

No. 63
Winter 1988

**BRITISH
LICHEN
SOCIETY
BULLETIN**



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FORTHCOMING BLS FIELD MEETINGS

New Forest, Hampshire	18 March 1989
Leader Dr F. Rose	
Wigtownshire, Scotland	20-27 April 1989
Leaders Brian Coppins and Oliver Gilbert	
North Norfolk	20-22 October 1989
Leader Peter Lambley	

THE GREAT STORM OF 16 OCTOBER 1987 AND ITS EFFECT ON THE CORTICOLOUS LICHEN FLORA OF SOUTH-EAST ENGLAND

The storm of last October was an event without precedent in SE England since at least 1703. It has been estimated that from 13 to 15 million trees were blown down, with a total timber volume of nearly 4 million cubic metres. Lichenologists, both in Britain and in France, were exceedingly concerned that this natural disaster might have given the "coup de grace" to an epiphytic lichen flora already much damaged in places by SO₂ pollution and agricultural chemicals; and also with some Xanthorion elements reduced, in particular, by the ravages of Elm Disease. It soon became clear, however, that the massive destruction of trees on a large scale was largely confined to the scarps and slopes of the chalk, greensand, and High Weald areas of Sussex, Surrey and Kent, and a coastal belt in E. Suffolk and E. Norfolk. In Hampshire, only the eastern fringe of the county was really badly hit.

I therefore undertook to carry out a survey of the major woodland and parkland sites from Hampshire to East Kent, under the auspices of the NCC and the National Trust, to try to discover what had actually happened to the rich epiphyte floras of our best sites in the south-east. It soon became clear that, while tree damage was particularly severe on the chalk scarps and on the ridges of the Weald, it was extremely variable in extent. The storm consisted of two components:

1) extremely strong winds generally of up to 70 mph or so, which broke off branches and felled less well-rooted trees in an apparently random manner here and there;

2) tornado-like spiral winds of far greater strength that crossed S.E. England in large numbers, spaced half a mile or more apart along narrow tracts to the west, closer together to the east. These were observed by the few people who were out that night to rotate trees and pull them out of the ground in places in the manner of a cork screw. In driving across the countryside after the storm (once the roads were cleared) one passed through broad zones of no (or of only minor branch) damage, alternating with zones of severe devastation in which, particularly to the east, hundreds of trees at a time were felled. Westward, these zones of destruction were progressively narrower and of less extensive damage. Worst hit were the conifer plantations of the Forestry Commission and private owners, the beech woods of the chalk and greensand scarps, and the amenity beech belts which are such a feature of the High Weald in central and east Sussex.

In places, however, narrow tornado belts were funnelled up escarpment valleys or wealden gill ravines, destroying all large-crowned trees in their wake, but often leaving large trees on the scarps on either side quite undamaged. Consequently the patterns of damage were often of a quite extraordinary nature.



Fig. 1. Storm damage at Scotney Castle, Kent (Photograph courtesy of the National Trust).

It seems appropriate, after this introductory section on the character of the storm damage, to record the actual effects on the epiphytic lichen floras in all the major sites I have been able to visit myself (or on which I have been able to obtain information) from the east Dorset coast through to East Kent.

East Dorset

Most of Dorset escaped damage, except for the SE coastal area. Vince Giavarini tells me that one of the Teloschistes flavicans sycamore trees at Lulworth Park was blown down, but Teloschistes survives on at least one other tree. The Lobarion communities on the oaks there do not seem to have been much affected.

Hampshire

Everyone will be glad to learn that the New Forest sustained little damage of any real significance: nothing worse than we have been accustomed to in the occasional severe autumn or spring gales over the years. Some areas are virtually untouched, for example the splendid high forest of oak and beech in Bramshaw Wood. Other areas, such as Red Shoot Wood, Wood Crates and Sunny Bushes, have lost only 0.5 - 1.0% of their trees, none of major lichenological importance, though many oaks here lost some branches from their crowns. Mark Ash Wood does have one area of some ten acres where about 30 - 40 trees (nearly all beech) are down, but again only one Lobaria tree has fallen there, and most of the wood is largely intact. The southern fringe of the forest nearest to the sea sustained rather more tree losses, but again only one Lobaria tree is known to have fallen. Roydon Woods Hants Trust reserve was rather battered locally in its upper parts, but the best lichen areas along the valley of the Lymington River are more or less intact.

The Upper Hamble Country Park east of Southampton has lichen-rich oaks along the Hamble estuary, but although trees have fallen here and there, no local lichens have been affected. In spite of severe damage in local areas of the Wealden Edge Hangers north of Petersfield, there is little loss of interesting epiphytes, as most of these are on Field Maple or Ash on the lower slopes or in valleys that were not much damaged (Pachyphiale carneola and Normandina trees remain intact). The sheltered hangers of the upper greensand scarp from Selborne to Petersfield contain some good epiphytes on oak and ash; here there are no losses of any significance.

Sussex

Damage is much more widespread on the chalk scarps here than further



Fig. 2. Storm damage to woodland at Knole Park, Kent
(Photograph courtesy of the National trust)

west, so it was with some trepidation that I approached East Dean Park Wood, N. of Goodwood, the only West Sussex site for Lobaria pulmonaria, and the only site east of the New Forest for Sticta limbata. The beech woods on the ridge to the south were devastated, but the ancient oak-ash-hazel woodland in the valley below was very little damaged, and all important lichen trees were found to be intact.

Pads Wood, on the Uppark estate further west, was reported to have lost 80% of its trees due to the passage of a tornado; in fact the figure was nearer 25-30%, and all the interesting species there (e.g. Thelopsis, Pachyphiale, Schismatomma niveum) were refound quite soon, though some richer trees had fallen.

Ebernoe Common, on Weald Clay, N of Petworth, a Sussex Trust Reserve with a good ancient woodland lichen flora, is relatively low-lying, and only lost about 150 trees in its 180 acres, mostly beeches; no lichens of importance seem to have gone; the Thelopsis site is all right.

Parham Park near Storrington, an important site with over 140 species has not been visited by me yet, but the NCC reports that most trees in the park survived: in the woodland to the north, though the conifer plantations were massacred, all the important (marked) old oaks have survived with some limb losses.

Slindon Park (N.T.) E of Chichester famous for its old beech close-canopy forest, was devastated totally to the east; but the mixed oak-ash-beech-maple woodland on lower ground to the west (where all the best lichens were in 1968) was much less damaged, and nearly all species were refound there.

Sheffield Park (N.T.) suffered severe damage to the gardens, but I found on my visit that it was the exotic trees, mostly conifers that had taken the brunt. I was able to find all the important species (such as Lecanora quercicola) on old oaks still standing. Evernia prunastri was seen in good fruit on a (fallen) Nothofagus; this tree is to be left where it fell for some years. In the east part of Sheffield Park, there was a bonus in the discovery of a fine area of ancient, little-damaged pasture-woodland of old oaks with much Thelopsis, Pachyphiale, Arthopyrenia ranuculospora, etc. This area had been missed before; I was not sorry to see that the large pines that had invaded it were mostly blown over.

Chiddingley Wood, West Hoathly At least half the trees in this valley with its rich sandrock communities are down, but the bryophytes and Hymenophyllum seem to have benefitted much from extra light already, and Sphaerophorus melanocarpus was recently refound after 30 years.

Eridge Park. This venerable former deer park, formed 800 years ago to include, it is thought, some relics of the former wildwood, is the richest site for lichen epiphytes in England east of the New Forest with nearly 180 species, so I was more concerned about its fate than any other site in the south-east. My delight was great when I found that it was virtually untouched by the storm apart from the odd tree or branch down. The two Lobaria species (L.pulmonaria & L.virens) were flourishing as were Pachyphiale, Arthopyrenia ranuculospora, Schismatomma quercicola, Parmelia reddenda, Bacidia biatorina, Micarea pycnidiphora, Thelotrema, Buellia schaeferi, Graphina anguina and Phaeographis dendritica. Nephroma laevigatum, however, seems to have gone from the (intact) trees where I knew it in the seventies. The Park lies in a shallow basin; the storm seems to have passed over it, and wrecked the beech woods on the ridge to the north instead, which were of no lichenological importance.

Tilgate Wood, Ardingly (owned by Kew Gardens). Though devastated areas adjoin it, this lichenologically and bryologically rich part of the Wakehurst estate has survived largely intact with all its sandrock bryophytes, filmy fern colonies, and rare saxicolous and corticolous lichens.

Kent

Scotney Castle Park(N.T.)(Fig.1.) The woodlands along the drive and the gardens are badly damaged, but the park trees (oaks and ashes) in the valley have mostly survived and nearly all the important

species here, particularly Anaptychia ciliaris, Parmelia crinita and P. acetabulum, are still present and in good condition. It was not possible to examine other Kent sites in detail, but it seems that most old oaks have survived at Horsmonden and Benenden Parks; Knole Park at Sevenoaks has lost many trees, (Fig. 2) but not those of more lichenological interest. The worst devastation seen was in the plateau woodland at Toys Hill SE of Westerham; but this area was of no special lichenological importance, and the few trees that had anything of interest have survived in a valley.

East Suffolk

Sotterley Park, according to Chris Hitch, has been badly damaged, but I have now heard that most of the important trees have survived.

Norfolk

Blickling Park, according to the National Trust, has lost a number of old park trees, but the best area (in Great Wood where huge Tilia cordata have Thelotrema in one of its few East Anglian sites) is more or less intact. Fellbrigg Park (also N.T.) has lost some of the ancient beeches in what is thought by some to be the most northerly native beech site in Britain, but most survive, as do most of the old pollard oaks.

Conclusions

The October storm was a major catastrophe for our landscape in the SE of England in some areas, the skylines and the character of many woodlands having been changed for some generations to come. But lichenologically, I am delighted to be able to report that, in most sites, little damage of significance has occurred, and indeed some sites escaped altogether. The thinning out of trees and the formation of new glades may well benefit the epiphyte lichens in some areas, while the extra dead wood, where left on the ground, will provide valuable potential habitats for Cladonia spp. Trapeliopsis spp. and many fungi.

NOMINATIONS REQUIRED FOR OFFICERS AND COUNCIL MEMBERS

Nominations for Officers for 1989 and three members of the Council for the period 1989-1990 should be made in writing, with the consent of the nominee, to the Secretary: T.H. Moxham, Dept. of Plant Sciences, University of Bath, Claverton Down, Bath, Avon, BA2 7AY, at least two weeks before the Annual General Meeting, i.e. before Saturday 24 December 1988, please. Mr Peter W James, Dr John Henry H. Looney and Mrs Alexandra M. O'Dare retire from Council and are not eligible for re-election.

Members will be saddened to learn that our Treasurer Noel Tallowin died at the end of October. An obituary will be published in due course. It is important that a new Treasurer is appointed as soon as possible; would anyone willing to take on this job please contact the Secretary before Christmas.

JANUARY MEETINGS 1989

This year the meetings will be held in a variety of places.

Friday 6 January 1989

BOOK SALE This will be held between 18.00 and 21.00 in the Meeting Room of The Royal Entomological Society of London, 41 Queen's Gate, London, SW7 5HU, just around the corner from the British Museum (Natural History) - where the 1988 book sale was held. The admission charge of £7.50 covers the cost of a buffet and one glass of wine. Would those wishing to attend please use the tear-off form on the accompanying information leaflet, and send a cheque for £7.50 (payable to "The British Lichen Society") to Tim Moxham, Dept. of Plant Sciences, University of Bath, Claverton Down, Bath, Avon, BA2 7AY, by Friday 30 December 1988 so that arrangements for catering may be made.

Frank Brightman and Mark Seaward will look after the auction and will be happy to give advice on reserve prices of sale items. Please bring along books, journals, reprints, illustrations or other items with a lichenological, botanical or natural history flavour. All sales will be split on a 50:50 basis between the vendor and the Society. If you are unable to attend the auction but would like to sell any items, please make arrangements with either Frank Brightman or Mark Seaward. Unsold items will still be available for sale the following day at the A.G.M.

COUNCIL MEETING. Council will also meet in The Royal Entomological Society (Council Room) in the afternoon at 14.00 (please let the Secretary have any items that you wish Council to discuss).

Saturday 7 January 1989

ANNUAL GENERAL MEETING, EXHIBITIONS, SLIDES AND LECTURE MEETING

The Annual General Meeting will be held in the Lecture Room of The Jodrell Laboratories, Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AB at 10.30 on Saturday 7 January 1989. Following the meeting there will be the usual exhibition meeting and slide show to which members are invited to contribute. This is always a valuable time to show fellow lichenologists items of mutual interest and to discuss informally many topics that there never seems time for during the rest of the year - please bring along your exhibits and slides to help make it a success.

PROGRAMME

10.00 Jodrell Laboratories open to B.L.S. members.

10.30 Annual General Meeting.

AGENDA

1. Apologies for absence.
2. Minutes of A.G.M. - 9 January 1988.
3. Matters arising.
4. Officers' reports.
5. Meetings 1989 - 1990.
6. Election of Auditor.
7. Election of three members of Council.
8. Election of Officers.
9. Any other business.

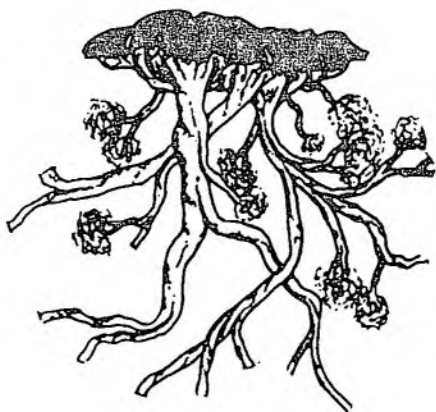
- 11.30 Coffee followed by Exhibition Meeting and Members' slide show.
- 12.30 Lunch - Arrangements have been made for a buffet lunch (with wine and sweet) - price £3.00 - at the CAB International Mycological Institute, please use tear-off slip on the leaflet to help with numbers for catering.
- 14.00 Open Day at CAB International Mycological Institute, Ferry Lane, Kew, Richmond, Surrey, TW9 3AF. (For members who will not be there already for lunch, please arrive at the entrance at 14.00). The tour will include the herbarium (350,000 specimens), library (4000 books), and culture collection (135,000 strains; including the U.K. National Collection of Fungus Cultures). Demonstrations of computerized databases will include that used to produce the Index of Fungi and Bibliography of Systematic Mycology (both including lichens), and of culture collection strains. There will also be a display of publications.

Lecture programme - Jodrell Laboratories

- 15.15 Tea
- 15.30 Dr Christopher J.B. Hitch - Changes in the lichen flora of Suffolk churchyards.
- 15.50 Mr Albert Henderson - Lichens on unusual man-made substrata.
- 16.10 Discussion.

LICHENOLOGIA

During the summer a number of members have been preoccupied with completing their contributions to the new Flora. It is pleasing to know that progress is on schedule, and that the final editing will commence in January 1989. All contributors have been commendably conscientious in making every effort to get things right; one (readers may care to guess at his identity), faced with describing a rare crustose species, went out in the field and collected fertile material: it was the first time it had been found in a hundred years. Research in lichenology is so active at the present time that one difficulty of Flora writing is that genera tend to disintegrate while the accounts of them are being compiled. This may be no bad thing with huge genera like Lecidea, but it happens to smaller ones too. This year Haematomma (for perfectly good reasons) budded off a new genus Ophioparma; it is a pity though that it is the species in which the apothecia look like blood-blisters (or haematomas) that now has to be called O. ventosum. Another problem is that species new to Britain (as reported elsewhere in this Bulletin) continue to be found; there will of course have to be a "cut-off point" at the end of this year for the Flora. Farther afield new species continue to turn up in Europe as well. Poelt et al. have described a "Lecanora with roots" from high altitudes in the mountains of central Spain. The plant (figured here) grows on easily exfoliated rocks, and consists of yellow-green squamules with rhizinose strands penetrating a centimetre or more into the substrate. It is called L. rhizinata, but it may well be put in a new genus soon.



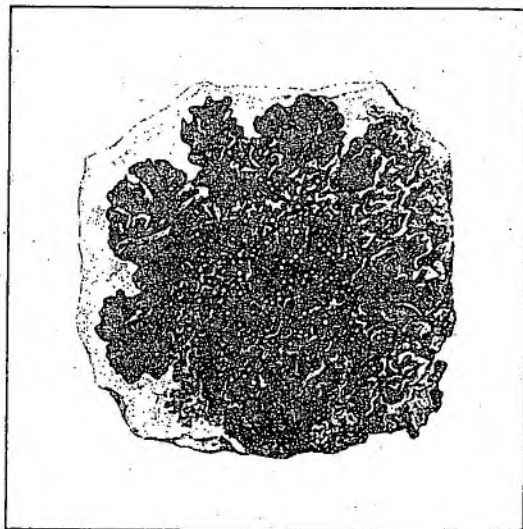
On top of their work for the Flora, a number of members have been considering the question of endangered lichens in Britain. As mentioned last time, work is proceeding with the compilation of data sheets for such species under the terms of a contract awarded by the Nature Conservancy Council to the Conservation Association of Botanical Societies. Meanwhile the European Economic Community has produced a list of endangered European species, which can however only be regarded as tentative. Outside the EEC other countries are interested in the problem. In the USSR a Lichen Red Data Book has been published; each species receives a full page, including an illustration of the plant and a distribution map, as in the example reproduced here.



**Лептогиум
Гильденбранда**

Leptogium hildenbrandii Nyl.

СТАТУС. 3(R). Редкий вид с
дизъюнктивным ареалом



Nowadays fashion seems to influence almost everything; even the popular fashion of "green concern" has fashion within it. Acid rain is now a little old fashioned; the latest "in thing" is atmospheric engineering, and concern about a CO₂ induced greenhouse effect. Wallace Broecker of Columbia University is reported as advocating a fleet of aircraft permanently aloft in the stratosphere (as the US bomber fleet is, or used to be), distributing 35 million tonnes of SO₂ per year to counter the effect of increasing CO₂ levels. He regretted that it might cost too much (in dollars); the rest of us can be glad of this because of the cost (to plant and animal life) that such an absurd scheme would involve.

COUNTRY DIARY: GREAT COMBERTON, WORCESTERSHIRE

I looked out of the window to see one of those summer mornings that seem mostly restricted to childhood. I was on a boat moored to the banks of the Avon, the water reflected the sky, the dew sparkled and, though not normally an early riser, I had to get up to be part of it. Walking briskly up Quay Lane, a man exercising a dog must have wondered at my purposeful stride, but I was not late for anything, just brimfull of anticipation to return to a small churchyard noticed the previous evening. Entering it through an iron gate I halted, extracted notebook and biro, surveyed the scene and thought I'd be lucky to reach fifty.

Heading for a group of well illuminated gravestones I was soon totally immersed in the job in hand. I find it most efficient to write names down in groups of three, it is possible to remember up to three before the memory feat becomes distracting. At first I note only common species as miraculously, once recorded, they no longer register, so only new ones are seen. This makes it necessary to go round the churchyard twice, once for the widespread lichens and a second time for the infrequent ones. The clock strikes the quarters, I have given myself an hour. Fortunately the graves are a mixture of sandstone and limestone. The fine grained sandstone yields Buellia aethalea, Porpidia tuberculosa, Rhizocarpon obscuratum, Parmelia glabratula, Lecanora atra, and a single moribund thallus of Rhizocarpon geographicum. The limestone provides Aspicilia calcarea, Diploicia canescens and Verrucaria muralis - nothing special yet.

I wait till I have my eye in before beginning on what is often the richest habitat - south facing buttresses and the porch. These are surprisingly good for Caloplaca species with C. aurantia, C. decipiens, C. flavovirescens, C. isidiigera, C. saxicola, C. teicholyta and C. variabilis. There are 10 Caloplaca species on the porch, probably as many as the congregation on a wet Sunday. I enjoy the third quarter-of-an-hour the most; anything

new is a small triumph, and also two of my favourites turn up, Lecanora crenulata and Xanthoria elegans. A quick count gives 49 and I wish I had my chemicals, particularly C, a saxicolous habitat needs C. That Lecidella scabra should be checked and the white smudge that might be Trapeliopsis placodioides. Nothing more for five minutes, despite an inspection of the lightning-conductor. I look up and for the first time notice the half-timbered and thatched cottages flanking the churchyard and a wall covered with honeysuckle. Bird song now penetrates my world as concentration wanes and the beautiful morning shines in. I return down Quay Lane hoping to find breakfast well advanced or, if no one is up, I'll make a pot of tea and then read my book. I'm in a good mood.

FURTHER NEGLECTED HABITATS: HEAVY METAL OUTLIERS

Heavy metal tolerant lichens have been well described recently in both the Bulletin and the Lichenologist. Lead, zinc and copper mines are now a compulsory stop for anybody investigating the flora of a particular area. What is perhaps less appreciated is the extent to which spoil from these mines has been spread about the countryside. Its value as a weed killer seems to have been recognised for a long time. The Cambrian Railway Company made widespread use of spoil from the Van Lead Mines at Llanidloes in Montgomery, so that 25 years after the railway closed, tracks over 30 miles away from the mine in S. Radnor are still relatively weed free, and support communities of lichens very reminiscent of lead mine spoil tips, eg Veizdaea leprosa, V. retigera and Steinia geophana. Fifty-five years after spreading lead mine spoil on his drive, a land-owner from near Rhayader testified to the fact that he hasn't had to remove a weed from the drive since. The effect of this material is therefore likely to be very long-lasting.

In many areas of mid-Wales the Forestry Commission, private woodland companies and farmers have made use of lead mine spoil as a top dressing for farm and forestry tracks. Veizdaea acicularis

was described as a new species from just such a track in the Towi valley, Carmarthen, recently. Quite what impact this dispersed heavy metal rich spoil is having on the environment generally I do not like to contemplate, and certainly would not encourage its use. But as it is there I am happy to crawl on hands and knees investigating a clump of sick- looking moss here and a bare- looking patch there!

The metals from these and other mines have found wide use and their toxic effects on lichens are readily seen below flashings on roofs and galvanised wire on posts etc. Where the doses are sub-lethal, lead, zinc and copper tolerant species of lichen can be found. Churches are regularly reported as supporting notable species, eg Psilolechia leprosa below copper window grills and adjacent to lightning-conductors. Less frequently noted has been the sublethal effect of the humble galvanised fence or iron water tank. If the soil is naturally acidic below the fence or tank, and fairly nutrient poor the zinc concentration may be enough to suppress the higher plants and allow mosses such as Barbula convulata, Ceratodon purpureus and Pohlia nutans to grow, favoured prey of Vezdaea spp. V. leprosa seems to be the commonest colonist with V. rheocarpa as a notable rarity.

So keep an open mind as to the possibility of heavy metal contamination anywhere where higher plants are doing less well than might normally be expected or where unexpected quantities of heavy metal tolerant species such as common bent (Agrostis capillaris) occur to the exclusion of other plants. The metal mines may have extended their influence further than you thought.

Ray Woods

CHANGES IN THE POPULATION OF FULGENSIA FULGENS AT
LAKENHEATH WARREN OVER THE LAST 15 YEARS

Fulgensia fulgens has been known from Lakenheath Warren for many years. The first record appears to be by F.K. Eagle (Mayfield, 1930) with a subsequent record by the British Lichen Society in 1958. I was first shown the colonies by Peter Lambley in 1978. The ecological requirements of Fulgensia fulgens have been well documented by Gilbert (Lichenologist 1978). At Lakenheath Warren it is at the northern edge of its range. Here micro-climatic conditions have a greater effect on distribution than would be the case further south. It is a strict calcicole of well-drained soils of approximately pH 7.8, in sunny sheltered sites and prefers a short grazed open sward, where there may be a 50% cover of higher plants with the remainder consisting of bare earth, lichens and moss. These conditions are met at Lakenheath as the lichen occurs on raised areas of chalky boulder clay surrounded by low rolling sand-dunes. Fig. 1, taken in 1973 shows these conditions and Fulgensia fulgens in a very healthy state. The thalli, abundantly fertile, were dense on the ground and producing the effect of a yellow carpet.

Since those days conditions have seriously changed and the size of the colony has vastly decreased. The present conditions are shown in Fig. 2. The area is much less sunny and open and there are no bare patches of soil, though the vegetation is still low and sparse with much moss forming a continuous cover. Pines have now almost swamped the area. A large quantity of seed is produced annually and there is also a heavy leaf fall of needles; these are very acid and have reduced the surface pH to 6.0. The regeneration of pine is rapid and will soon cause the two remaining patches of Fulgensia fulgens to disappear completely. The many young pines in the area, without the grazing of rabbits, are becoming dominant. Rabbits also caused a good deal of disturbance to the soil with their scrapes and burrowing which is beneficial to the Fulgensia. With repeated outbreaks of myxomatosis and shooting rights extended to the local air base, rabbits are virtually non-existent now.



Fig. 1. Fulgensia at Lakenheath Warren with lichen thalli in the foreground and a few small pine trees, 1973, (Photo O.L. Gilbert).



Fig. 2. The same area with depauperate Fulgensia overshadowed by mature seed bearing pine trees, 1988, (Photo C.J.B.Hitch)

As a means of halting damage to the lichen population pine seedlings have been removed in the immediate vicinity of the colonies, but the mature seed-bearing trees remain. The problem is that the exceptionally glaucous-leaved pines are a source of income to the estate as Christmas trees for the Americans on the air base, so the estate forester is against the wholesale removal of the parent trees. In view of this in spring 1986 a core of soil approximately 15cm diameter containing twenty minute Fulgensia thalli was transplanted into an adjacent area where species such as Squamarina lentigera, Buellia asterella and Toninia caeruleonigricans still exist abundantly. I suspected the core might get shoved out by a passing mole, but the colony remained healthy and by summer 1988 had made spectacular growth.

One remaining hurdle had to be overcome at Lakenheath. In a report on the status of Fulgensia fulgens that I wrote in spring 1987, I suggested that if a circle of radius 25' - 50 m round the colonies was cleared of pines this ought to alleviate the problem and the pH might rise sufficiently to allow recolonisation. The NCC have been very active since the Warren was designated an environmentally sensitive area (ESA) for reasons such as the presence of breeding stone curlews. They got the estate to agree that 2 ha of pines around the Fulgensia site could be cleared. It is therefore hoped that with this happening, and by initially raking out the moss in the immediate vicinity of the remaining Fulgensia plants, the thalli may regenerate when the pH again rises in the absence of pine needles.

One of the more interesting facts about the Fulgensia at Lakenheath is that no collections show any formation of schizidia which are abundant on thalli in sites in SW Britain, so their increase is limited to fragmentation or spore dispersal. It would be interesting to transplant schizidial forming material to a grassland knoll in the area, about 200 m from the existing plants, and see if it continued to produce schizidia.

Literature:

Mayfield, A. (1930) The Hepatics, Mosses and Lichens of Suffolk. The Journal of the Ipswich and District Natural History Society, 1(2):89-140.

Chris Hitch.

ETYMOLOGICAL NOTES ON LICHEN NAMES. PART 6

44. Anaptychia ciliaris Folded throughout and hairy.

Derivation: ana (Greek prefix)=back, again,through,resembling,
ptyche(Greek) = (NB ptyx) a fold, layer.
cilium (New Latin)= a hair or hairlike process cf
Old Latin
cilium = eyelid.

45. Bryophagus gloeocapsa Moss-devourer, with sticky cups.

bryon (Greek) = lichen, tree-moss, seaweed.
phago (Greek) = I eat.
gloios (Greek) = sticky, viscid, gelatinous.
capsa (Latin) = a box, case.

46. Coelocaulon aculeatum Hollow-stemmed and spiny.

koilos (Greek) = hollow.
kaulos (Greek) = stalk, stem.
ake (Greek) = a needle, point, splinter;
from which derive the Latin
formations acus = a point and
aculeus = a needle, point,
sting.

47. Pertusaria leioplaca Like a rounded tablet, smooth between punctures.

pertusus (Latin) = perforated (NB Latin perfuno
= I pierce).
leios (Greek) = smooth.
plax (Greek) = a flat, round plate, tablet.

48. Pycnothelia papillaria Pimpled with firm nipples.

pyknos (Greek) = compact, dense, strong, solid.
thele(Greek) = a teat, nipple.
papilla(Latin) = a nipple, pimple.

-arius (Latin suffix, usually post-nominal)
= belonging to.

49. Ramalina thrausta Branching and brittle.

ramale (Latin) = a shoot, twig.

-inus (Latin suffix) = associated with.

thraustos(Greek) = brittle, breakable.

50. Trapelia coarctata Protean, but with clear boundaries.

trapelos(Greek) = easily turned, swayed,
changeable.

coarctatus(Latin) = confined, restricted;
deriving from Latin

arctus(more correctly artus)
= narrow, strait.

51. Umbilicaria hyperborea Springing from a navel and found at the
back of the north wind.

umbilicus (Latin) = umbilicus, navel.

hyper (Greek) = (NB hypeir) above, beyond,
over.

boreas (Greek) = north wind, north.

Albert Henderson

CHEWING THROUGH THE DESERT

The Negev Desert Highlands, Israel, is a hilly stony desert where 70% of the ground is covered by rocks carrying endolithic lichens. They are the dominant cryptogamic element in this hostile environment. Moshe Shachak, Clive Jones and Yigal Granot observed snails of two species, Euchondrus albulus and E. desertorum, foraging on these rocks. When feeding they left behind a channel 0.4mm deep in the rock with fresh white limestone showing in the bottom. The tongues (radula) of both species bear cutting teeth with large cusps and curved tips which are continually regrown to repair those that have been damaged. The faeces of the snail contain large amounts of calcium which confirms that they are ingesting the rock material they have removed.

The abundance of snails is around 21 per square metre, each eats about 15 mm³ of stone per day. Estimates of their contribution to rock weathering were that they removed 4-7% of the rock surface to a depth of 1mm each year. To help evaluate the magnitude of this biological weathering by snails in the process of soil formation it was compared with dust deposition. Airborne dust, considered to be one of the main sources of soil in the Negev Highlands, is deposited at the rate of c. 36g/m per year. The contribution of powdered rock via snail faeces is about 70-110g/m per year so clearly snail consumption of the lichen rock mixture has an effect on the process of rock weathering and soil formation even larger than that of dust deposition which was previously thought to be the major pedogenic influence in these deserts. Each year their munching creates about 1 ton of soil per hectare (2.5 acres). Further details in Science (1987) vol.236:1098-1099.

QUAINT AND CURIOUS USES FOR LICHENS

From promenade deck to the grave, lichens are a fashionable accessory. Whilst waiting for the Sealink ferry, St. Columba, to sail to Ireland recently and after ascertaining that Sealink ferries provide no suitable substratum for lichens (mapping secretary heave sigh of relief) I surveyed my fellow travellers, stewing gently in the Holyhead sun. Prominent were the inevitable blue rinsed, tamoshantered Americans (a statutory requirement on every ferry?) - invariably a poor substratum for lichens. Not so a splendid straw hat that came into view.

I have a weakness for straw hats and this one was magnificent. Strewn round the brim was a veritable botanic garden. Not the usual dried flowers, but a fine collection of things cryptogamic. Lobes of the bracket fungus Trametes versicolor of velvet purple were interspersed with a mixture of a sulphur yellow Usnea or Alectoria spp wound through Cladonias and dried assorted seaweeds. Not used to accosting strange ladies about the contents of their hats and mindful that the chairman of our conservation committee couldn't possibly approve, the hat and its bearer vanished into the crowds before I could compose a plausible opening remark.

Less mobile, but no less intriguing, were the remains of a most unusual wreath seen recently in a Radnor churchyard. Revisiting it later with our President, Cladonia stellaris was confirmed and appears now on the somewhat modest list of Radnor's introduced lichens. Placed over the top of a new grave was a large rectangular frame packed with lively-looking specimens of this lichen, so adding to the many uses to which it is put, and offering, perhaps for the first time, temporary foothold in Britain.

Ray Woods

YET MORE LICHENS ON TREES IN THE CHELSEA PHYSIC GARDEN

Gilbert (Bulletin 58: 28, 1986) reported seven lichens on trees in the Chelsea Physic Garden, including Hypogymnia physodes. The following year, as a result of a visit by Dr D.J. Galloway, Mr J.R. Lauñdon, Dr J.H. Looney and Dr O.W. Purvis, Parmelia subaurifera, and Placynthiella icmalea were added (Purvis, Bulletin 61: 4, 1987). We visited the garden on 21 July 1988 and, in addition to confirming all nine species recorded on the above two visits, found also the following additional seven species on trees: Buellia punctata (on Diospyros lotus), Candelaria concolor (on D. lotus) Candelariella vitellina (on Paulownia), Parmelia sulcata (on Paulownia), Physcia adscendens (on D. lotus), P.tenella (on Pyrus salicifolia) and Xanthoria polycarpa (on P.salicifolia).

On the same tree from which Lecanora muralis was reported by Gilbert and Placynthiella icmalea by Purvis, Candelaria concolor is represented by several small thalli and is evidently spreading; lobes were well-developed in one thallus and a small fragment was removed and confirmed as K-. This was most exciting as this species was last recorded in the London region from Walthamstow by Forster in the 1780s.

Xanthoria polycarpa was found in Blackheath in 1806, but is now very well established and we have found it in 18 other London sites so far. The Parmelia subaurifera we saw was only on Diospyros and could not be seen on the Catalpa from which it was reported by Purvis; this is now known to us from a further 23 London sites.

We wish to stress that this site is not the only rich lichen locality in central London. Evernia prunastri and Ramalina farinacea occur close by in West Brompton Cemetery; E. prunastri, Rinodina exigua and Xanthoria candelaria are amongst 17 corticolous species now present on trees in Regents Park.

Parmelia caperata has extended dramatically into Greater London since 1980, being present at least in Colindale, Gunnersbury Park, Hampstead Garden Suburb, Osterley Park, Ickenham Marsh, Richmond Park, and Radlett. Parmelia subrudecta is now present in Kew Gardens, and Usnea subfloridana has been found as far into Central London as Dollis Brook in West Finchley.

David Hawksworth and Paulette McManus



In the grounds of Iona Abbey lie the lichen clad graves of Scottish kings. (Susan Griggs Agency Ltd).

AGONY COLUMN

The BLS has been fortunate in securing the services of NORA LEC who runs a counselling agency. She is willing to provide helpful and supportive advice to members who would like to share their problems with her. She can be contacted via the Bulletin editor. Please keep letters short and to the point.

Dear Auntie,

Today, Teacher asked our class what the difference is between a lichen and a moss. I said moss needs soil to grow on while lichen can grow on rock. What is the correct answer please?

Yours sincerely,

Katherine Pearman (aged 12½)

Dear Katherine,

Thank you for your interesting letter. I'm not quite sure what answer a 12 year old should give. A few years ago a member of the society suggested that lichens are organisms studied by lichenologists, but I prefer your answer which shows ecological insight. Our expert says "As the lithosere advances towards subclimax, species successively replace each other due to habitat modification so the xerosere becomes increasingly mesic which facilitates the ingress and eventual replacement of the lichen dominated pioneer stages by bryophytes and angiosperms". In other words, he agrees with you.

Yours encouragingly,

Auntie Nora

Dear Madam,

Plea for home TLC kits

The increasing use of thin-layer chromatography in the identification of lichens is a matter of much concern. Some institutions now even decline to name lichen specimens until the material has been chemically analysed. When I was at school we

were taught that all plants could be readily identified from their appearance. Now we find that the morphology of lichens counts for little, and it is their chemical content which is all important. Whilst thalli of widely differing appearance are being merrily lumped together (e.g. Coriscium with Omphalina; Dendriscocaulon with Lobaria), lichens of similar appearance are often split apart, largely on chemical grounds (e.g. in Lepraria and Porpidia for example).

This might be acceptable if the present chemical methods were widely available for use. All persons interested in lichens are familiar with colour tests, but these are no longer enough. The irregular brown spots on the pages of books, caused by the accidental splashing of Pd, are rapidly becoming a thing of the past. Increasingly, Pd reactions are being replaced by neat slate-grey circles low down on TLC plates. To date, these chemical methods are used chiefly by white-coated boffins in their ivory towers. A cheap, effective, and safe method of thin-layer chromatography must be evolved which can be used in the home. Here much important amateur lichenology is still carried out, despite the counter attractions of videos, computers, The Independent, home-banking, and Kylie Minogue. Fume-cupboards and facilities for spraying sulphuric acid are not to be found in many bedrooms and this is a matter of regret. Therefore a home TLC kit must be developed quickly, preferably complete with control substances. Otherwise the study of lichenology may wither at the rhizinae. Lichenology must never become so technical that the amateur feels left behind.

Yours faithfully,
Jack Laundon

Dear Jack,

I entirely agree with your sentiments and frustrations; you have highlighted a serious deficiency in modern lichenology that will be compounded by the appearance of new floras. I have no sensible solution to offer yet, but perhaps one could think of overcoming some of the hazards of the process of TLC as it is now defined in White & James's admirable little book. First and foremost, the cost. Not only of the aluminium backed plates, nearly £2 apiece,

but in the cost of the specialised glassware, solvents, and charring techniques which appear to be associated with it.

The process consists of putting a drop of an acetone solution of lichen acids (why not a drop of gin or nailvarnish remover?) and placing it as a small spot on aluminium backed silica gel plates. Why can't you use blackboard chalk or the white 'blanco' the military police use? Perhaps a streak of 'snow whitewash' used for walls on an old tin can might work. After development in TEF (cleaning fluid. aftershave??) the plate is dried and sprayed with 10% sulphuric acid. OK, all Health and Safety pundits close your eyes. I have heard that one field course lecturer, faced with a similar problem, heated his plate to dry off the last remaining solvents, but having left his hairdrier at home, took it outside and gently warmed it from below with a spirit burner. The last remaining solvent was acetic acid which burns quite well. Gentle flames rose over the sheet, and went out, leaving a beautifully developed plate. The system had not seen any sulphuric acid. In other words, a possible alternative to sulphuric acid is to 'flambe' the thing!

The correct glassware, I feel sure, is simply icing on the cake. Any of a multitude of jamjars would do the trick. Remember also that although a thin layer plate 20cm x 20cm may cost around £2, if it were chopped up into 2cm x 10cm strips they would cost 10p or less each. Why cannot everything be done in miniature, putting miniscule spots on under a stereomicroscope, perhaps 2 or 3 mm apart, develop for 8-10 mins, flambe, then observe your handiwork under the stereomicroscope?

Yours,

Auntie Nora

LICHEN CONSERVATION NEWS

It has been suggested that BLS members might like to know more of the activities of the Conservation Committee. Through the kindness of the Bulletin's Editor, it is intended that there should in future be short regular contributions describing items of general interest - this is the first.

An introduction - who we are -

We have a Chairman (Frank Brightman) a Secretary (Joyce Gadsby) and two Conservation Officers (Rob Jarman and myself) to assist the Committee. Rob is concerned primarily with keeping the site records etc., and answering site enquiries, whilst I have agreed to take on general aspects of policy and reporting to the BLS Council. But we cannot function without the help of many others - the general members of the Society, the Nature Conservancy Council, the National Trust, local Trusts, the Conservation Association of Botanical Societies (CABS) and others.

What we have been doing recently -

This account is not intended as a precis of the Committee's minutes, so it refers only to a few of the more important matters that we are considering at present. We are trying to rationalise the site recording schemes used by the BLS - recording methods have evolved organically and not always wholly rationally, but we have found much common ground. A much more difficult problem is the grading of sites for lichenological interest. It seems that everyone has their own idea as to what categorises sites of lichenological interest, these range from criteria virtually determined by the properties of computer programming languages, through to "This is a jolly good site and I like it".

Some issues run and run, 'Mousetrap' like. One is the by-now-rather-battered New Forest. The special epiphytic communities of the Forest are of international importance - but their future is always under threat. Forest management, public pressure and pollution have long had their effects, but now we have the renewed

danger of increased air pollution from the Solent area (the date of the Public Enquiry into Fawley 'B' is not known at the time of writing). Such industrial developments bring increasing atmospheric contamination to the Forest on east or south-east winds, but unfortunately we cannot say when threshold levels are being exceeded because there are probably no absolute thresholds - lichen vigour decreases as the pollutants increase and the damage varies from species to species. We look forward to specialist support from members when problems of this kind arise - we have unique professional knowledge in the BLS which must be marshalled for site protection.

A less parochial issue is that of selecting Red Data Book species. The concept seems simple, yet the nomination of candidates is complex. Many are small and hard to name (pace those few specialists who are NOT defeated by carbonised spots under 1 mm diameter), and so are at times seriously under-recorded. But to my mind a much more serious matter is the use to which Red Data lists may be put. It is imperative that all users of the lists realise that some of the more common species NOT LISTED may also have ecological and conservation value, and even more important - the ultimate value resides in sites and whole communities, not just individual species. We should in fact be looking on the Red Data lists as focusing attention on those locations and ecosystems of value where conservation effort should be directed. More of this anon, because we are involved in Red Data exercises on both a UK and European scale.

Kerry Dalby

MISCELLANEOUS

Proposals for a London Lichen Group

I am proposing the formation of a London Lichen Group which will meet informally and irregularly in the London area. Initially we would meet at Imperial College, but subsequently we may circulate between the British Museum (Nat.Hist.), Imperial College and other London colleges. We would discuss (or display) any subject of lichenological interest; that is, research under way, interesting papers recently published, matters of physiological, ecological or taxonomic concern, etc.

Meetings would be open to anyone interested, whether or not they are members of the British Lichen Society or the University of London. There would be no formal administration or subscriptions. Initially I would act as co-ordinator for speakers, locations and dates. If you would like to participate, please contact me at 132 Gordon Road, CAMBERLEY, Surrey, GU15 2JQ or telephone (best after 7.30 pm) CAMBERLEY (0276) 21230.

Kerry Dalby

For sale: Baker Microscopes

Due to the purchase of new student microscopes, Bath University are selling several ex-student monocular microscopes with detachable mechanical stages and X10, X40 and X100 (oil immersion) objectives and X5, X10 eyepieces & X10 focusing eyepiece with graticule. Microscopes have a plain and concave mirror and are provided with a bench lamp. Price:- £50.00 + VAT (= £57.50). A few have their own carrying boxes (£5.00 + VAT) - first come, first served. This is an excellent opportunity to purchase a reliable solid microscope at a reasonable price. Contact Tim Moxham, Dept. of Plant Sciences, University of Bath, Claverton Down, Bath, Avon, BA2 7AY, who can bring any microscopes to the January meetings at the Jodrell Centre, Kew.

Extinct macrolichens of Estonia

Recently Trass and Randle have reported 38 lichens which they consider are now extinct in Estonia. Habitat destruction and air pollution are thought to be mainly responsible. It was a surprise to discover, on reading their list, that 80% occur in Britain, many being widespread, e.g. Collema auriforme, C. crispum, Hyperphyscia adglutinata, Leptogium sinuatum, Parmelia elegantula, P. perlata, Toninia lobulata and Xanthoria elegans. The Red Data Book of Estonia records these under the O category while to us they are very much run-of-the-mill lichens. This emphasises the importance of compiling Red Data Books on an international scale.

Folia Cryptog.Eston. Fasc.25 (1987): 1-7.

BLS Greeting Cards

No new designs are being issued this year as there are still stocks of Solenopsisora candicans and Sphaerophorus globosus left. These can be purchased at the bargain price of £3.50 for 10 (post free) from Sandy O'Dare, Springfield, 13 Barrows Road, Cheddar, Somerset, BS27 3AY.

Nature in Churchyards

A leaflet Nature in churchyards: conservation guidelines is enclosed with this issue of the Bulletin. Churchyards are major lichen habitats, as acknowledged in the guidelines. The British Lichen Society made a financial contribution towards the cost of the printing. Members might consider pinning up their copy on the notice board of their parish church.

NEW, RARE AND INTERESTING BRITISH LICHEN RECORDS

(Contributions to this section should be submitted in a form similar to that of the entries below to Frank Brightman, South London Botanical Institute, 323 Norwood Road, London SE24 9AQ.)

Erratum

Parmelia centrifuga noted in Bulletin 58 (Summer 1986) p. 35 should be deleted from the British Flora. The specimen found was assumed to be P. centrifuga on the presence of very immature fruits and chemistry by TLC. It is in fact fertile Parmelia incurva which has the same chemistry, and the presence of fruits inhibited completely the formation of soralia. These were later noted on other thalli close by on a further visit to the site.

New Records

C. B. Hitch

Caloplaca lucifuga: On several old Quercus trees, Brampton Bryan Park, Hereford, VC 36, GR 32/35-71-, F. Rose, M. Gosling and K. Sandell, 1987, det. B. J. Coppins. Also on Quercus, Moccas Park, VC 36, GR 32/34-12-, M. Gosling and K. Sandell, 1988; and at Hesleyside, Northumberland, VC 67, GR 35/81-83-, B. J. Coppins et al., 1969, not identified until recently. This tiny, sterile, blister-like golden-sorediate K+) corticolous Caloplaca species was named and described by G. Thor in 1988 (Lichenologist 20, pp. 175-178). New to the British Isles; known also from France, Germany, Italy, Denmark and Sweden.

F. Rose

Caloplaca luteoalba: On chalk stone in steep, stony chalk grassland (SE aspect), Deep Dene, Lullington, Sussex, VC 14, GR 51/54-02, 1988, confirmed P. W. James.

F. Rose et al.

Cavernularia hultenii: Widespread on Betula in old open woodlands on Raasay, VC 104 (South Fearn, 18/58-35-; Hallaig, 18/59-37-; Loch na Broon, 18/57-46- and 18/58-46-) 1987 and 1988. This lichen, formerly regarded as more or less confined to the relics of the Caledonian Pine Forest in the British Isles (and even there, commoner on Betula and Sorbus than on Pinus) is now confirmed as a highly oceanic species (as in Norway) and will surely be found elsewhere along the W. Scottish coast; it is already known (rarely) in Skye and Sunart on Betula.

F. Rose

Cladonia convoluta: At the Caloplaca luteoalba locality given above, with Caloplaca lactea and Porina linearis (on pebbles), 1988, all new to Sussex.

F. Rose et al.

Cladonia incrassata: On damp sandstone rocks, Cow Wood, Handcross, Sussex, VC 14, GR 51/26-29-; Tilgate Wood, Ardingly, Sussex, VC 14, GR 51/33-31-; Motts Mill, Groombridge, Sussex, VC 14, GR 51/52-35-. 1985-88. This tiny Cladonia species seems to be much overlooked.

F. Rose

Cryptolechia carneolutes: On old Fraxinus, Dundon Hill Wood, Dundon, Somerset, VC 5, GR 31/48-32, 1988. Not recorded for Somerset in W. Watson's Lichen Flora (1930), but listed for VC 6 in his Census Catalogue (1953).

F. Rose

Cyphelium notarisii: On wood of a picnic table in the grounds of Blickling Hall, Norfolk, VC 27, GR 63/71-29-, 1988.

Peggy Cayton and C. J. Hitch

Fallhanora (Catillaria) bouteillei: On non-basic igneous rock in disused quarry, Great Ayton, VC 62 (N.E. Yorks), GR 45/57-11-, 1988. First record of this normally foliicolous species from northern England and first modern British record of the saxicolous form. Det. B. J. Coppins.

A. Fryday

Fallhanora (Catillaria) bouteillei: On leaves of Buxus sempervirens in a shaded valley in the grounds of Fyvie Castle, Aberdeenshire, VC 93, GR 38/76-39-, 1988; Hypogymnia physodes and Parmelia subaurifera were also growing on the leaves. Det. C. J. Hitch.

B. Abbott

Leptogium cochleatum: On an ancient Fraxinus, Yew Scar Wood, Gowbarrow, Ullswater, Cumberland, VC 70, GR 35/41-20-, 1988. The only modern record for England.

P. W. James, J.H. Looney and F. Rose

Megalospora tuberculosa: On Fraxinus, with apothecia, by River Barle near Tarr Steps, Somerset, VC 5, GR 21/86-33-, 1988. The first record of this species in a fertile state for over 100 years.

F. Rose

Opegrapha demutata: On brickwork of disused farm buildings, Gibraltar Point, Lincolnshire, VC 54, GR 53/55-58-, 1987. Det. B. J. Coppins. New to Britain. Similar to O. ochrocheila but white-pruinose, not red (K+p) pruinose.

M. R. D. Seaward

Pannaria pezizoides: On Salix in carr, Ashcombe Bottom, Simonsbath, Somerset, VC 5, GR 21/77-39-, 1988. New to Somerset.

F. Rose and P. A. Wolseley

Verrucaria knowlesiae: On mortar on remains of mediaeval castle, Loftus, VC 62 (N.E. Yorks), GR 45/70-16-, 1987. Second locality for this recently described species (Lichenologist 20, pp. 1-10, 1988) and the first from mainland Britain. Det. P. M. McCarthy.

A. Fryday

TREASURER'S REPORT ON THE ACCOUNTS
FOR THE YEAR 1987

Once again I have tried to make the Accounts for 1987 more interesting by itemising popular events showing both cost and receipts, and combining items of academic interest such as balances on the various accounts at banks together with interest receivable.

One item which I am sorry will disappear in future (stocks exhausted) is the Royalty received on the sale of Dr. Ursula Duncan's Book. She was a great benefactor to the Society and besides bequeathing the Royalties on her book, she always insisted on paying her subscription notwithstanding she had been elected an Honorary Member as a tribute to her work for lichenology. I trust the absence of her name in the Accounts will not mean she will join the realms of the "Forgotten".

As promised I have managed to keep membership subscriptions static for five years but now the cost of publishing and despatching the Lichenologist is costing the Society £2 more than the £15 subscription. Consequently proposals will be put before members at the next Annual General Meeting to rectify the position. This will be a very important item on the Agenda and as many members as possible should attend so that the result is in accordance with members' wishes.

Accounts. It will be noted that the cost of publishing the Bulletin fluctuates from year to year. This is entirely due to the printers rendering their accounts at very irregular intervals. The variation in the amount of individual subscriptions paid to other organisations is due to the 'Rate of Exchange' differing at times of payment. Overseas organisations demand to be paid in the currency of their country.

Another item appearing for the first time is Bank Charges - all the big banks have decided to make a charge to charities for keeping their bank accounts. This charge applies to the Society despite my vehement protests.

Finally I must record my thanks for their help and untiring efforts in collecting subscriptions to the two Assistant Treasurers - Mr Frank Dobson and Dr John Sheard. Also, the Society's Auditor who manages to spare time, at very short notice, to perform the important task of verifying the accuracy of the Accounts. I am indebted to him.

Noel Tallowin
Hon. Treasurer.

BRITISH LICHEN SOCIETY

EXPENDITURE & INCOME FOR THE YEAR ENDING 31/12/87

1986	<u>EXPENDITURE</u>	£	£	<u>RECEIPTS</u>	£	1986
£						£
8150	Printing & distributing The Lichenologist	8772		Subscriptions	7848	
2643	Less Profit Sharing	<u>2957</u>	5815	Add Life members	<u>60</u>	7908
	Printing & distributing the Bulletin			Sale of Atlas	3	26
1274	Subscription paid:-		602	Sale of Microchemical Techniques	13	-
	CoEnCo	7		Royalties:-		
	CABS	25		Dr U K Duncan's book	227	129
15	Biological Council	18		Interest received:-		
30	Cryptogamie Bryol	34		Banks	1065	971
20	American Bryol & Lich	19		Nat. Savings Bonds	<u>1186</u>	2251
19	Inter Mycol Assoc.	<u>16</u>	119	A.G.M./Linnean Society		
	Postage		707	Receipts	1065	
	Grants - Travelling etc.		175	Grant - Royal Society	<u>500</u>	
	Library		252		1565	
50	Insurance		50	Less expenditure	<u>1220</u>	345
	Bank charges		101	Greeting cards - sales	207	125
	Secretarial expenses		51	Greeting cards - cost	<u>166</u>	41
	Checklists written down		100	A.G.M. - Book Auction		347
	Pd written down		24			269
			7996			
648	Excess of Income over Expenditure	<u>3139</u>				
			£ 11135			£ <u>11135</u>

BALANCE SHEET AS AT 31/12/87

<u>LIABILITIES</u>	£	£	<u>ASSETS</u>	£
Subscriptions in advance	792		Cash at Banks	9876
Life members	240		National Savings Bonds	12930
Conservation Fund	432		Stocks:-	
Less expenditure	<u>162</u>	270	Checklists	550
Burnett/Wallace fund	330		Less sales and write off	<u>150</u>
Less engraving microscopes	<u>22</u>	308	Keys	400
Royal Society - grant		1000		214
B.P. International - grant		400		
General fund	17271			
Add surplus for year	<u>3139</u>	20410		
		£ 23420		£ <u>23420</u>

Audited and in my opinion a correct record of
the Accounts of the British Lichen Society

T.D.V. Swinscow
Honorary Auditor 4/6/88

S.N. Tallwin
Honorary Treasurer

NEW MEMBERS

The following members joined the Society between April and October 1988. The Assistant Treasurer, Mr Frank S Dobson, c/o Richmond Publishing Co.Ltd., Orchard Road, Richmond, Surrey TW9 4PD, should be notified of any change of address so that the mailing list can be kept up-to-date and you will continue to receive all Society literature uninterrupted.

Mr Oyvinn ASKELAND, 5620 Torvikbygd, NORWAY.

Dr J.W. BATES, Dept. of Pure & Applied Biology, Imperial College at Silwood Park, ASCOT, Berks, SL5 7PY.

Mr Raymond BRADNEY, 6 Shropshire Avenue, Brinnington, STOCKPORT, SK5 8HE.

Ms Inga E. BRUTEIG, Dept. of Botany, University of Trondheim, N-7055 Dragvoll, NORWAY.

Dr. Andrew A. FARMER, Dept. of Pure & Applied Biology, Imperial College at Silwood Park, ASCOT, Berks., SL5 7PY.

Prof. Maria A. FAVALI, Institute of Botany, Viale delle Scienze, University of Parma, 43100 Parma, ITALY.

Dr Anthony FLETCHER, 11501 February Circle No.301, Silver Spring, MD 20904, U.S.A. (change of address).

Mr Richard S. GRINVALDS, 36 Le-Marchant Road, Frimley, CAMBERLEY, Surrey, GU16 5RW.

Dr. Annick MATHEY, Station de Pathologie Vegetale, INRA, Route de Saint Cyr, 7800 Versailles, FRANCE.

Mr Keith D. MEE, 118 Colinton, Holland Moor, SKELMERSDALE, Lancs., WN8 9AE.

Miss Evelyn A. MOIR, Horris Bank, Newtown, NEWBURY, Berks., RG15 9DF.

Mr Tatsuya OKAMOTO, Botanical Institute, Faculty of Science, Hiroshima University, Hagashi-senda-machi, Hiroshima 730, JAPAN.

Mr Arto PUOLASMAA, Murtomaantie 40, 20300 Turku, FINLAND.

Mr Neil D. REDGATE, Burnside, Murkle, CAITHNESS, KW14 8YT. (change of address).

Ms Zandra SLATER, 3 East Green, Runhall, NORWICH, Norfolk, NR9 4DW.

Mr L. SPIER, Kon. Arthurpad 8, 3813 HD Amersfoort, HOLLAND.

Mr. Thomas S. WHARTON, 40 Dere Avenue, Tindale Crescent, BISHOP AUCKLAND, Co.Durham, DL14 9SY.

Mr. R.W. (Dick) WHITE, The Barn, Stodday, LANCASTER, Lancs. LA2 OAG.

Mr. Marcus YEO, 2, Park Street, BANGOR, Gwynedd, LL57 2AY.

PUBLICATIONS FOR SALE

Orders to Mr. F.S. Dobson, 58 Parkway, London, SW20 9HF

Price

Bulletin 32, 39, 41, 44, 46, 48 - 63

£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.

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BULLETIN 63. 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.

Published by Tradeprint(Cromworth Ltd), 515 Abbeydale Road, Sheffield, S7 1FU

ISSN 0300 - 4562