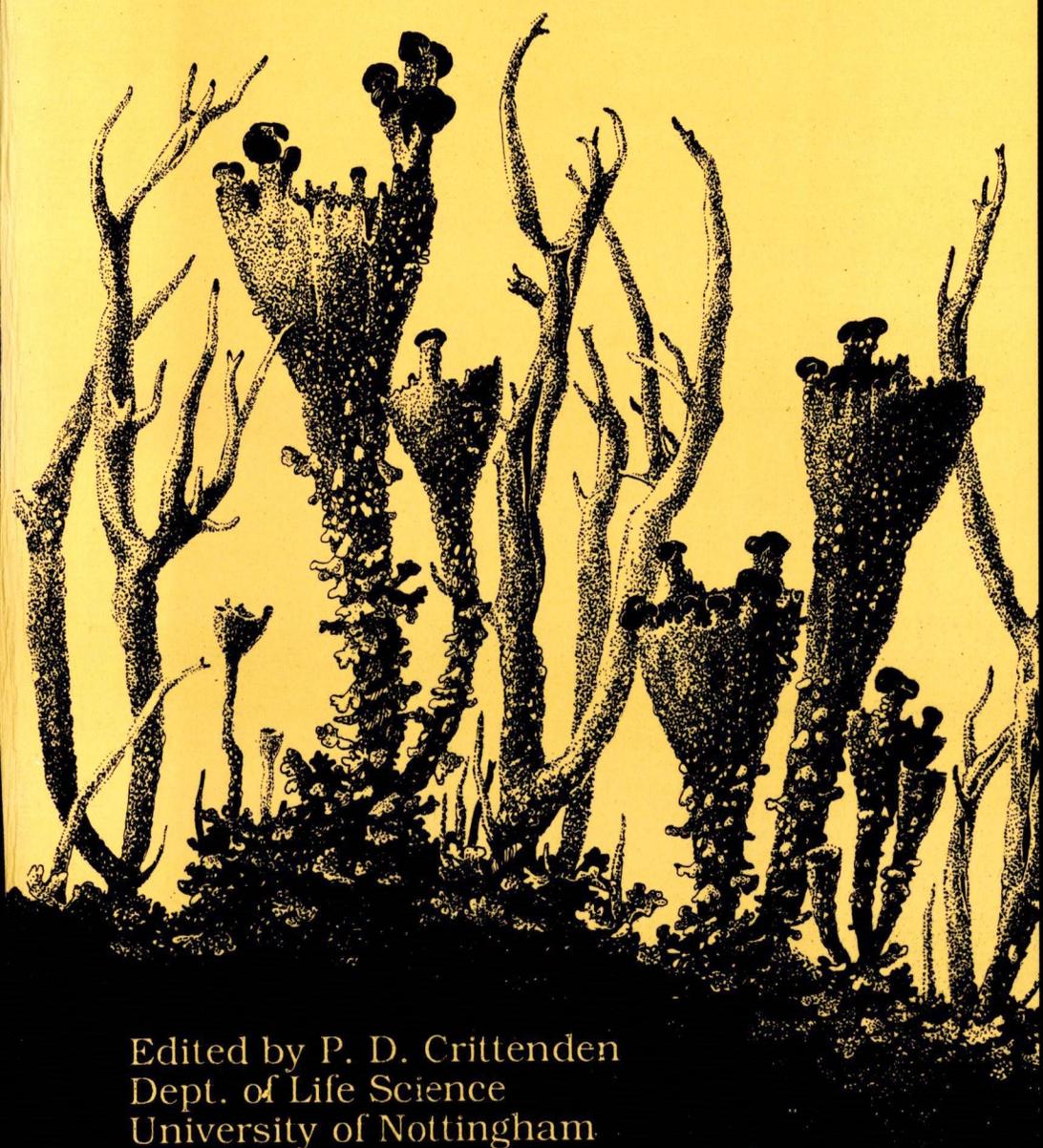


BRITISH LICHEN SOCIETY
BULLETIN
No. 71 Winter 1992



Edited by P. D. Crittenden
Dept. of Life Science
University of Nottingham

FORTHCOMING BLS FIELD MEETINGS

LOCHINVER

Leader: Oliver Gilbert

10-17 April 1993

SLOVAKIA

Leaders: Ivan Pisut, Peter James and William Purvis 28 June - 6 July 1993

1993 MEMBERSHIP AND SUBSCRIPTION RATES

Annual rates except where indicated

(Dollar rates are two times the Sterling Rate except where indicated)

ORDINARY MEMBERSHIP for individuals (i.e. not available to Institutions) who have signed the Application Form and paid the subscription, being entitled to all publications and facilities of the Society. £20.00

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for Institutions only £15.00

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Institutions rate £114.00
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Dollar membership Subscriptions should be sent to Dr J W Sheard, Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.

Overseas members may find it most convenient to pay subscriptions by GIRO: the British Lichen Society Giro Number is 24 161 4007

Application for Membership should be made to The Secretary, The British Lichen Society, The Natural History Museum, Cromwell Road, London SW7 5BD.

SUBMISSION DEADLINE

Please would intending contributors to the Summer 1993 issue of the *Bulletin* submit their copy to the Editor by 26 March.

Cover artwork by Claire Dalby

DOUGAL SWINSCOW

Thomas Douglas (Dougal) Victor Swinscow, former deputy editor of the *British Medical Journal* and lichenologist, died on September 24 aged 75. He was born on July 10, 1917.

Dougal Swinscow's life was a quest. As a scientist he sought out and discovered new species of plants; as a Taoist he searched for a mystic harmony with nature, and as a man he worked to gain a deeper understanding of the meaning of life. A modest person of great integrity, he was justly proud of his contribution to the study of lichens.

He was a shy, sensitive child who disliked school and had the burden of an early life overshadowed by parental conflict. His mother was a passionate eccentric, an expert pistol shot who took to smoking a pipe and learnt to drive in order to run a taxi service for friends when her husband refused her money. His father, a chemist turned brewer turned country gentleman, was a cold, distant figure, irretrievably crushed by the desertion of his first wife. Dougal's search for harmony and peace was, he later suggested, a reaction to the discord in which he grew up.

He studied medicine at St Thomas', qualifying in 1940, and served in the Royal Army Medical Corps, first in Africa and then as a parachutist in Holland and Norway. In 1944 he was with the 1st Airborne Division at Arnhem, for which he was awarded the Dutch equivalent of the DSO.

After the war he abandoned plans for a career in psychiatry and joined the editorial staff of the *British Medical Journal* where he worked for the next 45 years, becoming deputy editor in 1964. There he was part of a team, headed by Hugh Clegg, that pulled the *BMJ* out of its pre-war doldrums, establishing it as an international scientific medical journal, editorially independent of the BMA. He was the author of *Statistics at Square One*, a guide to medical statistics now known to generations of medical students, and was renowned for his ability to produce off the cuff editorials which were always elegant and to the point.

But it is for his activities outside work that he will be most keenly remembered. In the British tradition of the amateur naturalist he took an early interest in botany and became an authority on ferns and mosses. His researches took him on long walks throughout Britain collecting specimens - his slight physique disguised surprising physical stamina. On one of these, in Borrowdale, the idea came to him of forming a society to promote the study of lichens. In 1958 the British Lichen Society was inaugurated at a meeting of 25 botanists in London.



Dougal Swinscow (*Photo: British Medical Journal*)

He remained an active member of the society for much of his life and was a regular visitor to the Natural History Museum where his extensive collection of specimens is now housed. He described several new species of lichen and, in tribute to his work, three species now bear his name.

His interests outside work were both the apparent cause and the consolation for his failing to be offered the editorship of the *BMJ* when Hugh Clegg retired in 1964. But the undoubted disappointment of being passed over for a colleague eventually found its place within his philosophy of life - that the greatest satisfactions were to be found in the middle slopes rather than among the rocky peaks. When the editorship was vacant some years later he made it clear that he was not a candidate, preferring to spend time on his botanical research and with his family.

During the 1970s he began a study of East African lichens, in a partnership with the Norwegian botanist, Hildur Krog, which took them on many trips to Kenya and Uganda. The work culminated in *Macrolichens of East Africa* (1988) which instantly became a classic text for students of lichenology.

In the last 15 years of his life he gave himself to the study of garden design, working on his own philosophical garden at his home in Devon. The prostatic cancer from which he died allowed him a year in which to celebrate his golden wedding anniversary, to see the publication of his last book, *The Mystic Garden*, and, in the words of his autobiography, "to draw strands together in a patterned skein".

He is survived by his wife, Josephine, and their three daughters.

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ACIDIFICATION AND THE *LOBARION*: A CASE FOR BIOLOGICAL MONITORING

Many of the larger foliose lichens that comprise the *Lobarion* community, especially those with cyanobacterial photobionts, are known to be sensitive to atmospheric pollutants, particularly those leading to acidification. This distinctive community also includes the majority of indicator species used by Dr Francis Rose to identify ancient woodlands in Britain (Rose 1976, 1988, 1992). A three year project with the Nature Conservancy Council was set up at the Natural History Museum in 1986 to determine the effects of acidification on the *Lobarion pulmonariae* lichen community.

The sites selected in the first stage of this project were situated in areas of high conservation interest (mainly SSSIs and NNRs) affected by a range of atmospheric conditions across Britain and in which acid deposition is monitored by the Warren Spring Laboratory. This allowed us to assess the relationship between monitored pollutant levels and the growth or loss of lichens in these sites over a period of time. Fifty seven sites were selected and 434 permanent quadrants 18 x 27 cm established (Looney and James, 1990). During the initial 3-year project the correlation between lichen growth rate and pollutant levels was often not as expected, despite observations of deterioration or good growth of lichens. A further survey was undertaken in 1990 (Wolseley & James, 1991).

During 1990 we revisited 23 of the selected sites with the object of reassessing the state of lichens both in clean air and polluted sites (Fig 1.). The 1990 survey has allowed us to interpret patterns of change in the lichen communities over a 5-year period, and to reinterpret the pollution data during a period when weather conditions had shown some dramatic regional differences across Britain. The information in this article is based on the 1991 report to The Nature Conservancy Council (Wolseley & James, 1991).

Since Francis Rose began defining ancient woodland indicator species, we have become used to the "treasure hunt" for *Lobaria* species as the prime indicators of potentially "interesting" woodlands, associated with a large number of our rarer and restricted lichen species. They are found in a characteristic climax *Lobarion* community of large foliose species, usually associated with ancient trees of oak, ash and hazel, in woodlands where the wet warm atlantic climate has influenced the flora over many thousands of years. On an island with an extensive atlantic seaboard, these conditions may extend far inland especially in upland areas where there is a high rainfall. In these damp, mild conditions the larger foliose species of *Lobaria* may grow 1 to 2 cm a year e.g. on the west coast of Scotland. There is

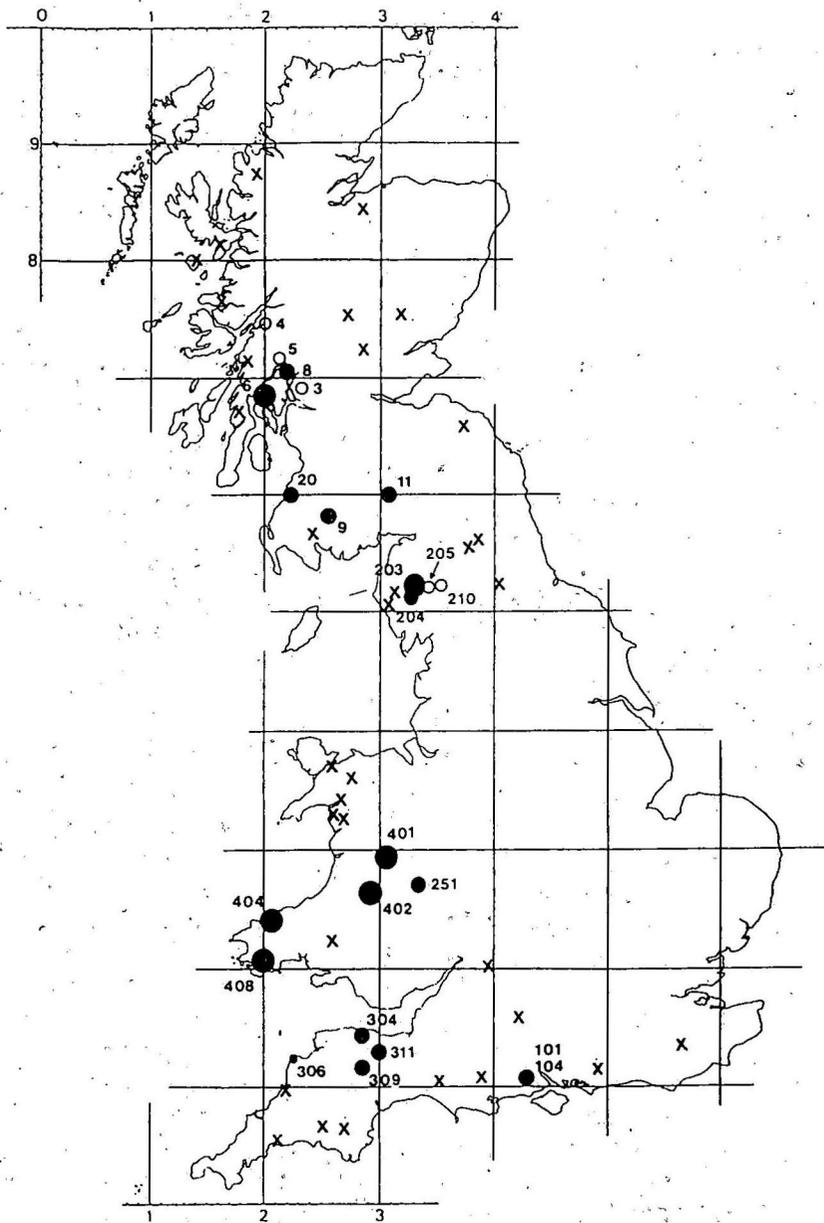


Fig 1. Sites visited in 1990 with categories of health of *Lobaria* spp. (circles) and other sites in the original survey (crosses). (○) showing positive growth; (●) growth rate has changed from negative ('86-'88) to positive ('88-'90); (●) growth rate has changed from positive ('86-'88) to negative ('88-'90); (●) growth rate has remained negative.

another facies of the *Lobarion* occurring in long established parklands where ancient trees occur in a more open environment maintained by grazing animals. This facies is associated with well-lit sites and increased nutrient conditions from grazing animals, a higher frequency of *L. amplissima*, and includes some characteristic species with a more continental distribution (e.g. *Rinodina roboris*, *Parmelia quercina*). Seven sites in England are ancient parkland sites (excluding New Forest sites) and four in Scotland. In these more open and often drier conditions the growth rate of *L. pulmonaria* was considerably lower than in the wet western forests.

Species of *Lobaria* are perennials, providing good material for long term monitoring, but their manner of growth and life cycle varies. *L. virens* and *L. amplissima* increase in radius with age by closely oppressed lateral growth, eventually forming large plates. *Lobaria pulmonaria* exhibits two phases; a juvenile phase in which the plant remains attached to the substratum and spreads radially, followed by a mature phase where more or less detached, elongated lobes develop, hanging from the trunk in characteristic ruffs. At this stage the lichen is liable to fall off the tree in sheets. This development is shown in Fig 2. Juvenile stages present in several places in the 1986 quadrat have by 1990 developed the long lobes of the mature phase, while the one mature phase plant (m) in the centre of the quadrat in 1986 has gone. The mature phase has also overgrown parts of *L. amplissima* and *L. virens* in 1990.

Our findings in 1990 suggest that of the larger *Lobarion* species *L. scrobiculata* is the most sensitive to acidification. When healthy it forms a series of more or less ascending lobes attached to the trunk at the base of each lobe, rarely forming extensive sheets. With increasing acidification the mature lobes become chlorotic and drop off. The presence of cyanobacteria may be an important factor in its high sensitivity (Gilbert 1986). The species is undergoing a marked decline in Britain, and has already disappeared from many of its southern and western localities in England and Wales. In the west of Scotland it is still frequent, but its deterioration in Hells Glen (site 8) was conspicuous. Although some individuals had shown some growth between 1986 and 1988, by 1990 all *L. scrobiculata* individuals were showing signs of chlorosis, had lost mature lobes and showed a negative growth rate. Damage to *L. pulmonaria* and *L. amplissima* is usually observed as loss of mature parts and signs of chlorosis.

Lobaria virens appears to be less sensitive to low levels of acidification, partly because it is a shade-tolerant species preferring conditions that may be protected from acidification effects. A quadrat in Great Wood in Borrowdale (site 203) shows the stages in deterioration of *L. virens* between

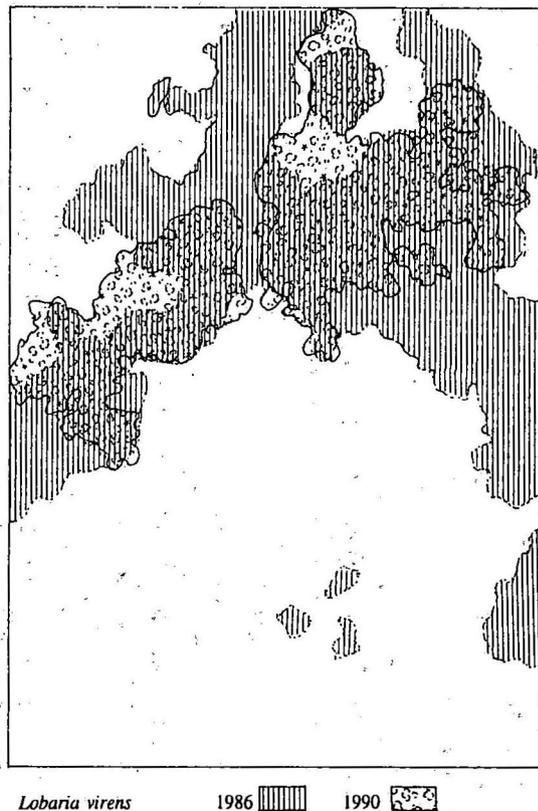


Fig 2. Changes in area covered by *Lobaria* spp. on oak at Glen Shira on the west coast of Scotland (site 5, see Fig 1) (there are 12 lichen species in this quadrat).

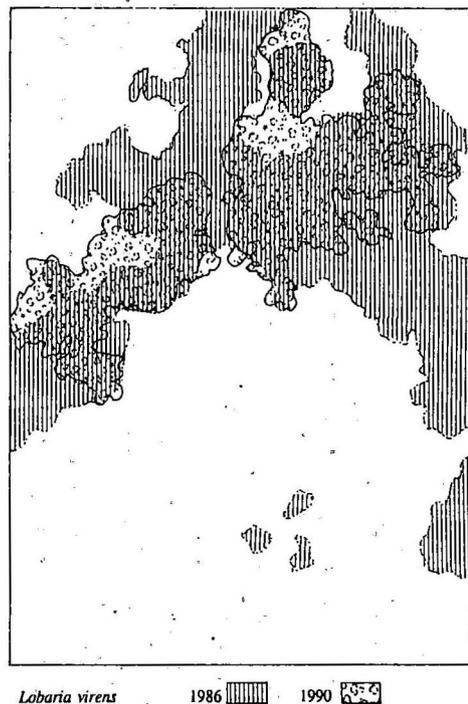


Fig 3. *Lobaria virens* on oak in Great Wood, Borrowdale (site 203, see Fig 1) showing deterioration between 1986 and 1990. There has been some establishment of new lobes and loss of mature parts. Exposure of bare bark is associated with an increase in *Metzgeria furcata*. There are no other lichens present in this quadrat.

1987 and 1990 (Fig 3.). The continued fragmentation of the mature thallus is accompanied by limited establishment of new marginal lobes. Deterioration is also associated with loss of lichen diversity, increasing exposure of bare bark, and an increase in the cover of the liverwort *Metzgeria furcata*.

Our long-term studies have established that there is a well-defined pre-*Lobarion* phase rich in species of *Sticta*, *Nephroma*, *Parmeliella*, *Degelia*, *Pannaria* and species of *Parmelia*, that develops into the climax community dominated by species of *Lobaria*. Within the 5-year period of monitoring, species associated with the pre-*Lobarion* showed a cycle of rapid development and loss from the quadrat area. In healthy sites re-establishment occurs continuously elsewhere on the trunk giving a species-rich mosaic, but in areas where acidification is occurring these species are lost. In the last five years such losses have been observed in the New Forest (sites 101-4) and in the Barle valley (site 304) in SW England. This type of loss may be due to changing conditions within the site, such as increasing shade and moss cover, as well as to atmospheric pollution.

Bark pH is clearly an important factor in determining the growth and distribution of *Lobaria* species. Bark pH was measured on a range of tree species supporting the *Lobarion* at each site, and also on adjacent trees conspicuous for the absence of *Lobaria*! Bark pH will vary with the species, age and individual tree. Oaks tend to have a more acid bark especially when they are young, whereas ashes and elms have bark with a higher pH at all stages of their lives. At Seatoller (site 204), despite the abundance of oak trees present at both sites, species of *Lobaria* were found only on ash trees with a pH of *c* 5.0 or on elms with a pH of *c* 5.6. Where *Lobaria* was still found on oak at Seatoller or the adjacent Great Wood, the pH was *c* 5.0 and consistently higher than that of the neighbouring oak trees. The considerable variation in bark pH of oak species at any site may be due in part to age and management, but it would also appear that there may be a genetic basis for some of this variation. Although mature individuals of *Lobaria* spp can remain for many years in acidified conditions with a declining bark pH, there is no evidence for regeneration on bark with a pH below 5. The implications of this for conservation of the *Lobarion* community are considerable. More on pH and how it effects cation availability has been written for the same sites by Farmer, Bates and Bell (1991).

Within the last 5 years an unusually wide range of climatic conditions has occurred. During the winters of 1986/87 and 1987/88 a predominance of westerlies brought warm wet conditions and few anticyclonic periods from more polluted continental air masses. During this period positive growth of *Lobarion* species was observed at sites that had previously shown.

symptoms of stress. When this weather pattern changed, it was succeeded by a period of low winter rainfall and drought conditions that began early in 1989 except in Scotland where the wet winters continued but with an increasing proportion of wet easterlies. This produced a dramatic deterioration in lichen growth and health in areas that received considerable amounts of wet sulphate such as Loch Riddon and Hells Glen. In the South the drought had its effect on lichen species that were moisture-dependent, and as our surveys were conducted in the middle of the drought, the results were often very obvious. In Horner Combe large sheets of *L. pulmonaria* were stripped from the trees by normally ground-feeding birds attempting to find insects on the bark below the lichen. The lobes remaining were shrivelled and distorted so that it was not easy to calculate area increase or loss. However, in the nearby coastal site of Clovelly (site 306), where coastal mists contributed to the atmospheric moisture the growth rate was good between 1988-90. We visited Horner in the wet winter of 1991 and found that *Lobaria* was re-established in most areas where parts of the thallus had been lost. In sites where acidification is known to be occurring it would appear that *Lobarion* species that are still present in a site can resume growth during temporarily ameliorating conditions.

The distribution and condition of health of the *Lobarion* sites visited in 1990 is shown in Fig 1 and the distribution of acid deposition of hydrogen and sulphate ions during 1989 in Fig 4. Whilst there appears to be some correlation between the health of the lichens and atmospheric acidification, this is not proven on a site by site basis. There are several reasons for this; the data from Warren Spring is provided as annual means calculated from records made on a fortnightly or weekly basis, so that maximum pollution events are masked in a fortnightly record and then in an annual average that is calculated from January to December. Yet the maximum rainfall usually falls between October and March and may not reflect seasonal variations falling in either calendar year. Our surveys are made in summer, so that annual growth of the lichen covers the entire wet winter season, an important growing period for epiphytes, when there are no leaves on the trees. Warren Spring Data is modelled to allow for regional variations in rain, fog or seeder feeder clouds (pollutant loads carried from another area), but this may not account for local conditions experienced within, what are often, very small lichen sites. The recent development of continuous atmospheric monitoring systems has shown that there may be considerable variation in the relative and absolute concentrations of pollutants during a single rain event (Ames, 1987).

Finally, *Lobarion* lichen sites were originally chosen for their proximity to atmospheric monitoring sites, but many of the latter have since been shut down particularly those in "clean" areas of Scotland and Wales, so that we

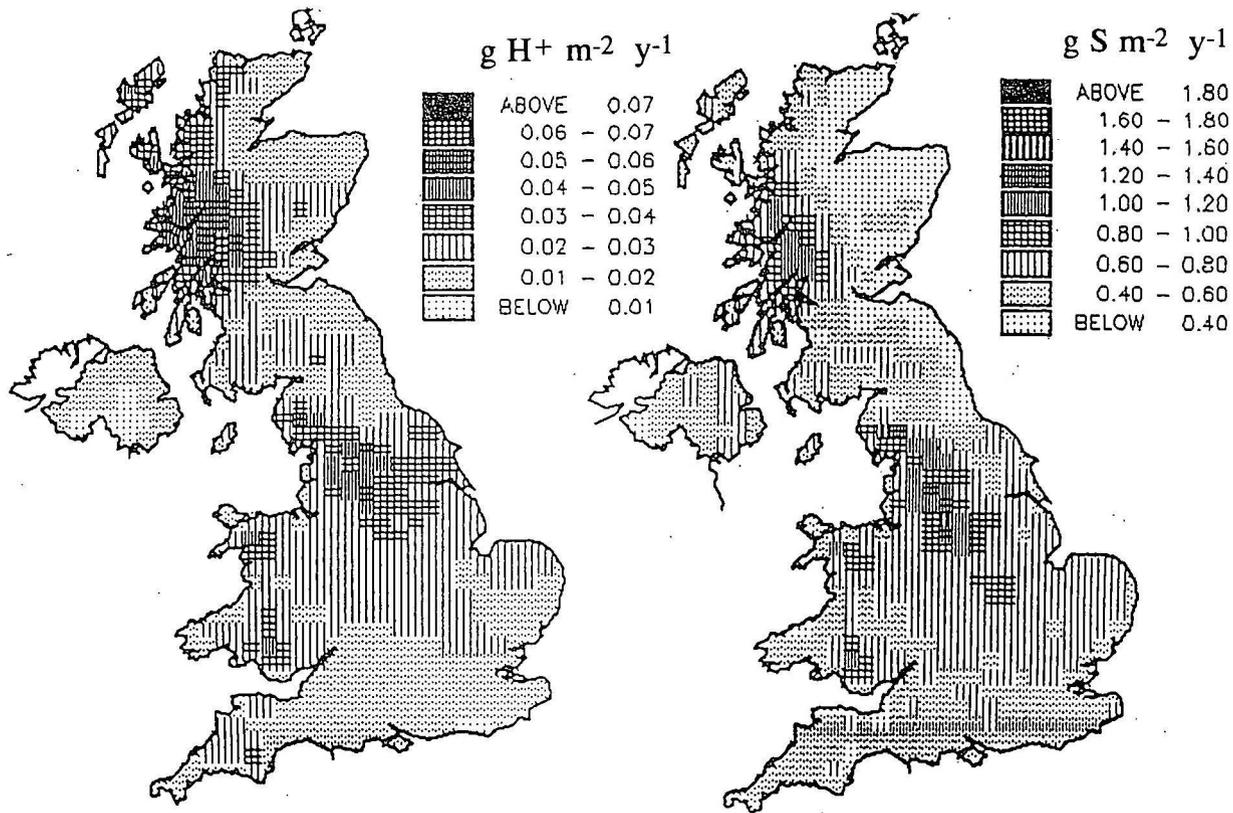


Fig 4. Geographical variation in wet deposited hydrogen ions and non marine sulphate in 1989 (Campbell, Stedman & Irwin (1992), Warren Spring Laboratory).

are now lacking recorded control sites. Continuous atmospheric monitoring may confirm that sensitive lichens are providing a more reliable picture of what is happening in a site than overall modelling from reduced data sets can give. Long term collection of base-line data by Warren Spring has proved important in the assessment of overall trends in acidification, but the loss of records in "clean air" sites is to be regretted, especially in areas where lichen communities appear to be deteriorating as in Welsh sites: 401 Gregynog, 402 Corngaffallt, and 408 Lawrenny. These are also areas likely to be affected by plans to develop or upgrade power stations. Northern Scottish sites were not visited in 1990.

The results of this five-year base-line survey demonstrate that significant changes are occurring within this sensitive lichen community in areas receiving acidification. The chemical analysis of bulk precipitation samples is generally carried out in few isolated sites at infrequent intervals. However, it is apparent that lichens may respond to short episodic pollution events within a local area that may be undetected by conventional analysis. There is now a considerable body of evidence for the physiological effects of acidification on lichen species of the *Lobarion* community (Farmer *et al*, 1992). In the field this is reflected in a declining bark pH which is a critical factor in allowing the establishment of acidophilous species of the *Parmelion laevigatae* which may, with continuing acidification, replace the *Lobarion*. This study has also demonstrated that natural succession occurs within the *Lobarion*, and that analysis of population dynamics may provide us with valuable information on the dynamics of the community. Our present evidence suggests that continued monitoring of lichen growth and succession with concomitant monitoring of other environmental parameters will provide valuable information on the health of our ecosystems.

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Peter James and Pat Wolseley

"WINTABOLITES" - A NEW COMPUTER PROGRAM FOR RAPID IDENTIFICATION OF LICHEN SUBSTANCES

A program for the identification of lichen substances based on TLC-RF values, HPLC-RI values, the colour of developed TLC spots under visible and UV-light, as well as the results of lichen spot results, has been developed by Esther Mietzsch, Thorsten Lumbsch (Essen) and Jack Elix (Canberra). The program is based on the computer program for rapid identification of lichen substances designed for Apple Macintosh computers [Elix et al. (1988) *Mycotaxon* **31**:89-99], but incorporates several new features and a number of new data. The program contains data for c. 550 lichen substances, including data for the recently described lichen xanthones. A synonym-list of older substance names and their current counterparts has been included. The calculation of RF and RI values is easily done with the "Calculate" menu of the program. The substance class of the metabolites has also been included.

The program accepts RF data from six standard solvent systems and a range of possible colours of an unlimited number of spots. A list of possible answers is generated within a user-defined error range of both RF values and colours. The program is designed for an IBM-compatible computer (2 MB RAM or more and VGA graphic monitor) and requires MICROSOFT-WINDOWS 3.0 or 3.1. The program makes full use of the user-friendliness of the WINDOWS system, supporting the windowing and menu environment. Very little typing is required to operate the program as most commands are issued with the mouse, but the program can be operated without a mouse if the user wishes. A help menu answers questions that might arise without the necessity to consult the manual again. The program costs US \$ 149, but a person not attached to an institution, or researchers working at an institution which is not able to cover the cost of the program may ask for a reduced price of US \$ 79. Orders or inquiries should be sent to me at the Universität Essen, Fachbereich 9/Botanik, PO Box 103 764, D-4300 Essen 1, Germany.

Thorsten Lumbsch

NOMINATIONS REQUIRED FOR COUNCIL MEMBERS

Nominations for members of the Council for the period 1993-1994 should be sent in writing to the Secretary, Dr O W Purvis, Dept of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD **before 18 December 1992**, please. No person may be nominated without their consent. Mrs B Aguirre-Hudson, Mrs P A Wolseley and Mr J R Laundon retire from Council and are not eligible for re-election as Council members. The Conservation Officer will be resigning and the President has resigned his position as Treasurer; in the interim the Assistant Treasurer is Acting Treasurer.

JANUARY MEETINGS

Council Meeting

Council will meet on the afternoon of Friday 8 January 1993 at 14.00 in the Council Room of the Royal Entomological Society of London, 41 Queen's Gate, London, SW7 5HU. Please let the Secretary have any items that you wish Council to discuss by Friday 1 January 1993.

Evening buffet/book sale/slide-show

This event will be held on the evening of Friday 8 January 1993 between 18.00 and 21.00 in the Meeting Room of the Royal Entomological Society of London, 41 Queen's Gate, London, SW7 5HU. The buffet will cost **£9.00** which will include one glass of wine. The book sale this year will be restricted to texts of a lichenological nature or of allied subjects and will allow more time to show slides and for general conversation. Members are also invited to bring **12 slides** on their favourite lichen habitat. All sales will be split on a 50:50 basis between the vendor and the Society. Mark Seaward will be the auctioneer; any unsold items will be sold the following day after the AGM.

Please complete the enclosed tear-off form and send your cheque for £9.00 (payable to "The British Lichen Society") to Dr O W Purvis, Department of Botany, the Natural History Museum, Cromwell Road, London SW7 5BD, before Friday 1 January, so that arrangements for catering can be made.

Annual General Meeting/Exhibitions/Lecture Meeting

The Annual General Meeting will be held in the Demonstration Room of the Department of Palaeontology (ground floor), The Natural History Museum, Cromwell Road, London SW7 5BD, at 10.30 on Saturday 9 January 1993. The Museum opens to the public at 10.00. Following the AGM there will be the usual exhibitions, to which members are invited to contribute.

Please bring along your exhibits and help to make it a success. Members requiring display boards should contact the Secretary by 18 December letting him know the display area required please. There are no formal arrangements for lunch, though members may eat in the Museum restaurant, entrance on the ground floor (follow signposts) in Central Hall; alternatively there are numerous restaurants, pubs etc in South Kensington. The afternoon will be devoted to a lecture meeting on the British Lichen Flora.

Programme

- 10.00 Museum opens to public.
- 10.30 Annual General Meeting.

AGENDA

- 1 Apologies for absence.
- 2 Minutes of Annual General Meeting 4 January 1992.
- 3 Matters arising.
- 4 Officers' reports.
- 5 Meetings 1992-1993.
- 6 Election of members of Council.
- 7 Any other business.
- 8 Date and place of next AGM.

- 11.30 Coffee and Exhibition Meeting
- 12.00 Lunch
- 14.00 Lecture Meeting
- 17.00 Close

Lecture Meeting: "The British Lichen Flora"

- 14.00-14.30 Trials and tribulations of flora writing (P W James)
- 14.30-15.00 Key construction: theory and practice (O W Purvis).
- 15.00-15.30 Lichen nomenclature (J R Laundon)
- 15.30-16.00 Tea
- 16.00-16.30 The British blue-green problem (P M Jørgensen)

William Purvis

FROM THE PRESIDENT'S CHAIR

As I write this piece for the *Bulletin* the summer field season is coming to a close. It is several years since I was last rained upon so many times in one year. I suppose that if it was uncomfortable for us, at least the lichens must have grown well this summer.

Each year some of our members enjoy a very entertaining evening on the day before the AGM. I would urge more of you to come as I am sure that you would find it an enjoyable addition to your lichenological activities. You will find a good buffet meal, slides of members' activities during the year and a chance to talk to fellow members. Mark Seaward has also agreed to hold another book auction and those of you who have attended previous ones will know that this is an event not to be missed.

To make it even more worthwhile to come to London for the AGM, it has been decided to hold a short field meeting on the Sunday morning. During my term as President I would like you to see a little of the lichens in my part of the London suburbs and Peter James has agreed to lead a meeting in Richmond Park. This is an interesting site that has improved greatly in recent years as levels of pollution in south west London decline, and I expect that we will detect further changes. It is also an interesting park for all its historical associations. We will meet in the car park by the entrance to Pembroke Lodge at 10.00. Richmond is on the British Rail line from Waterloo and also the District line of the underground. Jeremy Gray and I will run a shuttle service from the station to the park between 9.30 and 10.00 (look for the blue Volvo estates). If you are thinking of coming to the meeting by train it would assist us if you would let me know in advance. (telephone 081 949 2416). We will finish the meeting at about 13.30 with lunch in a local pub.

Looking further ahead, Francis Rose has agreed to lead a meeting to Wimbledon Common after the AGM in January 1994 and that should be another very interesting site.

I hope that the weather is kind to us this early in January and that as many members as possible will come to the various events over the weekend. It would help to blow away the effects of the Christmas and New Year party season.

Frank Dobson

LICHENOLOGIA

During the summer this year I visited a friend on several occasions who was incarcerated in hospital for some months. As he was well aware, I used to maintain that if a man was interested in plants, wherever he found himself he could not be bored. Even in a prison cell, I would say, there would probably be a few mosses on the window sill. He was not convinced, and now I am not so sure either. The first ward he was in overlooked a yard with lorries, fork-lift trucks, and so on. Amazingly some sycamores and buddleias had managed to establish and maintain themselves in odd corners. The second ward, where he spent most of the time, looked out on to a muddle of outhouses and the incinerator with its enormous 20m high chimney; every day hospitals destroy large amounts of paper, plastics and textiles. No trees, no bushes, not even grass, and no cryptogams on the window sills. However, there was a small shed roofed with an ancient corrugated sheet of asbestos cement. As I was quick to point out to him, I could make out plants of *Lecanora muralis*, *Xanthoria parietina* and probably a *Parmelia* (? *P. saxatilis*). There were also crustose species present, but it was impossible even to guess at their identity at a distance of 10m. Had I been a really all-round naturalist instead of just an amateur botanist, or if he had been interested in birds, perhaps we could have speculated about the few pigeons (why were they so diseased?) and fewer crows (also rather dilapidated looking) that occasionally hove in sight. Not even a grey squirrel (though we had seen one previously in a sycamore tree). So it seems that my earlier views about combating boredom were incorrect --- or were they?

Correspondents have told me about a recent excursion (an extended long weekend) jointly between East Anglian and West Yorkshire lichenologists that started near Leeds and ended up near Leicester. My informants were cagey about the lichens seen until they have done their homework on the specimens collected, but *Enterographa hutchinsiae* and *Thelocarpon laureri* were mentioned. There can be hazards associated with such excursions: by the river Wharfe near the Strid there is a deep underground cavern "from which no traveller returns" and at Newbold Colliery there are large cracks in the capping of a shaft 200m deep. The lichenologists on this occasion exercised due care. Another correspondent has drawn my attention to a passage in Tyler Whittle's *The Plant Hunters* referring to the exploits of Joseph Dalton Hooker (the Hook. f. of taxonomists) on Ross's expedition to the Antarctic in the *Erebus* and *Terror* in 1842. He stresses the hardships involved in collecting lichens in Tierra del Fuego and mentions a hammer and chisel having to be used on frozen rocks, apparently unaware that these implements are standard equipment for field lichenologists and might in

fact be called their insignia. More novel however, is the statement that Hooker would sit down on lichens until they were thawed by the warmth of his body before collecting them.

Recently I have been including occasional literary references in LICHENOLOGIA and no one has objected (though admittedly no one has expressed satisfaction with them either!), so I cannot allow to pass without comment the publication of *The Mystic Garden* by Douglas Swinscow, known to all of us as Dougal, and who I was shocked to learn had died when this paragraph was in proof. He was of course the author of *Macrolichens of East Africa* (with Hildur Krog) and a fascinating autobiography that came out a year or two ago. He was also a founder member of our Society (he was the man who called together the inaugural meeting), the first Editor of *The Lichenologist*, one of our Presidents, and always a provider of sound advice in our affairs and lichenological information of astonishing breadth. In his new book he comments on a wide variety of gardens, some of them very famous, and others less so; a number of them are illustrated in rather dark, but effective, black-and-white engravings by Cynthia Rowan. In the text the fact that the author is fundamentally a sound scientist keeps coming to the surface; he tells us that he is also a Christian and a Taoist. One of the most remarkable things about the human mind is that it is capable of being so many different things at once. It is impossible in a short review to convey the flavour of this work; if you are interested, you will have to read it for yourselves.

The Dog Lichen is one of the very few species with a genuine English name which almost certainly antedates the Linnean epithet. Linnaeus called it *Lichen caninus*, and Willdenow transferred it to the genus *Peltigera*; nowadays it is regarded as one of a cluster of similar species. An interesting article by Gunnar Carlin (in Swedish) on this group in the journal *Graphis Scripta* gives notes on seven large tomentose species known to occur in Sweden. How this compares with the position in Britain (which I suppose we must now call Great Britain and Ireland) I cannot say, as my copy of the new Flora has not yet arrived. Of the seven I think I can recognise *P. praetextata* and *P. rufescens*; *P. membranacea* looks to me like a larger *P. canina*, but there must be more to it than that. Carlin says that the veins and rhizinae are practically identical in the two species, but that the gaps between the veins are smaller in *P. canina*. Accompanying his notes he provides drawings of the upper surfaces, lower surfaces showing venation, and, especially interesting, enlargements showing in detail the appearance of the rhizinae, in all the seven species. I anticipate that this paper will be very useful in the field as well as in the herbarium.

CUDBEAR

CONSERVATION NEWS 7

A trinity of items to report this time . . .

Firstly, if any members of the BLS have records of lichens from Surrey, (especially of species useful as habitat indicators, preferably backed by 6-figure grid references and with some environmental data) please could you send them to the Surrey Wildlife Trust, Powell Corderoy Annexe, Longfield Road, Dorking RH4 3DF. The Trust is preparing a biological records database for the county, and needs urgent help in increasing its information on lower plants. In contrast to neighbouring counties, little has been written about Surrey lichens (maybe we all go rushing off as far as we can e.g. Cornwall or Shetland and consequently neglect an interesting and varied county?).

Next, members who undertake any lichen translocation experiments ("transplanting" in the vernacular), are asked to tell the Society's Conservation Officer what species is involved, how many plants have been moved, where to, when, etc. It really is essential that records of these experiments be maintained centrally. The Conservation Committee acts as a clearing house for matters like this (and for possible threats which might affect such experiments), and information of this kind, always handled wholly confidentially, may well be of benefit to many of us in the future. We generally guess as to what the environmental requirements for lichens are; translocation experiments help to show if the guesses are correct or not and can be vital in clarifying the use of particular species as environmental indicators.

Finally, I feel it best for me to resign as Conservation Officer at the AGM in January 1993. I suggest that my successor should have personal working contacts elsewhere in the conservation movement (many committees have common membership), have a good understanding of conservation legislation (conservation nowadays has perhaps less to do with plants, but a lot to do with politics . . .), be computer-literate (especially in regard to the manipulation of databases), be competent at obtaining funds for survey and conservation projects, and be prepared to keep the Committee and its work programme on a very firm financial keel. An interest in lichens could also be beneficial. If you fit (or come near to) this modest set of requirements, then the post could be yours (plus a seat on Council) - see information on nominations for Council elsewhere in this issue.

Kery Dalby

CITY DIARY

As is now the norm, five of us, that is Peggy Cayton, Amanda Waterfield, Peter Earland-Bennett, Albert Henderson and myself, decided to look at another area of London, on the Sunday after the AGM, and we made for an area in the northwest of the Greater London conurbation, just inside the boundary where a churchyard and a bit of woodland looked promising. We were very fortunate that Peter and Amanda both had cars, thus enabling us to get to our chosen site easily and relatively quickly.

The day started fine and bright and not at all cold - very pleasant for January. We set off from South Kensington, where some of the party were based, crossed Hyde Park and turned NW along the Edgware Road to our destination around Harrow Weald. We decided to start by looking at an annexe to Harrow Weald church, an old cemetery area close by, triangular in shape surrounded by a high hedge and bordered by the Uxbridge Road to the north and Elms Road to the south east (51/154915). Initially the tombstones looked unpromising as they were often heavily polluted with algae and densely shaded due to the presence of a number of large trees to the south and some smaller scrub as well. However, close examination proved rewarding and by lunch time 31 lichens and 2 fungi had been seen.

A marble tomb supported *Verrucaria muralis*, *Phaeophyscia orbicularis*, *Lecanora dispersa*, *Candelariella aurella*, *Caloplaca citrina*, together with its form *flavocitrina* on a chalky oolitic stone close by. *Physcia dubia* was also seen on the top of an oolitic tomb, and *Sarcogyne regularis* on a heavily polluted basic border stone in deep shade. The acidic stones were generally much poorer, though *Psilolechia lucida*, *Scoliciosporum umbrinum* and *Buellia aethalea* (K+y-r) were noted on sandstone and *Polysporina simplex* on granite. *Scoliciosporum umbrinum* was also noted on an iron cross as were *Lecanora dispersa* and *L. conizaeoides*.

One of the features of this graveyard seemed to be the fact that species were moving from their preferred substratum to an alien one, probably a result of pollution, and thus causing confusion. This was seen with *Physcia dubia* on oolite. A strange assemblage of species was recorded on a sloping sandstone tomb with *Candelariella vitellina*, *Trapelia coarctata* and *T. placodioides* present, but also *Candelariella aurella*, *Verrucaria nigrescens* f. *sorediata*, *V. muralis* and *Lecidella stigmatea*. By far the most interesting find at this site was *Anisomeridium nyssaegenum* colonising the root of a tree and spreading to the soil, with its packets of conidia being ejected in filamentous threads, which were visible to the naked eye. The trees, however, were generally poor, with *Lecanora conizaeoides* colonised by *Lichenocodium erodens* and *Athelia arachnoidea* on algae on a sycamore.

At this juncture we felt that lunch was necessary, so scraping the sticky clods of London clay off our footwear, we drove towards our next destination and were relieved to see a pub, "The Hare" at Bushey (51/147925), which sold food on a Sunday where, though very crowded, we managed to eat heartily. On leaving this hostelry we discovered that a distinct change in the weather had occurred for it was dull and overcast and much colder, but our spirits were high and we took advantage of some weathered beer tables in front of the pub to make a few more records. It was obvious that our odd behaviour of lying prone on the tables, with our noses pressed close to the woodwork, was causing much merriment to the other patrons and it was not long before the landlord appeared to enquire what we were doing, though he became quite interested when we explained our object. Eight species were seen here and included *Lecanora saligna*, *Micarea denigrata*, *Lecanora symmicta* and *Trapeliopsis flexuosa*.

Harrow Weald Common (51/13-4.92.) was our last stop for the day and by this time it was beginning to spot with rain. The common is peculiar because it is an open wooded area on a hillside sloping south of mainly oak, beech and birch, with yew and a single giant redwood. The understorey is bracken, brambles and bilberries and an ancient impenetrable rhododendron hedge. The terrain is uneven, of pits and hummocks, as though excavation of the gravelly clay had occurred.

Lichenologically the area was poor and represented only by odd thalli. *Athelia arachnoidea* was present on beech and *Lichenocodium erodens* on *Lecanora conizaeoides* on pine. Oak had the most abundant flora on boles and branches, with *Parmelia sulcata*, *P. subaurifera*, *Hypogymnia physodes*, *Lepraria incana* and *Cladonia coniocraea* being noted. A sloping bole of birch was also well covered with the above species, though not *Parmelia subaurifera*, but in addition, *Trapeliopsis granulosa* and a fungus, *Ascocoryne sarcoides*, were present. At the base of another birch, between the buttress roots, the pycnidial state of *Micarea botryoides* was found. On the other side of the road, from the main wood, a line of pollarded hornbeams in a ditch supported both sterile and fertile thalli of *Micarea prasina* and this was found to be spreading to the soil close by. Our first record of *Evernia prunastri* was noted on these hornbeams as well.

Further along the main road a cart-track (Ass House Lane) went to a cottage with pebble-dashed walls, by the side of the golf course. The walls of the cottage were devoid of any lichen except for *Candelariella aurella*, but a lump of rock in the ground had *Caloplaca citrina*, *Lecanora dispersa* and *Rinodina gennarii*, and a bit of asbestos in a hedgerow had *Lecanora muralis* and *Phaeophyscia orbicularis*. Despite a footpath across the golf course

there were no takers to see if any lichens were present on trees in open exposed conditions.

As the day was deteriorating rapidly and the light was beginning to fail, we walked back along a track through the north side of the wooded area, skirting some ponds and a deep ditch, which is all part of Grim's Dyke, an ancient earthwork system. The only lichens recorded were *Daldinia concentrica* on a large ash and a small thallus of *Cladonia fimbriata* on the buttress root of a huge beech by one of the ponds. This western end of Harrow Weald Common appeared to be landscaped and ornamental. Big stands of rhododendron were present and there seemed to be the marshy dried up remains of some artificial lakes, also a large, probably artificial, rock outcrop of a conglomerate sandstone was discovered, which only had *Lepraria incana* in crevices as it was too heavily shaded by an enormous yew tree.

In this area two exciting finds were made. A branch of rhododendron had *Micarea prasina* present which was parasitised by what appears to be *Pezizella epithallina* as it concurs in all details with the description of this species in Hawksworth's paper: "A key to the lichen-forming parasitic, parasymbiotic and saprophytic fungi occurring on lichens in the British Isles" (*Lichenologist* 15(1): 1-44 [1983]). However, it was not on its conventional host, *Peltigera*, and it awaits confirmation. The other interesting find on the base of an old oak near the "rock outcrop", though by this time it had become so dark and with rain falling heavily it was virtually impossible to tell in the field what the thallus was, turned out to be *Chaenotheca ferruginea* and fertile.

We then got back to the cars as quickly as possible, damp but happy, said farewell to Amanda who had other plans for the evening and made our way back to South Kensington for an Indian curry and a natter.

Chris Hitch

TO ALL ASPERGERS ANONYMOUS

CHURCHYARD	VICE-COUNTY	RECORDERS	SURVEY DATES	TOTAL
1 Mickleham	17 (Surrey)	PWJ/JRF <i>et al</i>	1964ff	153
2 Helmdon	32 (Northampton)	TWC <i>et al</i>	1983-92	131
3 Tedburn St Mary	3 (S Devon)	PWJ/TWC	1975/92	129
4 Trotton	13 (W Sussex)	BJC/BLS	1971/91	127
5 Wappenham	32 (Northampton)	TWC <i>et al</i>	1983-92	122
6 Blair Athol	89 (East Perth)	AMF <i>et al</i>	1992	117
7 Stopham	13 (W Sussex)	FRKS/PWJ/BLS	1989/91	116
8 St David's Cathedral	45 (Pembroke)	PWJ/PAW	1987	114
9 Sutton	13 (W Sussex)	FR/PWJ	1975	112
10 Wartling	14 (E Sussex)	KP/BLS	1991	109
Rolvenden	15 (E Kent)	KP	1986-92	109
12 Pulborough	13 (W Sussex)	PWJ/FR/BLS	1989/91	105
13 Parham	13 (W Sussex)	BLS	1991	104
Bepton	13 (W Sussex)	BLS/FR	1991/92	104
15 Llandudno(St Tudno)	49 (Caernarvon)	BLS	1991	103
Claudy	H20 (Londonderry)	BJC/AMO'D	1991	103
17 Bitton	34 (W Gloucester)	DJH <i>et al</i>	1985/86	102
Greatham	13 (W Sussex)	FR/PWJ	1992	102
19 Nacton	25 (E Suffolk)	CJBH/PC	1988	101
Rogate	13 (W Sussex)	FR/BJC/BLS	1968-92	101

As promised, here is a revised version of the Top Twenty Churchyards Challenge first issued a year ago. It includes no less than seven new entries, the highest of which I learnt of just a day or two ago and is a result of this year's Kindrogan course tutored by Alan Fryday. I haven't yet received the detailed list, although I gather it contains rather a lot of Cladonias! Others have climbed the charts from within, emphasising yet again that a single survey rarely does justice to a site and that new knowledge and fresh eyes (in more than one sense) consistently reveal new records.

It is always a privilege and delight to visit the churchyards of another area and attempt to familiarise oneself with a different geology and a different community of lichens. The splendid summer field meeting in Cornwall provided the ideal opportunity for this and, in all, eleven churchyards were surveyed, so far yielding 184 taxa. I say "so far" because the precise determination of numerous minute scrapings can take many months. There are times when I envy the epiphyte enthusiasts! Actually, in Madron churchyard, I came across a huge fallen branch bristling with species and, for half an hour, was able to whittle away to my heart's content. The resulting heap still sits in the corner of my workroom waiting patiently for me to make the next move. It isn't every day one finds an ascocarp on stone big enough to pick off with the fingers, and Ken Sandell and I were

somewhat surprised when we encountered *Sarcogyne clavus* for the first time on the south-facing granite wall of St Buryan Church. Subsequently, it was found in the same position at two other sites. A first encounter on a different scale and equally exciting was having *Gyalecta jenensis* var. *macrospora* pointed out (literally!) to me by Peter James. There was certainly nothing macro about these "fruits". Even with an expert finger guiding me unerringly to the precise square centimetre, it was some time before I could make them out. Here was another good example of what happens in the condensed landscape of a churchyard where two contrasting substrates are in close proximity. The lichen was growing on top of an acid tomb influenced by mortar wash.

On my way back, I called in at Tedburn St Mary in Devon first surveyed by Peter James seventeen years ago. The trees partly responsible for the high total shown above were nowhere to be seen and, as Peter suggests, they were probably elms long since cremated. I did, however, manage to boost the total by finding 13 more species on stone, including my favourite *Caloplaca isidiigera*.

The totals above, incidentally, include species both past and present and should really be revised downwards when habitats, through bad management or ill fortune, have disappeared. Thanks to the hospitality of the Benfields, I was able to visit a number of other Devon yards on both the outward and return journeys.

Yet another opportunity to visit pastures new presented itself when I was invited to help with a Churchyard Management Training Day at Colwall on the edge of the Malverns on June 27th. The day was well organised and attended, and it was useful to take a group round in tandem with Dr Eric Robinson, President of the Geological Association. I have now worked with him on numerous occasions and his expertise is invaluable. Over ninety lichen species were recorded and at least a dozen geologically distinct stones found. I also called in briefly at Weobley, where the spire dominates the almost too picturesque, timber-framed village, and two churches in Kilvert country, Bredwardine and Moccas. The tiny church in Moccas Park is unusual in that it is made entirely of tufa. Although it appeared to carry only ten species, it was clearly well-liked by *Lecanora crenulata* and *Caloplaca saxicola*. As I was staying in the village, I had a longer look at Bodenham. Some ascocarps dotted along the mortar of the north porch had isabelline margins and immediately recalled *Lecanora fugiens* so often prolific on the granite slabs in Cornish churchyards. Sure enough, they were C+ orange. But why on mortar?

The answer came in early September when I had the pleasure of spending

a couple of days with Francis Rose in Sussex. He took me to Greatham to show me a species abundant on the old mortar between the flints. He had found it with Peter James earlier in the year. It was *Lecanora conferta* similar both in looks and reaction to *L. fugiens*, but on a very different substrate. We found it again at West Thorney, where it was pleasing to see *Lecanactis hemisphaerica* for the first time, as well as a puzzling, pinkish *Dirina*-like crust. We went on to carry out a detailed survey at Graffham and added yet one more to the growing list of "ton-up" sites in Sussex.

As some of you may know, George Baron regularly produces a lichen report for *British Wildlife* magazine. In the last edition (Vol.3 [No.6]), his concluding paragraph begins:

"It was recently reported in *The Times* that unfortunate sufferers from a newly diagnosed disorder, Asperger's syndrome, tend to be 'loners' and to devote themselves to such esoteric interests as 16th-century Spanish wars or churchyard lichens."

Fortunately, George goes on to add:

"But surely there is enough evidence to demonstrate that enthusiasts for the latter are among the most gregarious and convivial of human beings!"

So far this year, I have surveyed churchyards in the company of at least a dozen different BLS colleagues (not counting the group visits made on official field meetings), as well as with a number of non-lichenologist friends. This has been particularly so on home territory. The Northants trio (Malcolm Senior, John Smeathers and I) have been yard-hopping regularly on a Tuesday, joined in the school holidays by John Walton from Warwickshire and Ivan Pedley from Leicestershire. The main reason why Wappenham and Helmdon have soared in the charts is that more expert eyes than mine have scrutinised them. Peter James found sterile *Caloplaca virescens* for me at Wappenham, while Oliver Gilbert added *Thelidium minutulum*, *Vezdaea rheocarpa* and *Rinodina lecideina* at Helmdon. Much to my satisfaction, I did manage to add *Petractis clausa*, *Thelidium papulare* and *Rinodina bischoffii* to the former list all on my own. More recently, following Keith Palmer's example, I have tried to establish a Lichen Interest Group in the county. The inaugural meeting was held at these same two yards and, not only did Keith come all the way from Kent, he also added *Petractis clausa* and *Physcia clementei* (nowadays mainly a coastal species) to the Helmdon list! Not to be outdone, John Smeathers contributed by finding *Parmelia pastillifera* at Wappenham. And so the totals grow through cooperation and conviviality.

Cooperation with other naturalists is equally important and this could not be better illustrated than by the project preoccupying me as I write. The

Gloucester Cathedral Project is an attempt to look at the natural heritage of the cathedral and its precinct from as many angles as possible. Surveys, for example, of birds, bats and other mammals, spiders, hoverflies, flowering plants, ferns, mosses and lichens have been carried out and a herb garden is being set up in the Little Cloister. The whole project has culminated in a week-long Creation Festival which is taking place this very week (20th-26th September). I took part in a presentation in the Parliament Room on Sunday and helped to set up an exhibition which will run for the week. I return on Thursday to a conference at Glenfall House, near Cheltenham, at which our findings will be conveyed to representatives from other cathedrals in the hope that they may do likewise. On Saturday, there will be a Family Fun Day. Eric Robinson has created the Gloucester Wall Game and I have prepared a lichen trail. If the conservation of lichens in churchyards is to make any kind of headway, we need to become involved in such initiatives at both the local and national level.

To this end, the Society is, of course, holding its first national workshop on Churchyard Lichens at Stoneleigh on October 10th. Unfortunately, this is well after the deadline for the present *Bulletin* and, unless you come to the AGM, you will have to wait until June 1993 for the outcome. All I can say at this juncture is that the numbers participating should exceed 30 and that it is a nice mix of experienced lichenologists and complete beginners. Among the latter are a flowering plant botanist from Buckinghamshire, a free-lance writer from Gloucestershire, and the already twice-mentioned geologist! I hope that, as a result, a small permanent committee will be formed and that a document outlining guidelines for recording and conservation will be available to you in the very near future.

Tom Chester

SOUTH-EAST REGIONAL FIELD MEETINGS 1992

Bright and breezy and chilly early Spring conditions prevailed near the south coast for a series of visits, one April weekend, to both saxicolous and corticolous sites in east Sussex.

Patient, thorough and unhurried churchyard work paid off well on the Saturday with the lichen total for Wartling Churchyard soaring to 109. The whole day was spent here and several pairs of eyes produced one of the highest churchyard totals yet in this vice-county. The main attraction was a splendid acid chest tomb generously covered in lichens on the top surface, particularly the leafy *Parmelia* species with striking colour contrasts between the blue-grey of *Parmelia revoluta*, the yellow-grey of *P. soledians* and the brown of *P. verruculifera*. A small piece of the green form *flavovirella* of *Candelariella vitellina*, found here among a number of crustose species that had managed to find a niche in spite of the aggressive competitiveness of so many *Parmelias*, occurred, as it most often does, as a small island in the midst of a much larger patch of the normal yellow form.

Other *Parmelias* on stone in this churchyard included *P. glabratula* subsp. *fuliginosa*, *P. mougeotii*, *P. subrudecta* and *P. subaurifera*. Behind the lightning conductor was the now increasingly familiar *Psilolechia leprosa*, growing by the copper run-off. One sandstone headstone produced *Platismatia glauca*. Other saxicolous species included *Caloplaca crenularia*, *C. isidiigera*, *Clauzadea monticola*, *Polysporina simplex*, *Ramalina farinacea* on the church wall, *Trapelia obtogens*, *Belonia nidarosiensis* and *Porpidia macrocarpa*.

Of course variety of habitat within the site is crucial to a high churchyard total and at Wartling there was no lack of either corticolous or lignicolous species. On the trees grew the waxy brown pyrenocarp *Pyrenula chlorospila*, small contiguous colonies of grey *Enterographa crassa* and *Schismatomma decolorans*, while the rich flora of species growing on wood included, on a remarkable and presumably rarely occupied bench, *Ochrolechia turneri* and *Pseudevernia furfuracea* plus the normally saxicolous *Parmelia glabratula* subsp. *fuliginosa* and *P. verruculifera*. *Parmeliopsis aleurites* and *Cyphelium inquinans* were on nearby wooden memorials while *Chaenotheca ferruginea* was growing in a somewhat shaded spot on the boundary fence.

Next day the group, consisting now of largely different personnel, walked from Barley Lane car park at Hastings Country Park to the exposed boundary fence on the cliff-top at Ecclesbourne Glen. Here grows a colony

of *Cyphelium notarisii*, rather like a bright green *C. inquinans*, which was duly noted, admired and photographed. Other lignicolous lichens at this spot included *Buellia griseovirens*, *Pseudevernia furfuracea*, *Lecanora symmicta* with fruits more or less fusing together and *L. confusa*, showing an orange reaction upon application of C. Returning by a wooded ravine, bryophytes, such as *Hookeria lucens*, sparked greater interest than the lichens though *Enterographa crassa* and *Parmelia revoluta* were observed. Beauport Park on the northern outskirts of Hastings was investigated during the afternoon. Certain acidophilous species were noted on the trees, including *Hypogymnia tubulosa* and *Ochrolechia androgyna*. *Chrysothrix chrysothyma* was growing extensively on one tree with *Leproloma vouauxii*, a more unusual corticolous species. *Usnea subfloridana* was another find while the distinctive black lichenicolous fungus on *Hypogymnia*, *Lichenocodium erodens*, was pointed out. A low damp rock suddenly stumbled upon in the middle of the wood yielded *Trapelia coarctata*.

Finally, a brief visit was paid to Guestling Churchyard. This is a locality for saxicolous *Parmeliopsis aeurites*. Low damp gritty sandstones seemed to be favoured by this normally lignicolous species. *Hypocenomyce scalaris* with its overlapping, downward-hanging squamules, was found thriving on a headstone. Other lichens of note here included *Buellia stellulata*, species of *Opographa* on the shaded church walls and *Catillaria lenticularis*, rather unobtrusive and easily overlooked on limestone.

Tom Chester is keen to have churchyard records from Bedfordshire and so on 1st August we visited three sites in the north-west of the county, close to the Northamptonshire border and to ironstone country. A few ironstone memorials were to be found, especially at Sharnbrook, but this was clearly not the heart of ironstone territory. I find fascinating the subtle distributional differences that occur between my own stamping-ground of Kent and east Sussex and, for example, places in the Midlands which I visit much less often. Thus *Caloplaca variabilis*, a species that excites some comment in the far south-east was comfortably present on limestone in all three yards. Much the same remarks apply to *Rinodina teichophila*, again present at all three sites, and *Aspicilia subcircinata*, present only on a window ledge at Odell but a species enjoying a much greater provenance in the Midlands and East Anglia, than south of the Thames. *Caloplaca rudenum* was also found at Odell, which is one of several locations in Bedfordshire that lies west of the main range of this species. *Xanthoria elegans* was a slightly surprising find on two newer limestone headstones at Sharnbrook, since its limited churchyard distribution tends to be confined to concrete posts or concrete coping stones on wall tops. It is easily identified by its particularly deep orange colour and narrow, strap-shaped, lumpy lobes (but remember

to take *Caloplaca saxicola* into account although that species is generally much paler). *Psilolechia leprosa* was duly searched for on copper run-off and found in two of the three yards: Odell and Felmersham. At the latter *Lepraria lesdainii* on mosses in mortar was discovered deep in recesses; *Leptogium plicatile* was on limestone ledges at Odell.

Milton Hyde is a small but curious mixture of woodland and damp heath lying some five miles north of Eastbourne in east Sussex. A pleasant day, interrupted by some heavy but mercifully brief showers, was spent at this site on 30 August. Our aim this time was to improve beginners' knowledge of corticolous species. One oak had a fine colony of *Pyrrhospora quernea* in a fertile condition. More often it occurs as a small, dull greenish, sterile sorediate crust surrounded by a black line. The oak flora here was richer than in many parts of eastern England although some bark acidification was indicated by the occasional presence on horizontal boughs of *Hypogymnia tubulosa*, *Platismatia glauca* and *Pseudevernia furfuracea*. Fruiting *Chaenotheca ferruginea* was pointed out and other species on oak included *Enterographa crassa* and, in the recesses, *Schismatomma decolorans*. But the star of the oaks was the old forest indicator species *Parmelia reddenda*. Several specimens of *Ramalina fraxinea* were found on ashes along with fine *Parmelia perlata* and *Lecanora pallida*. On one tree *Parmelia sulcata* was in fruiting condition. Different species, however, were pointed out on the smooth bark of hornbeams, notably *Arthonia radiata*, *Enterographa crassa*, *Graphis* spp., *Pertusaria hymenea* and *P. leioplaca*.

Non-lichenised fungi were found in abundance after recent rains and at one time threatened to tempt away the party. However, a few terricolous lichen species saved the day, notably *Cladonia subulata* and, in an area of compacted damp heathland soil, many thalli of *Baeomyces roseus*, some with incipient fruiting bodies.

Keith Palmer

The Second Symposium of the International Association for Lichenology took place this summer at Båstad, Sweden, attracting 245 participants from 33 countries. The meeting began officially at 12.00 on Sunday 30 August in the Botanical Gardens in the historical city of Lund (Fig 1). After a light "garden party" style lunch we were escorted on a tour of the cathedral (dating back to 1080) and the University (founded in 1668). We then boarded coaches and were driven northwards for c80km to the Hemmeslövs Konferenshotell at Båstad where the Symposium was held. That evening we enjoyed a fine open-air barbecue. There then followed, in very convivial surroundings, 4 1/2 days of intense activity with more than 90 lectures, 100 posters, several Society and specialist group meetings, and an excursion as well as an IAL dinner. The large number of presentations necessitated two parallel lecture programmes; this frequently led to frustration when lectures of interest clashed but the great diversity of lecture and poster topics ensured that there was much to interest almost everyone. A local excursion, marred a little by poor weather, took place on the Tuesday afternoon to an area of *Calluna* heathland at Måstocka Ljunghed a little north of Hemmeslöv (Fig 2). On the Thursday evening an IAL General Meeting took place at which thirteen "Acharius Medals" were awarded for long and distinguished contributions to lichenology: the recipients were D D Awasthi, C F Culberson, W L Culberson, G Degelius, A Henssen, P W James, H Krog, O Lange, J Poelt, R Santesson, J W Thompson, H Trass and A Vězda. The medals are silver facsimiles of one made in honour of Erik Acharius in 1846 by the Swedish Royal Academy of Sciences; the facsimiles were struck from the original die which was generously loaned to the IAL by the Academy. This meeting was followed by an excellent IAL dinner (Figs 3 & 4) with much after-dinner conversation continuing late into the evening. During dinner, those members of the IAL Executive Council attending the Symposium were presented with official Lund University ties or scarves by the local organizing group (Fig 5) who in turn were themselves presented with University of Lund T-shirts in appreciation of their hard work. In fact all the organizers and programme convenors are to be congratulated for making IAL 2 a tremendous success.

Some participants had attended pre-Symposium excursions to Abisko in the far north of Sweden, and to Bohuslän on the Swedish west coast north of Göteborg, and after the Symposium there was an excursion to Vadstena to unveil a plaque in memory of Erik Acharius (see p33).

(Photos: P D Crittenden)

Peter Crittenden

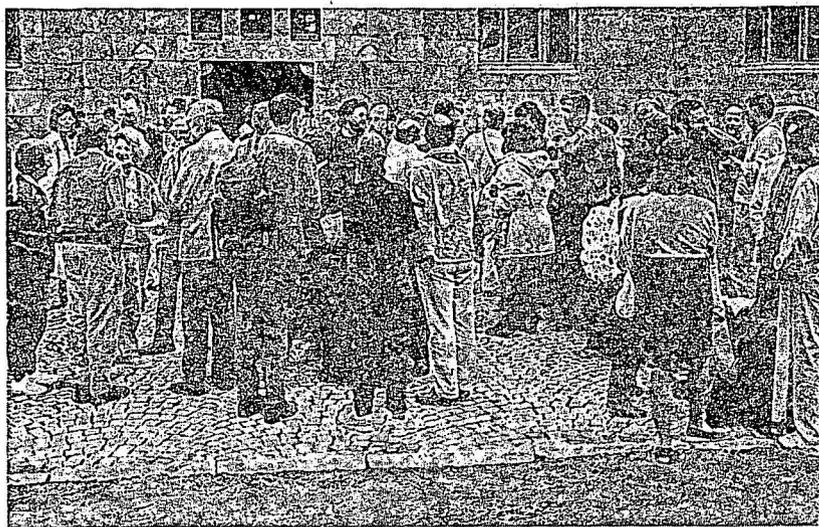


Fig 1. IAL 2 participants gathering in the Botanical Gardens, Lund.



Fig 2. Field excursion to *Calluna* heathland at Mästocka Ljunghed

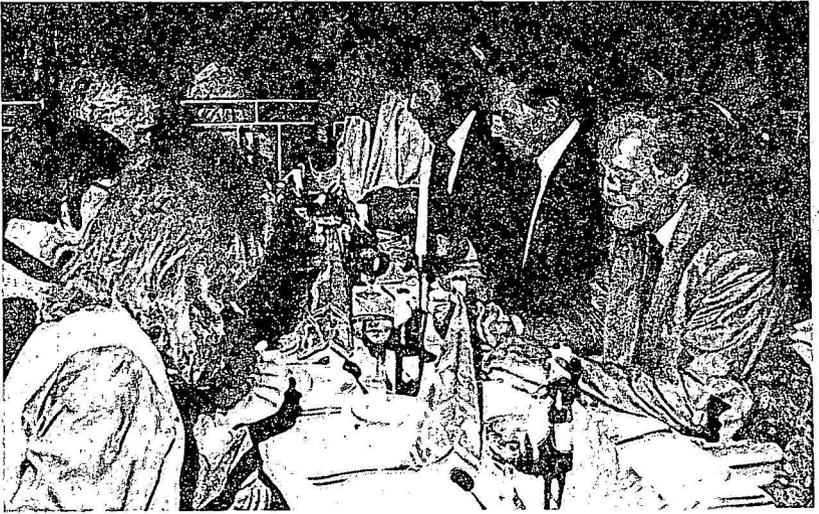


Fig 3. IAL Dinner



Fig 4. IAL Dinner

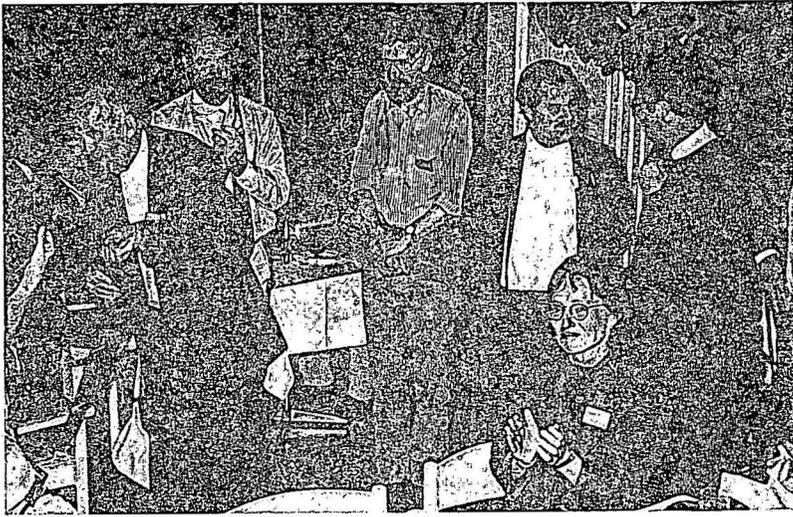


Fig 5. Presentation of Lund University ties at the IAL Dinner (recipients, L to R: J Poelt, D J Galloway, J A Elix, L Arvidsson and M R D Seaward.)

BUILDERS' LIME TURNS LICHENS PINK

Earlier this year an employee of English Heritage, who is involved with repairing old buildings, mentioned to me that, when newly repointed masonry is hosed down to clean off surplus mortar, the yellow lichens all turn pink, the colour fading as they dry out. Until c 1870 lime-mortar (also known as putty mortar) was used for construction purposes. It includes hydrated lime as a major component. After this date hydrated lime, or builders' lime as it is more often called nowadays, was rapidly superseded by cement which produces a much harder mortar. In the interests of authenticity English Heritage repair their buildings using the old recipe. The colour effect can readily be demonstrated by obtaining a sample of builders' lime, mixing it with a little water, and applying it to yellow lichens. All the *Caloplaca*, *Candelariella* and *Xanthoria* species I have tested turn pink. This effect appears to have gone unnoticed by lichenologists though Laundon has pointed out that certain *Caloplaca* species react C+ violet-red with bleach (*Lichenologist* 24: 1-2). The builders' lime mixture does not turn *Trapelia coarctata* pink, so its action is different from that of bleach.

Oliver Gilbert

ACHARIUS MEMORIAL - VADSTENA

On Saturday 5 September 1992, a group of some 25 lichenologists representing the IAL, joined with the Mayor and dignitaries of the small Swedish town of Vadstena on the shores of Lake Vättern to unveil a bronze memorial plaque to Erik Acharius (1757-1819). The idea of a memorial to Acharius was first discussed at the meeting on Tropical Lichens held in London in September 1989 and at that meeting a subcommittee of Prof. Roland Moberg (Uppsala), Prof Per Magnus Jørgensen (Bergen) and Dr Lars Arvidsson (Göteborg) was elected to further this project. Since Acharius has no tombstone in the fine churchyard of the Abbey Church of Vadstena, it was thought initially that a stone memorial in the churchyard would be a suitable enterprise. However, after a visit to Vadstena by Lars Arvidsson and Roland Moberg it was found that the house in which Acharius lived for the last ten years of his life, Bergenstråhlska Huset, Storgatan 32, was still in existence and is presently the property of Prof. Göran Söderström of Stockholm. They were shown over the recently restored house and garden and decided after seeing this fine 18th century house that a memorial on the end wall of the house would be more appropriate than a churchyard memorial. Prof Söderström was warmly in agreement with this plan and so Roland Moberg commissioned the sculptor, Liss Eriksson, to cast a suitable memorial in bronze.

Vadstena is a most attractive town beautifully sited on the shores of Lake Vättern and with some 7600 inhabitants. Vadstena is inextricably linked with Saint Birgitta who established a convent there in the 14th century. It was consecrated in 1384, 11 years after Birgitta's death and she was canonized in 1391. The Abbey Church was consecrated in 1430 and today the Abbey, the monastery and the convent and their associated buildings are among the notable features of this town which is dominated by an impressive castle built between 1545 and 1620. The mediaeval town plan with its narrow, twisting streets has been preserved, together with many houses from the 18th and 19th centuries which gives Vadstena its special charm. The major employer is the large Birgitta's Hospital for psychiatric patients.

The town has always had a strong hospital tradition and it was to a hospital caring especially for venereal disease cases that Acharius came in 1789, after graduating MD from Lund in 1782. Earlier, he had been a student of Linnaeus in Uppsala and his thesis defence of 1776 on "Planta aphyteja" was the last at which Linnaeus publicly presided. Before moving to Vadstena Acharius worked as a scientific illustrator at the Royal Swedish Academy of Sciences in Stockholm, where he formed one of the most important and influential friendships of his life, that with Olof Swartz, who was to encourage him above anyone else in his studies in lichens.

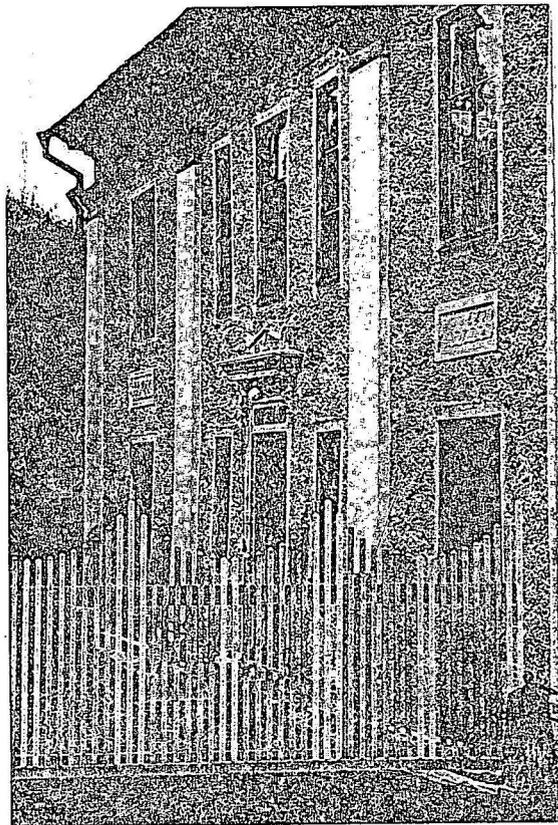


Fig 1. Acharius's house at Vadstena

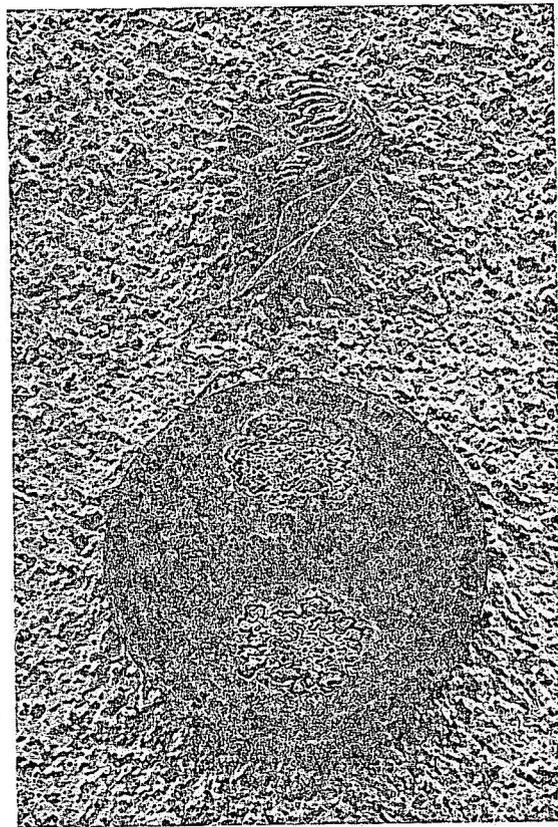


Fig 2. The Acharius memorial

Acharius's house (Fig 1) was originally a single-storey timber building belonging to Johan Werner the Elder, court painter to Per Brahe the Younger in the middle of the 17th century. It was used in the 18th century by several of the managers of Vadstena Hospital. At the end of the 18th century the house was rebuilt to its present dimensions by Captain J G Sparrschöld. Acharius was in residence there from 1810 until his death in 1819. It is recorded that he was stricken with an apoplectic fit while sitting in the garden of his house under a large pear tree (still impressively standing) studying lichens that had been sent to him from Spain. He never recovered from the fit and died the following day.

The bronze memorial plaque is in two parts comprising a profile portrait taken from the J G Ruckman engraving of Acharius which was used as the title page embellishment of his *Synopsis methodica lichenum* in 1814, and a roundel bearing Acharius's name and dates and the inscription "Pater Lichenologiae, Professor Honoris Causa, Medicus Provincialis Vadstenensis" (Fig 2). The memorial was unveiled by Prof. Bengt Jonsell, President of the Swedish Linnean Society and this was preceded by short addresses by Prof. Roland Moberg, Dr David Galloway and Prof. Rolf Santesson. After the unveiling, the assembled company was entertained to wine and snacks in the garden of Acharius's house and a speech of welcome and thanks was made by the Mayor of Vadstena. Afterwards, and as a respite from the rain which had started to fall during proceedings, Prof. Söderström invited us to view the splendidly restored principal rooms of the house on the first floor which are furnished in early 19th century style and which contain fine restored examples of Swedish 18th century keyboard instruments: clavichord, fortepiano and transverse piano.

The memorial, which is a fitting remembrance of the founder of our subject, was made possible by substantial grants from the Swedish Linnean Society, the Linnean Society of London, the British Lichen Society and the IAL, who between them contributed £4500 of the necessary £6000 which is the final cost of the memorial. Prof. Moberg (University of Uppsala, Fytoteket, P O Box 541, S 751 21 UPPSALA, Sweden) is in charge of the Acharius Memorial fund, and would be extremely grateful of any donation from interested members of the BLS, which would help defray the remaining cost of this most worthy memorial.

(Photos: L Arvidsson)

David Galloway

LETTER FROM AN OVERSEAS CORRESPONDENT

Lichenological Events of Lucknow

The 11th Indian Antarctic Expedition team included for the first time a lichenologist as a scientific member: Dr D K Upreti of the National Botanical Research Institute, Lucknow. The aim was to collect lichens in and around the Indian Station at Maitri in the Schirmacher Oasis (Queen Maud Land) East Antarctica.

During the expedition about 150 lichen samples were collected from almost all the rock outcrop areas, from around lakes and streams (eg *Carbonea*, *Rhizocarpon flavum*, *Umbilicaria aprina*, *U. decussata*), on moraine (eg *Acarospora*, *Buellia*), on decaying moss tuft (*Rinodina*, *Candelariella*) and on dry rocks (*Porpidia*, *Lecideia*). Antarctic lichens are one of the most difficult groups to study because of the lack of modern floras, monographs, type collections, and adequate herbaria. In spite of these problems identification of all the lichens collected was achieved up to generic, and a few up to specific, level. Two species, *Umbilicaria aprina* Nyl. and *U. decussata* (Vill.) Zahlbr., which were very common in this region, were collected for heavy metal analysis.

The lichenological investigations at the National Botanical Research Institute, Lucknow, were mainly concentrated on microlichen genera. Dr Singh began work on pyrenocarpous lichens during the seventies. Revisionary studies on several Indian pyrenocarpous genera have been completed viz. *Anthracotheceum*, *Laurera*, *Parmentaria* and *Pyrenula*, and work on *Porina* and *Arthopyrenia* is currently in progress. Recently morphotaxonomic studies on 15 species of *Diploschistes* and 13 species of *Stereocaulon* from India and Nepal have been completed. Two new species of *Diploschistes* (*D. awasthii* and *D. nepalensis*) were described from this region.

Dr D D Awasthi, after his retirement from Lucknow University, donated his personal lichen herbarium to the National Botanical Research Institute, Lucknow (LWG).

D K Upreti

FROM THE ASSISTANT TREASURER

Following the resignation of Frank Dobson as Treasurer I have agreed to become Acting Treasurer until next year's AGM but, to avoid confusion, I will continue to use the title "Assistant Treasurer" in my capacity as collector of subscriptions and salesperson of publications!

Subscriptions

At the 1992 AGM new categories of membership were agreed giving the option of membership of the Society without receiving *The Lichenologist*. Enclosed with this issue of the *Bulletin* is a Membership Renewal form. It would be helpful if this was returned with your 1993 subscription which is due on 1st January.

Of the 135 members who have chosen to subscribe for a three or five year period, those who subscribed for a three year period from 1990 should note that a 1993 subscription will be payable. The option of paying for a number of years in advance is not available from 1993. The Society is continuing the policy of not sending publications unless subscriptions have been received for the current year.

Some members may have a stock of old membership application forms which they issue to intending members (I received one application form this year with a £7.00 subscription dating back to the '70s!). I would be grateful if they would not use these in future but write to me for a supply of 1993 application forms.

Numbers

The publication of telephone, FAX and E-mail numbers for use by other members did not prove a popular idea and I have circulated the only number I was sent to the member who sent it - as promised!

Greeting Cards

The Society still holds a stock of Greeting Cards of Clare Dalby's drawing of *Physcia aipolia* (see *Bulletin* 67: 31). These cards are now available at a reduced price of £3.00 for a pack of ten (with envelopes) and represent excellent value. A few *Ramalina cuspidata* cards remain at £2.00 for a pack of five.

Jeremy Gray

TREASURER'S REPORT ON THE ACCOUNTS FOR THE YEAR FROM 1/7/91 TO 30/6/92

After due consideration I decided, together with the Council, that there could be a possible conflict of interest between my position as Treasurer and that as President. I therefore decided to resign as Treasurer at the end of the financial year (30 June 1992). Jeremy Gray as Assistant Treasurer agreed to take over the position of Acting Treasurer. As I was Treasurer during the period of these accounts it was thought that I should write this report.

These are the first annual accounts to be produced for the year ending 30 June and it will not be until next year that direct comparisons can be made. We have taken the opportunity to make some adjustments to improve the format of the accounts. The £2,300 under the *Bulletin* is high as it includes 3 editions and also a membership list. This means that in future the editions that apply to the year of the report will be the ones included in the accounts.

Last year we were unable to obtain, in time for the accounts, accurate stock figures from the various stock holders. We therefore undervalued the stock and took steps to get the true figures in future. The value of the stock proved to be higher than expected and this increase is shown as stock revaluation. Since the date of the accounts, over £1,000 of stock has been sold.

The cost of *The Lichenologist* has risen and unfortunately the pressure on budgets has caused a number of subscribers to cancel and thus reduce our share of the profit.

We have repaid the £500 loan that formed part of the £1000 obtained from The Royal Society for the Gwynedd Flora.

It will be seen that the accounts show the finances of the Society are in a healthy state but the Council are looking at various projects that will reduce the reserves but forward the aims of the society.

I would like to thank those members who made donations to the Society and also the Assistant Treasurers John Sheard and Jeremy Gray, and the Auditor, Douglas Oliver, for all their assistance during the year.

Frank Dobson
Hon. Treasurer (up to 30/6/92)

BRITISH LICHEN SOCIETY
EXPENDITURE & INCOME FOR THE YEAR 1/7/91 TO 30/6/92

18 months to
30/6/91

EXPENDITURE

1/7/91 to 30/6/92

18 months to
30/6/91

INCOME

1/7/91 to 30/6/92

	Printing and distributing								
	The Lichenologist	11,092				Subscriptions		13,840	
6,705	Less profit sharing	(2,846)	8,246			Add 1/5 life members		258	
	Printing and distributing			20,558		Less refunds	(343)		
	The Bulletin	2,828		7,963		Paid in advance	(2,314)	(2,657)	11,441
1,060	Less receipts	(484)	2,344	22,858		Interest received			7,057
1,549	Secretarial and committee expenses		519	268		Donations			345
725	Items for sale		584			Sales of stock		893	
476	Bank charges		289	21		Stock revaluation		1,477	2,370
368	Loss on exchange rate		64			Sundry receipts			9
307	A.G.M. and buffet		48	£51,668				Total	£21,222
40	Grants, Seminars Field trips etc.		1						
150	Accounting and audit		200	£39,853		Excess income over expenditure			£8,803
120	Insurance		75						
107	Subscriptions paid		49						
91	Library		-						
117	Sundry expenses		-						
£11,815			Total	£12,419	£11,815			Total	£12,419

BALANCE SHEET AS AT 30/6/92

LIABILITIES

ASSETS

	Sundry creditors (inc. advance subs)								
3,432			3,295	72,903		Cash at Banks			79,579
891	Life members		1,033	1,609		Stock			3,183
307	Burnet/Wallace Memorial Fund		307						
1,000	Royal Society Grant (Gwynedd Flora)		500						
400	B.P. International Grant		400						
114	Conservation fund		56						
68,368	General Fund at 30/6/91	68,368							
	Plus surplus for 12 months	8,803	77,171						
£74,512			Total	£82,762	£74,512			Total	£82,762

AUDITOR'S REPORT TO THE BRITISH LICHEN SOCIETY

I have been unable to examine the Register of Members or confirm it is complete, or the account of The Royal Bank of Canada, Saskatoon; neither have I checked the Imprest Account of the Secretary, nor have I checked the stock which has been valued by the Treasurer. However in the context of the Society's turnover the amounts involved are not material.

Subject to the foregoing, in my opinion, the attached accounts prepared under the historical cost convention and the notes thereon give a fair view of the state of affairs of the Society and the income and expenditure of the Society for the year ended on 30 June 1992.

D E W Oliver FCIB, ATII, APMI

Notes to the Accounts

1. *Managers' remuneration*: no officer of the Society received remuneration and none is due in the twelve months covered by these accounts.
2. *Status*: the Society is a registered Charity, number 228850.

LICHEN WALLCHARTS

The lichen wallcharts live again!

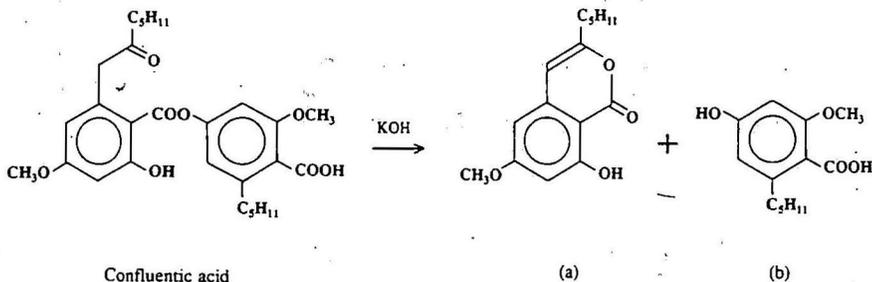
BP Educational Service at Poole hold the remaining stocks of the wallcharts, about 1000 (when we made contact in August this year) of both *Lichens and Air Pollution* and *Lichens on Rocky Seashores*. Copies may be obtained by post by sending a cheque for £3.00, made out to BP Educational Service at PO Box 934, Poole, Dorset BH17 7BR. This price includes post, packing and VAT. For enquiries about bulk orders, posting overseas etc, their telephone number is 0202 669940.

Claire and Kery Dalby

THE CHEMISTRY OF THE NEW CONFLUENTIC ACID TEST

Further to my note "A microscopic test for confluentic acid" in the last issue of the *Bulletin*, Siegfried Huneck of the Institut für Biochemie der Pflanzen, Halle, has written to me as follows:-

"The chemical background to your test is the easy hydrolysis of confluentic acid with KOH which gives p-methyletherolivetonide (a) and 2-O-methylolivetol carboxylic acid (b).



The oil droplets in your test consist of (a) which is insoluble in KOH. If one adds conc. KOH to confluentic acid (a) results even as crystals (needles)" [Huneck, S. (1962) *Chemische Berichte* 95: 328].

I am very grateful to Dr Huneck for this information as it is reassuring to know that what was a casual observation on my part does have a sound chemical basis.

Alan Fryday

NEW, RARE AND INTERESTING BRITISH LICHEN RECORDS

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

Bacidia myrtillicola Erichsen: on top of large, stream boulder, Combe Water, Oakford, VC 4, N Devon, GR 21/892206, 1992. New to Britain. An easily overlooked species with tiny blackish apothecia (0.1-0.22 mm diam) on a thin grey-green thallus. It is related to *B. vezdae*, but has 3-septate spores, 17-24 (-28) x 3-4.8 μm , and a dark brown (K+ greenish) hypothecium. Its black pycnidia with curved, filiform conidia (c. 20-36 x 0.8 μm) distinguished it from *Byssoloma* and *Felhanera* species. Determined B J Coppins.

B Benfield

Blarneya hibernica: on the boles of old *Quercus*, Merthen Wood, Constantine, Cornwall, VC 1, West Cornwall, GR 10/73-25-, and Boconnoc Park, Cornwall, VC 2, East Cornwall, GR 20/14-60-, May 1992 (confirmed P W James). New to England.

F Rose

Caloplaca luteoalba: growing in good quantity on an old "unthreatened" poplar, Campsey Ash, Suffolk, VC 25, East Suffolk, GR 62/316558, 1992.

P M Earland-Bennett

Catolechia wahlenbergii: single thalli seen on gabbro at three locations during a traverse of the Cuillin Ridge, Isle of Skye, VC 104, GR 18/41, 18/42, 1992.

O L Gilbert

Lecanactis amylacea: (with *Zamenhofia coralloidea*, *Agonimia octospora*, *Lecanactis lyncea* and *Opegrapha prosodea*) on the trunks of ancient *Quercus* in relics of the former deer park Trelissick, south of Truro, Cornwall, VC 1, West Cornwall, GR 10/83-39-. All except the last two named, new to VC 1, 1992.

F Rose

Lecanactis hemisphaerica: on old plaster on north side of church, West Thorney, Sussex, VC 13, West Sussex, GR 41/76-02-, 1992.

F Rose

Lecanora conferta: on old plaster of church walls in Sussex, VC 13, West Sussex, at Greatham, GR 51/04-16-; Graffham, GR 41/92-16-; Rustington, GR 51/05-02-; West Thorney, GR 41/76-02-; and in Surrey, VC 17, at Thursley, GR 41/90-39-, 1992. This species, resembles *L. dispersa*, but has crowded isabelline apothecia and is C + o (persistent). It has clearly been overlooked.

F Rose

Lecidea ahlesii: on a river boulder in the Danes Brook, Devon, VC 4, GR 21/87-29-, 1992. New to southwest England. Determined B J Coppins.

B Benfield

Leptogium plicatile: on old brick and sandstone walls in churchyards in Sussex at Greatham GR 51/04-16-; East Levant, GR 41/86-08-; Upper Beeding, GR 51/19-11-; all in VC 13, West Sussex; and on a chest tomb in Buxted churchyard, Sussex, VC 14, East Sussex, GR 51/48-23-, 1992.

F Rose *et al*

Mycoblastus alpinus: sheltered sandstone outcrop, Chatsworth Park, Derbyshire, VC 57, GR 43/266687, 1991. New to England.

B J Coppins and O L Gilbert

Ochrolechia inaequatula: with *Diploschistes scruposus* on crumbling, vertical rocks in a railway cutting, Wanlockhead, VC 72, Dumfries, GR 26/86-13-, at 450 m, 1991. New to SW Scotland. Similar to *O. androgyna*, but with more effuse soralia and a weak Pd+ orange reaction in addition to being C+ red. Previously thought to be a species of summit areas in the Scottish Highlands, but recently discovered at lower altitudes in the Borders and now here in Dumfries.

B J Coppins & A M O'Dare

Parmelia disjuncta: on granite memorials, Westbourne churchyards, Sussex, VC 13, West Sussex, GR 41/75-07- and Bishops Waltham churchyard, Hampshire, VC 11 Hants, GR 41/55-17-, 1992.

F Rose

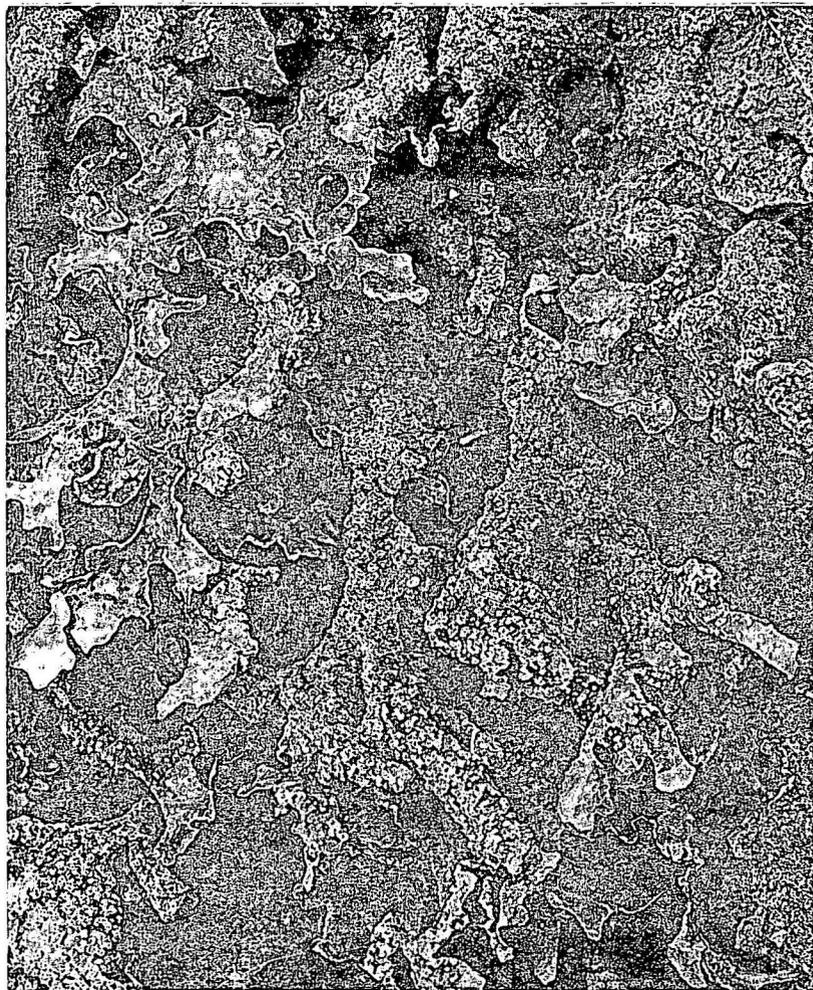
Parmelia minarum: on *Quercus* in wood by estuary, Trelissick, Cornwall, VC 1, West Cornwall, GR 10/83-39-, May 1992. (Also found the following week by the BLS excursion in West Penwith, Cornwall.) These Cornish records are the only ones this century in Britain outside the New Forest.

F Rose

Parmelia submontana Hale (syn. *P. contorta* auct.): abundant on sycamores, also on beeches and a gravestone, Wanlockhead Cemetery, VC 72, Dumfries,

GR 26/864136, at 350 m, 1991. Also in nearby Leadhills, VC 77, Lanark, GR 26/886148 on beech trees and the edge of a garden tub! New to Britain. It resembles a loosely attached *P. sulcata*, but has granular to isidioid soredia on strap-shaped lobes which are often rolled down along their margins (see figure). Perhaps a species that is spreading; mainly known from montane regions of C & S Europe, but recently discovered in S Sweden. At Wanlockhead it grew together with *P. saxatilis*, *P. sulcata*, *Hypogymnia physodes*, *Parmeliopsis ambigua*, *Platismatia glauca* and *Bryoria fuscescens*.

B J Coppins & A M O'Dare



Parmelia submontana from Wanlockhead Cemetery. (Photo: Sid Clarke.)

Porpidia cinereoatra: on sandstone walls, Warminghurst churchyard, GR 51/11-16-, and Fittleworth churchyard, GR 51/00-19-, Sussex, VC 13, West Sussex, 1992.

F Rose

Psilolechia leprosa: on stonework adjacent to lightning conductors on many churches in Sussex, VC 13, West Sussex, 1992. (See also earlier records by K Palmer in the previous *Bulletin*.)

F Rose, K Sandell and T Chester

Ramalina siliquosa: abundant on north side of church tower, West Preston, Sussex, VC 13, West Sussex, GR 51/06-02-, 1992.

F Rose and P W James.

Rinodina lecideina: on sandstone, West Preston churchyard, Sussex, VC 13, West Sussex, GR 51/06-02-, 1992.

P W James

Roccella phycopsis: on sandstone wall, abundant locally, on north side of church, South Hayling, Hampshire, VC 11, Hants, GR 41/72-00-, 1992.

H W Matcham

Stereocaulon tornensis: with *S. leucophaeopsis* on stone in lead spoil, valley NW of Wanlock Dod, Wanlockhead, VC 72, Dumfries, GR 26/87-13-, at 420 m, 1991. Also here were the rarely fertile *S. nanodes* with apothecia and *S. condensatum*, together with abundant *S. dactylophyllum*. *Stereocaulon tornensis* is a species characteristic of areas of late snow-lie in the Scottish Highlands, and is here at an unusually low altitude - unless it has been overlooked!

B J Coppins & A M O'Dare

Thelomma ocellatum: on several wooden post tops between fields, Wickham Market, Suffolk, VC 25, East Suffolk, GR 62/318552, 1992.

P M Earland-Bennett

Verrucaria amphibia: with *Lichina pygmaea* on chalk boulder in Freshwater Bay, Isle of White, VC 10, GR 40/345856, 1992. New to the island and a considerable eastward extension of the known range for both species. Determined A Fletcher.

C Pope

Veizdaea acicularis: on consolidated, lead-contaminated soil in recently landscaped area (a picnic site), valley NW of Wanlock Dod, Wanlockhead, VC 72, Dumfries, GR 26/86-13-, at 380 m. 1991. New to SW Scotland.

B J Coppins & A M O'Dare

LITERATURE PERTAINING TO BRITISH LICHENS - 12

Lichenologist 24 (2) was published on 30 April 1992, and 24 (3) on 15 August 1992.

Taxa prefixed by * are additions to the flora of Britain and Ireland. Comments in square brackets are mine.

ARMSTRONG, R A & SMITH, S N 1992. Lobe growth variation and the maintenance of symmetry in foliose lichen thalli. *Symbiosis* 12: 145-158. Results of a study measuring individual lobe growth and polyol content, over a 22 month period, in thalli of *Parmelia conspersa* and *P. glabrata* subsp. *fuliginosa* in S Gwynedd.

BATES, J W & FARMER, A M 1992. *Bryophytes and Lichens in a Changing Environment*. Oxford: Clarendon Press. Pp. 404. Eight of the 14 chapters have a major lichen content.

GILBERT, O L 1992. *Rooted in Stone. The natural flora of urban walls*. Peterborough: English Nature. Pp 32. The importance of urban walls is emphasised, with chapters on conservation and management. A small chapter deals with bryophytes and lichens.

GILBERT, O L 1992. Lichen reinvasion with declining air pollution. *In* BATES & FARMER 1992: 159-177.

HODGETTS, N G 1992. *Cladonia: a field guide*. Peterborough: Joint Nature Conservation Committee. Pp. 39 [ISBN 1 873701 08 X. Price: £3.50.] A guide for field ecologists and beginners. Most of the British species are included, although the difficult complexes (e.g. *C. chlorophaea* and *C. coccifera* groups) that require TLC, and some very rarely recorded species, are not treated in detail. Most species are illustrated with simple line drawings.

LEUCKERT, C, KNOPH, J-G & HERTEL, H 1992. Chemotaxonomische Studien in der Gattung *Lecidella* (Lecanorales, Lecanoraceae) II. Europäische Arten der *Lecidella asema*-Gruppe. *Herzogia* 9: 1-17. Four of the five species treated are cited from the British Isles, each characterised by their major xanthone(s): *L. asema* (Nyl.) Knoph & Hertel (syn. *L. subincongrua*; thiophanic acid); **L. elaeochromoides* (Nyl.) Knoph & Hertel (arthothelin); **L. effiguriens* (B. Nils.) Knoph & Hertel (2,5,7-Trichloro-3-O-methylnorlichexanthone and aotearone); *L. meiococca* (Nyl.) Leuckert & Hertel (*L. prasinula* auct. brit.; 2,5,7-Trichloro-3-O-methylnorlichexanthone

and thiophanic acid). [A TLC method for identifying these compounds is in press in *The Lichenologist*.]-

PARNELL, J 1992. Isaac Carroll's "Cryptogamic Flora" of County Cork - the fragments in Trinity College, Dublin. *Glasra* 1 (n.s.): 135-159. The history and content of this manuscript flora, rediscovered in 1982, are discussed, and an alphabetical list of the taxa included is provided. [See next entry.]

PARNELL, J 1992. Isaac Carroll's Cryptogamic Flora of County Cork. *National Botanic Gardens, Glasnevin, Occasional Papers* 6: 1-41. The manuscript of Carroll's unpublished flora, which contains many localised records, is transcribed. Introductory material by Parnell, includes a list of collectors and localities (with general directions) cited by Carroll. [See previous entry.]

POELT, J & PETUTSCHNIG, W 1992. Beiträge zur Kenntnis der Flechtenflora des Himalaya IV. Die Gattungen *Xanthoria* und *Teloschistes* zugleich Versuch einer Revision der *Xanthoria candelaria*-Gruppe. *Nova Hedwigia* 54: 1-436. Following an assessment of several characters (eg rhizines, ascospores, spermatia, and morphology and development of vegetative diaspores), five species are recognised in the *X. candelaria* group, all of which occur in Europe. [Unfortunately, no British specimens are cited; see also the next paper.]

POELT, J & PETUTSCHNIG, W 1992. *Xanthoria candelaria* und ähnliche Arten in Europa. *Herzogia* 9: 103-114. The five European species of the *X. candelaria* complex are keyed and discussed. [No British specimens are cited, but *X. candelaria* s. str. and **X. ulophyllodes* Räsänen (*X. fallax* auct. brit.) occur in the British Isles.]

ROSE, F 1992. Temperate forest management: its effects on bryophytes and lichen floras and habitats. In BATES & FARMER 1992: 211-233 (see above). Includes publication of the New Index of Ecological Continuity (NIEC).

TØNSBERG, T 1992. The sorediate and isidiate, corticolous crustose lichens in Norway. *Sommerfeltia* 14: 1-331. A detailed treatment, including a key, of 128 species in 45 genera, many of which occur in the British Isles. New species include: **Buellia arborea* Coppins and Tønsb., **Fuscidea arboricola* Coppins & Tønsb., **F. pusilla* Tønsb., **Lecidea gyrophorica* Tønsb., **Micarea coppinsii* Tønsb., and **Schaereria corticola* Muhr & Tønsb. *Ochrolechia androgyna* s. lat. is shown to comprise at least 4 distinct

species. New combinations include: *Lepraria rigidula* (B. de Lesd.) Tønsb., *Mycoblastus caesius* (Coppins & P. James) Tønsb., *Placynthiella dasaea* (Stirton) Tønsb. (syn. *Lecidea dasaea* Stirton), and *Ropalospora viridis* (Tønsb.) Tønsb. (syn. *Fuscidea viridis* Tønsb.). *Mycoblastus sterilis* is reduced to synonymy with *M. fucatus*. **Pertusaria borealis* Erichsen is confirmed as new to Europe (cf. Coppins & James in *Lichenologist* 21: 237-242, 1989).

WATLING, R & FRYDAY, A 1992. Profiles of fungi 44: *Multiclavula vernalis* (Schwein.) Petersen. *Mycologist* 6: 67. Colour photograph and description of this newly reported basidiolichen from the British Isles (Outer Hebrides and Shetland).

WEBB, D A 1992. The Irish and British plants in the herbarium of Trinity College, Dublin. II. The non-vascular plants. *Irish Naturalist's Journal* 24: 69-72. Includes notes on the lichen collection of c. 1500 specimens.

Brian Coppins

INDEX TO NEW, RARE AND INTERESTING BRITISH LICHEN RECORDS

I have prepared an index to all entries which have appeared under the above heading in BLS *Bulletin* 48 (1981) to 70 (1992) inclusive. Entries are given in abbreviated form: *Bulletin* number, year of *Bulletin*, page in *Bulletin*.

An extract to show the format:

A. . .

Absconditella trivialis: 70, 1992, 64 (2 entries)

Acarospora bendarensis: 52, 1983, 36

Acarospora chlorophana: 69, 1991, 32

Some very common species mentioned only incidentally are omitted. BLS members may obtain a copy by sending me four first class stamps (this will cover photocopying, envelope and postage).

Kery Dalby
132 Gordon Road
Camberley
Surrey
GU15 2JQ

EMANUEL D RUDOLPH

The Society is saddened to hear of the death, in June of this year, of Emeritus Professor Emmanuel Rudolph, at the age of 64, in Wooster Ohio, as a result of a motor accident. Dr Rudolph taught in the Department of Botany at Ohio University from 1961-89, and was chairperson between 1978-87. His lichenological research was concerned mainly with the ecology of antarctic and arctic lichens and he was director of the Institute of Polar Studies (later Byrd Polar Research Centre) between 1969-73. The "Rudolph Glacier" in Victoria Land, Antarctica, was named after him as was the lichen genus *Edrudia*. Dr Rudolph was a long standing member of the BLS having first joined in 1963.

A FIELD GUIDE TO CLADONIA

Hodgetts, N G (1992) *Cladonia: a Field Guide*. Joint Nature Conservation Committee. £3.50 (excluding postage) from Natural History Books Service Ltd., 2 Wills Road, Totnes, Devon TQ9 5XN.

The genus *Cladonia* contains many conspicuous and attractive lichens, and must be among the first genera to be tackled by the beginner. The reputation of *Cladonia* as a difficult genus stems from the large number of species (over 60 in Britain), and the phenotypic plasticity of many, and poorly developed material, can be confusing.

The present guide should be very useful to anyone trying to order the species in their memory: a key to seven major groups is followed by brief descriptions of all but the rarest species opposite a sketch showing the major features. The sketches are intentionally rather diagrammatic to give an appreciation of the essential features (although *C. ochrochlora* is rarely so regular in shape). There is enough space on most pages for the user to add short notes. To page 13 one might add *Cladonia azorica*, which has been found to be widespread in western Britain: podetia yellowish or greyish, 2(-3)-chotomous, K-, P+ red, UV + (*Cladonia ciliata* is UV-, *C. portentosa* is UV +).

Alan Orange

LICHENS - an Illustrated Guide to the British and Irish Species (3rd edition).

The latest edition of this well known book by F S Dobson has recently been published. It has been completely rewritten and enlarged, and now covers about 600 species. The book follows the former editions giving for most species, a description with habitat etc., a distribution map and an illustration including almost 100 species in colour. The nomenclature follows that of *The Lichen Flora of Great Britain and Ireland*. Each genus has a key or table to the species and the popular "lateral key" to the genera has been improved and expanded, and now includes a synopsis to assist the more experienced lichenologist. Obtainable from The Richmond Publishing Co Ltd P O Box 963, Slough, SL2 3RS. Paperback £20, Hardback £28.

LOOKING BACK

Top: BLS Autumn Field Meeting, Hebden Valley, 27-29 October, 1972. (L to R): John Farrar (seated on wall), Oliver Gilbert, Peter Crittenden, Jack Laundon (looking down at wall), Mark Seaward (looking away from camera), not known, Patrick Holligan (looking sideways), Paul Stewart, not known, Peter Lambley, David Richardson, Peter Earland-Bennett, Brian Coppins and Mick Chaffer. (*Photo: The Halifax Evening Courier, reproduced by permission*).

Bottom: BLS Mapping Meeting, 7 January 1977 (in a room near the Whale Hall at the Natural History Museum). (L to R): Peter James, Mark Seaward, Pauline Topham, Chris Hitch, Jack Laundon, Joy Fildes, Richard Brinklow, David Hawksworth, Peter Lambley, Francis Rose, Richard Bailey and Dave Galvin. (*Photo: F S Dobson*).



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For overseas members requiring publications from Jeremy Gray and other items from Tim Moxham, you need order only from one person and send one cheque or International Money Order.

ERRATA

In the previous edition of the *Bulletin* (No 70) authorship of the article entitled "Regional Representatives" was erroneously attributed to A M Fryday and that of "New, rare and interesting British lichen records" was incorrectly attributed to K Palmer. The authors of these contributions were in T H Moxham and F H Brightman respectively. The editor apologizes for these mistakes.

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