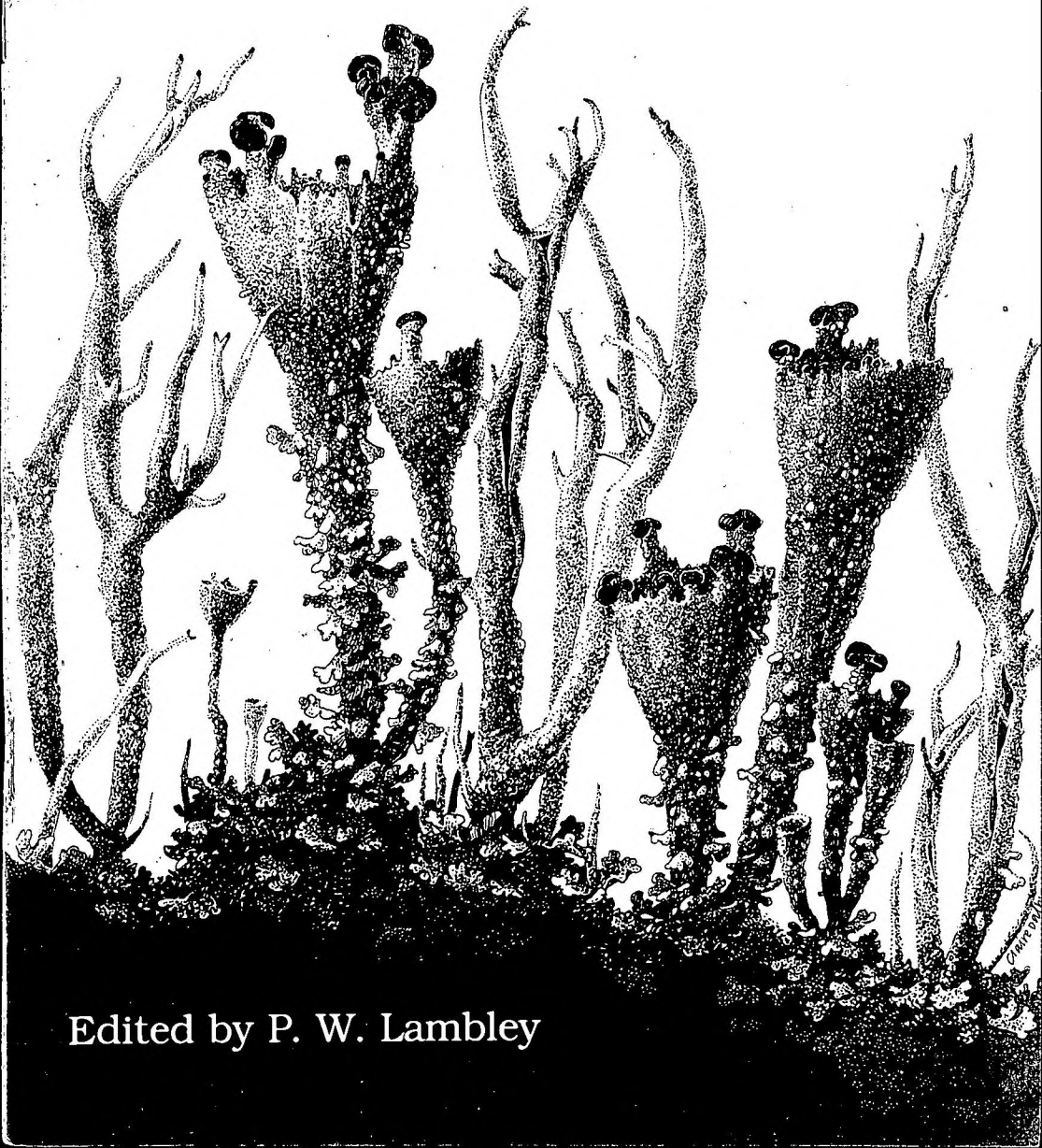
BRITISH LICHEN SOCIETY BULLETIN
No. 81 Winter 1997



Edited by P. W. Lambley

FORTHCOMING BLS MEETINGS

IRELAND (South-east Connemara)
Leader: Howard Fox — 25th April-2nd May 1998

SCOTLAND (Kindrogan) Workshop - *Lecanora*
Leader: Peter James — 11th-18th July 1998

1998 MEMBERSHIP AND SUBSCRIPTION RATES

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

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

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

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

ASSOCIATE MEMBERSHIP £18.50

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

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

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

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

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

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

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

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

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

SUBMISSION DEADLINE - 21st March 1998

Cover artwork by Claire Dalby

PARASITIC FUNGI GROWING ON LICHENS IN AN ORCHARD

Studying lichen parasites can offer refreshing new insights on lichens in familiar territory. In our back garden near Athy, S6495, Co Kildare, there is an old orchard with 24 apple trees, two plums and a greengage which are clothed in a luxuriant lichen vegetation. *Lecanora chlarotera, Lecidella elaeochroma, Physcia tenella, Ramalina farinacea, Evernia prunastri, Parmelia sulcata, Parmelia perlata, Parmelia subaurifera* and *Xanthoria parietina* are the most abundant species, and they cover a huge surface area of apple twigs, which so far has defied Newtonian mathematical calculation. Some of these lichens harbour parasites, whereas rare species in the garden are uninfected. Host indexes confirm this trend (see Hawksworth 1983) of parasites occurring only on locally common lichen species, i.e. species that contribute significantly to lichen vegetation associations (see James *et al*, 1977).

Lichenicolous fungi are fungal infections of lichen vegetation, spreading in a spatial pattern to be explained below. Observations on the use of lichens by animals seem surprisingly relevant. The big players are birds, which perch, shelter from rain, forage and leave bird droppings on apple tree branches. Foliose lichens are breeding sites for mites and bark lice, hiding-places for camouflaged caterpillars, resting sites for common flies sunning themselves, and foraging ranges for predatory bugs and so on. The activity of animals in lichen vegetation is weather dependent, and it is useful to relate changes in general weather conditions to the diurnal variation of microclimate of the apple twigs. Evaporation of water films on lichen-covered bark after rain or dewfall is well worth watching for a few hours. Such observations help to place lichenicolous fungi in their ecological context.

As they share their habitat with the invertebrates that live in lichen vegetation, it is not surprising that lichen-parasitic genera mimic the colours, shapes and sizes of the invertebrates that frequent apple trees in the orchard. Take *Vouauxiella lichenicola* growing at the thalline margin of an apothecium of *Lecanora chlarotera* where dew evaporates last. Is it an excellent mimic of a hatch of ascospore-eating mites? I have observed a common red predatory bug *Temnosthetus gracilis* (Hemiptera: Cimicidae) probing its rostrum around *Physcia tenella* and *Xanthoria parietina* in search of mites, and seen it spear a mite while watching with a hand lens. With a contaminated rostrum, perhaps this bug inadvertently sows conidia of *Xanthoriicola physciae*, which blackens the apothecial discs of *Xanthoria parietina*. *Marchandiomyces corallinus*, a flamboyant pink species on several foliose lichens in the orchard, I suspect is eaten, perhaps by mistake, by some of the passerine birds such as chaffinches, robins or bluetits that have territories in the garden. This has never been observed, but, viewing through binoculars, I have seen a chaffinch peck at branches and wipe its bill on the side of *Physcia* covered twigs. It could be demonstrated by photographic monitoring

of the advance of lichenicolous fungal infections. The proof may be at the margins of old bird droppings on horizontal lichen-covered branches, where *Marchandiomyces* tends to grow.

Watching animals living in lichen vegetation is a fascinating pastime, and studying lichen parasites is equally interesting. Taxonomists may not always be on the right path in generating very narrow morphological species concepts for lichenicolous fungi. The microevolution of lichenicolous fungi probably depends more on the choices of lichenophilous mites, the foraging strategies of their predators and the proximity of different lichen species in lichen vegetation, than on the traditional lichen host characters with which we seem constantly preoccupied. If I think about lichenicolous fungi in this orchard for long enough, perhaps an apple will fall on my head!

References

Hawksworth, D L (1983). Lichenicolous Key *Lichenologist* **15**: 1-44.
James, P W, Hawksworth, D L & Rose, F (1977). Lichen communities in the British Isles: a preliminary conspectus. In *Lichen Ecology* (M R D Seaward ed): 295-413. London Academic Press.

Howard Fox

LICHENS IN LITERATURE: 1
CONGO JOURNEY

I woke up, covered in big blue-black flies and the little black sweat-bees, feeding on my shirt and trousers, on the slime of diarrhoea. The gorilla was still asleep, his breathing fast and shallow under my right ear. 'Go on,' I whispered to the flies and bees, lying as still as I could. 'Keep at it. Eat all you can. And one of you - go and fetch a few dung-beetles.' I stared up at the grey-green lichens on the trunk of the tree. I tried and failed to remember who had first discovered that lichens were really composites of a fungus and an alga in symbiosis, living together, or a fungus and cyanobacteria - blue-green algae, closely related to bacteria, whose fossils have been found in rocks 3000 million years old, and which, given air and light, photosynthesize, releasing oxygen. So it's thanks to you, I thought, and the oxygen you first produced, that we're here at all. And how peaceful it would be to devote one's life to the study of lichens. Or would it? Maybe even in the history of the science of lichens you'd find rivalries, jealousies, murderous disputes - indeed perhaps they're a necessity, part of the motivation for the study of anything. Maybe if you examined the skeletons of all those botanists who'd studied lichens you'd find that 74 per cent of the males had suffered severe head wounds ...

Redmond O'Hanlon (1996). *Congo Journey*. London: Hamish Hamilton, p.406.

P. W. Lambley

A FORGOTTEN SPECIES: *PYRENOCOLLEMA PELVETIAE* DISCOVERED IN DEVON

Pyrenocollema pelvetiae is epiphytic on *Pelvetia canaliculata*, a fucoid seaweed which grows in sheltered situations high in the shore zonation above *Fucus spiralis*. It has only previously been recorded in the U.K. from Orkney and although it is common in Spain and France, there have been no recent British records.

In early 1997 the *Pyrenocollema* was found on *Pelvetia* growing on a west-facing shoulder of rock at the base of a red sandstone cliff in the Exe Estuary and on a south facing conglomerate outcrop in the Teign Estuary. In each case the opposite shores provided no suitable habitat for the seaweed. In the Dart estuary *Pelvetia* is abundant on both banks on sunny and shaded shale. However, the *Pyrenocollema* was only found in sunny situations facing west and on the west facing aspects of outcrops. In reaches where sedimentation is high the lichen is absent. The preference of the *Pyreocollema* for sunny situations may be due to the state of the seaweed rather than the aspect. In shade *Pelvetia* remains damp and turgid for many hours after the retreat of the tide, whereas in full sun the fronds can dry quickly especially if the protective fatty layer is damaged (Cremona, 1988). The rougher surfaces of the dried plants form niches which may be more easily colonised by spores.

The perithecia of the *Pyrenocollema*, which when well developed densely cover the fronds of the seaweed, are prominent, often glossy and have a slightly depressed ostiole which can be seen with a hand-lens. The innate perithecia of the fungus, *Mycosphaerella ascophylli*, were not seen on the *Pelvetia* investigated and *Pyrenocollema* was not found growing on any other seaweed. *Pelvetia* and *Fucus spiralis* can live up to five years but the *Fucus* regularly sheds its cuticle.

Open coastal sites were visited to ascertain whether the *Pyrenocollema* was confined to south- or west-facing estuarine shores in Devon. As a result the lichen has been found in two further sites on the south coast, at Churston and Elberry Coves in Torbay; two in north Devon, at Combe Martin and Widmouth; and at Bude in north Cornwall. Along the open coast the lichen was only on *Pelvetia* in the most sheltered parts of coves often facing inland away from the strongest wave action, but a south or west aspect was not found to be a vital factor for its growth. The distribution of *Pyrenocollema pelvetiae* in Devon suggests that it could be in clean sheltered situations along other parts of the west coast of Britain.

References.

Cremona, J. (1988). *A Field Atlas of the Seashore*. Cambridge University Press.
Little, C. & Kitching, J. A. (1996). *The Biology of Rocky Shores*. Oxford University Press.
Purvis, O. W., Coppins, B. J., Hawksworth, D. L., James, P. W. and Moore, D. M. (1992). *Lichen Flora of Great Britain and Ireland*. London: Natural History Museum Publications.

Barbara Benfield

TREASURER'S REPORT ON THE ACCOUNTS FOR THE PERIOD FROM 1/7/96 TO 30/6/97

This has been a satisfactory financial period for the society. Sales of the *Flora*, *Atlas*, etc, continue to produce a profit for the society and this is being reinvested in new publications and in the new venture of lichen CDs to augment the atlas.

Many members pay subscriptions in advance. These subscriptions are allocated in the accounts in the year in which they are due. This is a complicated process as members are paying for varying combinations of years during a seven year period. This year, a reallocation of subscriptions paid in advance has resulted in the apparent reduction in income during the period of these accounts.

Falling interest rates in the earlier part of the year have substantially reduced the interest received. It was decided to transfer a major part of our capital to an account paying a higher rate. It was considered that risk should be avoided and, therefore, this money was placed in a National Savings investment account at an improved rate of interest.

There was concern about our profit share when *The Lichenologist* was made available by the publishers on the Internet. Despite the increased number of pages, our income held up well and there is only a 10% increase in the total cost for the year. *The Bulletin* included an extra large issue which, together with increased postal charges, resulted in the higher cost of this publication.

Despite the much higher activity of the many committees and sub-committees of the society, there has only been a small increase in their cost to the society. Printing costs are higher as several mapping cards, leaflets, etc, have been produced during the year.

A new item in the accounts is depreciation. During the year we purchased a large display stand for use by members at exhibitions and also a drive to enable us to produce the master disks for the CD roms. These are being depreciated at a rate of 25% per year.

We have managed to negotiate lower bank charges and these are reflected in the accounts. The grants to students were paid out of the interest received on the Burnet/Wallace Memorial Fund and the capital of this fund remains intact.

As always, I must thank the assistant treasurers, John Sheard and Jeremy Gray, for their very great assistance during the year, and also Douglas Oliver for auditing the accounts.

F.S. Dobson, Hon Treasurer

BRITISH LICHEN SOCIETY

EXPENDITURE AND INCOME FOR THE YEAR 1/7/96 TO 30/6/97

1995/6	EXPENDITURE			1995/6	INCOME			
	Printing and distributing				Subscriptions		17,559	
	The Lichenologist	12,743			Add 1/5 life membership		357	
6,701	Less profit sharing	(6,635)	6,108		Less refunds	(240)		
	Printing and distributing			13,791	Paid in advance	(6191)	(6431)	11,485
	The Bulletin	4,202		4,853	Interest received			3,560
2,890	Less receipts	(293)	3,909	45	Donations			45
1,081	Secretarial and committee expenses		1,252	1,504	Profit on sales of stock inc. *Flora*			3,402
-	Depreciation		259	(146)	Profit/Loss on exchange rate			205
1,108	Printing		1,975	-	Profit on book sale			241
284	Bank charges		189					
636	A.G.M.		250	£20,047			Total	£18,938
	Grants, Seminars, Field trips etc.	148						
106	Less receipts	(–)	148	(£6,342)	Excess income over expenditure			(£3,806)
92	Churchyard project		–					
150	Accounting and audit		150					
103	Insurance		103					
254	Subscriptions paid		183					
300	Donations paid		500					
–	Miscellaneous		106					
£13,705		Total	£15,132	£13,705			Total	£15,132

BALANCE SHEET AS AT 30/6/97

	LIABILITIES				ASSETS		
7,896	Sundry creditors (inc. advance subs)		6,191	109,998	Cash at Banks		110,932
2,211	Life members		1,429	9,015	Stock and work in progress		7,950
3,307	Burnet/Wallace Memorial Fund		3,307	–	Capital equipment £1,038		
900	Grants and funds in hand		900		Less depreciation (£259)		£779
	General Fund at 30/6/96	104,699		–	Debtors		671
104,699	Plus surplus for 12 months	3,806	108,505				
£119,013		Total	£120,332	£119,013		Total	£120,332

Auditor's Report to the British Lichen Society

I have not checked the stock or examined the Register of Members but, in my opinion, the attached accounts prepared under the historical cost convention give a fair view of the state of affairs of the society and the income and expenditure of the society for the year ended on 30th June 1996.

D.E.W. Oliver FCIB ATII

Notes on the Accounts

1. Manager's remuneration: No officer of the society received remuneration and none is due in the twelve months covered by these accounts.

2. Status: The Society is a Registered Charity, number 228850.

JANUARY MEETINGS 1998

Nominations

Nominations for Officers for 1998 and four members of Council for the period 1998-1999 should be sent in writing to the Secretary, Dr O.W. Purvis, Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, before 20 December 1997, please. No person may be nominated without their consent.

Council Meeting

Council will meet at 14.00 on Friday 9 January 1998 in the Meeting Room of the Linnean Society, Burlington House, Piccadilly, London W1V OLQ. [Half way between Green Park and Piccadilly tubes stations on the north side of Piccadilly, the Linnean Society rooms are to the left immediately beneath the entrance.] Please let the Secretary have any items you wish Council to discuss by Friday, 2 January 1998.

The Dougal Swinscow Memorial Lecture/Evening Wine Buffet

Rosmarie Honegger, a world renowned researcher and speaker, will present a lecture on *The Lichen Symbiosis - what is so spectacular about it?* at 19.00 hours in the meeting room of the Linnean Society. This will appeal to a wide audience and will set the scene for the ensuing Symposium devoted to intraspecific and higher level taxonomy. This will be followed by an evening buffet at 20.00 in the elegant and convivial rooms of the library. Members wishing to attend the lecture can do so free of charge, but those wishing to partake in the buffet are requested to complete the enclosed payment slip and send a cheque for £15.00 (made payable to the Linnean Society) of London before 20th December so that arrangements for catering can be made.

Annual General Meeting/Exhibitions/Lecture Meeting

The Annual General Meeting will be held in the **meeting room of the Linnean Society** at **the earlier time of 10.00 am** on Saturday, 9 January 1997. Please bring along exhibits of lichenological interest for display in the library.

Programme

Saturday 9 January

9.00	Coffee and reception
10.00	Annual General Meeting

AGENDA

1. Apologies for Absence.
2. Minutes of Annual General Meeting 6 January 1996.
3. Matters arising.
4. Officer's Reports.
5. Meetings 1996-1997.
6. Election of Officers.
   - (i) Vice President (*Council's nomination* Dr A Fletcher).
   - (ii) Conservation Officer.
   - (iii) Other Officers.
   - (iv) 5 members of Council.
7. Election of Honorary Member(s).
8. Any other business.
9. Date and place of next AGM.

11.30	Coffee and Exhibition Meeting.
12.00	Lunch (to be taken at local venues).

14.00-17.00 **Lichen Symposium**

The first session devoted to the *Taxonomy of species and infra-specific taxa* will take the place of the usual lecture meeting. This is also an excellent opportunity for UK members to meet fellow lichenologists from abroad. Please note that those attending the AGM but not wishing to partake in the full symposium are cordially invited to attend the Saturday afternoon session without charge.

SYMPOSIUM: TAXONOMY, EVOLUTION AND CLASSIFICATION OF LICHENS AND RELATED FUNGI (JANUARY 9-11th)

The planning of the Lichen Systematics Symposium, arranged by The British Lichen Society, The Linnean Society, and The Systematics Association, in conjunction with the BLS AGM, is progressing well, and we can look forward to a most interesting meeting!! The event will be held in the rooms of The Linnean Society, Burlington House, Piccadilly, London W1V 0LQ, between 9-11 January 1998.

The Symposium aims to present an integrated picture of the status of modern lichen systematics as well as providing a valuable opportunity to assess the future challenges. Three half-day sessions, each focused on practical and theoretical aspects of lichen systematics at different level of organisation, are included. The invited speakers are a selection of well-established lichen taxonomists, as well as post-graduate and post-doctoral students at the forefront of lichen systematics. The progress in lichen systematics at all taxonomic levels has probably never been so rapid as today, and the refined understanding of natural relationships provided by new character complexes from the genome, and new methods of analysing data, is likely to lead to future dramatic changes in our classifications and concepts of taxa!

Those who wish to participate in the full Symposium, please contact **The Meetings Officer at The Linnean Society [Tel: (+44) (0)171 434 4479; Fax: (+44) (0)171 287 9364; E-mail: marquita@linnean.demon.co.uk]** and register **immediately**, preferably using the enclosed booking form!!

Those BLS members who will attend the AGM, and who wish to participate in the Saturday afternoon session of the Symposium *only*, are cordially invited to attend this session free of charge, courtesy of the BLS Council. The Dougal Swinscow Memorial Lecture on Friday evening is likewise free of charge; the Wine Buffet afterwards costs £15.00. Please, register your participation in the Wine Buffet with The Meetings Officer, Linnean Society (see above), **before 20th December**, preferably using the enclosed payment slip.

I look forward to seeing as many as possible of you at the Symposium in January.

Welcome.

Mats Wedin

PRELIMINARY PROGRAMME

Friday

16.00 Registration Desk opens - tea served in the Library.

19.00 The Dougal Swinscow Memorial Lecture:
Rosmarie Honegger (Zürich) - The lichen symbiosis - what is so spectacular about it?

20.00 Evening Reception.

Saturday

9.00 Registration Desk opens - morning coffee served in the Library.

10.00-12.00 British Lichen Society Annual General Meeting.

SYMPOSIUM: TAXONOMY, EVOLUTION AND CLASSIFICATION OF LICHENS AND RELATED FUNGI

14.00-17.00 **I. The taxonomy of species and infra-specific taxa.**

Philippe Clerc (Geneva) - Species concept in the genus *Usnea*.
Katileena Lohtander & Anders Tehler (Stockholm) - Lichen species pairs.
Per Magnus Jörgensen (Bergen) - What shall we do with the blue-green phototypes?

15.15-15.45 Tea.

Jørg Peine (Cologne) - Protein characters as taxonomic markers in lichens.
Paul Bridge & David Hawksworth (Egham) - What molecular biology has to tell us at the species level in lichenised fungi.

16.35-17.00 Discussion.

19.00 Symposium Dinner.

Sunday

9.30-12.30 **II. The concept of concepts - the circumscription of taxa, particularly at the generic level.**

Ana Crespo, O.F. Cubero & R. Noya (Madrid) - A molecular approach to the circumscription and evaluation of the genera segregated from *Parmelia* s. lat.
Ulf Arup & Martin Grube (Graz) - Molecular systematics of *Lecanora* subg. *Placodium*.
Pier Luigi Nimis (Trieste) - A critical appraisal of modern generic concepts in Lichenology.

10.45-11.15 Coffee.

Rikard Sundin & Anders Tehler (Stockholm) - The *Arthonia* story, or How to find monophyletic groups in large genera.
Leif Tibell (Uppsala) - Principles and prejudice in lichen classification.

12.05-12.30 Discussion.

12.30-14.00 Lunch in the Library, The Linnean Society.

14.00-17.00 **III. The integration of lichens into the system of the Fungi - the taxonomy at and above family level.**

Soili Stenroos (Helsinki) - Evolution and taxonomy of the stipitate lichens.
Thorsten Lumbsch (Essen) - Systematic studies in Lecanorales suborder Agyriineae.
Gerhard Rambold (Munich) - The distribution of selected diagnostic characters in Lecanorales.

15.15-15.45 Tea.

Katarina Winka (Umea) - Are there lichenised Ostropales?
Andrea Gargas (Copenhagen) - Phylogeny of lichen-forming fungi within the Eumycota.

16.35-17.00 Discussion.

17.00 Summary and Farewell.

FROM THE ASSISTANT TREASURER

Subscriptions

Please note that subscriptions are due on 1st January. If your subscription is not received by that date it is likely that you will miss the main mailing of the first part of *The Lichenologist*. On payment of your subscription after 1st January I notify Academic Press (usually immediately by e-mail) and your name is entered on a 'catch-up' list. It may then be several weeks before you receive the 'catch-up' copies. I regret that this is out of my hands. As previously requested please send claims direct to Academic Press.

Please note also that, in anticipation of possible increase in subscription rates in 2000, the three and five year subscriptions will not be available in 1998 or 1999. This method of payment has proved very popular, particularly with overseas members who often have to pay considerable bank charges. I hope it will be possible to reintroduce it later.

Referees

Some time ago the Society established a new, two-tier system involving Regional and Specialist Taxonomic Referees. The function of these referees is to assist members of the British Lichen Society in the identification of lichens.

All lichens collected in the British Isles should in the first instance be sent to the appropriate Regional Referee (see current *Bulletin* for list). No more that six specimens should be sent at any one time without obtaining prior approval.

Specimens submitted should be adequate in size (or at least in reasonable condition) and well-packeted including full documentation such as: country, county or vice-county, borough or parish, precise locality and grid reference, altitude, date, habitat and ecology, notes, name of collector and collecting number. Identification should be attempted before sending material to a referee and details of anatomical investigations and chemical reactions included where appropriate. Return postage should always be included.

Specialist Referees (see current *Bulletin* for list) are those referees who have agreed to examine problematical material belonging either to particular lichen groups or occurring in particular habitats. On no account should material be sent direct to a Specialist Referee without obtaining their prior approval.

As the addresses of Referees are not published in the *Bulletin*, members may have had difficulty in contacting them for help with identification. To contact a Regional Referee write to the Assistant Treasurer or e-mail **jmgray@argonet.co.uk** for the address.

BLC Web Page

http://www.argonet.co.uk/users/jmgray/

The Society's web page is now updated regularly. Here, in addition to the Society's prospectus and an application form, you will find the Society's rules, general information, names and addresses of officers of the Society and chairpersons of committees, a listing of Referees and how to contact them, details of meetings and publications as well as information on the availability of new *Atlas* fascicles and hard copy of the photographs from the *Parmelia* CD when published. There is also an evaluation version of the new *Parmelia* CD Rom.

Back Numbers of *Bulletins*

I still hold stocks of back numbers of the *Bulletin*. They are packed with interesting articles making enjoyable reading for a winter's evening. At £1.00 each to cover printing, postage and packing, they offer excellent value. As I only receive one or two requests for these per year they have to be dumped soon to release storage space. I would prefer them to be read!

Jeremy Gray

LICHENS AND HABITAT WORKSHOP: 3RD - 6TH SEPTEMBER 1997

Probably the first workshop anywhere on the management of habitats for lichens took place at the University of Bangor, Wales from the 3rd to the 6th of September 1997. As the only visitor from abroad I have been given the task of giving a personal account of the two and a half day meeting which brought together 24 lichenologists and conservationists both professional and amateur from around the British Isles.

Until now literature on management for lichens has been virtually non-existent. Hence it was the main purpose of the workshop to gather, evaluate and summarize experience and information among lichen experts and then to compile a working handbook on lichen management and conservation which should be ready in the new year. This account can only give a flavour of some of the main points and ideas which came out at the meeting.

Although focusing on the United Kingdom, the workshop covered a very wide range of different habitats and issues, many relevant to other countries, including the following: woodland, parkland and wayside trees, rocky shores and dunes, grassland and heath, natural rock outcrops, mine spoil-heaps, churchyards, bio-deterioration of monuments, conflicts in management with other plant groups or with animals, transplants, monitoring lichens and the Red Data Book. Lectures, field trips and discussions tried to explore all these different aspects, not only in theory but also in the field. This very broad approach meant that not every topic was explored in detail at the workshop but it would at least provide the basis for practical advice and identify needs for further studies and

conservation effort.

Peter James opened the proceedings with "Why is biodiversity important?". This provocative question stressed the fact that, although the British Lichen Flora is comparatively well studied, very little is known about ecology and conservation of lichens. A comprehensive flora, the Red Data Book and the BLS lichen distribution records provide a far better background for conservation management than is available in most other European countries. However, the rather large number of "Data Deficient" Red Data Book species highlights the need for further studies especially on rare, poorly understood or "key/indicator" species. Ray Woods from the Countryside Commission for Wales summarized this need, when he posed a series of questions. "At which stage do we recommend intervention? Which key species indicate that something is going wrong? What are the ideal habitat conditions?" At the moment there are only a few specialists who are able to carry out research, and most major contributions about the knowledge on species distribution, ecological requirements and conservation still derive from enthusiastic BLS amateurs. It is therefore essential that more research and education on lichen habitats and key species takes place, which can be applied in management.

Brian Coppins considered whether it was a case of *'species versus habitat'* management rapidly coming to the conclusion that species can only be protected within their habitats. Nevertheless discussions showed that it may be difficult to select which species require the main attention. A task made even more difficult when only little funding is available. The Red Data Book of the UK strictly applies to IUCN criteria and evaluates the threat within the UK only without taking into account the threats on a more local scale or comparing the situation in the UK with the international background. Therefore, there is a danger that internationally important habitats like those of *Lobarion* communities of Western Scotland may not get the recognition and attention they deserve, many of the species in the community are not being listed in the Red Data Book as they are not seen as threatened nationally.

Neil Sanderson gave an account of his work in the New Forest, drawing conclusions from his observations on the colonisation of planted enclosures of known date within the Forest. He emphasised the importance of grazing animals in keeping an open gladed structure in the high forest. There was an interesting discussion on the role of large herbivores like aurochs and elephant in the temperate interglacial forests. Pollen analysis has been suggesting that natural woodlands consist of vast areas without any open space, however, this may well be misleading. For instance, the diversity of lichen indicator species for ancient woodlands does not support the concept of largely closed canopies. Whilst many lichens need high humidity, they are well adapted to drying out at frequent intervals. Furthermore, most lichens are certainly comparatively less shade-tolerant than many bryophytes.

Discussions during the workshop stressed that most conflicts about managing habitats for certain groups of animals or plants are caused by different perceptions rather than being founded on scientific evidence. Thus, well illuminated but sheltered habitats which are rich in lichens may indeed meet similar requirements in vascular plants and invertebrates. However, densely shaded woodlands which support only a poor lichen flora still may support rich invertebrate communities. Both habitats rely on management regimes which provide stable conditions so that massive changes are likely to lead to local species extinction. Management regimes should therefore always be based on thorough scientific assessment of different groups rather than advocating changes in favour of single species or habitats. The importance of habitats such as old fenceposts, rotten wood and stumps, pollarded and injured trees for many invertebrates, lichens, bryophytes and fungi was stressed. These microhabitats are often threatened in an increasingly tidy countryside. On a larger scale, do we regard mine spoils, often unique lichen habitats, as an eye-sore or are we able to realize their strange beauty?

This conflict about human attitude towards tidiness became most apparent in papers by Tom Chester and Mark Seaward on the conservation of churchyard lichens and the conservation of ancient monuments respectively. Do we accept a culture which attempts to preserve every monument from biodeterioration or are we willing to accept that every clean surface is a challenge for new natural colonization, a challenge for biodiversity? Clean surfaces deteriorate from physical and chemical weathering. However, although lichen colonization may enhance bio-deterioration, it may on the other hand provide shelter from harsh atmospheric weathering.

The problem of understanding the causes of change were illustrated by Peter Lambley in his account of the deterioration of the Breckland grasslands and their associated lichen flora. Neglect allowing pine growth and consequent change in micro-climate was a possible cause but episodic pollution events were another possibility. The lack of understanding of the impact of agricultural chemicals was emphasised by Sandy Coppins and Peter James when they stressed the importance of wayside trees for a diverse lichen flora. In the past atmospheric pollution by SO_2 has often been monitored by mapping their epiphytic flora. However, with a decrease in SO_2 pollution habitat eutrophication from agricultural fertilisers now seems far more critical.

Oliver Gilbert's paper on his experiments on lichen transplants in the Breckland highlighted the question of "at which stage do we recommend intervention?" also posed by Ray Woods. Many species survived as part of a traditionally managed countryside. Now that these practises have ceased we may have to intervene more and use new techniques to enhance species recovery. Oliver's work on Breckland lichens funded by English Nature's species recovery programme, was experimental and carefully monitored. It did however highlight the need for more studies on dispersal and recolonization. There was a consensus that these critical experiments should only be carried out, if habitats

conditions seem favourable for re-establishment.

The link between culture and lichen conservation was brought home in a poignant way on the last day which coincided with the funeral of Diana, Princess of Wales. During the session the participants stood for a minute's silence as a mark of respect. Then Tom Chester talked about lichen conservation and mentioned that Great Brinton church (where it had been thought that she would be buried) had the best stand of *Parmelia tiliacea* in Northamptonshire. If thousands visited the church regularly it might be lost or damaged.

Even though the workshop did not have the objective of exploring every aspect of conservation in detail (eg what is the ideal grazing pressure for chalk grassland in stock of sheep per hectare) it has been an excellent opportunity to summarize experience and give advice on future needs for research, education and management. Conservation of our living world is a challenge which must involve not only the obvious '*pretty*' species like birds, mammals or butterflies but also the less obvious ones. This wealth of biodiversity is not summarized by sheer species numbers but by complex interacting living systems which may indeed depend on a highly diverse and species rich community of organisms. The workshop and its forthcoming handbook on lichen conservation management have been a first step in the right direction. Here again the BLS takes a leading role in lichenology. Much work remains to be done to raise awareness within the UK and abroad. I personally very much hope that the publication of a Handbook will encourage lichenological organisations from other countries to follow. I hope it will eventually lead to more research in lichen ecology and its application in their conservation. It is encouraging that there is already talk of a follow-up meeting focusing on methods and lessons to be learnt from monitoring studies.

A feature of the conference was the large number of British lichen experts who attended and the relaxed and friendly atmosphere of the many useful discussions which took place both in the conference room and late in the evening in nearby pubs. The field meetings provided an opportunity to see habitats and discuss management problems, whether these were trail-biking on Paris Mountain ('the wonder of Wales') or cattle grazing on dunes. The university was an excellent venue both for its facilities and also as a good centre for a wide range of habitats. Though remembering the security door codes to get in to the building proved a challenge to some! Finally, thanks must go to the Countryside Commission for Wales and to English Nature for grants towards the running of the meeting and especially to Tony Fletcher who was largely responsible for the organisation of the meeting.

Frank Bungartz

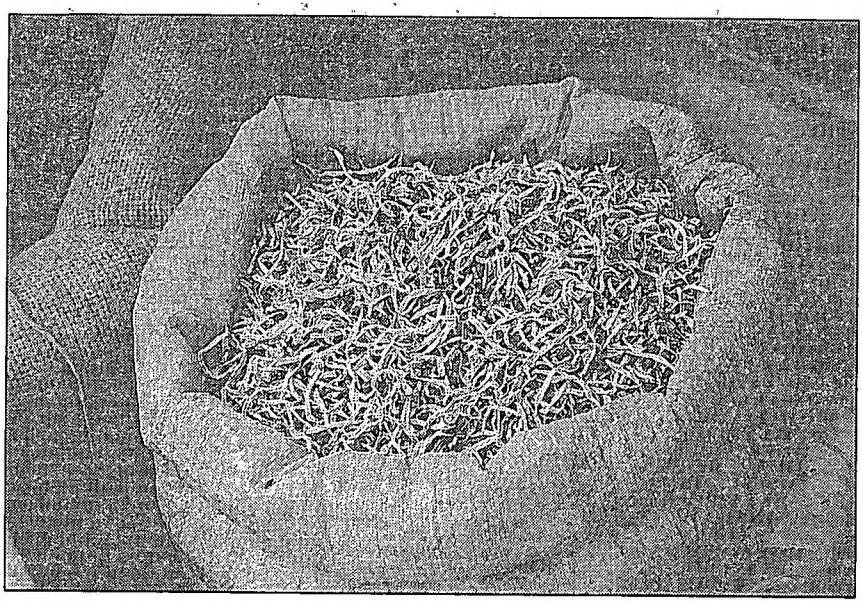
(With additions by the editor as Frank was not present on the last morning.)

NOTE ON LICHEN TEA

I was sent a photograph by Dr. T. Fenero of the University of Hamburg taken by one of his students, O. Apel, who observed the use of *Thamnolia vermicularis* in the city of Lijiang, in the province of Yunnan, China.

Apparently about ten fragments are added to about two teaspoons of green tea. This mixture is reputed to be the usual one to brew tea in this area.

David Richardson



PORTRAIT OF A COUNTY 1: DERBYSHIRE

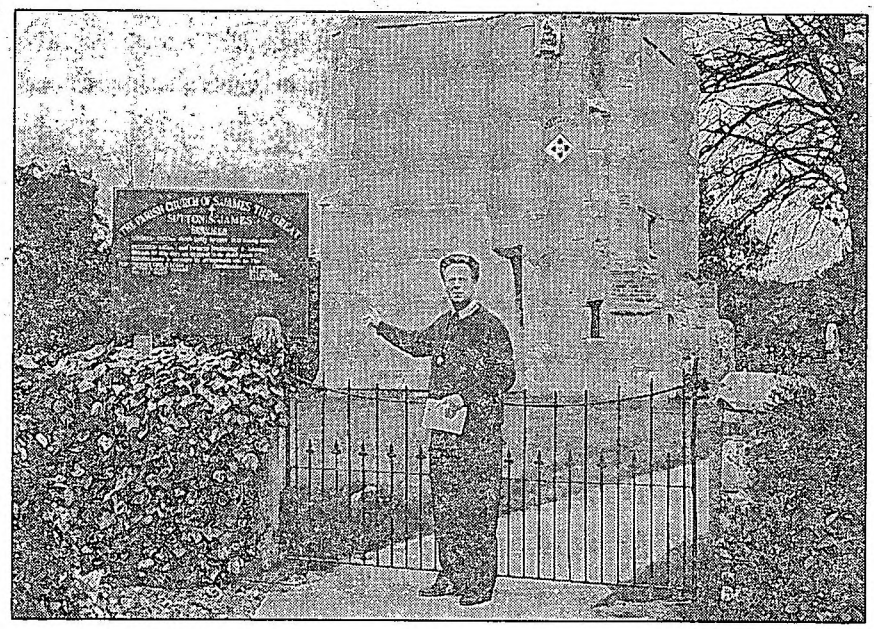
Derbyshire is well-off for lichenologists with five criss-crossing the county. No-one is collecting records with the intention of producing a flora, so that little systematic work gets undertaken; it is mostly a case of odd days out. The exception is Ivan Pedley who is methodically working churchyards starting from the south; he has already added *Aspicilia subcircinata, Lecanora conferta, L. pannonica* and *Parmelia mougeotii* to the county list. David Hawksworth produced a lichen flora of v.c. 57 in 1969, it reported 218 species recorded post-1960. Supplements by various authors (1974, 1983, 1993, 1995), together with records in hand, have more than doubled this number, which now stands at 456. This is nowhere near a final total; it is a poor day out that does not add a further species. It is encouraging that pollution sensitive epiphytes are returning. Their occurrence is not yet general but *Parmelia perlata, P. revoluta, Physcia aipolia* and *Usnea wasmuthii* can be found on elders and willows in sheltered valley bottoms. The only epiphytic site of note is the Old Deer Park, Chatsworth, which is a jewel. Here deep bark crevices on 500 year old oaks (wood pasture) continue to provide exciting species that must have survived the industrial period *in situ*. Others, such as *Lecanora piniperda, Lecidea hypopta, Parmeliopsis aleurites* and *Protoparmelia oleagina* favour the trunks of huge fallen trees lying among the bracken. They have an affinity with the Scottish pine wood flora and directly link the medieval deer park with the forest period.

Derbyshire has its own Red Data Book which includes 105 lichens. Though none are on the British Red List, several are national rarities, eg *Absconditella sphagnorum, Lecidea commaculans* and *Lecidea pernigra*, appearing to have their main centre of distribution in the UK in the county (eg *Cladonia fragilissima, Lecanora campestris* subsp. *dolomitica* and *Protoparmelia picea*), or represent outlying populations (eg *Cetraria islandica, Cornicularia normoerica, Micarea pycnidiophora* and *Mycoblastus alpinus*).

A good day out for a visiting lichenologist, at any season, would be to explore one of the Carboniferous limestone dales where careful collecting would almost certainly reveal species new to the county. Warm weather is required to enjoy the gritstone edges which reach up to 610m; they have recently provided several species unsuspected of occurring so far south in the Pennines such as *Fuscidea austera, F. mollis, Polysporina dubia, Rhizocarpon subgeminatum* and *Schaereria cinereorufa*. I am hopeful of additions and have spent many hours attempting to relocate *Sphaerophorus globosus*. Victorian lichenologists knew it from Cromford and 'moors above Baslow', anyone beating me to it can claim the reward of a giant Bakewell pudding.

Oliver Gilbert

LAST SQUARE BASHED: A LINCOLNSHIRE ODYSSEY



It is fitting that the Mapping Recorder, one of the three initiators of the BLS mapping scheme 34 years ago, should be the one to compile a list of lichens from the last 10 km square in England and Wales that remained unvisited.

On 15th April 1997 he made his historic journey to a remote part of South Lincolnshire to locate grid square 53/31. A quick perusal of the OS map showed why this square had been resolutely by-passed by lichenologists as it appeared to lack outstanding natural or architectural features, a situation which was largely confirmed on the recorder's arrival there. The entire landscape was divided by parallel drove roads lacking hedgerows and punctuated only occasionally by exposed dust-impregnated trees; all in all, an uninspiring panorama, even though the sun was shining. It is hard for a Lincolnshire-born 'yellow-belly' to admit that his native county is anything less than perfect!

These Fenlands with their flat vistas are normally redeemed by the architecture of their once wealthy churches. Although not outstanding in this respect, 53/31 could boast a few interesting examples. Rather curiously, the first church selected for an in-depth

survey, Sutton St James (see accompanying photograph), proved to be nave-less, this feature having been destroyed during the Commonwealth - perhaps 'one of the things that Cromwell knocked about a bit'? All that remains is a tall tower and short chancel. Unperturbed, the recorder managed to assemble a modest list of 40 species from the disjunct portions of the church and its churchyard, while a nearby horsechestnut added a further three species.

Thus encouraged, and with his spirits raised considerably by such a promising start, your recorder moved on to the next church, 6 km to the SSW, at Sutton St Edmund. Here he was relieved to find an entire church, dating from the Georgian period; alas, its brick walls supported disappointingly few lichens and the churchyard memorials produced only 20 species, although the list was boosted by a further eight species found on lignum and a single ash tree.

Undeterred by these slim pickings, your intrepid recorder moved on to Gedney Hill, where the limestone church, the tower of which is referred to by Pevsner as 'a rare landmark in this most uncompromising Fen country' and the nave as 'an unpromising exterior hiding an exciting and unusual interior', again proved poor for lichens. Once again, the large churchyard was explored with despairing zeal and 42 species laboriously checked off from its many monuments, with a further four species gleaned from a single sycamore.

After visits to two further churches, which proved to be Victorian edifices with no churchyards, your recorder was then precluded from further study of this rivetting square by the necessity to attend a JNCC meeting in Peterborough. In all, 65 species were recorded from 53/31, perhaps not so bad a haul after all.

How long, one wonders, will it be before Brian Coppins and Howard Fox are in a position to visit the last remaining squares in Scotland and Ireland respectively?

Mark Seaward

SMALL ECOLOGICAL GRANTS

By the end of August 1997 six grants had been allocated to members under this scheme. Five of these were for projects suggested in the *Bulletin*; the sixth, to aid a national survey of slate quarries, is regarded as being particularly valuable. Funds are still available to grant aid several more projects that deal with neglected habitats or species. Applications, briefly outlining your topic, should be made to: Dr Oliver Gilbert, 42 Tom Lane, Sheffield, S10 3PB.

CHURCHYARD PROJECT: ANNUAL REPORT 1996-7

This year's report has a triumvirate of authors reflecting the immense amount of work carried out in Northern England by Don Smith and in the West Midlands by Ivan Pedley. Because their commitment and enthusiasm knows no bounds, they have inevitably moved beyond the confines of their own designated areas. Ivan who lives in Leicestershire has, for example, surveyed every one of the 327 sites in his own vice-county, while Don completed his survey of the 172 lowland churchyards of VC 61 (S.E. Yorkshire) some time ago. They have also extended their activities into Wales and Scotland. I am grateful for the help of others, including Pat Wolseley and Peter James who have recently surveyed 25 sites in Pembrokeshire and Bridget Ozanne who, with assistance from Keith Palmer, has sent me lists for 18 churchyards and cemeteries on Guernsey, Alderney and Sark. Sheila Street, the co-ordinator for Scotland, now has copies of all the relevant site lists previously sent to me and has constructed a master 10km square map of all the devolved vice-counties north of the border.

As usual, BLS field meetings and workshops have provided the opportunity to look at other 'upland' sites. At the Grange-Over-Sands meeting in October 1996, a number of churchyards were visited including Cartmel Priory where 111 species were recorded. The soil crevices of the boundary walls provided a habitat for *Psora lurida* and abundant *Catapyrenium squamulosum* and *Toninia sedifolia*. After the main meeting was over, Ken Sandell and I visited Aldingham on the fringe of Morecambe Bay and found *Gyalecta truncigena* on the north-west corner of the church.

A year ago on the *Parmelia* Workshop, Slapton churchyard provided us with 125 species (see *Bulletin* **79**) and perhaps we thought saturation point had been reached. This August, however, we returned for the *Caloplaca* Workshop and extended the list to 145. How could such obvious crusts as *Aspicilia calcarea* and *Psilolechia lucida* have been missed the first time round! It was especially useful for us to be able to compare three easily confused *Caloplaca* species - *C. arenaria*, *C.ceracea* and *C. crenularia* - together on a slate chest-tomb. It was interesting also to find *Micarea prasina* in the form of a dark green crust with whitish, stalked apothecia under the drip of a drain pipe on the north side of the church, having collected it from exactly the same niche at Widecombe-in-the-Moor a few days earlier. Three of us had called at Widecombe on our way to Slapton to see *Lecanactis dilleniana* found there initially by Vince Giavarini in April (see p34). This is a rich yard and would repay further study. During the course, we also visited Malborough churchyard and, despite initially thinking it unpromising, reached a total of 105, including two more *Lecanactis* species. Amanda Waterfield spotted *Lecanactis grumulosa* under the arch of the north door, while, our tutor, Peter James, discovered *Lecanactis lyncea* at the base of a sycamore.

No doubt many, many more sites in Devon and Cornwall have over 100 species and there is a clear need for more survey work to update and augment that carried out by David Hawksworth *et al* in 1970s. Ann Allen has kindly offered to take over the role of **South-West Area Co-ordinator** from Barbara Benfield and all records for this area should now be sent to Ann. Our thanks to BB for all her assistance in the past.

The church with the longest name in Britain (Llanfair...) was revisited by Ishpi Blatchley, Peter James, Carl Borges of English Nature (Essex) and myself as part of the recent Habitat Management Workshop in Bangor, North Wales. When I first called there on my way to the Anglesey Field Meeting, I reported that it was one of very few sites with more letters in its name than lichens in its churchyard (see *Bulletin* **77**). Thanks to the eagle eyes of Ishpi and Peter this is no longer the case. In fact, despite the dominance of slate, the list for this yard on the edge of the Menai Strait was extended to 92. One window sill under a metal grille was encrusted with a K- C- *Acarospora* which is provisionally being called *A. smaragdula* f.*muddii* and needs further critical examination. It is turning up all over Britain. Please look out for it and let me have chapter and verse. More will no doubt be written about the Management Workshop in due course. However, I would like to thank Ishpi Blatchley for her contribution to this vital strand of our work.

Phase 1: Lowland England

Our initial plan to survey one churchyard thoroughly in every 10km square in the 35 vice-counties of the designated lowland area is well on the way to completion. Virtually all the parish churches in 12 vice-counties have been surveyed and only 40 squares out of 960 remain uncharted and, by the time you read this, the figure should have been reduced by at least a quarter. My thanks to all who have contributed records during the year. Please don't forget to send copies to Mark Seaward for the national *Atlas*.

Much work was carried out in the winter months in preparation for the spring meeting in Dorset, especially by Humphrey Bowen and Vince Giavarini. This will be reported in more detail in a future *Bulletin*. Over 150 sites have now been visited in this county covering all but one of the 10 km squares and the county is proving to be one of the richest in England. Iwerne Courtney currently shares the honours with Stackpole Elidor in Pembrokeshire as the site with the highest individual species total of 160. The list includes a new *Endocarpon* (see p.34) and the most south-westerly station so far for *Lecanora pannonica*. Other finds of note were *Gyalideopsis anastomosans* on a wooden seat and *Thelidium pyrenophorum* on the porch wall.

As a result of an article in Biological Science Review mentioned in the last *Bulletin*, I was invited to stay for three days in June at St Edmund's, a large Catholic boarding

school near Ware in Hertfordshire. Part of the time was spent surveying an old orchard, a chapel and a church, all located within the grounds, and visiting churchyards in five 10 km squares in the neighbouring countryside. I earned my keep by giving an illustrated talk to the sixth form and helping them to carry out some research work in Standon churchyard. A month later, the Churchyards Committee was able to use the school as a base for its now traditional "works outing". The building was open for an international summer school and Ivan Pedley, Ken Sandell and I were provided with board and lodging in return for a donation to the school's charities fund. For four days we drove to and fro along the A120 into Essex, met up with John Skinner and surveyed 15 sites. One day was particularly notable in that we were joined by Chris Hitch and Peter Earland-Bennett and recorded 110 species at Coggeshall making it the richest yard to date in East Anglia. To add icing to the cake, we were even provided with refreshments by a group cleaning the inside of the church!

Phase 2: Northern England - Don Smith

Northern England churchyard surveying continues apace, albeit at low key compared with lowland England. Much help has been forthcoming from Norman Hammond in Cumbria and Stella Thrower in the Isle of Man. I have managed to survey sites from Cumbria across to North Northumbria down to South Yorkshire (VCs 59 & 63) with some clandestine incursions north into Scotland and south into Derby and Notts. 1,160 survey lists are now on computer disc.

There are 342 10 km squares involved though many are shared by adjoining areas. 56 still remain to be done, most in Lancashire & Northumbria, though at least five moorland squares will never be filled, lacking any religious building or land. I would be very grateful if lichenologists in either of those counties would forward any churchyard lists they may have. There must surely be somebody out there!

The most dispiriting areas to survey are those in West Yorkshire and on into Lancashire. There, presumably due to both urban and industrial pollution, many blackened churches and headstones present virtual lichen deserts - stones where neither *Lecanora conizaeoides* nor *Lepraria incana* can get a toe-hold. However, that said, such sites do present a worthwhile challenge requiring the most painstaking examination without missing a single headstone. In one such depressing yard at Penistone, west of Barnsley, one tiny thallus of *Lecanora epanora* gleamed greenly from a ground level ledger. Then quite recently at Ripponden near Huddersfield, which only managed 18 species, just one drunken headstone tucked away among waist-high weeds was covered with madly fruiting *Baeomyces rufus*.

The advent of the new sterile saxicolous key is most welcome. Fertile *Lecanora caesiosora* was found on outcrops of the Yorkshire Moors and similar thalli in nearby

yards on acid sandstone. Superficially similar thalli further afield were enthusiastically but far too hastily considered for the role. The problem with churchyard surveying is the general impossibility of obtaining anything but scrapings. Finally, near Sedbergh, a very substandard stone provided a number of complete thalli. Using the new key, three of us consider it highly likely to be *Lecanora rupicola* v. *efflorens*, which means that it might be present in at least 40 other yards in about eight vice-counties from VC 68 southwards. The prominent black prothallus with individual radiating hyphae was as conspicuous on one of the specimens as is the white prothallus of *Haematomma*.

The tide does appear to be turning, albeit very slowly, in many of these polluted yards with evidence of scores of tiny, young thalli of a variety of species including *Xanthoria parietina, Lecanora muralis* and various *Physcia* species. However, the icing sugar frosting of the pristine clear areas on marble headstones is a clear indication of the continuing effects of acid rain.

Phase 2: The Welsh Borders, West Midlands, Derbyshire - Ivan Pedley

A little over a year ago, churchyard lichen records for the designated upland vice-counties of Derbyshire (VC57), Cheshire (VC58), Shropshire (VC40), Staffordshire (VC39) and Herefordshire (VC36) were few and far between. Since then a number of members have started to survey these counties or have provided data from previous surveys. Brian Fox and, more recently, Joy Ricketts have provided valuable records for Cheshire and Herefordshire respectively. Oliver Gilbert, David Newman, Don Smith and myself have recently visited or provided data for over 160 churches in Derbyshire which is close to two-thirds of the county's total number. The spin-off in terms of the *Atlas* has been considerable and the momentum continues with recent visits to Staffordshire. Exciting finds are being made and, for those of us who enjoy discovering new county records, these must be there for the asking in Shropshire and Staffordshire. In Derbyshire, for example, *Aspicilia subcircinata, Lecanora conferta, L. pannonica* and *Parmelia mougeotii* were added to the county list after visiting a relatively small number of churchyards.

Much still needs to be done and, if nothing else, the data (or lack of it) may encourage members to resurrect old records lying mouldering among their field notes. I hope however the information tempts others to visit more churches - it would be nice to have every empty 10 km square visited at least once before the end of the Millennium.

Phase 3: Wales - Ivan Pedley

There is no compelling reason why a systematic survey of the Welsh churches should be delayed until Phase 2 of the Churchyard Project is completed. Although great tracts of this lovely country still seem to be in the dark age as far as lichen records are concerned, some recording has taken place. Light glimmers in those areas visited

during previous BLS field meetings, Denbigh for example, visited in 1996 and also those parts favoured by that rare breed of naturalist - the lichenologist on holiday!

Pembrokeshire, that "little England beyond Wales" has seen a relative frenzy of activity over the past few years with over 50 parish churches being surveyed out of a possible 156. Our most experienced lichenologists have been involved and a sustained BLS siege at Stackpole Elidor produced a species total which rivals any yard in Britain at 160. This single-minded survey of the Pembrokeshire churches - selflessly rejecting the lure of the beach and the pleasures of the ice-cream vendor! - has resulted in a vice-county total approaching 300 species. My personal memory this year will be trying to post cards in the wall box at Rosson and having to pull aside swathes of both *Roccella* species to do so. The chapel, only a few strides away, was devoid of either.

All this systematic surveying of the Pembrokeshire churchyards is sadly not reflected in the other Welsh vice-counties, most of which remain unexplored. As far as the Churchyard Project in Wales is concerned, I make a plea for members to go to church more often - and, of course, send the records to the church co-ordinator.

Education & Research

A point again strongly emphasised at the Habitat Management Workshop at Bangor was that the churchyard is an important habitat not only for lichens but also for the education of L-plate lichenologists and an ideal place for carrying out research projects. I continue to receive almost daily enquiries by letter or phone from young and old who are beginning to be ensnared if not fully hooked. Over 60 copies of the Churchyards Fact Sheet mentioned in the last *Bulletin* have now been distributed. It will be revised in January and sent out by Jeremy Gray to all new members. The other day I went through the 1995 membership list highlighting the names of members who could be said to be in some way involved with churchyards and was surprised to find it totalled almost 50! I think it would be useful to provide an occasional (perhaps annual) news sheet for such -I'm tempted to say enlightened -members in order to point out species to look for, squares to be surveyed and matters of research interest. The first of these will be distributed early in the New Year. If you feel that you belong to this growing in-crowd, please let me know! Some relatively inexperienced members may feel that they need further help with identification. A residential weekend course on this subject was held for the first time at Knuston Hall, Northamptonshire in July and was attended by 5 BLS members and 7 others. It will be repeated on 15th-17th May, 1998 (see Field Meetings Programme insert for details).

Tom Chester (unless otherwise indicated)

A REVIEW OF LICHENOLOGY IN INDIA DURING 1996

During 1996, studies in lichenology at the National Botanical Research Institute at Lucknow were mainly concentrated on the taxonomy of the *Lecanora subfusca* group, the ethnobotanical uses of some lichen species and on the carotenoids and heavy metals of Antarctic lichens.

The lichen genus *Lecanora* is poorly known from the Indian sub-continent. In order to improve knowledge of its taxonomy, studies were initiated by segregating specimens of *Lecanora* on the basis of their substrate. The investigations were started on corticolous *Lecanora* after describing 19 corticolous K+ yellow species of the *Lecanora subfusca* group and 3 of the *L. pallida* group from India and a few areas of Nepal. These studies revealed 11 species as new records for the Indian flora. Further investigations were conducted on *Lecanora* species which are saxicolous, K+ yellow and have a dark hypothecium from India and Nepal. A detailed account of *Heppsora indica* and two species of *Tephromela* from India was also prepared.

A collaborative research project between the National Botanical Research Institute and the Indian Institute of Science at Bangalore, evaluating the floristics of the Nanda Devi Biosphere Reserve was completed. This found 92 species of 32 lichen genera. Ethnobotanical information on *Thamnolia vermicularis* (Swartz) Schaerer was also collected, as the species is used by the Bhotia tribe of Nanda Devi for killing white worms of stored butter-milk. The podetia of this species are put in a wide cup containing burning coal, and smoke is directed into vessels containing the butter-milk to kill the worms.

Studies on heavy metals and carotenoids of Antarctic lichens have also been undertaken. Samples of 11 lichen species were analysed for chromium, copper, iron, lead and zinc. These studies showed that, amongst the crustose lichens, those growing on mosses had higher metal levels than those growing on rock, while the foliose and fruticose species accumulated greater amounts of metals than crustose ones. Lichens forming cushion-like mats had more metals than stipitate or substipitate forms.

Estimation of carotenoids in the thalli of 33 lichens from Antarctica was carried out with the help of column-and thin-layer chromatography, which revealed the presence of, α-carotene, β-carotene, δ-carotene, ε-carotene, β-cryptoxanthin, lutein, zeaxanthin, echinenone, hydroxyechinenone, canthaxanthin, β-doradexanthin, α-doradexanthin, astaxanthin, lycopene-5, 6-epoxide, lutein epoxide, antheraxanthin, neoxanthin, violaxanthin, auroxanthin, mutatoxanthin, and capsochrome. The total contents of carotenoids ranged from 23.25 (*Leptogium puberum*) to 123.5 (*Polycauliona regalis*) $\mu g\ g^{-1}$ dry weight. Studies were also conducted to identify Antarctic crustose lichens,

which are very common and widespread in East Antarctica.

Until now there have been no ecological and distributional studies of epiphytic lichens in India. To remedy this omission a project entitled 'The epiphytic lichen flora of *Pinus* and *Quercus* trees in Kumaon' was started, sponsored by the Department of Science and Technology, New Delhi. The epiphytic lichens growing on *Quercus dilatata*, *Q. leucotrichophora, Q. semecarpifolia* and *Pinus roxburghii* at different altitudes of Kumaon area of the Central Himalayas were surveyed and collected. Field observations indicate that the distribution of lichens on trunks and twigs of trees is greatly influenced by the altitude, age, structure and condition of the forest trees and the nature of the surface of the bark.

At the Agarkar Research Institute, Pune, a group has worked on the taxonomy of the pyrenocarpous lichen genera; *Tryptethelium*, *Porina* and *Arthothelium* in India. These studies revealed the presence there of 30 species and one variety of *Tryptethelium*, 65 species and one variety of *Porina*, and 43 species and one variety of *Arthothelium*.

The lichenologist at the Botanical survey of India based in Sikkim is working on the higher altitudinal lichens of the eastern Himalayas and work on the biodiversity of lichens in mangroves is in progress at the M.S. Swaminathan Research Foundation, Madras.

D.K. Upreti

LETTER FROM AN OVERSEAS CORRESPONDENT

Romanian lichenology 1991 - 1997

In Romania there are few lichenologists, so my letter contains data of our activities extending over several years. In May 1995 we completed our studies of "Lichens and mosses as bio-indicators of radioactivity" begun in 1993 and supported by a grant from the Research Support Scheme of the Central European University, Prague. This was a collaborative project involving a lichenologist (myself), two chemists and two physicists from Romania and Hungary. The ^{137}Cs activity concentration was assessed in epiphytic and terricolous lichens and mosses in mountainous regions of Romania and Hungary. Our most significant conclusion regarding contamination of the Carpathians Mts as a result of Chernobyl was the importance of standardising methods of sample collection of biological material.

In August 1995 I had the possibility of studying the *Peltigera* collection of the National History Museum, Department of Botany, Budapest, Hungary. Here I benefited greatly

from the kind assistance of Lokos Laszlo, the lichen curator. A study of V. Gyelnik's collection assisted me in establishing the distribution of this genus in Transsylvania. A paper on 'The genus *Peltigera* in Romania' is completed based on these results.

In 1996 year I attended some international symposia:- "Research, Conservation and Management", Aggtelek National Park, Hungary, 1-5 May 1996, with the paper: Lichens of Danube Delta Biosphere Reserve, Romania (author: K. Bartok) published in Proceedings of Symposium, vol.1, p.283-294, 1997 - "7th International Trace Element Symposium", Budapest, Hungary, 28-30 June 1996, with the paper: Trace element monitoring by using lichens, authors: K.Bartok, I.Pop, A.Nicoara, published in the Proceedings of The Symposium, p.301-306, 1996 - The IAL3 Symposium in Salzbourg, Austria "Progress and problems in lichenology of nineties", 1-7 September 1996. I had participated with two papers: The *Peltigera* genus in Romania (author: K. Bartok) and ^{137}Cs content studies on lichens in mountain regions of Romania (authors: K. Bartok, I. Mocsy, A. Bolyos, Z. Dezso). Both papers are in press.

An important project has been beginning work on and editing the "*Flora Cryptogamica of Romania*". The first volume was prepared by M. Ciurchea and Fl. Crisan, titled "Ord. Verrucariales in Romania" (in press); a second is in progress by myself which will cover ord. Peltigerales, and is scheduled to be completed by 30th November.

In 1995 we explored the possibility of establishing a collaborative programme of research between Romanian Scientific Institutes and The Natural History Museum of London, England, to study the environmental effects of mining and mineral processing in Romania. The British Council sponsored reciprocal visits by scientists of each country. In Romania the Zlatna region was selected for preliminary geological and biological environmental studies. Zlatna is one of the most polluted regions in Romania, where mining has operated since Roman times and mineral processing from the 19th century onwards has caused severe environmental damage with important consequences for human and environmental health. In 1997 the Royal Society awarded a grant for a project "Mobilisation and bio-accumulation of lead in Zlatna", focusing mainly on lichens. This is a collaborative project involving William Purvis (lichenologist) and Ben Williamson (mineralogist), both from the Natural History Museum, London, together with a young student, Zoltani Noemi, and myself, Katalin Bartok. Field work was carried out including sample collection during the second part of July 1997. In November the Romanian lichenologists will visit the Natural History Museum, London to work jointly on our collections, learning to use its advanced analytical facilities. We hope our collaboration will be successful!

Katalin Bartok

LICHENS IN RSPB RESERVES: REQUEST FOR INFORMATION

Sheila Street is co-ordinating the recording of lichens on RSPB reserves as part of a biodiversity project. Any lichen records would therefore be gratefully received and should be sent to her at Ivy Cottage, Insh, Kingussie, Highland, Scotland, PH21 1NT.

CALOPLACA LUTEOALBA, THE ORANGE-FRUITED ELM LICHEN - WHERE IS IT IN THE UK PLEASE?

As part of the UK National Biodiversity Action Plan, the Natural History Museum has agreed to take a lead role in preparing the *Caloplaca luteoalba.* plan. *C. luteoalba* is a rare lichen, considered as vulnerable in the recent Red Data List of lichens and also listed on Schedule 8 of the Wildlife and Countryside Act (1981). This species was formerly frequent in lowland, southern, central and eastern England and eastern Scotland with scattered populations in eastern Wales. Although 112 records are listed in the RDB, the loss of elms, its principal phorophyte, is believed to have resulted in a massive decline in this species. Air pollution is also likely to have had an effect. What can we do about this? I am particularly interested to learn of recent records of this species with a view to organising a co-ordinated monitoring programme of selected sites. There is surely plenty of scope for action to be taken by local lichenologists here (and hopefully some funding too, provided we can make a realistic case to the relevant agencies), but first we need to assess the situation in more detail. I am interested to have your opinions and comments.

Where does it occur?
Please send me your records! I will provide details of localities based on herbarium records in the next *Bulletin* to act as a stimulus here.

We have little knowledge of its ecology.
What are its currently preferred substrates, bark pH, sensitivity to SO_2 and agricultural sprays?

In what communities does it occur? I would also be interested in records of *Bacidia incompta*, another rare species formerly frequent on elms and showing a similar decline.

We know little about its biology
How fast does it grow? What is its ability to spread to new substrates?

What recomendations should we make to the Conservation Agencies to preserve and enhance the presence of this species in the flora?
Trees supporting this species should be reported to the relevant agencies and land-owning bodies, but that in itself is insufficient to ensure its continued protection - even with a tree protection order. We also need to recommend appropriate management of the trees, for which we need further information on the species.

William Purvis

ANNOUNCING A TEST AND TRIAL PHASE FOR THE REGISTRATION OF NEW PLANT NAMES (1998-1999)

Introduction

From the 1st of January 2000, and subject to ratification by the XVI International Botanical Congress (St Louis, 1999) of a rule already included in the International Code of Botanical Nomenclature (Art. 32.1-2 of the Tokyo Code), new names of plants and fungi will have to be registered in order to be validly published. To demonstrate feasibility of a registration system, the International Association for Plant Taxonomy (IAPT) undertakes a trial of registration, on a non-mandatory basis, for a two-year period starting 1st January 1998. The co-ordinating centre will be the Secretariat of IAPT, currently at the Botanic Garden and Botanical Museum Berlin-Dahlem, Germany. Co-ordination with present indexing centres for major groups of plants is being sought, in view of their possible active involvement at the implementation stage. The International Mycological Institute in Egham, U.K., has already agreed to act as associate registration centre for all fungi, including fossils.

Registration Procedure

The co-ordinating registration centre (IAPT Secretariat), and any associated centre operating under its auspices, will register and make available all names of new taxa, all substitute names, new combinations or rank transfers that are brought to their attention in one of the following ways:

- by publication in an accredited journal or serial;
- by submission for registration (normally by the author or one of the authors), either directly or through a national registration office;
- or (for the non-mandatory trial phase only) as a result of scanning of other published information by the registration centres' own staff.

Registration by Way of Publication in Accredited Journals or Serials

For a journal or serial to be accredited, its publishers must commit themselves, by a signed agreement with the IAPT, to

- point out any nomenclatural novelties in each individual issue of their journal or serial, either by including a separate index of novelties or in another suitable, previously agreed way;
- submit each individual issue, as soon as published and as rapidly as possible, to a pre-defined registration office or centre.

Accredited journals and serials will be entitled, and even encouraged, to mention such accreditation on their cover, title page or in their impressum.

A permanently updated list of accredited journals and serials is being placed on the World Wide Web (see under: http://www.bgbm.fu-berlin.de/iapt/registration/). This list will be published annually in the journal *Taxon*.

Registration by Way of Submission to Registration Offices

Authors of botanical nomenclatural novelties that do not appear in an accredited journal or serial (but eg, in a monograph, pamphlet, or non-accredited periodical publication) are strongly encouraged to submit their names for registration and will be required to do so once registration becomes mandatory in the following way:

- all names to be registered are to be listed on an appropriate registration form, using a separate form for each separate publication;
- the form (in triplicate) must be submitted together with two copies of the publication itself, either to a national registration office (see below) or, optionally, directly to the appropriate registration centre. Reprints of articles from books or non-accredited periodicals are acceptable, provided their source is stated accurately and in full;
- one dated copy of each form will be sent back to the submitting author in acknowledgement of effected registration.

Registration forms can be obtained free of charge by (a) sending a request to any registration office or centre, by letter, fax or e-mail; or preferably by (b) printing and copying the form as available on the World Wide Web (see above).

Registration offices are presently being established in as many different countries as possible. They will serve (a) as mailboxes and forwarding agencies for registration submissions and (b) as national repositories for printed matter published locally in which new names appear. A permanently updated address list of all functioning national registration offices is being placed on the World Wide Web (see above) and will also be published annually in the journal *Taxon*.

Registration Date

The date of registration, as here defined, will be the date of receipt of the registration submission at any national registration office or appropriate registration centre. For accredited journals or serials (and, for the duration of the trial phase, for publications scanned at the registration centres), it will be the date of receipt of the publication at the location of the registration centre (or national office, if so agreed).

For the duration of the trial phase, i.e. as long as registration is non-mandatory, the date of a name will, just as before, be the date of effective publication of the printed matter in which it is validated, irrespective of the date of registration. Nevertheless, the registration date will be recorded, for the following reasons:

- to make clear that the name was published on or before that date, in cases when the date of effective publication is not specified in the printed matter;
- to assess the time difference between the (effective or stated) date of the printed matter and that of registration, since it is envisaged that the date of registration be accepted as the date of names published on or after 1 January 2000.

It is therefore in the interest of every author to submit nomenclatural novelties for registration without any delay, and by the most rapid means available.

Access to Registration Data

Information on registered names will be made publicly available as soon as feasible, (a) by placing it on the World Wide Web without delay in a searchable database, (b) by publishing non-cumulative lists biannually, and (c), hopefully, by issuing cumulative updates on a CD-ROM-type, fully searchable data medium at similar intervals.

A Call to Everyone: help in testing the system to make it work

To make the test effective and significant, it is important that everyone publishing nomenclatural novelties on or after 1st January 1998 should participate by registering all new names and combinations on a voluntary basis. Please help (a) by doing so yourself and (b) by spreading the message to others!

Do not be put off if shortcomings or errors occur in the initial months. Remember, this is a test phase. Let us know of any bug or crinkle in the system, and we will iron it out. What matters is that everything operates smoothly by the end of 1999, and that by the next Congress all have satisfied themselves that it will.

We believe that registration of new names, once implemented in a functional way, will be of great benefit for all concerned, with little inconvenience in the way of cost; which was, indeed, the general feeling of the Nomenclature Section at Yokohama in 1993. Nomenclatural practice and procedures must be in excellent shape for the next millennium. Let us work together to make it happen.

L. Borgen, W. Greuter, D. L. Hawksworth, D. H. Nicolson & B. Zimmer, Officers of the International Association for Plant Taxonomy (IAPT) 1.

1 - Contact address: IAPT Secretariat, Botanischer Garten & Botanisches Museum Berlin-Dahlem, Königin-Luise-Str. 6-8, D-14191 Berlin, Germany.

NEW, RARE AND INTERESTING BRITISH LICHEN AND LICHENICOLOUS FUNGUS RECORDS

Contributions to this section are always welcome. Please submit entries to Chris Hitch, The Whin, Wadd Lane, Snape, Saxmundham, Suffolk, IP17 1QY, in the form of species, habitat, locality, VC no., VC name [from 1997, nomenclature to follow that given in the Appendix, see *Bulletin* **79**, which is based on the *Biological Records Centre, Instructions for Recorders*, ITE, Monks Wood Experimental Station, Abbots Ripton, Huntingdon, PE17 2LS, 1974], Grid Reference (GR), altitude (alt.), where applicable, in metres (m), date, comments and recorder. An authority with date after species is only indicated when the record is new to the British Isles. *In the interests of accuracy, typescript is much appreciated. Please use only one side of the paper. Copy should reach the subeditor at least a fortnight before the deadline for the Bulletin.* Records of lichens listed in the *RDB* are particularly welcome, even from previously known localities.

Absconditella lignicola: towards the base of several stands of old and leggy *Calluna*, frequently with *Dimerella pineti*, Studland Heath, VC 9, Dorset, GR 40/02-85-, May 1997. Determined by B. J. Coppins. For more details see *Bulletin* 74 (1994) p.54 (sub ed).

V. Giavarini

Acrocordia cavata: on holly in woodland at edge of loch, Loch Rannoch, VC 88, mid-Perthshire, GR 27/6--5--, October 1974.

C. J. B. Hitch & P. B. Topham

Amandinea lecideina: (i) on sheltered, east-facing sea-cliff, Llangranog, VC 46, Cardiganshire, GR 30-54-, alt. 3 m, April 1997; (ii) also frequent on coastal rock faces, Penyrangor, Aberystwyth, VC 46, Cardiganshire, GR 22/58-80-, September 1997. Confirmed by A. Orange. First Cardiganshire records.

S. P. Chambers

Amygdalaria consentiens: on damp and flushed subvertical faces on back-wall of cwm, Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 600 m, May 1997. Confirmed by A. M. Fryday. New to Cardiganshire.

S. P. Chambers

Bryoria fuscescens: on dead, dusty, acidic, *Rhus typhina*, together with seventeen other epiphytes, including *Parmelia soredians*, in roadside shrubbery of garden centre, Woodbridge, VC 25, East Suffolk, 62/26-48-, May 1996. Material was collected to allow a determination (TLC) as the plant was too small to have soralia present, and also in view of heavy rotovating machinery, used in close proximity. The shrub is now no longer there.

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

Calicium salicinum: in crevices of bark of large *Quercus* in parkland, Barons Court Deer Park, near Omagh, VC H36, Tyrone, GR 23/36-82-, March 1997. First recent record for Ireland.

M. J. Simms

Caloplaca ruderum: (i) at the base of dusty south-facing shale wall, beside a minor road, Llangranog, VC 46, Cardiganshire, GR 22/31-54-, April 1997. New to Cardiganshire; (ii) on south-facing limestone by trackway, Great Orme, Llandudno, VC 49, Caernarfonshire, GR 23/77-82-, April 1997. Both records confirmed by J. R. Laundon. This species is probably somewhat overlooked in the sunnier parts of Wales.

S. P. Chambers

Catapyrenium cinereum: on thin coastal soil, Foelymwnt, near Cardigan, VC 46, Cardiganshire, GR 22/19-51-, March 1997. New to Cardiganshire.

S. P. Chambers

Cecidonia xenophana: on a *Porpidia* sp. on rocks above Llyn Llygad Rheidol, Plynlimon, VC 46, Cardiganshire, GR 22/79-87-, alt. 550 m, May 1997. New to Cardiganshire.

S. P. Chambers

Cladonia firma: closely associated with *Cladonia foliacea* on south-facing coastal slope, Foelymwnt, near Cardigan, VC 46, Cardiganshire, GR 22/19-52-, March 1997. New to Cardiganshire. Confirmed by O. L. Gilbert.

S. P. Chambers

Cladonia uncialis subsp. *uncialis*: on metal-affected river shingle heath, Grogwynion, VC 46, Cardiganshire, GR 22/72-72-, alt. 90 m, September 1995. Confirmed by B. J. Coppins. New to Wales.

S. P. Chambers

Cyphelium notarisii: abundant on the back slats of a seat overlooking the river Deben, Woodbridge, VC 25, East Suffolk, GR 62/27-47-, July 1997. There were virtually no thalli on the seat area, probably due to excessive abrasion.

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

Dactylospora parasitica: corticolous on *Pertusaria albescens* var. *corallina*, Macharioch, VC 101, Kintyre, GR 16/73-09-, October 1974.

C. J. B. Hitch & P. B. Topham

Dactylospora purpurescens: on thallus of *Pilophorus strumaticus*, on vertical Ordovician strata above Llyn Llygad Rheidol, Plynlimon, VC 46, Cardiganshire, GR 22/79-87-, alt. 510-610m, May 1997. Determined by B. J. Coppins. A new host for this species. Previous British specimens are on *Amygdalaria pelobotryon*, but it is known from Scandinavia on *Pilophorus dovrensis*.

S. P. Chambers

Endocarpon sp: on a greensand wall, spreading both along the upper surface and across vertical faces, Iwerne Courtney or Shroton, VC 9, Dorset, GR 31/85-12-, April 1997. New to the British Isles and yet to be named to species level. Look for it on walls composed of blocks of sandstone, where it may be easily overlooked for *Verrucaria macrostoma*. However, the brown thallus is minutely squamulose, lobed at the edges, and with two or more perithecia per areole. Determined by B. J. Coppins.

V. Giavarini

Fuscidea viridis: (i) on *Betula* in damp woodland, Hafod, VC 46, Cardiganshire, GR 22/75-72-, alt. 135 m, November 1996; (ii) on *Betula* west of Pontrhydygroes, VC 46, Cardiganshire, GR 22/73-71-, July 1997. Confirmed by A. Orange. First records for Cardiganshire.

S. P. Chambers

Gyalecta foveolaris: on mossy ledge in narrow crevice of damp north-facing, coastal rock-face, Foelymwnt, near Cardigan, VC 46, Cardiganshire, GR 22/19-52-, alt. 50 m, March 1997. Confirmed by O. L. Gilbert. New to Wales.

S. P. Chambers

Halecania spodomela: forming sparsely fertile, dark, scurfy crusts, on vertical shale slabs, erected as edging to an old track, Yr Wyloer, Gilfach, Rhayader, VC 43, Radnorshire, GR 22/96-71-, alt. 200 m, August 1997. Confirmed by A. Orange. New to Radnorshire. This species must be easily overlooked when sterile.

S. P. Chambers

Ionaspis melanocarpa: on vertical metamorphosed limestone, Coire Cheap, east of Aonach Beag, VC 97, West Inverness-shire, GR 27/47-75-, alt. 900 m, August 1994. Determined by A. M. Fryday. Third British locality.

S. P. Chambers & A. M. Fryday

Lecanactis dilleniana: on vertical granite wall of church, Widecombe-in-the-Moor, VC 3, South Devon, GR 20/71-78-, April 1997. Determined by B. J. Coppins.

V. Giavarini

Lecanactis lyncea: on craggy bark of ancient *Quercus*, with *Milospium graphideorum*, Hafod, VC 46, Cardiganshire, GR 22/74-72-, alt. 135 m, November 1996. Determined by A. Orange. Both records new to Cardiganshire.

S. P. Chambers

Lecanora epanora: for details see under *Miriquidica lulensis*.

S. P. Chambers

Lecanora pannonica: on stonework of church, Iwerne Courtney or Shroton, VC 9, Dorset, GR 31/85-12-, 1997. Seen only at this church, despite an extensive survey of Dorset churchyards.

V. Giavarini

Lecanora pruinosa: on stonework of church, Hilton, VC 9, Dorset, GR 31/78-03-, January 1997. It is now known from at least six Dorset sites, since that date.

V. Giavarini

Lecanora rupicola var. *efflorens*: on flaking headstone in churchyard, Garsdale, VC 65, North-west Yorkshire, GR 34/74-89-, July 1997. Determined by C. J. B. Hitch.

D. H. Smith

Lecidea commaculans: on top of roadside boulder by trackway, Gleann Taitneach, VC 89, East Perthshire, GR 37/09-72-, August 1995. Determined by B. J. Coppins.

R. C. Munro

Lecidea confluens: on south-facing boulder in sheep walk, Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 550 m, May 1997. Determined by A. M. Fryday. New to Cardiganshire.

S. P. Chambers

Lepraria elobata: (i) on soil in south-facing hollow on roadside bank, Loch Shandra, VC 90, Angus (Forfar), GR 37/2161-, November 1994; (ii) on soil in west-facing hollow on roadside bank, Tulloch Hill, Glen Prosen, VC 90, Angus (Forfar), GR 37/37-60-, June 1997. Determined by C. J. B. Hitch.

R. C. Munro

Lepraria elobata: on south-facing crumbly rocky scree by roadside, Killhope Burn, Wearhead, VC 66, Durham, GR 35/81-41-, June 1997. Determined by C. J. B. Hitch.

D. E. McCutcheon

Lichenostigma elongata Nav.-Ros & Hafellner (1996): on thallus of *Aspicilia calcarea* on church wall, Ivychurch, VC 15, East Kent, GR 61/02-27-, May 1967. Collected by B. J. Coppins. Specimen in E. New to Britain. Distinguished by its elongate ascomata on the thallus and apothecia of *Aspicilia* (including *Lobothallia*) spp. See 'Literature Pertaining' in this issue.

B. J. Coppins

Lithographa tesserata: very sparse on rocks above Llyn Llygad Rheidol, below Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 650 m, May 1997. New to Cardiganshire.

S. P. Chambers

Llimoniella neglecta: on *Lepraria caesioalba*, on siliceous rock outcrop at the confluence of Allt Feith Làir and Allt a' Ghlinne Mhór, Felar, VC 89, East Perthshire, GR 27/99-79-, alt. *c.* 425 m, June 1997. Determined by B. J. Coppins. Specimen in E.

I. Blatchley

Milospium graphideorum: for details see under *Lecanactis lyncea*.

S. P. Chambers

Miriquidica lulensis: on west-facing, iron-rich, shale wall of adit, with a good complement of metallophytes, including *Lecanora epanora* and fertile *Rhizocarpon furfurosum*, Level Fawr, Pontrhydygroes, VC 46, Cardiganshire, GR 22/73-72-, alt. 150 m, September 1997. Second Welsh record.

S. P. Chambers

Parmelia laciniatula: several thalli on mature *Acer pseudoplatanus* on ancient huge mound of soil in pasture, Pettistree, VC 25, East Suffolk, GR 62/29-55-, April 1997. New to Suffolk.

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

Parmelia soredians: (i) on dead *Rhus typhina* in roadside shrubbery of garden centre, Woodbridge, VC 25, East Suffolk, GR 62/26-48-, May 1996, collected by Hitch and Earland-Bennett; (ii) on well-lit branch of *Quercus*, Staverton Park, VC 25, East Suffolk, GR 62/35-50-, April 1997, collected by Hitch, Earland-Bennett & Sibbert; (iii) on lignum of sunny, weathered fence by road, with fertile *Physcia dubia* and *Buellia griseovirens*, Offton, VC 25, East Suffolk, GR 62/07-49-, June 1997, collected by Earland-Bennett and Hitch; (iv) on rather shady buttress root of *Quercus*, Yoxford, VC 25, East Suffolk, GR 62/39-68-, collected by Strauss; (v) on well-lit bole of *Quercus*, Barnhamcross Common, VC 26, West Suffolk, GR 52/86-81-, July 1997, Hitch and E-Bennett. New to vice-county 26.

P. M. Earland-Bennett, C. J. B. Hitch, N. E. Sibbert, D. F. Strauss

Parmelia soredians: on well-weathered churchyard seat, with *Parmelia saxatilis*, Ashtead, VC 17, Surrey, GR 51/19-58-, July 1997. Supposedly new to the county.

C. J. B. Hitch and P. M. Earland-Bennett

Parmelia tinctina: Abundant on slates on north, east and south pitches of large outbuilding roof of the church rectory, and probably the rectory as well - no longer used as such. Somersham, VC 25, East Suffolk, GR 62/09-48-, September 1995. Collections and subsequent TLC analysis confirmed this red data book species which was first suspected in Suffolk in 1995.

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

Placynthiella dasaea: on saturated stump of dead *Salix cinerea*, Pentrosfa mire, Llandrindod Wells, VC 43, Radnorshire, GR 32/05-59-, alt. 210 m, June 1997. Confirmed by A. Orange.

S. P. Chambers

Placynthium flabellosum: fertile on marginal boulders, Brown Cove Tarn, Helvellyn, VC 69, Westmorland with North Lancashire, GR 35/34-16-, alt. 620 m, August 1996. First fertile British material.

S. P. Chambers

Polyblastia cruenta: for details see under *Thelidium zwackhii*.

S. P. Chambers

Polyblastia cupularis: on flushed outcrops, Llyn Llygad Rheidol, Plynlimon, VC 46, Cardiganshire, GR 22/79-87-, alt. 520 m, May 1997. Determined by A. Orange. New to Cardiganshire.

S. P. Chambers

Polysporina lapponica: (i) occasional on horizontal boulder tops, Yr Wyloer, Gilfach, Rhayader, VC 43, Radnorshire, GR 22/96-71-, alt. 250 m, August 1997; (ii) also sparse on costal shale outcrops, Penyrangor, Aberystwyth, VC 46, Cardiganshire, GR 22/58-80-, September 1997. First vice-county records.

S. P. Chambers & A. D. Hale

Porina mammillosa: on a vertical rock-face near the river, Water of Saughs, VC 90, Angus (Forfar), GR 37/43-73-, August 1995. Confirmed by C. J. B. Hitch.

R. C. Munro

Protoparmelia atriseda: on moribund *Rhizocarpon geographicum* on vertical, sheltered Ordivician outcrops, Gilfach, near Rhayader, VC 43, Radnorshire, GR 22/96-71-, alt. 360 m, August 1997. New to Radnorshire.

S. P. Chambers

Rhizocarpon colludens: frequent on flushed Ordovician grit on back wall of cwm, Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 550 m, May 1997. Confirmed by A. M. Fryday. New to Cardiganshire.

S. P. Chambers

Rhizocarpon furfurosum: for details see under *Miriquidica lulensis*.

S. P. Chambers

Rhizocarpon viridiatrum: on south-facing coastal rocks, Afon Drywi, near Aberaeron, VC 46, Cardiganshire, GR 22/42-60-, alt. 40 m, March 1997. New to Cardiganshire.

S. P. Chambers

Rimulara limborina: on flushed or splashed rocks by Llyn Llygad Rheidol, Plynlimon, VC 46, Cardiganshire, GR 22/79-87-, alt. 520 m, May 1997. Confirmed by A. M. Fryday. New to Cardiganshire.

S. P. Chambers

Rinodina pityrea: good fertile material on southwest side of decorticated tree stump (?*Fraxinus*), sheltered by bushes at edge of pastureland, Pettistree, VC 25, East Suffolk, GR 62/29-54-, April 1997.

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

Sclerococcum montagnei Hafellner (1997): (i) on thallus of *Lecanora rupicola*: Breiddon Hill, VC 47, Montgomeryshire, GR 33/2--1--, August 1985, collected B. J. Coppins & R. G. Woods; (ii) also at Hareheugh Craigs, VC 81, Berwickshire, GR 36/6--3--, June 1991, collected B. J. Coppins, A. M. O'Dare & D. G. Long; (iii) and at Harelaw Burn, Lammermuir Hills, VC 82, East Lothian (Haddington), GR 36/54-63-, March 1991, collected B. J. Coppins & A. M. O'Dare. Specimens in E. New to Britain. This species is similar in appearance to *S. sphaerale* on *Pertusaria corallina*, but has smaller, mainly 2-celled conidia. See Hafellner (1997) in 'Literature Pertaining', in this issue.

B. J. Coppins

Thelidium zwackhii: (i) on mortar-rich wall-footing of old mine building, Ceunant mine, VC 46, Cardiganshire, GR 22/70-82-, alt. 260 m, March 1993; (ii) on little stones with *Polyblastia cruenta*, in streamlet, Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 570 m, May 1997. Confirmed by A. Orange. First Cardiganshire records.

S. P. Chambers

Thelomma ocellatum: on partially shaded horizontal fence rail round lake, Forcett Park, VC 65, North-west Yorkshire, GR 45/17-12-, June 1997. Determined by C. J. B. Hitch. New to Yorkshire.

A. Henderson and M. R. D. Seaward

Verrucaria latebrosa: on mildly basic seepages in Ordivician rocks, Plynlimon Fawr, VC 46, Cardiganshire, GR 22/79-87-, alt. 570m, May 1997. Determined by A. Orange. New to Cardiganshire.

S. P. Chambers

LITERATURE PERTAINING TO BRITISH LICHENS - 22

Lichenologist **29**(2) was published on 7th March 1997, **29**(3) on 14th May 1997, and **29**(4) on 22nd July 1997.

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.

ANON 1997. *Action for Wildlife. Biodiversity Action Plans - The Challenge for Wales*. Bangor: Countryside Council for Wales. 100 pp. Includes species accounts and distribution maps for Wales of *Caloplaca luteoalba*, *Collema dichotomum* and *Pseudocyphellaria norvegica* on pp. 67-69.

BARR, M E, HUHNDORF, S B & ROGERSON, C T 1996. The pyrenomycetes described by J. B. Ellis. *Memoirs of the New York Botanical Garden 79*: 1-137. *Anisomeridium polypori* (Ellis & Everh.) M. E. Barr (1966) is said to be the correct name for *A. nyssaegenum*.

ELVEBAKK, A & HERTEL, H 1997 ['1996']. A catalogue of Svalbard lichens. *Norsk Polarinstitutt Skrifter* **198**: 271-359. The combination *Lecanora atromarginata* (H. Magn.) Hertel & Rambold is validated (see *Bulletin* **76**: 50, 1995).

GIRALT, M, van den BOOM, P. P. G. & MATZER, M. 1997. The lichen genus *Rinodina* in Belgium, Luxembourg and the Netherlands. *Mycotaxon* **61**: 103-151. This revision of the genus in the Benelux countries, includes a dichotomous key, spore drawings and many useful notes on distinguishing features and ecology, etc. It would appear that the entity growing on nutrient enriched or dust-impregnated bark, and generally called *R. exigua* in Benelux and the British Isles, is actually referable to *R. oleae* Bagl. (1857), although this in turn may prove to be conspecific with the saxicolous *R. gennarii* Bagl. (1861).

GIRALT, M & LLIMONA, X 1997. The saxicolous species of the genera *Rinodina* and *Rinodinella* lacking spot test reactions in the Iberian Peninsula. *Mycotaxon* **62**: 175-224. Includes useful descriptions and notes on several species that occur in the British Isles. *R. orculariopsis* is said to contain gyrophoric acid and be a synonym of *R. sicula* H. Mayrhofer & Poelt (1979). [All specimens of *R. orculariopsis* in E are C- in microscopical sections, but these and other British specimens need to be analysed by TLC to establish the presence or absence of lichen substances.]

HAFELLNER, J 1996. Bemerkenswerte Fund von Flechten und lichenicolen Pilzen auf makaronesischen Inseln V. Über einige Neufunde und zwei neue Arten. *Herzogia* **12**: 133-145. Includes original description and illustrations of *Sclerococcum montagnei* Hafellner, a parasite of *Lecanora rupicola*. [See 'New, rare and interesting' in this *Bulletin* for British records.]

IHLEN, P G 1997. The lichen genus *Baeomyces* (Leotiales, Ascomycotina) in Norway. *Nova Hedwigia* **64**: 137-146. A revision of *Baeomyces* s.str. in Norway. In all three species (*B. carneus, B. placophyllus* and *B. rufus*) gyrophoric and lecanoric acids are found in the epithecium and hymenium of mature apothecia (giving a C+ red reaction in sections).

MOTYKA, J 1996. *Porosty (Lichenes) Tom IV. Rodzina Lecanoraceae*. Lublin. The fourth part of Jósef Motyka's posthumously published monumental monograph (see *Bulletin* **80**: 62 for details). This volume includes treatments of placodioid taxa, *Squamarina*, as well as *Trapelina* [=*Trapelia*] and *Mosigia* [=*Rimularia*]. [As with the previous volumes the taxonomic concepts (especially at generic and familial ranks) are 'archaic', and numerous, unnecessary and often superfluous nomenclatural innovations are introduced. For example, the name *Trapelina* Mot. is introduced to replace *Trapelia* M. Choisy, which is said to be a 'nomen invalidum' - which it is not!].

NAVARRO-ROSINÉS, P & HAFELLNER, J 1996. *Lichenostigma elongata* spec. nov. (Dothidiales), a lichenicolous ascomycete on *Lobothallia* and *Aspicilia* species. *Mycotaxon* **57**: 211-225. The new species is widely occurring on *Aspicilia* and *Lobothallia*, especially those growing on calcareous substrata. [Reported from England in 'New, rare and interesting' in this *Bulletin*.]

NAVARRO-ROSINÉS, P & HLADUN, N L 1996. Las especies saxícolo-calcícolas del grupo de *Caloplaca lactea* (Teloschistaceae, líquenes), en las regiones mediterránea y medioeuropea. *Bull. Soc. Linn. Provence* **47**: 139-166. This revision treats seven species, two of which occur in the British Isles: *C. crenulatella* and *C. lactea*. The former, previously regarded as a British endemic, is shown to be widely occurring in Europe, and is also reported from New Zealand. The spores of *C. crenulatella* are (13-)15-20(-23) µm long, with somewhat pointed apices. From the spore length ('15-20 µm' long) for *C. lactea* given in the British *Flora* the authors suggest that British material may belong to *C. crenulatella*. [However, the spore measurements given in the *Flora* are erroneous - all specimens of *C. lactea* in E have spores 12-15(-16) µm long and with rounded apices, agreeing with the concept of *C. lactea* in this revision.]

NAVARRO-ROSINÉS, P & ROUX, C 1997. *Weddellomyces protearius* sp. nov. et *Lichenochora xanthoriae*, champignons lichénicoles non lichénisés parasites de *Caloplaca proteus*. *Mycotaxon* **61**: 433-440. A revised key to the now seven species of *Weddellomyces* is provided.

RANDLANE, T & SAAG, A 1997. A second updated world list of cetrarioid lichens. *Bryologist* **100**: 109-122. The 135 listed species are placed into 22 genera, and synonymy is provided.

ROBERTS, P 1997. New heterobasidiomycetes from Great Britain. *Mycotaxon* **63**: 195-216. **Chionosphaera coppinsii* P. Roberts is described from the thallus of *Parmelia glabratula*, collected at Torridon in West Ross. A second collection, on *Lecidella elaeochroma* from near Bettyhill in Sutherland, is provisionally referred to this new species.

SEAWARD, M R D 1996. The Oxford University lichen herbarium. *Oxford Plant Systematics* **4**: 14-15. A note on the lichen collections at OXF, apart from the renowned Dillenium herbarium. At least 95 collectors have been recognised so far, and a more detailed appraisal of the herbarium's contents is in progress.

SEAWARD, M R D 1997. Progress in the study of the Yorkshire Lichen Flora-2. *Naturalist* **122**: 57-59. Maps show the number of lichen taxa recorded from each 10km square in the county. The total taxa is now 810 (787 species), with 679 considered extant. Twelve species are listed as additions to the author's 1994 Yorkshire checklist.

TRETIACH, M & NAVARRO-ROSINÉS, P 1996. *Sarcopyrenia sigmoideospora* sp. nov., a lichenicolous ascomycete growing on *Verrucaria* gr. *parmigera*. *Nova Hedwigia* **62**: 249-254. Includes a key and spore drawings for all the known species of *Sarcopyrenia*.

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