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BRITISH LICHEN SOCIETY BULLETIN

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FORTHCOMING BLS FIELD MEETINGS

ISLE OF MAN

Leader P.M. Earland-Bennett — 17-26th April, 1990

THE GOWER PENINSULA

Leader Alan Orange — 10 - 14th September 1990

THE GREENHOUSE EFFECT AND LICHENS

A number of papers are now appearing that forecast on the possible consequences for wildlife of the greenhouse effect. This article summarises current thought on the phenomenon and suggests some of the ways in which the British lichen flora might be affected. The consensus view is that we are heading for a carbon dioxide induced 'super interglacial' with a climate warmer than at any time in the last 10,000 years.

A greenhouse gas is one that simulates a real greenhouse. It acts just like the glass in letting heat and light from the sun pass down through the atmosphere relatively uninhibited, but trapping some of the heat from the planet's surface on its way out to space. As a result the climate warms. The atmosphere, of course, already contains CO_2 under natural conditions, about 0.275%, otherwise the earth's temperature would be well below freezing point. But the concentration now is 0.343%, an increase of 25% over about the last 150 years. The excess CO_2 has come partly from burning fossil fuels and partly from the destruction of vegetation, especially tropical rain forests, where carbon was previously locked up in wood.

Other 'anthropogenic' greenhouse gases are methane (from rice paddies, domestic cattle and landfill sites), nitrous oxide (from fertilisers and combustion), ozone, and chlorofluorocarbons or CFCs, the refrigeration gases (which are also attacking the ozone in the stratosphere). The most recent estimates, considering other greenhouse gases as similar in effect to CO_2 are that a doubling will be achieved well before 2050 AD and possibly by 2030. The consequences for temperature are calculated to be a global mean increase of anywhere between 1.5 and 5.0°C.

Global temperature is already higher than at any time since records began - the six warmest years on record have occurred during the 1980s and any further warming will move our climatic system into uncharted territory. The warming that brought the world out of the last ice age was only of the order of 3-4°C. A temperature increase of 1.5°C would effectively shift Newcastle-on-Tyne to Kent in winter and to about Cambridge in summer; an increase of 5.5°C would shift Newcastle to somewhere near Bordeaux. Or expressed in terms of altitude, a 1.5°C increase would move the climatic belts about 820 ft up our hillsides and a 5.0°C increase would move the belts about 3,000 ft higher than they are now, allowing the cultivation of wheat and barley on the highest summits of the Pennines and the Lake District. This refers only to temperature; effects on moisture are still uncertain and day length will not be altered.

The consequences for sea-level of these temperature shifts depends on what happens to the West Antarctic ice-sheet. Without its contribution the predicted warming should raise sea- level by 0.25 to 1.65 metres, mainly due to thermal expansion of sea water. If the ice-sheet were to collapse sea- level would rise by another 5m, but this would take several hundred years. Since the industrial revolution, the climate has already warmed by about 0.5°C and sea level risen at a rate of about 14cm per century - but these changes are also within the range of quite natural variations in climate.

Predictions of the direction of vegetation change have been summarised by Grime & Callaghan (1989). In southern England, particularly on dry soils, they see the growing season shifting significantly towards the autumn, winter and spring with a quiescent phase often occurring in summer. In such sites bryophytes may be expected to decline and lichens to become more abundant locally. Many species which reach their northern limit in England and southern Scotland will begin to expand northwards. Species currently restricted to south-facing slopes in Britain will begin to colonise other aspects, while plants of northern distribution in Europe may be expected to retreat from the southern extremities of their range. There are obvious possibilities for the incursion into Britain of mediterranean plants. It is considered that climatically extreme years will be of critical importance in initiating these changes. There is evidence that

they already have a key role in regulating distribution and abundance.

So what does a warmer future hold for the British lichen flora? Certain lichens will tend to migrate northwards to remain within climatically suitable habitats. Arctic and boreal species that reach their southern limit in the north of Britain may become extinct. Sub-Mediterranean and southern European species not yet recorded for Britain or only known from the Channel or Scilly Isles will almost certainly establish populations on the mainland. The chief effect, however, will probably be less spectacular - a shift in the balance between species already present in our flora. It is considered that coastal habitats will re-establish themselves at slightly higher elevations as they have done many times before in response to ice- sheet melt.

Prime candidates for a gradual reduction followed by extinction are 'snow-bed specialists' in the Scottish Highlands such as Lecanora leptacina, Lecidea griseovirens, Lecidella bullata and probably Aspicilia alpina. More widespread species favoured by late snow lie will increasingly become restricted to high ground. For example the tiny population of Lecanora caesioatra on the NE facing summit scarp of Cross Fell, its only site in England, must be highly vulnerable. A complicating factor is that length of snow lie is not just controlled by temperature, it is also a product of the degree of snow accumulation which is affected by, among other things, wind speed and direction. Additionally the effects of acid precipitation may be particularly pronounced in snow beds. The half-dozen or so lichens known in Britain only from the summit of Ben Lawers must also be endangered. Caloplaca nivalis, regularly found there by Victorian lichenologists, is now extremely rare having only been seen twice during the modern period, both times as a single thallus.

Lichen contenders for invading mainland Britain are less easy to forecast because the precise factors operating to limit species at the edge of their range are rarely known. Candidates should ideally be mobile, rather weedy species and tolerant of the dusty, mildly eutrophicated conditions that go with an increasingly warm, dry climate. Most likely contenders already have a foothold here. Teloschistes chrysophthalmus and Tornabea scutellifera, at present

extinct on the British mainland, could return to our south coast while Teloschistes villosus, Physconia servilis and other mediterranean epiphytes may eventually appear.

Corticolous species already well established in the UK, which might be expected to increase in the light of their known European distribution and ecological requirements, belong to two associations of the Xanthorion parietinae alliance. The Teloschistetum flavicantis occurs on twigs and well-lit tree boles in the sunniest and driest parts of southern England. Its characteristic species are nitro-tolerant and include Teloschistes flavicans, Physcia clementei, P.leptalea and P.tribacioides. The other association, the Parmelietum carporrhizantis, is found on very well-lit, slightly nutrient enriched parts of trees in low rainfall areas of SW England. Its distinctive species are Parmelia borreri, P. quercina, P. soredians and probably P. reticulata. Temperature is unfortunately not the only factor controlling the distribution of these species. Whether they could respond to any rise in temperature would depend on levels of air pollution remaining sufficiently low and the hypertrophication of tree bark caused by modern farming methods being controlled. If both these factors were reduced in southern Britain, the species might be expected to expand even without any rise in temperature. The mapping scheme does however give us a fair idea of the natural limits of conspicuous species like Teloschistes flavicans in the days before pollution became a problem. Twig epiphytes appear to possess a particularly well developed colonising ability.

A prime candidate for picking up the greenhouse effect must be the terricolous lichen Fulgensia fulgens, which was the subject of a detailed study published in 1978. It is a mediterranean species that is established at about a dozen sites in the UK, many of them nature reserves in a very stable condition. At two of these sites (Brean Down and the Isle of Wight), it has recently been reported as having started to increase, behaving not as a relict species but as an opportunist (Bulletin 64). The Breckland rarities Buellia asterella and Squamarina lentigera should also be monitored.

Whether lichens will be equally successful as environmental indicators of the greenhouse effect as they have been in monitoring SO_2 air pollution or in helping to identify ancient, long undisturbed woodland remains to be seen. A feature in their favour

is that they appear to respond reasonably rapidly to changing conditions; many observers have been surprised at the speed with which Usnea subfloridana, Ramalina farinacea and Xanthoria polycarpa have invaded towns in the wake of falling pollution. Despite their slow growth rate many lichens are far more mobile than most higher plants.

Philip Grime, Francis Rose and Angus Lunn are thanked for helping with the preparation of this article.

Grime, J.P. & Callaghan, T.G.(1989) Direct and indirect effects of climate change on plant species, ecosystems, and processes of conservation and amenity interest. Contract Report to the D.O.E. Ref T07020 b1.

NOMINATIONS REQUIRED FOR OFFICERS AND COUNCIL MEMBERS

Nominations for Officers for 1990 and members of the Council for the period 1990-91 should be sent in writing to The Secretary, T.H.Moxham, Dept. of Plant Sciences, University of Bath, Claverton Down, Bath, Avon, BA2 7AY before 22nd December 1989, please. No personmay be nominated without their consent. Dr. Oliver L. Gilbert wishes to stand down as Bulletin Editor and Mr. Tim H. Moxham wishes to relinquish the post of Secretary. Council have discussed the possibility of introducing a new post as a Publicity/Education/ Liaison Officer - see item 9 on the A.G.M. agenda. Dr Roy W. Alexander, Mrs Peggy Cayton and Mr Jack R. Laundon retire from Council and are not eligible for re-election as Council members.

JANUARY MEETINGS

Anything to discuss ?

Council will meet on the afternoon of Friday 5 January 1990 at 14.00 in the Council Room of the Royal Entomological Society of London, 41, Queen's Gate, London, SW7 5HU. Please let the Secretary have any items that you wish Council to discuss by Friday 29 December 1989.

Book Sale/Slide Show

The book sale will be held on the evening of Friday 5 January 1990 between 18.00 and 21.00 in the Meeting Room of the Royal Entomological Society of London, 41 Queen's Gate, London, SW7 5HU. The admission charge of £9.00 covers the cost of a buffet and a glass of wine. The event this year will be combined with the Members' Slide Show which has frequently been in danger of being squeezed out of the Saturday programme by the pressure of other activities. Please bring along your latest transparencies as there should be plenty of time for showing them this year.

Frank Brightman and Mark Seaward will be the auctioneers again, and will be happy to give advice on prices. There are already a number of lichenological books for sale, but please bring along any other books, journals, reprints, illustrations or ephemera with lichenological, botanical or natural history contents. All sales will be split on a 50:50 basis between the vendor and the Society. If you are unable to attend but have items for sale, please contact either Frank Brightman or Mark Seaward. Unsold items will be auctioned the following day after the A.G.M.

Please complete the enclosed tear-off form and send your cheque for £9.00 (payable to "The British Lichen Society")to Tim Moxham, Dept. of Plant Sciences, University of Bath, Claverton Down, Bath, Avon, BA2 7AY before Friday 29 December 1989, so that arrangements for catering may be made.

ANNUAL GENERAL MEETING / EXHIBITIONS / LECTURE MEETING / OPEN DAY

The Annual General Meeting will be held in the Demonstration Room of the Department of Palaeontology (ground floor), British Museum (Natural History), Cromwell Road, London SW7 5BD, at 10.30 a.m. onSaturday 6th January 1990. The Museum doors open to the public at 10.00am. Following the A.G.M. there will be the usual exhibitions, to which members are invited to contribute, members are encouraged to show fellow lichenologists items of interest and to take the opportunity to discuss informally topics of mutual interest, please bring along your exhibits and help to make it a success. The morning will conclude with the Presidential Lecture Meeting where Dr.Francis Rose will talk on the New Index of Ecological Continuity and the President will talk on lichens of native pinewoods. A buffet lunch (including a glass of wine) will be served in the Palaeo-common room,

but please complete the enclosed form to ensure that we cater for the right number. The afternoon will be devoted to an open day in the Lichen Section where the staff will give 20-25 minute demonstrations of facilities and current research work, after which there will be a little time left for the exhibition and discussions.

Programme

10.00 Museum opens to public.

10.30 Annual General Meeting.

AGENDA

1. Apologies for absence.
2. Minutes of Annual General Meeting 7 January 1989.
3. Minutes of Special General Meeting 4 September 1989.
4. Matters arising:
   a) Questionnaire for Field Meetings
5. Officers' reports.
6. Meetings 1988 - 1989.
7. Election of Auditor.
8. Election of members of Council.
9. Education/Liaison/Publicity Officer.
10. Election of Officers.
11. Election of Vice-President(Council's nomination: Mr F.S. Dobson).
12. Election of President (Council's nomination: Professor D.H.S. Richardson).
13. Any other business.
    a) Facilities for members.
    b) Regional Representatives.
14. Date and place of next A.G.M.

11.30 Coffee and Exhibition Meeting.

12.00 Lectures.

1. Dr Francis Rose - New Index of Ecological Continuity.
2. Dr Brian J.Coppins - Lichens of the native pinewoods.

13.00 Buffet Lunch in Palaeo-common room.

14.00 Open Day in Cryptogamic Botany Department - Lichen Section.

Mr J.R. Laundon - Historical Lichenological Collection
Dr O.W. Purvis - Lichens and Metal / Flora
Mr P.W. James - Lichen Monitoring Projects
Dr D.J.Galloway - Southern Hemisphere Lichens

16.00 Tea

17.00 Close

NEW SUBSCRIPTION RATES FROM 1990

Council recommended and members at the 1989 Annual General Meeting voted in favour of an annual subscription rate increase from £15 to £20 per year from 1st January, 1990. The last increase was on 1 January 1986 from £12.50 to the current rate of £15 and it is hoped, as in the past, to maintain the new rate for several years.

At the Special General Meeting on 4th September members further agreed an annual dollar subscription rate increase from $30 to $40 and approved the proposal that a £90 ($180) subscription be available for the 5 year period 1/1/90 to 31/12/94 only, and a subscription of £57.50 ($115) be available for the 3 year periods 1/1/90 to 31/12/92, 1/1/91 to 31/12/93 or 1/1/92 to 31/12/94.

Advantages to members opting for the 5 or 3 year subscriptions are that the subscription rate is fixed for the period even if the annual rate is increased, the subscriptions offer a small reduction over the annual rate and members will not need to remember to renew subscriptions every year. For overseas members, only one commission charge will be payable for a number of years' subscription.

Receipts will be issued for 5 and 3 year subscriptions and in the event of resignation from the Society during the period of a 5 or 3 year subscription, a refund would be made of a sum leaving subscriptions paid as though a member had been subscribing at the annual rates.

If you already pay by Standing Order PLEASE, NOW OR BEFORE 29th DECEMBER 1989,

EITHER cancel the Standing Order if you wish to pay by some other method or wish to pay for 5 or 3 years

OR submit to your Bank the new pink Standing Order mandate duly completed.

If you pay by Standing Order and do not ACT NOW OR BEFORE 29th DECEMBER 1989 your account will be incorrectly debited £15 on 1st January 1990!

PLEASE RENEW YOUR MEMBERSHIP BY USING EITHER THE PINK OR THE BLUE FORM ENCLOSED WITH THIS BULLETIN.

Jeremy Gray

LICHENOLOGIA

Arthur Wade, founder member and first Secretary of the British Lichen Society, emigrated to New Zealand at the age of 86. He died early this year, and I regret, as do some other BLS members, that I lost touch with him in his final years. A formal obituary is appearing in The Lichenologist, but I would like to contribute a few personal reminiscences to the Bulletin that he founded, which from the beginning has always been something more than just a news-sheet about meetings and excursions. It seems that after a lifetime as a very active botanist, Arthur, when he found himself at the other end of the world, turned to the other talent that not everyone realised he had: that of an accomplished water-colourist. He devoted his time to the recording of the countryside round his new home in a series of landscapes. Also for a time he gave informal painting classes at the local hospital as part of an occupational therapy programme. The patients were indeed fortunate, for he was a remarkable teacher, patient, humorous, and dedicated. It was at the courses in lichenology that he ran for the Field Studies Council at Malham Tarn and Dale Fort in the late 1950s that a number of now prominent BLS

members learnt their trade. In the beginning the only keys we had were those in Annie Lorrain Smith's Handbook, a slim volume that really would slip into the pocket, printed in small but quite legible type with occasional sketches of diagnostic features little more than "thumbnail" in size. Of course, generic and specific concepts were broader, and "chemistry" was little more than K and C, but the phrases in the keys were laconic, and some, we thought, unhelpful; e.g., the line under Lecidea "thallus light, dark or wanting". We were critical also about colour words always ending in "ish"; e.g. one species of Lithographa was separated by the phrases "spores many... thallus greyish" and then a mention of spore-size. Long afterwards, on account of the numerous spores, this species was placed in a new genus Wadeana, described at about the time of Arthur's eightieth birthday. It was a privilege in those early days to have access to his annotated copy of the Handbook. He would patiently identify the same species for beginners countless times a day; and he could explain things so well, sketching the different shapes of Caloplaca spores on a slip of paper, for instance. This led years later to his excellent paper (one of many) on Caloplaca in The Lichenologist. Later we had a set of cyclostyled keys by the Norwegian lichenologist Eilif Dahl, which passed from hand to hand and were copied and re-copied. These keys introduced us to Pd, and taught us that J meant iodine. As we came to grips with the lichens of the moors round Malham and the coastal rocks at Dale we also encountered a number of "pseudolichens": the black stain on a roadside boulder that turned out to be "Verrucaria asphalticum", the grey threads left by a sheep on a jagged rock that were dubbed "Alectoria ovina",and even a yellow stain on a stone excavated by a rather foolish amateur archaeologist attending another course at Malham which she insisted was a lichen - when patient explanations that lichens don't grow underground failed to convince, it acquired a label "Lepraria neolithica". In those years some of us sent home-made Christmas cards to one another with representations of lichens on them: small black and white photographs, or small linocuts in colour. Arthur responded with miniature water-colour landscapes, usually of the sea-coast or the Welsh mountains. The patients in the New Zealand hospital were very lucky.

Cudbear

On the way to the British Lichen Society AGM this year I met up with Albert Henderson and Peggy Cayton on the London Underground at South Kensington. Arriving at Kew Gardens station we noticed the end of the platform had a good covering of lichens. Closer inspection of the bituminous aggregate surface revealed Scoliciosporum umbrinum, Stereocaulon pileatum, Trapelia coarctata, T. placodioides and best of all, Stereocaulon vesuvianum var. symphycheileoides. What is that I hear you cry? Well, I had better explain. One of the things I was going to do at the AGM was to put on a display of Stereocaulon vesuvianum var. symphycheileoides Lamb. This variety is new to Britain, being originally described by Lamb from the Carpathian Mountains in Czechoslovakia. John Skinner and myself have know this variety in Britain since 1984, but our material was only recently determined as this taxon by Dr O.W. Purvis. It is very common in South Essex and I had also previously found it in the City of London. It differs from var. vesuvianum by having basal phyllocladia which are sorediate along their margins, these soredia sometimes coalescing into a continuous crust.

These early morning finds whetted our appetite for further 'field-work' while we were in London. On the way from the station to the AGM in Kew Gardens, we again found Stereocaulon vesuvianum var. symphycheileoides on a brick wall in Broomfield Road and Leproloma vouauxii on mortar in Kew Road.

After the AGM, Albert Henderson, Alan Fryday and myself looked at the lichens present near the Commonwealth Mycological Institute in Ferry Lane and Kew Green nearby. Mortar in these two roads yielded 8 species, with well-developed Caloplaca citrina (var. flavocitrina) and Sarcogyne regularis. Among the 7 species found on brick were Lecanora stenotropa, Lecidea fuscoatra, Lecidella scabra, Stereocaulon pileatum and my old friend, Stereocaulon vesuvianum var. symphycheileoides. Several plane trees were looked at in Kew Green with Physonia grisea being the most interesting of the 8 species seen. That evening, Peggy Cayton, Albert Henderson, Chris Hitch and myself had an enjoyable meal in a Thai restaurant recommended by Peter James. The lettuce served to garnish the dishes bore a striking resemblance to Cetraria islandica! The four of us, well sated, decided to meet up in London on the following day to study further another small part of the lichens of London.

It was raining when I left Essex on the following day, but by the time I had driven to London and picked up my three accomplices, the weather was kinder. We headed, quite by chance, to Battersea Park on the south side of the Thames. We spent a pleasant morning in the park, but only managed to look at a small part of it. Thirty species of lichen were seen altogether. A mahogany park bench near the entrance was well covered with lichens (5 species) including Lecanora saligna and Micarea denigrata. Corticolous species were much in evidence, especially on plane trees, 13 species being recorded in all. Single very small plants of both Evernia prunastri and Hypogymnia physodes were seen on plane, together with Parmelia subaurifera, P. sulcata (quite frequent) and Xanthoria polycarpa. The most interesting find was on Platanus hispanica where a sizeable patch of Bacidia aff. chloroticula (det. Dr. B.J. Coppins) was seen and samples collected. Scoliciosporum umbrinum was found (much to Albert Henderson's delight) growing on tar on old railway sleepers forming a wall. The nursery area proved quite fruitful (13 species) with finds including very well-developed Lecania erysibe on breeze-blocks, Lecanora crenulata and Sarcogyne regularis.

Feeling quite pleased with ourselves, we headed for Chelsea. After sustenance in a small cafe, we found ourselves in Astell Street off the King's Road, Chelsea. Here we were the subject of much interest to passers by and householders, and spent much time explaining what we were doing. Stereocaulon vesuvianum var. symphycheileoides was again present and var. vesuvianum was seen on soil over mortar. Trapelia coarctata and Scoliciosporum umbrinum were present on brick walls and oolite coping stones had a good cover of Verrucaria spp. including V. muralis, V. nigrescens (sorediate form), V. tectorum and V. viridula. Several thalli of an unknown lichen were also seen, which consisted of light-grey granules with pycnidia and ochraceous/orange soredia (I have also seen this plant in Essex).

After obtaining directions to St. Luke's Church in Sydney Street, Chelsea, we were a little disappointed with the lichens present. The churchyard has been made into an amenity area and the headstones lined up around the perimeter wall - totally devoid of any lichens now. On one remaining large chest-tomb we found a single poorly-developed thallus of what was probably Buellia aethalea. Despite this poor end to the day we were quite satisfied with our recording, and decided to meet up and do the same next year.

Peter Earland-Bennett

SOME CHINESE LICHEN ILLUSTRATIONS

Recognisable mentions of lichens in Chinese literature pre-dating modern scientific work are rare. However, during a search through some of the older encyclopaedias, etc., several references and a few illustrations were encountered. The three most interesting are reproduced here.

Figure 1 is a woodcut impression from the T'u-shu Chi-ch'eng, the great encyclopaedia of 1718 A.D., which according to Giles' index to the work was 60 yards long. It represents the lichen shih-jui, which from the accompanying commentary, describing its edibility and its habitat on boulders and rock faces in mountain regions, is identifiable as a rock tripe, possibly Umbilicaria esculenta.

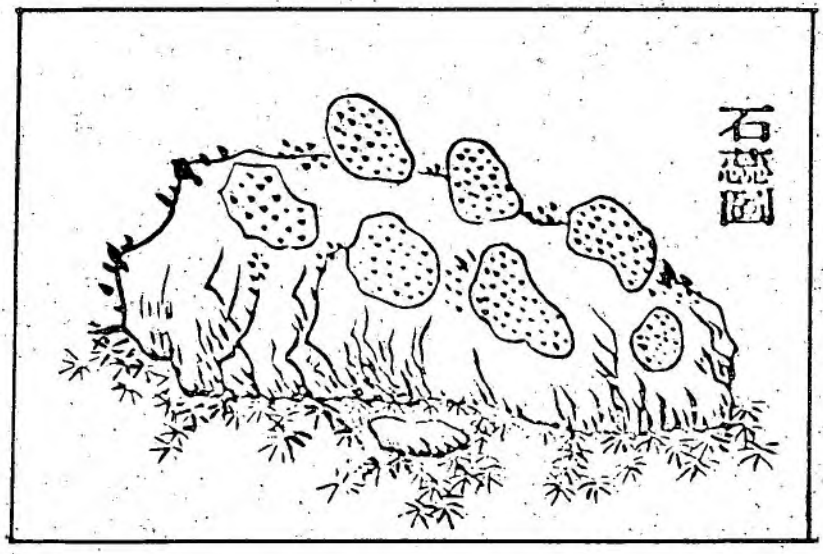

Figure 1

Figure 2, apparently illustrating the same plant, is from the Chi-wu-ming Shi-t'u-k'ao of Wu Ch'i-chun, an eminent doctor of botany who died in 1848. "It grows", he says, "on stones in the high mountains and is a sort of lichen." (See Sato, M. (1968) and Mattick, F.(1968) for well illustrated descriptions of Japanese collection and culinary preparation of Umbilicaria esculenta).

Figure 2

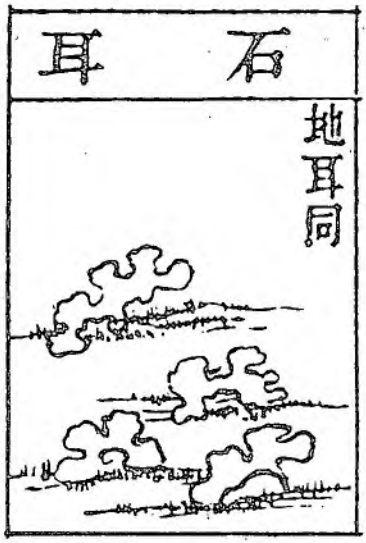

Figure 3

Figure 3, from Li-Shih-chen's late 16th century pharmacopoeia, the Pen-t'sao Kang-mu, seems to represent a Peltigera species. The accompanying ideograms name the plant as both shih-erh 'stone-ears', and ti-erh, 'earth-ears'.

References

Sato, M. (1968) An edible lichen of Japan, Gyrophora esculenta Miyoshi. Nova Hedwigia 16: 505-509.

Mattick, F. (1968) Bemerkungen zu Masami Sato: An edible lichen of Japan. Gyrophora esculenta Miyoshi. Nova Hedwigia 16: 510-519.

Acknowledgement

I thank Mr.W.T. Wheat for translation of Chinese texts.

Albert Henderson

CHANGING NAMES

The names of lichens are formed in the same way as other plant names and are subject to the same rules. The name comprises two elements: that of the genus followed by the species, this last being called the specific epithet. The genus name starts with a capital letter and the specific epithet with a lower-case letter (e.g. Parmelia sulcata). It is surprising that specific epithets were introduced by Linnaeus from 1745 - 1753 merely as a form of shorthand for the phrase-names by which plants were then called. Lichen names apply to the mycobiont.

The name of the publishing author is placed after the plant name. When the classification of a lichen is changed, the name of the person making the change is placed after the original author's name which then appears in brackets. When the name of an author is abbreviated, a full-stop is added to show this. Thus Parmelia saxatilis (L.) Ach. was originally published as Lichen saxatilis by Linnaeus, but later transferred to the genus Parmelia by Acharius. In the ideal world the name of this lichen would always be Parmelia saxatilis (L.) Ach. and would then be understood by all. Unfortunately we do not live in an ideal world.

There are two reasons for changes of names. One is taxonomic and the other for reasons of nomenclature. The majority of taxonomic name changes in lichens are because research on a genus or species shows that it consists in reality of more than a single entity. Thus my own work (Laundon 1989) showed that the old Lepraria membranacea consisted of four distinct species which should be placed in Leproloma. Many well-established genera (e.g. Lecidea) are now being split up into smaller, natural units. However, in many cases this has gone too far and the use of sub-genera as an occasional alternative to genera could have helped to prevent name changes. In my opinion the genera Phaeophyscia, Pseudevernia, and Trapeliopsis, to name but three, would be best placed as sub-genera of Physcia, Evernia, and

Trapelia respectively, and name changes could have been avoided. Restraint is called for. It is preferable that old genera are only split up where there are several differing characters, especially with regard to the ascocarps. The splitting has been carried to extremes in Parmelia, where each group of species now has a genus name of its own! Here classification is in disrepute, and many name changes unjustified.

A second change resulting from taxonomic research occurs when a species has been wrongly interpreted. Sometimes a type specimen proves to belong to a species different from the application of its name. Thus the type specimen of Buellia verruculosa was found to be B. aethalea, and therefore the former species name had to be changed to B. ocellata (Laundon 1986). Changes of this nature, due to mistakes in the past, are unavoidable.

Changes for reasons of nomenclature are especially unpopular. An International Code of Botanical Nomenclature has been in existence since 1905 in order to ensure that the names of all plants are international and stable. Yet the existence of the Code may have had the opposite effect. The Code has now been critically applied to lichens since c. 1960 and even after 30 years cases of names contrary to its articles are still coming to light. Unfortunately the Code makes no provision for the conservation of the names of lichen species, although genus names can, and are, conserved, and therefore stable as regards their nomenclature.

Names of lichen species have been found to be nomenclaturally incorrect chiefly for one of four reasons. The first is that a name was published without a description or reference to a previous description (Article 32 of the Code). Thus Du Rietz's Haematomma ochroleucum, published in Svensk bot. Tidskr. **18**: 377 (1924), has no description or reference to a basionym (= original name), and is therefore a nomen nudum (Recommendation 50B of the Code) and not validly published. Since 1935 the description or

diagnosis must be in Latin (Article 36).

The second reason for rejecting a name is that it is the same as another already published (Article 64). Thus Pertusaria lutescens was published as a new combination by Lamy in Bull. Soc. bot. Fr. **25**: 427 (1878), but unfortunately Krempelhuber had already published this same name for a different Pertusaria in J. Mus. Godeffroy **1**(4): 103 (1873). Lamy's name was therefore a later homonym (= word with the same spelling based on a different type) and illegitimate. This is why this lichen is now called Pertusaria flavida (DC.) Laundon.

The third reason for rejecting a name is because it is superfluous (Article 63). The well-known name Haematomma coccineum was based on Lichen coccineus Dickson, Fasc. Pl. Crypt. Brit. **1**: 8 (1785). However, Dickson cited "Lichen ochroleucus ... Necker" as a synonym of this species, an available name he should therefore have used. Thus Lichen coccineus must be rejected as an illegitimate name, and the species called Haematomma ochroleucum (Necker) Laundon.

A major reason for name changes is because an earlier name for a species is found (Article 11). This can result from taxonomic research where species previously considered to be distinct are united, as with Rhizocarpon constrictum and R. richardii for example (Laundon 1986). Often it arises when old names are investigated. An examination of this kind resulted in the name Caloplaca flavescens replacing C. heppiana (Laundon 1984). Fortunately most lichen names are known and catalogued, the only major early work which had been overlooked being the first edition of Witherings's Botanical Arrangement of 1776; this has now been researched and the lichens assimilated (Laundon 1984a).

Name changes can also arise from changes in the Code itself. At each Botanical Congress proposals to change the Rules of Botanical Nomenclature are discussed and voted upon. Especially

pertinent was the abolition in 1975 of Article 70, which stated that names based on entirely discordant elements must be rejected. Now they must be accepted. Several names involving lichenicolous fungi were formerly discarded under this article because their descriptions applied both to the fungus parasite and the lichen host, but they must now be typified on one element or the other.

As a reaction against name changes the establishment of approved lists of names in current use, with protected nomenclatural status, is being keenly investigated. David Hawksworth has published an important letter in Nature, Lond. **334**: 301 (28 July 1988) on the subject. Further measures to promote the stability of plant names are clearly desirable.

Acknowledgements

I thank Dr D. J. Galloway, Mr M. Mullin, Dr O. W. Purvis, and Mr D. M. Williams for their helpful comments.

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Jack R. Laundon

THE 'GALLOWAY HIGH': A SOCIAL RECORD OF THE SPRING MEETING

As meetings go Galloway turned out extra special not so much because of the lichens, though we filled in another square or two, but because of the excellent company, blue skies, glittering sea, and golden sheets of gorse. These produced an event which ranks with the best of childhood memories - and a few adult ones thrown in relating to spiritual content. It should be understood at once that the adult aspect was occasionally necessary to keep the labourers around the microscopes from flagging under the burden of work as dawn approached. It is amazing what really useful things can be learnt at meetings. For example, on the very first night a kind sheep farmer in the bar let me into the secret of how to tell a good whisky from a bad. The information was thoroughly tested over the following nights with all the available brands; this enabled our Austrian member, Roman, not only to "brush up his English" but his Scotch as well.

Peter's editing work on the Flora was another centre of attention. It seemed a demanding occupation or was he asleep in the back of the car? However, he tore himself away for long enough to assist in some of the "square bashing". On the Mull o'Galloway his roll call of exotic sounding species caused Peggy to hurry to his side eager to view. Her disappointed comment was: "It sounded like a veritable treasure chest but when I got there, there was almost nothing to see".

The decor of our hotel left us in no doubt that this part of the world is the home of the hunter. Brian suggested that perhaps we should present a suitably framed lichen for the management to hang up amongst the other dead carcasses. Oliver hastened to rescue us from any superior attitudes towards our fellow sportsmen by pointing out that lichenologists have aggressive feelings too; they hammer their prey to bits. 'Foxey', always a leader of fashion, used the occasion to introduce a new piece of essential

gear for the really eager lichen hunter. He brought his mountain bike to the meeting. It enabled him to get out and scoop the bag before the more sluggish amongst us had so much as sniffed our early morning cuppas.

Most unusually, nobody that I heard of got more than wet to the knees during the week, though there were a number of tempting sites and near misses. For instance, the romantic waterfall on to the beach below Dunskey Glen and the brown pools up Sheucan Burn which needed a nymph to complete the picture - I <u>almost</u> persuaded Sandy to fill the role. Oliver came the nearest to disaster when, teetering on a springy tree trunk midway across a foaming torrent, he rashly dared me to follow .... my death defying leap nearly undid him. How is it that a peaceful gentle sport like lichen hunting can lead to such dicy situations? On more than one occasion, I found myself plastered against a cliff wall wondering how I got there and, more to the point, how I could get out of there. Perhaps, after such hair raising experiences one can be allowed to rest in a warm spot behind a boulder? Indeed, on some particularly stressful afternoons there was hardly a boulder that didn't shelter a recumbent form.

Another pleasurable way to pass the time was in companionable huddles over pebbles on the beach; some of us more catholic minded members even collected cowries on one unusually golden strand. Other delights of the week included the jumper-of-many-colours,

knitted with 16 balls of wool, each dye from a different plant, by Marion, our member from Belfast; the antics of Jenny's acrobatic dog; and Mary's cake. This cake was entrusted to Oliver's care. There was some doubt as to whether it was safe there; would he be able to resist being the first to classify its ingredients? He kept us guessing until the last dinner when, after a good deal of pressure, it was produced... Thank you Mary, it was delicious and there was more than enough (left) to go round.

By 4p.m. on most days, I noticed a uniform wavering of purpose towards tea. The vital importance of getting to the urn before 5p.m. was born in on us by a heartless tea lady at Logan Botanical Gardens where Peter was turned tealess away at 5.01p.m. Though we found several much more obliging spots, the best one I can report was tracked down on the last day at The Crown in Newton Stewart. Here, tea, scones, and strawberry jam were consumed in the comfort of deep red sofas before a roaring fire as the first rain of the week slashed down outside and pleasant lethargy settled over us, weary from a hard week's lichen hunt.

What, of lichenological interest did I learn from this meeting? Well, I can now, with no trouble at all, identify a Lempholemma (last seen in the 1880s) and even say with some confidence (after 6 years membership of the society) "This is not Lecidea lactea - I think - perhaps"?

Vanessa Winchester

WHERE ARE BRITAIN'S LARGEST LICHENS?

Earlier this year I encountered a giant thallus of Caloplaca flavescens growing on a seventeenth century oolitic limestone, tomb in Burford churchyard, Oxfordshire. It formed an almost perfect hollow circle 27 cm in diameter. Other large but lesser examples were present on adjacent tombs showing that this was not an abberation. Does anyone know of a larger colony of this species?

This episode alerted me to watch out for other large lichens. Ochrolechia parella forming a perfectly intact disc with a maximum diameter of 54 cm, the diam. at right angles to this measured 52 cm, was seen on a vertical cliff at 2,400m in Caenlochan Glen, Angus. Then at Melrose Abbey, Roxburghshire, the tops of red sandstone tombs dating from the eighteenth century supported Lecidea fuscoatra the largest thallus of which was 35 cm (max.diam.) x 33cm (diam. at right angles). This should be quite easy to beat. I have heard it rumoured that a tree in Longleat Park, Wilts, bears a Lobaria thallus the size of a cart wheel.

Tree enthusiasts, such as Alan Mitchell, have catalogued many of the more notable specimens in this country giving height, girth and location. I wonder if, through a new section in the Bulletin, it would be possible to start accumulating data on some of the finest lichen thalli in Europe? Measurements of two diameters taken at right angles, should be made with a flexible steel tape to the nearest millimeter and it must of course be absolutely clear that fused thalli are not involved. Black and white photographs (including a scale) of exceptional specimens would be welcome.

Brian Coppins prepares for a day in the field
Caenlochan Glen 1989

NEGLECTED HABITATS: THE TREE CANOPY

Most lichenologists who study epiphytes tend to confine their attention to tree trunks to about 8ft above ground level, and to low spreading branches and to shrubs. Ladders are not regarded as a normal part of a corticolous lichenologist's equipment; they are clumsy things to carry about, even the light aluminium ones that can be dismantled into short sections. However several years ago, I decided to obtain such a ladder, but must confess that I don't use it as often as I should.

Shortly after I had obtained my ladder, I was walking with my wife in the New Forest; Brian Coppins had told me of an early 20th century record for Lobaria amplissima in Bramshaw Wood, which no-one had noted since. It was a fine late autumn day, and the trees were nearly leafless; suddenly I noticed about 15 ft up on a beech, a yellowish-white patch about a square foot in area. Was this the Lobaria or was it just Parmelia caperata ? I returned with a ladder, and to my great delight, it was L.amplissima. A further specimen was found at a similar height in Frame Wood.

Another lichen that may be easily overlooked because of its liking for well-illuminated, well-lit tree crowns is Usnea articulata. In SW England, where it is locally common, it is often easy to see on bushes or low sweeping branches, but in the New Forest often the only evidence of its presence is fragments on the ground that have fallen off in strong winds. Careful search, however, will often reveal its presence in situ high in the canopy. Usnea articulata was thought to be extinct in Southern England, east of the New Forest, until the great storm of October 1987. In spring 1988 it was found in West Sussex both in West Dean Woods by Mrs Appleford, and in East Dean Park by Mr H.W. Matcham, on the upper boughs of trees felled by the hurricane. I revisited East Dean Park this year and, by using binoculars, found it was on the upper parts of many standing trees in this remarkable wood (which still has Lobaria pulmonaria and Sticta limbata).

In November 1988, I surveyed Parham Park, West Sussex. One great oak near the south lake had been uprooted by strong winds and on this ancient tree, some 20ft above what had been ground level there was a healthy patch of Lobaria pulmonaria; this was only the third post-1902 locality for it in Sussex. It was above the fork

of a large limb in a position where it would have been invisible from below when the tree was standing. This encouraged me to look more carefully at other, nearby, great oaks. I soon spotted another likely-looking brown patch. With a long pole I was able to detach a fragment; it proved to be L. pulmonaria. While transplanting the Lobaria from the fallen tree to other standing trees, I detected Agonimia octospora among it, also new to the park; this would have remained undetected but for the storm.

The upper crown branches of trees are often rather boring, with common calcifuge species like Platismatia glauca and Parmelia sulcata; however this is not always so. In Longleat Park High Wood, some ten years ago, R.J. Hornby and I, wondering what grew high up in the tall oaks and ashes, looked for fallen trees. We soon found one with large quantities of Heterodermia obscurata on the upper limbs, new to Wiltshire. Some years later this was repeated with another fallen tree. This makes me wonder whether such species as H. obscurata are indeed much commoner in the high crowns of our ancient southern woodlands than we suspect. However, it has not turned up again while carefully surveying trees in SE England felled in the 1987 storm.

Francis Rose

PRODUCING THE BULLETIN - LIVING ON THE EDGE

Over the last ten years the business of producing the Bulletin has changed little. As articles arrive, or titbits of information are chanced upon, they are stored in a manila file prominently labled Bulletin No.X to reduce the likelihood of it getting mislaid. The Lead Article and Country Diary are solicited six months in advance; regular features such as Lichenologia and New Members can be relied on; the rest is largely left to providence. Normally about two months before a number is due out the file contains only two or three sheets of paper so action is required. I rack my brains for the names of people who made vague promises, perhaps at the AGM, write a few pieces myself, am absurdly grateful for a wad of announcements from the secretary, and I even welcome news of an increase in subscriptions that will fill a page. Over the next four weeks the file thickens. I rarely welcome long articles (No.64 suffered here). I'm after variety and a Bulletin less than 40 pages long - I believe there is a good chance that people will read 40 pages, but they will probably only flick through 60. I

have never lengthened an article, many get cut by around 25%, but I don't go in for detailed editing, preferring to let personality come through.

Four weeks before the Bulletin is due out I settle down one evening, give everything a final read, put the articles in order, then next morning drop the file off at the small family firm of Tradeprint, who always greet my appearance with cries of 'Is it Bulletin time already?', this being one of the largest and most complex items they handle. About 10 days later I call in to collect 3 photocopies of the draft camera- ready copy, having in the interval posted on to them a couple of late arrivals. If there was a deadline for copy certain numbers would have been little more than empty covers. One photocopy I correct, the others go by first class mail to two unsung 'champions of the cause'. Jack Laundon is an expert on commas and the correct use of capital letters, while Albert Henderson is a connoisseur of the apostrophe, the hyphen and word order.

Since Tradeprint purchased a word processor, dealing with alterations has been less of a nightmare. Late one afternoon, when we can be assured of several uninterrupted hours, the unflappable Rita Thomas and I settle down with cups of coffee and in the company of the three-legged office cat, turn the draft into final copy. We do much cutting and pasting to make room for illustrations and to ensure that some articles at least start at the top rather than the bottom of the page. The last job is pagination and if the last number is divisible by 4 we feel extra pleased, as it means no blank pages at the end.

DOUGLAS SWINSCOW PUBLISHES HIS AUTOBIOGRAPHY

Earlier this year Dougal Swinscow published his autobiography. This tells, in a restrained manner, the fascinating story of an eventful life. A shy, sensitive boy, who disliked his boarding school became a survivor of the battle of Arnhem, then deputy

editor of the British Medical Journal and, in the latter third of the book, a man of growing stature in lichenology. He relates how a meeting with Francis Rose (before either had discovered lichens) altered the whole course of his life. Then, there is the founding of the BLS in February 1958 and revealing word portraits of Ursula Duncan, Peter James and Francis. Much personal philosophy shines through this volume. The war taught Swinscow to expect the unexpected and to realise the unimaginable, or how could an amateur - one who practices a thing as a past-time - have contemplated co-authoring the first modern account of the lichens of a tropical region measuring 1000 miles x 1000 miles. He enjoyed it too, writing "Can any treasure hunt have a more exciting prelude than the study of a map before going on a botanical expedition?" Towards the end of the book he attempts to argue that taxonomy is a point where love, truth and beauty meet. I think everybody will learn something from this book; I enjoyed the allusions, the similes and the attempt to explain motivation as he edged his steps further up the curve of knowledge.

Swinscow, D. (1989) Reap a Destiny. Divagations of a Taoist Memoir Club of the British Medical Journal, London. Inland £14.95, Abroad £17.50, USA $29.00, all including postage, from BMJ, Tavistock Square, London, WC1H 9HR, U.K.

AGONY COLUMN

Letters to Auntie Nora via the Editor.

Dear Auntie Nora,

I am a beginner with a particular interest in terricolous lichens, but am getting disheartened as most of the packets I send to referees are returned unnamed with comments like "no lichen apparent" or "material insufficient for a determination ". Despite using padded envelopes the specimens are often returned in

powdered form. Is there a solution to my problem?

Yours,

Frustrated.

Dear Frustrated,

Yes there is a solution, it is called Primal AC 634. When diluted 1:1 with water it forms a first class soil binder. Some people brush the diluted liquid onto the outside of the soil but it is better to use the dunking method. Trim the soil as level and as thin as possible then place the specimen, soilside down, in a dish containing a shallow layer of the solution. When the liquid has soaked up nearly to the soil surface remove the specimen and leave it to dry on a wad of tissue for 48 hours. Don't try this on wet soil or the results will be a disaster. Primal AC 634 can be obtained from Spectrum Oil and Colours, 259 Queen's Road, South Wimbledon, SW19 8NY. It costs £2.85 for 50 ml or £6.95 per litre exclusive of VAT.

I hope this answers your problem,

Auntie Nora

P.S. In an emergency dry soil can be stabilised with copydex.

LICHEN SOCIETY GREETINGS CARDS

Ramalina cuspidata

This is the fourth lichen card executed by Claire Dalby for the British Lichen Society. The cards are blank inside. They are sold in packets of 10 at £4.00 (post free), or packets of 5 at £2.50 (post free). Proceeds go to the British Lichen Society, to which cheques should be made payable.

When ordering by post, send to Mrs. A.M. O'Dare, 13 Barrows Road, Cheddar, Somerset, BS27 3AY. These cards will also be on display at the Annual General Meeting. There are still some cards of Solenopsora candicans available at a reduced price of 10 for £3.00.

WATERPROOF NOTEBOOKS ON SALE

The Society has purchased 100 waterproof notebooks overprinted 'British Lichen Society'. These are available to members at £3.50 each (£4.00 overseas) post free from Jeremy Gray, Myrtle Cottage, Church Lane, Kingston St. Mary, Taunton, Somerset, TA2 8HR. They are pocket sized, spiral bound with 30 plain leaves, have a strong p.v.c. cover and a pencil is supplied held tucked in the spine. Their biggest advantage is that pencil will write on the paper when it is wet. Once the page is dry, the pencil can be rubbed out and the page re-used, so the books should last a number of years. No climate is too tough; these notebooks have been used at both poles, on Everest, sewer- inspecting in Yorkshire, navigating the Amazon and by divers in the North Sea.

CONSERVATION, SYSTEMATICS AND ECOLOGY OF TROPICAL LICHENS

An international meeting hosted by the International Association for Lichenology and the Systematics Association, was held at the Flett Theatre, British Museum (Natural History) from 4-8 September. The meeting which attracted 56 participants from 13 different countries, discussed what is currently known on the conservation status, distribution, ecology and systematics of tropical lichens, the first time that an international meeting has addressed this particular field of enquiry. Twenty- eight papers were read and one poster displayed, with sessions covering the African tropics, the Asian tropics, the Pacific tropics and the Neotropics. A workshop on lichens for the Flora of Australia Project was chaired by A.S. George (Canberra) and a wide-ranging discussion on conservation of tropical lichens closed the meeting. Session chairmen included: M.Galun(Tel Aviv); B.J.Coppins (Edinburgh); D.L.Hawksworth (Kew); D.L.Dalby(London); T.D.V.Swinscow (Topsham); H.Krog (Oslo); J.R.Laundon(London); L.Arvidsson (Goteborg); D.H.Brown(Bristol); P.M.Jorgensen(Bergen); D.J.Galloway(London) and M.R.D.Seaward(Bradford). The British Lichen Society hosted an evening reception, a Conference Dinner was held at the Linnean Society of London, and visits were made to the Chelsea Physic Garden and to the Linnean Collections. Proceedings of the meeting will be published by Oxford University

Press for the Systematics Association. Conference participants attended a highly enjoyable outing to Hatfield Forest on Saturday 9 September, organised by Peter Earland-Bennett and John Skinner.

David Galloway

CONSERVATION NEWS

The function of the BLS Conservation Committee is being clarified as we find ourselves in a changing conservation scene - the changes are largely politically imposed, and are forcing us to think afresh as to what we do and how we do it. Readers of the Bulletin may prefer detailed discussions of individual sites and issues, but I think it essential to report here instead on general principles, because these principles dictate how we face the individual situations in the future.

The main customer for our site reporting activities remains the Nature Conservancy Council; we will be following their requirements in our recording and grading. County Trusts, the National Trust and other bodies may be able to adapt these criteria to their own needs - alternatively if special studies were commissioned, then we could agree on unique criteria for each. Additionally, we will continue to lend specialist support whenever needed (as with the proposals for extended skiing activities in the Cairngorms).

NCC now need help with terricolous and saxicolous lichen communities, but cannot give us any guarantee of financial support. I have proposed to the Conservation Committee that we 'go it alone' (though the end result must be very different from the commissioned reports on woodlands and heathlands of happier days past). We will recognise seven reasonably well-defined saxicolous habitat groups (maritime/coastal rocks and cliffs; consolidated coastal shingle/pebble beaches; coastal dunes/slacks and Breckland sand habitats; heathlands; lowland rock outcrops, ancient monuments and sarsen stones; chalk and flint pebbles; churchyards), and each will have a Convenor taking the initial responsibility for extracting available published data, plus any other data known through individual lichenologists's field experience. Much exchange of information will follow between the

Convenors and the Society's general membership - not only those with specialist knowledge. The latter will be able to assist in specified studies directed at areas where data is ambiguous, poor or lacking. Because we cannot rely on external funding, we have to prove to potential sponsors that we deserve help. If BLS members cannot find their own funding, and also cannot start these projects unaided, then our conservation efforts will probably fail. But here the new group Plantlife comes into the picture. Plantlife will build on the expertise and experience gained by CABS, and will receive scientific guidance from the BLS and other Societies. Plantlife then hopes, in its campaigning role, to seek funding which could support particular projects. If we have constructive proposals, we might well qualify for some financial help through Plantlife.

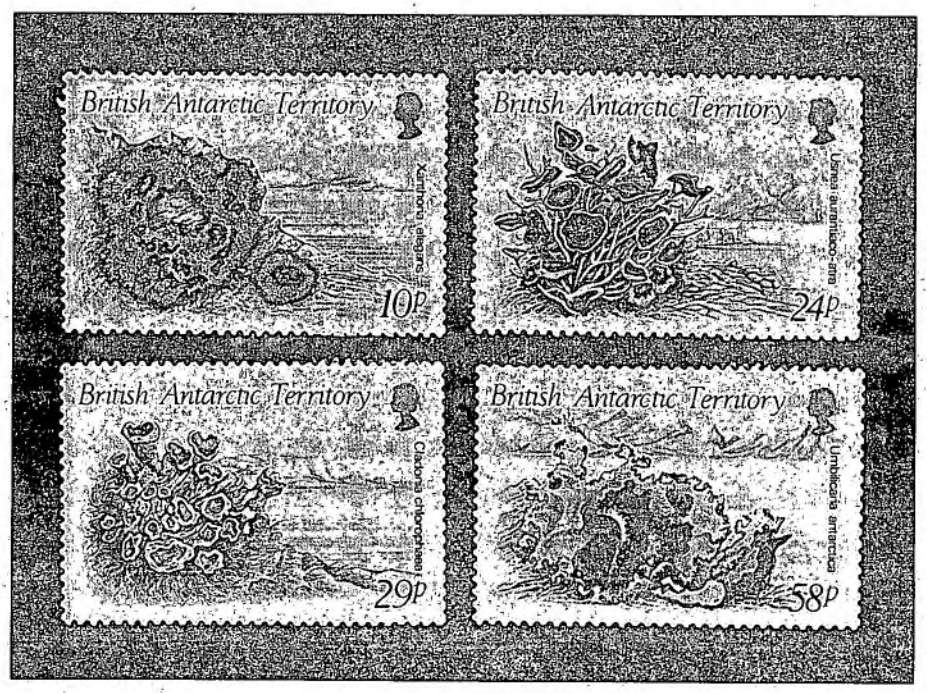
This outline provides a broad strategy for lichen conservation in the near future - the details (jollier reading perhaps) will be filled in later.

Kery Dalby

FALKLAND ISLAND STAMPS

In March this year the Falkland Islands issued a set of four stamps depicting the lichens Xanthoria elegans, Usnea aurantiaco - atra, Cladonia chlorophaea al Umbilicaria antarctica. An accompanying information leaflet informs readers "That nowhere in the world are lichens more conspicuous than in the Falklands".

Peter James



SAVE THE CAIRNGORMS CAMPAIGN

I have been asked by the Conservation Committee to bring the issue of 'Lurchers Gully' to your attention. The Society's objection to the extension of skiing facilities to this area was registered with the Highland Regional Council and made known to the Secretary of State. Although a total of 2,359 objections to Policy 53 phase 2 were registered, the Council received 3,225 letters of support and decided not to amend the plan. However, half the letters of support were of a standard form which the respondent only needed to sign, in effect a petition which most planning authorities would count as only one response. This would reduce the number in support of development to 1,613, a clear moral majority against.

Cut into the northern slopes of the main Cairngorm range, Lurchers Gully comprises a broad expanse of blanket bog connecting the Cairngorm-Ben Macdhui high plateau with the ancient Caledonian pine forest and moorland below. Both the pine forest and the plateau contain many rare lichens and although those of the pine forest are not threatened by the proposed development those of the high plateau are. A quarter of the 134 species recorded by Gilbert & Fox (1985) are rarities thought to have their stronghold on this high plateau, depending on very specific and fragile habitats within this harsh environment. Over half these specialities are snow patch lichens. Micarea viridiatra and Staurothele clopina (the latter in melt water streams) are here at their only British stations. Cladonia stricta is known only from six Cairngorm snow patches and Miriquidica grisioatra is known elsewhere only from Beinn Dearg in Wester Ross. An undescribed species of Lecidea (previously mis-identified as Caloplaca nivalis) is known only from here and British Columbia. Calluna reaches its highest British elevation in the Cairngorms, and this exposed Callunetum holds the only ten modern British records for Alectoria ochroleuca. Severely exposed sites in which loose gravel is dotted with isolated tussocks of Juncus trifidus are the home to yet further Cairngorm specialities. These specialised and highly stressed habitats are fragile and easily damaged by only light trampling. The strong drying winds make lichens fragile and easily broken up.

If the proposed developments were to go ahead then the whole pattern of visitor pressure would change. The easy access along a tarmac road toward Lurchers would make the summit of Ben Macdhui attractive to many more walkers. A circular walk from the summit of Cairgorms chairlift across to and down Lurchers would be made more attractive. The expanded activity on the plateau would present a severe threat to the lichens of these fragile habitats. Research has shown that damaged lichens on the high plateau take at least eight undisturbed years to recover. The main British polulations of no less than thirty lichen species are threatened, including many that will find their way into the British red data book.

The Highland Regional Council are now due to submit their draft revised Structure Plan to the Secretary of State for Scotland who will then instigate a further consultation period of about four weeks. It is absolutely vital that the maximum possible number of objections are submitted to him at this stage (New St. Andrews House, Edinburgh EH1 3SZ). If you would like to be notified of when and how to respond then please write NOW to the Save The Cairngorms Campaign, PO Box 39, Inverness IV1 2RI.

Trevor Duke

BIBLIOGRAPHY ON LICHENOLOGICAL BIBLIOGRAPHIES

This bilingual (English and German) bibliography compiled by W.Korth and D.Ruckert was published in mid-September 1988 in Cour.Forsch.-Inst. Senckenberg. 104 1-153. (ISSN 0341-4116 ISBN 3-924500-41-X). It cites over 900 lichenological publications each of which contains at least 50 references. The 930 bibliographies (most are just long papers which include a comprehensive list of references) are listed alphabetically according to the first author; key words are given. Periodically published papers such as Swinscow's series on pyrenocarpous lichens in the Lichenologist or Hector's 22 papers on the lichens of Uruguay are listed separately, as taken together, they represent a substantial introduction to the literature. To help information searches, three indexes are provided: 1) a co-author index, 2) a subject index that includes geographical key words,and 3) a systematic

index. This publication, which is most attractively laid out, will be a useful tool for research workers who want a fast entry into the literature on topics varying from air pollution to zinc, from appressoria to Zaire.

LICHEN FLORA OF GREAT BRITAIN AND IRELAND: PROGRESS REPORT

All drafts, with the exception of Lecanora, have now been completed and 3/4 of the text illustrations drawn. The scientific editing has now commenced and it is hoped to complete this by the end of the year. The BLS Advisory Committee and BLS Council have selected the Natural History Museum as publisher. A decision will soon be taken by Council whether or not to invest BLS funds in this publication and thereby reduce the cover price of the book.

William Purvis

NEW, RARE AND INTERESTING BRITISH LICHEN RECORDS

(Contributions to this section are always welcome. Please submit entries to Frank Brightman, South London Botanical Institute, 323 Norwood Road, London, SE24 9AQ, in the form species: habitat: locality: vice county (V.C.): grid reference (G.R.): date: comments: recorder. Grid references may be abridged in the interest of conservation; they will be omitted when the record has been published elsewhere).

Bacidia caligans: On walltop, Stopham churchyard, VC 13, West Sussex, GR 51/02-19-, 1989.

F. Rose and P. W. James

Caloplaca chalybea: On chest tomb, Pulborough churchyard, VC 13, West Sussex, GR 51/04-18-, 1989.

F. Rose and P. W. James

Cetraria chlorophylla: On a wide range of trees at altitudes from 190m to 430m, VC H20, Wicklow. Records from GRs 31/(1099), 32/(0714), 32/(1005), 32/(1012). 1988-89. Also on Salix spp., altitude 230m, VC H21, Dublin. GR 32/(1620). 1989. New to VCs. H20 and H21, underrecorded, and not as restricted in Ireland as the few published records imply (see Seaward and Hitch, Atlas of Lichens of the British Isles Vol. 1, 1982).

H. F. Fox

Cliostomum corrugatum: On old wooden jetty posts just above HWM, Hadleigh, Essex, VC 18, S. Essex. GR 51/808850. 1987. This very rare species was growing in good quantity with Caloplaca marina. Determined B. J. Coppins.

P. Earland-Bennett

Lecidella carpathica: On vertical concrete and flint wall, Fittleworth churchyard, VC 13, West Sussex. GR 51/01-18-. 1989. New to Sussex.

F. Rose and P.W. James

Leptogium massiliense: On chest tomb, Fittleworth churchyard, VC 13, West Sussex. GR 51/01-18-. 1989. New to Sussex.

F. Rose and P. W. James

Leptogium plicatile: On chest tomb, Fittleworth churchyard, VC 13, West Sussex. GR 51/01-18-. 1898. West Sussex.

F. Rose and P. W. James

Opegrapha gyrocarpa: On north-facing wall of Stopham church, VC 13, West Sussex. GR 51/01-19-. 1989. New to Sussex.

F. Rose and P. W. James

Parmelia disjuncta: On horizontal granite slab, Stopham churchyard; also on granite, Shipley churchyard; VC 13, West Sussex,. GRs 51/01-19-., 51/04-12-, 1989. New to Sussex.

F. Rose and P. W. James

Pertusaria flavicans: On wall, Stopham churchyard, VC 13, West Sussex. GR 51/01-19-, 1989. New to Sussex.

F. Rose and P. W. James

Sarcopyrenia gibba: On top of limestone chest tomb, Fittleworth churchyard VC 13, West Sussex. GR 51/01-18-, 1989. New to Sussex.

F. Rose and P. W. James

Sarcopyrenia gibba: In churchyards at Darley Dale and Money Ash, Derbyshire, VC 57, Derby. GRs 43/26-62 and 43/15-66-. This species is turning up in the Peak District at altitudes of nearly 1000 ft (300 m); is this an altitude record?

O. L. Gilbert

Scoliciosporum sarothamni: On Fraxinus trunk, Hockley, Essex, VC 18, S. Essex. GR 51/851949. 1988. New to Britain. Characterised by the pale soralia; the specimen was fertile. Determined B. J. Coppins.

P. Earland-Bennett

Solenopsora holophaea: On sandstone stonework of mediaeval tower of Pulborough church, VC 13, West Sussex. GR 51/04-18-, 1989. Previously recorded by G. Davies in c. 1870.

F. Rose and P. W. James

Toninia kolax: Lichenicolous on Placynthium nigrum on mortar on paddock walltop. Termoncarragh, Corclough, The Mullet, Co. Mayo, VC H27, West Mayo. GR 03/(647354). 1988. Confirmed P. M. McCarthy. Also on P. nigrum on cement wall of sluice gates, Shannon weir, Meelick, Portumna, Co. Galway, VC H15, S.E. Galway, GR 12/(949140). 1989. This small species is likely to be widely distributed in Ireland, and should occur in Britain.

H. F. Fox

Verrucaria simplex: On birch on the ground in a garden, Billericay, Essex, VC 18, S. Essex. GR 51/687960. 1989.

P. Earland-Bennett

"Lecidea" chalybeoides: On steep periodically wet rock surfaces, north of Kerriemuir, VC 90, Angus: Winter Corrie (Glen Clova), White Glen (Glen Prosen), Coire na Berran (Glen Westwater); GRs 37/27-74-, 37/23-71-, 37/44-72-. 1989. Thallus dark green minutely fissured, areolae with raised black rims; apothecia black. Identified by B. J. Coppins and placed provisionally in "Lecidea".

R. C. Munro

TREASURER'S REPORT ON THE ACCOUNTS FOR THE YEAR ENDED 31st DECEMBER 1988

In October the society suffered the loss of our treasurer Noel Tallowin who died suddenly from a heart attack. Noel had been Treasurer for 14 years and it is in many ways due to his efforts that the B.L.S. is in its present sound financial position. At the time of his death Noel was in the process of moving house and this has presented some difficulties in locating all of the records of accounts.

The accounts given with this report have not at this date (October 5th) yet been audited. They do present a true statement of the finances of the society and any member who would like an audited copy of the accounts may receive one by writing to the Treasurer.

The accounts only show a very modest surplus and this is partly due to the inclusion of two years' (1987 and 1988) Bulletins and the full accounts for The Lichenologist relating to 1988. This change of presentation will, in the future, give a more accurate statement of the profit and loss in any year. As a number of invoices relating to these items are not received until after the end of the year but before the presentation of these accounts, this explains the greatly increased sum shown under current liabilities.There was a sum of £3867.39 allocated to unpresented cheques which has been largely carried forward from previous years. I have now incorporated this sum into the general fund.

The extra income from the increased subscription commencing in 1990 will be absorbed, in some measure, by the higher charges for The Lichenologist. However, it is hoped that this subscription rate will remain in force for several years. It is worth remembering that you can fix your subscription rate by taking advantage of the terms for three or five year subscriptions. May I remind those members who pay by standing order that a revised mandate for £20 should be sent to their banks immediately.

Finally I would like to thank John Sheard for looking after our transatlantic members and accounts, Jeremy Gray for taking up the difficult task of Assistant Treasurer, and Dr T.D.V. Swinscow for agreeing to audit these accounts.

F.S.Dobson (Hon. Treasurer).

BRITISH LICHEN SOCIETY

EXPENDITURE & INCOME FOR THE YEAR ENDING 31/12/88

1987	EXPENDITURE			1987	INCOME		
	Printing & distributing				Subscriptions	6654.65	
8773	The Lichenologist	8971.21			Add in advance 1987	792.50	
2958	Less profit sharing	(3162.85)	5808.36		Less refunds	(97.00)	
	Printing and distributing					7350.15	
	the Bulletin (1987 and 1988)			7908	Add 1/5 life members	48.00	7398.15
	inc. Membership list	2681.38		26	Sale of Atlas		4.00
602	Less receipts	(162.00)	2519.38		Sale of Microchemical Tech.and c/list		59.50
	Subscriptions paid:				Sale of Keys		25.30
8	Co En Co	7.50			Sale of Horizons in Lichen.		147.00
25	CABS	25.00			Interest received:		
18	Biological Council	19.50		1065	Banks	992.96	
34	Cryptogamie Bryol.	32.14		1186	Nat Savings Bank	1209.54	2202.50
19	Inter-Mycol Assoc.	19.50		40	Greeting cards - sales		182.45
–	I.L.A.	24.95			Sundries		47.40
19	American Bryol Soc	21.78	150.37				
707	Postage		77.50			Total	£10066.30
175	Travelling, seminars, grants etc.		153.70	3139	Excess income over expenditure		97.97
252	Library		11.00			Total	£9968.33
50	Insurance		–				
101	Bank charges		164.98				
51	Secretarial and committee expenses		86.24				
100	Check list stock written down		100.00				
	Ilfracombe Workshop	1008.39					
	Less Grant	(761.19)	247.20				
	Horizons in Lichenology		501.00				
	A.G.M. net		39.30				
	Grant fund expenses		109.30				
		Total	£9968.33				

BALANCE SHEET AS AT 31/12/88

LIABILITIES				ASSETS		
Current Liabilities		10888.16		Debtors and prepayments		1573.56
Life members		192.00		Cash at Banks	20706.66	
Conservation fund	270.20		9876	Less unpresented cheques	(15.24)	20691.42
Less expenditure	(109.30)	160.90	12930	National savings Bank		14139.74
Burnett/Wallace Memorial Fund		307.50		Stock:		
Royal Society grant (Gwynedd Flora)		1000.00		Checklists	400.15	
B.P. International Grant		400.00		Less sales and written down	(130.80)	269.35
General Fund at 31/12/87	20410.14			Keys – less sales		188.99
Plus surplus for year	97.97			Horizons in Lichenology	501.00	
Unpresented cheques from prior year	3867.39	24375.50		Less sales	(40.00)	461.00
	Total	£37324.06			Total	£37324.06

NEW MEMBERS

The following new members joined the Society between March and September 1989. Please notify the Assistant Treasurer of any change of address as soon as possible; this will keep the membership list records up-to-date and ensure that you receive all Society literature without problems.

Mr Paul G. ADAMS, 29 Cox Lane, CHESSINGTON, Surrey, KT9 1DF.
Mr Leif ANDERSSON, Smedjeback, Bankalla, S-540 15 Varing, SWEDEN.
Mrs Juanita P. BUTTERWORTH, Stonestar, Craglands Park, Great Urswick, ULVERSTON, Cumbria, LA12 OSL.
Mr Brian A. COLLINS, 54 The Park, YEOVIL, Somerset, BA20 1DF.
Mr John A. COLLS, 177 Thunder Lane, NORWICH, Norfolk, NR7 OJF.
Mr Brian EVERSHAM, 6 Rosecrea Terrace, HUNTINGDON, Cambs., PE18,6DE.
Dr Anthony FLETCHER, Leicestershire Museums Service, 96 New Walk, LEICESTER, LE1 6TD. (change of address)
Dr Bene E. MADUNAGU, Dept. of Biological Sciences, University of Calabar, P.M.B. 1115 Calabar, NIGERIA.
Mr David P. MUIR, 2 Old Cemetery Road, HARTLEPOOL, Cleveland, TS24 ONA.
Mr Jeremy SMITH, Old Home Cottage, Sparkwell, PLYMOUTH, Devon, PL7 5DQ.
Mr David STRAUSS, Valley Cottage, Brundish, WOODBRIDGE, Suffolk IP13 8AY.
Dr John M. WARREN, Zenith Point, Penybryn, Penycae, WREXHAM, Clwyd.
Mr Andreas WERNER, Koetnerholzweg 20, D-3000 Hanover, WEST GERMANY.

Lichenologist **21**(2) was published on 26 May 1989 and **21**(3) on 19 August 1989.

ALEXANDER, R. W., RICHARDSON, D.H.S., COTTON, D. & SEAWARD, M. R. D. 1989. Field meeting to Sligo and Connemara National Park. Lichenologist **21**: 159 - 168. [Description of lichen vegetation with lists of lichens.]

BROAD, K. 1989. Lichens in southern woodlands. [Forestry Commission Handbook 4] HMSO, London. [£4.00. Attractive introduction to woodland lichens, including their use as indicators, with excellent colour photographs.]

CHESTER, T. 1989. Lichens. In COLSTON, A. & PERRING, F. (Editors) The Nature of Northamptonshire: 115 - 121. Barracuda Books, Buckingham. [£17.95. Review of lichen records, with habitat drawings and photographs. Buelliella physciicola Poelt & Hafellner is a lichen parasite newly reported for Britain.]

COPPINS, B. J. 1989. Rinodina griseosoralifera, a new corticolous sorediate lichen from western Europe. Lichenologist **21**: 169 - 172. [Rinodina griseosoralifera Coppins sp. nov. is described from Scotland and elsewhere.]

COPPINS, B. J. 1989. Notes on the Arthoniaceae in the British Isles. Lichenologist **21**: 195 - 216. [Arthonia anglica Coppins, A. anombrophila Coppins & P. James, A. cohabitans Coppins, A. graphidicola Coppins, A. invadens Coppins, A. ligniariella Coppins, and A. thelotrematis Coppins are described, whilst Arthonia leucodontis (Poelt & Döbb.) Coppins, Arthothelium dictyosporum (Coppins & P.James) Coppins, and Melaspilea granitophila (Th.Fr.) Coppins are new combinations. Notes on other species.]

COPPINS, B. J. 1989. On some species of Catillaria s. lat. and Halecania in the British Isles. Lichenologist **21**: 217 - 227. [Catillaria aphana (Nyl.) Coppins, C. modesta (Müll.Arg.) Coppins, C. picila (Massal.) Coppins, C. scotinodes (Nyl.) Coppins, and Halecania rhypodiza (Nyl.) Coppins are new combinations, whilst Halecania viridescens Coppins & P.James is described.]

COPPINS, B. J. & JAMES, P. W. 1989. The identity of 'Lecidea cinnabarina' in the British Isles. Lichenologist **21**: 237 - 242. [Most British records of Lecidea cinnabarina are referred to either Pertusaria pupillaris (Nyl.) Th.Fr. or Schismatomma quercicola Coppins & P.James sp. nov.]

GILBERT, O. L. 1989. Field meeting in the eastern Howgills, Cumbria. Lichenologist **21**: 287 - 291. [Descriptive account of the lichen flora with habitat photograph.]

HAWKSWORTH, D. L. & McMANUS, P. M. 1989. Lichen recolonization in London under conditions of rapidly falling sulphur dioxide levels, and the concept of zone skipping. Bot. J. Linn. Soc. **100**: 99 - 109. [49 epiphytic species from 50 sites in NW. and central London, eight "not ... seen during the last 200 years." Some pollution - sensitive species were the new colonisers; "widespread recolonization of foliose species started in about 1983."]

HOLIEN, H. 1989. The genus Bryoria sect. Implexae in Norway. Lichenologist **21**: 243 -258. [Three species are recognised from Norway, four others being subsumed. Bryoria pseudofuscescens is placed as a synonym of B. implexa (Hoffm.) Brodo & D. Hawksw.]

JØRGENSEN, P. M. & RYMAN, S. 1989. Proposal to conserve Omphalina Quélet over Phytoconis Bory and Botrydina Bréb isson (Basidiomycetes). Taxon **38**: 305 - 308.

LAMBLEY, P. W. 1989. The lichen flora of Norfolk - systematic list. Trans. Norfolk Norwich Nat. Soc. **28**: 183 - 220. [List of 352 lichens recorded, with habitat and locality details.]

MATTSSON, J.-E. & LUMBSCH, H. T. 1989. The use of the species pair concept in lichen taxonomy. Taxon **38**: 238 - 241. [Five types of species pairs are listed and dealt with in different ways.]

McCARTHY, P. M. 1989. Observations on fragmentation and loss among lichen thalli. Proc. R. Ir. Acad. **89B**: 25 - 32. [Observations in the Burren on lichen fragmentation and recovery. Drawings of thalli at different dates.]

MUHR, L.-E. & TØNSBERG, T. 1989. Rimularia fuscosora, a new corticolous sorediate lichen from north western Europe. Nordic J. Bot. **8**: 649 - 652. [Rimularia fuscosora Muhr & Tønsberg sp. nov. from Scotland and Scandinavia.]

ORANGE, A. 1989. Macentina stigonemoides (Verrucariaceae), a new lichenized species from Great Britain and Ireland. Lichenologist **21**: 229 - 236. [Includes key to the species of Macentina.]

RICHARDSON, D. T. 1987. Yorkshire Naturalists' Union excursions in 1986. Naturalist, Hull **112**(983): 141 - 158. [Comments on lichens recorded from Keld and How Stean Gorge by Mark Seaward and Albert Henderson.]

SEAWARD, M. R. D. 1989. Lichens as pollution monitors: adapting to modern problems. In ÖZTÜRK, M. A. (Editor) Plants and Pollutants in Developed and Developing Countries: 307 - 319. Ege University, Turkey. [Recent changes in the British distribution of many epiphytic lichens are discussed in relation to recent changes in air pollution. Six distribution maps.]

SWINSCOW, D. 1989. Reap a Destiny. Divagations of a Taoist. Memoir Club of the British Medical Journal, London. [£14.95. Engaging biography. Interesting comments on Ursula Duncan, Peter James, and Francis Rose, as well as the formation of the British Lichen Society.]

J. R. LAUNDON

PUBLICATIONS FOR SALE

Orders to Mr J.M. Gray, Myrtle Cottage, Church Lane, Kingston St Mary, Taunton, Somerset TA2 8HR

	Price
Bulletin 32, 39, 41, 44, 46, 48 - 65	£1.50
	(£3.00 to non-members)
Literature Guide by Hawksworth (1970)	£1.00
Conservation by Gilbert (1975)	£1.00
A new guide to microchemical techniques for the identification of lichen substances by F.J. White and P.W. James (1985) (Suppl. to Bulletin 57)	£1.50
Check-list of British Lichen-forming, Lichenicolous and Allied Fungi by Hawksworth, James and Coppins (1980)	£4.00
	(£6.00 to non-members)
A key to the Lichen-forming, Parasitic, Parasymbiotic and Saprophytic Fungi occurring on Lichens in the British Isles by Hawksworth	£3.00
	(£5.00 to non-members)

Cheques/PO payable to the British Lichen Society, Remittance must accompany order (note all items post free).

Back numbers of the Lichenologist can be obtained from Academic Press, 24 Oval Road, London NW1 7DX. Members must state that they belong to the Society and are therefore entitled to a discount.

Lichen Atlas by M.R.D. Seaward and C.B.J. Hitch (1982) from The Institute of Terrestrial Ecology, Merlewood Research Station, Grange-over-Sands, Cumbria. LA11 6JU.
Cost to members £3.85 (post free).
When ordering please state you are a member of the Society.
Cost to non-members £4.50.

CONTENTS

BULLETIN 65. Issued by the British Lichen Society, c/o Department of Botany, British Museum (Natural History), Cromwell Road, London, SW7 5BD (Telephone 01-589 6323 ext.552). Edited by O.L. Gilbert, Dept. of Landscape Architecture, The University, Sheffield, S10 2TN who is author of all unsigned articles, except Lichenologia. The view of contributors are not necessarily those held by the British Lichen Society.

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