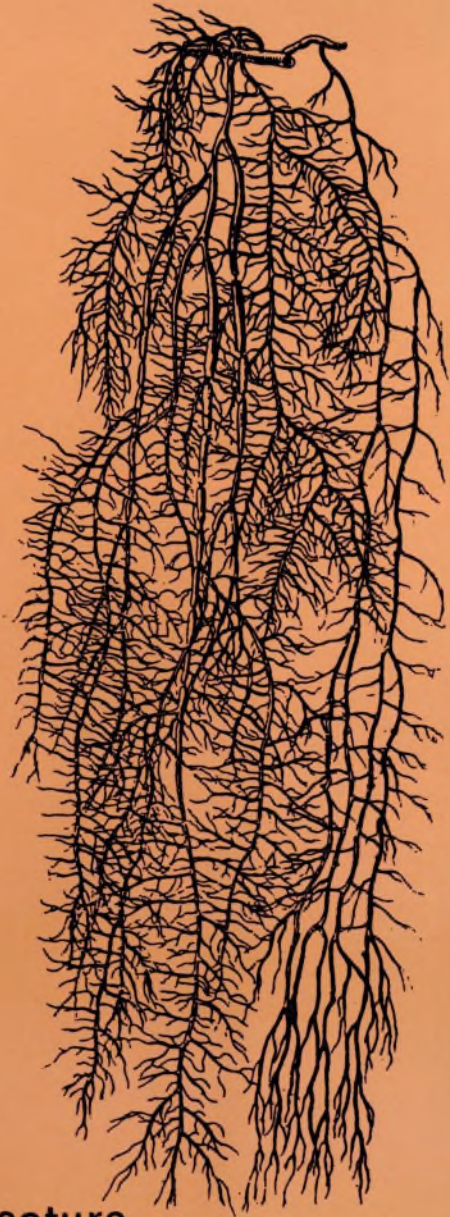


No.56

Summer 1985

**BRITISH
LICHEN
SOCIETY
BULLETIN**



**Edited by O.L.Gilbert,
Dept. of Landscape Architecture,
The University, Sheffield S10 2TN**

The old forests of Western Europe and their epiphytic lichens

The epiphytic lichen vegetation of British forests is now quite well known, having received much attention in the last 18 years. Accordingly, I have in collaboration with a number of continental lichenologist friends, been attempting to carry out a survey of the lichen flora of as many as possible of the old forests of western continental Europe. This work began in 1968, and in recent years has covered many regions and forests: About 260 individual forests have now been sampled in the epiphyte survey: 105 in most parts of France, 12 in West Germany, 60 in Denmark, 33 in Norway, 10 in Belgium, 2 in Luxembourg, 1 in Holland, 30 in N and central Italy, and 2 in NE Spain.

Since about 1968 Pisut, Wirth and others have drawn attention to the great decline in epiphytic lichens in the forests of central Europe, attributing this change to a combination of increasing air pollution, and in more remote areas, to changes in forest management techniques, including the felling of many of the older stands of hardwoods, and their replacement with conifers. In the Netherlands and Belgium as Barkman pointed out in 1958, such changes have been going on for a long time. These changes have become steadily more serious, so that today little is left of the formerly rich epiphyte floras of those hardwood forests that remain in a great zone of the north European Plain from about Calais eastwards through the Low Countries, across Germany, and far into Poland and Czechoslovakia; the hilly country of central Germany is also severely affected, so that one has to go south to the Black Forest and the Swabian Jura before one finds anything of the old flora surviving.

Nevertheless, recent survey work has revealed that many species and communities of epiphytic lichens, (and bryophytes) survive in extensive areas of western Europe where it had been feared that they were extinct. This is particularly the case in France, where apart from

the industrial region about Lille and Dunkirk in the far north, severe pollution zones are still limited to the immediate neighbourhood of Paris and the lower Seine valley down to Rouen, and to smaller areas about Lyon, St-Etienne, Nantes, North Lorraine, etc., though management practice in many French lowland forests (where trees are regenerated in very dense stands, and trees are cut down when they reach a diameter of 40 to 50cm) has resulted in rather dull epiphyte floras generally of the *Parmelion perlatae* type (with much *P.caperata*, *P.perlata*, *P.revoluta*, *P.glabratula*, *Evernia*, *Pertusaria* spp etc). Even in the French lowlands, however, *Lobarion* and *Usneion* communities survive in a few places in old forests in the relatively oceanic Pas de Calais, e.g. at the Forêt de Boulogne and Forêt de Montcavnel. In Normandy, and still more in highly oceanic Brittany, rich *Lobarion* communities of SW British type, are still present in a number of old forests (See B.J. Coppins' account of the BLS Excursion to Brittany in *Lichenologist*, 1971). Even though there are rather few really large old oaks or beeches such as one finds in comparable sites in SW England, the *Lobarion* communities seem able to maintain themselves in the moist, clean air on smaller trees than is usual in SW England. What one does notice in Brittany and Normandy (those parts of continental Europe most akin in climate to southern England) is the great rarity, indeed often absence, of the *Lecanactidetum premneae*, the community that is so uniquely



FRANCIS ROSE
examining a tree
in the New Forest,
England, 1985.

developed in southern Britain. Lecanactis premnea, L. lyncea, and Rinodina roboris, for example, are extremely rare in most of lowland west and central France - there just aren't enough old oaks present for it to develop as the normal "post climax" epiphyte community as it still commonly does with us, even into dry East Anglia.

Apart from the oceanic west of France the only other area of lowland north or central France where rich epiphyte communities occur is in a few of the ancient, formerly Royal, forests around Paris. The supreme example here is the great forest of Fontainebleau, some 120 square miles of woodland far enough (38 miles) south of Paris to be little affected by its pollution. Even here, the greater part of the forest is either sandy heathland, colonised by (or planted with) pines, or else rather dull managed oak or beech forest with relatively small trees, or else coppice. But some areas remain, - the "Reserves Biologiques" - ironically, owing their original conservation as relics of the ancient hunting-forest structure not to naturalists, but to the artists of the Barbizon school of painters last century. These artists were outraged when the French forest authorities began to clear the old, ancient, irregular open woodlands in order to plant some more economically valuable trees, and managed to save perhaps 200 hectares or so of the old woodlands.



Giant oak in the great forest of Fontainebleau
France

It was much later that the naturalists awoke to the situation and took these areas over. In one of these reserves, an area of very hilly, open old beech and sessile oak forest with holly etc., and many sandstone outcrops, a remarkable flora persists including a little Lobaria pulmonaria, Nephroma parile, Pannaria conoplea, and Gyalecta ulmi (none of these now occur anywhere else within 100 miles of Paris), while on the moist N facing sandstone cliffs (and on a few nearby birches) there remains an extraordinary relic oceanic flora, including Menegazzia terebrata, Cetrelia olivetorum, Parmelia laevigata and P. endochlora. The drier sandstone outcrops at Fontainebleau are of course famous for their saxicolous lichens, including both southern elements like Dimelaena oreina, and boreal ones like several Umbilicaria species.

There is very little forest of any lichenological interest left in the plains of the Netherlands and northern Germany today, until one reaches the northern part of Schleswig-Holstein. Here are oak and oak-beech-holly forests, rather reminiscent of some of eastern Scotland in their lichen epiphytes, with a species poor Lobarion. In Denmark, particularly in Jutland, are the best remaining lichen rich woodlands of the northern European plains. Here species-poor Lobarion (L. pulmonaria only, no Pannariaceae now) occurs quite luxuriantly in several ancient oak and beech forests, with again many of our usual British crustose "old forest" lichens. SW Norway on the other hand, is much more oceanic, and the lichen flora (as well as the oak and ash woods) remind one of western Scotland, though a number of the more strongly oceanic species are rare (Parmelia laevigata) or absent (Parmelia taylorensis, Thelotrema subtile).

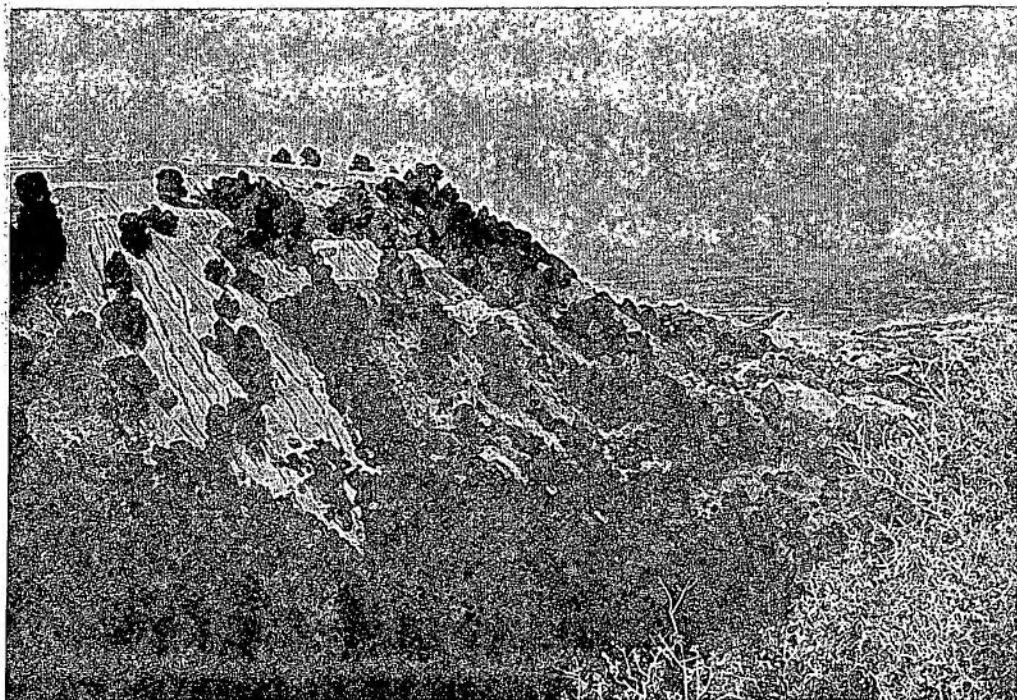
However, apart from the more oceanic areas along the Atlantic coastline, the major "oasis" in west and central Europe today where rich lichen epiphyte vegetation (with many old forest relic species) can still be studied, are to be found in the montane massifs. These lie above 350m (in the north) or 500m (further south) up to the tree line about 1500m, and include a number of relatively isolated hill or mountain groups beside the major Alpine and Pyrenean ranges.

Although acid rain is modifying the lichen communities, in more exposed sites from a Lobarion towards a Pseudevernion, extensive forests remain in many of these massifs with little altered lichen vegetation, particularly to the west and south. A clear zonation

of forest communities, unlike anything to be seen now in the British Isles, is characteristic of most montane massifs in western central and central southern Europe. The more central group of upland areas includes the Belgian Ardennes, the Massif Central, the Vosges, and the Jura in France, and the Black Forest, the Swabian Jura, and the Bohmer Wald-Bayrischer Wald in Germany. The greater ranges of the Alps and Pyrenees show similar vegetation patterns at least on their northern sides. One passes from the oak-hornbeam-lime zone (often much modified by management, and so only locally lichen-rich) into the beech zone (with mature sycamore) at about 900 - 1000m (at only c.500 m in Ardennes) and into the silver fir zone (usually with beech still present) at c.1450 m, though on poorer soils this may descend lower.

The oak and beech zones are characterised by a rich Lobarion of progressively more continental type as one goes eastward, and the silver fir, though it also carries the Lobarion on the better soils, has a rich Usneion of *Usneetum filipendulae* type on poorer soils and in the higher purer stands.

The Lobarion in the west (Pyrenees, Massif central) has a number of more oceanic species present. *Lobaria virens*, (which does not seem to occur east of the Rhone valley today), *Sticta limbata*, *Dimerella lutea*, (Pyrenees only) and much *Nephroma laevigatum*; more continental species such as *Nephroma resupinatum*, *N. bellum*; and *Leptogium saturninum*; however occur too, as does *Catillaria globosa*, and these extend right to the east of central Europe, with the addition of *Menegazzia terebrata*, which (besides occurring in the hyper-oceanic western British Isles) is very much a feature of the central and east European Lobarion, together with *Cetraria olivetorum*, *Lobaria pulmonaria*, *Lobaria amplissima*, *L. scrobiculata* and *Parmeliella triptophylla*. *Thelopsis rubella* is rare, but widespread throughout the European Lobarion, S. into Italy and N. into Norway. The Usneion of the higher silver fir (and spruce, where native further east) zones is characterised by *Usnea filipendula*, *Alectoria sarmentosa*, *Ramalina thrausta*, *Bryoria fuscescens*, *B. capillaris*, *B. bicolor*, *B. nadvornikiana*, and from the Vosges eastwards, by *Bryoria setacea* and *Evernia illyrica*. *Letharia vulpina* is essentially a species of the Alps. Pseudevernion communities (with *Cetraria pinastri*, *Hypogymnia bitteriana* and *H. vittata*) come in more to the east.



Natural Quercus pubescens and Pinus halepensis forest,
Aragon, Northern Spain.

The general decline in oceanic elements eastwards is, however, interrupted by the occurrence in warmer, humid Austrian valleys, such as by Almsee, of such surprising species as Parmelia crinita, P.laevigata, P.sinuosa and Heterodermia obscurata. Parmeliella plumbea and Nephroma laevigatum do not seem now at least, to extend north of the Alps, east of the Wutach valley in SW Germany.

Further south in Europe, the zonation of the forests and their lichen communities is more complex at lower levels, but essentially the same higher up. In Provence in SW France, for example, and generally in the Mediterranean lowlands up to 300 or sometimes 500m, the remaining fragments of native forest (usually much modified by man) of evergreen oak (Quercus ilex) on more calcareous soils and of cork oak (Q.suber) or Pinus halepensis on more siliceous soils; carry a Xanthorion community rich in Physconia species (including P.servitii, P.venusta, P.pulverulacea) and "southern" mosses like Leptodon smithii and Leucodon morensis. From 160 m upwards in humid spots (Les Mayons, near Le Lac) but more generally from 400 to 800m, ancient Castanea forests, managed as pasture woodland and

often with many old pollards, represent the main type of forest climax at the present time. Though there is still argument about whether the chestnut is really native here, it certainly carries a superb Lobarion, which may be evidence for indigenous status. This Lobarion contains three Lobaria species (no L.virens) and much Parmeliella plumbea, together with a wealth of other blue-green photobiont species of Pannariaceae and Collemataceae such as Pannaria mediterranea, P.ignobilis, P.conoplea, P.rubiginosa, P.olivacea (confined to the Mediterranean zone), Parmeliella atlantica, Collema furfuracea and C.subflaccidum. These are intermixed with what in N Europe we would regard as Xanthorion species, including Physconia venusta, P.pulverulacea, Physcia semipinnata, Anaptychia ciliaris, and Parmelia acetabulum, plus an abundance of the very southern Parmelia quercina. This community should perhaps be described as an Anaptychio-lobarion and is rich in southern basicole mosses.

The beech zone is only reached in a few places in Provence, as on Mont Ventoux at over 1400m, where a species poor Lobarion (Nephroma resupinatum and Peltigera collina abundant) occur with a little Lobaria pulmonaria and Leptogium saturninum and bryophytes only from ground level to about 1m up on the trunks of the ancient beeches, corresponding to the zone protected by snow in winter, while above this level there is a rather austere Xanthorion (with Parmelia acetabulum, P.sulcata, Anaptychia ciliaris, Physconia spp. and Phaeophyscia labrata) in the trunk zone exposed to the mistral wind at all times. Fruticose species, other than Ramalina are almost absent.

A very remarkable forest is that of St. Baume in Provence, where an ancient religious tradition that Mary Magdalene spent her last years in a cave here has preserved this forest as virtually a sacred grove. Here on a humid N slope on limestone the Quercus pubescens forest gives way gradually to beech-holly-yew forest (apparently wholly natural) at the low altitude of 700m. The Anaptychio-lobarion (with Gyalecta ulmi) of the Quercus zone gives way to a rather British, oceanic type of Lobarion (with Pachyphiale carneola and Thelopsis rubella) in the beech forest.

The Apennine mountains in central Italy, N. of Lucca and N & E of Florence, display similar zonations to those in Provence, with Xanthorion in the lower, mostly much-modified evergreen and downy

oak (Quercus pubescens) woods up to about 500m; above this the mosaic of chestnut and Quercus pubescens forests has a Lobarion even richer than in Provence, with an even greater wealth of Collema spp. including C.nigrescens, C.fasciculare, C.faccidum, and Leptogium spp such as L.brebissonii, L.lichenoides, L.cyanescens, and L.teretiusculum. Fruticose species are even rarer than in Provence - even Evernia prunastri is very rare, as are calcifuge species like Hypogymnia physodes and Parmelia saxatilis, but many of the small crustose species associated with ancient forests in Britain (e.g. Pachyphiale carneola, Thelopsis rubella, Thelotrema lepadinum, Catillaria atropurpurea, and even Rinodina isidioides and Pachyphiale arbuti occur, also much Pannaria sampaiana. The beech-silver fir zone begins at about 1200 - 1300 m, (e.g. Abetone, Vallombrosa) and besides carrying on trunks of both species a Lobarion of more northern, British type, has luxuriant festoons of Bryoria fuscescens, B.capillaris, and Usnea filipendula, besides other Usnea spp. - so far unnamed. The epiphyte flora in the central Italian mountains seems unaltered over the last 100 years, and is probably the most intact in Europe, apart from those of west Scotland and parts of Norway.

The questions that the epiphyte communities pose are these. Why does one find the Xanthorion as the forest climax epiphyte community in the lower altitude areas in southern Europe, even on trees with bark that would be acid in Britain or north France, such as pines? Why, higher up, is the Lobarion so interpenetrated by species that in N Europe we would regard as members of the Xanthorion, and so lacking in fruticose genera like Usnea? The answers seem to be that in the Mediterranean zone the summer is long, hot and dusty; the bark of trees becomes thus impregnated with base-rich dust, producing a high pH and eutrophication. Hence Xanthorion type species are able to thrive. Lower down it is probably too dry for too long for Lobarion species to survive at all, except in a few sheltered long-undisturbed sites; higher up, the winter rains and October to April humidity are evidently adequate for the more hygrophytic Lobarion communities, but dusty enough in summer for some Xanthorion elements to become established.

FRANCIS ROSE

Report on the New Year Meetings, 4-5 January 1985

The Conversazione was well attended and the Book Auction raised around £200. Prices ranged up to £20 but even these were bargains at less than half the catalogue value. Next year new participants will be required, as the regulars have largely disposed of their surplus books.

Forty-six people attended the A.G.M. Few ripples disturbed the even tenor of B.L.S. administration, all officers standing for re-election, but note that a new secretary will be required for 1986. Mike Gosling, Paulette McManus and Francis Rose were elected onto Council, and on the toss of a coin, William Purvis co-opted for one year. The momentous decision was taken to increase the number of issues of the Lichenologist to four a year from 1986 with a subscription increase to cover this.

Report on the Lecture Meeting: 'Travels with a Lichenologist'

A summary of the papers delivered is given below together with the President's introduction.

Introduction - J.R.Laundon

It was in 1964 that John Sheard, proposed that the title 'British Lichen Society' should be changed to 'Lichen Society' because he considered that we should be worldwide in scope. The Council rejected his suggestion and, indeed, the Society has tended to concentrate on British lichenological matters, rather than adopt a global view. For this afternoon however, John Sheard will have his wish and British lichenology will not be discussed or even mentioned. Our title 'Travels with a lichenologist' reminds me of Robert Louis Stevenson's book Travels with a Donkey (1879) which I had to study at Kettering Central School for my School Certificate. This was in the days before O-levels and before schoolchildren studied sexy books by D.H.Lawrence, John Updike, and the like. Of course, travelling with a lichenologist can hardly be compared with travelling with a donkey, or can it? Stevenson wrote that his companion, called Modestine, "went doggedly ahead of her own accord, as before a fair wind; but once on the turf or among heather, and the brute became demented... it took all the steering I had in

me to keep even a decently straight course through a single field ...in half a minute she was clambering round and round among some boulders." Well, Stevenson travelled abroad to improve his health; whether any of our present speakers visited their respective countries for this reason perhaps we will learn this afternoon.

Polish Lichen Flora: Past, Present and Future

It soon became clear that Mark Seaward's title alluded not so much to the rise and fall (under pollution stress) of the Polish lichen flora but rather to the difficulties of defining the lichen flora of a country whose boundaries have suffered many changes. Practical difficulties likely to be encountered by British lichenologists include the language barrier, which extends to a completely different Latin pronunciation, and the fact that many of the best habitats lie in sensitive areas such as those close to political boundaries or within military training zones. Though aware of lichen conservation, the Poles are approaching it in an unfamiliar way, the emphasis being on species rather than habitats. Also management by non-intervention has caused a dramatic decline in terricolous species such as Fulgensia. In compensation however, most road verges support Cetraria islandica. Due to air pollution, on a scale now just a memory in Britain, huge epiphyte deserts exist inhabited only by Lecanora conizaeoides.

Lichen Ecology of Montane Forests in South-West China

Ivan Day's lecture filled out the Bulletin article he wrote a year ago. The Picea-Abies forests in which he collected, set among towering snow capped peaks appeared an unlikely habitat for the varied and exotic Lobarion he described. There was almost no European element among the corticolous lichens but interestingly, quite a number of the saxicolous species were common to Britain. As might be expected, it was proving difficult to determine many of the collections. There is currently a ban on taking any biological specimens out of China; once this is lifted a further expedition is planned.

Lichens of a West Norwegian Birch Wood

Kery Dalby described for us the macrolichens of a birch wood overlooking the sea in West Norway. It was more northerly than any wood in Britain and lay well beyond the limits of oak and locally of elm. Posing the question "Does the Lobarion community gradually shed species as one travels north of the Quercus limit?" the answer appeared to be no, or not macrolichens anyway. A species-rich Lobarion was present on aspen while birch supported typical Physodion which included the British rarity Cavernularia hultenii. The communities on rowan were particularly interesting as certain, but not all, of the larger trees supported a Lobarion whereas the literature was unanimous in suggesting their acid bark with its poor water holding capacity should be clothed with Physodion. During the ensuing discussion it was considered that possibly nutrient additions from sea spray were enriching the rowan bark sufficiently for it to support the more demanding species.

Lichens in Saudi Arabia's Deserts and Mountains

David Hawksworth's visit to Saudi Arabia in 1978 was productive in terms of species new to that country (42), but his talk concentrated on their ecology. In areas with no significant precipitation the upper surface of rocks are rendered too unstable for lichen colonisation due to exfoliation. Excessive temperatures may also be important as no lichen was seen growing on concrete. However, they occasionally occur on the sides of boulders away from direct sun. Dew fall largely determines the distribution of terricolous lichens and patches of soil in recesses among rocks often had a good cover of Diploschistes, Fulgensia and Squamarina species. He found collecting difficult wearing Arab head-gear which became dislodged on bending. In the mountains, mist becomes an important source of water and juniper trees laden with Usnea articulata occur. The talk ended with a plea for sensible collecting when working in unknown territory. It is always time consuming naming specimens - up to six years in this case - so it is often more productive to work one habitat thoroughly, or concentrate on a taxonomic group than amass a large general collection.



View over pine heath on outwash gravels near Follidal, Hedmark, Norway. The heath is dominated by Cladonia stellaris, Cetraria cucullata and C.nivalis which form a continuous yellow carpet. Photo D.H. Dalby



Juniper tree laden with Usnea articulata, Saudi Arabia. Photo D.L. Hawksworth

The Exhibition Meeting was so poorly supported that its viability must be questioned. This 'sensitive barometer' may indicate that the society is moving from the current active phase, which has lasted 25 years, into one where a passive interest in lichens predominates.

The following members provided exhibits.

BROWN, D.H. Lichens on a wooden beer mug, carved from the bough of an olive tree.

DALBY, C. The next lichen wall chart - Maritime lichens. Superb water colour paintings of seaside lichens.

FOX, B.W. Some rarer alpine lichens. Six collections from the Scottish Highlands.

GILBERT, O.L. Purple staining of lichens in the uplands. Examples of lichens stained by the droppings of birds which had been eating bilberries.

LOWEN, R. Wanted Nectriella. Examples with a request for material.

RICHMOND PUBLISHING Bookstall.

Conversazione - Lecture Meeting 1986

Members may like to note in their diaries that the Society proposes holding an evening conversazione and book sale, along the same lines as last January, at the British Museum (Natural History) on Friday, 10 January 1986:

The theme of the afternoon lecture meeting following the A.G.M. on Saturday 11 January 1986 will be Lichens as Environmental Indicators. Further details of both these events in the next issue.

ACTION PLEASE

SUBSCRIPTIONS 1986

Because members at the Annual General Meeting held in January this year voted in favour of publishing 4 issues of The Lichenologist per year as from 1 January 1986 it is necessary to raise members' subscriptions to meet the additional cost.

It was agreed to increase the annual subscription from 1 January 1986 to £15 for those paying in sterling and \$30. for members paying in U.S.Dollars. Overseas subscribers may pay in either currency.

This alteration in subscription rate will mean that those members paying by Banker's Order must complete and forward to their bank the revised Order form enclosed with this Bulletin. This should be done as soon as possible to ensure the bank transfers the correct amount in 1986.

With postage at an exorbitant level and one's time at a premium it will be appreciated how important it is to instruct your bank PROMPTLY.

S.N. TALLOWIN
Treasurer.

Grapevine

One or two goodies of the last six months. Most of all, thank you to James Gray and Tony Allen for the excellent close-up photography in BBC2's "Natural World" on February 17th. This fifty-minute study of a Cotswold dry-stone wall built 400 years ago included superb vignettes of lichens "with a calendar spanning the four centuries etched into their patterns" and paid homage to the wealth of this man-made habitat, a misleading term given the plethora of forces and creatures that have made it what it is today.

Lest, however, we began to think an idyllic age was dawning in Auntie Beeb's relationship with lichens, Tuesday Call was at hand on March 3rd to provide a healthy rap on the knuckles. One of the phone-in questioners was enduring sleepless nights worrying about lichens: "I've heard from scientists that they break down the stone". Having recommended "a good fungicidal wash", the consultant on pedogenesis (The executive editor of Do-it-yourself Magazine), continued, "the root system seems to get into the cracks. I don't think it's the roots themselves that do the damage, only they take in water". More generally still, of lichens, "They're a fungus and an alga together, and nothing will touch them, even boiling water".

From here it is not a long way to Miles Kington's definition in "Nature made ridiculously simple" (a Penguin most strongly recommended to those who have not yet come upon it): "Lichen is lawn which thinks it's moss, or perhaps moss which thinks it's lawn --- either way, it's a dried-out version of both and always looks dead. It likes growing (or dying) on rocks, walls, churches, the side of the tree facing Iceland and posters for holidays in Sweden. It has a range of five different colours: rust-red, rust-brown, rust-orange, rust-green and off-rust. What marks lichen off from all other moulds is that nobody knows how to pronounce it". Mr. Kington is equally sound on all other branches of natural life (and death).

Grapevine recently attended an A.G.M. where the presidential address was devoted to "Soil Fertility". The anthropocentric view, that leads us to assess landscape in terms of a fertility index which should always be higher than it is, was much to the fore in both addresses and ensuing discussion. Horticulturist and agriculturist alike were largely unaffected by a mutual secondary theme,

that raised its head only to sink fast: when growing food, we want a high index of fertility; when out with our camera or canvas, we are quite likely to be carried away by eroded, nutrient-poor topographies. Lichenologists incline more than most, of course, to nutrient-poor ecosystems. Many of our favourites among the creation need a low fertility index to get them going. So Grapevine came away meditating a Platonic question: What sort of society would/could afford to give priority to a high aesthetic index?

VINIFERA

Country Diary - 9 : North-West Yorkshire/Sheffield

We woke to a bright frosty morning of the kind which often follows a starry night. After a leisurely breakfast a picnic was made and we set off up the beck in which each stone was ringed with ice. Sheep watched us pass, their breath hanging in the air, the silence was broken only by the children breaking frozen puddles. Our objective, the summit of Whernside, eventually appeared over a rise; we pressed on. It is difficult to take time off to botanise on a cold day with three children romping ahead, but it is equally difficult to ignore lichens, so a compromise was struck. After lunch eaten on the limestone pavement which lies above Greensett Craggs, a few minutes were spent accumulating a winter evening collection. The slabs of cold rock carefully wrapped in spare clothes were stowed in rucksacks and we again addressed ourselves to the slope.

A few weeks later---. The day had been a tiresome one and I was fed up. After supper and some indifferent telly, I still felt unsettled so reaching for the whisky bottle I repaired to my study, set up two microscopes, and sought out the winter evening collection. Only the pyrenocarps needed slides making, I prepared these four at a time winking out the immersed fruit with the tip of a scalpel blade previously moistened in my mouth as I find the slightly viscous nature of saliva helps minimise losses during transit to the slide. Soon I'm totally engrossed, time stands still, the species list at my elbow lengthens. On the second slab of limestone many of the lichens are now familiar, but I still find it impossible to tell between Polyblastia albida, P. deminuta, Thelidium decipiens, T. incavatum and Staurothele rupifraga without examining spores,

so further batches of four slides are prepared. The new key works a treat - - - thank you Brian. Eventually, I stretch, look at my watch and can't believe it is nearly midnight. A last finger of whisky, a final count, 19 species none of them particularly rare, and I turn to the stairs at peace with the world.

Four days on Arran

Under the leadership of Vince Giavarini ten lichenologists braved some atrocious weather in April 1985, to explore the 'lichenologically neglected' Islé of Arran. At least we thought it was neglected until the first evening when Vince, sitting by the fire in our headquarters, pulled out a wad of record cards filled in by Brian Coppins while on holiday. It was immediately obvious that we would have to work very hard if we were to produce lists that could stand beside his. By general consent, Brian's cards were put away for the rest of the trip.

Vince had worked hard to find us a good centre and we were not disappointed. The Arran Outdoor Centre at Shiskine is a Christian establishment that normally runs courses for junior schoolchildren. This had resulted in the development of an excellent tuckshop and we found as with all the best meetings that set up for the day on a good breakfast and with packed lunch and various bars from the shop, we never had to think about such tiresome aspects of existence as food. A word of thanks here to Alistair, the assistant warden, and his excellent staff who made up welcome. They were bemused by our dinner table talk, "Does he only speak in latin?", somebody asked about one of our party.

Our little lab quickly became rather squalid, mainly because we were bringing back wet specimens that had to be laid out to dry on tables or dried, in turn, on an old convector heater that gave you a little shock if you weren't quick. It was fascinating to see how different people coped; woodlice and beetles scattered as some folk emptied messy plastic bags onto the tables; I found myself packeting material far longer than the others and had to admire Brian Fox's methodical way of working - neatly gathered specimens laid out, dried and packeted within the evening, leaving time to take some of us down to the local hotel for a quiet drink later.

Vince was normally to be found looking down an antiquated (antique would be too kind a word) microscope or filling in his record cards. After a day or two the whole party had identified with Vince's quest to find over 300 species during the meeting. At each meal we would ask anxiously "How's the card going, Vince?" but we need not have worried, the magic number was passed. Here is not the place to discuss the lichens but surely a few beans can be spilled? We soon found that the woodlands were generally disappointing, being rather exposed. We found a pine plantation which seemed to have plenty of Micarea-like species and Brodick Park provided us with a fine Lobarion, but no sheltered sites with, for example, Pseudocyphellaria species were found. The mountains were lost to the weather so we concentrated upon rocky exposures on the coast, particularly the cliffs of the raised beach which we found quite exciting. Sticta canariensis "like rhubarb leaves" and Menegazzia were macrolichen highlights and the wide range of Caloplacas (C.arnoldii, C.albolutescens, C.littorea and others) was another pleasant feature of these outcrops. Arran has an astonishingly varied geology, a walk of half a mile can take one through dozens of rock types and microhabitats; calcareous, siliceous, hard, soft, with or without running water (usually with in our experience), so these coastal places gave us our longest lists. Even so, we were feeling, towards the end of the trip, that Arran is larger than we had realised and there is still plenty of scope for more fieldwork before a meaningful checklist of Arran lichens can be compiled.

We felt somewhat handicapped by the absence of our expert B.L.S. referees but, looking on the bright side, perhaps it was 'good for us', at least this was what we told ourselves. Maybe we did think about our specimens a bit more carefully than we would have done if they had been easily named by experts and it was a pleasant surprise that we could collectively identify a fair amount.

There was a moment of shock at the end. The Scottish ferry company decided to give the ferry a refit and thriftily substituted a vessel half the size. Imagine our concern on seeing our leader stranded on the quayside as the rest of us sailed away. We were glad to learn later that he got on the next boat and, in the true spirit of the meeting he had, while waiting, nipped back to Brodick Park and added a few more lichens to the list.

JOHN SKINNER

Ursula K. Duncan (1910 - 1985) remembered

Shortly after I began lichenology I met Ursula Duncan. I saw her name as a referee when I joined The B.L.S. and appealed for help. As to all requests for aid, she was prompt and generous in her reply, and I found her waiting for my bus at the red sandstone gate pillars of Parkhill the next Saturday. We walked up the drive seeing Coniocybe furfuracea on the base of a wall and Chaenotheca ferruginea on a larch and I was enchanted - by the lichens, by Ursula, by Parkhill. For about 15 years we met once a month, rain or shine, except for the coldest winter months. I would arrive complete with hammer, lens and packed lunch, be taken to the library where the farm accounts were done, and maps would be chosen and previous lists checked. In the winter we went to sheltered dens, river gorges or coastal sites; in the summer we climbed to the high tops or visited distant glens, and in between Ursula wrote to factors or landowners and we recorded in parks and woodlands. We would come back to afternoon tea, scones warmed in the Aga cooker, and walk round one of the Parkhill gardens, Ursula with a trug basket and a trowel in case a plant took my fancy. There are three gardens at Parkhill, none near the house: the wild garden in the quarry from which the house was built in the early 1800's; the walled tennis court with a raised bed for alpiners; and the garden proper, enclosed, with everything that a Scottish countryhouse garden should have, box edges, sundial, fruit, vegetables, flowers. The gardener was probably Ursula's one personal extravagance. The evening was spent in checking our collections, comparing finds with her extensive herbarium and typing out meticulous lists. There was no way to thank her except by working on any specimen left unidentified, and by arranging the next trip.

P.B.T.

The death of Ursula Duncan is a great loss to the B.L.S. and a cause of deep grief to her many friends. She was so kind and generous, and she knew her British plants so well - not only was she the author of a splendid book that is the nearest thing we have to a modern lichen flora - , she was an authority on genera as widely different as Sphagnum and Potamogeton. When in the 1950s I was organising a postal lichen study group, she was unfailingly

helpful with information and advice and generous with specimens, all of which came with notes on points of special interest, a statement of chemical reactions and drawings of the spores and sometimes other microscopical details. My happiest memories of her are of days in the field: of her converting a belligerent gamekeeper in Glen Clova into her obedient and devoted servant with a few quiet words; of Loch Brandy in Forfar ("What I like about Brandy is the tadpoles."); and on the last few yards to the summit of Ben Lawers after two or three hours patiently identifying plants for beginners -- "Now let's be serious." She would wish us, I think, to continue to be serious about lichens, but to be light-hearted and cheerful too.

F.H.B.

For a long period it was impossible to botanize in Scotland without Ursula Duncan's name cropping up and sooner or later you were bound to meet her. Whilst a student I attended a BSBI meeting she was leading on the Isle of Lewis (1958), but that was flowering plants and Ursula found it difficult to give her attention to more than one plant group at a time. On the last day however, as a concession, she spent 20 minutes helping Sam Manning with some Cladonias. Brian Fox and I joined in and learnt our first correctly named lichens. Our next contact was at the BLS Repton Field Meeting (1964). I remember her as being a little diffident when botanizing outside Scotland, but apart from a rising star - Peter James - she knew more than anyone, took an obvious delight in everything, and was very patient with beginners. We met regularly at AGM's up till 1972, where, on one occasion I overheard her and Arthur Wade expressing regret that neither had anybody living nearby to whom they could pass on their knowledge. How I wished I did. Ursula's charm included a degree of Scottish reserve, it is said that on being asked if she would stand for President she declined saying it was a job for a MAN. I have kept the dozen or so letters she wrote and note that she was reluctant for me to send her specimens after 1968 when she failed to identify two Lecidea spp. out of a batch of ten. The last letter, in June 1984, was full of information on Scottish lichens. No more Arbroath postmarks now.

O.L.G.

Black acid snow in the remote Scottish Highlands

A recent paper in Nature (1 November 1984) reported that shortly before 6 am on 20 February 1984 a fall of black snow (c. 5 cm) descended on the Cairngorm Mountains; about 200 km² were affected. Local residents claim that recently black snow has fallen several times each year and appears to favour high-ground but this is the first time that a fall has been scientifically investigated in Britain. The snow contained exceptionally large amounts of black carbon and larger particles typical of pulverised fuel or coal fly ash. The black snow had a pH of 3.0 and in addition to containing SO₄²⁻, Cl⁻ and NO₃⁻ were well represented. Back tracking showed the air had flowed over a broad corridor of industrial activity in the English Midlands.

Acid snow leads to acidic flushes during the spring snow melt and this has the potential to affect lichens in the Cairngorms. Most at risk will be the rich and unusual communities associated with the inner zone of snow patches as they require a slightly higher base-status than other species on the plateau.

My First A.G.M.

If any other beginners have been feeling a bit 'high' on lichens, I recommend an Annual General Meeting to bring them down to earth. With my mind full of mythical quests for magical lichens, I set out for my first A.G.M. of the B.L.S., fully expecting to join about two hundred equally enthusiastic members striding past the solitary violinist in the subway en route to the British Museum. In fact, due to the country being deep in snow, only about sixty members turned up - and most of these had a preoccupied air - perhaps wondering how on earth they were going to avoid taking on yet another onerous office, or maybe shell-shocked by the rumour that Huilia albocaerulescens was no longer a British species, indeed, it was whispered the whole genus was to be sunk. I was also disappointed that the President was not wearing bicycle clips.

While the more mundane matters of the Society were being discussed - so we are existing on a shoe-string (I hadn't realised) - and the subscriptions must go up (Oh well.....) it was fun to fit the faces to the names. I mean those fabulous names that are tossed

around by the initiated on courses and that kept cropping up in the Bulletins which I have been reading to offset the long wait for the Journals. Could this present rather sober company of professionals and academics be the very same lichenologists who had scaled mountains, crept along walls and leaped chasms in search of the definitive golden lichen?

A new Secretary is required - and there are no volunteers. Frank Dobson, who is taking over as Assistant Treasurer, running two courses and a publishing company, in addition to being a member of the Special Police Reserve, is asked if he will take on the job of Secretary as well. He hesitates a little before declining. A worried-looking Field Meetings Officer reveals that the best-laid plans get bedevilled, two meetings arranged for 1985 are going to clash. Oliver Gilbert reproaches us for lack of copy, being expected to produce the Bulletin without any. An irrepressible Mark Seaward runs a book auction to make extra money for the Society and renowned members obligingly buy back the books which they had contributed only yesterday. It is suddenly very clear that the handful of lichenologists who perform the stirring deeds and who write the learned papers, are also THE ONES WOT DO THE WORK to keep the whole thing going. Hurrah for the Famous Ten. (with apologies to Enid Blyton) - and back to Cloud Nine for the Lectures.

PEGGY CAYTON

Some memorabilia of the industrial manufacture of the lichen dyestuffs, cudbear and orchil - Part 2.

Holroyds' dyeing workshop at Sheepscar, Leeds, founded in 1750 was managed by the family until 1927. Amongst the sparse extant documentation covering the early period of the firm's activity are a Ledger Book with Index and a Letter Book for the years 1784 to 1807. These are now deposited with Leeds City Archives, themselves based at Sheepscar, a stone's throw from the site of the works.

Many of the transactions detailed concern the purchase of dyestuffs of natural origin, indigo, mill madder, cochineal, logwood and fustick. References to the lichen dyestuff, cudbear, are few. Relevant letters quoted below, throw light on the salesmanship of the firm of Gordon, producers and suppliers of cudbear from 1758.

In justification of the Gordons' pressing approach, it should be noted that after the foundering of their first factory at Edinburgh, production had been transferred to Glasgow with manufacture also carried on in London, Bristol, Manchester, Leeds and Leith, so that success was vital.

Messrs Gordons
Sirs

Leeds 18th October 1786

The Cask of Cudbear we ordered of you when here - and
not have you send it by any means till you hear from us again
- and your Obedg - Sirs - Yrs & Co. J & J. H.

Leeds 18th October 1786

(Sirs,

The Cask of Cudbear we ordered of you to send when here
- we'd not have you send it by any means till you hear from
us again - and you'd oblige - Sirs - Yrs & Co. J & J.H.)

Messrs Gordons

October 21

Sirs

On the 18th Instt. we wrote desiring you not to send the Cask
of Cudbear ordered which we find was too late --- this
morning we recd. yours advising us of two Casks sent off upon
our Acct. --- and as we only ordered one --- are surprised you
sh'd. send more - as positively we shall take no more than we
order'd -- this is a rule we never depart from ---
consequently you must either call one of 'em back or order
it elsewhere if you think of doing any business with us ---
you must attend to our orders ---

We are Sirs Yrs. &c. Jn & J. H.

Messrs. Gordons

Novr. 1

Sirs

The 18th & 21st Octr. we wrote you concerning the Cudbear --- the letter was to inform you we sho'd not take any more than One Cask --- to which you have never thought proper to give us an Answer --- Yesterday we rec'd it --- but are determined to keep no more than one so you may either order it elsewhere or we shall lay it out to your Acct. -- an answer in course of a few posts ---will oblige Sirs

Yours &c J & J H.

Messrs. Gordons

Leeds 22nd Septr. 1787

Sirs

Yours we rec'd and are surprised you sho'd think of Charging us with two Casks of Cudbear --- as we wrote you --- we sho'd only take one of 'em - to which we had your Answer desiring us to take the other till called for --- which we did --- No. 14 we opened a few weeks since --- but positively shall not use the other which we wrote you before --- if you will order it anywhere we will send it -- and will send you a Bill for the Cask we are using --- your answer in Course will much oblige.

Sirs

your &c

J & J H.

Holroyds' Ledger Book 1783-1823 (Entries concerning cudbear)

Jas & Wm Gordon

	Dr	L.	S.	D.		L.	S.	D.
1785					1784			
Mar 28th a Bill		9	-	19 - 0	May 25 Cudbear		9	- 13 - 3
1786					1785			
Sept 23 a Bill		18	-	8 - 0	Aug 16 Cudbear		18	- 8 - 0
1787					1786			
Dec 15 a Bill		16	-	0 - 0	Oct 18 Cudbear		15	- 16 - 0

ALBERT HENDERSON

Provisional Atlas Vol.2 pt.1 published

The Provisional Atlas of the Lichens of the British Isles Vol.2 pt.1 has just been published. It can be purchased for £2.50 + £1.00 post and packing from M.R.D. Seaward, School of Studies in Environmental Science, The University, Bradford, West Yorkshire, BD7 1DP.

The publication, which is well produced and bound, contains maps for 63 species arranged in alphabetical order. It covers Acarospora sinopica - Hymenelia lacustris. Many hours of informative browsing can be had; did you realise that Coriscium viride and Hymenelia lacustris have almost identical distributions except that the former maintains an outlying population in the Weald? The compiler, Mark Seaward, stresses in his introduction that the maps should be regarded as working documents. He will be glad to receive alterations/additions so that when they finally appear together with their rubrics in volume 2 of the Atlas they are completely up to date.

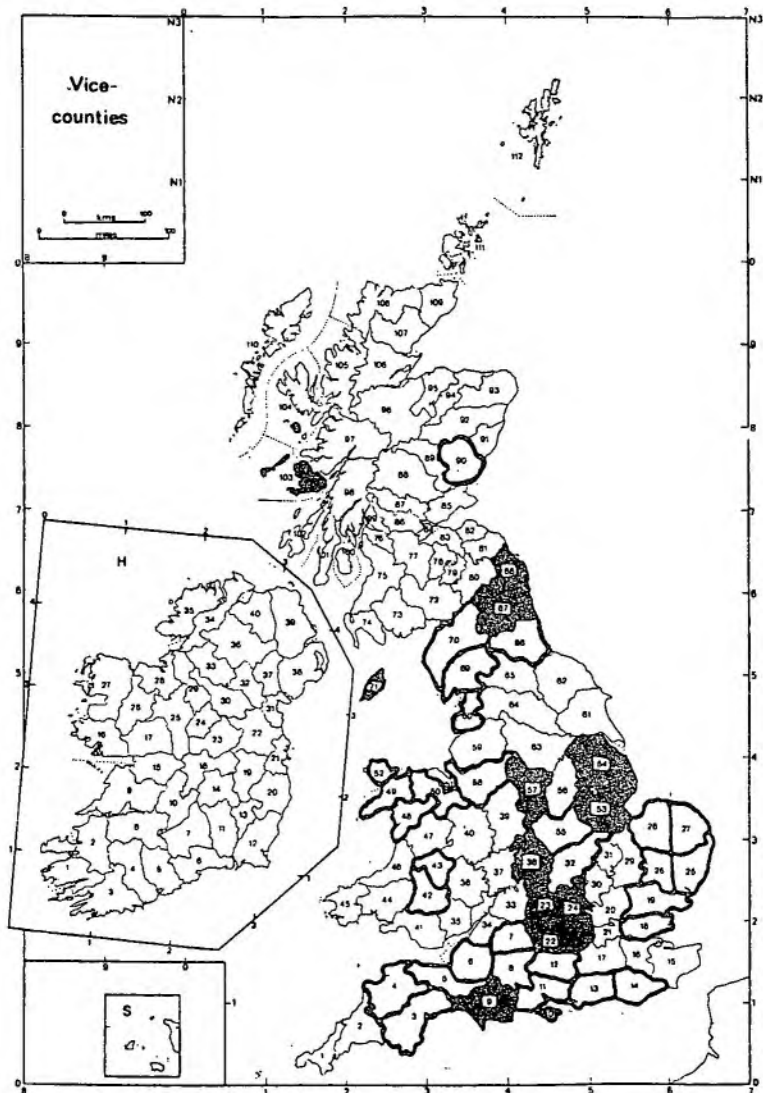
Lichen Flora of the Isle of Wight published

Colin Pope's Flora has just appeared in the Proceedings of the Isle of Wight Natural History and Archaeological Society Vol 7, Pt 8, (1985) pp 577-599. Reprints are available, price £1.00 (post free), from Isle of Wight Natural History & Archaeological Society (to whom cheques should be made payable) 66 Carisbrooke Road, Newport, Isle of Wight, PO30 1BW.

This attractively produced Flora consists of a brief account of the island, its major lichen habitats, their conservation, history of recording and a list containing notes on 395 taxa. Highlights include species with an extreme southern distribution in Britain such as Cryptolechia carneolutea, Opegrapha prosodea and Wadea dendrographa. The ancient turf on Tennyson Down contains what is almost certainly the richest assemblage of chalk grassland lichens remaining in Britain, while the north side of the church tower at Godhill is rendered quite memorable by the abundance of ---. You'd better purchase the Flora and find out why!

Progress in the study of the British lichen flora

This map indicates in solid black those areas for which comprehensive studies, usually floras, have recently been published. Thick black lines enclose Vice-Counties which are currently being worked fairly intensively, for several, floras are in an advanced stage of preparation. The Editor would be pleased to receive corrections and additions to the map so that the next Bulletin can contain a short guide to well studied areas.



The lichen herbarium of the National Museum of Wales

The lichen herbarium of the National Museum of Wales in Cardiff contains around 19,000 specimens. The collection has recently been reorganised with the help of a team sponsored by the Manpower Services Commission and all the genera and species are now arranged alphabetically and follow the current 'Checklist of British Lichen-Forming, Lichenicolous and Allied Fungi' by D.L. Hawksworth, P.W. James and B.J. Coppins (1980), except where nomenclature changes have since been published and these are followed. The specimens are arranged geographically within each species following the Watsonian v.c. system, followed by foreign specimens. Where a specimen has been re-identified, a card is placed in its original position (the name the specimen was originally registered under) so that a track can be kept of all specimens.

The herbarium contains mainly British, particularly Welsh, material, but there are also specimens from most European countries (Austria, Czechoslovakia, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Majorca, Netherlands, Norway, Spain, Sweden, Switzerland), and from Greenland, U.S.S.R., India, Nepal, Somaliland, Canary Islands, N. America, Chile, Uruguay, Galapagos Islands, New Zealand, and others.

The herbarium has been gradually expanded over the years from its foundation in 1911, when around 181 specimens were purchased from the widow of Dr. Plowright. The specimens seem not to have been collected by Dr. Plowright but most are attributed to W.A. Leighton and are amongst the oldest specimens in the herbarium, dating from 1856-1876. Several private collections have since been bought (A.R. Horwood in 1923, J.A. Wheldon in 1825, D.A. Jones in 1937), but most of the specimens have been donated (for example, H.H. Knight's collection of 1,700 lichens in 1944). The present size of the herbarium, however, is due mainly to the interest in lichens shown by A.E. Wade who first joined the staff of the Museum as Assistant in 1920, becoming Assistant Keeper in 1943. At the time he retired from the Museum, in 1960, the number of specimens in the lichen herbarium was 16,381, of which about a third had been collected by him.

The collectors with the largest number of specimens are listed below. Most of the figures can only be estimated.

REV. W. JOHNSON	305	BRITISH ISLES
C. STENHOLM	313	SWEDEN
W. A. LEIGHTON	330	BRITISH ISLES
W. WATSON	352	BRITISH ISLES
P. B. MASON	395	BRITISH ISLES, CHANNEL ISLANDS
A. R. HORWOOD	773	BRITISH ISLES
A. R. PERRY	1,000	BRITISH ISLES, N. AMERICA, JAPAN
D. A. JONES	1,300	BRITISH ISLES
A. WILSON	1,810	BRITISH ISLES
H. H. KNIGHT	2,000	BRITISH ISLES
J. A. WHELDON	5,000	BRITISH ISLES
A. E. WADE	6,000	BRITISH ISLES, NEW ZEALAND

The oldest specimens in the herbarium were collected by the Rev. Hugh Davies and were part of the J. E. Griffith collection purchased in 1927. There are 13 specimens in the herbarium collected by him in Anglesey, but only 4 are dated. The oldest is a specimen of Moelleropsis nebulosa collected in Tregaian in 1790, the other specimens are of Mycoblastus sanguinarius dated 1797 and Parmeliella plumbea and Lobaria virens DATED 1798. Rev. H. Davies (1739-1821), published the first county flora of any part of Wales in 1813, 'Welsh Botany', covering the flora of the Isle of Anglesey in which he recorded 240 lichen species under the genera Lichen, Opegrapha, and Tremella.

The earliest, clearly dated, 19th century specimens in the herbarium were collected by Dr. J. Richardson in N. America. There are two collections, one dated 1821 collected in the Hudson Bay area including specimens of Alectoria ochroleuca, Gyrophora vellea, Letharia vulpina and Usnea ceratina and a second collection dated 1826 from the Rocky Mountains. Of note are a bound collection of 41 Scandinavian specimens collected by J. E. Zetterstedt between 1868 and 1870 and purchased from Dr. M. Paterson in 1945, and 'A Monograph of British Cladoniae' by W. Mudd dated 1865 which contains a number of specimens collected in Cleveland and Yorkshire.

So far 20 type specimens have been located in the herbarium: Acarospora lesdainii Harm. ex A. L. Smith, Monogr. Brit. Lich. 1:334 (1918)

= Acarospora smaragdula (Harm. ex A. L. Smith) Magnusson

Acrocordia monensis Wheldon in Lancs. Nat. 8:196 (1915)

= Arthopyrenia monensis (Wheldon) Zahlbr.

- Arthopyrenia gyalectoidea Knowles ex A.L. Smith, Monogr. Brit. Lich. 2:391 (1926)
 = Arthopyrenia halodytes (Nyl.) Arnold
- Arthopyrenia knightii W. Watson in Jour. Bot. 70:100 (1932)
 = Arthopyrenia sociali Korber
- Bacidia arceutina var. brevispora Weldon & Travis in Jour. Linn. Soc. London (Bot.) 43:127 (1915)
 = Bacidia egenula (Nyl.) Arnold
- Bacidia muscorum var. atriseda Wheldon & Travis in Jour. Linn. Soc. London (Bot.) 43:129 (1915)
 = Bacidia muscorum (Ach.) Mudd
- Bacidia salicicola Wheldon & Travis in Jour. Linn. Soc. London (Bot.) 43:128 (1915)
 = Scolicosporum chlorococcum (Graewe ex Stenhammer) Vezda
- Bilimbia cambrica Wheldon in Jour. Bot. 58:15 (1920)
 = Toninia leucophaeopsis (Nyl.) Th. Fr.
- Bilimbia leucoblephara var. rupicola Wheldon & A. Wilson in Jour. Bot. 53:63 (1915)
 = Byssoloma subdiscordans (Nyl.) P. James
- Catillaria ooliticola W. Watson in Jour. Bot. 73:154 (1935)
- Cladonia luteoalba A. Wilson & Wheldon in Trans. Liverpool Bot. Soc. 1:6 (1909)
- Clathroporina calcarea W. Watson in Jour. Bot. 63:131 (1925)
- Hubbsia lumbricoides W.A. Weber in Svensk Bot. Tidskr. 59:61 (1965)
- Lecidea lactea var. lecanorina Hartley & Wheldon in North Western Nat. Suppl. :29 (1927)
 = Lecidea lactea Florke ex Schaerer
- Lecidea milliaria var. saxigena Leighton nom. nud., Lich. Flora Gt. Brit. ed. 3. : 363 (1879)
 = Micarea lignaria (Ach.) Hedl.
- Microglaena breadalbanensis Wheldon & A. Wilson in Jour. Bot. 53 Suppl. :71 (1915)
 = Microglaena corrosa (Korber) Arnold
- Parmelia dubia var. caesiocinerea B. de Lesd. in Bull. Soc. Bot. Fr. 70:843 (1923)
 = Parmelia perreticulata (Rasanen) Hale
- Parmelia saximontana R.A. Anderson and W.A. Weber in Bryologist 65:236 (1962)
- Rinodina calculiformis W.A. Weber in Bryologist 67:473 (1964)
- Sphaerophorus globosus var. recurvus Wade in Bryologist 57:228 (1954)
 = Sphaerophorus globosus (Huds.) Vainio

The herbarium has actively exchanged specimens with the Lund Botanical Museum, Sweden, and with the University of Colorado, and though at present not involved with any exchange organisation, would be interested in becoming so. Loan requests are received from private individuals and institutions, and all these are usually granted if the material is available. The national Museum of Wales would be

interested in any donations of named Welsh lichens and bona fide researchers are most welcome to consult the herbarium.

K. J. KAY

Summary of Secretary's report for 1984

The eve of the A.G.M. heralded the introduction of a new social venture, an informal conversazione held in the British Museum. The thirty-three members and guests who attended took part in a book auction which raised over £300 for the society.

During 1984 the membership broke the 600 mark and now stands at 602. Dr. T. D.V. Swinscow was elected to the position of auditor. Thanks go to Mr.F.S.Dobson for taking over the reins of Assistant Treasurer from P.W.Lambley who held the post for ten years.

Field meetings have been well attended. A meetings broadsheet circulated with the Bulletin was introduced this year. Under the editorship of Dr C.J.B.Hitch, this will now be a regular feature and members are encouraged to keep him informed of courses and meetings of interest to lichenologists. Mr.J.R.Laundon, Mrs.A.M.O'Dare, Dr A.Fletcher, Dr B.J.Coppins, Mr T.W.Chester, Mr F.H.Brightman, Dr F.Rose and Dr D.H.Brown are thanked for arranging and leading workshops and excursions. Dr O.L.Gilbert is also thanked for standing in at the Bristol Workshop for Mr P.W.James who was indisposed. The council held three meetings.

Three parts of The Lichenologist and two numbers of The Bulletin were published during the year. The first of a series of conservation leaflets, entitled 'Lichens in Churchyards' was published and circulated to members. The Society is most grateful to the World Wildlife Fund for a grant of £500 towards the production of a new mapping card and to Dr M.R.D. Seaward for all his work during its preparation. We now have a checklist and recording card that are compatible and look forward to the prospect of a second volume of the Atlas shortly. Finance is being sought for the production of a new British lichen flora.

JOY WALKER

Treasurer's report on the 1984 accounts.

The profit sharing item received from the publishers of the Lichenologist (f2413) distorts the figures for the year in question. It is unwise to forecast or estimate a figure under the above heading for a particular year therefore any amount received has to be included in the accounts for the year in which received. In 1984 two years profit sharing was received which obviously inflated the surplus shown in the Expenditure & Income Account.

I must mention the loss to the Society of a most generous benefactor namely Dr Ursula Duncan who died earlier this year. She was made an Honorary Member yet insisted on continuing to pay the annual subscription and it will be noted that the royalty from her book 'Introduction to British Lichens' has been a valuable source of income for the society; this year it reached the figure of f360.

The Annual General Meeting combined with a book auction produced a handsome profit. Another item requiring comment is the anonymous donation of f272 towards the printing of an article in The Lichenologist. It has been agreed with the society's banks that interest will continue to be paid gross after 1 April 1985. Funds invested in National Savings Bonds have resulted in an increase of f442 over 1983 in 'Interest Received'.

Finally, I must express my thanks to the two Assistant Treasurers who handle the onerous task of collecting subscriptions so expertly.

S.N. TALLOWIN

BRITISH LICHEN SOCIETY

Statement of Expenditure & Income for the year ended 31st December, 1984

<u>1983</u>	EXPENDITURE		INCOME		<u>1983</u>	
£	£	£	£	£	£	
5796	Cost of Lichenologist Less Profit sharing 1982 & 3	5852 <u>2413</u>	3439	Subscriptions Add life membership	6240 <u>80</u>	6320 6195
	Subscriptions paid:-					
3	Co En Co:	5		Reading Circle	7	
17	Biological Council	17		Checklist	45	89
	Cryptogamic Bryol			Atlas	26	
25	et Lich	25		Other publications	2	11
24	American Bryol & Lich	32		Royalties:-		
-	Inter Mycol Assn. 1983 & 4	<u>40</u>	119	Dr U.K.Duncan's book	360	72
578	The Bulletin		917	D.H.Brown's Lichenology	<u>41</u>	401 48
119	Stationery		133	Interest received:-		
85	Postage		96	Nat.West	588	732
50	Insurance		50	Canadian Imperial	58	90
				Girobank	49	44
				Nat.Savings Bank	<u>613</u>	1308
				A.G.M. & Conversazione		264
185	Excess of Income over Expenditure		<u>3893</u>	Donations - towards cost of printing papers		<u>274</u>
			<u>8647</u>			2
						<u>8647</u>

Balance Sheet at 31st December 1984

LIABILITIES		ASSETS	
Subscriptions paid in advance		105	Balance at banks:-
Life membership carried forward		160	National Westminster
Conservation	953		Canadian
B.P.International	<u>750</u>		Imperial
	1703		Cash in transit
Less expenditure	<u>1140</u>	563	620
General fund	8156		Girobank
Add surplus for year	<u>3893</u>	12049	National Savings
			Checklist(stock)
			Hawksworth Keys
			(stock)
			Pd. (stock)
		<u>£ 12877</u>	
			<u>£ 12877</u>

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

T.D.V. Swinscow
Hon.Auditor 24th March 1985

S.N. Tallwin
Hon.Treasurer
21st March, 1985

New, rare or interesting British lichen records

Amygdalaria consentiens V.C.88, Mid Perth, Ben More, 2,600 ft on sloping schistose rocks July 1976 B.J.Coppins (E). New to Britain. Similar to A.pelobotryon but thallus is C⁻ (no substances).

Brian Coppins

Buellia erubescens V.C. 11, Hants: New Forest, Beech Bed Inclosure (about two miles north of Burley) on beech, April, 1985. Chemistry: K + y (or faintly) - r, Pd + y or o. Possibly much overlooked. Confused with Buellia disciformis. Examine candidates for a grey areolate thallus, the areolae crumple and distorted, often scruffy in appearance; entirely lacking a black hypothalline margin. Test in the field with K. Allow about a minute before checking for a blood-red patchy stain. Under the microscope the problem is easily resolved. Apart from the smaller, oval shaped spores (c. 14-16 μ long) of B.erubescens, the entire squash is devoid of oil droplets. In B.disciformis the thecium is literally swamped in them.

Vince Giavarini

Candelariella medians f. steepholmensis. Found in South Essex growing among a large population of C.medians. Second record of this British endemic.

Peter Earland-Bennett

About 40 thalli on asbestos sheeting, St. Olaves Priory, Nr.Great Yarmouth, May, 1985. Again amongst a large population of the normal yellow coloured C.medians.

Peggy Cayton

Cladonia incrassata V.C.12, North Hants; on soil and bases of birch trees Waggoners Wells. V.C.14. East Sussex on Penns.Rocks, Groombridge with Sphaerophorus melanocarpus, 1983-4. A much overlooked Cladonia not recorded from S.E. England before. Francis Rose.

Lobaria pulmonaria V.C. 36, Hereford; on Tilia platyphyllos Downton Gorge near Ludlow, 1982. The first record in Britain on this tree; it is however known on T.cordata by Ullswater. Francis Rose

Opegrapha prosedea V.C. 9, Dorset: Knowlton Rings, nr Cranborne. On exposed roots of several yews adjacent to Bronze Age sacred circle. New to Dorset. Only recorded from a number of scattered localities in the south. February 1985.

Vince Giavarini

Parmelia arnoldii V.C. 42 Brecknock: abundant on a few large Salix cinerea trees in damp woodland, Allt Gam Rhiw, Llywel (SN 83).

First mid-Wales record.

Ray Woods

Parmelia mougeotii Devon; on glass window of Gidleigh Church 1983. Recent records of lichens growing on the glass of church windows are very scarce, in this instance it had colonised the glass and was not an extension from surrounding stonework. George Baron

Porina hibernica V.C. 48, Merionethshire, on oak, Coed Crafnant, near Harlech 1982 (conf.B.J.C.). New to Wales and new northern limit for this species almost confined to the New Forest and S.W.Ireland. Francis Rose

Porocyphus kenmorensis V.C. 3, South Devon, Dartmoor National Park. On submerged rocks in the River Dart, with Verrucaria elaeomelaena, 1984, J.F. Skinner, (det. P.W.J.). This species is rare; the only records I can find are from vice-counties H2 (North Kerry, 1982, P.W.James), H.16 (West Galway, 1961, T.D.V.Swincow), 98 (Main Argyll, 1977, P.W.James), and 99 (Dunbarton, Coppins 10214 and R.G.Woods). Some records come from lake margins but the Devon specimen, now in BM, was in a fast-flowing section of the river. An interesting creature found in the same stretch was the rare River Pearl Mussel, Margaratifera margaratifera, itself an important record. John Skinner

Rhagadostoma lichenicola V.C. 96, Easternness, Sgurr na Lapaich, 28/163341, 1140m, Aug 1984 J.Muscott (E, IMI). First record of this conspicuous parasite of Solorina crocea this century; also a new dot for S.crocea. Brian Coppins

Schismatomma graphidioides V.C. 5, South Somerset on ash, Horner Combe, plenty on one tree; 1984 (conf.B.J.C.). Not seen in England since 1854. Francis Rose

Stereocaulon vesuvianum. V.C. 18, South Essex. Recently found in many localities particularly tops of brick walls, also on charcoal, cinders, tarmac and, of course, rubber dustbin lids(Billericay hospital). Usually present as a thin crust of dark-centred phyllocladia-like granules which are often sorediate at the margins, 1984. P.M.Earland-Bennett and J.F.Skinner. Checked using TLC. John Skinner

Verrucaria melaenella V.C.43, Radnor. With Bryum argenteum in cracks in Bulth Road railway station platform. Perhaps confirming O.L.Gilbert's observation (Bull. 49, 21) that this species does not just grow in the highest quality terricolous sites.(det.B.J.C.) Ray Woods.

NEW MEMBERS

The following joined the Society between November 1984 and March 1985

JA = Junior associate, FM = family member.

Miss B. AGUIRRE, 104 Mortlake Road, KEW, Surrey, TW9 4AS.

Mr M.M. AMEZQUITA, c/o Baron de Pinopar 6,6^o '2a, PALMA DE MALLORCA
07012, Spain.

Mr S.J. ASHWORTH, 5 Hillside Avenue, PURLEY, Surrey, CR2 2DP

Mr H. BAYLIS, John Innes Institute, Colney Lane, NORWICH, Norfolk.

Mr J.A. COLLINS, 73 Hazlewood Rd., Acocks Green, BIRMINGHAM, B27 7XW.

Mrs M.W. COLLINS, 73 Hazelwood Rd., Acocks Green, BIRMINGHAM, B27 7XW (FM)

Mr A.A. COOK, 15 Park View, KETTERING, Northants.

Mrs D.C. COOK, 15 Park View, KETTERING, Northants (FM)

Dr D. COXSON, Kananaskis Centre, University of Calgary, CALGARY,
Alta, Canada, T2N 1N4.

Mr D.D. DORMER, 48a Grenfell Rd., MAIDENHEAD, Berks., SL6 1HG.

Miss J. GOSS, Flat J4/O.4 James Baillie, North Hill Rd., LEEDS
LS6 2EN (JA).

Mr J.P. GUEST, c/o 26 Chancery Lane, Bollington, MACCLESFIELD, Cheshire.

Mrs N. KARANDINOS, Athens Univ. of Agricultural Sciences,
Iera Odod 75, Botanikos, ATHENS, Greece.

Mr J. LANGFORD, 82 Clare Rd., Grangetown, CARDIFF, CF1 7RT.

Mr D. McGRATH, 23 Morley Terrace, WATERFORD, Ireland.

Dr J.A. MEDLIN, 1424 Hillcrest, KALAMAZOO, MI. 49008, U.S.A.

Mrs R. PALMER, Clouds, Cologné Rd., Bovington, WAREHAM, Dorset.

Mrs B. PORTER, 1 Hazel Close, Marple, STOCKPORT, Cheshire SK6 7QT.

Dr D. PUNTILLO, Orto Botanico, Universita Della Calabria,
87030 ARCAVACATA CS, Italy.

Mr N.D. REDGATE, 3 The Cottages, Myles Farm, TRANENT, East Lothian
EH33 2LE.

Mrs R. ROBERTS, 1 Stone Row, BUTTERKNOWLE, nr Bishop Auckland,
Co. Durham, DL13 5PF.

Mr M.F. WATSON, 58 Bournville Ave., CHATHAM, Kent, ME4 6LR.

Changes of address

These should be sent to the membership secretary

F. Dobson, 58 Parkway, London, SW20 9HF.

Literature on lichens - 44

Lichenologist 17(1) was published on 15 February 1985.

AHTI, T. 1984. The status of Cladina as a genus segregated from Cladonia. Beih. nov. Hedwigia 79: 25 - 61. [Comparison of Cladina with Cladonia. Includes "the necessary nomenclatural combinations for use by those who would like to recognize Cladina as a genus." Several are forms.]

BRODO, I. M. 1984. The North American species of the Lecanora subfusca group. Beih. nov. Hedwigia 79: 63 - 185. [38 species. The correct name for L. subfuscata is L. argentata (Ach.) Degel. L. rugosella Zahlbr. is regarded as of species rank.]

BRODO, I. M. 1984. Lichenes Canadenses Exsiccati: Fascicle III. Bryologist 87: 97 - 111. [Notes on 75 species. Ochrolechia geminipara is shown to be Pertusaria geminipara (Th.Fr.) C. Knight.]

BRODO, I. M. & VITIKAINEN, O. 1984. The typification of Lecanora subfusca (L.) Ach., its varieties, and some of its related taxa published before 1850. Mycotaxon 21: 281 - 298. [Typification of 22 epithets.]

CLAUZADE, G. & ROUX, C. 1984. Les genres Aspicilia Massal. et Bellemeria Hafellner et Roux. Bull. Soc. bot. Centre-Ouest II, 15: 127 - 141. [Outline revision of Aspicilia. A. alpina becomes Bellemeria alpina (Sommerf.) Clauz. & Roux and A. cinereorufescens becomes Bellemeria cinereorufescens (Ach.) Clauz. & Roux.]

COLLOFF, M. J. 1984. Notes on two lichenophagous oribatid mites from Ailsa Craig (Acari: Cryptostigmata). Glasg. Nat. 20: 451 - 457.

COPPINS, B. J. 1984. Epiphytes of birch. Proc. R. Soc. Edinb. B, 85: 115 - 128. [Communities and lists of lichens and bryophytes.]

COPPINS, B. J. 1985. A new Micarea from the Scottish highlands. Lichenologist 17: 99 - 101. [Micarea viridiatra Coppins sp. nov. from the Cairngorm Mountains.]

DOBLEN, H. F. van 1983. Changes in the epiphytic lichen flora and vegetation in the surroundings of 's-Hertogenbosch (the Netherlands) since 1900. Nova Hedwigia 37: 691 - 719. [Detailed analysis. 132 epiphytic lichen species now reduced to 57. In the mid 19th century the area belonged to pollution zone 9, but now it is 4 - 5.]

ECKL, P., TÜRK, R. & HOFMANN, W. 1984. Natural and man-made radionuclide concentrations in lichens at several locations in Austria. Nordic J. Bot. 4: 521 - 524. [The "lichens contained significant amounts of short-lived man-made radionuclides evidently originating from an atmospheric nuclear weapons test carried out by the People's Republic of China (16 Oct 1980)."]

ERIKSSON, O. 1984. Outline of the ascomycetes - 1984. Systema Ascomycetum 3. University of Umeå, Umeå. [220 families and 44 orders are accepted.]

FRITZ-SHERIDAN, R. P. 1985. Impact of simulated acid rains on nitrogenase activity in Peltigera apthosa and P. polydactyla. Lichenologist 17: 27 - 31. ["acid rain ... may severely inhibit nitrogenase activity ... and ... eliminate their contribution ... to forest ecosystems."]

GALLOWAY, D. J. 1985. Flora of New Zealand. Lichens. Government Printing Office, Wellington. [662 + lxxiii pages. 966 taxa. Detailed account, complete with keys; descriptions, references, citation of types, chemistry, distribution, etc., as well as valuable introductory chapters and glossary. NZ \$ 39.95.]

GILBERT, O. L. & FOX, B. W. 1985. Lichens of high ground in the Cairngorm Mountains, Scotland. Lichenologist 17: 51 - 66. [Account of the lichen vegetation, especially in relation to snow-beds.]

GOFF, L. J. (Editor) 1983. Algal Symbiosis. A Continuum of Interaction Strategies. Cambridge University Press, Cambridge. [Review; lichens included.]

HAFELLNER, J. 1984. Studien in Richtung einer natürlicheren Gliederung der Sammelfamilien: Lecanoraceae and Lecideaceae. Beih. nov. Hedwigia 79: 241 - 371. [Revision of Lecanoraceae and Lecideaceae. 35 new families are described. Typification of many genera given. Bacidia sabuletorum becomes Mycobilimbia sabuletorum (Schreber) Hafellner, Catinaria grossa becomes Megalalaria grossa (Pers. ex Nyl.) Hafellner, Encephalographa cerebrina becomes Poeltinula cerebrina (DC.) Hafellner, and Placynthiella uliginosa becomes Saccomorpha uliginosa (Schrader) Hafellner. Lecanora badia becomes Protoparmelia badia (Pers.) Hafellner, although the correct basionym is not given. Lecidea monticola becomes Clauzadea monticola (Ach.) Hafellner & Bellemère, although the correct basionym is not given. Lichen immersus Weber, an illegitimate name, is given as the basionym of Clauzadea immersa Hafellner & Bellemère, which refers to Lecidea immersa. There is much that is controversial and open to question in this account.]

HALE, M. E. 1984. An historical review of the genus concept in lichenology. Beih. nov. Hedwigia 79: 11 - 23. [The "present productive period in lichenology will lead to greater instability in generic concepts ... (for) many groups."]

HERTEL, H. 1984. Über saxicole, lecideoide Flechten der Subantarkt. Beih. nov. Hedwigia 79: 399 - 499. [Detailed taxonomic account. Key. Many species of Hullia are transferred to Porpidia.]

HERTEL, H. & KNOPH, J.-G. 1984. Porpidia albocaerulescens eine weit verbreitete, doch in Europa seltene und vielfach verkannte Krustenflechte. Mitt. bot. StSamml. Münch. 20: 467 - 488. [Porpidia is shown to be an earlier name for Huilia and the taxonomy of the species is tabulated.]

HOBBS, R. J. 1985. The persistence of Cladonia patches in closed heathland stands. Lichenologist 17: 103 - 109. ["Cladonia spp. can inhibit germination or establishment of vascular plants, probably through both chemical and physical processes."]

INOUE, M. 1984. Japanese crustose lichen genera formerly reported under Lecidea sensu lato. 1. Amygdalaria Norman. J. Hattori bot. Lab. 56: 321 - 330. [Monograph of three species. Huilia consentiens is transferred to Amygdalaria consentiens (Nyl.) Hertel, Brodo & M. Inoue.]

LONG, D. 1984. Bryophytes and lichens from Skellig Michael, Co Kerry. Ir. Nat. J. 21: 368. [Long's short list of 14 species.]

MCCARTHY, P. M. 1984. Two continental European lichens in the west of Ireland. Ir. Nat. J. 21: 341 - 342. [Bagliettoa parmigerella (Zahlbr.) Vězda & Poelt (Verrucaria parmigerella Zahlbr.) and Porina ginzbergeri Zahlbr. new to the British Isles.]

MEYER, S. L. F. 1982. Segregation of the new lichen genus Foraminella from Parmeliopsis. Mycologia 74: 592 - 598. [The Parmeliopsis ambigua group are placed in Foraminella gen. nov. New combinations for the British species: Foraminella ambigua (Wulfen) Fricke Meyer, F. hyperopta (Ach.) Fricke Meyer.]

MID-SUSSEX NATURALISTS GROUP 1984. Poyning's Churchyard Study. University of Sussex, Brighton. [Includes detailed account of the lichens. £1.20 + £0.25 post and packing.]

OBERHOLLENZER, H. & WIRTH, V. 1984. Beiträge zur Revision der Flechtengattung Fuscidea. Beih. nov. Hedwigia 79: 537 - 595. [Account of nine species.]

OBERWINKLER, F. 1984. Fungus-alga interactions in Basidiolichens. Beih. nov. Hedwigia 79: 739 - 774. [Discussion of five genera.]

POELT, J. 1983. Bryonora eine neue Gattung der Lecanoraceae. Nova Hedwigia 38: 73 - 111. [Monograph of six species. Lecania curvescens becomes Bryonora curvescens (Mudd) Poelt.]

PURVIS, O. W., GILBERT, O. L. & JAMES, P. W. 1985. The influence of copper mineralization on Acarospora smaragdula. Lichenologist 17: 111 - 114. [Two recently described species are considered to be synonyms; "taxonomists must pay serious attention to the impact of rock mineralogy on lichens."]

SÉRUSIAUX, E. 1985. Goniocysts, gonicystangia and Opegrapha lambinonii and related species. Lichenologist 17: 1 - 25. [Includes discussion of goniocysts and related structures in various lichens and their differences from soredia.]

THOMSON, J. W. 1984. American Arctic Lichens. 1. The Macrolichens. Columbia University Press, New York. [Keys and descriptions; line drawings and distribution maps. \$71.50.]

THOMSON, N. F. & THOMSON, J. W. 1984. Spore ornamentation in the lichen genus Solorina. Bryologist 87: 151 - 153. [SEM (scanning electron microscope) study. Each "species has a distinctive spore coat pattern".]

TIBELL, L. 1984. A reappraisal of the taxonomy of Caliciales. Beih. nov. Hedwigia 79: 597 - 713. [Major review. Cladistic analysis. Coniocybe is placed as a synonym of Chaenotheca and Chaenotheca furfuracea (L.) Tibell is a new combination.]

TIMDAL, E. 1984. The delimitation of Psora (Lecideaceae) and related genera, with notes on some species. Nordic J. Bot. 4: 525 - 540. [Notes on many taxa. Psora has 19 species, but Lecidea lurida (syn. Psora petri) is excluded.]

WALKER, F. J. 1985. The lichen genus Usnea subgenus Neuropogon. Bull. Br. Mus. nat. Hist. (Bot.) 13: 1 - 130. [Monograph. 15 species, plus accounts of three allies. The correct name of the bipolar U. sulphurea is shown to be U. sphacelata R.Br.]

J. R. LAUNDON

COPY DATE FOR NEXT BULLETIN

Closing date for copy for the next Bulletin is 1 October 1985.
Please send contributions typed in double spacing.

PUBLICATIONS FOR SALE

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

	Price
Bulletin 32, 39, 41, 44, 46 incl. suppl., 48-56	£1.50 (£1.50 to non-members)
<u>Literature Guide</u> by Hawksworth (1970)	£1.00
<u>Conservation</u> by Gilbert (1975)	£1.00
<u>A revised guide to microchemical techniques for the identification of lichen products</u> by Walker and James (1980)	£1.00
<u>Check-list of British Lichen-forming, Lichenicolous and Allied Fungi</u> by Hawksworth, James and Coppins (1980)	£4.00 (£6.00 to non-members)
<u>A key to the Lichen-forming, Parasitic, Parasymbiotic and Saprophytic Fungi occurring on Lichens in the British Isles</u> 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).

Note: Back numbers of the Lichenologist are 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, 68 Hills Road, Cambridge, CB2 1LA. 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

The old forests of western Europe and their epiphytic lichens. F. Rose	1
Report on the New Year Meetings 1985	9
Conversazione - Lecture Meeting 1986	13
Subscriptions to be raised - ACT NOW	14
Grapevine	15
Country Diary : North West Yorkshire/Sheffield	16
Four days on Arran J.F.Skinner	17
Ursula K. Duncan (1910-1985) remembered	19
Black acid snow in the remote Scottish Highlands	21
My first A.G.M. P. Cayton	21
The industrial manufacture of lichen dyestuffs Pt.2. A. Henderson	22
Provisional Atlas Vol.2. Pt 1 published	25
Lichen Flora of the Isle of Wight	25
Progress in the study of the British lichen flora	26
The lichen herbarium of the National Museum of Wales K. J. Kay	27
Secretary's report J. Walker	30
Treasurers report on the 1984 accounts S.N.Tallowin	31
New, rare or interesting British lichen records	33
New members	35
Literature on lichens J.R. Laundon	36
Copy date for next Bulletin	39
Publications for sale	40

BULLETIN 56. Issued by the British Lichen Society, c/o Dept. of Botany, British Museum.(Natural History), Cromwell Road, London, SW7 5BD (Tel: 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 Grapevine. 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