forma <i>elaechroma</i>	Fx Ac							x	lig,+			
	<i>scabra</i>	Sd	D	D		+	+	+	+	D	D		+
	<i>stigmatea</i>	co		mo	mo					D	mo		
<i>Lepraria</i>	<i>incana</i>		Q Fx Ac	D	Fx	+		+	+				Q +
	<i>lobificans</i>		Q	Q	Fx	+		+	+				+
	<i>caesioalba</i>												+
	<i>vouauxii</i>							+					
<i>Leptogium</i>	<i>turgidum</i>		Lm										
<i>Melanelia</i>	<i>disjuncta</i>												+
<i>Melanelixia</i>	<i>fuliginosa</i> subsp. <i>fuliginosa</i>		D		D	+	+				D		+
	<i>fuliginosa</i> subsp. <i>glabratula</i>	Fx	Q	Ca					x	Ac			
	<i>subaurifera</i>	Ac	Q						x	Ac			
<i>Micarea</i>	<i>denigrata</i>									lig			
	<i>erratica</i>		D								D		
	<i>melaena</i>											lig	
	<i>myriocarpa</i> (N)												+
<i>Miriquidica</i>	<i>leucophaea</i>		D			+	+				D	+	+
<i>Opegrapha</i>	<i>gyrocarpa</i>			x					+				
	<i>rupestris</i>		Lm										
	<i>varia</i>		Q										
	<i>zonata</i>		D		+								
<i>Parmelia</i>	<i>saxatilis</i>		Q +		+		+	+		Lig		+	+
	<i>sulcata</i>	Ac Fx	Q	Ca	+				x			+	Q
<i>Parmelina</i>	<i>tiliacea</i>								x				
<i>Parmotrema</i>	<i>perlatum</i>	Ac	Q	Ca						Ac			Q

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(N) =New to County													
<i>Pertusaria</i>	<i>albescens</i> var. <i>albescens</i>						+						
<i>Pertusaria</i>	<i>amara</i> forma <i>amara</i>		x									+	
	<i>aspergilla</i>						+						
	<i>corallina</i>		D										+
	<i>lactescens</i>							+					
	<i>pseudocorallina</i>		D			+							
<i>Petractis</i>	<i>clausa</i>	Lm											
<i>Phaeophyscia</i>	<i>orbicularis</i>	co Fx	Q					+		AcD			
	<i>nigricans</i>									D			
<i>Physcia</i>	<i>adscendens</i>	Ac	Q	D				+	+	Ac +			
	<i>aipolia</i>		Q						x				
	<i>caesia</i>			D				+		D	mo		+
	<i>dubia</i>					+		+				+	
	<i>stellaris</i>								x				
	<i>tenella</i>	Fx Ac	Q	Ca	+			+	+	Ac D		+	Q
<i>Placynthiella</i>	<i>icmalea</i>	co								lig			
<i>Platismatia</i>	<i>glauca</i>		x										
<i>Polysporina</i>	<i>simplex</i>							+					
<i>Porina</i>	<i>chlorotica</i>								+				
<i>Porpidea</i>	<i>cinereoatra</i>		D										
	<i>crustulata</i>		x									+	
	<i>macrocarpa</i>											+	
	<i>soredizodes</i>	sd	D	Tf	+			+					+
	<i>tuberculosa</i>	sd	D	Tf	+	+	+	+	+			+	+
<i>Protoblastenia</i>	<i>calva</i> (N)	Lm											
	<i>rupestris</i>	Lm		mo	mo								
<i>Protoparmelia</i>	<i>badia</i>											+	
<i>Pseudevernia</i>	<i>furfuracea</i> var. <i>furfuracea</i>		+										
<i>Psilolechia</i>	<i>leprosa</i>							+	+				
<i>Psilolechia</i>	<i>lucida</i>	br	D	Tf				+	+				
<i>Punctelia</i>	<i>jeckeri</i>	Ac	Q	Be					x	Ac Fx			
	<i>subrudecta</i>	Ac	Q	Be					x	Ac			
<i>Ramalina</i>	<i>farinacea</i>	Fx	Q	Ca					x	Ac			Q
	<i>lacera</i>								x				

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			Car park	Walls	Sliding Stone	Dale Wood		Rifle range	Pool Car park	Groby Pool		
(N) =New to County												
<i>Rhizocarpon distinctum</i>				+	+					+	+	
<i>geographicum</i>		D		+	+	+	+			D		+
<i>lecanorinum</i>					+							
<i>petraeum</i>										sl/ mo		+
<i>reductum</i>	sd	D	Tf	+	+	+	+	x		D	+	+
<i>Rimularia furvella</i>		+								+	+	
<i>intercedens (N)</i>		+			+							
<i>Rinodina gemmarii</i>				+			+					
<i>teichophila</i>							+			mo		
<i>Sarcogyne regularis</i>	mo											mo
<i>Sarcopyrenia gibba</i> var. <i>getsleri</i>							x					
<i>Schaereria fuscocinerea</i> var. <i>fuscocinerea</i>												
<i>fuscocinerea</i> forma <i>sorediata</i>					+							
<i>Scolio-sporum chlorococcum</i>	fert							x				
<i>umbrinum</i>	Ir											wal 1
<i>Strangospora pinicola</i>		+										
<i>Tephromela atra</i> var. <i>atra</i>				+	+		+					
<i>grumosa</i>		D		+	+							+
<i>Thelidium decipiens</i>	Lm											
<i>fontigenum papulare</i> forma <i>papulare (N)</i>	Lm									mo		
<i>Toninia aromatica</i>							+					
<i>Trapelia coarctata</i>	+	D				+				D		
<i>glebulosa</i>		D				+						+
<i>placodioides</i>		D						x				
<i>Trapeliopsis flexuosa</i>	lig	x							lig	D		
<i>granulosa</i>		x						x	lig			
<i>pseudo-granulosa</i>		x										
<i>Umbilicaria deusta</i>		D										
<i>polyphylla</i>		D										
<i>Usnea</i> aff. <i>subfloridana</i>		Q						x				
<i>Verrucaria baldensis</i>	Lm						+					
<i>Verrucaria fuscella</i>	Lm						+			D mo		

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(N) =New to County												
<i>hochstetteri</i>	Lm co		mo	mo			+					
<i>macrostoma forma macrostoma</i>										mo		
<i>muralis</i>	mo			mo			+			mo		
<i>nigrescens</i>	Lm		mo	mo			+			mo		
<i>Verrucaria viridula</i>	Lm						+			mo		
<i>Vezdaea leprosa</i>								ter (Zn Cu)				
<i>Xanthoparmelia conspersa</i>					+							
<i>mougeotii</i>							+			D		
<i>verruculifera</i>						+	+			D		+
<i>Xanthoria calcicola</i>							+					
<i>candelaria</i>		D			+							
<i>elegans</i>										D		
<i>parietina</i>	Fx co	Q	Fa		+		+	+		D +		Q
<i>polycarpa</i>	Ac	Q						+	Ac			Q
<i>Xanthoria ucrainica</i>	Ac	Q			+			+	Ac			Q

Lichenicolous fungi												
<i>Brothallus bertianus</i>								x				
<i>Athelia arachnoidea</i>		Q	Ca									
<i>Carbonea vitellinaria</i>												
<i>Lichenoconium lecanorae</i>		x										
<i>Opegrapha sp. on Verrucaria</i>	Lm											

Species totals												
	94	97	40				62			49	27	50

Localities

Leicester Botanic Garden [SK 615013]. **Ulverscroft** [SK 489125; diorite, oak]. **Bradgate**: Car park [SK523117; trees, walls, diorite, mortar]; Walls [SK 524117; tuff, mortar]; Sliding Stone Outcrops [SK532112; tuff]; Dale Wood Outcrop [SK 533109; tuff]. **Swithland**, St. Leonard Church [SK554128]. **Groby**: Rifle Range [SH 525078; diorite, concrete, corticolous]; Pool Car Park [SK524079; diorite]; Groby Pool [SK524083; diorite, slate]; WG Quarry [SK 517090; diorite]. **Alter Stones** [SK485108; tuff, oak].

Key to table

Plant associations: Ac = *Acer*, Q = *Quercus*, Fx = *Fraxinus*, Bx = *Buxus sempervirens*, Rh = *Rhododendron*, br = bryicolous, Ca = *Castanea sativa*, Fa = *Fagus sylvatica*, Be = *Betula* sp.

Geology: Lm = Limestone, Sd = Sandstone, D = Diorite, co = concrete, mo = mortar, br = brick, sl = slate, Tf = Tuff
+ = present, substrata not recorded unless at column heading. ter = terricolous, ir = steel sculpture, lig = lignicolous, fert = fertile, ws = window sill, > = facing, N = North.

Field Meeting at Falmouth, West Cornwall

23rd – 30th April 2008

Introduction

Cornwall in the spring tempted 28 BLS members and associates to enjoy the varied scenery of this part of Cornwall. Falmouth was chosen as a centre as it is well positioned to allow access to both the north and south coasts, and points further west. Previous meetings in west Cornwall had been based at Zennor in West Penwith and on the Lizard so it was intended that this meeting would not cover these areas with the exception of one day on the Lizard and the fringe of the Penwith peninsula. The meeting was based at the Rosemullion Hotel in Falmouth which was a good central location. We were fortunate that we were largely blessed with good weather which meant that we were able to spend every day in the field. During the meeting 331 taxa were recorded including species restricted to this part of the British Isles.

The geology of the area is Devonian shales and slates with granite emplacements west of Falmouth and at west Penwith. Basic igneous rocks are represented by greenstone and pillow lavas at St Ives. The mineralisation associated with the granite resulted in the development of a major mining industry, mostly for copper and tin, throughout most of west Cornwall in the 18th and 19th century. This had an impact on the woodlands and probably explains why the Lobarion communities are so rare in west Cornwall as the woodland was heavily exploited for fuel as coppice. Many of the willow carrs in the valley bottoms are probably relatively recent in origin as a result of reduced grazing. The climate is oceanic with rainfall distributed throughout the year and a low incidence of frost particularly close to the coast.

Site visits

Thursday 24th April, Roseland Peninsula

Cododden Wood SW 844394 On our first day we took the King Harry Ferry across the Fal river and parked just up from the other side along a road widened to take American troops to ships moored for the invasion of Normandy. We were greeted by the song of a wood warbler, a rarity to those of us from the east. On arrival we were met by Beth Tonkin of Natural England who introduced us to the agent for the Trelissick Estate. He explained issues of woodland management, particularly in relation to a woodland grant scheme application. These woods, like most around the Fal, are essentially oak coppice on steep slopes, but in places thickets of young holly (*Ilex aquifolium*) are establishing and sycamore (*Acer pseudoplatanus*) saplings originating from trees on the edge of the field are forming dense groves. These pose management issues on how much clearance of the non-native sycamore should take place, and what the effect of opening up these woods would be on the lichen interest. Although they were not easy to explore because of difficult terrain a list of 91 lichens was made. The most interesting were a number of species associated with dry bark

on the larger trees including *Cresponea premnea*, *Lecanactis subabietina* and *Schismatomma cretaceum*. *Dimerella lutea* was probably the only representative of the Lobarion, a rather common situation in most west Cornwall woods. *Parmelinopsis minarum* was another good record, once formerly considered to be very rare and restricted to the New Forest and one or two sites in Cornwall. It is now proving to be rather more common in Cornwall now that its habitat preferences are better understood. Other species of interest included the minute *Lauderlindsaya acroglypta*, *Mycoblastus caesius*, *Parmelinopsis horrescens*, *Usnea cornuta*, *U. hirta* and *U. rubicunda*. A few of the rocks along the shore contributed to the total number of lichens recorded.

In the afternoon we moved on to **Philleagh Church** (SW 871394) and some members of the party set to recording this church and churchyard. An interesting find was *Opegrapha cesareensis* growing in abundance, normally a species of coastal rocks. The north wall was dominated by *Dirinia massiliensis* and also the recently described *Llimonaea soreliata* with its pinkish hue. The rest of the group set off down a series of tracks and across the fields to more oak coppice woodlands bordering the Fal near **Philleagh** SW 867404. Here the oak woodlands tumble down to the very sheltered shore which is flanked by some larger oaks which just cling on to the low cliff. These are a common feature at many sites around the Fal. As they overhang the shore the undersides are dry and support a dry bark lichen assemblage with species including *Lecanographa lyncea*, *Lecanactis subabietina*, *Schismatomma niveum*, *S. quercicola* and *Cresponea premnea*. Otherwise there was a rather similar suite of species to those in Coddoden Wood with the smaller trunks and branches of the coppiced oak supporting *Thelotrema lepadinum* and more *Parmelinopsis minarum*. The coastal rocks along the shore helped raise the total recorded to 84.

The final stop was **St Just in Roseland Church** (SW 849358). This is unusually set in a very sheltered situation close to one of the Fal river inlets and is surrounded by a churchyard which has more of the appearance of a garden with a variety of exotic bushes and trees. We did not have time to do the church and churchyard justice though 73 species were recorded (this includes some recorded previously by Paul Gainy and Bryan Edwards). However, we were able to spend time getting to grips with the differences between *Dirinia massiliensis* and *Llimonaea soreliata*. There was also a very fine showing of *Roccella phycopsis*, mostly on the north facing walls.

Friday 25th April, Mawnan Smith area.

In the morning the party had arranged to visit **Trebah** gardens SW 768275 where we were met by one of the gardening staff for a briefing on the history of the gardens. These were planted up in the 19th century with the then owner taking advantage of the exceptionally mild climate and the sheltered south facing valley running down to the Helford estuary. This explains why tree ferns and many Himalayan rhododendrons and other tender plants of New Zealand, Australia and southern South America are able to thrive. The gardens are now owned by a Trust and are open to the public daily. We were able to explore them for lichens and species of interest found included *Fellhanera bouteillei* which was abundant on many of the evergreen leaves of species of *Camellia* and *Rhododendron*, and *Pannaria conoplea* on

Rhododendron. The rocks around a small beach on the shores of the Helford estuary supported additional coastal species for the list.

The afternoon was spent examining the coastal rocks at **Bream Cove** (SW 784282) and trees leading down to it. On the path leading down were a number of beeches (*Fagus sylvatica*) with *Phaeographis dendritica* parasitised by the uncommon *Melaspilea lentiginosa*. The coastal rocks are Devonian shales that have been levelled into a wave cut platform which supports salt marsh turf in places and some small pockets of sand, backed by soft deposits of an old raised beach. Notable coastal species seen included *Diploschistes caesioplumbeus* and *Toninia sedifolia*.

Saturday 26th April, Mawnan Smith (Penwarne) SW 770304.

This site was visited because it is known to hold a large population of *Teloschistes flavicans* (VU A) growing on sycamores and ash trees. The main area is a belt of sycamore and ash with some oak and holly in an arable field. Rather wet willow carr borders the field on its northern, western and part eastern sides. The *Teloschistes* was low down on the ash which had few branches lower down whilst on the sycamore it was mostly higher up on the sloping boughs. It was recorded from 17 trees. Other rare species of note in the tree belt included *Bacidia incompta* (VU A) in the hollowed trunk of a holly, *Heterodermia japonica* (NT), *Melaspilea lentiginosa* (NT), *Parmelinopsis horrescens* (NT), *P. minarum* (VU B) and *Physcia tribacioides* (VU C D1). Other species of interest included *Gyalecta truncigena* and *Ramalina pollinaria*. The western part of the carr had elements of the Lobarion including *Menegazzia terebrata* (very uncommon in south-west England,) *Sticta fuliginosa* and *S. limbata*. In addition *Nephroma laevigatum* was found a few days later on a tree on the eastern side of the field. In the context of west Cornwall this is an important site which at present has no conservation status. It is particularly vulnerable to impacts from agricultural chemicals as it is now being ploughed and cropped. A total of 85 species were recorded, all on trees.

The intention had then been to go to Trelowarren on the Lizard peninsula, but because more time was spent at Penwarne than anticipated, the party visited **Mawnan Smith** church (St Mawnan) and a breakaway group explored nearby cliffs (SW 786270) and a willow carr at **Port Saxon** (SW 780273). A list of 85 species was recorded from the church, which though partly sheltered by trees is on an exposed site above the mouth of the Helford River. The cliffs had a dense cover of blackthorn (*Prunus spinosa*) and some hawthorn (*Crataegus monogyna*) on the upper slopes and this was covered in *Ramalina* species, *Parmotrema perlatum*, *Physcia aipolia* and *Evernia*. Some broken turf on the cliff slope supported several colonies of *Moelleropsis nebulosa*. The willow carr was relatively disappointing but typical of the area with *Parmelia* s.l. species and *Usnea* species prominent.

Sunday 27th April, St Ives area

In the morning the rocky point of **Carrick Du** (SW 512410) on the west side of St Ives Bay was visited. It was chosen because it is composed of pillow lavas and greenstone which contrast with the granite which composes most of the Penwith peninsula. The morning was spent exploring these exposures which were very accessible. *Roccella phycopsis* was present in sheltered situations on the rock outcrops.

Other species of interest included *Acarospora impressula*, *Arthonia varians* on *Lecanora rupicola*, *Catillaria atomarioides*, *Lecanora fugiens* and *Neofuscelia loxodes*.

After lunch the party moved on to **Rosewall Hill** (SW 486394), where there are impressive granite tors which rise to 227m above the coastal peneplane. *Parmelinopsis minarum* was found again, this time in a sheltered situation under an overhang of a large rock, apparently a characteristic habitat for the species. Nearby *Sphaerophorus globosus* and *Usnea flammea* were found on a low rock.

The final stop of the day was **Trencrom Hill** (SW517360), an inland granite tor 180 m in altitude with very fine views. There was a similar flora to the previous site though *Bryoria fuscescens* growing on turf over rock was an addition. Other species of interest included *Aspicilia caesiocinerea*, *Xanthoparmelia pulla*, *Parmelinopsis minarum*, *Pertusaria monogyna* and *Rinodina atrocinerea*.

Monday 28th April, Penhale Sands

For a complete change of habitat the party visited **Penhale Sands** (SW769548) to record the sand dune communities. As the site was in a military training area the visit began with a briefing. We were accompanied on the visit by the project officer for this very large dune complex, which has a wide range of owners and land use. The dunes face west and are built up on quite a high cliff and are thus very exposed to westerly gales. The lichen interest was mostly confined to a number of areas where sand cover was thin over rock. In this situation lichens and bryophytes have a competitive advantage over flowering plants. The special species in the community, which was made attractive by the yellow thalli of *Fulgensia fulgens*, were *Catapyrenium pilosellum*, *C. squamulosum*, *Squamarina cartilaginea* and *Toninia sedifolia*.

In the afternoon an area of willow carr (SW 780573) at the back of the dunes was explored. The lichen flora was first recorded by Bryan Edwards and Paul Gainy some years previously. This carr appears to be subject to flooding in winter and this may well help to maintain high humidity and explain in part the abundance of *Nephroma laevigatum* compared with other willow carrs in west Cornwall. Other species of interest found included *Leptogium teretiusculum*, *Lauderlindsaya acroglypta*, *Normandina pulchella*, *Sticta fuliginosa*, *S. limbata*, *S. sylvatica*, *Ramalina fraxinea* and *R. pollinaria*.

Tuesday 29th April, The Lizard

The final day of the meeting was spent on The Lizard, last visited by the Society in 1986 (Gilbert & James, 1987). This was an opportunity for the party to see the special flora for which the area is justly famous. The interest is centred on the serpentine outcrops on the coastal cliffs and just inland. Most of the day was spent around **Kynance Cove** (SW 689381) where *Solenopsora liparina* was found in several places mostly on near-vertical rocks; it has a very distinct and attractive green colour. *Collema latzelii* was found on small crags just up from the beach and later on cliffs behind the scree. The scree at valley is partly covered with ivy and there seems to be a balance between the ivy growing and providing some shelter and humidity for some of the species and too vigorous growth which would swamp the lichen community. Naturally this balance is probably maintained by grazing animals and at times

Highland cattle have grazed in the area. It was noticeable that species like *Heterodermia japonica*, *H. leucomelea*, *Pannaria conoplea*, *Sticta fuliginosa*, *S. limbata* and *S. sylvatica* were mostly associated with this interface. The stream running down to the cove had boulders supporting a good growth of *Dermatocarpon luridum*. A rock near the Bronze Age village at SW 687139 supported *Teloschistes flavicans* and *Phycia tribacioides*. *Caloplaca aractina*, seen in abundance by the author a few years previously, could not be found in the same area at the cove. It may have been present but not fruiting for some reason. We finished the meeting with a brief visit to **Poltescue Cove** (SW 728157) where *Caloplaca aractina* was found on rocks near the shore along with more *Solenospora liparina*.

Our final evening was a convivial meal in a nearby pub and the meeting finished after breakfast on the Wednesday with the remaining participants dispersing with memories of a beautiful part of the country and its rich lichen flora.

Participants

Peter Lambley (leader), Anne Allen, Lesley Balfe, Barbara Benfield, Paul Cannon, Pat & Keith Cavagnah, Steen Christiansen, Robin Crump, Frank Dobson, Paul Gainy, Brian & Fiona Gale, Vince Giavarini, Jeremy Gray, Mary Hickmott, David Hill, Barbara Hilton, Chris Hitch, Bob Hodgson, Inge Knudson, Robert Marshall, Ivan Pedley, Joy Ricketts, Ken Sandell, Sheila Street, Verena Stubbs, Beth Tonkin and Amanda Waterfield.

Acknowledgements

I would particularly like to thank Paul Gainy for his help in suggesting localities, and Beth Tonkin and Jeremy Clitheroe of Natural England's Cornwall office for helping over access to various sites and their interest in the meeting. The staff of Trebah Gardens are acknowledged for guiding us around the garden, and the Project Officer for Penhale Sands for meeting us and taking us into the military area. Finally Ivan Pedley helped to compile the records made at the meeting.

Reference

Gilbert, O.L. & James, P.W. (1987) Field meeting on the Lizard Peninsula, Cornwall. *Lichenologist* **19**: 319-334.

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Species list from Falmouth field meeting, April 2008		Coddoden Wood	Philleagh Wood	St. Philleagh Church	St. Just in Roseland	Trebah Gardens	Breann Cove	Penwarne, Mawnan Smith	Mawnan Smith cliffs	St. Martin's Church	Carrick Dhu, St Ives	Rosewall Hill	Trencom Hill	Penhale Camp sand dunes	Penhale Camp willow carr	Kynance Cove
<i>Acrocordia</i>	<i>conoidea</i>			■				■								
	<i>gemmata</i>	■						■								
<i>Acarospora</i>	<i>fuscata</i>									■	■	■	■			
	<i>impressula</i>					■				■	■	■				
	<i>smaragdula</i>					■							■			
<i>Agonimia</i>	<i>tristicula</i>										■					
<i>Amandinea</i>	<i>punctata</i>					■	■	■					cort		■	■
<i>Anaptychia</i>	<i>runcinata</i>							■			■	■				■
<i>Anisomeridium</i>	<i>biforme</i>	■	■		+	■									■	
	<i>polypori</i>							■								
<i>Arthonia</i>	<i>apotheciorum</i>									■ ²						
	<i>cinnabarina</i>	■	■					■								
	<i>didyma</i>	■														
	<i>diploiciae</i>									■ ³						
	<i>elegans</i>	■														
	<i>punctiformis</i>		■			■										
	<i>radiata</i>	■			■		■			■					■	
	<i>spadicea</i>	■														
	<i>varians</i>										rup.					
<i>Arthopyrenia</i>	<i>analepta</i>	■	■			■										
	<i>punctiformis</i>		■													
	<i>salicis</i>							■								
<i>Aspicilia</i>	<i>calcareae</i>					■				■						
	<i>caesiocinerea</i>												■			
	<i>cinerea</i>												■			
<i>Bacidia</i>	<i>arcutina</i>					■										
	<i>bagliettoana</i>													ter		
	<i>delicata</i>							■							■	
	<i>incompta</i>							■								
<i>Bacidia</i>	<i>laurocerasi</i>				+				■							
	<i>phacodes</i>	■														
	<i>saxenii</i>													bone		
	<i>scopulicola</i>					■	■									
	<i>viridifarinsa</i>	■														
<i>Baeomyces</i>	<i>rufus</i>		■				■						■			
<i>Bilimbia</i>	<i>sabulatorum</i>									■				ter		

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<i>Botryolepraria</i>	<i>lesdanii</i>								■							
<i>Bryoria</i>	<i>fuscescens</i> v. <i>fuscescens</i>												■			
<i>Buellia</i>	<i>aethalea</i>			■	■	■				■	■	■		#		■
	<i>disciformis</i>							■								
	<i>griseovirens</i>	■	■					■								
	<i>ocellata</i>								■			■	■	#		
	<i>stellulata</i>								■	■				#		■
	<i>subdisciformis</i>					■				■				#		
<i>Caloplaca</i>	<i>aractina</i>															■
	<i>ceracea</i>								■							
	<i>citrina</i>			■	■	■	■		■	CO				#		
	<i>crenularia</i>			■		■	■									■
	<i>crenulatella</i>					■			■	CO						
	<i>flavescens</i>			■	■	■			■	CO				#		
	<i>flavocitrina</i>				■	■			■	CO						
	<i>flavovirescens</i>					■				CO						
	<i>holocarpa</i>								■	CO				#		
	<i>littorea</i>						■									■
	<i>marina</i>					■	■			■				#		■
	<i>maritima</i>									CO						■
	<i>microthallina</i>						■									
	<i>saxicola</i>					■			■					#		■
	<i>thallincola</i>					■	■			■						■
<i>Candelariella</i>	<i>aurella</i> f. <i>aurella</i>					■			■	CO	■			#		
	<i>coralliza</i>											■				■
	<i>reflexa</i>	■	■						■							
	<i>vitellina</i> f. <i>vitellina</i>						■		■	■	■	■	■			■
<i>Catapyrenium</i>	<i>pilosellum</i>													ter		
	<i>squamulosum</i>						■							ter		
<i>Catillaria</i>	<i>atomarioides</i>					■				■				#		
	<i>chalybeia</i> v. <i>chalybeia</i>	■		■		■	■		■	■	■			#		■
	<i>lenticularis</i>			■		■			■	CO				#		
<i>Chrysothrix</i>	<i>candelaris</i>	■	■		+				■							
<i>Cladonia</i>	<i>caespiticia</i>											■				
<i>Cladonia</i>	<i>cervicornis</i> ssp.											■	■			

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	<i>cervicornis</i>															
	<i>cervicornis</i> ssp. <i>verticillata</i>															■
	<i>chlorophaea</i>					■										
	<i>coniocraea</i>	■	■					■				■				
	<i>digitata</i>											■				
	<i>diversa</i>											■				
	<i>firma</i>							■			ter.					■
	<i>furcata</i> ssp. <i>furcata</i>												■	ter		■
	<i>humilis</i>					■										
	<i>macilenta</i>							■								
	<i>pacillum</i>													ter		
	<i>polydactyla</i> v. <i>polydactyla</i>	■	■													■
	<i>portentosa</i>												■			
	<i>pyxidata</i>					■		■				■				■
	<i>ramulosa</i>										ter.					■
	<i>rangiformis</i>										ter.		■			■
	<i>squamosa</i> v. <i>subsquamosa</i>											■	■			
	<i>subcervicornis</i>											■	■			
<i>Clauzadea</i>	<i>monticola</i>									■						
<i>Cliostomum</i>	<i>griffithii</i>						lig	■								■
<i>Collema</i>	<i>auriforme</i>									■					#	
	<i>crispum</i> v. <i>crispum</i>									■					#	
	<i>furfuraceum</i>									■						
	<i>tenax</i> v. <i>tenax</i>					■	■			■				ter		
	<i>tenax</i> v. <i>ceranoides</i>															■
<i>Cresponea</i>	<i>premnea</i>	■	■		+											
<i>Cyrtidula</i>	<i>quercus</i>	■	■													
<i>Dermatocarpon</i>	<i>luridum</i>															■
<i>Dimerella</i>	<i>lutea</i>	■	■					■								■
	<i>pineti</i>	■	■					■								
<i>Diploicia</i>	<i>canescens</i>			■	■	■	■	■	■	■	■			#		
<i>Diploschistes</i>	<i>caesio-plumbeus</i>						■				■					
<i>Diplozomma</i>	<i>alboatrum</i>			■	■					■				#		

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<i>Dirina</i>	<i>massiliensis</i> f. <i>sorediata</i>	■		■	■	■				■	■					
<i>Enterographa</i>	<i>crassa</i>	■	■		■	■	■	■							■	
	<i>hutchinsiae</i>	■	■													
<i>Evernia</i>	<i>prunastri</i>	■			■				WC						■	
<i>Fellanera</i>	<i>bouteillei</i>				+	■										
<i>Flavoparmelia</i>	<i>caperata</i>	■	■	■	■	■	■	■	WC	■		■	■		■	■
	<i>soredians</i>		■							■						
<i>Fulgensia</i>	<i>fulgens</i>													ter		
<i>Fuscidea</i>	<i>cyathoides</i> v. <i>cyathoides</i>												■			
	<i>lightfootii</i>	■	■		■											
<i>Graphis</i>	<i>elegans</i>	■			■	■	cort	■								
<i>Graphis</i>	<i>scripta</i>	■	■			■	cort	■	WC					cort	■	
<i>Gyalecta</i>	<i>truncigena</i>							■								
<i>Heterodermia</i>	<i>japonica</i>							■								■
	<i>leucomela</i>															■
<i>Hyperphyscia</i>	<i>adglutinata</i>							■								
<i>Hypogymnia</i>	<i>physodes</i>	■				■		■	WC			■			■	
	<i>tubulosa</i>	■	■						WC							
<i>Hypotrachyna</i>	<i>revoluta</i>	■	■	■	+			■	WC							
<i>Japewia</i>	<i>tavaresiana</i>					■									■	
<i>Lauderlindsaya</i>	<i>acroglypta</i>	■													■	
<i>Lecanactis</i>	<i>abietina</i>	■				■	cort									
	<i>subabietina</i>	■	■		+											
<i>Lecania</i>	<i>aipospila</i>				+											
	<i>atrynoides</i>					■										
	<i>cyrtella</i>							■								
	<i>erysibe</i>			■							co	■				
	<i>hutchinsiae</i>				■											
<i>Lecanographa</i>	<i>grumulosa</i>				■											
	<i>lyncea</i>		■													
<i>Lecanora</i>	<i>actophila</i>						■				■					■
	<i>albescens</i>			■	■					■	co			#		
	<i>argentata</i>							■							■	
	<i>campestris</i> ssp. <i>campestris</i>			■	■	■	■			■	co	■		#		■
	<i>chlarotera</i>	■	■	■	■	■	cort	■		■			cort			

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<i>Lecanora</i>	<i>confusa</i>	■			+	■		■							■	
	<i>conizaeoides</i>					■									post.f	
	<i>dispersa</i>					■	lig	■	■	co	■	■	■	#		
	<i>expallens</i>	■	■	■	■	■	cort	■		■					■	
	<i>fugiens</i>										■					
	<i>gangaleoides</i>			■			■				■			#		■
	<i>jamesii</i>	■			■	■		■	WC						■	
	<i>umbrina</i>						lig									
	<i>helicopis</i>					■	■									■
	<i>persimilis</i>								■							
	<i>polytropa</i>						■				■	■	■			
	<i>praepostera</i>										■					
	<i>rupicola</i> v. <i>rupicola</i>										■		■			■
	<i>sulphurea</i>										■		■			
	<i>symmicta</i>					■									post	
	<i>zosteriae</i>										■					
<i>Lecidea</i>	<i>doliiformis</i>		■			■										
	<i>lithophila</i>											■				
<i>Lecidella</i>	<i>asema</i>						■				■					
	<i>elaeochroma</i> f. <i>elaeochroma</i>	■	■			■	cort	■	■					cort		
	<i>scabra</i>					■			■	■	■			#		
	<i>stigmatea</i>					■				co				#		
<i>Lepraria</i>	<i>ecorticata</i>	■	■		+											
	<i>incana</i>	■	■	■	■	■	■	■	■	■	■	■	■			■
	<i>lobificans</i>	■	■	■	■	■	cort	■	■	■	■	■	cort		■	
	<i>neglecta</i>											■	■			
	<i>nivalis</i>									■						
<i>Leptogium</i>	<i>gelatinosum</i>			■			■		■							■
	<i>schraderi</i>													ter		
	<i>teretiusculum</i>					■		■	WC						■	
	<i>turgidum</i>													ter		
<i>Lichina</i>	<i>confinis</i>						■				■					■
	<i>pygmaea</i>						■									
<i>Llimonaea</i>	<i>sorediata</i>		■	■	■					■						
<i>Melanelixia</i>	<i>fuliginosa</i> ssp. <i>fuliginosa</i>									■	■	■				■

Species list from Falmouth field meeting, April 2008		Coddoden Wood	Philleagh Wood	St. Philleagh Church	St. Just in Roseland	Trebah Gardens	Breann Cove	Penwarne, Mawnan Smith	Mawnan Smith cliffs	St. Martin's Church	Carrick Dhu, St Ives	Rosewall Hill	Trencom Hill	Penhale Camp sand dunes	Penhale Camp willow carr	Kynance Cove
<i>Melanelixia</i>	<i>fuliginosa</i> ssp. <i>glabratula</i>				■			■		■						
	<i>subaurifera</i>	■	■	■	■			■		■					■	
<i>Melaspilea</i>	<i>lentiginosa</i>	■					1	1								
	<i>ochrothalmia</i>		■													
<i>Menegazzia</i>	<i>terebrata</i>							■								
<i>Micarea</i>	<i>bauschiana</i>	■	■													
	<i>botryoides</i>	■														
	<i>denigrata</i>					■										post
	<i>micrococca</i>	■	■													
	<i>pelioarpa</i>	■	■													
	<i>prasina</i>	■	■													
<i>Moelleropsis</i>	<i>nebulosa</i>								■							
<i>Mycoblastus</i>	<i>caesius</i>	■	■						WC							
<i>Mycoporum</i>	<i>anticellens</i>	■	■													
<i>Nephroma</i>	<i>laevigatum</i>							■								■
<i>Normandina</i>	<i>pulchella</i>	■	■				cort	■	WC						■	■
<i>Ochrolechia</i>	<i>androgyna</i>							■								■
	<i>inversa</i>	■				■		■								
	<i>parella</i>		■	■	■	■	■			■	■			#		■
	<i>tumeri</i>	■														
<i>Opegrapha</i>	<i>atra</i>	■	■		+	■	cort	■	■	■					■	
	<i>calcareo</i>			■	■					■						
	<i>cesareensis</i>		■	■												
	<i>corticola</i>				+										■	
	<i>gyrocarpa</i>	■	■	■	+					■		■				
	<i>herbarum</i>	■	■													
	<i>mougeotii</i>				■											
	<i>niveoatra</i>	■						■								
	<i>sorediifera</i>	■	■													
	<i>varia</i>		■													■
<i>Opegrapha</i>	<i>vulgata</i>	■						■	■							
	<i>zonata</i>	■			■					■						
<i>Pannaria</i>	<i>conoplea</i>					■										■
<i>Parmelia</i>	<i>omphalodes</i>											■	■			■
	<i>saxatilis</i>	■						■		■		■	■			
	<i>sulcata</i>	■		■	■	■				■			cort		■	■

Species list from Falmouth field meeting, April 2008		Coddoden Wood	Philleagh Wood	St. Philleagh Church	St. Just in Roseland	Trebah Gardens	Breann Cove	Penwarne, Mawman Smith	Mawman Smith cliffs	St. Martin's Church	Carrick Dhu, St Ives	Rosewall Hill	Trencom Hill	Penhale Camp sand dunes	Penhale Camp willow carr	Kynance Cove
<i>Parmelinopsis</i>	<i>horrescens</i>					■	cort	■								
	<i>minarum</i>	■	■					■				■	■			
<i>Parmotrema</i>	<i>crinitum</i>											■				
	<i>perlatum</i>	■	■	■	■	■		■	■	■		■	cort		■	■
	<i>reticulatum</i>				+			■				■				
<i>Peltigera</i>	<i>hymenina</i>											■				
	<i>membranacea</i>							■								
<i>Pertusaria</i>	<i>albescens</i> v. <i>albescens</i>							■								
	<i>albescens</i> v. <i>corallina</i>		■		■					■						
	<i>amara</i> f. <i>amara</i>	■	■				cort	■							■	
	<i>aspergilla</i>											■				
	<i>corallina</i>			■								■	■			
	<i>hymenea</i>						cort	■								
	<i>leioplaca</i>	■					cort								■	
	<i>monogona</i>											■	■			
	<i>multipuncta</i>	■	■		+										■	
	<i>pertusa</i>	■	■	■	■	■	cort	■	■							
	<i>pseudo-corallina</i>					■	■			■	■	■	■			
<i>Phaeographis</i>	<i>dendritica</i>	■	■	■	+		cort	■		■					■	
	<i>lyellii</i>		■		+			■								
<i>Phaeophyscia</i>	<i>orbicularis</i>	■						■		■				#		
<i>Phlyctis</i>	<i>argena</i>	■	■		+	■	cort	■		■					■	
<i>Physcia</i>	<i>adscendens</i>		■							■		■		#		
<i>Physcia</i>	<i>aipolia</i>				■			■	■	■					■	
	<i>leptalea</i>		■													
	<i>tenella</i>	■	■	■	■	■	cort			■				#		
	<i>tribacioides</i>							■								■
<i>Placynthium</i>	<i>nigrum</i>													#		
<i>Polysporina</i>	<i>simplex</i>					■				■		■		#		
<i>Porina</i>	<i>aenea</i>	■					cort	■								
	<i>chlorotica</i> f. <i>chlorotica</i>	■	■		+											
	<i>lectissima</i>	■														
<i>Porpidia</i>	<i>cinereoatra</i>	■	■			■	■					■	■			
	<i>crustulata</i>											■				
	<i>macrocarpa</i>		■		■							■				

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<i>Porpidia</i>	<i>soredizodes</i>									■						
	<i>tuberculosa</i>			■	■		■			■		■	■			
<i>Protoblastenia</i>	<i>rupestris</i>			■		■				■				sax		■
<i>Psilolechia</i>	<i>lucida</i>		■		■					■						
<i>Punctelia</i>	<i>reddenda</i>		■					■								
	<i>subrudecta</i>		■	■												
<i>Pyrenocollema</i>	<i>halodytes</i>						■									
<i>Pyrenula</i>	<i>chlorospila</i>	■					cort	■	WC							■
	<i>macrospora</i>	■	■		+	■	cort	■								■
<i>Pyrrhospora</i>	<i>quernea</i>	■	■		+											■
<i>Ramalina</i>	<i>canariensis</i>			■				■	■	■						■
	<i>cuspidata</i>						■				■					
	<i>farinacea</i>	■	■		+	■	cort		■							■
	<i>fastigiata</i>				+				■	■						
	<i>fraxinea</i>															■
	<i>lacera</i>		■					■								
	<i>pollinaria</i>			■				■								■
	<i>siliquosa</i>			■	■	■	■		■	■	■	■				■
<i>Ramalina</i>	<i>subfarinacea</i>							■				■				
<i>Rhizocarpon</i>	<i>geographicum</i>									■	■		■			
	<i>petraeum</i>													#		■
	<i>reductum</i>		■	■	■	■				■	■	■		#		■
	<i>richardii</i>					■					■					■
<i>Rimularia</i>	<i>furvella</i>										■					
<i>Rinodina</i>	<i>atrocinerea</i>												■			
	<i>gennarii</i>						■			■	CO					
	<i>roboris</i> v. <i>roboris</i>							■								
	<i>sophodes</i>		■					■								
<i>Roccella</i>	<i>phycopsis</i>				■						■					
<i>Sarcogyne</i>	<i>regularis</i>					■										
<i>Schismatomma</i>	<i>cretaceum</i>	■														
	<i>decolorans</i>	■	■		+											
	<i>niveum</i>		■													
	<i>quercicola</i>		■													
<i>Sclerophytonomyces</i>	<i>circumscripatus</i>											■				

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<i>Solenopsora</i>	<i>holophaea</i>						■									
	<i>liparina</i>															■
	<i>vulturiensis</i>		■			■										
<i>Sphaeroporus</i>	<i>globosus</i>											■				
<i>Squamarina</i>	<i>cartilaginea</i>													#		
<i>Stenocybe</i>	<i>septata</i>	■														
<i>Stereocaulon</i>	<i>evolutum</i>											■				
<i>Sticta</i>	<i>fuliginosa</i>							■								■
	<i>limbata</i>							■								■
	<i>sylvatica</i>															■
<i>Strigula</i>	<i>taylorii</i>				+											
<i>Teloschistes</i>	<i>flavicans</i>							■								
<i>Tephromela</i>	<i>atra</i>			■	■	■				■	■					■
<i>Thelotrema</i>	<i>lepadinum</i>		■													
<i>Toninia</i>	<i>aromatica</i>			■		■	■			■	co			#		
	<i>sedifolia</i>						■							ter		
<i>Trapelia</i>	<i>coarctata</i>					■	■									
	<i>glebulosa</i>						■					■	■			■
<i>Trapeliopsis</i>	<i>granulosa</i>											■			post	
	<i>pseudo-granulosa</i>	■														
<i>Usnea</i>	<i>ceratina</i>					■										
	<i>cornuta</i>	■	■		■	■	cort	■		■		■				■
	<i>esperantiana</i>							■	■							
	<i>flammea</i>											■	■			■
	<i>hirta</i>	■														
	<i>rubicunda</i>	■				■		■	WC							
	<i>subfloridana</i>	■	■				■	■								■
<i>Verrucaria</i>	<i>baldensis</i>			■												
	<i>elaeina</i>									■						
	<i>fusconigrescens</i>					■				■		■				
	<i>hochstetteri</i>			■										#		
	<i>macrostoma</i> f. <i>furfuracea</i>				■					■						
	<i>macrostoma</i> f. <i>macrostoma</i>			■		■										
	<i>margacea</i>						■									
	<i>maura</i>		■			■	■				■					■

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<i>Verrucaria muralis</i>				■						co			#		
<i>nigrescens</i>			■	■					■	co					
<i>prominula</i>						■									
<i>Xanthoparmelia conspersa</i>			■	■						■	■	■			■
<i>delisei</i>												■			
<i>loxodes</i>										■	■	■			
<i>mougeotii</i>			■	■					■						
<i>Xanthoparmelia pulla</i>												■			
<i>verruculifera</i>										■		■			
<i>Xanthoria aureola</i>						■				■					■
<i>ectanea</i>					■					■					
<i>parietina</i>		■	■			■	■		■		■	■	#		

Key to table

¹ on *Phaeographis dendritica*

² on *Lecanora albescens*

³ on *Diploicia canescens*

co on concrete (wall and ruined coastguard station)

ter terrestrial

rup on *Lecanora rupicola* var. *rupicola*

on ruined building, mortar and granite

+ additional records from 2004 (B. Edwards and P. Gainey)

BLS Field Meetings and Workshops 2009 – 2010

Workshop: Lichens on Limestone

Friday 13 – Sunday 15 February 2009

There will be a weekend course at Bristol University Botanic Garden from 7.30pm on Friday 13 February to 4.30pm on Sunday 15 February 2009. Tutors will be Dr B J Coppins and Dr D J Hill. The University Botanic Garden is located in Stoke Bishop where there is plenty of nearby parking.

The course will help lichenologists who want to get to know the lichen flora of limestone areas better and become more confident at finding the species present and

identifying them reliably. The emphasis will be on linking an ecological understanding to the habitats in the field with laboratory work on material collected. The programme will start with an introduction to sites we will visit in the field (possibly Cheddar Gorge or Burrington Combe). Then we will consider how the habitats can be divided up into niches and their ecological characteristics with examples of the key species to be found. In the field we will learn how to approach these habitats in practice with the provisional identification of characteristic species that occur in these niches. In the field, we will learn how to collect small samples for laboratory study back for the purpose of confirming identities of field determinations or complete identification of unknowns. We will be using the new Lichen Flora and learning the new features of this work as improvements on the first edition. The Laboratory work will include training in microscopic examination and where appropriate any other methods such as those for lichen substances. The intention is a theme of developing specific skills rather than a general field meeting.

Fee: £20.00 (excluding any board and lodging and catering). We have the possibility of accommodation at Burwalls (University conference centre) at a reasonable cost. Fuller details (with costs) will be sent out to all those expressing an interest.

Come and hone your identification skills. Please contact David as soon as possible as the numbers will be strictly limited to 15 places. If you are interested please contact D.J.Hill@bris.ac.uk, tel. 01761 221576.

Spring 2009 Field Meeting, The Burren

Saturday 18 – Saturday 25 April 2009

A field meeting is planned focused on the Burren, County Clare, western Ireland. The Burren is famed for its limestone habitats that include pavements, hazel and ash woodlands and coastal cliffs, whilst County Clare also offers habitats ranging from oak woodland to the exposed headland of Loop Head. Available accommodation ranges from hostels and B&Bs to hotels.

The area is accessible by long-distance rail, coach and plane, although for transport within the Burren car-sharing or minibus hire would be necessary. If interested, please contact the Field Meetings Secretary Ivan Pedley (ivan.pedley@gmail.com, tel. 0116 287 6886).

Summer 2009 Field Meeting, Raasay

Wednesday 15 – Tuesday 21 July 2009

It is proposed to hold a field meeting on the island of Raasay, arriving on Wednesday July 15th and departing on Tuesday July 21st. This is a beautiful island and geologically very varied, with rocks including Lewisian gneiss and Jurassic

limestone. The meeting will be based at Raasay House and accommodation will be based on two sharing and full board. The cost will be £61.20 per night and includes packed lunches and evening meals. For information about Raasay House see www.raasay-house.co.uk. There is also a small camping site attached where the charge will be £6.30 per night with meals extra and also a Youth Hostel on the island. The island is a short ferry journey from Skye and it is possible to reach it by public transport with the Inverness to Kyle of Lochalsh rail service and a connecting bus on from there. For further details and booking arrangements contact the Field Meetings Secretary Ivan Pedley (ivan.pedley@gmail.com, tel. 0116 287 6886) by 1st March.

Autumn 2009 Field Meeting, Derbyshire

Thursday 8 – Monday 12 October 2009

Based in the village of Hartington, this meeting will focus primarily on the carboniferous limestone habitats of the Peak District. The abundance of cliffs, outcrops, screes, seepages, bedrock pedestals and lead rakes offered by the dales will be complemented by an especially arranged visit to the normally private Old Deer Park at Chatsworth House giving us privileged access to its 600 year old oak trees.

Outline programme:

Thursday 8 Oct. (evening): assemble

Friday 9 Oct.: BLS Council and other committee meetings

Saturday 10 Oct.: limestone lichens - sites to be finalised

Sunday 11 Oct.: limestone and lead rakes - sites to be finalised

Monday 12 Oct. (morning): The Old Deer Park, Chatsworth

The meeting will be based at YHA Hartington Hall (grid ref SK132603). This is a very luxurious hostel with a café, a restaurant and a bar that sells the locally brewed Hartington beer. For those not involved in committee meetings on Friday 9th the hostel is within easy walking distance of good lichen habitats. Further details of the hostel can be found on www.yha.org.uk.

30 beds in a number of single, twin and triple en-suite rooms (some with bunk beds) have been reserved for us – the cost b&b is around £28.00 per night. Double rooms and dormitory rooms are also available in the hostel but no beds in these have been reserved. Rooms should be booked (and paid for) direct with the hostel on 01298 84223 and not via the central YHA booking system. Advise the hostel beforehand if an evening meal is required on the day of arrival. The rooms will be held until the 1st June 2009, after which they will become available for public booking. Other types of accommodation can be found through the website www.visitpeakdistrict.com.

The nearest rail station is in Buxton, 20mins car drive to the north. There are infrequent bus services from Buxton which call at Hartington. See

www.derbyshire.gov.uk/transport_roads for current timetables. If you have particular problems with transport please contact Steve Price (see below).

Please advise the local organiser Steve Price (rosnsteve@tiscali.co.uk or 01298 814830) and the BLS Field Meetings Secretary Ivan Pedley (ivan.pedley@gmail.com, tel. 0116 287 6886) if you plan to attend. More detailed information will be sent out to attendees shortly before the meeting.

Possible field meeting in Bhutan, May – June 2010

In addition to the usual UK/Ireland based field meeting programme in 2010, it may be possible to organize a lichen study expedition to Bhutan. This is likely to be 2 – 3 weeks in duration, involving a mixture of trekking and collecting along one of the established routes through deciduous oak and conifer forests to rocky habitats and grassland above the tree line around 4000 m in altitude. In May/June the weather is usually bright and sunny (though cold at night) and the mountain flowers should be impressive. A reasonable level of fitness must be assumed, but mountaineering skills will not be required. The expedition would operate as a collaboration with the appropriate agencies of the Bhutanese government. It will have a development component, including training of Bhutanese scientists in identification of macrolichens and establishing the nucleus of a lichen herbarium at the National Biodiversity Centre.

Bhutan is an expensive country to visit and the cost is likely to be around £2500 per person. However, this would be a rare opportunity to view and study some of the least disturbed ecosystems of the Himalayas, with an impressive range of lichen habitats and substrata.

At this stage I would like merely to gauge interest in the possible expedition; if you are seriously interested then please email me. If there are sufficient people to make it viable, I will discuss our plans with my colleagues in Bhutan and put together a more detailed proposal.

Paul Cannon
p.cannon@cabi.org

SOCIETY BUSINESS

ANNUAL GENERAL MEETING, 9-11 JANUARY 2009

Royal Botanic Garden Edinburgh, Inverleith Row, Edinburgh

Nominations

Nominations for Officers for 2009 and four members of Council for the period 2009-2012 should be sent by e-mail or in writing to the Secretary, c/o Peter Lambley [P.W. Lambley MBE, The Cottage, Elsing Road, Lyng, Norwich NR9 5RR, email Plambley@aol.com] at least two weeks before the AGM. No person may be nominated without their consent. Council members retiring are John Douglass, Chris Ellis, Peter James and Don Palmer.

Committee Meetings, RBG Board Room

Education & Promotions Committee, 09:30 Thursday 8th January 2009

Data Committee, 14:00 Thursday 8th January 2009

Conservation Committee, 09:30 Friday 9th January 2009

Council Meeting

Council will meet at **13.30 on Friday 9th January 2009** in the Board Room at RBG Edinburgh. Please let the President have any items you wish Council to discuss by 12th December 2008.

Lichenological exhibition and book sale

Please bring books or other items for sale. There will be a special table reserved for books included in the sale in the Conference Room. Please hand these to Mark Seaward before 18.00 on Friday 9th. This will be run on paper bids which Mark will assess on Sunday morning. 25% of the proceeds from the sale go to the BLS.

The Conference Room is reserved to put up exhibits of lichen interest from 14:00, **Friday 9th January** onwards. This is an opportunity to showcase your projects and activities to members so please contribute items to this. Display boards and tables will be available but we need to organise this well before the meeting. Please email Chris Ellis (e-mail c.ellis@rbge.org.uk) the subject and/or title of your exhibit and space required (e.g table, electrical or internet connection) **by 12 December, 2008**. [You are also welcome to contribute items to the exhibition on Saturday morning after 9.00am].

From 17:00 on Friday afternoon there will be a preview of the exhibits with a glass of wine, with a buffet supper commencing at 18:00 in the Conference Room. For attendance at the buffet supper please complete the booking form enclosed. This will be followed at 19:00 by:

Dougal Swinscow Lecture

Lecture Theatre, RBG

The lecture will be contributed by **Gintaras Kantvilas**, Tasmanian Herbarium & University of Tasmania, Hobart.

‘An Antipodean Odyssey – The Lichens of Tasmania’

ANNUAL GENERAL MEETING

Saturday, 10th January 2009

The Annual General Meeting will be held in the Lecture Theatre, RBG.

10.00 Coffee

10.30 Annual General Meeting

AGENDA

1. Apologies for absence
2. Minutes of the Annual General Meeting January 2008
3. Matters arising
4. Officers and Committee Chair Reports
5. Field Meetings 2009
6. Election of Officers and four members of Council including vacant positions of Secretary and Librarian
7. Proposal for establishing a new category of membership (e-access to journals only)
7. Any other business
8. Date and place of next AGM

12:45 Lunch will be served in the Conference Room

Lecture Meeting, 14:00 (RBG Lecture Theatre): Taxonomy, Habitats and Conservation

14:15-15:00 : Recent Advances in Lichen Taxonomy,
Jola Miadlikowska, *Duke University*

15:00-15:45 : The Ecology of Hazel in Native British Woodlands
John Birks, *University of Bergen*

15:45 – 16:30 : Coffee Break (Conference Room)

16:30-17:15 : Lichen Conservation – Challenges for the 21st Century
David Genney, *Scottish Natural Heritage*

Saturday evening

The Society's annual meal will take place in the Conference Room at RBG (booking form enclosed); all are warmly invited. The meal cost will be £18, please send cheques (made payable to 'The Royal Botanic Garden Edinburgh') with a completed booking form to Chris Ellis, Royal Botanic Garden Edinburgh, 20A Inverleith Row, Edinburgh, EH3 5LR, specifying if vegetarian or other special requirements. The meal will be followed by an informal event to celebrate the career and forth-coming retirement of Brian Coppins.

Wine or soft drinks will be served at 18:30 in the Conference Room prior to dinner at 19.00.

Field excursion

Sun 11th January 2009

Pentland Hills: further details to be provided at the AGM

Travel & Accommodation

Orientating yourself

To identify the location of RBGE see www.multimap.com, or www.streetmap.co.uk : the post-code for RBGE is EH3 5LR

Princes Street forms the centre of Edinburgh. It is the main city centre shopping area, and the railway and bus stations are close by. It also offers a spectacular view of Edinburgh castle. The Royal Botanic Garden is to the north of Princes Street, downhill and towards the Firth of Forth.

From the airport to the city centre

To get from the airport into the city, the most economical route is to take the Airlink bus. This costs £3 single, £5 return and can be joined just outside the terminal building. This bus terminates at Waverley train station which is the best place to get off for onward travel. There is also a taxi rank at the airport, but expect to pay around £20 to get into the city centre.

Arriving by inter-city bus

Inter-city coaches arrive in St Andrews Square located almost directly across Princes St from Waverley Train Station.

Arriving by train

Edinburgh's main railway station is Waverley Station also next to Princes St. Some trains also stop at Haymarket Station, at the west end of Princes St – but for RBGE and local accommodation it is best to get off at Waverley Station.

From the city centre to the Royal Botanic Garden (RBGE)

From Waverley train station and the Bus station – it is a 20-25 minute walk (downhill) to the Royal Botanic Garden (the return journey is steep!). There are also frequent buses (exact fare needed, £1.10) to the Royal Botanic Garden from the city centre. Lothian Buses 23 and 27 run from Hanover St (just off Princes Street) to the Royal Botanic Garden. A taxi to the RBGE will cost around £7 (a taxi rank is located inside the train station next to Platform 11).

Accommodation

There is plentiful accommodation in Edinburgh (see www.edinburgh.org, www.visitscotland.com), but for convenience (and to avoid having to cross the town centre each day) it is best to stay either centrally in the city, or in the Inverleith area of town, close-by the RBG. For a list of recommended lodgings send an e-mail with subject titled 'BLS Accommodation' to c.ellis@rbge.org.uk.

Report of the Data Committee – 2008

The main work of the Data committee continues to be the project to get records for England and Wales digitised, into the database and onto the National Biodiversity Network (NBN) Gateway, so that BLS members and the general public can access them. However, progress in digitising this large number of records remains extremely limited without significant financial help.

The NBN have been helping us in our search for funding for this project, and over the last year we have had many meetings with them and their partner organisations. The first was in March when Peter Lambley, David Hill and Janet Simkin met with Trevor James (NBN), Oliver Grafton (NBN), Chris Cheffings (Joint Nature Conservation Committee) and Mark Hill (Biological Records Centre), and since then Janet has met several times with Oliver, Mark and others. The NBN cannot offer very much financial help for specialist groups such as ourselves, but they now coordinate the funding available from national agencies such as Natural England, the Countryside Council for Wales and Scottish Natural Heritage. This year funding is being prioritised for plants, birds, Lepidoptera and lichens, but although lichens are on this list we still have to put together a detailed project proposal that meets the needs of the agencies as well as the BLS, and demonstrates that the work will be done professionally and in the most cost-effective way.

Ours will be the first project to go through backed by this new arrangement, so we have been asked to start it with a trial that will compare the cost and accuracy of

using professional data inputters, such as local record centres and BRC using their own input tools, with our own people using the BLS spreadsheet. A set of churchyard cards will be used for this as they need little preparation and include the sort of detailed information on substrate and “small scale” habitat (such as rock type or the species of tree for corticolous species or the species of lichen for lichenicolous species) that is typical of much of our data.

The project will then use the optimal method to input the rest of the churchyard cards and about 5,000 cards and lists held by the Mapping Scheme and others. These should include all the records from surveys of SSSIs and other sites of conservation importance, so although we won't get all the known records for England and Wales into the database at this stage we will have the most important. We will also complete the transfer of records from BioBase and import the considerable backlog of spreadsheets, so that all our site-based records are at last held within one consolidated database.

At the time of writing this the funding we need for this work is not yet agreed, but Janet and the Data Committee will be working hard on this and maximising our likelihood of success. In the mean time Janet has continued to build up the Recorder 6 database. Including the Scottish data and the Threatened Lichens database, we now hold details of 17,623 locations with 816,934 records made by 913 people, some going back historically to the first records of lichens ever made! The next project could add another 1 million records.

The Mapping Scheme data (which is only on a 10km square basis) has been successfully copied into Recorder 6 so that we can also include this in our database. This was essential as many of these records are not supported by site-based cards and so would not be picked up by the main project. Meanwhile the Mapping Scheme is still providing people with data (as lists and printed maps) under Mark Seaward's capable hands.

Over the last few months the NBN has been reviewing its own organisation and future direction, and it is now allowing the national societies and recording schemes to get more involved. Janet Simkin has joined the NBN Strategy Implementation Group, which includes representatives of DEFRA and the national agencies as well as some of the national societies, and in September Peter and David met with Jim Munford (NBN Chief Executive) and Sir Neil Chalmers (NBN Trust Chairman) as part of series of meetings they were having with specialist societies. These meetings have given us an opportunity to raise issues that concern the BLS and other national societies at a more strategic level, and to make the NBN more aware of our objectives and achievements not just with data but with our other activities.

We do want members of the BLS to use this data – after all many of you have been wonderful in supplying records and helping with the development of the database so far. The Scottish part is up and running already and you can use it on the NBN Gateway (www.searchnbn.net) to answer questions you like to pose about lichen distribution and change in Scotland. Do encourage others to use it. We hope to have the Lichen Mapping Scheme data available to all on the NBN Gateway soon so that you can look up the general distribution of species in Britain yourself from

your own computer, and the Threatened Lichens database will enable you to find out more about the distribution of scarce species.

We have had a good recording workshop at the Autumn Meeting in Northumberland at Wooler. Here we learned how good data on lichens starts with good recording in the field and we tried to put this into practice during the weekend. We used a new updated Excel Spreadsheet (version 5.1) available on the website (<http://www.thebls.org.uk/content/databases.html>) which has improved species input facilities. A record card is recommended as the species can be input quickly using the BLS numbers, but we discussed the importance of additional information on substrate and habitat that may be more easily held in a notebook. The more detail we record, especially for the more unusual species, the more useful the database will be in the future. Following the workshop the Lichen Recording Guidelines will be revised to give more guidance on such matters.

At the Meeting of the Data Committee in Wooler, we also discussed the lack of progress on the publication of new *Fascicles of British Lichens*. The main problem is that we seem unable to get the authors to complete nearly finished ones or to start new ones. In time, the Committee felt that, with the development of the website, we will in a few years have a screen for each species tiled with its distribution map, photo and ecological information (see *ITALIC* for a similar site for Italian lichens – <http://dbiodbs.univ.trieste.it/>). We are concerned about whether it is desirable to continue with the production of an expensive publication that duplicates much of this information and which may not be kept up to date in the future. Please let us know what you think.

Finally we briefly reviewed the working of the Data Committee to examine its role and its method of reporting to the membership. Three reports will be produced each year one for the AGM and January Council and two further ones during the year specifically for Council. We are mainly concerned with the database for lichens of Britain and the fascicles, and interaction with the Conservation Committee and the Education Committee. Although data related, the website is a remit of the Education Committee. If there are other matters that should be brought to the Committee's attention please let us know.

David Hill

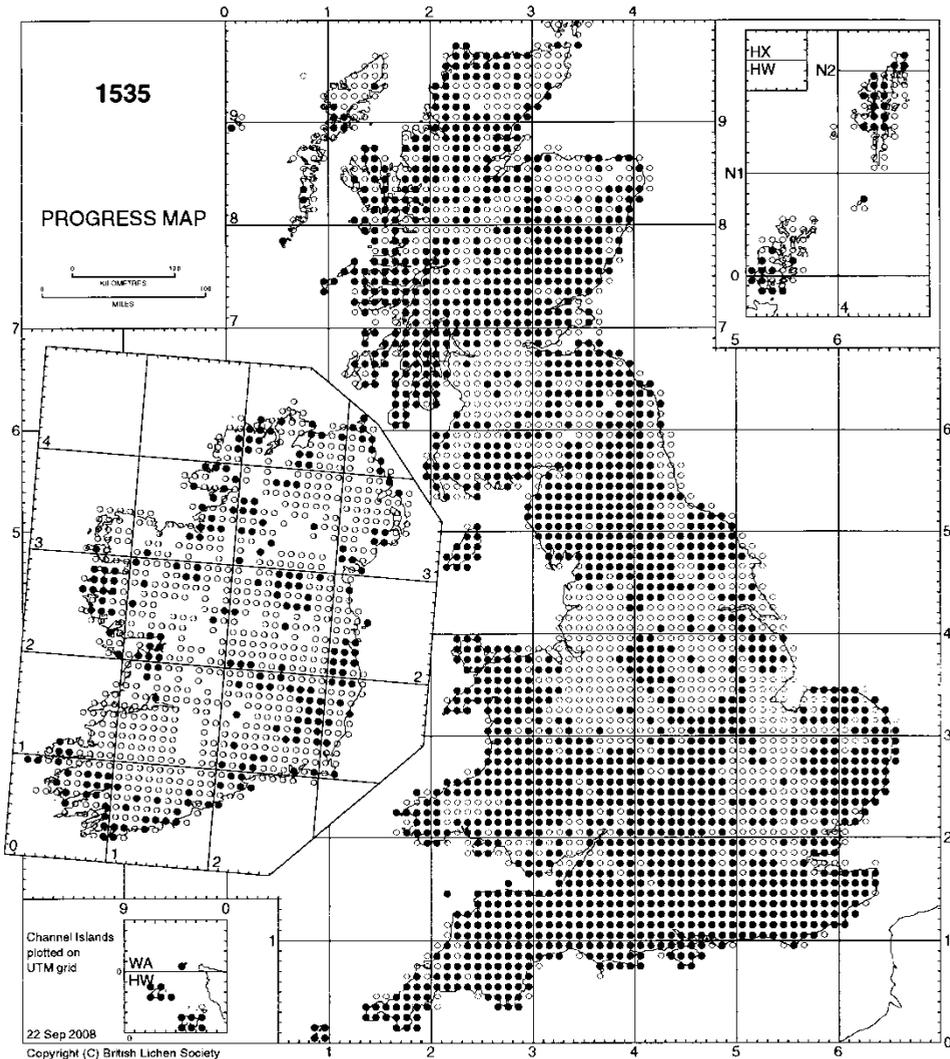
Chairman of Data Committee

Distribution Maps Of Lichens In Britain And Ireland

The map below, generated directly from the British Lichen Society's computer database at the University of Bradford, shows that records have been received from 3625 10-km grid squares; of these, 2003 (including 219 for Ireland) have over 100 records, 951 (including 297 for Ireland) have 50-100 records, and 676 (including 332 for Ireland) have less than 50 records. Overall, 94.1% of Britain and Ireland has received some form of coverage (97.6% for England Scotland, Wales and the Channel Islands, with an average of 116 taxa recorded per

square, and 84.0% for Ireland, with an average of 69 species recorded per square). All the above figures refer only to lichenized fungi; non-lichenized fungi traditionally studied by lichenologists and lichenicolous fungi have not been included in the calculations. Furthermore, a considerable number of records held in the LichenIreland database (Ulster Museum, Belfast) have yet to be incorporated into the BLS database.

Mark R.D. Seaward
University of Bradford
M.R.D.Seaward@Bradford.ac.uk



Distribution Map of Lichen Records in Britain and Ireland, 2008

Education and Promotions Committee Report 2008: Looking forward!

2008 started enthusiastically with the first of our three meetings at the January AGM at Nettlecombe Court, and progress has been furthered at two later meetings, in April at the Natural History Museum and in October at the BLS autumn meeting in Wooler (Northumbria). A benefit of convening at other BLS meetings is the attendance of members who are available because of wider lichenological interests and find it difficult to join meetings in London.

OPAL: OPen Air Laboratories

OPAL is developing a crescendo of activities for lichens! This acronym stands for OPen Air Laboratories and happily involves lichens. OPAL is an ambitious project to involve the general public in England in exploring their environment. The overall portfolio director is Dr Linda Davies, whom many will know from her days researching lichens and air quality with William Purvis and field work activities with Peter James, Pat Wolseley and Frank Dobson.

OPAL spreads its wings through nine regional projects across the Government's regions of England, and five national strands. Significantly, three of the national strands are planned to involve the public in surveying the quality of air (autumn 2009, using lichens); the quality of the earth (spring 2009, using earthworms); and water (to follow air quality, and use a variety of organisms associated with still, fresh water). Pat Wolseley has played a key role throughout the setting-up stage in liaising with Linda Davies and Gill Stevens (Linda's deputy and responsible for coordinating NHM contributions). Now Barbara Hilton is working with Pat in developing the project materials, and supporting 'community scientists' across England in understanding how to use the materials, so they in turn can help others to use them.

OPAL is an extremely exciting development. Potentially, 40,000 people may participate in the lichens and air quality project, which will involve recording the incidence of a small number of indicator lichens in their own area. Materials are being developed and modified through the last few months of 2008 until spring 2009. We are fortunate to draw on the experience of the Field Studies Council in the materials' preparation, especially since Rebecca Farley and Simon Norman are both members of this committee. Examples of other significant opportunities to record and study lichens, as part of OPAL-funded projects, include heathlands (University of Nottingham) and orchards (University of Hertfordshire).

As in any very large project which involves universities, research and community outreach across the whole country, OPAL inevitably has a bureaucracy of its own. Pat and Barbara are valiantly and cheerfully coping with this, which includes meetings with a wide range of people and occasional delightful insights. In early summer a meeting was held at Imperial College's campus at Silwood Park (near Ascot). Interestingly, the original manor house on the site was the family home of Alfred Waterhouse and designed by him. Waterhouse is famous as the architect of

the Natural History Museum. While the house is modest in size, similarities are obvious.

We have been very grateful for the participation, through comments and responses to OPAL plans, of a large number of BLS members. Very many thanks! We will keep you informed about developments. Watch This Space! For further information visit the website: <http://www.opalexplornature.org>.

BSF: Biosciences Federation

The BSF is also developing considerable muscle! (Overall developments are reported separately by Tony Fletcher.) The BSF is placing considerable emphasis on reaching schools. We propose updating the BLS projects (Ann Allen) on our website and can use the BSF as an additional link to these. Pat Wolseley and Barbara Hilton attended the BSF Education Colloquium 2008: Biology Outreach in Schools, at the National Science Learning Centre, York, at the end of October.

Churchyards

We are grateful to Ishpi Blatchley for bringing matters concerning churchyards to our attention. Much interest continues to be taken in churchyard lichens, by individuals and local groups. Keen members use these locations to involve local naturalists and school children in finding out about lichens. While we become used to finding a familiar suite of species in most churchyards, individual yards show interesting specialities. Although real rarities may be seldom seen, spotting a less-frequently seen lichen on the east face of a church in north Devon was a pleasurable treat (*Diploschistes gypsaceus*, Weare Giffard, spring 2008). The churchyard working group held a short meeting in the Isle of Wight in autumn. Sheila Street was very helpful in making local arrangements. As well as providing a useful occasion to update skills and to survey churchyards in the locality, the meeting was invaluable as an opportunity for taking stock of churchyard conservation and the promotion of churchyard lichen flora as a national heritage.

Website

Jacqui Middleton has accomplished numerous updates over the last year, including Janet Simkin's database information. A link to Mike Sutcliffe's photographic library has been made, allowing access to stunning images of lichens. While Jacqui works autonomously, we are tremendously grateful for her efforts and success in providing accessible information about lichens and the BLS on the website.

Publications and Photographs

We continue to be indebted to Frank Dobson for his eminently valuable publications. Frank's recent achievements include:

- *FSC AIDGAP Key: Lichens of Heaths and Moors*
- *Lichen Identifier* (CD) - further improvements
- *Seashore Lichens* (to be published shortly by the FSC)
- *Watchword* article on lichens - see separate item

The excellent illustrations in Frank's publications, which are so helpful in identifying lichens, are mostly his own. Through every month of 2008 we have enjoyed greatly the images taken by lichenologists in the UK and across the world, which are included in the 2008 BLS Calendar. We thank all the photographers and especially Jeremy Gray for the excellent work he put into its production. Jeremy continues to assist photographically, as in the BLS advertisement placed in *British Wildlife*. We have been grateful for the use of images from Mike Sutcliffe's valuable website, alongside some by Ann Allen and Jeremy Gray, in designing the new Membership Leaflet.

Projects and Publicity

The use by schools of lichen projects continues to gather pace. A development in 2008 has been the number of school teachers (rather than students) who have contacted the BLS (Ann Allen) seeking support. This probably stems from inclusion in school curricular documents and GCSE syllabuses of mention of lichens as suitable for field work, as well as the availability of support materials (Pat Wolseley) and BLS website projects. We anticipate this type of activity will expand further, when OPAL is underway.

The summer *Conversazione* of the Cambridge Natural History Society provided an excellent opportunity to raise the awareness of the general public and other societies in understanding about lichens. Ivan Pedley, joined by our President, Peter Lambley, skilfully arranged the display and responded to interest shown.

Grateful thanks to all Committee members for their hard work and enthusiasm during 2008: Ann Allen (Committee secretary), Peter Lambley (as President of the Society), Ishpi Blatchley, Linda Davies, Frank Dobson, Rebecca Farley (FSC), Tony Fletcher, Michael Holland (CPG), Peter James, Simon Norman (FSC), Don Palmer, William Purvis, Stephen Ward (Vice-President) and Pat Wolseley (ex-President). We are fortunate to have good support from our circle of corresponding members, who are welcome to join meetings when opportunity allows, and so readily offer help when needed: Peder Aspen, Ian Bennallick, Andrew Branson (*British Wildlife* journal), Don Chapman, Sandy Coppins, Robin Crump, John Douglass, Ray Woods (Plantlife), Bryan Edwards, Jeremy Gray, David Hill, Scott LaGreca, Jacque Middleton, Alan Orange, Steve Price, Janet Simkin, Cliff Smith and Bill Syrratt.

For more information and full minutes of previous meetings, contact the Committee Secretary Ann Allen (maallen@eclipse.co.uk).

Barbara Hilton
Chair, Education & Promotions Committee

Field Meetings Secretary's Report – 2008

There have been three meetings this year in localities stretching the length of the British Isles. The spring meeting from April 23rd to 30th was based in Falmouth and was attended by 28 people. We visited sites around the Fal estuary, west to St Ives and north to Perranporth, finishing with a day on the Lizard. The weather was generally good and we saw an impressive range of lichens including *Teloschistes flavicans* in abundance, *Parmelinopsis minarum*, *P. horrescens*, *Roccella phycopsis* and *Menegazzia terebrata*. Three hundred and thirty one taxa in total were recorded. It was particularly interesting to explore the oak coppice woodlands which tumble down to the Fal estuary so that the lowest oaks get draped in seaweeds by the higher tides. We were very fortunate to have help from the local Natural England team with the presence of Beth Tonkin and Jeremy Clitheroe on some days. Paul Gainy supplied the local knowledge which makes such a difference to the success of meetings.

The summer meeting by contrast was held in Hoy in the Orkneys from August 18th – 24th. This was ably led by Chris Ellis and was a great success with the 20 participants staying in the new accommodation of the Hoy community centre. The whole meeting was very well organised and had very friendly atmosphere, for many beginning with the minibus drive north. There was a real exploration feel to the meeting and it was nice that the party included our youngest member (Simon Ellis at 6 months) and one of our oldest members. The whole of the meeting was blessed by excellent weather. During the time we spent on the island we visited the northernmost native wood at Berrie Dale and some of the highest cliffs. For me the afternoon spent on the high hill of Sui Fea with its very exposed vegetation and glorious views was unforgettable. Over 100 species of lichen were found new to the Orkney list.

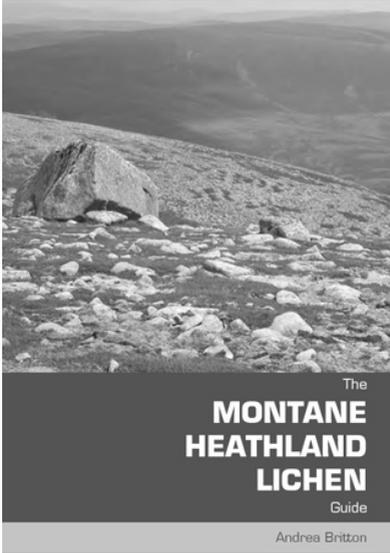
Our final meeting of the year was based at Wooler in Northumberland, where Janet Simkin organised a recording workshop which was of the highest order. We spent two days (for some three) out in the field and added many records new to North Northumberland. On the Saturday we visited Holy Island in driving rain but it improved in the afternoon and we enjoyed a really interesting few hours in Ford Churchyard. On the Sunday we visited a quarry near Bamburgh on the Whin Sill and were treated to glorious views across to Bamburgh Castle and the Farne Islands in brilliant sunshine. The presentations by Janet in the evening workshops were excellent and will I am sure provide a stimulus to improved recording within the Society.

All three events demonstrated the value of field meetings in building friendships and links within the Society and in extending the knowledge of members. For those who have not attended one I would strongly recommend the experience. You see some wonderful places and there is a wonderful companionship in the field. Next years look equally tempting with plans to visit the Burren in Western Ireland, the island of Raasay and Derbyshire.

Peter Lambley
on behalf of Simon Davey

New Publications

The Montane Heathland Lichen Guide



By **Andrea Britton**. Macaulay Institute, Aberdeen, 2008. Price £10.99 inc. p&p (£8.99 for members of the BLS and the British Ecological Society). To order, see the website www.macaulay.ac.uk.

Well written in non-technical language, slipping easily into the rucksack and printed on plastic paper to withstand the wet, this new field guide is useful for anyone who spends time on the hills and mountains and is interested in the lichens to be found on the ground in those environments. The book is both a good introduction and a handy reference. It provides an easy-to-use guide to help accurately identify the most conspicuous species. Superb photographs, notes on habitats and on similar species complement the descriptions and simple identification keys. The *Cladonia* family, not

normally an easy group, are very well dealt with.

Of the 27 species which are fully illustrated, 24 occur on the Pennine, Lake District and Welsh hills, 20 in the Peak District and 19 on the moors of South West England. For the full set of 27 species visits to the Scottish mountains are required. Another 24 species are also covered in the text with notes on how to identify them in the field.

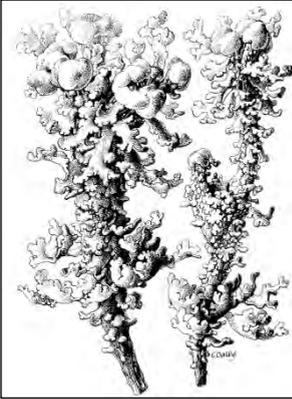
The publication of this guide was financially supported by the British Lichen Society.

Reviewed by
Steve Price

Correction

The review of *Conserving the Flora of Limestone Dry Stone Walls* published in the Summer 2008 issue of the *Bulletin* was contributed by Stephen Ward. Apologies to him for omitting this information.

CLAIRE DALBY, LICHEN GREETINGS CARDS FOR SALE



Beautifully illustrated greetings cards by Claire Dalby. Now for sale through BLS merchandise. Price £3 for a set of 8 different designs (blank inside) including: *Cladonia bellidiflora*, *C. cervicornis* subsp. *verticillata*, *Cornicularia normoerica*, *Physcia aipolia*, *Ramalina cuspidata*, *Solenopsora candicans*, *Sphaerophorus globosus*, *Stereocaulon dactylophyllum*.

PUBLICATIONS AND OTHER ITEMS FOR SALE

(Subject to availability)

For publications and other items please send orders to:

Brian Green, 3 Tyn y Coed, Carneddi, Bethseda, Gwynedd LL57 3SF, UK (email brian@mrgreen.org.uk). Cheques in Sterling should be made payable to '**The British Lichen Society**', and drawn on a UK bank or on a bank with a UK branch or agent. All prices include postage and packing. Purchases in US\$ can be made through the Americas Treasurer: US Dollar rates are double the Sterling Rate. Cheques in US\$ should be made out to 'British Lichen Society' and sent to J W Hinds, 254 Forest Avenue, Orono, Maine 04473-3202, USA. *Overseas members may also pay by direct transfer into the Society's UK bank account. Please contact Brian Green for details if you wish to pay by this method.*

PUBLICATIONS

Lichen Atlas of the British Isles (ed. M.R.D. Seaward)

Fascicle 2 (*Cladonia* Part 1: 59 species): members £7.50; non-members £10.00.

Fascicle 3: The Foliose Physciaceae (*Anaptychia*, *Heterodermia*, *Hyperphyscia*, *Phaeophyscia*, *Physcia*, *Physconia*, *Tornabea*), *Arctomia*, *Lobaria*, *Massalongia*, *Pseudocyphellaria*, *Psoroma*, *Solorina*, *Sticta*, *Teloschistes*: members £7.50; non-members £10.00.

Fascicle 4: *Cavernularia*, *Degelia*, *Lepraria*, *Leproloma*, *Moelleropsis*, *Pannaria*, *Parmeliella*: members £7.50; non-members £10.00.

Fascicle 5: *Aquatic lichens and Cladonia* (part 2): members £8.00; non-members £10.00.

Fascicle 6: *Caloplaca*: members £8.00; non-members £10.00.

Identification of Parmelia Ach. [UK species] on CD-Rom - ISBN 0 9523049 4 5.
Members £8.00; non-members £13.00; multiple users at one site £24.00.

- Microchemical Methods for the identification of Lichens.*** Members £8.00; non-members £11.00 (Airmail, additional at cost).
- Lichens & Air Pollution*** (James): 28 page Booklet; £1.50.
- Key to Lichens and Air Pollution*** (Dobson): £2.00.
- Lichens on Rocky Shores.*** A1 Dalby 'Wallchart' £6.00; A4 laminated Dalby 'Wallchart' £1.50.
- Key to Lichens on Rocky Shores*** (Dobson): £2.00.
- Taxonomy, Evolution and Classification of Lichens and related Fungi*** Proceedings of the symposium, London 10-11 January 1998 (reprinted from *The Lichenologist* Vol. 30): members £8.00; non-members £13.00.
- Bibliographic Guide to the Lichen Floras of the World*** (Edn 2; Hawksworth & Ahti (reprint from *The Lichenologist* Vol. 22 Part 1): £2.00.
- Checklist of British Lichen-forming, Lichenicolous and Allied Fungi*** (Hawksworth, James & Coppins, 1980): £2.00.
- Checklist of Lichens of Great Britain and Ireland*** (Coppins, 2002): members £7.00; non-members £9.00.
- Lichen Habitat Management Handbook:*** members £10; non-members £15.00.
- Surveying and report writing for Lichenologists*** (Guidelines for surveyors, consultants and commissioning agencies): members £10.00; non-members £15.00.
- The Lichen Hunters*** (Gilbert, 2004): £8.50.
- Horizons in Lichenology*** (Dalby, Hawksworth & Jury, 1988): £3.50.
- Aide Mémoire: Usnea*** (James): members £3.90; non-members £5.90.
- A Field Key to Common Churchyard Lichens*** (Dobson): members £7.00; non-members £8.00.
- A Guide to common churchyard Lichens*** (Dobson): £2.50.
- A Conservation Evaluation of British Lichens*** (Woods & Coppins): members £4.00; non-members £6.00.
- Indices of Ecological Continuity for Woodland Epiphytic Lichen Habitats Of the British Isles*** (Coppins & Coppins): members £3.50; non-members £6.00.
- Lichen Photography*** (Dobson, 1977): £1.00 [Photocopies of A4 sheets].
- Mapping Cards:*** General, Churchyard, Woodland, Mines, Coastal, Urban, Chalk and Limestone, Moorland: free.
- BLS leaflets:*** Churchyard lichens - Lichens on man-made surfaces (encouragement and removal): free.
- Lichen Society Postcards:*** Lichens in full colour in assorted packs of 16. £3.00 [Orders for more than five packs are available at a reduced rate.]
- British Lichen Society Car Sticker:*** 5 colour 4" diam. self-adhesive plastic: £1.50

OTHER ITEMS

All the following items have the British Lichen Society logo in three colours - black outline, silver podetia and red apothecia.

Woven ties with below-knot motif of BLS logo: £7.00. Colours available: maroon, navy blue, brown, black and charcoal.

Sweatshirts with breast pocket size embroidered motif of BLS logo: £16.00. Colours available: light grey, navy blue, bottle green, red.

Sweaters, wool with breast pocket size embroidered motif of BLS logo: £14.00. Colours available: maroon, bottle green and navy (various sizes).

T-shirts with screen-printed full chest motif of BLS logo encircled by the words 'British Lichen Society': £10.00. Colours available: light grey, navy blue, bottle green, tangerine (one old stock yellow - small). Please specify size *and* colour options.

Earthenware mugs (white) with coloured logo on both sides and encircled by the words 'British Lichen Society' below: £3.00

Hand lenses

Gowland x10 plastic lens - a useful spare or second lens, handy when taking a friend with you! £3.00.

x10 glass lens in metal body, lens diam 18mm £8.50.

x30 lens, diam 21mm. A new top quality lens £14. This lens is not suitable for general field work, a x10 lens is necessary for this and the x30 for more detailed examination later.

NEW FOR LOAN: For UK members only

A microscope stage-micrometer slide for the calibration of eye-piece graticules in 10µm divisions is available for loan. A deposit of £40 is required.

When ordering items through the post, please allow a month for delivery, as many items have to be ordered specially, or in bulk.

BACK NUMBERS OF *THE LICHENOLOGIST*

Cambridge University are pleased to announce that from 2006 all BLS members will be able to purchase back numbers of the Lichenologist (ISSN 0024-2829) at £10.00 per back issue and back volumes at £40.00. Cambridge holds issues back to and including Volume 33 (2001).

Contact:

Tel. 0044 1 233 326070

Fax 0044 1 223 325150

E-mail: journals@cambridge.org

Back stock is also held at SWETS. For details see:

<http://backsets.swets.com/web/show/id=47067/dbid=16908/typeofpage=47001>

A complete volume from SWETS costs 200 euros.

Membership Matters

It would be a great help to the Assistant Treasurer if any UK members, who have not already done so, could set up a Standing Order to pay their annual subscription.

The details you must supply to your bank are as follows:

Payment is to be made to CAF Bank (whose address is 25 Kings Hill Avenue, Kings Hill, West Malling, Kent ME19 4JQ)

Account name is "British Lichen Society"

Sort code 40-52-40

Account number 00012363

Payment to be made annually on 1 January

Please specify the amount for your membership type from the table below.

Reference should be your surname followed by your membership number (this is the 4 digit number on the Bulletin mailing label). Contact the Assistant Treasurer if you wish to check your number. Please make sure the bank is provided with this information, otherwise it is difficult to link payments to members!

Membership Type	Rate
Ordinary Membership – 2008	£30
Associate Membership – 2008	£22
Senior Associate Membership – 2008	£10
Junior Associate Membership – 2008	£5
Family Membership - 2008	£5

SUBMISSION DEADLINE

Please would intending contributors to the Summer 2009 issue of the *Bulletin* submit their copy to the Editor by 21 April. These can be sent by e-mail to p.cannon@cabi.org as an attachment. This should be in MS Word. Alternatively they can be sent on a CD to the Editor (for address see inside front cover). It is helpful to have hard copies of tables and other diagrams. For the style of references see past *Bulletins*.

BRITISH LICHEN SOCIETY - 2008 MEMBERSHIP DETAILS

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

Queries on membership matters and subscription payments and **Changes of address** should be sent to: The Assistant Treasurer & Membership Secretary, c/o The Natural History Museum, Cromwell Road, London SW7 5BD.

CATEGORIES OF MEMBERSHIP AND SUBSCRIPTION RATES

Ordinary Membership for individuals (not available to institutions) who have signed the Application Form and paid the subscription. Ordinary Members are entitled to all publications and facilities of the Society.

Rate for 2008: **£30 / \$60 / €52.50** Three year rate for 2008-2010: **£85 / \$170 / €148**

Life Membership is available to persons over 60 years of age at **£300 / \$600 / €525**. Life Members have the same entitlement as Ordinary Members.

All three categories of **Associate Member** listed below are entitled to all the facilities of the Society, including the *Bulletin*, but excluding *The Lichenologist*.

Associate Membership. Rate for 2009: **£22 / \$44 / €38.50**

Senior Associate Membership, for persons over 60 years of age. Rate for 2008: **£10 / \$20 / €17.50**

Junior Associate Membership, for persons under 18 years of age, or full-time students. Rate for 2008: **£5 / \$10 / €8.75**

Family Membership is available for persons living in the same household as a Member. They are entitled to all the facilities of the Society, but receive no publications and have no voting rights. Rate for 2008: **£5 / \$10 / €8.75**

Bulletin only subscriptions are available to institutions only. Rate for 2008: **£22**

PAYMENT OF SUBSCRIPTIONS *Members may pay their subscriptions, as follows:*

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British Lichen Society Bulletin no. 103

Winter 2008

Index

Page

Features and letters

Taxonomists – an endangered species	Tony Fletcher	2
A strategic approach to lichen identification	Mike Sutcliffe & Katie Grundy	7
A wonderful time to be a lichenologist	Ivan Pedley	8
Edmund Whymper and lichens	Linda in Arcadia	9
Ethnobotanical use of <i>Stereocaulon macrocephalum</i> in Meghalaya	S.R. Hynniewta & Y. Kumar	12
Raiders of the Lost Lichen strike gold	Michael Viney	13
Observations on changes in the lichen flora of Bergen between 1971 and 2008	Pat Wolseley	14
Presentation of Honorary Membership of the BLS to Professor Per Magnus Jørgensen	Pat Wolseley	17
Watchword – Lichens reach 100000 young people!	Barbara Hilton	19
Lichen-Time in the <i>Church Times</i>	Barbara Hilton	20
New Biosciences Federation report on learned societies and publishing	Tony Fletcher	21
Kindrogan – a journey from complete to only partial ignorance	Katie Grundy	22
Lichens of Nepal Expedition 2007	Louise Olley	24
Lichens as space travellers	Paul Cannon	33

Regular articles

Churchyard news	Ivan Pedley	35
Literature pertaining to British lichens – 43	Brian Coppins	39
New, rare and interesting lichens	Chris Hitch	44
British Isles List of Lichens and Lichenicolous Fungi – September 2008 update	Brian Coppins, Mark Seaward & Janet Simkin	53

Field meeting reports

The Autumn Field Meeting 2007: Charnwood Forest	Ivan Pedley	56
Field Meeting at Falmouth, West Cornwall	Peter Lambley	73

Future meetings 2009-10

87

Notice of Annual General Meeting 2009

Report of the Data Committee – 2008	David Hill	91
Distribution Maps of Lichens in Britain & Ireland	Mark Seaward	96
Report of the Education and Promotions Committee – 2008	Barbara Hilton	98
Report of the Field Meetings Secretary – 2008	Peter Lambley	101

New Publications

102

Articles for Sale etc.

103

