



British Lichen Society *Bulletin*



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We hope that everyone will find something of interest in this summer issue which should feel satisfyingly chunky thanks to our enterprising members who take the time to contribute such a variety of interesting articles.

The considerable support the Society receives is felt not only on this front but notably on social media and in the attendance at field meetings. This issue has wonderful accounts of two quite different field meetings and the number of members enjoying these seems to be growing. These meetings offer valuable experiences with the excitement of encountering new lichens and renewing friendships, as well as appreciating beautiful landscapes. We are fortunate to have those who are willing to undertake the considerable work of organising these events.

If you turn to the first page you will find the full account of the JNCC's Selection of SSSIs for lichen interest as promised in the last *Bulletin*. This contains a wealth of important information affecting planning and the control of development, as well as changes in the names of habitat indices and to the way in which sites are scored. Don't miss the details of the new habitat indices in preparation too, work leading towards the production of Red Lists for Scotland and England.

Take the opportunity to catch up on the latest Court Room drama in the battle for the Coul Links. Following the Public Inquiry we now have to await the decision of the Scottish ministers

The section devoted to New, Rare and Interesting finds is once again extensive and the proportion of lichenicolous fungi unprecedented. This fascinating area of study seems to be seducing some of our lichenologists and raising so many questions: host specificity, taxonomy, geographical distribution and more. Similarly an increasing number of field botanists have been developing an interest in plant galls, a further instance of the amazing interconnectedness of nature.

The links between art and lichen morphology are always present and this year it was encouraging to discover the inspiring work of an award-winning young artist, Bryony Benge-Abbott. Her art, designed to be very much in the public realm, can be seen on the walls of walkways in Islington directing pedestrians to take a less polluted route through London whilst also increasing awareness of lichens and their role in gauging pollution. (More details can be found in the Social Media article).

It is timely to draw attention to the essential work being done in preparation for the new edition of LGBI and the opportunity we all have to read and check out the 16 new drafts and glossary which have already been prepared. You will find these under the Resources tab on the website so do have a look and try the new keys. The new glossary is full and user-friendly so why not save it to your desktop now.

Front cover: a female leafhopper (*Cicadella viridis*) on a *Cladonia* podetium at the Borrowdale Field Meeting July 2018. Photo © Steve Price.

Guidelines for the Selection of SSSIs for Lichens

In 2018 new guidelines for the selection of SSSIs for their lichen interest were published <<http://jncc.defra.gov.uk/page-2303>> (Chapter 13 - Sanderson et al, 2018). These are intended to provide peer reviewed measurable criteria for choosing the lichen sites best deserving of national protection in Britain. The application of the guidelines also goes beyond SSSI selection as they can be used to define lichen sites of national importance for other purposes, including planning and development control. It is important to note that the SSSI series was never meant to be totally inclusive; only a selection of nationally important sites was intended to be notified. As well as the main authors, Neil Sanderson (consultant ecologist, BLS Conservation Committee), Tim Wilkins (Natural England), Sam Bosanquet (Natural Resources Wales), and Dave Genney (Scottish Natural Heritage), several BLS members also contributed a great deal to the guidelines, including Bryan Edwards, Vince Giavarini, Janet Simkin, Ray Woods, Ishpi Blatchley and Pat Wolseley. Brian Coppins also gave valuable advice as the external reviewer.

The 2018 guidelines replaced the previous long out of date guidelines (Hodgetts, 1992). These did include the very successful Indices of Ecological Continuity developed by Dr. Francis Rose (Rose, 1992 & subsequently Coppins & Coppins, 2002), which were five habitat quality indices applied to woodland types across Britain. Otherwise the other criteria in the 1994 guidelines were either problematic or not much used. In particular there was a site quality scoring system using Nationally Scarce, Nationally Rare and Schedule 8 species that was poorly fitted to lichens (Sanderson, 2011). For woodlands in particular, the thresholds for this scoring system were far too low. There were also criteria for selecting SSSIs for threatened Red List species, which were good, but initially lacked a Red List to make them usable and also conflated Nationally Rare with Red Listed leading to significant ambiguity.

The new guidelines had a much improved knowledge base to work from, due to the hard work of BLS members, including much greater survey coverage, The Lichens of Great Britain and Ireland (Smith et al, 2009) and a recent Red List (Woods & Coppins, 2012). Two separate types of criteria needed to be produced to apply to the lichen assemblage of Britain. These were choosing important populations of Threatened species and scoring important habitat assemblages. Sanderson (in press b) showed that, for eastern Scottish woods at least, neither of two separate measures of important habitat assemblages, the Sub-oceanic Woodland Index (SWI) and Threatened, Near Threatened and Notable species scoring (TNTN), correlated significantly with numbers of Threatened species. They did, however correlate significantly with each other. This shows that the two criteria, important populations of Threatened species and scoring important habitat assemblages, are measuring different aspects of lichen importance and are complementary. The richest sites usually, but not always, contain populations of Threatened species but significant populations of these can occur in poorer sites which would not be selected by scoring using important habitat assemblages only.

The Threatened species criteria were straightforward and are shared across other groups. One modification was made, however, to adapt to the lichen data. Other groups included criteria to select internationally threatened species relating to the global IUCN Red List, European Red Lists or Annex 2 of the Habitats Directive. These either do not exist for lichens, or are not systematically developed, so the authors argued successfully that, as well as the standard Critically Endangered, Endangered and Vulnerable Red List species, the criteria should include species that are both Near Threatened and International Responsibility species. This brings in a lot of internationally important populations of mainly oceanic species that have good populations in Britain but are rare in the rest of Europe.

The criteria used were:

Sites can qualify for the presence of single or multiple Threatened species, or Near Threatened-International Responsibility species, but each species should satisfy one or more of the following conditions:

- *The largest population of the species in each of England, Scotland or Wales so that no Threatened species becomes regionally extinct with respect to each country's devolved biodiversity duties.*
- *A viable population of the species in an Area of Search (AoS) supporting a substantial proportion of localities for the species in Britain. Preference should be given to stronghold populations, or clusters of localities in the AoS, that maximise resilience, especially in the face of climate change.*
- *A viable population on the edge of the species' geographical range, but excluding species known to have expanding ranges.*
- *The only or largest viable population of the species in a particular AoS.*

As well as using the national British Red List, country Red Lists can be used, but only species that are Vulnerable or higher in the latter lists can be used. Within an individual country, to integrate the UK and county Red lists in site selection, the highest Red List status available for the country concerned is used in assessment. To date, the only country Red List prepared is for Wales. The Threatened species criteria are potentially a very valuable tool for assessing the importance of sites. They do, however, depend on some knowledge of population sizes and even more so viability, which may be poorly known for some species. Generally persistence, several records over the years, can be taken as a measure of viability.

For scoring important assemblages, there were significant changes for the way all groups are to be assessed. Gone was the counting of all rare and scarce species found on a site, regardless of the niche in which they grow. This process was replaced in the bryophytes chapter by habitat appropriate 'Ecologically Coherent Assemblages': an approach initially recommended by JNCC. These were ecologically and/or bio-

geographically coherent assemblages of rare or scarce species associated with the habitat being assessed.

The habitat indices used in lichen assessments were already effectively doing this and were accepted as appropriate for the guidelines. The main difference was that the lichen indices included highly indicative species that were not necessarily Nationally Rare or Nationally Scarce, while these are not normally included in Ecologically Coherent Assemblages (for example in the bryophyte and invertebrate chapters). As part of the process, the existing woodland indices were reviewed for effectiveness and where possible, in the short time available, new indices were devised and tested by BLS members (Table 1).

For the existing woodland indices the main change was to remove the multiple choices, where even if several species on the list were found then only one was added to the score (Sanderson, in press a). Removing these makes the indices much easier to use, especially in databases. The Bonus Species concept was also dropped as rare species were better covered by the Threatened species criteria. The species used were also reviewed but for most indices only minor changes were made. Given that some changes were made to all, the names of the indices were changed as well, to reflect that they had been edited. This gave the opportunity to make the names more self-explanatory. These name changes are listed below:

- Southern Oceanic Woodland Index (SOWI): was the New Index of Continuity (NIEC)
- Lowland Rainforest Index (LRI): was the West of Scotland Index of Ecological Continuity (WSIEC)
- Sub-oceanic Woodland Index (SWI): was the East of Scotland Index of Continuity (ESIEC)
- Upland Rainforest Index (URI): was the Euroceanic Calcifuge Woodlands Index of Ecological Continuity (EUOCIEC)
- Boreal Woodland Index (BWI) Native Pinewood Index of Ecological Continuity (NPIEC)

The changes had a limited impact on most indices, increasing the scores of the best sites and having limited impact on the scores of the poorer sites but two indices were changed more. The Sub-oceanic Woodland Index (SWI) had so many species under multiple choices that sorting this out led to considerably increased scores. This, however, simply improved the discrimination between rich and poor sites. The Upland Rainforest Index (URI) was more comprehensively changed than others. Several species with poor indicative value in the EUOCIEC were removed and replaced with more predictive species. The result had less impact than the changes to the SWI, mainly just increasing the scores for the richest sites. The old indices were

also all significantly correlated with the new indices, allowing new equivalent SSSI thresholds to be calculated. The regional limits of the indices were more accurately defined and for some indices higher thresholds set within the core areas of the indices.

In addition, within very limited time, great steps were taken in the production of new habitat indices by several BLS members. These were:

- Metalliferous Habitats Index (Simkin, in press.)
- Maritime Rock and Coastal Slope Index (Edwards & Wolseley, in prep.)
- Acid Watercourses Quality Index (Giavarini, in press.)
- Heathland, Moorland and Coastal Heath Index (Sanderson et al, 2018)
- Limestone Index (Edwards & Sanderson, in prep.)
- Pinhead Index (Sanderson et al, 2018)

This still left many habitats of lichen interest uncovered by indices. It is highly desirable that more indices are developed in time, but as a stopgap a different method of evaluating Ecologically Coherent Assemblages was adopted. To do this, the British lichen assemblage was reviewed by Sanderson (in press b). Beyond the categories of GB Threatened (Critically Endangered, Endangered & Vulnerable), GB Near Threatened and International Responsibility, the status of the remaining Nationally Rare and Nationally Scarce as species of conservation interest were assessed. Those species that were ruderal, and/or recently described and likely to be widespread, and/or highly data deficient were excluded. For simplicity all International Responsibility species and those Nationally Rare and Nationally Scarce species considered to be of conservation interest, which were not also GB Threatened or GB Near Threatened were lumped together as Notable species: that is a Notable taxon has one of the following statuses:

- International Responsibility but neither Threatened nor NT; or
- Nationally Rare and of conservation interest but neither Threatened nor NT;
or
- Nationally Scarce and of conservation interest but neither Threatened nor NT.

The species in the resulting Threatened, Near Threatened and Notable list (TNTN list) were then assigned to a selection of broadly defined habitats. This gave the assemblages that could be used for scoring to assess the conservation status of the appropriate habitats (these are listed in Table 1). The following scoring system was used:

Assemblage taxa that have been recorded at the site are each awarded the highest score of one of:

- GB Threatened (CR, EN, VU) – scores 4 points
- GB Near Threatened (NT) – scores 2 points
- Notable (defined below) – scores 1 point
- None of the above – scores nil

Thresholds of national interest were then worked out with reference to existing data and survey reports for each habitat of interest not covered by Habitat Indices (Table 1). The full list of TNTN species, assemblage habitats and selection thresholds can be downloaded as a spreadsheet ‘Appendix’ to Chapter 13 on the JNCC webpage. For some of these habitats, this appears to be the first time that conservation scoring of these habitats have been attempted. Non-montane acid rock for example, supports a sizable proportion of the lichen diversity of Britain and although much of this must already be inside SSSIs notified for other reasons, very few SSSI citations mention this element as a feature of interest.

Table 1. Lichen assemblages, the habitats in which they occur, and the method to use for assessment.

Broad Habitat[@]	Assemblage	Assessment method / Key interest	Threshold[#]	Section
Coastal	Maritime rock and coastal slope	Maritime Rock and Coastal Slope Index	35 or 25 or 15	3.4.3
Coastal	Coastal shingle*	Lichens should be mentioned in SSSI citations	-	3.5.2
Coastal	Coastal base-rich dunes & machair*	Lichens should be mentioned in SSSI citations. Southern base-rich dunes can be assessed under TNTN lowland calcareous ground.	-	3.5.3
Woodland	Pinhead lichens	Pinhead Index: covers standing deadwood and large trees with dry bark crevices	10	3.4.1
Woodland	Southern oceanic woodland*	Southern Oceanic Woodland Index: covers a wide swathe of southern Oceanic Britain	30 or 20	4.1
Woodland	Hyperoceanic woodland (lowland)*	Lowland Rainforest Index: covers hyperoceanic and western euoceanic temperate rainforest in very high rainfall areas in the western Highlands	25	4.2
Woodland	Sub-oceanic woodland*	Sub-oceanic Woodland Index: covers temperate woodland in the east of Scotland and areas with a similar climate in the north east of England	20 or 15	4.3
Woodland	Hyperoceanic woodland (upland)*	Upland Rainforest Index: covers hyperoceanic and euoceanic acidic upland temperate woodland in very high rainfall areas	15 or 10	4.4

Broad Habitat[@]	Assemblage	Assessment method / Key interest	Threshold[#]	Section
Woodland	Boreal woodland*	Boreal Woodland Index: covers native pinewoods and old-growth birch in the eastern and central pinewood zones of the Scottish Highlands, as well as pure native pinewoods in the western pinewood zone	20 or 15	4.5
Woodland	Old trees of open places	TNTN: well-lit veteran trees in parkland, farmland, waysides and hedgerows	16	3.4.7
Grassland	Lowland calcareous ground	TNTN: open calcicolous grasslands without significant outcrops of hard limestone. Includes chalk downland, Breckland grassland, southern base-rich dunes and coastal soft cliffs	6	3.4.7
Heathland	Heathland, moorland & coastal heath*	Heathland, Moorland & Coastal Heath Index	20	3.4.2
Non-montane rock	Limestone rock	Limestone Index	30	3.4.5
Non-montane rock	Non-montane acid rock	TNTN: outcrops of acid rocks, including both siliceous rocks and hard basic igneous rocks, sometimes with localised base rich influence, in the forest zone	6 or 10	3.4.7
Non-montane rock	Non-montane mixed siliceous/calcareous rock outcrops	TNTN: rare outcrops with intimate mixtures of acid siliceous and calcareous rocks	10	3.4.7
Freshwater	Acid watercourses*	Acid Watercourses Quality Index	11	3.4.4
Freshwater	Lakes	TNTN: rocky lake shores	6	3.4.7
Upland	Hyperoceanic* & euoceanic acid montane rock/soil	TNTN: rock and soil on predominately acidic north and west Highland mountains, west of the Drumochter Pass	30	3.4.7
Upland	Hemioceanic acid montane rock/soil	TNTN: rock and soil on predominately acidic mountains in the eastern central Highlands, east of the Drumochter Pass	40	3.4.7
Upland	Montane calcareous rock/soil	TNTN: outcrops of calcareous rock in the Scottish Highlands, mainly over 600m in the central Highlands; also at lower altitudes on Tertiary basalts on the west coast of Scotland	40 or 20	3.4.7
Artificial	Metalliferous habitats*	Metalliferous Habitats Index	10	3.4.6
Artificial	Churchyards	Lichens should be mentioned in SSSI citations	-	3.5.4

[@] broad habitats are ordered to follow chapters of *Guidelines for Selection of Biological SSSIs*; * indicates assemblages of international significance (2.1.1–2.1.4); # alternative index thresholds are explained in the text within each section in Sanderson et al. (2018); for TNTN refer to the spreadsheet downloadable with Sanderson et al. (2018).

This is was an immense effort by all involved; great thanks are due to all. These guidelines are certainly not perfect, but are quite an advance on the previous guidelines. They give a more secure footing for efforts to conserve the British lichen assemblage. We now await results! There is of course much more to do; we need Red Lists for Scotland and England and preparing further habitat indices well in advance of any future review of the SSSI guidelines would a good idea.

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(With thanks for input by Tim Wilkins (Natural England), Sam Bosanquet (Natural Resources Wales)

Suburban Ramblings

Living in a town and trying to document the lichen flora of it involves a slightly different and more subtle approach to that of our country lichenologist cousins. No striding around with hammer, chisel and knife, more discrete actions are required. But, by taking certain opportunities, records can be amassed and specimens collected for identification and as vouchers.

Trees along roads and in parks are, of course, a major urban habitat and when councils promise, as mine has, to plant two trees for every one they have to remove, a constant supply of fresh bark surfaces seems assured. In urban surroundings most of the lichens are not rare and lists and photographs are all that are required. Occasionally, small samples are required, for instance I like to check *Catillaria nigroclavata* and *Caloplaca cerinella* but the samples required are tiny and a few fallen twigs are usually all that are needed.



A storm-blown tree, Southend-on-Sea, gone within 24 hours. Photo © John Skinner

Usneas are a slight problem. They are rare in suburban Essex and when found are usually solitary thalli. One can't see details of the holdfast without removing them and I leave them which is rather frustrating. I have found a detached *Usnea* thallus on the

ground but only once. Incidentally, Andrew Harris found a detached *Ramalina fraxinea* thallus in St. Albans, Hertfordshire and that's about as good as urban lichenology gets.



Usnea sp. (top centre) on a street tree, Shoebury, Essex. Photo © John Skinner

After stormy weather the urban lichenologist has to work fast. Any fallen trees are usually cleared by the local council within 24 hours and the rare chance to record lichens of the upper branches is soon gone.

London Plane (*Platanus x hispanica*) is a commonly planted street tree in many towns as it is suited to the urban environment. Its bark is shed in plates and often a plane tree will appear to be devoid of lichens. However, during spells of wet weather the tree trunk must expand quite suddenly for at such times every tree sheds a huge amount of bark, much of it from above eye level. I collect these bark flakes and am gradually building up lichen lists from different locations, including some London ones.



Plane bark flakes from a pavement tree after rain, Southend-on-Sea. Photo © John Skinner

Saxicolous habitats are more challenging. I feel a certain embarrassment in examining people's garden walls and of course opportunities for collection are only sporadic. Brick walls are the main saxicolous habitat where I live and I have acquired a special interest in damaged walls. Sometimes the damage is caused by vehicles, a welcome bonus of careless driving. If a wall is being repaired I often approach the workmen and ask for an unwanted brick. They are usually curious about my motive (or perhaps they are just humouring me) and I usually get my brick. Roof tilers are also often very obliging when they are throwing tiles into a skip.



The very low brick wall, now demolished, was the site for *Caloplaca albolutescens*. Photo © John Skinner

The most awful looking places can sometimes produce nice surprises for the lichenologist and here are a couple of examples. In the middle of town a few years ago was an abandoned petrol station, then being used as a car wash.

The low brick wall at the edge of the pavement was in very poor condition, probably due to vehicle damage, and I was able to collect some flakes. One of the lichens from this wall puzzled me and it was kindly identified by Mark Powell as *Caloplaca albolutescens* which I have since found to be quite widespread.

A few hundred yards away, on the concrete wall of an approach road to a depressing brutalist 1970s car park, the corroding railings have caused the outer cement layer to delaminate and the possible effects of iron and zinc also attracted me to take a proper look. The resulting flakes carry fine material of *Acarospora moenium*, an example of which has been lodged at Kew.



Southend Central Library car park. The rotting concrete wall is the site for *Acarospora moenium*.
Photo © John Skinner

Some brick walls are very susceptible to frost damage and on my walks around town I keep a watchful eye on those that show most promise, picking up any flakes at the foot of the wall, hopefully before the molluscs and psocids get them. Interesting species found like this have included *Verrucaria bulgarica*, *Lecania turicensis* and *Lecanora orosthea*.

Some years ago, the pavements of our road were re-laid, an operation that took some months. I think I was the only resident who actually talked with the workmen and that resulted in a couple of nice spin-offs. Firstly, a particularly brilliant job was done of the pavement outside my house but the second spin-off was even better. I had noticed that uncollectable lichen *Caloplaca crenulatella* growing on many paving slabs and some of these were cracked. I approached the foreman and asked if I could have one of the broken stones. We walked the road together and selected a slab and a few weeks later it was delivered to my house. The photograph shows the team with the *Caloplaca* specimen. Incidentally, the Council was happy to let me have the slab (it would have gone for landfill) and the men agreed that I could use the photograph in our Society's magazine.



My team with the *Caloplaca crenulatella* specimen. Photo © John Skinner



A flower bed, Southend-on-Sea, mainly *Collema tenax* var. *ceranoides*. Photo © John Skinner

Terricolous habitats are not so common in the urban landscape. In my town, the only such habitat of interest is flower beds which have been unattended for some years. Collection is not a problem (these sites do eventually get turned over) but I obtained permission from the Council to collect samples. Abandoned flower beds acquire a good cover of *Collema* species and, less commonly, *Leptogium turgidum*, and, recently, *Verrucaria bryoctona*.

Even in the crowded south-east, and in places that appear uninteresting, there are lichens to be found. Covering the same ground over several years also makes one aware of changes in the flora. Last year, for example, *Punctelia borrieri*, a lichen springing up all over Essex, appeared for the first time in Southend. It will be interesting to see if it spreads within the town. A willingness to talk to people, telling them about lichens and often getting their assistance, is often the start of an interesting story.

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Update on the proposed golf course development at Coul Links, part of Loch Fleet SSSI

In the Winter Bulletin (*Bulletin 123*, Winter 2018: 13-25) there was a report on the circumstances and concern over the proposal to place an 18-hole golf course over the dune habitat of the Coul Links area of Loch Fleet SSSI. The report clearly set out the lichen interest and importance of Coul Links. The BLS submitted an official objection and agreed to be part of the local campaign group Not Coul to oppose the development. There was a tremendous amount of interest in the whole project, both in support of the scheme, and opposing it. I have seen figures of 2,101 objections submitted directly to Highland Council, 91,329 signatories to an internet petition, and 2,030 signatories to a second petition. Buglife's internet petition attracted 3,632 signatures. I do not have figures for those who submitted in support for the scheme.

In the autumn of 2018, the Scottish Government 'called in' the decision of the Local Planning Authority, to review the matter through a Public Inquiry (PI).

In February 2019, the PI was launched. Public Inquiries to do with Planning and Development have to be held within easy distance to the locality under consideration. So it was that The Carnegie Hall in Clashmore, a small village near Dornoch and a few miles from Coul Links was the scene of the intense 15 days of the PI (26 February to 22 March). Carnegie Hall is a perfect, unspoiled example of an Arts and Crafts-style Highland village Hall. It was erected in 1907 by the Scots-born American philanthropist, Andrew Carnegie, for the employees on his nearby Skibo Estate and the residents of Clashmore. The hall is a popular venue for local weddings, concerts,

plays and ceilidhs, so the seriousness and intensity of the PI was something of a contrast. But it was a pleasant place for the proceedings.

A decision by Scottish Ministers to ‘call in’ a Planning decision and launch a Public Inquiry is not taken lightly. It involves a vast amount of preparation over several months by the two parties – the Applicant (proposing the development) and the Objectors. Amongst the Objectors was a Conservation Coalition (including RSPB, SWT, Buglife, Butterfly Conservation, Plantlife, NTS and the Marine Conservation Society), and the Not Coul group (which included representation by Brian Coppins for BLS), and their QC John Campbell. Scottish Natural Heritage also were objectors, represented by their expert witness, Prof. Stewart Angus, and their QC, Marcus McKay.

Each of the Objectors had appointed expert specialist witnesses to put the case for objecting to the development. Listening (and also reading) their submissions, one felt that surely the Objectors’ combined cases must prevail! But of course, the Applicant also had a strong group of experts putting the case in support of the development.

The PI is overseen by two Reporters, who listen to all the evidence, and all the questions and answers from the expert witnesses on both sides. The whole proceedings are videoed live – it is a Public Inquiry – and is still available to watch and listen. The link to observe Brian Coppins giving evidence on behalf of the lichen can be found here: [NA-HLD-086](#) (then scroll down to Coul Links) Thurs 14 March. But be warned, there is a bit of a delay at the start while discussion goes on about the timetable for remaining witnesses, but eventually Brian sets out the case for the lichen interest.

He faced challenging questions from the QC for the Applicants but his answers were calm, knowledgeable and self-assured, based on his many years of experience in lichens and the dune habitat. The Applicants’ QC, Ms. Wilson, is extremely able, but was struggling to get round the concept of lichens and lichen habitats (clearly a subject way beyond her experience); nevertheless she was ably advised and prompted by other members of her team, notably Bob Taylor and Andy McMullen.

The whole experience of a PI is totally fascinating. Some have said it is so slow it is “like watching paint dry, only less exciting”, but to be honest, I found it gripping, like a slow drama played out over the 15 days – but I didn’t watch it all by any means. Some of it seemed incredibly nit-picking and pedantic – some of the questions were designed to undermine the witnesses, to detract from their expertise, some were very unpleasant and deeply personal. But every witness maintained their demeanour and dignity – on both sides.

The final witnesses gave their evidence and were questioned, and the two stalwart Reporters listened, made their notes and drew the proceedings to an end. I must say I am full of admiration for the enormous and complex task they have in sifting all the evidence, some of it quite detailed (e.g. the hydrology of the dunes and the effects of nutrient input, and whether mitigation through management would be achievable).

So now, we await the decision. The Reporters will present their deliberations before Scottish Ministers, who will then debate and come to a decision. At the time of going to press with the Bulletin, we have not heard any news of a decision.

What is a 'links' golf course? There is a very informative website about the long history of golf in Scotland <http://www.scottishgolffhistory.org/origin-of-golf-terms/links/>:

“A 'links golf course' refers to the type of soil and terrain on which it is built. Only 92 (17%) of the more than 550 golf courses in Scotland are true links courses, though this includes most of the historic courses.

Another 5% of Scottish courses are coastal with some properties of 'links' courses and moorland vegetation. Apart from links courses, the other main types of Scottish golf courses are parkland (61%) and moorland (17%)

And, in 1457, an Act of Parliament under James II in Scotland banned golf and football, requiring all males over 12 years old to partake in military training. The Act was the earliest known written evidence for the game in Scotland. However, the topography of the dunes – or links – habitat, meant that golfers could still practise more or less out of sight. The act was repealed in 1502. Sport, including golf, was further prohibited on the Sabbath between 1580 to 1724 during the period of religious intolerance to sport on the Sabbath.

The point to note is that “only 92” of the Scottish golf courses are ‘links’ courses. When one considers how other coastal dune habitats have been changed and lost, apart from golf, to caravan and holiday developments, plus sites where the natural dune processes have been halted by extensive plantations of conifers and land converted for agriculture, the cry to save Coul Links should surely be heeded.

In May this year, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) was convened by the United Nations to find an answer to the questions: what are we doing to the world’s species, its biodiversity, its ecosystems and its natural resources? And what are the consequences – for human life, as well as the natural world? Will this alert in any way sway the Scottish Government’s decision over Coul Links: biodiversity vs. economic growth?

Sandy Coppins

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Still hanging on in Scotland – the lichenicolous fungus *Thamnogalla crombiei*

The Lost & Found Fungi project (<http://fungi.myspecies.info/content/lost-and-found-fungi-project>) is funded by the Esmée Fairbairn Foundation and coordinated at the Royal Botanic Gardens, Kew. It aims to survey rarely-recorded species in the UK, to establish whether they are genuinely rare, or simply overlooked. Around one quarter of the species targeted to date are lichens or lichenicolous fungi.

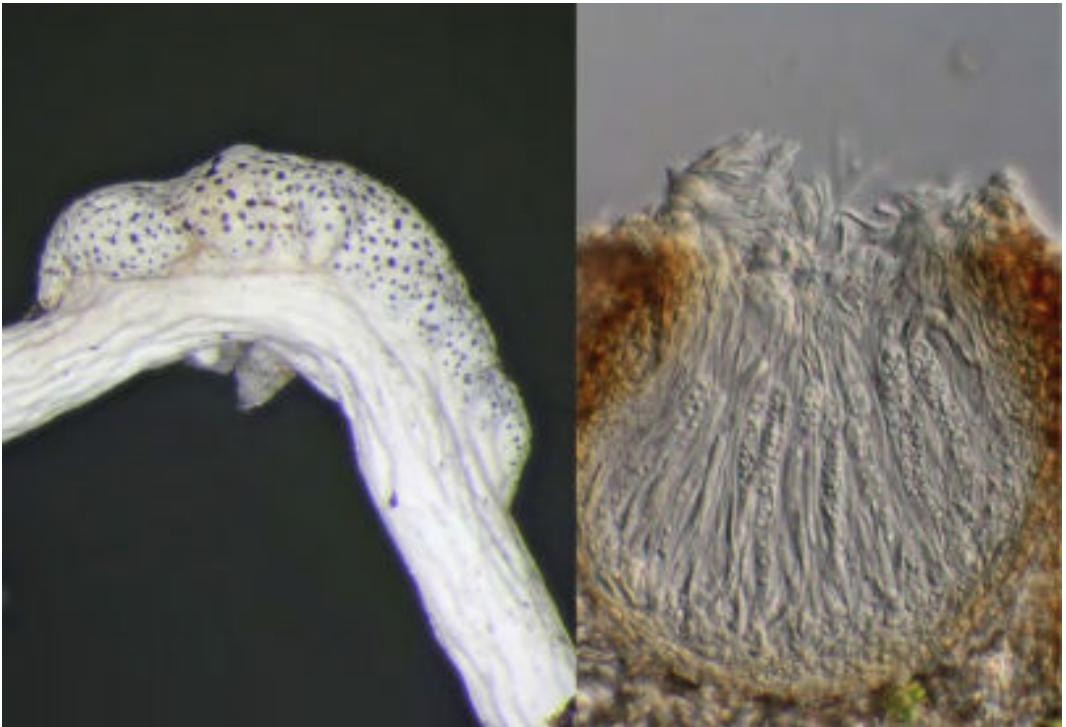
One of the more challenging species on the target list is *Thamnogalla crombiei*, a gall-forming species on the thalli of *Thamnolia subuliformis* (as *T. vermicularis* var. *subuliformis* in Lambley & Purvis 2009). The terricolous host lichen is more or less restricted to high montane moorland, and forms short worm-like thalli that are frequently not attached to the ground, and can be dispersed in the wind.



The host lichen *Thamnolia subuliformis*, in moorland near Dovre, Oppland, Norway

The monotypic genus *Thamnogalla* was described by Hawksworth (1980), based on *Endocarpon crombiei* Mudd. Although it appears to form perithecia immersed in the galls, in structural terms the fruit-bodies are deeply cupulate apothecia, and the genus has been shown to belong to the *Helotiales* (the “inoperculate discomycetes”) by Suija et al. (2015). *T. crombiei* is not the only gall-forming fungus recorded on *Thamnolia*, which harbours a diverse range of lichenicolous fungi (Zhurbenko 2012). *Cercidospora thamnogalloides* (not yet recorded from the UK) also stimulates gall production by the host lichen, but has a grey rather than brown exciple, few or no interascal hyphae, and septate ascospores.

In the original publication of *Endocarpon crombiei* (Mudd 1865), the species was reported from a number of mountains in the Scottish Highlands, including Morrone, Cairn Gorm, Beinn a' Bhuid and 'other localities in Scotland', which evidently included Ben Lawers as the locality of the lectotype. Subsequently, *T. crombiei* seems to have been reported only once from the UK, from *Thamnolia* on Cader Idris (Keissler 1925).



Thamnogalla crombiei: gall on thallus of *Thamnolia subuliformis* (left), section through immersed apothecium (right)

The need for a re-survey for *Thamnogalla crombiei* was obvious. The Lost & Found project primarily supports fieldwork on a voluntary basis, but in this case the inaccessible habitats (and the sheer exertion of getting to them) justified a paid survey. Andy Acton was contracted to carry out a short survey on a number of high montane habitats, and Paul puffed up three further Munros (Scottish mountains over 3000 feet – 914 m in height) with the help of a volunteer Sherpa, Dave Minter, who nobly carried the rucksack. The work included resurvey of known historic sites, and further localities where the host lichen was known but the parasite not recorded.

Andy's first survey site was one of Mudd's original localities, the mountain of Morrone just SW of Braemar, between 750 and 860m altitude. Here the host lichen proved to be locally abundant with well over 50 patches surveyed. The habitat was ericoid heathland dominated by *Calluna vulgaris*, *Empetrum nigrum*, *Vaccinium vitis-idaea* and *Arctostaphylos uva-ursi*. *Thamnolia subuliformis* was especially associated with wind clipped *Calluna*, and lichen associates included *Ochrolechia frigida* (incl. f. *lapuensis*), *Stereocaulon condensatum*, *Flavocetraria nivalis*, *Alectoria sarmentosa* subsp. *vexillifera* and *A. nigricans*. Rocks in the vicinity supported *Arctoparmelia incurva*. The search was rewarded not only with two *Thamnolia* thalli with *Thamnogalla* galls, but the samples collected also harboured two further lichenicolous species, *Cercidospora thamnoliae* and *Sphaerellothecium thamnoliae*. Both of these were new records for Britain.



The *Thamnogalla* site (circled) in a small erosion hollow near the summit of Morrone

Andy's second site was Cairn Gorm, east of Aviemore at an altitude of 1030-1230 m. Here *Thamnolia* was very scarce and local in most of the search area, but occasionally frequent. In the more exposed and disturbed areas with more gravelly patches the *Thamnolia* is restricted to more sheltered habitats e.g. adjacent to or under the shelter of overhanging boulders, or amongst *Empetrum* patches associated with bouldery patches of ground. *Thamnolia* was most common in *Racomitrium-Empetrum* heath or *Racomitrium-Carex bigelowii-Vaccinium-Deschampsia flexuosa* heath. It appears that in more disturbed ground there was too little suitable vegetation to 'entrap' dislodged fragments of *Thamnolia*, hindering establishment of new populations.

This was another labour-intensive survey, but searches of a further 38 *Thamnolia* patches were rewarded with a single further *Thamnogalla* gall. Another patch harboured *Sphaerellothecium thamnoliae*, while a further sample containing a lichenicolous fungus blew away in the wind before it could be identified. Not a problem generally experienced by churchyard surveyors...



At Caim Gorm, boulder patches provide some shelter from disturbance due to erosion from exposure and footfall. *Thamnolia* was found under the shelter of the overhanging boulder here (in area indicated by the yellow circle) but notably absent from the surrounding area despite extensive searching.

After this, luck ran out for Andy. A survey of around 40 *Thamnolia* patches on Aonach Mor, west of Fort William and Ben Nevis at altitudes between 890 and 1220 m, did not result in further *Thamnogalla* finds. Surveys in the north-western Highlands at Sgurr a' Chaorachain, Applecross (alt. 650-780 m) and Farmheall, NW Sutherland (alt. 350-520 m) were also unrewarded; these sites were very exposed with rather restricted *Thamnolia* populations.

So far, the Great *Thamnogalla* Hunt had included searches of five montane localities, over 150 *Thamnolia* patches and probably well over 1000 host thalli, and around 2500m of altitudinal ascent. A rather less systematic approach was adopted by the other authors of this article, with an ascent of Glas Maol (1068m), Cairn of Claise (1064m) and Carn an Tuirc (1019m) from the Glenshee ski centre south of Braemar. We were too late for skiing so the chairlifts were not working, and there were no yaks available to carry our survey equipment. However, extensive late snow patches provided an excuse to take ice axes, and there was sufficient exposed ground to find *Thamnolia* populations. Essential supplies included pies from the incomparable Chalmers Bakery in Ballater, as well as the traditional local warming liquid.

Walking up from the ski centre, we passed populations of *Alchemilla alpina* just emerging from snow cover, which gave excuses to stop and search (successfully) for another of the LAFF target species, the non-lichenized *Anthostomella alchemillae*. The pace was slow due to Paul's lack of overall fitness (not just because of the pies and warming liquid), which reduced the time available for survey at the top.

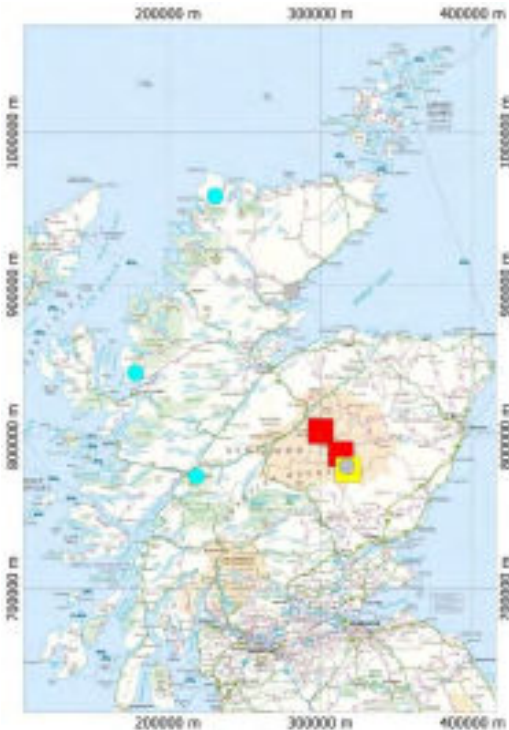


Dave Minter and Paul Cannon looking heroic on the upper slopes of Carn an Tuirc

Thamnolia was not seen on Glas Maol (possibly because of snow cover), but populations were found on both of the other hills. Those surveyed on Carn an Tuirc were free of the parasite, but on the summit of Cairn of Claise a single *Thamnogalla* gall was found (along with *Sphaerellothecium thamnoliae*, yet again). This was in a small *Thamnolia* patch in a crevice between rocks about a metre north of the drystone county boundary wall that separates Aberdeenshire and Angus. The habitat was similar to that depicted in Andy's picture on Cairn Gorm in an earlier part of this article.

So, was it all worth it? The time and effort expended (especially by Andy) was quite significant. We now know that *Thamnogalla crombiei*, not seen in the UK for over 90 years, is not extinct in this country. Two more species were added to the British list. We have detailed habitat information and indicators of population size for the host lichen *Thamnolia subuliformis* at a number of Scottish sites, itself at long-term threat due to climate change and also from intensive sheep grazing in Wales (Pentecost 1987). We know that *Thamnogalla* populations are small and appear only to occur in areas

with substantial *Thamnolia* populations. That indicates that it is probable that the species is now restricted to the Scottish Highlands, and perhaps to the Cairngorm massif. If *T. crombiei* were a bird or a mammal rather than a lichen parasite, conservation action would be pretty much automatic, with time and money invested in its protection from both the professional and voluntary communities. Why should not fungi be protected in the same way?



Map, left. Three post 2000 records for *Thamnogalla* (indicated by the square symbols), all within the Cairngorms National Park. The *Thamnogalla* at the red squares were recorded by Andy Acton and at the yellow square by Paul Cannon and Dave Minter. Study sites where no *T. crombiei* was recorded are indicated by the circles (blue examined by Andy, grey by Paul). The basemap is an Ordnance Survey MiniScale map available under the OS OpenData map dataset and is free to use under the Open Government License (OGL). Contains OS data (c) Crown copyright and database right 2018.

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Andy Acton (Taynuilt, Argyll; email andy.acton.esm@gmail.com)

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***Ramalina siliquosa* and the Fair Isle weather**

Some 26 years ago I drew attention to storm-related damage to *Ramalina siliquosa* across Fair Isle which turned individuals directly exposed to the wind a light reddish brown colour (Riddiford, N. 1992. Storm-related damage to *Ramalina siliquosa* on Fair Isle. *BLS Bulletin* **70**: pp 43-44). The article pondered whether this was a known phenomenon and what was the cause.

The occurrence of a similar event in January 2017 prompted further consideration of the issue; and on this occasion I had the good fortune to receive expert guidance to investigate the cause.

Ramalina siliquosa is ubiquitous across Fair Isle on walls and fence posts as well as the cliffs. In January 2017 prolonged westerly gales over a ten day period turned *Ramalina siliquosa* branches directly facing the wind a rusty red (Photos 1 and 2).



Photo 1. Storm-damaged *Ramalina siliquosa*, west-facing wall, Fair Isle, 8th February 2017.

Photo © Camila Quinteros Peñafiel.



Photo 2. Close-up of Storm-damaged *Ramalina siliquosa*, west-facing wall, Fair Isle, 8th February 2017.
Photo © Camila Quinteros Peñafiel.



Photo 3. Undamaged *Ramalina siliquosa*, east-facing wall, Fair Isle, February 2017.
Photo © Camila Quinteros Peñafiel.

On the leeward side of the same walls and posts, the *Ramalina* retained its typical glaucous green hue (Photo 3).

Advice from Brian Coppins suggested that the thalli showing reddening were likely to be of the salazinic acid containing race “which would turn red under the influence of a strong base” (Coppins, *in lit.*). To test this hypothesis, specimens were collected from windward and leeward sides of a Fair Isle wall and sent to Paul Harrold at the Royal Botanic Garden Edinburgh for TLC analysis. The analysis confirmed that all the specimens were the salazinic acid containing race. So the colour change could not be attributed to different chemotypes.

The 1992 event was unexpected. The joint recollection of Fair Islanders was of just one previous occurrence some thirty years or so before. Circumstances have changed. The event is now occurring on such a frequent basis (four winters between January 2009 and January 2017) that islanders – always quick to point out unusual natural events - no longer make reference to it.

The weather conditions have been similar on each occasion: *dry gales*, gale to storm force winds over periods of 48 hours to a week or more with very little or no precipitation. It appears that the strong base derives from constant dousing of wind-borne salt without the diluting effect of precipitation. *Ramalina* sheltered from the wind are not or scarcely affected.

The increasing frequency of a weather type which was formerly exceptional on the isle does not appear to threaten the long-term viability of *Ramalina siliquosa*. It gradually recovers its colour though the recovery period, based on the 2017 event, is a little over three months.

I gratefully acknowledge essential input and guidance from Brian Coppins, Paul Harrold and Steve Price. Camila Quinteros provided the photographs.

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Update on social media

By the 14th May 2019 the number of Twitter followers stood at 2212, Facebook Likes at 572 and Followers at 634. The continued growth in interest is good for the British Lichen Society and should be considered a reflection of the respect that it has worldwide. It is a privilege to be a part of this and we do our best to keep up the momentum but must make it clear that a) we are only human and b) this is the Society's success and we are simply enablers.

BLS social media first birthday 14th November 2018

On the first anniversary of BLS Twitter and Facebook we wanted to celebrate in a meaningful way, with great appreciation for all our followers and friends at home and across the world. We celebrated lichenologists, sharing stories of how some first got into lichens. Images were a challenge! The text below is as it was tweeted.

Dougal Swinscow formed the BLS in 1958. An editor of the British Medical Journal, his interests in botany were diverse. In 1957 in Borrowdale he realised he should take the fungus-like plants he had been noticing more seriously - 'everywhere they formed their crusts and cups and beards, plastering the surface of the surrounding rocks and trees with their rococo decoration'.

Dr Francis Rose was an early BLS member, a favour to his friend Dougal Swinscow. A report on pollution levels near the New Forest and a 1962 BLS field meeting kick-started his passion for the stories lichens tell about habitat and the environment. He scoured Kent, Hampshire and Sussex.

Oliver Gilbert's introduction to lichens was at Malham Tarn Field Centre, Yorkshire, as a young staff member. The tutor, Arthur Wade, could not drive. That is how 'I met my first real lichenologist and, as with so many of my generation, it was he who switched the light on.' He developed what he called Adventure Lichenology. In the 1980s he abseiled down the face of a cliff east of Hastings looking for *Tornabea scutellifera*. Sadly he was not able to refind this species, but his attempts remain inspirational.

Prof. Mark Seaward, whose work on the ecology and mapping of lichens, especially in monitoring pollution, is appreciated worldwide, says he was attracted to them by reading Frank Brightman's article in *New Biology* 'Neglected plants – lichens'. He thought he might be able to redress this!

Charles du Bois Larbalestier was born in 1838 in St. Aubin, Jersey, made friends with Jean Piquet (a famous Jersey botanist) and a lawyer, Henry Varley. Together this trio would go out 'lichenising'. Lichens were used for various products, including a cough linctus. Another trade was collections for private libraries, exsiccatae. Several specimens of the period were collected by one or other of this trio. It seems likely that as well as finding lichens, they were enjoying making money. Larbalestier funded himself through tutoring and these collections.

Simon Davey. In 1971 I first became involved in the world of lichens. I'd been aware of grey crusts on Ely Cathedral but air pollution was widespread, lichens weren't a feature of East Anglia. Then Francis Rose suggested I join the BLS looking at lichens in the New Forest.

"I didn't know lichens grew on trees," I said. A chuckle from Francis. "Oh yes, I think I can safely say there are quite a number that do grow on trees." I spotted a large, cabbage looking plant on a beech tree. "Is this a lichen?" "Mmmm, yes. That is *Lobaria pulmonaria*!"

Not a bad first lichen. This was like finding a rare, and important orchid. We visited 2 areas of ancient woodland and I collected samples of over 100 species. Much of the

next few weeks I studied them developing a lasting love of this fascinating & rewarding group of organisms.

While studying a geography degree, *Amanda Davey* was introduced to lichens through dating glacial retreat. When she met Simon Davey he asked if she would like to look at lichens in the New Forest, and they've been looking at lichens together ever since.

One of the more significant figures in mid 20th lichenology was *Ursula Duncan*. [The period] 1937-1957 was lean for British lichen study. Walter Watson, a teacher in Taunton, was to inspire the shy young Miss Duncan to study them, which she took to like a duck to water. Member of the Lichen Exchange Club and friend of Dougal Swinscow, Ursula gave courses at Kindrogan, wrote books and contributed species to Watson's Census Catalogue of British Lichens (1953). Her isolation triggered Dougal to initiate the BLS in 1958.

Maxine Putnam "It was bird watching in the Scottish Highlands after capercaillie that started it. We were to travel to the forest by minibus and creep silently through it. Impossible with wonderful, amazingly beautiful lichens which appeared at every difficult, twig-snapping step. Their sheer beauty captivated me. The diverse and wondrous forms of the countless *Cladonias* and *Usneas* bewitched me, and as for *Icmadophila ericetorum*! What a gem! Lichens have taken over my life - I am never bored and am always on one identification mission or another."

Jack Laundon worked with Peter James in the Natural History Museum. Jack was particularly interested in nomenclature and when he found an earlier name, some groaned that the lichen had been 'Jacked'. He described *Lecanora antiqua* as new to science in 2011. Previously it had been recorded as *L. conferta* but Jack examined the type specimen and found it was a good match. The discs have pruina and turn orange with bleach. *Lecanora antiqua* J.R. Laundon is common, especially on churches. It likes sandstone which is set in a mortared wall - something about siliceous rock slightly ameliorated by run-off from calcareous mortar seems to suit it.

Rev. W. Leighton, b. 1805, went to school with Darwin, gave up law for the church but in 1848 resigned his curacy to devote his attentions to botany. He published the excellent Lichen Flora of Britain in 1871. "The successful study of lichens is not really so difficult...!"

William Borrer, the renowned 19th C. botanist, was also an excellent lichenologist. *Verrucaria elaeina*, *V. ochrostoma* and *V. polysticta* were all described by him, then largely forgotten until recently revived from obscurity. All are common but hardly recognised during 20th C.

Paula Shipway was new to lichens until 2012 and is now an excellent Vice-county recorder. With her skills at microscopy she has made interesting discoveries particularly regarding the staining of the perispore in species of *Opegrapha*. Her work has shed light on the separation of *Opegrapha* sensu stricta from other taxa included in the group.

Tom Chester became a lichenologist after a career in teaching. He undertook extensive surveys of churchyards in the 1980s and made a breakthrough in identifying as

Lecanora pannonica a mysterious lichen common on Midland churches which had been nicknamed 'Tom's Lecanora'.

Another teacher, who continued Tom's work in churchyards, is *Ivan Pedley* who has done so much to teach and enthuse others by inviting them to accompany him on churchyard surveys. They are the best training courses - learning in the field from experienced recorders.

Mark Powell says "I bought the Observers book of Lichens when a teenager in the 1970s. I wasn't sure I was getting identification right and making contact with others was more difficult in those days. I assumed the subject was too difficult for me and wasted much of my working life in coppices. Somehow the spark survived and a serious accident in 2007 helped me re-assess my priorities in life (plus cheap imports were making coppice unprofitable). In my 40s I thought I had left it too late to make any significant contribution. Initially I was content to be a field recorder but then realised how many lichens, even in lowland England, were misunderstood and hence 'forced' into taxonomy to try to understand them. Material in my unremarkable parish has led to progress in our understanding of several lichens, some not previously recorded in Britain. *Caloplaca limonia*, *Lecanora horiza*, *Porina byssophila* and *Verrucaria ochrostoma* are examples of lichens which would still be misidentified by British lichenologists if I hadn't studied my parish in detail. Never too late, and good to get to know your own locality. If I had my time over again I would not leave studying lichens so late. Coppice work was a hard slog and didn't achieve my dream of restoring ancient woodlands. Nutrient enrichment, depredation by deer and other factors have continued to degrade ancient woodlands."

Rebecca Yahr Here is the **#lichen** that started it all for me... *Cladonia perforata*, a clonal fungus, growing vagrant and endemic to Florida rosemary scrub white sands. What a world. **@BLSlichens @ArcboldStation #florida**

Ginnie Copey "I must have been aware of lichens long before joining the BLS ten + years ago, because Simon was running a course at Southampton University on wild flowers of the New Forest which Alison Bolton and I attended, and Simon was crazy about lichens. That must have been in the 1970s. Simon enthused Alison about charophytes, and me about the lichens. It was another thirty years before I revived my lichen passion, but only a few weeks ago that Alison was teaching us charophytes."

All of this created a good buzz of interest and generated some memorable recollections from followers.

October 2018

On the Scilly Isles bird migration was slow. As a result bird watchers were getting down to the ground or close to the twigs and studying the beauty of the lichens. This is generating some interest in a Scilly Islands BLS field meeting. Darren Mason is a protégée of Maxine's and also happens to be head ranger at Scilly Wildlife - so in a perfect role to help make this happen.

At the Shropshire Recorders annual meeting (20th October) it was really good to be tagged and told that 2 lichen talks were planned, by Bob Kemp and April Windle.

As the day progressed it turned out that all/almost all of the talks had referred to lichens, including one on the role social media has to play in the progression of science. It is hoped that this will spur the re-igniting of a lichen group in Shropshire, inspired by the enthusiasm of those present on the day.

We were also approached by a Spanish archaeology student who had been getting more and more interested in lichens through investigations into lichenometry and had found the BLS as a result. The questions were interesting, but it would have been good to have known more about who is working on this in the lichen world at the moment. Any suggestions gratefully received.

#lichenJanuary

#lichenJanuary came about as a result of the frustration with doing #30DaysWild run by the Wildlife Trusts. Interaction came in from far and wide. Australia was in high summer, but the many Australian lichens remained frustratingly fascinating. Input came from several places in the USA, from Bavaria, Norway and Alaska. Inspirational outreach in action! We had the bewildering range of temperatures and threats that people were out looking for lichens in; -50°C and polar bears in Alaska, through to $+40^{\circ}\text{C}$ in Australia with snakes, spiders and a step ladder! To add to Oliver Gilbert's Adventure Lichenology we would like to add a group called Stalwart Lichenologists. Twitter reached 2000 followers on 30th January, just after the AGM. Shortly afterwards, Heather Paul emailed a beautiful lichen encrusted fircone from Findhorn, Moray, covered in multiple lichens. We rapidly gained followers from 2022 to 2109 as



a result (75 retweets and 256 likes)! Facebook was also appreciative of this wee beauty, reaching 557 people.

Lichens in art



Clean Air Walkway Image © Bryony Bengel-Abbott

Regularly we get to see the most amazing artistic creations inspired by lichens. In February an artistic creation was added to this list in Islington, with the Clean Air Walkway in Archway - a mural by the talented Bryony Bengel-Abbott (@bryonyandbloom). (See #followthelichen). In some ways we could fill an entire Bulletin with the lichen-related activity going on in the big wide world.

#30DaysWild and other events

We have welcomed several new members to the BLS in these past few months. There is a wide range of level of knowledge and interest in detail. Many members have expressed the need for an interactive forum where ideas, questions and discoveries can be shared and UK fungi (www.fungi.org.uk) has a section dealing with lichens. The website is easy to use and it is hoped that many people will try it. Looking forward, we will again be doing #30DaysWild in June and are keen to encourage members to share notices etc. that may be appropriate for widespread sharing.

Once again, many thanks to everyone who has submitted information, posts and thoughts. Thank you to Fay Newbery and Paul Cannon for their continued support

and to Rebecca Yahr and Mark Powell for backup with identification or further exploration of ideas.

Amanda Davey

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Lichen colonisation of new garage roof



April 2016, immediately after completion

In April 2016 we had our garage re-roofed with a tiled pitched roof (previously it had a flat roof). The neighbouring property has a similar, longer-established pitched roof garage with some obvious patches of *Xanthoria parietina*, and I was interested to see how long it would take for ours to show signs of colonisation.

On 29th April 2019, three years after the new roof was completed, I inspected the roof with binoculars and counted 15 small *Xanthoria* thalli, ranging from perhaps 2mm up to about 10mm, on the West side (facing the camera in the picture).



Small thallus on W side

The South side (to the right) showed no evidence of lichen colonisation, whilst the North side had one small *Xanthoria*, but numerous (50) closely-spaced small thalli of a grey-green lichen, presumably a *Lecanora* species, near the apex and unfortunately inaccessible for close inspection or photography. The East side faces the adjoining property and is not clearly visible.

We frequently have gulls and other birds perching on the roof, but I have not resorted to spraying with manure or other substances!

I look forward with interest to following the progress of these pioneer colonies.

Paul Halstead

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The Living Valley

We see so much beauty in lichens. That beauty is not always accessible to others, so sometimes we need the bridge of art. Amanda Schutz's series of paintings, drawings, and patterns called the "Living Valley: an illustrated study of lichen" is one such bridge. The first supports were put in place 2 years ago when we met in the Archives of the old Royal Alberta Museum. The office space was retrofitted to house a growing team of taxonomists, those archives also were home to over 150,000 lichens collected from across Alberta (Alberta Biodiversity Monitoring Institute).

I am an ecologist by training and taxonomist by necessity. I've loved lichens for decades, for reasons I can't adequately explain. When asked to specialize I stubbornly held onto my generalist leanings, but eventually yielded. They would be to me as barnacles were to a certain famous naturalist, a lens to look deeper into life rather than broader across ecological patterns. Stupid me – they've enriched my life by allowing both.

Amanda is a gifted artist and a fellow nature lover and pattern finder. A graphic designer by trade, she was wed in a sunny yellow dress of botanical abstraction of her own design. A woman of my own ilk is what I thought. We connected over our mutual love of lichen and a desire to share it with others.

We make our lives in Edmonton (in the province of Alberta, Canada), home to a perhaps surprising diversity of lichens. Many of those lichen communities are in the North Saskatchewan River valley that winds its way through the centre of the city. Edmonton's river valley is the largest urban park in Canada, and a place to filter the contamination of city life. Our interest in lichen bridged our skill sets - Amanda wanted to do lichen art, and I wanted to celebrate our local diversity. Amanda successfully applied for an artist's grant to illustrate urban lichens from three perspectives. My role - provide the images and the material inspiring the art. We walked in the river valley and met over microscopes. Lichen specimens, photographs, scanning electron images, and compound microscopy were fodder for Amanda's imagination. In the end, each of ten species was interpreted in scientific, representational botanical drawings, stylized paintings using shape and colour, and abstract art made of digitized surface patterns. Currently Amanda is using the art to engage artists, many with developmental disabilities, in developing the extraordinary ability to perceive lichens and the community they represent (Nina Haggerty Centre for the Arts)



Introducing lichens to the Nina Haggerty Centre artists.

Uli Rodler doing a study of *Bryoria*



Lichen samples



Gordon Herd illustrating *Cladonia cristatella*.

Here we share some of those art pieces and how they were created. Our goal is an installation in the river valley that inspired us, a partnership with the shared artistic

and scientific endeavor of shifting perceptions. Or perhaps a provocation so that others may see and want to protect the diversity cohabitating our ribbon of green. We'll see where the project takes us.

Left: *Hypogymnia physodes*. Representational botanical pencil drawing.

Below: expressive gouache and ink painting on wood.

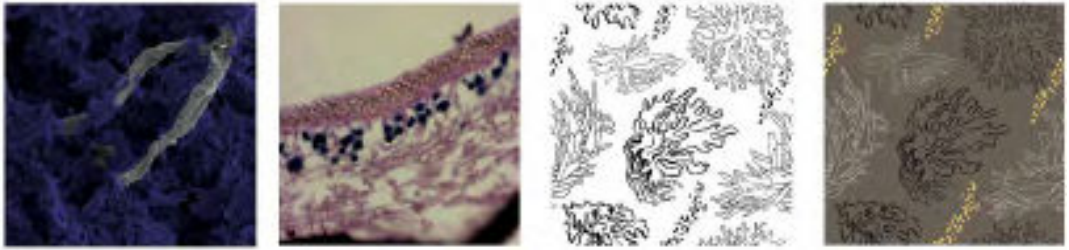


Parmelia sulcata. Below left: representational botanical pencil drawing.
Below right: expressive gouache and ink painting on wood.

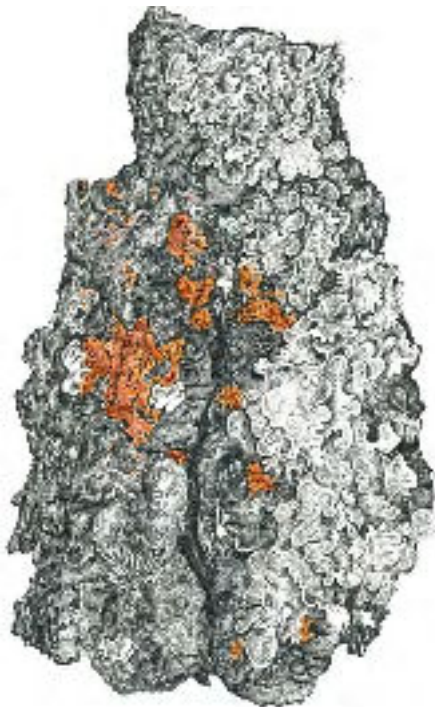


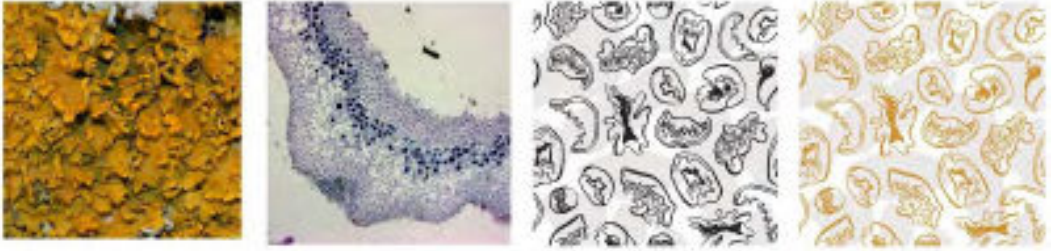
Parmelia sulcata (below). From right: two abstract digital patterns based on compound microscope images of slides. Cross-section of *Parmelia sulcata* lobe from formalin-fixed

sample embedded in wax and sectioned on microtome, stained with lactophenol cotton blue and eosin red. Re-coloured scanning electron microscope image of medullary hyphae and crystals of salazinic acid.



Xanthomendoza fallax (below). Left: representational botanical pencil drawing. Right: Expressive gouache and ink painting on wood.





From right: two abstract digital patterns based on compound microscope images of slides and macrophotography. Cross-section of *Xanthomendoza fallax* from formalin-fixed sample embedded in wax and sectioned on microtome, stained with lactophenol cotton blue and eosin red. Photograph of thallus with soralia.

Resources

The Lichen Project. <https://lichen.amandaschutz.com/>

Alberta Biodiversity Monitoring Institute. www.abmi.ca

The Nina Haggerty Centre for the Arts. <https://thenina.ca/>

Acknowledgements

We thank the City of Edmonton Arts Council for funding the project and providing Diane Haughland a permit to sample lichen, Peter Haughland for introducing us, Arlene Oatway, University of Alberta Biological Sciences Advanced Microscopy Facility for assistance with slide preparation, Rachel Byer and Darren Jacknisky for photographing the art, and Anders J. Svensson for naming the exhibit.

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Two new *Usnea* species for Great Britain and *U. barbata* confirmed

Introduction

The author regularly receives *Usnea* specimens for identification or confirmation from lichen recorders in Great Britain and, indeed from further afield. Recently I received some specimens from Scotland collected by Jenny Ford which, after morphological examination and chemical analysis, were clearly not conspecific with established British taxa. *Usnea praetervisa* (Asahina) P. Clerc and *U. perplexans* Stirt. were found to be new to Great Britain and a modern specimen of *U. barbata* (L.) F.H. Wigg. confirms the findings of Clerc (2016) where he postulates the occurrence of the latter from old specimens in BM.

Methods & materials

The specimens were examined using a stereo microscope with x45 magnification to examine the occurrence of soralia, isidia, isidiomorphs, fibrils, fibercles, foveoles and papillae. The form and ratio of the cortex, medulla and axis were also examined by cutting longitudinally halfway through a secondary branch of each thallus using a razor blade.

Spot tests were carried out and TLC was performed on each specimen according to the methods and techniques described by Orange et al. (2001). All specimens were extracted in acetone and firstly run using solvent G. Cryptostictic acid and salazinic acid were difficult to resolve in this solvent and, where a spot indicated either was present, the specimen was rerun in solvent C to separate these frequent compounds.

The specimens will be lodged in a major herbarium.

Usnea praetervisa (Asahina) P. Clerc

Two specimens of this corticolous species from Great Britain have now been confirmed by Philippe Clerc, both collected in Scotland by Jenny Ford. The first was collected in May 2017 from a *Quercus* branch at grid reference NM994556 in the Ardsheal area of VC 98 Argyllshire and the second in April 2018 from the Wood of Cree near Newton Stewart, at NX387717, VC 73 Kirkcudbrightshire. Both specimens were subjected to TLC analysis and found to contain the medullary substances salazinic and norstictic acids, the latter in significant quantities.

This taxon was originally described as *U. comosa* subsp. *praetervisa* by Asahina (1956) and subsequently Philippe Clerc created the new combination *U. subfloridana* subsp. *praetervisa* (Fos & Clerc, 2000). A third chemotype of *U. subfloridana* containing the medullary compounds norstictic and connorstictic acids which are biosynthetically distant from thamnolic and squamatic acids found in *U. subfloridana*. Clerc (2004) elevated the taxon to full species level after recognition of important morphological differences which clearly differentiate it from *U. subfloridana*.

The most important morphological difference is the way in which the soralia develop. In *U. subfloridana* the soralia develop initially on the cortex and are delimited

by a slightly reflexed cortical rim (x45 magnification). Usually the soralia enlarge, become slightly stipitate, convex on top, and frequently develop isidiomorphs. In *U. praetervisa*, as also seen in *U. cornuta*, short fibrils are initially formed on young branches which are shed soon after formation, leaving fibercles which have the appearance of pseudocyphellae. These fibercles lack a cortical rim and often coalesce to form large, unstipitate, plane soralia which may later develop isidiomorphs. The medulla is thin and dense and Clerc (2004) tentatively postulates that *U. subfloridana* may have a slightly thicker cortex and thinner axis but shortage of *U. praetervisa* specimens for anatomical examination prevents clarity on this character. The thallus is shrubby to subpendent, richly branched and with a black base; papillae are present, largely on the main branches.

The two specimens of *U. praetervisa* from Scotland were both found to have norstictic and salazinic acids as medullary compounds which differs from previously described specimens from Europe and North America in the presence of the second compound. However, Ohmura (2012) found both compounds in specimens of this species from Taiwan making this combination an established chemotype of this species.



Fig. 1. *Usnea praetervisa*, Ardsheal collection

Field recognition of this species requires a good lens for examination of the anatomical structures mentioned above. Both *U. subfloridana* and *U. praetervisa* are similar in the erect or subpendulous growth habit but the presence of fibrils and resulting fibercles are diagnostic for the latter. KOH spot tests and shortwave UV examination are also diagnostic, the medulla of *U. praetervisa* reacting K+ yellow→red (salazinic and

norstictic acids) whereas in *U. subfloridana* the medulla is short wave UV+ bright blue/white and/or persistent striking K+ canary yellow (thamnolic acid). Despite the apparent high levels of norstictic acid showing in TLC for *U. praetervisa*, the author was unable to observe the characteristic red, needle-shaped crystals usually seen for this substance in a KOH squash.



Fig. 2. *Usnea praetervisa*, Newton Stewart collection



Fig. 3. *Usnea praetervisa*, showing fiberclcs

Full descriptions of this species can be found in Clerc (2004, 2007), Randlane et al. (2009) and Ohmura (2012).

***U. perplexans* Stirt.**

Usnea perplexans Stirt. is now considered to be the correct name for the corticolous species previously known as *U. lapponica* Vain. (Clerc, 2016) which is largely a circumpolar and continental species from montane and/or boreal forests, but also found in coastal areas of the Mediterranean and California.

A collection by Jenny Ford in August 2018 at NM696935 from a *Betula* trunk, near Morar Lodge, VC 97 West Inverness-shire, was tentatively identified by the author as a rather gross form of *U. esperantiana* P. Clerc but was demonstrated by TLC to have only salazinic acid in the medulla, lacking the aliphatic compound bourgeanic acid which is diagnostic for that species. It was subsequently identified by Philippe Clerc as *U. perplexans* Stirt.



Fig. 4. *Usnea perplexans*, Morar collection

The most distinctive morphological feature of this shrubby species is the abundant, deeply excavate soralia without isidiomorphs and the rather irregular branches. The specimen from Scotland also has rather gnarled terminal branches like those found in *U. esperantiana*. However, unlike *U. esperantiana*, *U. perplexans* has a blackened base and, when mature, is usually larger than *U. esperantiana*, becoming subpendulous in habit. Papillae are usually numerous on main branches and the medulla is rather loose.

The medulla tests K+ yellow→red and Pd + orange-red (consalazinic and salazinic acids).

Further descriptions of *U. perplexans* Stirt. (as *U. lapponica* Vain.) can be found in Halonen (1999), Randlane et al. (2009) and Clerc (2011).

***Usnea barbata* (L.) F.H. Wigg.**

Whilst checking *Usnea* specimens at BM, Philippe Clerc found three old specimens from eastern Scotland that appeared to be conspecific with *U. barbata* (L.) F.H. Wigg. (Clerc, 2016). Two were collected by U.K. Duncan in 1958 and one by T.D.V. Swinscow in 1967 and all were found on *Larix*. Their BM barcodes are respectively BM-733832, BM-733830 and BM-733826. No specimens have been found since 1967.

A specimen collected in August 2018 by Jenny Ford at NM696935 from a *Betula* trunk, near Morar Lodge, VC 97 West Inverness-shire was, after recognition of the irregularly swollen branches and TLC result of salazinic acid as the only medullary compound, identified by the author as *U. barbata* (L.) F.H. Wigg. This identification was later confirmed by Philippe Clerc. Diagnostically, the widest sections of the thallus are wider than the basal parts and are often ridged with foveoles or transverse furrows. The branches are somewhat inflated at their widest parts, where the medulla is quite wide and lax. Note that the red colouring of exposed axis in Fig. 5 is due to the decomposition of salazinic acid and is not its natural colour.

The medulla tests K+ yellow→red and Pd + orange-red (salazinic acid).

Further descriptions of *U. barbata* (L.) F.H. Wigg. can be found in Clerc (2011) and Randlane (2009).



Fig. 5. *Usnea barbata*, Morar collection

Discussion

At present, little is known about the distribution of the above three *Usnea* species in the British Isles but it is hoped that this paper will stimulate interest in recording these species in the future.

As always, the author is willing to identify or confirm any well annotated specimens of the genus *Usnea*. Specimens must have full basal parts and should be sent to the address given below.

Acknowledgements

I am very grateful to Jenny Ford whose enduring enthusiasm for this fascinating genus has supplied the author with many interesting *Usnea* specimens and also to all other field workers who have sent in *Usnea* specimens for examination.

Many thanks to Philippe Clerc for his expert determinations and for constant support and encouragement during the author's long association with this genus.

Gratitude is also due to all the staff of the Ascus laboratory in Edinburgh, particularly Jiri Jirout, whose support and facilitation of my TLC work has enabled the author to continue his research. Thanks are also due to Brian Coppins for reviewing the paper and making helpful suggestions.

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Some *Opegrapha* species (sensu lato) from Uganda

There are currently few records of lichens belonging to the large crustose lichen genus *Opegrapha* sensu lato in East Africa although good progress has been made in understanding the flora and distribution of the area's macrolichens (Swinscow & Krog, 1988). However there has been a recent study of the related genus *Arthonia* from the Impenetrable Forest in Uganda (Frisch et al., 2014) and some work on crustose foliicolous lichens in the Democratic Republic of the Congo (van den Broeck et al., 2014). Recent studies on *Opegrapha* sensu lato from the paleotropics (Ertz, 2009), the Indian subcontinent (Siljo et al., 2018) and the Mediterranean region, including North Africa (Torrente & Egea, 1989) have greatly increased our understanding of this large genus and done much to clarify species concepts and distribution.

It therefore appeared timely for this author to report upon his own collections of the genus made between 1971 and 1995 in several parts of Uganda, further increasing our knowledge of the tropical species in a region where microlichens have been largely neglected. Despite numerous botanical expeditions to East Africa over the past 150 years, reviewed by Swinscow & Krog, 1988, few collections of this genus appear to have been made. Four *Opegrapha* species are reported from Uganda by Ertz, (2009) namely *O. dimidiata* from Elgon in 1914 (collector unknown); *O. maldiveana* and *O. ugandensis* from the Budongo Forest (Sérusiaux, 2005) and *Zwackhia* (*O.*) *viridis* from Ankole, (A. Burnet, 20th C but without date). Ertz also noted some collections made by O. Alstrup and R. Moberg in Tanzania. Most of the following collections were made in Bundibugyo District in western Uganda on an expedition from Imperial College London undertaken in 1971. This region is one of the most inaccessible parts of the country but contains one of the few remaining areas of lowland tropical rain forest in East Africa. Most sites are located within the recently established Semuliki National Park. Rainfall in this region is about 1250 mm per annum and mean annual air temperature circa 28°C (Chego et al., 2002).

Methods

Twenty two collections were made on two expeditions to Uganda in the summer of 1971 and in March 1995. Samples were collected from tree stems and branches where accessible and transferred to paper envelopes for identification. Each collection was carefully examined in the laboratory to confirm the genus and species using the criteria detailed in Torrente & Egea (1989), Ertz (2009) and Siljo et al. (2018). Additional reference was also made to the taxonomic works of Pentecost & James (2009) and Redinger (1938) covering the British Isles and Europe. For ascospores, asci and ascocarps, means of 10, 5 and 10 measurements were determined respectively. The collections currently reside at the author's address but will eventually be deposited in the Natural History Museum, London (BM).

Species details are provided in Table 1 and further described below. Where the species differs significantly from the descriptions provided by Ertz (2009) the characters in question are printed in bold within the table. Names appear according to the *Index*

Fungorum and Siljo et al. (2018) where some of the taxa have recently been transferred to the genus *Alyxoria* and *Zwackhia* but the original names are also retained.

The species

Alyxoria culmigena (Lib.) Ertz sensu lato (*Opegrapha herbarum* Mont.). On a large forest tree near Hakitengya Rest House, Semuliki National Park, Bundibugyo. Lat. 0°45'6" N. Long. 30° 3'4" E. Alt. 790m. 18th August 1971. Pentecost RE 404. Figure 1c.

This specimen was collected from rough bark in an open glade. The hymenium of this material stained I+ blue where it normally stains red-brown, although Ertz (2009) noted the reaction may be variable. Otherwise it is a good match with the type. This species was formerly known as *O. herbarum* Mont but the latter has been synonymised with the above despite the different exciple reaction with K (Siljo et al., 2018). This is unfortunate since the epithet *herbarum* has been used for many years and there should have been some support for its conservation.

Alyxoria culmigena (Lib.) Ertz sensu lato (*Opegrapha herbarum* Mont.). Uncommon on small trees in swamp forest at the edge of Lake Nabugabo, Masaka District. Lat. 0° 20' 48" S Long. 31° 51'52" E. Alt. 1150 m. 25th March 1995. Pentecost U4875. Figure 1d.

The ascospores were unusually short for this species, the minimum recorded in European specimens being around 16 µm although the characteristic perispore was often evident. The hypothecium also contained 'Atra brown' (K+ olive-green reaction), not recorded by other taxonomists. However, this species also possessed pycnidia, unusual in African material according to Ertz and the dimensions of these agree with the type.

Alyxoria varia (Pers.) Ertz & Tehler (*Opegrapha varia* Pers.). On the trunk of a sheltered roadside tree, 1.5 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0° 49'54" N. Long 30° 10' 2" E. Alt. 700m. 19th August 1971. Pentecost RE 406. Figure 1h.

The ascospores agree well with those of this species but the conidia are marginally longer than those described from Europe (6 µm as opposed to 5 µm). Their ontogeny appears to be of 'type 2' but they are described as 'type 3' by Ertz (2009). The lack of Atra brown is the only other inconsistency. A second collection from a large buttress-root tree in the same area (Pentecost RE 400) was almost identical but with longer, more septate spores (6-7) well within that accepted for the species. It was unusual in possessing several spores with elongate appendages, perhaps representing premature germination (Figures 1g, 2). These are however a regular feature of some lichen genera such as *Epigloea* and the non-lichenised ascomycete *Broomella*. A further collection on the branch of a young tree again agreed well with this species and this specimen did contain Atra brown (Pentecost RE 244-2a). The species appears to be widely distributed and fairly common in suitable habitats throughout tropical Africa.

Opegrapha aff. agelaeotera Vain. Common on roadside trees near Hakitengya Rest House, c. 2 km north of Bundibugyo, Bundibugyo District. Lat. 0°43'15" N. 30°3'14" E. Alt. 870m. 18th August 1971. Pentecost RE 409. Figure 1a.

Most of the ascospores were 3-septate but a few were 5-septate and lacking a perispore. There are no species fitting this combination in the descriptions provided by Ertz, (2009), Siljo et al.,(2018) or any of the European floras. However the author has observed similar septation 'aberrations' in the Atlantic species *O. saxigena* Tayl. which is accepted as a 3-septate species. If the same argument applies here then the above species fits the material reasonably well although the epihymenium and hypothecium do not appear to contain Atra brown.

Opegrapha aff. agelaeotera Vain. On a large tree bole by the Abruzzi Path in montane rain forest, as it ascends Rwenzori from Ibanda, Bundibugyo District. Lat. 0° 34' 40" N. Long. 30° 1'55" E. Alt. 1680m. 31st August 1971. Pentecost RE 445. Figure 1i.

The ascospores of this specimen are consistently 3-septate but they do not possess a perispore. The spores are also a little narrower than the type, otherwise this species fits well here.

Opegrapha astraea Tuck. On the branch of a young tree, 1.5 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0°45'6" N long. 30° 3'4" E. Alt. 790m. 19th August 1971. Pentecost RE 244-2b. Figure 1b.

This small specimen agrees well with descriptions but differs in several minor respects. The ascospores are significantly narrower than those of the type, did not possess a perispore, and the apothecial K reaction was negative (no Atra brown present). However this is known to be a variable species and is best placed under this name at present.

Opegrapha aff. deblockiae Ertz. Forming small thalli on branches of a sapling in an avenue 1.5 km NW of Fort Portal, Kabarole District. Lat. 0°39'24" N. Long. 30°15'40" E. Alt. 1500m. 25th July 1971. RE 25.

This specimen agrees well with the type apart from the I+ blue to red-brown reaction of the hymenium.

Opegrapha dekeselii Ertz. On the bark of *Morus lactea nyakaloma* in the Budongo Forest Reserve, Masindi District. Lat. 1°37' N. Long. 31°22'. August 1971. Collector P.S. Mackessey. RE67.

Opegrapha irosina Vain. On a large non-lactiferous tree bole in a wooded valley close to Leopard Rock, Kilembe Mines, Kasese District. Lat. 0°10'15" N. Long. 30°40'40" E. Alt. 1370 m. 12th September 1971. Pentecost RE 327. Figure 1e.

A second collection was made on the bole of a large forest tree 1.5 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0° 49'54" N. Long 30° 10' 2" E. Alt. 700m. 19th August 1971. RE413c

The first specimen differs only in having a wider ascospore (mean 6.7 µm as opposed to 3-5.5 µm in the description). Had the ascospore ontogeny been of type 1 rather than

type 2 the material would probably have been placed with *Zwackhia prosodea* (Ach.) Ertz. The difference between these two species appears to be small.

Opegrapha subdimidiata Ertz. Abundant on sheltered tree trunks in an avenue 1.5 km NW of Fort Portal, Kabarole District. Lat. 0°39'24" N. Long. 30°15'40" E. Alt. 1500m. 25th July 1971. Pentecost RE 26. Figure 1f.

The specimen agrees with the description given by Ertz (2009). This material has a variable I reaction in the hymenium, also in agreement with his observations.

Opegrapha trochodes Coppins, Berger & Ertz. On the bole of a large forest tree 1.5 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0° 49'54" N. Long 30° 10' 2" E. Alt. 700m. 19th August 1971. RE413b.

Associated with *Z. (O.) bonplandii*. The specimen agrees well with descriptions having almost circular apothecia up to 0.4mm in diameter. Bacilliform conidia 4 x 0.3 µm were present.

***Opegrapha* sp.** Scarce on the soft bark of *Senecio adnivalis* by Bujuku Lake, Rwenzori, Bundibugyo District. Lat. 0° 22'36" N. Long. 29°53' 35" E. Alt. 4000 m. 5th August, 1971. Collected by C. Cockburn. Pentecost RE 118. Figures 1j, 3.

Lichens belonging this genus were not found to be common in the upper montane zone of this range, nor of Mount Elgon.

Characters do not match closely any of the species described by Ertz (2009) nor any of the descriptions of New World species in the author's database so it may be undescribed. At least 80 corticolous species of *Opegrapha* s.l. with three-septate ascospores have been described, often on the basis of single, inadequate specimens.

Zwackhia (Opegrapha) bonplandii (Fée) Ertz. On the bole of a large forest tree 1.5 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0° 49'54" N. Long 30° 10' 2" E. Alt. 700m. 19th August 1971. Pentecost RE 411, 413a.

A further collection was made at the edge of the montane forest above Ibanda, Rwenzori Mountains, Bundibugyo District. Lat. 0° 34' 40" N. Long. 30° 1'55" E. alt. 1650m. RE 448.

All agreed well with descriptions although this species differs little from *Z. viridis*.

Zwackhia (Opegrapha) viridis (Ach.) Poetsch & Schied. Forming extended thalli on the bark of a shaded forest tree 2m above ground level tree 3 km south of Buranga Hot Springs, Semuliki National Park, Bundibugyo District. Lat. 0° 49'53" N. Long 30° 10' 2" E. Alt. 700m. 19th August 1971. RE397.

A further collection was made 2km north in similar habitat. A third collection was made in a small forest between Nabugabo and Masindi in March 1995. Pentecost 2125.

Discussion

The above list has added eleven taxa to the Ugandan lichen flora, but the collections often show deviations from the detailed descriptions in Ertz (2009) and Siljo et al. (2018). This can only reflect our incomplete knowledge of the species, despite much

recent work to clarify their delimitation. Particular inconsistencies centre around the presence or absence of a perispore and the K and I reactions of the ascomata. It is nevertheless important to record these differences so that the individual taxa can be further clarified, leading eventually to an understanding of their biogeography. Molecular methods may eventually resolve these problems but until then, it is important that collections are fully documented with their microscopic characteristics.

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Table 1. Details of some *Opegrapha* sensu lato species recorded from Uganda and described in this study. Abbreviations: Ep epihymenium; Hym hymenium; Hyp hypothecium. M Mid-elevation of ascocarps; H High elevation.

Species	<i>Alyxoria culmigena</i> 404	<i>Alyxoria culmigena</i> 4875	<i>Alyxoria varia</i> 406	<i>Opegrapha aglaeotera</i> 409	<i>O. aglaeotera</i> 445	<i>O. astraea</i>	<i>O. irosina</i>	<i>O. subdimidiata</i>	<i>O. sp.</i>
Spore septation	3	3	4-6	3-5	3	3-5	8-9	5	3
Spore ontogeny	-	-	2	-	3?	?	2	2	-
Spore dimensions μm	24 x 5.9	14.9 x 5	30x 6.3	19.9x 5.1	16.4x 3.4	18x 2.9	44x 6.7	25x5.2	18.5x 4.9
Perispore	+	+	+	-	-	-	+	+/-	-
Ascus dimensions μm	45x 14	52x 14	49x14	57x15	53x9	53x11	87x17	62x16	60x 15
Conidia dimensions μm	-	3.5 x 0.4	6 x 0.5	-	-	-	-	-	-
Ascocarp dimensions mm	0.7x 0.16	1.1x 0.17	0.56x 0.16	0.66x 0.16	0.51x0.28	0.6x0.16	0.96x0.28	1.2x0.18	0.53x 0.23
Ascocarp elevation	H	H	M	M	M	M	H	M	M
Ascocarp pruina	-	-	-	-	-	+	-	-	-
Exciple closure	+	+	+	+	+	+/-	+	+	+
Atra brown	-	Hyp +	-	-	Hyp+ Ep+	-	Hyp+	-	-
Hymenium I reactions	Hym +	-	-	Hyp+	Ep+Hyp +	-	-	Ep+Hym+Hyp +	Ep+ Hyp+
Hymenium thickness μm	55	70	50	75	85	63	85	60	70

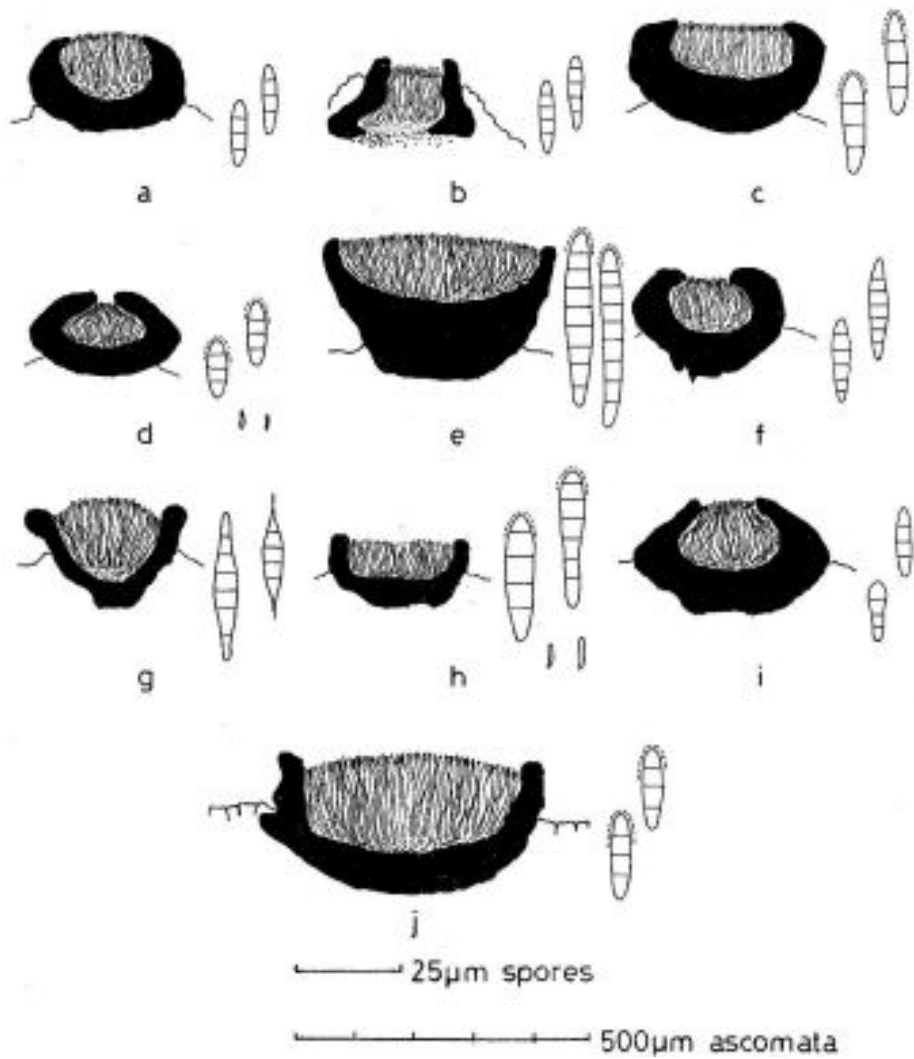


Figure 1. Ascomata sections and spores for some of the recorded taxa. a) *O. aff. ageleaotera* 409; b) *O. astraea*, c) *A. culmigena* 404, d) *A. culmigena* 4875, e) *Z. (O.) irosina*, f) *O. subdimidiata*, g) *A. varia* 400, h) *O. varia* 406, i) *O. ageleaotera* 445, j) *O. sp.* 118.



Figure 2 *Alyxoria varia* RE 400. Buranga, Semuliki National Park. Bar 1 mm.



Figure 3. *Opegrapha* sp. RE 118. Rwenzori Mountains on *Senecio adnivalis*. Bar 1 mm.

Thank you, Ray Woods

Lying in bed early on the morning of 25 March 2018 with BBC Radio 4 playing quietly into my earpiece I was privileged to hear a repeat of 'The Living World' from 2011 when Paul Evans joins Ray Woods in Snowdonia in a programme titled The Celtic Rainforest. The content of the programme struck a few personal chords with Ray taking listeners firstly into the world of 'filmy ferns' and then mentioning a lichen going by the name of Black-eyed-Susan. Not being an experienced lichenologist I had to type the common name into Google to find I was dealing with *Bunodophoron melanocarpum*, and, like David Clarke in a recent edition of the BLS Bulletin (no.122 pp 56-58), *Bunodophoron melanocarpum* at Naddle Forest Cumbria, I was inspired to go looking for it and also to do a bit of botanising.



Bunodophoron melanocarpum

Sadly, I knew little about lichens whilst working for the RSPB in 1973 on the Lake District golden eagle protection scheme at Haweswater and living right next to Naddle Forest with its recent important lichen discoveries. That year the eagles failed and, whilst holidaying on the Isle of Rum, I managed to get a job there as an estate worker, probably just as well as we had sold our house when taking on the job in the Lake District! On Rum I was fairly certain that we saw Wilson's filmy fern (*Hymenophyllum*

wilsonii), the first filmy fern Ray talks about in the programme and I wondered if this fern had been found in Strathspey where I now reside.



Wilson's Filmy Fern (above) and *Sphaerophorus globosus* (below)



Help from the BSBI informed me that there had been a recent find on a rocky hillside in Inshriach Forest near Aviemore plus a couple of old records from the early 1970s from near Loch Ness. On the day of the broadcast I found that *Bunodophoron melanocarpum* had been found in woodland near Dava Moor about 20 miles away; I failed to re-find it but did record common species like *Dibaeis baeomyces*, *Ramalina fraxinea* and *Mycoblastus sanguinarius*, the less common *Protopannaria pezizoides* along with my first frog spawn of the year. The next day was an outing to try and re-find Wilson's filmy fern in Inshriach Forest NNR last seen in 2012 and, after much scrambling over large rocks, it was found on several boulders close to the original location. Also present on the rocks were *Sphaerophorus globosus*, *Rhizocarpon geographicum* and interrupted clubmoss (*Lycopodium annotinum*).

A few days later I was off to one of the best sites locally for Lobarian lichens, the Pass of Inverfarigaig, adjacent to Loch Ness. Here, trees hang thick with Lobarian species; *Lobaria virens*, *Lobaria pulmonaria*, *Lobaria scrobiculata*, *Degelia plumbea*, *Sticta sylvatica*, *Pannaria conoplea*, *Pannaria rubiginosa*, *Nephroma laevigatum*, *Nephroma parile*, and *Parmeliella triptophylla*, *Peltigera britannica*, an ancient elm with *Gyalecta ulmi* and *Bacidia incompta*, and several broadleaves with *Fuscopannaria ignobilis*. On rocks in the river, I also found *Dermatocarpon luridum*. The filmy fern though hadn't been seen here since July 1971 and well before GPS aided the precise location. Its location had been given at monad level (1km square) but with a little guidance "above memorial stone". The higher rocks didn't look suitable, so more time was given to the damper ones closer to the road and, on one narrow ledge, a few tiny fronds of what looked like the filmy fern were found, one group thankfully, with sporangia confirming this was the fern.



Alectoria sarmentosa

A couple of weeks later I had the chance to visit yet another important lichens site, Creag nan Clag to the east of Loch Ness, the second of the Wilson's filmy fern sites but also a location where I had seen *Alectoria sarmentosa* subsp. *sarmentosa* several years ago. The wee fern was last recorded here in August 1975 so once the crag-face was reached a careful search started of the main gully, the BSBI record stating that this was the area where it had been found. *Collema flaccidum*, *Leptogium gelatinosum*, *Polychidium muscicola* and *Sphaerophorus fragilis* were recorded during the climb up the gully along with a nice mixture of plants despite this being early in the growing season (16 April). On one of the slightly damper ledges the now familiar filmy fern was found, and a wider search revealed 3 small populations several with good numbers of sporangia. At the bottom of the gully were beautiful hanging populations of *Alectoria sarmentosa*, occupying a relatively small section of the conglomerate cliff.

Large conglomerate rocks had populations of *Umbilicaria polyrrhiza* and returning to the rock-face a small population of *Peltigera britannica* lead me to a tiny patch of *Gyalecta ulmi*, a lichen I had been advised to look out for. Small areas of the rock-face were bright purple due to the early flowering purple saxifrage (*Saxifraga oppositifolia*) growing next to non-flowering cushions of mossy saxifrage (*Saxifraga hypnoides*). *Leptogium palmatum* was the last lichen entry in the notebook as the freezing wind was telling me it was time to retreat back to the car being slightly under-dressed in what I thought was going to be a warmer spring day.



Purple Saxifrage

Making a few more enquiries via Brian Coppins about the *Bunodophoron melanocarpum* record in woodland near Dava Moor I found that there had been an error with the grid reference where NH9642 should have been NM9642 (Barcaldine) just over 100 miles away, not that it mattered because Wilson's filmy fern had been re-found and some interesting lichen records made along the way.

The repeat edition of The Living World is well worth listening to for inspiration and also for the problem's facings some of the rarer lichen species that Ray talks about. <https://www.bbc.co.uk/programmes/b09wpmvg> (October 2018).

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Mary's green *Peltigera*

During a survey of a particularly rich Lobarion community at Weekpark Plantation between Halwill Junction and Highampton in North Devon, Mary Breeds was excited by a bright green *Peltigera* at the foot of a *Salix*. Hearing her excited cries at believing she had located the green algal morph of *Sticta canariensis*, Maxine Putnam and Nicola Bacciu dashed across.....



Mary's discovery Photo © N.G. Bacciu

Despite the extraordinary colour, the underside of the small thallus (3x2cms) revealed relatively simple rhizines suggesting *Peltigera*. No cephalodia were present. This thallus was surrounded by mature, 'normal' *Peltigera praetextata*. Later sectioning of the green thallus showed a thinner cortex, a much brighter green photobiont and an absence of dark brown inclusions in the lower areas of the photobiont layer. A similar thallus has been reported from Wales (pers. comm. D. Lamacraft).

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An unusual site for *Peltigera leucophlebia* in the eastern Lake District

Cumbria has by far the greatest number of localities in England and Wales for this northern/western lichen, where it occupies a quite a wide range of habitats. However, my attention was recently drawn to a site for this species on the RSPB's Haweswater Reserve which was distinctly unusual. The site is on the east side of the Haweswater valley, an open fellside situation, close to the splendid deep wooded ravine of Guerness



Gill, NY483132. What is surprising about the site is that it shows no obvious signs of the base-richness that this lichen seems normally to prefer. The country rocks hereabouts seem typical of the area, which is open fellside, dominated by bracken with heather, bilberry, juniper and even small birch seedlings. The bryophytes and crustose lichens are also typical of this habitat. The only possible exception to this suite of 'acidophiles' is Wild Thyme (*Thymus polytrichus*), which I find to be an almost constant associate of the lichen.

At this particular location, which otherwise seems unremarkable, the lichen has some quite extensive patches on flat rocks sloping gently downslope, completely exposed to a westerly aspect on the hillside at 280 m a.s.l. It occurs at the edge of the thin turf around the bare rock exposures and seems also to follow any small surface cracks. At the time of my visit there had been little rainfall for weeks and many thalli



were clearly in a desiccated condition. The species must endure even more challenging conditions on warm summer days when constant insolation will cause the rock to heat up. Equally, it will be periodically flushed by surface water in this high rainfall area. The images show the association with Thyme, and the general aspect of the colony, with main patches of thalli arrowed.

I am grateful to the Reserve Manager, Lee Schofield, for this interesting find.

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Folies Lichenaires – surveying lichens at Painshill Park, Surrey



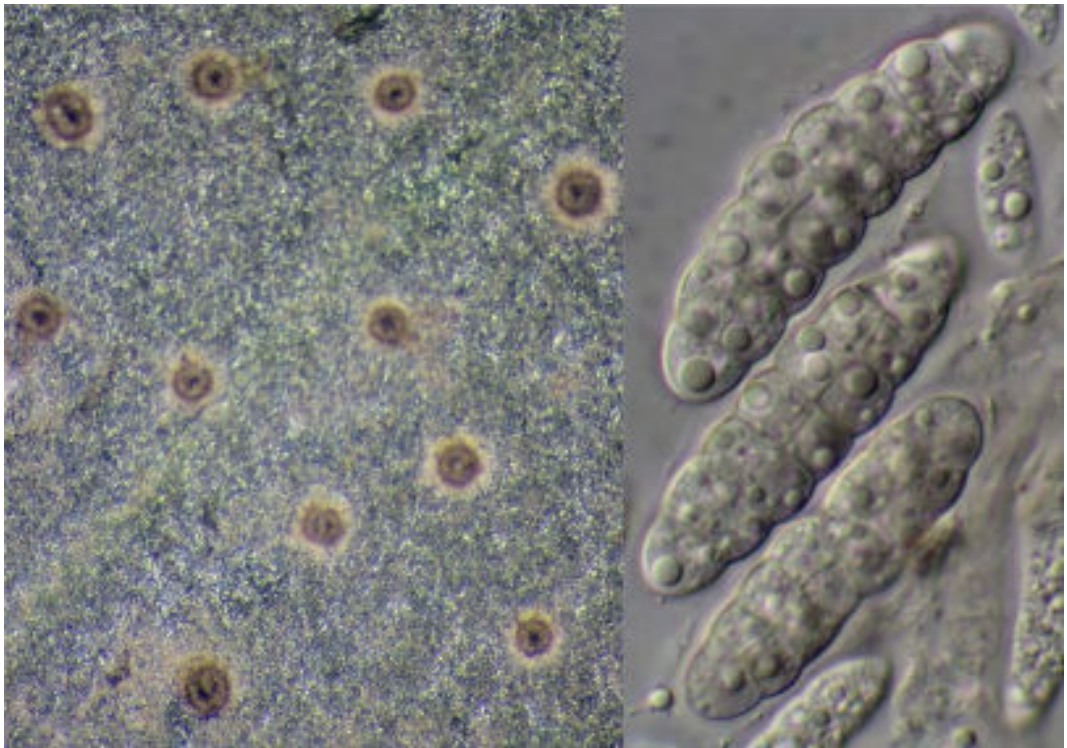
The lake at Painshill, with the Gothic Temple in the background. Image © Judith Allinson.

The day after each AGM, the BLS lets its hair down with a day-long field meeting. In 2019, the event took place at Painshill Park in Surrey, a Grade 1-listed eighteenth century landscape park that has now been restored to close to its original glory. The Park was established by the Honourable Charles Hamilton, 9th son and 14th child of the 6th Earl of Abercorn – who clearly wasn't short of a bob or two. As well as lakes and trees, the park houses a series of amazing follies, originally built for the entertainment of the great and the good, and now of lichenologists (among others). The follies include a Turkish Tent, a Gothic Temple, a Ruined Abbey, a Chinese Bridge, an extraordinary Crystal Grotto and even a Hermitage (Hamilton actually employed a hermit to grunt at genteel visitors).

Painshill Park is situated close to the M25 orbital motorway and one of the major radial routes in and out of London, and part of the park is currently threatened by a planned road widening scheme. A survey was therefore opportune, to establish whether the road scheme had implications for lichen conservation. The park staff were not aware of any earlier lichen work, and a quick scan of historical records from the

park in the BLS database revealed a grand total of one lichen record (*Cladonia chlorophaea*). We were therefore confident of adding noticeably to the list...

A multi-talented and multi-national group of lichenologists took part: Judith Allinson, André Aptroot, Graham Boswell, Paul Cannon, Andy Cross, Damien Ertz, Fay Newbery, Steve Price, Neil Sanderson, Maaïke Vervoort and Becky Yahr (who always brings up the rear in alphabetical lists). We faced the usual distraction challenges of lichens on the trees in the car park (including nice thalli of *Punctelia borrieri* and *P. subrudecta* next to each other for comparison), and the tea shop by the entrance, and soon got stuck into recording. The park has numerous trees dating back to its establishment 250 years or so ago, but no truly ancient specimens. Even so, we recorded a few species such as *Cresponea premnea*, *Lecanographa lyncea* and *Ochrolechia arborea* that demonstrated a degree of ecological continuity.



Perithecia (left) and ascospores (right) of *Phylloblastia* cf. *bielczykiae* on a holly leaf

Foliicolous lichens are incredibly diverse in the tropics, but we have very few in the UK. However, we found excellent colonies of a species of *Phylloblastia* on the long-lived evergreen leaves of an ornamental *Ilex*. It belonged to a species that has been recorded several times from southern England as *Phylloblastia* cf. *bielczykiae* (challenging to pronounce unless you're Polish). The uncertainty derives from the fact that the species was originally described from Bolivia and has apparently not been

recorded elsewhere, combined with very large variation in ascospore size and septation that could be linked to degree of maturity.

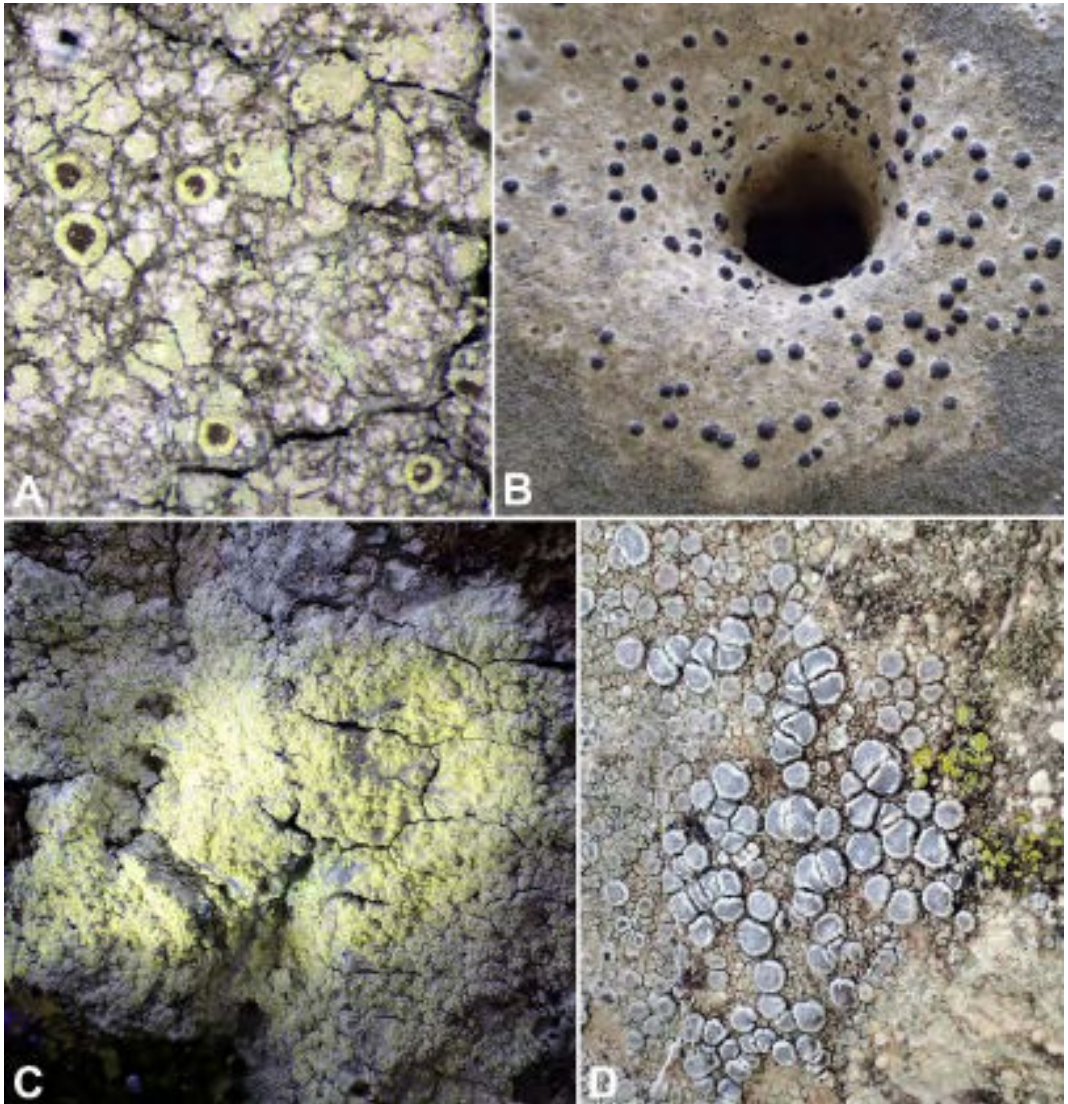


Surveying lichens on the limestone arches. Image © Damien Ertz

Close to the Crystal Grotto are a series of dinosaur skeleton-like arches made from water-worn limestone, and these added a substantial number of species to the list. Species such as *Acrocordia salweyi*, *Lecanora crenulata* and *Verrucaria caerulea* were admired and photographed, and no fewer than six species of *Caloplaca*. Further on round the lake, fertile populations of *Lecanora barkmaniana* were noted, the apothecia with pale yellow sorellate edges. The *Ochrolechia arborea* was confirmed with Neil Sanderson's industrial strength UV torch.

Most of us didn't get to the far end of the park (potentially most threatened by the road widening) and those that did found a relatively poor lichen assemblage, but *Arthonia cinnabarina* was recorded which is unusual for the county. Split chestnut palings added a few more names to the list, including *Lecanora aitema*, *L. pulicaris* with its characteristic orange-red Pd reaction, and *Protoparmelia oleagina*.

Cladonia species were thin on the ground (most of the habitat was not very suitable) but *C. chlorophaea* s.l. was re-reported, with at least some of the colonies referable to the segregate *C. cryptochlorophaea*, previously recorded in Surrey only from Chobham Common.



A. *Lecanora barkmaniana* with its pale yellow soredia. B. *Acrocordia salweyi* going down the plughole. C. The bright yellow UV reaction shown by *Ochrolechia arborea*. D. *Lecanora crenulata* on the limestone arches.

The final list includes 151 species, a substantial increase on the one previously reported. None of them has sufficient conservation value individually to influence a major planning decision, but we demonstrated that Painshill does have significant lichen value.

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Species list for Painshill Park (Codes as in the BLS recording spreadsheet)

Taxon name	Status	Substrate	Small scale habitats
<i>Acrocordia conoidea</i>	LC	Sax	SLm,SBO
<i>Acrocordia salweyi</i>	LC	Sax	SLm,SBO
<i>Amandinea punctata</i>	LC	Cort, Lig	CQ
<i>Anisomeridium biforme</i>	LC	Cort	CFx
<i>Anisomeridium polypori</i>	LC	Cort	CFx
<i>Arthonia cinnabarina</i>	LC	Cort	CSb
<i>Arthonia didyma</i>	LC	Cort	CSb
<i>Arthonia parietinaria</i>	NE NS	Lic	Z1530
<i>Arthonia radiata</i>	LC	Cort	CQ, Clx, CCb, CSb
<i>Arthonia spadicea</i>	LC	Cort	CFg
<i>Aspicilia contorta subsp. contorta</i>	LC	Sax	SB,SBo
<i>Athelia arachnoidea</i>	LC	Lic	
<i>Bacidia adastrata</i>	LC NS	Cort	CQ
<i>Bacidia egenula</i>	LC NS	Sax	SS,SBo
<i>Bacidia rubella</i>	LC	Cort	CQ
<i>Bacidia viridifarinosa</i>	LC	Cort	CPI
<i>Bilimbia sabuletorum</i>	LC	Sax	SB,SBo
<i>Buellia griseovirens</i>	LC	Lig	PFr
<i>Buellia ocellata</i>	LC	Sax	SS,SBo
<i>Caloplaca citrina s. str.</i>	LC	Sax	SLm,SBO
<i>Caloplaca flavescens</i>	LC	Sax	SLm,SBO
<i>Caloplaca flavocitrina</i>	LC	Cort	CQ
<i>Caloplaca obscurella</i>	LC	Cort	CQ
<i>Candelaria concolor</i>	LC	Cort	CQ,CFx
<i>Candelariella reflexa</i>	LC	Cort+Sax	CQ,CFx, SS,SBo
<i>Candelariella vitellina f. vitellina</i>	LC	Sax	SS,SBo

Taxon name	Status	Substrate	Small scale habitats
<i>Catillaria nigroclavata</i>	LC NS	Cort	CFx
<i>Chaenotheca ferruginea</i>	LC	Cort	CQ
<i>Chaenotheca hispidula</i>	LC NS	Cort	CPp
<i>Chaenotheca trichialis</i>	LC	Cort	CQ
<i>Chaenothecopsis nigra</i>	LC NS	Lig	LQ
<i>Chrysothrix flavovirens</i>	LC	Lig	LQ
<i>Cladonia coniocraea</i>	LC	Lig, Terr	LTs
<i>Cladonia cryptochlorophaea</i>	LC NS	Terr	
<i>Cladonia fimbriata</i>	LC	Cort	CPp
<i>Cladonia humilis</i>	LC	Terr	
<i>Cladonia macilentata</i>	LC	Lig	LTs
<i>Cladonia parasitica</i>	LC	Lig	LTs
<i>Cladonia polydactyla var. polydactyla</i>	LC	Lig	LTs
<i>Cladonia ramulosa</i>	LC	Lig	LTs
<i>Cliostomum griffithii</i>	LC	Cort	CFx, CQ
<i>Collema crispum var. crispum</i>	LC	Sax	SB,SBo
<i>Cresponea premnea</i>	LC Sc IR	Cort	CQ
<i>Dendrographa decolorans</i>	LC	Cort	CQ
<i>Diploicia canescens</i>	LC	Cort	CFx
<i>Enterographa crassa</i>	LC	Cort	CFg,CPI, CFx
<i>Erythricium aurantiacum</i>	LC	Lic	Z1112,Z1120
<i>Evernia prunastri</i>	LC	Cort	CQ
<i>Flavoparmelia caperata</i>	LC	Cort, Lig	CQ, PFr
<i>Fuscidea lightfootii</i>	LC	Cort	CAp
<i>Halecania viridescens</i>	LC NS	Cort	CFx, CQ
<i>Heterocephalacria bachmannii</i>	LC NR	Lic	Z0375

Taxon name	Status	Substrate	Small scale habitats
<i>Hyperphyscia adglutinata</i>	LC	Cort	CQ
<i>Hypogymnia physodes</i>	LC	Lig	PFR
<i>Hypotrachyna afrorevoluta</i>	LC	Cort	CQ
<i>Hypotrachyna revoluta s. str.</i>	LC	Cort	CQ, CFx
<i>Illosporopsis christiansenii</i>	LC NS	Lic	Z1120
<i>Lecania naegelii</i>	LC	Cort	CFx
<i>Lecanographa lyncea</i>	LC Sc IR	Cort	CQ
<i>Lecanora aitema</i>	LC	Lig	WT
<i>Lecanora albescens</i>	LC	Sax	SLm, SBo
<i>Lecanora barkmaniana</i>	LC NS	Cort	CFx, CQ
<i>Lecanora campestris subsp. campestris</i>	LC	Cort+ Sax	CQ, SS, SBo
<i>Lecanora carpinea</i>	LC	Cort	CQ
<i>Lecanora compallens</i>	LC NS	Cort, Lig	CQ, CFg, PFR, WT
<i>Lecanora confusa</i>	LC	Cort	CQ
<i>Lecanora conizaeoides f. conizaeoides</i>	LC	Lig	PFR
<i>Lecanora crenulata</i>	LC	Sax	SLm, SBo
<i>Lecanora expallens</i>	LC	Cort	CQ
<i>Lecanora hagenii</i>	NE	Cort	CQ
<i>Lecanora polytropa</i>	LC	Sax, Lig	SS, SBo, PFR
<i>Lecanora pulicaris</i>	LC	Lig	WT
<i>Lecanora symmicta</i>	LC	Cort, Lig	CTw, WT
<i>Lecidella elaeochroma f. elaeochroma</i>	LC	Cort	CQ, CFx, CFg
<i>Lecidella scabra</i>	LC	Sax	SS, SBo
<i>Lecidella stigmatea</i>	LC	Sax	SB
<i>Lepraria finkii</i>	LC	Sax, Cort	SB, SBo, CFx
<i>Lepraria incana s. str.</i>	LC	Cort+ Sax	CQ, SS, SBo
<i>Lepraria vouauxii</i>	LC	Sax	SB
<i>Melanelixia glabrata</i>	LC	Cort	CFx, CFg, CQ, CCb

Taxon name	Status	Substrate	Small scale habitats
<i>Melanelixia subaurifera</i>	LC	Cort	CFx, CQ
<i>Melanohalea elegantula</i>	LC	Cort	CQ
<i>Micarea denigrata</i>	LC	Lig	PFR
<i>Micarea viridileprosa</i>	LC NS	Lig	
<i>Milospium graphideorum</i>	LC NS	Lic	Z0600, Q
<i>Normandina pulchella</i>	LC L*	Cort	CFx
<i>Ochrolechia arborea</i>	NT NR	Cort	CFx
<i>Opegrapha atra</i>	LC	Cort	CFx
<i>Opegrapha multipuncta</i>	LC	Cort	CQ
<i>Opegrapha rufescens</i>	LC	Cort	CFx
<i>Opegrapha vermicellifera</i>	LC	Cort	CPI, CQ, CFg
<i>Opegrapha viridipruinosa</i>	LC NS	Cort	CFx
<i>Opegrapha vulgata</i>	LC	Cort	CPI
<i>Parmelia saxatilis s. lat.</i>	LC	Cort, Lig	CQ, CFx, PFR
<i>Parmelia sulcata</i>	LC	Cort, Lig	CFx, CQ, CFg, PFR
<i>Parmeliopsis ambigua</i>	LC	Lig	PFR
<i>Parmotrema perlatum</i>	LC	Cort+ Sax	CFx, SS, SBo, CQ, CPp
<i>Pertusaria coccodes</i>	LC	Cort	CFx
<i>Pertusaria hymenea</i>	LC	Cort	CFx, CSb
<i>Phaeophyscia orbicularis</i>	LC	Cort+ Sax	CFx, SS, SBo, CQ
<i>Phlyctis argena</i>	LC	Cort	CQ, CFx
<i>Phylloblastia bielczykiae</i>	NE	Fol	FIX
<i>Physcia adscendens</i>	LC	Cort	CQ
<i>Physcia aipolia</i>	LC	Cort	CQ
<i>Physcia tenella</i>	LC	Cort	CFx, CQ
<i>Placynthiella icmalea</i>	LC	Lig	PFR, LQ, WT
<i>Polysporina simplex</i>	LC	Sax	SS, SBo
<i>Porina aenea</i>	LC	Cort	CFx
<i>Porina byssochila</i>	DD NR Sc	Cort	CPI

Taxon name	Status	Substrate	Small scale habitats
<i>Porpidia soledizodes</i>	LC	Sax	SS,SBo
<i>Porpidia tuberculosa</i>	LC	Sax	SS,SBo
<i>Protoblastenia rupestris</i>	LC	Sax	SB,SBo
<i>Protoparmelia oleagina</i>	LC NS	Lig	PFr, WT
<i>Punctelia borrieri</i>	LC Sc	Cort	CFx
<i>Punctelia jeckeri</i>	LC	Cort+ Lig	CFg, PFr
<i>Punctelia subrudecta s. str.</i>	LC	Cort+ Lig	CQ,CFx, CFg, PFr
<i>Pyrrhospora querneae</i>	LC	Cort	CQ
<i>Ramalina farinacea</i>	LC	Cort	CQ, CFx
<i>Rhizocarpon reductum</i>	LC	Sax	SS,SBo
<i>Rinodina oleae</i>	LC	Cort	CQ
<i>Sarcogyne regularis</i>	LC	Sax	SB,SBo
<i>Scoliciosporum umbrinum</i>	LC	Sax	SS,SBo
<i>Trapeliopsis flexuosa</i>	LC	Lig	PFr, LQ, WT
<i>Verrucaria baldensis</i>	LC	Sax	SLm,SBo
<i>Verrucaria elaeina</i>	LC	Sax	SS,SBo, SB
<i>Verrucaria nigrescens f. nigrescens</i>	LC	Sax	SLm,SBo
<i>Verrucaria viridula</i>	LC	Sax	SLm,SBo, SB
<i>Xanthoria parietina</i>	LC	Cort+ Sax	CQ,CFx, SB

Summer Field Meeting in the English Lake District

July 2018

The summer field meeting took place between Sunday 22nd July and Sunday 29th July with thirty-seven people in attendance. The Glaramara Hotel near Seatoller in Borrowdale served as the venue. The hotel provided comfortable accommodation and a conference room suitable for microscopy and slideshows. Though July is not considered a good month for fieldwork in the Lakes, the group was blessed with exceptionally fine weather for most of the week. Streams and lakes exhibited unusually low water levels, which provided plenty of opportunity to examine the amphibious/aquatic species.



The group assembled outside the Glaramara Hotel

Left to right standing: Pat Cavanagh; Aniya Barker; Dave Lamacraft; Paul Cannon; Les Knight; Nigel Chadwick; Jeremy Atkinson; John Jones; Frank Burghause; Keith Cavanagh; Steve Price; Neil Sanderson; Judith Allinson; Janet Simkin; Heather Colls; Nerys Jones; Sue Knight; Heather Paul; Annelie Burghause; Moselle Singh; Doug McCutcheon; Gothamie Weerakoon

Kneeling and seated: Andy Cross; Ginnie Copsey; Paula Shipway; Eluned Smith; Juliet Bailey; Allan Pentecost (Leader); Pat Wolseley; Holger Thus.

Not present for photo: Nicola Bacciu; Matt Prince; April Windle; David Clarke; Mike Cruse; Ivan Day; Kath Tonge.

Monday 23rd July. Stonethwaite Woods and the Graphite Mines, Borrowdale.

Stonethwaite Woods have developed over screes and cliffs of andesite lava and are quite extensive but the upper more difficult sections remain largely unexplored. The woods are situated on the slopes of High Knott overlooking the village of Stonethwaite, occurring on a steep north-east facing slope, much of which is inaccessible without climbing equipment. The party split into several groups, one of which examined some of the higher level woodland below Hanging Haystack (NY264131) and another explored some ash pollards west of the village on the lower slopes around NY261136. Access proved difficult on the lower slopes as well, and the party ended up carefully treading between the well-tended courgettes of a private garden in order to access the area of interest. This group, led by Ivan Day, searched for the ash pollards tagged and surveyed by him thirty years before. Though once carrying a reasonably well-developed Lobarion community, many of the trees no longer support the same species of interest. A couple of trees found higher on the slope had *Pannaria conoplea*, *Sticta ciliata* and *Mycobilimbia epixanthoides*.



Ivan Day working through Stonethwaite Woods in Borrowdale

In the afternoon, the party walked down to the famous graphite mines situated above the village of Seathwaite (approx. NY 232122). The mines worked 'pipes' of the mineral situated along a NW-SE trending sliver of basalt disturbed by a fault. The geology here is complex, but the mine spoil situated high on the hillside was easy to identify; access, however, proved more difficult due to the steep ground, dense bracken, and deteriorating weather conditions. Perseverance eventually paid off and a reasonable collection was made from the spoil, which contained much altered basalt, gangue quartz and calcite among small fragments of graphite. The graphite itself appeared to be free of any lichen colonisation, although veins of calcite supported some typical limestone species such as *Protoblastenia rupestris*. The basaltic spoil was colonised heavily by several species of *Porpidia*, *Stereocaulon* and *Placopsis lambii*. Sue and Les Knight climbed to the upper levels where they were intrigued by a lone 18th century gravestone and a strong draught issuing from one of the pipes. They also managed to make a good collection from one of the drystone walls. Several groups concentrated on other areas nearby and one led by Neil Sanderson found a rich microflora on hazel.

Tuesday 24th July. Derwent Water ramble.

The original plan to walk around the perimeter of the lake proved over-ambitious given the richness of the flora instigating multiple unscheduled stops. One group started from the Lodore Hotel whence transported by bus and began the walk across the Derwent Water marshes west towards Great Bay. Nearby is one of the largest stands of *Myrica gale* in the valley and some time was spent looking for *Mycoglaena myrica*, which was soon found on the older stems. The scattered hawthorn and ash nearby yielded a good number of common species including *Ramalina fastigiata*, which is surprisingly scarce in Borrowdale. The group moved on to examine the lake foreshore at the northern end of Myrtle Bay 35/256193 where a good deal of shore was exposed owing to the drought. A fairly rich flora was found in the supralittoral zone with much *Dermatocarpon luridum*, a range of pyrenocarps including *Staurothele fissa* plus much *Porpidia rugosa*. The lower shore had abundant *Hymenelia lacustris* mixed with *Ephebe hispidula* and *E. lanata*. The party was slow to leave and eventually made their way through mixed woodland to Brandlehow Bay where a brief stop was made to examine copper mine spoil. The party then moved on towards the second shore site just south of Withesike Bay NY 256200. The shore here was similar to that at Myrtle Bay, both having small exposed outcrops of Skiddaw Slates and exhibiting a similar flora, including *Verrucaria andesiatica*.

The group then proceeded north along the coastal path to the southern headland of Otterfield Bay, having first stopped at the landing stage 200m south. The stage offered a good view of Otter Island upon which large clumps of a *Cladonia* (probably *C. portentosa*) were seen with Ginnie Copey's binoculars. Mature oaks along the path to the headland supported a good flora including large patches of *Pertusaria flavida*. From the headland the party proceeded west towards Haws End Outdoor Centre then on to The Park below Stub Hill. This small area of parkland sported a few large oaks, one of which had a rich flora including much *Lobaria amplissima* with *Collema furfuraceum*, *Catinaria atropurpurea*, *Gyalecta truncigena* and *Thelopsis rubella*. This tree

has been known for some time and the party noted that although the *Lobaria* appeared healthy, it was not fertile and cephalodia were hard to find. Another brief stop was made at the Langholme tea-house where a dry stone wall was examined and revealed *Opegrapha lithyriga*, while a stone gate post was well covered with *Verrucaria elaeina*. The next planned stop—a lamprophyre outcrop on the shore at Galemire Bay—had to be abandoned owing to access problems. The party continued instead towards the Portinscale road at Derwent Bank where a fallen tree was covered in *Evernia prunastri*, some thalli of which were fertile. The final section of the walk into Keswick was uneventful and a brisk pace was made to Booths car park and bus station. The plan to walk back down the east side of the lake to examine Frairs Crag had to be abandoned; however the open-top bus back to the hotel provided an opportunity to examine the tree canopy at bus stops. This did not add any new records, but the Great Wood *Lobarias* were easily spotted and it provided some amusement for the other passengers. The same day a small group drove south to visit the Coniston copper mines, adding several further species to the day's finds.

In the evening, Les Knight gave a presentation of the applications of GIS to lichen mapping using the latest free software. He showed how a large amount of environmental information can be added digitally to lichen maps making this an impressive and memorable talk.

Wednesday 25th July. Honister Pass, Grey Knotts and Fleetwith Pike.

A good day was spent in the Lakeland fells blessed with fine weather. The party met at the Honister Quarry car park for the usual health and safety talk and to inform the quarry manager of our arrival. The party split into several groups, exploring the area close to the quarry and several places further afield including Grey Knotts (697m) about 1 km to the south-west and Fleetwith Pike (648 m) 2 km to the west.

One group made its way up to the waterfall 200 m to the SSW (NY 224134) and true to form, it took the best part of the morning to reach it, the party having found plenty of interest on the way. The small stream had cut a modest ravine below the fall and had been formerly dammed as part of quarrying operations, exposing a considerable amount of weathered concrete of some lichenological interest. The stream itself was too rubbly and unstable to support much interest, but the small boulders and outcrops of andesite on the sides were of interest. The waterfall was eventually reached at lunchtime and the group sought shade under the large andesite cliff over which the water plunged.

In the afternoon, the party ascended to the top of the falls via a steep slope to the west where the cliffs were examined for some time. Thereafter, further interest was found in a series of ravines and cliffs along the path of the stream, all in andesite. These included *Ainoa mooreana* spotted in several places by Nigel Chadwick. Some rhyolite boulders were also examined where they had descended from the higher ground. These contained a typical upland flora including *Umbilicaria cylindrica*, a species uncommon on the Lakeland andesites. On returning, some of us decided to walk back down the pass to the hotel. Passing the Youth Hostel, small patches of *Xanthoria elegans* were noted on the cement rendering, a surprisingly uncommon lichen in the Lake District.

In the meantime, Janet Simkin undertook a vain search for *Cornicularia normoerica* which she had previously found on an outcrop close to the top of the pass.

Thursday 26th July. Mosedale gabbros and microgranites.

This was a short day in the field to allow further microscopy time back at the hotel. The party drove to Mosedale in a range of fells behind Skiddaw which dominated the view from Keswick to the north. It is little visited but contains large areas of open moorlands and is unique in England for its outcrops of gabbro. Our first stop was just outside Mosedale village below the classic gabbro exposure of Black Crag NY356326. We examined this area of east-facing cliffs for some time since there is little information available on their lichen flora. Before we started searching, Les Knight gave us an excellent introduction to the geology of the area, explaining how the gabbros formed at the base of a magma chamber with granites at the top. After cooling it was gradually tilted into its present position. The cliffs were not easy to access and the exceptionally hot weather was not ideal for collecting. Nevertheless, a good many samples were gathered, despite the toughness of the rock. Gabbro contains little if any quartz and a substantial proportion of the calcium feldspar anorthite, but the density of the material only allows for slow weathering so there was little to no trace of a base-rich flora here. Some members went off to visit the Apronful of Stones about 200m to the north where a similar flora was found and another group went off to investigate a small abandoned copper mine.

After an hour's toil, the party moved further north along the same intrusion to a car park at NY352342 close to a working quarry and some large screes on the eastern end of Carrock Fell. At this point, we were sampling rock higher in the magma chamber and of a granitic composition. There were no exposures within easy reach but plenty of large boulders among the scree that yielded a good range of upland species including *Cornicularia normoerica*, *Ophioparma ventosa* and *Ochrolechia tartarea*. Yellow *Rhizocarpons* and *Fuscideas* were abundant among the crusts, and it was pointed out that most of the former (*R. geographicum* agg.) were sterile. To provide a better understanding of these two formations, six 0.06 m² quadrats were thrown onto each of the rock types and the species cover examined and compared. It is important in this kind of work to ensure that influence from bird excreta and excess shade or moisture is avoided as these can mask differences in rock composition. To this end boulders were sampled with a slope less than 30°, that were between 0.3-0.7 m above ground level and were not overshadowed or directly connected to other rocks. The results are shown in Table 1 which includes bryophytes for completeness. Large differences are apparent between the rock types. The granites were slightly more diverse in species (30) than the gabbros (23) but only twelve species were common to both out of a total of 40. The gabbros were dominated by *Cladonia subcervicornis*, *Stereocaulon vesuvianum* and the bryophytes *Andreaea rothii* and *Racomitrium lanuginosum*. Often associated with the *Andreaea* were *Lepraria borealis* and *Micarea leprosula*. The granites were most frequently colonised by *Fuscidea lygaea* and *Rhizocarpon geographicum* agg. plus several yellow *Lecanoras* and grey *Porpidias*. A principal components analysis shows a clear distinction between the two communities (Fig. 1).

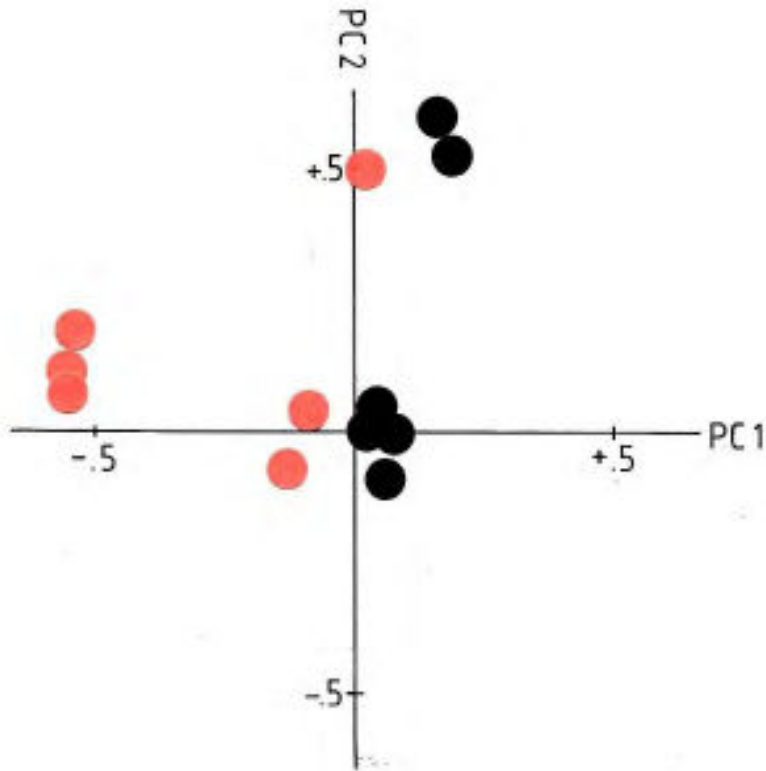


Fig 1. A principal components analysis of the gabbro (black) and granite (red) communities. Rare species removed from analysis.

Table 1. Gabbro (GA) and microgranite (GR) percent cover in six quadrants

Quadrat	Gabbro						Granite						GR ave	
	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA ave	GR 1	GR 2	GR 3	GR 4	GR 5		GR 6
Slope (degrees)		20		28	17			9	5	13	4	15		
Aspect (degrees)		80		270	90			10	70	50	90	35		
Height above ground m	0.6	0.4	0.5	0.5	0.6	0.7		0.45	0.6	0.5	0.4	0.4	0.3	
<i>Aspicilia cinerea</i>	0.5			0.5	0.5		0.25		0.5				2	0.4
<i>Buellia aethalea</i>								0.5						0.08
<i>Cladonia diversa</i> agg.		0.5	0.5				0.17							
<i>Cladonia subcervicornis</i>	0.5	20	1	4		0.5	4.3		15					2.5
<i>Diploschistes scruposus</i>				0.5			0.08							

Quadrat	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA ave	GR 1	GR 2	GR 3	GR 4	GR 5	GR 6	GR ave
<i>Fuscidea cyathoides</i>									0.5			5		0.9
<i>Fuscidea lygaea</i>								1	5	20	5		10	6.8
<i>Lecanora intricata</i>								1			0.5		0.5	0.3
<i>Lecanora polytropa</i>								0.5						0.08
<i>Lecanora soralifera</i>											8			1.3
<i>Lecidea fuscoatra</i>										8				1.3
<i>Lecidea lactea</i>								6						1
<i>Lecidea plana</i>										1				0.17
<i>Lepraria borealis</i>	0.5	0.5		0.5	8	0.5	1.7					0.5		0.08
<i>Micarea leprosula</i>	0.5	4		0.5	0.5	0.5	1					0.5		0.08
<i>Micarea lignaria</i>						0.5	0.08							
<i>Miriquidica leucophaea</i>	0.5						0.08				1	5	1	1.2
<i>Parmelia omphalodes</i>		0.5					0.08							
<i>Pertusaria corallina</i>		1		0.5	2		0.6							
<i>Placopsis lambii</i>								0.5						0.08
<i>Porpidia cinereoatra</i>	8				1		1.5					0.5		0.08
<i>Porpidia macrocarpa</i>						15	2.5					0.5		0.08
<i>Porpidia soredizodes</i>											0.5			0.08
<i>Porpidia tuberculosa</i>		1					0.17			1	20			3.5
<i>Rhizocarpon geographicum</i> agg.	2	0.5	0.5		3		1	20	0.5		0.5	1	5	4.5
<i>Rhizocarpon infernulum</i>	0.5						0.08					1		0.17
<i>Rhizocarpon reductum</i>											15			2.5
<i>Schaereria fuscocinerea</i>													2	0.3
<i>Sphaerophorus fragilis</i>	0.5						0.08							
<i>Stereocaulon evolutum</i>	0.5						0.08							
<i>Stereocaulon vesuvianum</i>	12	1		1		0.5	2.4				2	1	0.5	0.6
<i>Tephromela atra</i>								4						0.7
<i>Trapelia coarctata</i>		0.5	1			0.5	0.3		1					0.16
<i>Trapelia glebulosa</i>										1				0.16

Quadrat	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA ave	GR 1	GR 2	GR 3	GR 4	GR 5	GR 6	GR ave
<i>Trapeliopsis placodioides</i>									1					0.16
<i>Tremolechia atrata</i>								0.5			0.5			0.16
<i>Andreaea rothii</i>	10	1			15		4.3			1		1		0.3
<i>Campyloflexus atrovirens</i>			35				5.8							
<i>Racomitrium heterostichum</i> agg.	4						0.7							
<i>Racomitrium lanuginosum</i>	1	0.5	30				5.3							

Having been well irradiated by sunlight for the best part of three hours, the party decided to have lunch and return to the hotel for some shade. An evening session was held and John Jones entertained us with his lichen photographs. He gave an inspirational talk and demonstrated the photogenic appeal of these organisms.

Friday 27th July. Ashness Wood and Watendlath ash pollards, Borrowdale. Ashness Wood is but a short journey along the Borrowdale road from the hotel, soon reached along a steep narrow road, past Ashness Bridge and up an even steeper section of road to the National Trust car parks of Surprise View NY268188.



Surprise view, Ashness Woods.

This is set in dense mixed woodland, considerably elevated above the valley floor and home to several of the more upland corticolous lichens. These include members of the well-known community of *Hypotrachyna laevigata*, *Bryoria fuscescens* and *Mycoblastus sanguinarius*, particularly on the older birch trees.

Ivan Day, who has been monitoring the lichens of this area for several decades, observed that the flora here has recently deteriorated. A good collection of *Lepraria* was made from the trees and rocks in this area and investigated using thin layer chromatography. Most frequently encountered was the alectorialic acid strain of *L. eburnea* collected from sessile oak, holly, sycamore and north-facing rocks including an overhang and talus-cave. According to the Flora this lichen occurs on neutral to slightly basic substrata but the andesite lavas of this wood were decidedly acid. Next came *L. sylvicola* from several sessile oaks, sycamore, birch and ash together with shaded rock. *Lepraria membranacea* was also frequent on mature oak and shaded rock with one collection of *L. finkii* on oak.

After a pleasant couple of hours collecting, the party moved on to the roadhead at the hamlet of Watendlath to examine an area of open woodland around Watendlath Tarn. The tarn is surrounded by a small area of farmland with fields enclosed by dry stone walls and a good number of scattered ash pollards, particularly on the eastern side. Most of these were examined although a good number were close to walls. Trees such as these do not tend to have a rich flora presumably due to excess shelter from sun and rain. They were not entirely without interest, and one examined by Judith Allinson, revealed what appeared to be *Graphis elegans* on a small rotting branch, but turned out to be the rarely seen ascomycete *Hysterographium fraxinii*.

There was plenty of other interest with a Lobarion community locally developed and some additions to the Ashness area were made including *Gyalideopsis muscicola* and *Ramonia nigra*. The latter is an elusive species found mainly on rotting wood within the hollows of veteran ash trees. Several such trees were found and hands were seen delving into the hollows in the hope of finding it. Ivan was disappointed to find that several such delvings into a promising hollow proved fruitless, but was then surprised when a lump of wood suddenly dropped into his hand and when removed showed a fine collection of *Ramonia* apothecia.

Some large trees were found over a tall dry stone wall whose passage was only made possible by a narrow pipe running through it. Once cleared of debris by Aniya Barker the wall could be passed, but there was little time to examine the trees at the other side as a herd of cattle decided to make a charge. The farmer had warned the group about the cattle so a hasty retreat was in order. This concluded an interesting day which added several new records to the Borrowdale list.

Saturday 28th July. Low Buck Howe ash pollards and Combe Gill.

A short visit was made to a range of habitats along the footpath leading from Mountain View cottages to Tarn at Leaves, a few minutes' walk from the hotel. En route were several maiden ashes to look at including a group close to the bridge over Combe Gill NY253136 which were well covered in *Peltigeras*. The stream itself is heavily shaded here and yielded few amphibious species but the path that ascended steeply towards Tarn at Leaves was attended by a several good ash pollards and old hollies which

yielded a variety of species including *Sticta sylvatica* and more *Ramonia*. The intention was to press on into the Combe, a large corrie showing a classic section through the Borrowdale volcanics, but the weather had deteriorated and time was getting short. Later that day when conditions improved, a detailed survey was made of the grounds of the hotel, which included several species not previously recorded from the valley such as *Candelaria concolor*. This was the final field trip of a week blessed with uncommonly good weather for Borrowdale and a successful week for all. The leader was called away early upon receiving an invitation to give a talk about the week for the Borrowdale local interest group.

Additional note by Moselle Singh

The BLS summer field meeting presents a wonderful opportunity for new members and budding lichenologists to gain experience in the field. With the generous grant awarded through the BLS, I was able to attend the summer field meeting in Borrowdale. The breathtaking landscapes and flora of the Lake District inherently inspire a lively curiosity, immensely contributing to the positive learning experience. While recording and memorising lichen species in the field may offer a sense of ‘mastering’ lichenology, I learnt most from experiencing the science and uncertainty that underpins the skill. Though I have less than a year of experience in lichenology, I recognise it as an embodied skill—something that becomes integrated into the way a person observes, questions, and theorises about the dynamics of complex relations (i.e. connections between climate, assemblages, distribution, substrate chemistry, etc.). For this reason, I enjoyed observing the different ways people approached lichenology: Did they enter a space with an expectation of finding a particular species? Are certain assemblages valued over others, if so, why? Is the lichen approached as a complete *unknown*, or as a known species? For this reason, the Borrowdale meeting not only provided practice identifying species, it offered a means to practise the *processes of approaching, identifying, and recognising* species and larger dynamics, as exhibited by the lichenologists in attendance. I would like to formally thank BLS, as well as all of those that make a point to cultivate an inclusive, productive, communal learning environment.

Acknowledgements

The British Lichen Society is grateful to the following people and organisations for permission to visit the sites listed above. These are John Hooson Wildlife Advisor of the National Trust, Kendal; Charlotte Kimber of Lake District National Parks; Simon Webb, the Lead Conservation Advisor, Natural England, Kendal; Jo Edwards, Land Agent to Dalemmain Estates, the Manager at Honister Quarries and Sean Richardson at Fold Head Farm, Watendlath.

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Moselle Singh

Key to site code numbers (shown in bold below) in the species table. Numbers refer to 1 x 1 km (monad) grid squares examined in 100 x 100 km square 35.

Ashness Woods 2618, **1**; Castle Crag and River Derwent 2515/6, **2**; The Combe, Low Buck Howe 2513, **3**; Derwentwater Abbot's and Brandlehow Bay 2519, **4**; Derwentwater Copperheap Bay, Otterfield Island and Derwent Bay 2521, **5**; Derwentwater Great Bay and adjacent woodland 2518, **6**; Derwentwater Lingholme and Silver Hill 2522, **7**; Derwentwater, The Park 2421, **8**; Graphite Mines, Seathwaite 2312, **9**; Grasmoor 1619, 1719, 1720, **10**; Honister Pass fellside 2112, **11**; Honister Pass Fleetwith Pike 2113, **12**; Honister Pass Grey Knotts 2212, **13**; Honister Pass waterfalls 2213, **14**; Johnny Wood 2514, **15**; Low Beck How, Seatoller 2513, **16**; Mosedale Gabbros 3532, **17**; Mosedale Granites 3533, **18**; Seatoller Woods 2413, **19**; Seatoller Glaramara Hotel grounds 2413 **20**; Skiddaw 2528, **21**; Stonethwaite Wood 2613, **22**; Watendlath hamlet 2716, **23**; Watendlath farmland 2715, **24**.

Species table

Lichens and lichenicolous fungi recorded on the Borrowdale Field Meeting 2018

Taxon	Sites	Comments
<i>Acarospora fuscata</i>	12, 17, 18, 19, 23	
<i>Acarospora impressula</i>	14, 18	
<i>Acarospora nitrophila</i>	9	
<i>Acarospora sinopica</i>	9	
<i>Acrocordia gemmata</i>	8	oak
<i>Agonimia octospora</i>	16	
<i>Agonimia tristicula</i>	4, 16	
<i>Ainoa mooreana</i>	14	andesite
<i>Alectoria nigricans</i>	10	
<i>Amandinea punctata</i>	20, 24	lignum
<i>Amygdalaria pelobotryon</i>	4, 14, 17	
<i>Anisomeridium polypori</i>	1, 3, 4, 14, 22	ash
<i>Anisomeridium ranunculosporum</i>	3, 9	
<i>Anisomeridium viridescens</i>	1	hazel
<i>Arbrothallus caerulescens</i>	17	

Taxon	Sites	Comments
<i>Arthonia cinnabarina</i>	9	
<i>Arthonia didyma</i>	9, 24	
<i>Arthonia elegans</i>	9	
<i>Arthonia ilicina</i>	9	
<i>Arthonia ilicinella</i>	9	hazel
<i>Arthonia punctiformis</i>	5, 9, 22, 23	
<i>Arthonia radiata</i>	1, 6, 14, 22, 23, 24	
<i>Arthopyrenia analepta</i>	1, 6, 9, 19, 22, 23	
<i>Arthopyrenia cerasi</i>	9	
<i>Arthopyrenia cinereopruinosa</i>	9, 20	
<i>Arthopyrenia nitescens</i>	9	hazel
<i>Arthopyrenia punctiformis</i>	1, 23	
<i>Arthothelium lirellans</i>	9	hazel
<i>Arthothelium orbilliferum</i>	9	hazel
<i>Arthrorhaphis citrinella</i>	11, 14, 17	
<i>Arthrorhaphis muddii</i>	12	

Taxon	Sites	Comments
<i>Aspicilia caesiocinerea</i>	4, 6, 7, 17, 19, 24	
<i>Aspicilia cinerea</i>	16, 17, 18	
<i>Aspicilia grisea</i>	4	lakeside rocks
<i>Aspicilia intermutans</i>	24	
<i>Aspicilia laevata</i>	2	
<i>Baeomyces placophyllus</i>	10, 14	
<i>Baeomyces rufus</i>	10, 14, 17, 21, 22, 24	
<i>Botryolepraria lesdainii</i>	14	
<i>Bryoria fuscescens</i>	1	
<i>Buellia aethalea</i>	7, 9, 14, 17, 18, 20, 23	
<i>Buellia ocellata</i>	19, Coniston 2899	
<i>Buellia griseovirens</i>	6	
<i>Buellia stellulata</i>	24	
<i>Bunodophoron melanocarpum</i>	15	
<i>Caloplaca ceracea</i>	4	
<i>Caloplaca cerinella</i>	23	elder
<i>Caloplaca citrina</i>	23	
<i>Caloplaca crenularia</i>	4, 7	
<i>Caloplaca oasis</i>	19	
<i>Candelariella aurella</i>	9, 17, 19	
<i>Candelaria concolor</i>	19, 20	
<i>Candelariella coralliza</i>	6, 11, 17, 23	
<i>Candelariella reflexa</i>	6, 22, 24	
<i>Candelariella vitellina</i>	9, 14, 17, 19, 20, 23	
<i>Catillaria atomarioides</i>	7, 9, 14	
<i>Catillaria chalybeia</i> s.str.	9 (farm)	

Taxon	Sites	Comments
<i>Catillaria chalybeia</i> v. <i>choropoliza</i>	4, rivulet at 2515	
<i>Catillaria nigroclavata</i>	16, 24	ash
<i>Catinaria atropurpurea</i>	8	oak
<i>Cetraria aculeata</i>	18, 23	
<i>Cetraria islandica</i>	10	
<i>Cetraria muricata</i>	6, 10, 21	
<i>Chaenotheca ferruginea</i>	1	
<i>Chrysothrix candelaris</i>	7	oak
<i>Chrysothrix flavovirens</i>	1, 4	fir
<i>Cladonia arbuscula</i>	12, 18	
<i>Cladonia arbuscula squarrosa</i>	9, 10, 21	
<i>Cladonia caespiticea</i>	22	birch
<i>Cladonia callosa</i>	10, 14, 17	
<i>Cladonia cervicornis</i>	10, 14, 17, 18, 21	
<i>Cladonia cervicornis pulvinata</i>	9	
<i>Cladonia cervicornis verticillata</i>	14	
<i>Cladonia chlorophaea</i>	9, 17, 19, 20, 22, 23	
<i>Cladonia ciliata</i>	10, 12, 18, 21	
<i>Cladonia ciliata tenuis</i>	10, 18, 21	
<i>Cladonia coccifera</i> agg.	6, 10, 19, 21, 22	
<i>Cladonia coniocraea</i>	1, 9, 23	
<i>Cladonia crispata</i> v. <i>cetrariiformis</i>	17, 21	
<i>Cladonia crypto chlorophaea</i>	21	
<i>Cladonia cyathomorpha</i>	9	
<i>Cladonia digitata</i>	6, 9	

Taxon	Sites	Comments
<i>Cladonia diversa</i>	4, 14, 17, 21	
<i>Cladonia fimbriata</i>	19, 23	
<i>Cladonia floerkeana</i>	10, 19, 21, 23, 24	
<i>Cladonia furcata</i>	1, 6, 10, 12, 17, 21	
<i>Cladonia gracilis</i>	10, 21	
<i>Cladonia macilenta</i>	19, 22	
<i>Cladonia novochlorophaea</i>	Mosedale Cu mine 3534	
<i>Cladonia parasitica</i>	6	
<i>Cladonia polydactyla</i>	6, 17, 21, 23	
<i>Cladonia portentosa</i>	5, 6, 10, 14, 17, 18, 21	
<i>Cladonia pyxidata</i>	1, 6, 14, 22	
<i>Cladonia ramulosa</i>	6, 10, 21, 22, 23	
<i>Cladonia rangiferina</i>	10, 21	
<i>Cladonia rangiformis</i>	Mosedale Cu mine 3534	
<i>Cladonia scabriuscula</i>	6, 22	
<i>Cladonia squamosa</i>	1, 6, 14, 17, 22, 23	rot wood
<i>Cladonia strepsilis</i>	10, 17, 21	
<i>Cladonia subcervicornis</i>	6, 9, 10, 14, 17, 18, 21, 22	
<i>Cladonia subsquamosa</i>	1	
<i>Cladonia subulata</i>	1, 9, 23	
<i>Cladonia uncialis biunc</i>	6, 10, 14, 18, 21	
<i>Clauzadea monticola</i>	14	old concrete
<i>Collema auriforme</i>	19	church wall
<i>Collema flaccidum</i>	by rivulet 2515	

Taxon	Sites	Comments
<i>Collema furfuraceum</i>	8	old oak
<i>Collema glebulentum</i>	4	Lakeside rocks
<i>Collema subflaccidum</i>	9	
<i>Cornicularia normoerica</i>	11, 18	
<i>Cyrtidula quercus</i>	22	
<i>Dermatocarpon intestiniforme</i>	4	
<i>Dermatocarpon luridum</i>	4, 7	
<i>Dibaies baeomyces</i>	10, 14, 18, 21	
<i>Dimerella lutea</i>	15, 22	shaded boulder and oaks
<i>Dimerella pineti</i>	1, 3, 22, 23	ash
<i>Diploschistes muscorum</i>	19	
<i>Diploschistes scruposus</i>	14, 17, 19, 23, 24	
<i>Endococcus brachysporus</i>	13	
<i>Endococcus verrucosus</i>	24	
<i>Ephebe hispidula</i>	4, 14	
<i>Epicladonia sandstedei</i>	9	
<i>Ephebe lanata</i>	4, 7, 14, 17, 22	
<i>Evernia prunastri</i>	1, 6, 7, 9, 19, 22, 24	
<i>Flavoparmelia caperata</i>	5, 6, 9, 10, 19	
<i>Fuscidea cyathoides</i>	6, 9, 14, 17, 18, 22, 23	
<i>Fuscidea gothoburgensis</i>	Coniston 2898	
<i>Fuscidea lightfootii</i>	6, 9, 24	
<i>Fuscidea lygaea</i>	14, 17, 18, 23	
<i>Fuscidea praeruptarum</i>	14, 17	sheltered andesites
<i>Fuscidea recensa</i>	1	shaded andesite
<i>Graphina ruiziana</i>	1, 9, 22	

Taxon	Sites	Comments
<i>Graphis elegans</i>	1, 6, 22	
<i>Graphis scripta</i>	1, 4, 22	
<i>Gyalecta truncigena</i>	8	oak
<i>Gyalideopsis muscicola</i>	24	ash branch
<i>Haematomma ochroleucum</i>	1	
<i>Hainesia xanthoriae</i>	17	
<i>Hydropunctaria rheitrophila</i>	2	
<i>Hyperphyscia adglutinata</i>	6, 20	
<i>Hypocnomyce scalaris</i>	9, 20, 23	
<i>Hypogymnia physodes</i>	1, 6, 10, 18, 19, 22, 23, 24	
<i>Hypogymnia tubulosa</i>	1, 6, 23, 24	
<i>Hypotrachyna afrorevoluta</i>	10, 19, 22	
<i>Hypotrachyna laevigata</i>	14	
<i>Hypotrachyna revoluta</i>	1, 3, 6, 22	
<i>Ionaspis lacustris</i>	3, 4, 5, 6, 9, 14, 17, 23, 24	
<i>Japewiella tavaresiana</i>	9	
<i>Lassalia pustulata</i>	Mose-dale Cu mine 3534	
<i>Lecanactis abietina</i>	1, 3	
<i>Lecania cyrtella</i>	23	elder
<i>Lecania naegelii</i>	1, 16, 24	
<i>Lecanora aitema</i>	23	
<i>Lecanora argentata</i>	1, 24	
<i>Lecanora campestris</i>	9 (farm)	
<i>Lecanora carpinea</i>	20, 23	
<i>Lecanora chlarotera</i>	1, 5, 6, 9, 10, 19, 22, 23, 24	

Taxon	Sites	Comments
<i>Lecanora conizaeoides</i>	4	fir
<i>Lecanora expallens</i>	23	
<i>Lecanora farinaria</i>	1	lignum
<i>Lecanora gangaleoides</i>	6, 17, 23	
<i>Lecanora handelii</i>	9 (farm), Coniston 2898,99, Mose-dale Cu mine 3534	
<i>Lecanora intricata</i>	14, 17, 18, 23, 24	
<i>Lecanora orosthea</i>	6, 17	
<i>Lecanora polytropa</i>	9, 14, 17, 18, 19, 22, 23	
<i>Lecanora pulicaris</i>	1, 23	
<i>Lecanora soralifera</i>	14, 17, 18, 19, 22, 23	
<i>Lecanora subcarnea</i>	1	
<i>Lecanora sulphurea</i>	14	
<i>Lecanora symmicta</i>	6	
<i>Lecidea confluens</i>	14	
<i>Lecidea fuliginosa</i>	17	
<i>Lecidea fuscoatra</i>	6, 14, 17, 18, 23	
<i>Lecidea grisella</i>	14, 17, 18	
<i>Lecidea lactea</i>	14, 18	
<i>Lecidea lithophila</i>	6, 17, 23	
<i>Lecidea plana</i>	17, 18, 23	
<i>Lecidella elaeochroma</i>	5, 6, 10, 19, 22, 23, 24	ash
<i>Lecidella scabra</i>	7, 17, 23	
<i>Lecidoma demissum</i>	10	

Taxon	Sites	Comments
<i>Lepraria borealis</i>	17, 18	
<i>Lepraria caesioalba</i>	4, 13, 17, 18, 19, 22, 23, 24	
<i>Lepraria eburnea</i>	1, 14	
<i>Lepraria ecorticola</i>	24	
<i>Lepraria incana</i> s. lato	1, 19, 22, 24	
<i>Lepraria lesdainii</i>	9	
<i>Lepraria lobificans</i>	1	
<i>Lepraria membranacea</i>	1, 3, 6, 15	
<i>Lepraria sylvicola</i>	1	
<i>Leptogium lichenoides</i>	3	
<i>Leptogium pulvinatum</i>	3	
<i>Leptogium teretiusculum</i>	3, 8, 22	ash
<i>Lichenomphalia hudsoniana</i>	22	
<i>Lithographa tessellata</i>	14	steep andesites
<i>Lobaria amplissima</i>	8	old oak
<i>Melanelixa fuliginosa fulig</i>	1, 5, 17, 18, 19, 22, 23	
<i>Melanelixa fuliginosa glabratula</i>	5, 6, 9, 19, 22, 23	
<i>Melanohalea elegantula</i>	6, 19	
<i>Melanohalea exasperatula</i>	9	
<i>Melanohalea subaurifera</i>	6, 20, 22, 23, 24	
<i>Micarea alabastrites</i>	1, 9	
<i>Micarea coppinsii</i>	23	
<i>Micarea denigrata</i>	23	
<i>Micarea lignaria</i>	10, 14, 17, 22, 23, 24	
<i>Micarea leprosula</i>	9, 17, 18, 23	
<i>Micarea lutulata</i>	14	

Taxon	Sites	Comments
<i>Micarea peliocarpa</i>	6	
<i>Micarea stipitata</i>	9, 22	
<i>Miriquidica leucophaea</i>	1, 9, 14, 17, 18, 23	
<i>Miriquidica pycnocarpa</i>	18	
<i>Miriquidica pycnocarpa soreciata</i>	18	
<i>Muellerella pygmaea</i>	17	
<i>Mycobilimbia epixanthoides</i>	22	ash
<i>Mycoblastus caesius</i>	1	
<i>Mycoblastus fucatus</i>	1	
<i>Mycoblastus sanguinarius</i>	1, 18, 23	
<i>Mycoglaena myricae</i>	6	
<i>Mycomicrothelia atlantica</i>	9	hazel
<i>Mycomicrothelia confusa</i>	9	hazel
<i>Mycoporum antecellans</i>	1, 9	
<i>Mycoporum lacteum</i>	9	hazel
<i>Myriospora smaragdula</i>	17, 23, Coniston 2899	
<i>Neofuscelia loxodes</i>	Levers Water 2898	
<i>Nephroma parile</i>	9	
<i>Normandina pulchella</i>	1, 5, 6, 9, 20, 22, 24	
<i>Ochrolechia androgyna</i>	1, 6, 9, 14, 17, 18, 19, 22, 23	
<i>Ochrolechia frigida</i> f. <i>lapuensis</i>	10	
<i>Ochrolechia parella</i>	6, 14	
<i>Ochrolechia tartarea</i>	14, 18	
<i>Opegrapha atra</i>	22, 23, 24	

Taxon	Sites	Comments
<i>Opegrapha gyrocarpa</i>	1, 6, 9, 14, 17	
<i>Opegrapha herbarum</i>	22	
<i>Opegrapha lüthyrga</i>	7	in slate wall
<i>Opegrapha niveoatra</i>	7	Ilex
<i>Opegrapha pertusariicola</i>	9	hazel
<i>Opegrapha rufescens</i>	1, 9, 22, 24	
<i>Opegrapha saxigena</i>	17	
<i>Opegrapha thelotrematis</i>	9	hazel
<i>Opegrapha varia</i>	6, 9	
<i>Opegrapha vulgata</i>	22, 24	
<i>Opegrapha zonata</i>	1, 6, 7, 17, 22, 23	
<i>Ophioparma ventosa</i>	14, 17, 18	
<i>Pachyphiale carneola</i>	1, 9	hazel
<i>Pannaria conoplea</i>	22	ash
<i>Parmelia discordans</i>	Carrock Fell mine 3232	
<i>Parmelia ernstiae</i>	2	oak
<i>Parmelia omphalodes</i>	6, 11, 13, 14, 17, 18, 19	
<i>Parmelia saxatilis</i>	1, 3, 5, 6, 9, 14, 17, 18, 19, 20, 22, 23, 24	
<i>Parmelia sulcata</i>	1, 3, 4, 5, 6, 7, 8, 9, 19, 20, 22, 23, 24	
<i>Parmeliella triptophylla</i>	3, 9, 22	
<i>Parmelina pastillifera</i>	17	
<i>Parmeliopsis ambigua</i>	1	
<i>Parmeliopsis hyperopta</i>	1	

Taxon	Sites	Comments
<i>Parmotrema crinitum</i>	1	
<i>Parmotrema perlatum</i>	5, 10, 19, 20, 23, 24	
<i>Peltigera canina</i>	Mosedale Cu mine 3534	
<i>Peltigera horizontalis</i>	1, 3, 22	ash
<i>Peltigera hymenina</i>	6, 18, 20, 22, 24	
<i>Peltigera leucophlebia</i>	18	
<i>Peltigera membranacea</i>	3, 7, 14, 24	
<i>Peltigera praetextata</i>	1, 24	
<i>Peltigera rufescens</i>	9	
<i>Pertusaria albescens</i>	9, 22	
<i>Pertusaria albescens corallina</i>	1, 3, 5, 9, 22	
<i>Pertusaria amara</i>	1, 4, 5, 19, 23, 24	
<i>Pertusaria aspergilla</i>	6, 9, 17, 19, 23, 24	
<i>Pertusaria coccodes</i>	4	oak
<i>Pertusaria corallina</i>	6, 9, 14, 17, 18, 20, 22, 23, 24	
<i>Pertusaria dealbescens</i>	14	
<i>Pertusaria excludens</i>	6, 22, 23	
<i>Pertusaria flavida</i>	1, 5	old oaks
<i>Pertusaria hemisphaerica</i>	1	old oak
<i>Pertusaria hymenea</i>	3, 5, 22, 24	mainly ash
<i>Pertusaria (Varicell) lactea</i>	1, 6, 14, 17, 20, 22, 23	
<i>Pertusaria lactescens</i>	6, 19	
<i>Pertusaria leioplaca</i>	6	
<i>Pertusaria microstictoides</i>	8	oak

Taxon	Sites	Comments
<i>Pertusaria multipuncta</i>	23	
<i>Pertusaria pertusa</i>	5, 19	
<i>Pertusaria pseudocorallina</i>	6, 14, 17, 18, 23	
<i>Pertusaria pupillaris</i>	1	old oak
<i>Phaeophyscia orbicularis</i>	3, 5	
<i>Phaeospora rimosicula</i>	The Bell 34/2897	
<i>Phlyctis argena</i>	1, 6, 19, 20, 24	
<i>Phylloblastia inexpectata</i>	7	Rhododendron
<i>Physcia adscendens</i>	14, 24	
<i>Physcia aipolia</i>	6, 19, 24	
<i>Physcia caesia</i>	23	
<i>Physcia stellaris</i>	23	
<i>Physcia tenella</i>	3, 6, 22, 19, 20, 23	
<i>Pilophorus strumaticus</i>	9, 14	shaded andesites and basalts
<i>Placopsis lambii</i>	9, 11, 14, 17, 18, 19, 23	
<i>Placynthiella dasaea</i>	1	
<i>Placynthiella icmalea</i>	10, 21, 24	
<i>Placynthiella uliginosa</i>	1	birch
<i>Platismatia glauca</i>	1, 6, 10, 14, 19, 20, 22, 23, 24	
<i>Polycoccum arnoldii</i>	14	
<i>Polycococcum squamarioides</i>	Coniston 2819	
<i>Polysporina simplex</i>	4	Upper littoral
<i>Polyblastia cruenta</i>	14	rivulet
<i>Porina aenea</i>	6	mountain ash
<i>Porina byssophila</i>	9	hazel

Taxon	Sites	Comments
<i>Porina chlorotica</i>	4	
<i>Porina guentheri guentheri</i>	14	By waterfall
<i>Porina guentheri lucens</i>	22	
<i>Porina lectissima</i>	2, 4, 7, 14, 22	
<i>Porina rivalis</i>	2	
<i>Porpidia cinereoatra</i>	4, 7, 9, 11, 14, 17, 18, 22	
<i>Porpidia crustulata</i>	1, 4, 11, 14, 17, 19, 22, 23	
<i>Porpidia flavocruenta</i>	Levers Water 2898	
<i>Porpidia hydrophila</i>	14	
<i>Porpidia irrigua</i>	14	
<i>Porpidia macrocarpa</i>	4, 9, 14, 17, 18, 19, 23	
<i>Porpidia melinodes</i>	9, 14, 18, 24, Levers Water 2898	
<i>Porpidia platycarpoides</i>	6, 14, 18, 24	
<i>Porpidia rugosa</i>	4, 7	
<i>Porpidia soledizodes</i>	4, 9, 14, 17, 18, 23	
<i>Porpidia speirea</i>	14	
<i>Porpidia striata</i>	17	
<i>Porpidia tuberculosa</i>	1, 6, 9, 14, 17, 18, 19, 22, 23	
<i>Protoblastenia rupestris</i>	9, 14	
<i>Protoparmelia badia</i>	12, 17	
<i>Pseudevernia furfuracea cerat</i>	6, 9, 19, 23, 24	
<i>Pseudevernia furfuracea furfu</i>	1, 18, 23	
<i>Psilolechia lucida</i>	1, 9, 17, 22, 23	
<i>Punctelia jeckeri</i>	1, 6, 20	

Taxon	Sites	Comments
<i>Punctelia subrudecta</i>	6, 20	
<i>Pycnothelia papillaria</i>	21	
<i>Pyrenopsis grumilifera</i>	24, Coniston 34/2898	
<i>Pyrenula acutispora</i>	9	hazel
<i>Pyrenula hibernica</i>	9	hazel
<i>Pyrenula laevigata</i>	9	hazel
<i>Pyrenula macrospora</i>	9, 22	ash
<i>Pyrenula occidentalis</i>	9	hazel
<i>Pyrrhospora quernea</i>	5	oak
<i>Racodium rupestre</i>	1, 4, 7, 14, 17, 22	
<i>Ramalina farinacea</i>	5, 6, 9	
<i>Ramalina fastigiata</i>	5, 6, 9	
<i>Ramonia nigra</i>	3, 24	ash
<i>Rhizocarpon geographicum</i> sl	6, 9, 14, 17, 18, 20, 22, 23	
<i>Rhizocarpon geographicum prospec</i>	9, 17	
<i>Rhizocarpon hochstetteri</i>	11	
<i>Rhizocarpon infernulum</i>	14, 17, 18	
<i>Rhizocarpon lavatum</i>	3, 5, 7, 9, 14	
<i>Rhizocarpon lecanorinum</i>	11, 12	
<i>Rhizocarpon lindsayanum</i>	18	
<i>Rhizocarpon obscuratum</i>	17, 18	
<i>Rhizocarpon oederi</i>	9, 14, 18	
<i>Rhizocarpon petraeum</i>	14	
<i>Rhizocarpon polycarpum</i>	17, 23	

Taxon	Sites	Comments
<i>Rhizocarpon reductum</i>	4, 9, 11, 14, 17, 18, 19, 23	
<i>Rimularia furvella</i>	17, 23	
<i>Rinodina sophodes</i>	20	
<i>Roselliniopsis ventosa</i>	14	on Placopsis
<i>Schaereria cinereorufa</i>	18, 23	
<i>Schaereria fuscocinerea</i>	18	
<i>Sclerococcum sphaerale</i>	24	
<i>Scoliciosporum chlorococcum</i>	6, 24	
<i>Scoliciosporum intrusum</i>	14	
<i>Scoliciosoprum umbrinum</i>	23	
<i>Skyttea nitschkei</i>	9	hazel
<i>Sphaerophorus fragilis</i>	11, 17	
<i>Sphaerophorus globosus</i>	1, 6, 14, 17, 18	
<i>Staurothele fissa</i>	2, 4, 6	
<i>Stenocybe pullatula</i>	5	alder
<i>Stenocybe septata</i>	9, 16	
<i>Stereocaulon alpinum</i>	10	
<i>Stereocaulon dactylophyllum</i>	9(farm)	
<i>Stereocaulon evolutum</i>	17, 18	
<i>Stereocaulon leucophaeopsis</i>	Coniston 34/2899	
<i>Stereocaulon pileatum</i>	9	
<i>Stereocaulon vesuvianum</i>	6, 9, 14, 17, 18, 19, 22, 23	
<i>Sticta ciliata</i>	22	ash
<i>Sticta sylvatica</i>	3, 9	ash
<i>Stigmatidium microspilum</i>	9	
<i>Strigula confusa</i>	5	
<i>Taeniolella toruloides</i>	9	hazel

Taxon	Sites	Comments
<i>Tephromela atra</i>	13, 14, 17, 18, 19, 23	
<i>Tephromela grumosa</i>	Mosedale Cu mine 3534	
<i>Thamnotia vermicularis</i>	10	
<i>Thelidium pyrenophorum</i>	4	littoral
<i>Thelocarpon coccosporum</i>	24	
<i>Thelopsis rubella</i>	8	oak
<i>Thelotrema lepadinum</i>	1, 3, 9, 22	ash
<i>Thelotrema petractoides</i>	9	hazel
<i>Toninia thiopsora</i>	11, 12, 14	
<i>Trapelia coarctata</i>	3, 4, 9, 14, 17, 18, 22	
<i>Trapelia elacista</i>	24	
<i>Trapelia glebulosa</i>	9, 14, 18, 19, 20, 22, 23	
<i>Trapelia obtegens</i>	14	
<i>Trapeliopsis aeneofusca</i>	10	
<i>Trapeliopsis flexuosa</i>	19, 23	
<i>Trapeliopsis gelatinosa</i>	10	
<i>Trapeliopsis granulosa</i>	9, 10, 23	
<i>Trapeliopsis placodioides</i>	4, 9, 14, 17, 18, 23, 24	
<i>Trapeliopsis pseudogranulosa</i>	6, 9, 22	
<i>Tremolechia atrata</i>	6, 9, 14, 17, 18, 23	
<i>Umbilicaria cylindrica</i>	11, 24	
<i>Umbilicaria polyphylla</i>	17, 18, 23	

Taxon	Sites	Comments
<i>Usnea flammea</i>	14	
<i>Usnea cornuta</i>	1	
<i>Usnea subfloridana</i>	1, 6	
<i>Usnea wasmuthii</i>	1	
<i>Verrucaria aethiobola</i>	4, 7	
<i>Verrucaria andesiaca</i>	6	
<i>Verrucaria denudata</i>	3, 14	
<i>Verrucaria elaeina</i>	7	gatepost
<i>Verrucaria elaeomeleana</i>	4	
<i>Verrucaria funckii</i>	2	
<i>Verrucaria fuscella</i>	17	
<i>Verrucaria hochstetteri</i>	14	Old concrete
<i>Verrucaria hydrophila</i>	2, 4	
<i>Verrucaria margacea</i>	2	
<i>Verrucaria muralis</i>	23	
<i>Verrucaria pachyderma</i>	2, 24	
<i>Verrucaria praetermissa</i>	2	
<i>Xanthoria elegans</i>	14	Pebble dash wall
<i>Xanthoria parietina</i>	5, 6, 14, 19, 20, 22, 23, 24	
<i>Xanthoria polycarpa</i>	5, 20	
<i>Xanthoparmelia conspersa</i>	4, 6, 17, 19, 23	
<i>Xanthoparmelia mougeotii</i>	17	
<i>Xylographa vitiligo</i>	1	lignum

Literature pertaining to British lichens – 64

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Taxa prefixed by * are additions to the checklists of lichens and lichenicolous fungi for Britain and Ireland. Aside comments in square brackets are by the authors of this compilation.

APTROOT, A., SPARRIUS, L.B. & ALVARADO, P. 2018. *Aquacidia*, a new genus to accommodate a group of skiophilous temperate *Bacidia* species that belong in the Pilocarpaceae (lichenized ascomycetes). *Gorteria* 40: 11–14. The new genus *Aquacidia* Aptroot is introduced to accommodate three species of *Bacidia* s. lat.: *Aquacidia antricola* (Hulting) Aptroot [as “(Taylor) Aptroot”] (syn. *Bacidia carneoglauca*, *Bacidia antricola* Hulting and *Verrucaria torta* Taylor nom. rej. prop.); *A. trachona* (syn. *Bacidia trachona*) and *A. viridifarinoso* (syn. *B. viridifarinoso*).

BERTRAND, M., MONNAT, J.-V. & LOHÉZIC-LE DÉVAT, F. 2018. *Myriolecis massei*, a new species of Lecanoraceae from the coasts of the Armorican Massif in Western Europe. *Bryologist* 121: 253–263. **Myriolecis massei* M. Bertrand & J.Y. Monnat is newly described from Brittany, and with a single record from Jersey. It is a maritime species resembling *M. actophila*, but differing in its more yellowish, C+ orange thallus. A key to European maritime lecanoroid lichens reacting C+ or KC+ pink, red, yellow-orange or orange is provided.

DIEDERICH, P., LAWREY, J.D. & ERTZ, D. 2018. The 2018 classification and checklist of lichenicolous fungi, with 2000 non-lichenized, obligately lichenicolous taxa. *Bryologist* 121: 340–425. A world checklist of lichenicolous fungi, accepting 2319 species, 2000 of which are obligately lichenicolous fungi, 257 are lichenicolous lichens and 62 are facultatively lichenicolous fungi. Resulting from sequence studies, *Phaeopyxis* is considered a synonym of *Bachmanniomyces*, and *Dactylospora* a synonym of *Sclerococcum*. The resulting new combinations for species on the list for Britain and Ireland are: *Bachmanniomyces punctum* (A. Massal.) Diederich & Pino-Bodas (syn. *Bachmanniomyces uncialicola*, *Phaeopyxis punctum*), *B. varius* (Coppins, Rambold & Triebel) Diederich & Pino-Bodas (syn. *Phaeopyxis varia*), *Sclerococcum amygdalariae* (Triebel) Ertz & Diederich (syn. *Dactylospora amygdalariae*), *S. athallinum* (Müll. Arg.) Ertz & Diederich (syn. *D. athallina*), *S. attendendum* (Nyl.) Ertz & Diederich (syn. *D. attendenda*), *S. australe* (Triebel & Hertel) Ertz & Diederich (syn. *D. australis*), *S. frigidum* (Hafellner) Ertz & Diederich (syn. *D. frigida*), *S. lobariellum* (Nyl.) Ertz & Diederich (syn. *D. lobariella*), *S. microsporum* (Etayo) Ertz & Diederich (*D. microspora*), *S. parasitaster* (Nyl.) Ertz & Diederich (*D. parasitaster*), *S. parasiticum* (Flörke) Ertz & Diederich (syn. *D. parasitica*), *S. parellarium* (Nyl.) Ertz & Diederich (syn. *D. parellaria*), *S.*

purpurascens (Triebel) Ertz & Diederich (syn. *D. purpurascens*), *S. saxatile* (Schaer.) Ertz & Diederich (syn. *D. saxatilis*), *S. suburceolatum* (Coppins & Fryday) Ertz & Diederich (syn. *D. suburceolata*), *S. tegularum* (Arnold) Ertz & Diederich (*D. tegularum*), and *S. urceolatum* (Th. Fr.) Ertz & Diederich (syn. *D. ureolata*). *Sclerococcum ophthalmizae* Coppins is newly described for a fungus on *Pertusaria ophthalmiza*, previously known by the unpublished name *Dactylospora ophthalmizae*. Based on morphological characteristics the asexual *Phoma lobariae* is transferred to *Abrothallus* as *A. lobariae* (Diederich & Etayo) Diederich & Ertz. [*Spiloma auratum* is included under the illegitimate generic name *Spilomium* Nyl. (a synonym of *Sclerococcum*), but a new combination is not made. The normally considered lichenicolous *Verrucaria phaeosperma* is not included.]

- EKMAN, S. 2017. (2542) Proposal to reject the name *Variolaria torta* (Lecanorales, lichenized Ascomycota). *Taxon* **66**: 984–985. Proposal to reject *Variolaria torta* Taylor (1836) in favour of *Bacidia antricola* Hulting (1872) (syn. *B. carneoglauca*).
- GUZOW-KRZEMIŃSKA, B., ŁUBEK, A., KUBIAK, D., OSSOWSKA, E. & MARTIN, KUKWA, M. 2018. Phylogenetic approaches reveal a new sterile lichen in the genus *Loxospora* (Sarrameanales, Ascomycota) in Poland. *Phytotaxa* **348**: 211–220. Includes original description and habit photos of a new sterile soreciate crust, *Loxospora cristinae* Guzew-Krzem. et al., recently confirmed growing on *Alnus* and *Quercus* in Argyll.
- KISTENICH, S., TIMDAL, E., BENDIKSBY, M. & EKMAN, S. 2018. Molecular systematics and character evolution in the lichen family *Ramalinaceae* (Ascomycota: Lecanorales). *Taxon* **67**: 871–904. A radical re-arrangement of the family based on phylogenetic studies, which diverges from previous morphologically based arrangements. Changes affecting taxa occurring in the British Isles follows. The new genus *Bellicidia* Kistenich, Timdal, Bendiksby & S. Ekman is introduced for *Bellicidia incompta* (Borrer ex Hook.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Bacidia incompta*). The genus *Bibhya* J.H. Willis (1956) is resurrected and includes *Bibhya subcircumspecta* (Coppins) S. Ekman (syn. *Bacidia subcircumspecta*) and *Bibhya vermifera* (Nyl.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Bacidia vermifera*). *Kiliasia* Hafellner (1984) is resurrected and includes *K. episema* (Nyl.) Hafellner (1984) (syn. *Toninia episema*). The genus *Scutula* Tul. (1852) no longer contains only lichenicolous taxa but also *S. circumspecta* (Nyl. ex Vain.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Bacidia circumspecta*) and *S. effusa* (Rabenh.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Bacidia auerswaldii*). *Thalloidima* A. Massal. (1852) is split from *Toninia* s. lat. and resurrected to include: *Thalloidima candidum* (Weber) A. Massal. (1852) (syn. *Toninia candida*), *Thalloidima diffractum* (A. Massal.) A. Massal. (1853) (syn. *Toninia diffracta*), *Thalloidima opuntioides* (Vill.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Toninia opuntioides*), *Thalloidima physaroides* (Opiz) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Toninia physaroides*), *Thalloidima rosulatum* Anzi (1868) (syn. *Toninia rosulata*) and *Thalloidima sedifolium* (Scop.)

Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Toninia sedifolia*). Also split off and resurrected is *Toniniopsis* Frey (1926), with *Toniniopsis aromatica* (Sm.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Toninia aromatica*), *Toniniopsis coelestina* (Anzi) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Toninia coelestina*), *Toniniopsis mesoidea* (Nyl.) Timdal (syn. *Toninia mesoidea*), *Toniniopsis subincompta* (Nyl.) Kistenich, Timdal, Bendiksby & S. Ekman (syn. *Bacidia subincompta*) and *Toniniopsis verrucarioides* (Nyl.) Kistenich, Timdal, Bendiksby & S. Ekman (*Toninia verrucarioides*).

KUKWA, M., SCHMITT, I & ERTZ, D. 2018. *Ochrolechia incarnata* comb. nov. (Lecanoromycetes, Ascomycota), a distinct, species of the *O. parella* group from Europe and Macaronesia. *Phytotaxa* **371**: 119–126. *Pertusaria incarnata* Leight. is resurrected as **Ochrolechia incarnata* (Leight.) Kukwa, I. Schmitt & Ertz. It grows on siliceous rocks and is distinguished from *O. parella* by having apothecia with a C+ red medulla of the thalline margin (C– in *O. parella*). The species is distinct phylogenetically. It is so far known from Macaronesia, Ireland and Sweden, but may have been overlooked. It is also reported that corticolous and saxicolous specimens of *O. parella* from western Europe, the western Mediterranean and Sweden are genetically identical, but that a distinct, possibly undescribed corticolous taxon, commonly referred to as *O. 'pallescens'*, is found in central Europe, the Balkans, Georgia and the eastern Mediterranean. This will be treated in a forthcoming paper.

LAUNIS, A., PYKÄLÄ, J., VAN DEN BOOM, P., SÉRUSIAUX, E. & MYLLYS, L. 2019. Four new epiphytic species in the *Micarea prasina* group from Europe. *Lichenologist* **51**: 7–25. Of the four new species described, one is reported from the British Isles: **M. pseudomicrococca* Launis & Myllis. This species differs from *M. micrococca* in having an olive-green rather than a bright green thallus, narrower ascospores, and dimorphic paraphyses.

SVENSSON, M., EKMAN, S., KLEPSLAND, J.T., NORDIN, A., THOR, G., VON HIRSCHHEYDT, G., JONSSON, F., KNUTSSON, T., LIF, M., SPRIBILLE, T. & WESTBERG, M. 2017. Taxonomic novelties and new records of Fennoscandian crustose lichens. *MycKeys* **25**: 51–86. Among the nomenclatural novelties affecting British lichens are *Frutidella furfuracea* (Anzi) M. Westb. & M. Svensson (syn. *F. pullata*, *Lecidea pullata*), *Puttea duplex* (Coppins & Aptroot) M. Svensson (syn. *Fellhanera duplex*), *Bacidia antricola* Hulting (1872) (syn. *B. carneoglauca*, *Variolaria torta*). *Variolaria torta* Taylor (1836) is a much earlier, but little-used name and has been proposed for rejection – see Aptroot et al. (2018) and Ekman (2017) above.

TIBELL, L. 1999. Two new species of *Calicium* from Europe. *Mycotaxon* **70**: 431–443. Includes original description and illustrations of *Calicium pinastri* Tibell, which has recently been found in the New Forest, Hampshire and Abernethy Forest, Morayshire.

VAN DEN BOOM, P.P.G., BRAND, A.M., COPPINS, B.J. & SÉRUSIAUX, E. 2018. A new *Micarea* species from western Europe, belonging in the *Micarea denigrata* group. *Herzogia* **31** (1, 2): 381–389. **Micarea sambuci* van den Boom,

M. Brand, Coppins & Sérus. is described. It closely resembles *M. nitschkeana* but generally has paler apothecia and produces only mesoconidial pycnidia. *Micarea nitschkeana* has microconidial and macroconidial pycnidia, specimens previously reported with mesoconidia belonging to *M. sambuci*. *Micarea sambuci* seems to have markedly declined in recent decades and has not been collected since 2003 [1978 in UK].

VAN DEN BROEK, D., FRISCH, A., RAZAFINDRAHAJA, T., VAN DE VIJVER & ERTZ, D. 2018. Phylogenetic position of *Synarthonia* (lichenized Ascomycota, Arthoniaceae), with the description of six new species. *Plant Ecology & Evolution* **151**: 327–351. The genus *Synarthonia* Müll. Arg. (1891) is expanded to include *S. astroidestera* (Nyl.) Ertz & Van den Broeck (syn. *Arthonia astroidestera*) and *S. ochracea* (Dufour) Van den Broeck & Ertz [a species subsequently identified from Ireland and Scotland]. *Arthonia elegans* is confirmed as a synonym of *Coniocarpon fallax* (Ach.) Grube (2014).

WOLSELEY, P.A., COPPINS, B.J. & COPPINS, A.M. 2018. Somerset lichens and lichenicolous fungi: an overview and annotated checklist. *Proceedings of the Somerset Archaeological and Natural History Society* **161**: 235–311. Dedicated to the late Dr Francis Rose, who suggested a “New Lichen Flora of Somerset” in 1987. An overview of the Somerset landscape and lichen habitats is provided, supported by colour photos and coincidence maps of notable species for some of the habitat types. The checklist includes 984 species, of which 101 are lichenicolous fungi and 20 are non-lichenized fungi. For each species the annotations include: synonyms, UK conservation evaluation, vice-county occurrence, habitat and substratum preferences, abundance in the county, hectad (10-km square) occurrence (pre- and post-1960), and sometimes additional record information.

ZHURBENKO, M., TADOME, K. & OHMURA, Y. 2018. *Pronectria japonica* species nova and a key to the lichenicolous fungi and lichens growing on *Ochrolechia*. *Herzogia* **31**: 494–504. The key includes 41 species of lichenicolous fungi and two lichenicolous lichens; 15 species are reported solely from the genus *Ochrolechia*.

B.J. Coppins

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New, rare and interesting lichens

Contributions to this section are always welcome. Submit entries to Chris Hitch, Orchella Lodge, 14, Hawthorn Close, Knodishall, Saxmundham, Suffolk, P17 1XW, in the form of species, habitat, locality, VC no, VC name, (from 1997, nomenclature to follow that given in the appendix, see BLS Bulletin 79, which is based on the

Biological Record Centre for instructions for Recorders, ITE, Monks Wood Experimental Station, Abbots Ripton, PE17 2LS, 1974). Grid Ref (GR) (please only use letters for the 100km squares to aid BioBase and Recorder 2000, as these are used in the database and on the NBN Gateway), altitude (alt), where applicable in metres (m), date (month and year). NRI records should now include details of what the entry represents, e.g. specimen in Herb. E, Hitch etc., with accession number where applicable, field record or photograph, to allow for future verification if necessary or to aid paper/report writing. Determined/confirmed by, Comments, New to/the, Finally recorder. An authority with date after species is only required when the species is new to the British Isles. Records of lichens listed in the RDB are particularly welcome, even from previously known localities. In the interests of accuracy, the data can be sent to me on e-mail, my address is cjbh.orchldge@freeuk.com, or if not, then typescript. Copy should reach the subeditor at least a fortnight before the deadline for the Bulletin.

Please read these instructions carefully.

New to the British Isles

Calicium pinastri Tibell (1999): on *Pinus sylvestris* bark in native pinewood in Speyside and on introduced *Pinus* colonising glades in ancient *Fagus* dominated pasture woodland in the New Forest. Bognacruie, Abernethy Forest SSSI, VC 95, Morayshire, NJ04.15, alt. 340–350 m, Vondrák 19711 & 19729 (PRA); Wooson's Hill, New Forest, VC 11, South Hampshire, SU2591.0773, alt 45m, September 2018, J. Vondrák & N. A. Sanderson, Vondrák 19862 (PRA); Millyford Green, Wood Crates, New Forest, VC11, South Hampshire, SU2690.0814, 35m, November 2018, Coll. N. A. Sanderson. This lichen forms a thin grey thallus on *Pinus* bark with tiny epruinose black stalked apothecia 0.3–0.4mm high. The size of the cylindrical asci with uniseriately arranged spores is diagnostic at 30–35 x 4–5µm. This separates the species from stunted epruinose specimens of *Calicium glaucellum*, which has similar but longer and slightly narrower asci that are 35–41 x 3.3–4.5µm see Tibell in *Mycotaxon* **70**: 431–443 (1999) and *Nordic Lichen Flora* **1**: 27–28 (1999).

There are pictures of the asci in Peksa (2006) *Silva Gabreta* **12**: 51-56 <http://www.npsumava.cz/storage/vyzkum/SGpdf/SG12_2_Peksa.pdf>. The specimens Vondrák 19729 & 19862 were sequenced for ITS barcode and the sequences fit the GenBank record of *C. pinastri*. In the Abernethy Forest, the species was found in old-growth native pinewood. The New Forest occurrences are on naturally regenerated *Pinus sylvestris* seeded from introduced trees but are remarkably lichen rich. Associated species included *Lecidea nylanderii*, which does occur on the lignum and bark of *Quercus* species as well locally, but also the *Pinus* specialists *Calicium parvum* and the non-lichenized *Propolis leonis*. Both only known from the New Forest in England, the latter previously only recorded from native woodland in Speyside in Scotland. *Pinus sylvestris* was first planted on the fringes of the New Forest in the late 18th century, and was not planted within the Forest proper until the mid 19th century. Most *Pinus sylvestris* within the New Forest is lichen poor, only well-lit trees next to humid glades deep within the pasture woodlands support this distinctive assemblage. This represents something of a

conservation challenge as the presence of non-native *Pinus* is regarded as a negative feature within the old woodlands. **BLS No. 2740.** *N.A. Sanderson & J. Vondrák*

Candelariella xanthostigmoides (Müll. Arg.) R. W. Rogers: on *Fagus* twigs in pasture woodland, Mark Ash Wood, New Forest, VC11, South Hampshire, SU247.072, alt 70m, December 2016, Coll N. A. Sanderson; Matley Wood, New Forest, VC11, South Hampshire, SU334.078, alt. 25m, September 2018, Coll. M. Powell. Both collections were fertile and consisted of small squamules with the soredia arising from the margins of the areoles, with 8 spores per ascus. In Britain, such material was previously recorded as *Candelariella reflexa*, but, although this also has 8 spores per ascus, it is a morphologically distinct species, with a larger thallus which is sorediate from the centre of the areoles. When well developed *Candelariella reflexa* s. str. can have an almost rosette-like thallus, see Lendemer & Westberg (2010) *Opuscula Philolichenum*, **8**: 75-81, for pictures of both species. True *Candelariella reflexa*, does not appear to have been recorded from Britain to date and is a mainly eastern species in Europe (J. Vondrak, pers. comm.). In addition, material with a morphologically identical thallus to *Candelariella xanthostigmoides* but with about 30 spores per ascus is classified as *Candelariella efflorescens*. This species can only be distinguished from *Candelariella xanthostigmoides* when fertile, but to date no such material has been found in Britain. Of the two species *Candelariella efflorescens* is the most reported from central Europe, while *Candelariella xanthostigmoides* appears rarer there and was first reported from Switzerland, where it was mostly collected in humid places on *Salix* sp., *Betula* sp. and *Alnus* sp. Kubiak & Westberg (2011) *Polish Botanical Journal* **56**: 315–319 & Westberg & Clerc (2012) *MycKeys* **3**: 1–12). In eastern America *Candelariella xanthostigmoides* is a more southern species than *Candelariella efflorescens*, and it becomes a strongly coastal species at the northern edge of its distribution. The available evidence suggests that *Candelariella xanthostigmoides* is potentially the only taxon in the *Candelariella reflexa/efflorescens/xanthostigmoides* complex in Britain and certainly is by far the dominant. For the time being therefore, all records of *Candelariella reflexa* are transferred to *Candelariella xanthostigmoides*. **BLS No. 0297.** *N.A Sanderson, M. Powell*

Capronia hypotrachynae Etayo & Diederich (1998): on moribund *Hypotrachyna revoluta* s. lat. on low spreading branches of *Quercus*, Shepherd's Gutter, New Forest, VC 11, South Hampshire, GR SU263.154, March 2019, V. Giavarini (E, Herb. Giavarini). Det. B.J. Coppins. This species has: tiny, partly immersed, minutely hairy black perithecia; hairs aseptate, often <10 µm long, dark brown; 8-spored asci, and *Hypotrachyna*. For description and illustrations see Etayo & Diederich in *Lichenologist* **30**: 104–106 (1998). **BLS No. 2738.** *V. Giavarini*

Dactylospora parasitaster (Nyl.) Arnold (1875): on thallus of *Mycobilimbia pilularis*, Falls of Divach, Drumnadrochit, VC 96, Easternness, GR NH4927, June 1975, Coppins 1389 (E, IMI). Also: on thallus of *Mycobilimbia epixanthoides*, Rassal Ashwood NNR, VC 105, West Ross, GR NG8443, April 1999, Coppins 18474 (E). With 8 per ascus, 3-septate spores very similar to *D. parasitica* but with a different host range – the latter

parasitizing only species of *Ochrolechia* and *Pertusaria* (incl. *Lepra*). Very similar collections requiring critical investigation are known in the British Isles from other hosts, including *Caloplaca obscurella*, *Micarea prasina* s. lat. and prothalli of *Parmeliella testacea* and *P. triptophylla*. All lichenicolous species of *Dactylospora* have recently been transferred to *Sclerococcum* by Diederich et al. in *Bryologist* **121**: 340–425 (2018). If this move is generally adopted, then *D. parasitaster* should be known as *Sclerococcum parasitaster* (Nyl.) Ertz & Diederich (2018). **BLS No. 2733.** *B. Coppins*

Didymocyrtis cladoniicola (Diederich, Kockourk. & Etayo) Ertz & Diederich (2015): on pinkish white, necrotic podetia of *Cladonia rangiformis*. Findhorn Dunes, VC95, Morayshire, GR NJ047.639, alt. 10 m, October 2018, H. Paul (E). Det. B.J. Coppins. This species is known only by its pycnidial anamorph, previously known as *Phoma cladoniicola* Diederich, Kockourk. & Etayo (2007). For descriptions and illustrations see Diederich et al. in *Lichenologist* **39**: 153–163, and Ertz et al. in *Fungal Diversity* (2015) [[doi: 10.1007/s13225-015-0345-6](https://doi.org/10.1007/s13225-015-0345-6)]. **BLS No. 2724.** *H. Paul*

Dinemasporium strigosum (Pers.) Sacc (1881): on moribund thallus of *Peltigera hymenina*, on turf on mound in old lead mine, Highcliffe Mine, Eyam, VC 57, Derbyshire, GR SK2128.7716, alt. 300 m, October 2011, leg. A. Waterfield (E – Coppins 23827). This record was reported in *BLS Bulletin* **110**: 141 & 146 (2012). This is a common fungus on dead remains of higher plants, especially grasses. Although it is best regarded as facultatively lichenicolous, interestingly most of its lichenicolous occurrences are on the moribund thalli of *Peltigera* spp. [E.g. see Czyżewska & Kukwa, *Lichenicolous Fungi of Poland – A Catalogue and key to species*. Kraków: Polish Academy of Sciences (2009)]. However, it is reported as growing on *Xanthoria* by Tsurrykau & Etayo in *Lichenologist* **49**: 8 (2017). I have seen other collections of *D. strigosum* on *Peltigera*, but the records and specimens have not been retained. This fungus is considered to be the anamorph of *Phomatospora dinemasporium* J. Webster (1955), but it would appear that this is not congeneric with the type species of *Phomatospora* (Paul Cannon, pers. comm.). **BLS No. 2726.** *B. Coppins*

Endococcus parmeliarum Etayo (2008): (i) in patches on moribund thallus of *Parmelia sulcata*, not causing significant necrosis; Wilkies Wood, Findhorn, VC95, Moray, GR NJ0512.6401, Feb. 2019, H. Paul, Herb. K(M); (ii) on *Evernia prunastri* on oak bough, in birch-oak woodland, NE of Dunachton Lodge, Kincairg, VC96, Easternness, GR NH8246.0485, Mar. 2017, B.J. Coppins, Herb. E; (iii) on *Evernia prunastri*, VC 96, Easternness, N end of Cawdor Wood, NH84.49, alt. 75-90 m, Sep. 1996, B.J. & A.M. Coppins 17070 (E); (iv) on *Evernia prunastri*, VC 96, Easternness, Findhorn Valley, Coulmony Woods, GR NH966.484, alt. 145 m, Sept. 2008, B.J. Coppins & C.J. Ellis, Coppins 22791 (E); (v) on *Evernia prunastri*, VC 96, Easternness, road between Ardclach and Dulsie Bridge, GR NH941.449, alt. 205 m, May 2015, H. Paul (E); (vi) on *Evernia prunastri*, VC 92, S Aberdeenshire, Dinnet Oakwood NNR, NO46.98, alt. 170 m, B.J. Coppins, A.M. Coppins, G. Kantvilas, Coppins 16604 (E). The species has smaller ascospores (8-9.5 x 3.5-4 µm) than any of the *Endococcus* species currently recorded

from Great Britain and Ireland, and its apparently biotrophic nature implies a strong host specificity. It appears only to have been reported previously on two occasions; in the original paper, on *Parmelia saxatilis* from Isla Navarino in Tierra del Fuego and from several *Cetraria* species in central Italy. *Sphaerellothecium parmeliae* Diederich & Etayo (1998) has similarly sized ascospores, but they are \pm hyaline and the asci are ellipsoidal to pyriform in contrast to the \pm cylindrical asci found in *E. parmeliarum*. It has not been recorded from our area. For more information see the *Fungi of Great Britain and Ireland* website, also Etayo & Sancho, *Bibliotheca Lichenologica* **98**: 302 pp. (2008) and von Brackel, *Herzogia* **28**: 212-281 (2015). **BLS No. 2736.**

P.F. Cannon, B.J. Coppins & H. Paul

Eonema pyriforme (M.P. Christ) Redhead, Lücking & Lawrey (2009): on *Cetraria aculeata*. Findhorn Dunes, VC95, Morayshire, GR NJ047.639, alt. 10 m, October 2018, H. Paul (E). Det. B.J. Coppins. This is considered to be facultatively lichenicolous, more widely occurring, including in the British Isles, on moribund ferns, grasses and herbs, and often going under the name *Athelia pyriformis* (M.P. Christ.) Jülich. It was first reported as lichenicolous, also on *Cetraria aculeata*, by Khodosovtsev et al. in *Lichenologist* **50**: 529–540 (2018), in which photographs and notes are provided. In the Findhorn collection, the basidia measured 22–30 \times 7 μm , and the basidiospores 8–10 \times 5–6 μm , and no clamp connections were detected. **BLS No. 2725.** *H. Paul*

Knufia peltigerae (Fuckel) Réblová & Unter. (2013); on moribund thallus of *Peltigera* sp. on soil/plant debris over concrete, VC25 E Suffolk, Orford Ness GR TM433481, Oct. 2018, Coll. A. Aptroot, Det. P. Cannon & N.G. Bacciu. (K(M)). Formerly known as *Capronia peltigerae* but is phylogenetically distinct and has hyaline 3-septate ascospores. See <http://fungi.myspecies.info/all-fungi/knufia-peltigerae> **BLS No. 2723.**

A. Aptroot, P.F. Cannon & N.G. Bacciu

Lichenochora physciicola (Ihlen & R. Sant.) Hafellner (2010): causing galls on thallus of *Physcia tenella* on twig of *Fraxinus excelsior*, near Stoke Camp, Draycott, VC6, North Somerset, GR ST/489.510, 17 Feb. 2019. Herb. K(M). Collected by N. Bacciu. Similar to populations with 8-spored asci of *L. aipoliae* (which was present in the same locality) but with smooth, shorter and relatively broader ascospores [11.5–12.5 (–13) \times (8–) 8.5–9 μm for *L. physciicola* versus 13.5–15 \times 6.5–7.5 μm for *L. aipoliae*]. Other species on *Physcia* include *L. galligena* R. Sant. & Hafellner (1989) which has smaller ascospores (9–11 \times 6–8 μm) and occurs in tropical Africa and South America. *L. polycoccoides* Hafellner & R. Sant. was described from *Physcia tribacia* in Finland and has similarly sized ascospores to *L. physciicola*, but they are ovoid with a submedian septum. Neither has been recorded from Great Britain and Ireland. For more information see the *Fungi of Great Britain and Ireland* website, also Hafellner in *Nova Hedwigia* **48**: 357-370 (1989) and Hafellner & Zimmermann in *Herzogia* **25**: 47-59 (2010), which includes a useful key to lichenicolous species on *Physcia*. **BLS No. 2737.**

P.F. Cannon & N.G. Bacciu

Loxospora christinae Guzew-Krzem., Łubek, Kubiak & Kukwa (2018): on mossy bark of *Quercus*, woodland on W side of River Creran, NE of Elleric, Glen Creran Woods SSSI, VC 98, Argyll Main, GR NN042 495, alt. 40 m, June 2018, Vondrák 20127 (PRA) and *ibid.* on *Betula*, Vondrák 20130 (PRA). Determined by J. Maliček & J. Vondrák, both confirmed by mtSSU. This species is not known fertile, has a greyish white to grey-green or yellowish-grey continuous, smooth, verruculose to cracked areolate thallus, with similarly coloured soralia that are sometimes at first punctiform, but often confluent or forming a continuous sorediate crust. Spot test are negative, but the medulla is UV+ whitish; but it is best identified by TLC, containing 2'-O-methylperlatolic acid. In Britain it is most likely to be confused with *Lecanora farinaria*. For full description and photos see Guzew-Krzemińska et al. in *Phytotaxa* **348**: 211–220. **BLS No. 2739** J. Vondrák, J. Maliček, A. Acton, Z. Palice & M. Powell

Ochrolechia incarnata (Leight.) Kukwa, Schmitt & Ertz (2018) [syn. *Pertusaria incarnata* Leighton (1878)]: on rock, Kylemore, VC H16, West Galway, GR L7—5---, 1875, Charles Larbalestier (BM – holotype). Leighton in his *Lichen Flora of Great Britain* Edn 3: 236 (1879) gives the locality as Doughruagh Mountain [which is near Kylemore], and states that it was on granite rocks. For further details and habit photo see Kukwa et al. in *Phytotaxa* **371**: 119–126 (2018). **BLS No. 2734** B. J. Coppins

Phaeoseptoria peltigerae Punith. & Spooner (1997); on moribund thallus of *Peltigera neckeri* on soil/plant debris over concrete, VC25 E Suffolk, Orford Ness GR TM43754826, Oct. 2018, Coll. & Det. P. Cannon. (**K(M)**). A pycnidial species with usually 3-septate cylindric-fusiform pale brown conidia. See http://fungi.myspecies.info/all_fungi/phaeoseptoria_peltigerae **BLS No. 2721**. P.F. Cannon

Pseudorobillarda peltigerae Diederich (1998): on moribund thallus of *Peltigera rufescens* on soil/plant debris over concrete, VC25 E Suffolk, Orford Ness GR TM43754826, Oct. 2018, N. Bacciu, Det. André Aptroot (**K(M)**). Characterized primarily by the conidia with setose appendages at the base.. See http://fungi.myspecies.info/all_fungi/pseudorobillarda_peltigerae **BLS No. 2722**.

N.G. Bacciu

Sphaerellothecium icmadophilae (R. Sant.) Zhurb. (2008) [syn. *Stigmidium icmadophilae* R. Sant. (1984)]: on thallus of *Icmadophila ericetorum* on side of large, fallen decorticate trunk of *Pinus* in mature native pinewood, Bognacruie, Abernethy Forest SSSI, VC 95, Morayshire, GR NJ04.15, alt. 350 m, October 2018, B.J. Coppins 25365 (E). For description and photographs of this species see Ihlen in *Lichenologist* **30**: 27–57 (1998). **BLS No. 2727**. B. Coppins, J. Vondrák & C. Ellis

Synarthonia ochracea (Dufour) Van den Broeck & Ertz (2018): locally abundant on thalli of *Graphis scripta* on *Corylus* in hazelwood, S of Cahar Bridge, Caher River valley, The Burren, VC H9, GR M1649.0815, 100 m, November 2008, B.J. Coppins 23898 (E, GZU). Also: on *Graphis scripta* on *Corylus*, Eilean Mhic Chrion, Loch Craignish,

VC 98, Argyll Main, GR NM8003, June 2018, B.J. Coppins, specimen poor and not retained. This species, previously known as *Arthonia ochracea* Dufour, seems to be a parasite (at least initially) on *Graphis scripta*. Its ascomata have an ochraceous pruina, distinguishing it from *Coniocarpon fallax* (syn. *Arthonia elegans*), which has a red pruina. Its spores are (2–)3(–4)-septate, macrocephalic (with an enlarged apical cell) 11.5–17.0 × 4.0–7.5 µm, hyaline or becoming brown and warted with age. It has recently been included in the genus *Synarthonia* Mull. Arg. (1891), along with *Arthonia astroidestera*. For a recent treatment see Van den Broeck et al. in *Plant Ecology & Evolution* **151**: 327–351 (2008). Available on-line from. <https://doi.org/10.5091/plecevo.2018.1506> **BLS No. 2731**
B.J. Coppins

Taeniolella pertusariicola D. Hawksw. & H. Mayrhofer (1990). On thallus of *Ophioparma ventosa*, VC72 Dumfries, Glenwhargen Craig GR NS761029, 23 Apr. 2018, Coll. & Det. P. Cannon P3567. Herb. K(M). Externally, appearing like grotty strands of the superficial mycelium of a *Sphaerellothecium* sp., but with strongly verrucose, almost scaly conidia formed in chains from brown conidiophores. In this collection the colonies develop from what appears to be black cyanobacterial crud between the host thallus areoles. Mostly recorded from species of *Pertusaria* s.l., but also reported from *Ophioparma lapponica*, *Lecanora rupicola* and *Ochrolechia androgyna*. Seemingly a fairly common and widespread species and surprisingly not previously recorded from GBI. For more information see <http://fungi.myspecies.info/all-fungi/taeniolella-pertusariicola> and Heuchert et al., *Fungal Systematics & Evolution* **2**: 69–261 (2018), available free online. **BLS No. 2730**.
P.F. Cannon

Trapelia sitiens Orange (2018): on small stone in scree on N-facing slope, alt. 800 m, below Striding Edge, Helvellyn, VC 69, Westmorland, GR 35(NY)/3488.1498, 14 September 2018, Alan Orange 24188 (NMW). This species has a thin and diffuse, sometimes cracked thallus, thus resembling *T. coarctata* and *T. elacista*, but differs in the presence of immersed pycnidia with conidia 12.5–21 µm. Recently described from the Falkland Islands (Orange, *Lichenologist* **50**: 3–42, 2018). The small British specimen agrees very well with Falklands material in its ITS sequence. New to Great Britain.
BLS No. 2728.
A. Orange

Other records:

Agonimia flabelliformis: on base rich flushed bark on ancient *Fagus* and *Quercus* pollards, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9495.8500 & SU9439.8472, alt. 55–60m, September 2018 & April 2019. New to Buckinghamshire and east central England. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits.
N.A. Sanderson & D. Lamacraft

Agonimia flabelliformis: on a leaning old *Quercus petraea* on ravine slope, in old growth ravine woodland, Nab End Wood, Kilton Beck, Loftus, VC62 North-east

Yorkshire, NZ7037.1744, alt. 70m, March 2019. New to northern England and a major range extension for this newly described species. *N.A. Sanderson*

Ainoa mooreana: two sites on damp rocky till in eroding river terrace edges and a third on rotting granite exposed by wind erosion of peat in montane heath, lower slopes of Crossone and high in Chimney Rock Mountain, Mourne Mountains, H38, Co. Down, J37389.26853, J37965.26977 & J35934.26184, alt. 130, 260 & 630m, August & September 2018. New to the Mourne Mountains and the first recent Irish records. *N.A. Sanderson*

Arctomia delicatula: on phoenix ash collapsed across a small watercourse at Glenborrodale RSPB Reserve, Sunart SSSI, VC97 West Inverness-shire, GR NM601.610, January 2019. *A. Acton*

Arthonia anglica: single thallus on ancient *Ilex*, in old growth *Quercus robur* – *Ilex* pasture woodland, Matley Wood, New Forest, VC11, South Hampshire, SU3348.0793, alt. 25m, September 2018, Det. N. A Sanderson. Only the second find of this very rare lichen in the New Forest, in spite of quite intensive recent searching. *N.A. Sanderson, J. Vondrák, A. Acton, M. Powell*

Arthonia caerulescens: in apothecia of *Lecanora varia* on gate rail, South Falaknowe, Coldingham Moor, VC 81, Berwickshire, GR NT8663.6648, alt. 180 m, February 2019, Coppins 25355 (E). New to the vice-county. *B. Coppins*

Arthonia cinnabarina: on Veteran *Fagus* trunk, Ashridge Estate, VC20, Hertfordshire, GR SP9784.1204, October 2018, one thallus. During a subsequent visit it was also found on another veteran *Fagus* trunk with over 30 thalli present. Ashridge Estate, VC20, Hertfordshire SP982.119, February 2019. Second vice-county record. *A. Harris, P. Shipway*

Arthonia epiphyscia: parasitising *Physcia tenella* on a fallen twig, Boconnoc, VC2, East Cornwall GR SX146.603, alt. 43 m, February 2019. New to the county *N.G.Bacciu & Devon Lichen Group*

Arthonia muscigena: on *Sambucus*, Morkery Woods, VC53, South Lincolnshire, GR SK953.192, March 2019. Herb. Shipway. New to the Vice-county. Confirmed by Mark Powell. *P. Shipway*

Arthonia parietinaria: on senescing lobe and apothecial thalline margin of *Xanthoria parietina* on *Prunus spinosa* in wind-pruned coastal scrub, Llan-non, VC 46, Cardiganshire, GR SN507.668, alt. c. 5 m, February 2012. Herb. SPC. The 1st VC record. Previously reported as *A.molendoi* in NRI, BLS Bulletin **110**, Summer 2012, but recently re-determined. *S.P. Chambers*

Arthonia punctella: on thallus of *Diplotomma alboastrum* on S-facing outcrop of calcareous basalt, mouth of Milldown Burn, Coldingham Bay, VC 81, Berwickshire, GR NT9180.6632, alt. 14 m, February 2019, Coppins 25356 (E). New to the Vice-county. *B. Coppins*

Arthopyrenia nitescens: on twig of *Quercus robur*, VC25 E Suffolk, Sotterley Park GR TM4568.8503, Oct. 2018, Coll. & Det. P. Cannon (K(M)). Apparently new to East Anglia. *P.F. Cannon*

Arthothelium macounii: on three hazels in a stand of hazel at the Knapdale Beaver release site at Loch a' Chreag Mhòr, Knapdale SSSI VC101 Knapdale and Kintyre. On 2 hazels at GR NR804.912 and 1 hazel at NR804.913, March 2019. *A. Acton*

Bacidia circumspecta: small patches on base rich flushed bark on three ancient *Fagus* pollards, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9495.8500, SU9488.8495, SU9461.8479, alt. 55 – 60m, September 2018 & April 2019. New to Buckinghamshire and east central England. A major range extension for this Vulnerable Section 41 species and part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits. *N.A. Sanderson & D. Lamacraft*

Bacidia incompta: on lignum inside a hollow *Acer campestre*, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2841.6962, alt. 70m, March 2019. First recent record for Yorkshire for this Vulnerable and Section 41 lichen. *N.A. Sanderson*

Bacidia viridifarinosa: fertile, on the north side of trunk of old *Quercus* in valley woodland, Coed Allt Penrhiwgaled above the Afon Gido, c. 1 km west of Llanarth, VC 46, Cardiganshire, GR SN402.568, alt. 120 m, October 2018. Herb. SPC. The 2nd VC & 3rd fertile British record. Apothecia restricted to limited areas of wide-spreading thalli, but numerous in one part where they attained a maximum density of 24 over c. 25 x 8 mm. *S.P. Chambers*

Bacidina adastr (*Bacidia adastr*): fertile thallus on a *Fagus* twig in pasture woodland, Coomy Hat, Busketts Wood, New Forest, VC11, South Hampshire, SU3112.1104. alt. 30m, November 2018. New to Hampshire. This material has a neatly punctiform sorediate thallus, and similar sterile thalli are widespread in the New Forest, especially within wound tracks on ancient *Fagus*; the identity of which was unclear in the past. Andre Aptroot, has confirmed that the sterile punctiform sorediate thalli are also likely to be *Bacidina adastr*. *N.A. Sanderson*

Bacidina mendax: on sloping branch of *Salix* in shade, with *Catillaria nigroclavata*, in woodland, Stanmore Common LNR (compartment 7a), Harrow. VC 21, GR TQ 158.938, 30 March 2019. BM no. BM001242091. Confirmed by B.J. Coppins. Second UK record. *J.F. Skinner*, London NHS meeting

Bacidina squamellosa (*Bacidia squamellosa*): on *Salix cinerea* on edge of pasture woodland, Tom Pook's Hill, Stricknage Wood, New Forest, VC11, South Hampshire, SU2593.1251, December 2018. This collection supported pycnidia, these were very pale pinkish-brown 0.25mm diameter and marginless disks, with conidia 40 – 50 x 1 µm. These match the pycnidia described by Ekman (1996) *Opera Botanica* **127**:1-148. This is the first report of pycnidia from Britain and potentially Europe (see <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2304>> for pictures).

N.A. Sanderson, Wessex Lichen Group

Bilimbia sabuletorum: in small amount over bryophytes on northwest-facing trunk base of *Fraxinus excelsior* in sheltered coastal woodland, between Craig Ddu & Llanina Point, VC 46, Cardiganshire, GR SN417.600, alt. c. 40 m, December 2018. Field record. The first^t corticolous Vice-county record.

S.P. Chambers

Buellia hyperbolica: on an old *Betula pendula* and on lignum on a fallen *Quercus* log, in old growth *Quercus robur* – *Ilex* pasture woodland, Matley Wood, New Forest, VC11, South Hampshire, SU3343.0794, alt. 25m, September 2018. The first record of this rare Vulnerable and Section 41 species from *Betula*.

N.A. Sanderson, J. Vondrák, A. Acton, M. Powell

Byssoloma marginatum: on trunk of mature *Quercus* in old woodland, Roslin Glen, VC 83, Midlothian, GR NT279.632, alt. 100–135 m, December 2018, Coppins 25349 (E). Pycnidia only. New to the Vice-county and SE Scotland.

B.J. Coppins, J. Vondrák & C. Ellis

Byssoloma marginatum: on suppressed young *Quercus* and *Castanea* in old growth pasture woodland, Frame Wood & Wooson's Hill, New Forest, VC11, South Hampshire, SU359.033 & SU259.077, alt. 40m & 45m, September 2018. First records for Hampshire and only the second and third from lowland England. The lichen was recorded in two separate plots in different woods during same intensive survey; it maybe that the habitat of smaller suppressed trees in old growth woodland has been over looked in past less intensive surveys.

N.A. Sanderson, J. Vondrák, A. Acton, M. Powell

Calicium lenticulare: occasional on a dead *Quercus* stump on low cliff edge in cutover and regrowing acid woodland, Ness Wood, Ness Wood Country Park, H40, Co. Londonderry, C5217.1126, alt. 80m, September 2018. A very rare species in Ireland, with no previous records from the north of Ireland.

N.A. Sanderson

Calicium parvum: on the bark of an old *Pinus sylvestris* which had colonised a humid glade in ancient *Fagus* dominated old growth pasture woodland, Wooson's Hill, New Forest, VC11, South Hampshire, SU2591.0773, alt. 45m, September 2018, Det. J. Vondrak. First record for the New Forest and England since the original discovery in nearby Wood Crates in 1998. Subsequently refound at Wood Crates and in three other woods in the New Forest, all on well lit *Pinus sylvestris* in humid glades within

broadleaved old growth pasture woodland. This lichen appears confined to older *Pinus sylvestris* in humid locations within woods and is absent from New Forest *Pinus* trees in heathland. *Pinus sylvestris* was introduced to the New Forest area in the later 18th century and was not planted in the Forest proper in until the mid 19th century, suggesting the lichen arrived relatively recently by long distance dispersal. The lichen is easily separated in the field from the common *Calicium glaucellum* by the thicker grey-white thallus, which is distinctly verrucose, and is VU + white, Pd + yellow and K + dull yellow; of these the K reaction is least useful. The clavate asci are very distinct from the cylindrical asci of *Calicium glaucellum* or *Calicium pinastri*.

N.A. Sanderson, J. Vondrák, A. Acton, M. Powell

Caloplaca alstrupii: on twigs on *Fagus* trees and a wound track on an ancient *Fraxinus* pollard, in old growth pasture woodland; *Fagus* twigs, Wooson's Hill, SU2597.0778, alt 50m, September 2018, Det. J. Vondrak; *Fagus* twigs, Matley Wood, SU334.078, alt 30m, September 2018, Det. J. Vondrak; *Fraxinus*, Ocknel Sling, Highland Water, SU2449.1055, alt. 70m, Det. N. A. Sanderson; all New Forest, VC11, South Hampshire. New to southern England. This is a recently described, and certainly under recorded species, which is easily overlooked when sterile, but may not be a common species. When sterile this lichen looks very similar to *Caloplaca obscurella* or *Caloplaca ulcerosa*, with blister like vesicles busting to expose crater like soralia, but the vesicles are dark pigmented, when split the wall is retained as a lid-like structure and the soredia are bright green (see Palice et al (2018) *Herzogia* 31: 518–534). In neither *Caloplaca obscurella* or *Caloplaca ulcerosa* is the lid of the vesicle retained and the soredia are grey-green to blue-grey in the former and grey to pale yellow-green in the latter. (see <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2400>>)

N.A. Sanderson, J Vondrák, A. Acton, M. Powell

Caloplaca asserigena: on dead twig of *Picea* at edge of conifer plantation by abandoned quarry, 1 km S of Elf Kirk, Kielder Forest, VC 67, South Northumberland, GR NY695.848, alt. 300 m, March 2019, Coppins 25334 (E). New to Northumberland.

B.J. Coppins

Caloplaca cerina: on *Sambucus*, Aldbury, VC24, Hertfordshire, GR SP949.128, October 2018, at least 8 thalli. Second Vice-county record.

P. Shipway

Caloplaca cerinella: on *Fraxinus* twig, Morkery Woods, VC53, South Lincolnshire, GR SK95.19, March 2019. New to the Vice-county.

P. Shipway

Caloplaca herbidella s. str.: fertile thalli on well-lit lower trunks of two mature *Quercus* in parkland situation, Rydal Park, VC 69, Westmorland, GR NY36680.06081 and NY36817.05962, March 2019. New to the Vice-county. First record for the north of England of this RDB Vulnerable and Section 41 species. D. Lamacraft & A. Windle

Caloplaca herbidella s. str.: thallus with pycnidia on well-lit trunk of veteran *Quercus* tagged 08957 / 0293, Savernake Forest, VC 7, North Wiltshire, GR SU2187.6678, December 2018. Last recorded on this tree by Dr. Francis Rose in the 1990s. Now known on two trees at Savernake
D. Lamacraft

Candelaria pacifica: (i) on piece of bark with *Lecanora compallens* on the ground, at base of *Acer platinoides* by Newington Avenue bus stop, Southchurch, Southend-on-Sea, VC 18, South Essex, GR TQ902.868, July 2018. Herb. P.M.Earland-Bennett. Confirmed by B.J. Coppins. Second record of this species for Essex and East Anglia (ii) on trunk of *Salix* by lake and café, Southchurch Park, Southchurch, Southend-on-Sea, VC 18, South Essex, GR TQ898.849, October 2018. Herb. P.M. Earland-Bennett. Local records suggest that this species is under-recorded.
P.M. Earland-Bennett

Carbonea aggregantula: overgrowing thallus of *Lecanora soralifera*, Glenwhargen Craig, VC72, Dumfries, GR NS/761.029, 23 Apr. 2018, P.F. Cannon P3560. Herb. K(M). New to SW Scotland.
P.F. Cannon

Carbonicola anthracophila: on two charred snags of old *Pinus*, Glenmallie Pinewood, Loch Arkaig, VC 97, Westernness, GR NN12534.87582 & NN12616.87649, alt. 160 m, September 2019, field records (photos taken). Fourth locality for this rare old pinewood specialist of charred wood.
A. Acton & B.J. Coppins

Chaenotheca brunneola: corticolous on mixed deciduous parkland trees in pasture woodland, Sotterley Park, VC 25, GR TM46-85-, October 2018. Recorded by S. Price. Second modern record of this species for the county.
C.J.B. Hitch

Chaenotheca chlorella: on lignum exposed on ancient *Tilia* in parkland, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2772.6916, alt. 100m, March 2019. New to Northern England.
N.A. Sanderson

Chaenotheca chrysocephala: on dry bark on an ancient *Quercus*, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2789.6920, SE2831.6937, alt. 75m, March 2019. New to Vice-county.
N.A. Sanderson

Chaenotheca stemonea: on Veteran *Quercus* trunk, Langley Park, VC24, Buckinghamshire, GR TQ0148.8156, November 2018. New to the Vice-county.
P. Shipway

Chaenotheca stemonea: on dry bark on an ancient *Quercus* and a *Castanea*, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2789.6920, SE2831.6937, alt. 65 – 75m, March 2019. New to Mid-west Yorkshire and first modern record for Yorkshire. (See picture and comments on Pd reaction at <https://www.fungi.org.uk/viewtopic.php?f=16&t=2381>)
N.A. Sanderson

Chaenotheca trichialis: on inclined north side of *Quercus*, at edge of golf course, Belfairs Park Woods Nature Reserve, Belfairs, Leigh-on-Sea, VC 18, South Essex, GR TQ827.828, June 2005. Herb. P.M. Earland-Bennett, Determined by B.J. Coppins. Rare in the Vice-county. *P.M. Earland-Bennett*

Chaenothecopsis nigra: on lignum exposed on three ancient *Castanea* in parkland, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2780.6913, SE2839 6921, SE2855 6906, alt. 65 – 85m, March 2019. New to Yorkshire. *N.A. Sanderson*

Chaenothecopsis pusilla: on lignum exposed on ancient *Castanea* and *Tilia* in parkland, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2761.6923 and SE2772.6916, alt. 100 & 105m, March 2019. New to Yorkshire. *N.A. Sanderson*

Chaenothecopsis pusiola: occasional on a dead *Quercus* stub above river in cutover and regrowing woodland, Ness Wood, Ness Wood Country Park, H40, Co Londonderry, H40, Londonderry, C5220.1127, alt. 70m, September 2018. New to Ireland. Growing with *Chaenotheca hispidula* and *Cresponea premnea*. *N.A. Sanderson*

Chaenothecopsis savonica: on bark of *Quercus robur*, VC25, E Suffolk, Sotterley Park GR TM4572.8512, Oct. 2018, Coll. and Det. P. Cannon (**K(M)**). Apparently new to East Anglia. *P.F. Cannon*

Chaenothecopsis retinens: parasitising *Sporodophoron cretaceum* (*Schismatomma cretaceum*) on dry bark on a leaning veteran *Quercus*, in old growth *Fagus* – *Quercus* – *Ilex* pasture woodland opened up by *Ilex* coppicing and pollarding in 1990, Shave Wood, New Forest, VC11, South Hampshire, SU2933.1226, alt. 50m, February 2019. The second record from the New Forest for this internationally rare lichenicolous fungi, and occupying habitat actively managed for lichen conservation 29 years ago. *N.A. Sanderson*

Cladonia angustiloba: on acid humus on the back of sheep bunker in wet heath on slope within blanket bog, Slieve Sneachta, Inishowen, H34, East Donegal, C4359.3913, alt. 330m, September 2018. This acid, inland and upland habitat is very different from the coastal, if acidic, habitats reported for this taxon previously. Although recent DNA sequencing work was unable to separate this taxon from *Cladonia foliacea*, there does appear to be a strong differentiation between the taxa in the habitats occupied as well as the thallus morphology. *Cladonia foliacea* is found on much more base enriched soils and is exclusively coastal in Ireland. If not evolutionarily distinct, it is intriguing how such distinctive morphs are maintained. *N.A. Sanderson*

Cladonia azorica: three clumps on moss on boulder field in *Betula* – *Quercus petraea* wood on scarp, Conagher Forest Nature Reserve, Fermanagh Scarplands, H33, Co. Fermanagh, H0708.5390, alt. 100m, September 2018. New to Northern Ireland and

third Irish record. This taxon is potentially just a chemotype of *Cladonia portentosa* but does appear to occupy quite distinct habitats. N.A. Sanderson

Cladonia cariosa: on shingle amongst derelict buildings, Orford Ness, VC 25, East Suffolk, GR TM43-48-, October 2018. Determined by A. Aptroot. This taxon is rarely seen nowadays in Suffolk and the only time it has been seen fertile in recent decades. C.J.B. Hitch

***Cladonia grayi* s. str.**: on horizontal branch on young *Quercus* tree in bog woodland, in heathland, Matley Passage, New Forest, VC11, South Hampshire, SU3309.0710, alt. 25m, August 2018. Appears to be the first British record as an epiphyte. The very bright pale-purple fluorescence from the grayanic acid in this lichen is very distinctive, and this record was made by an opportunistic scan of the branch with a UV light. N.A. Sanderson

Cladonia luteoalba: five populations seen during a sample survey, but probably a substantial population in the Mourne Mountains over all, the lichen was observed as starting as a parasite on *Cladonia diversa* and *Cladonia coccifera* s. str. and was found on the vertical faces of peat hags in mountain blanket bog, Carn Mountain, Bog of Donard and Chimney Rock Mountain, Mourne Mountains, H38, Co. Down, J28932 2686, J35411 26696, J29023 26804, J36339 25881 & J35421 26691, alt. 490 – 630m, August and September 2018. New to Co. Down and first recent records from Northern Ireland. This species is likely to have been much under recorded in Ireland in the past. N.A. Sanderson

Cladonia luteoalba: on a low mound in level incipiently hagged lowland blanket bog and in hag in heavily eroded mountain blanket bog on shelf on hill side, one patch associated with *Cladonia diversa*, Slieve Sneachta, Inishowen, H34, East Donegal, C4229, C4389.3897 & C4333.3928, alt. 270 & 380m, September 2018. New to East Donegal. N.A. Sanderson

Cladonia luteoalba: in hags in mountain blanket bog, over growing or associated with *Cladonia diversa*, Sawel Mountain, H36 Co Tyrone & H40 Co Londonderry, H6329.9742 & H6284.9745, alt. 430 & 470m, September 2018. New to Co Tyrone & Co Londonderry. N.A. Sanderson

Cladonia phyllophora: on open exposed peat in hags in blanket bog and open patches of humus in prostrate montane heath, Carn Mountain and Chimney Rock Mountain, Mourne Mountains, H38, Co. Down, J2903.2678, J3571.2634, J3599.2611, J3627.2573 & J3628.2579, alt. 510 – 640m, August & September 2018. New to the Mourne Mountains and the first Irish records for many decades. N.A. Sanderson

Cladonia phyllophora: on the side of a hag in wet heath on a slope within blanket bog, Slieve Sneachta, Inishowen, H34, East Donegal, C4356.3916, alt. 340m, September 2018. New to East Donegal, second modern record for Ireland.

Cladonia rangiferina: three small patches in prostrate *Calluna* – *Racomitrium* montane heath, Slieve Sneachta, Inishowen, H34, East Donegal, C4229.3812, C4228.3810 & C4220.3810, alt. 450m, September 2018. New to East Donegal and a rare species in Ireland.
N.A. Sanderson

Cladonia straminea: open patches in prostrate montane heath on a summit plateau, Chimney Rock Mountain, Mourne Mountains, H38, Co. Down, J3627.2576, J3628.2579 & J3664.2609, alt. 590 – 640m, September 2018. New to Ireland.
N.A. Sanderson

Cladoniicola staurospora: parasitising the primary squamules of a *Cladonia* sp., turning them a pale, flesh colour, on clay top-soil, Teigngrace Meadow DWT, VC3, South Devon GR SX845.763, alt. 18m, February 2019. Specimen at Kew. A rarely recorded fungus, new to the county.
N.G. Bacciu

Clypeococcum hypocenomycis: parasitising *Hypocenomyce scalaris* on a mature *Pinus* trunk, Watersmeet NT, Combe car park, VC4, North Devon, GR SS739.477, alt. 217 m, November 2018. New to the Vice-county
N.G. Bacciu

Collema fragrans: a good population on lignum and bark inside hollow trunk of *Ulmus*, with *Caloplaca luteoalba* and *Bacidia incompta*, Gowbarrow Park, VC 70, Cumberland, GR NY4024.2039, March 2019. Herb. Lamacraft. New to the Vice-county and appears to be the first record of the species for the north of England since the 19th Century.
D. Lamacraft & A. Windle

Corticifraga peltigerae: parasitising *Peltigera didactyla*, Calley Heath YWT, VC61, South-east Yorkshire GR SE751.497, alt. 18m, March 2019. New to the Vice-county.
N.G. Bacciu

Cryptolechia carneolutea: three new colonies on veteran *Fagus* in old growth *Fagus* dominated pasture woodland; patches in wound track, Wooson's Hill, Mark Ash Wood, SU2524.0760, alt. 60m, November 2018; very large colonies occupying several wound tracks, Pound Hill, Mark Ash Wood, SU2432.1731, alt. 85m, December 2018; a sterile thallus with conidia colonising a recently formed wound track, Wood Crates, SU2692.0825, alt. 40m, January 2019; all New Forest, VC11, South Hampshire. The New Forest Beeches support a small but clearly dynamic of this Vulnerable Section 41 species population with evidence of recent colonisation.
N.A. Sanderson

Cyrtidula hippocastani: on *Castanea sativa* twigs in 'green' areas, Benson End, Colchester, VC19, North Essex, GR TL960.249, June 2018. Herb. P.M. Earland-Bennett. A new phorophyte for this species.
P.M. Earland-Bennett

Cyrtidula quercus: on trunk of young *Fagus sylvatica* 'pendula' in Christchurch Park, Ipswich, VC 25, East Suffolk, GR TM167.452, April 2018. Herb. P.M. Earland-Bennett. A new phorophyte for this species. *P.M. Earland-Bennett*

Cyrtidula quercus: on twigs of *Pterocarya* in Southchurch Park, Southchurch, Southend-on-Sea, VC 18, South Essex, GR TQ898849, October 2018. Herb. P.M. Earland-Bennett. A new phorophyte for this species. *P.M. Earland-Bennett*

Cyrtidula quercus, growing with *Arthopyrenia punctiformis*, on *Cydonia japonica* twigs, in St. Mary's churchyard, Layer Breton, VC 19, North Essex, GR TQ944.184, October 2018. Herb. P.M. Earland-Bennett. A new phorophyte for this species. *P.M. Earland-Bennett*

Dactylospora ophthalmizae: lichenicolous on *Pertusaria ophthalmiza* on an oak at Glenborrodale RSPB Reserve, Sunart SSSI, VC97 West Inverness-shire, GR NM601.610. *Andy Acton*

Dactylospora parasitica: on thallus of *Pertusaria hymenea*, on well-lit trunk of mature *Quercus* in parkland situation, Rydal Park, VC 69, Westmorland, GR NY36780.05942, March 2019. Herb. Lamacraft. New to the Vice-county. *D. Lamacraft & A. Windle*

Dactylospora parasitica: parasitising *Pertusaria hymenea* in a *Enterographa crassa* – *Pertusaria hymenea* community, on an ancient *Fagus* pollard, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9512.8514, alt. 55m, September 2018. New to Buckinghamshire. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits. *N.A. Sanderson & D. Lamacraft*

Didymellopsis pulposi: two records from VC 46, Cardiganshire; (i) on *Collema tenax* var. *ceranoides* on limestone chippings on building plot on trackbed of dismantled railway line, Llanfarian, GR SN591.778, alt. 30m, April 1993; (ii) on *C.tenax* var. *vulgare* on southwest-facing mortared wall in farmyard, Morfa Mawr farm, 1.5 km southwest of Llan-non, GR SN503.556, alt 25m, February 2019. Both Herb. SPC. The 1st Vice-county and 2nd and 3rd Welsh records. *S.P. Chambers*

Didymocyrtis ramalinae: parasitic on *Ramalina fastigiata* on the twigs of a *Crataegus* bush in acid grassland, Janesmoor Plain, New Forest, VC11, South Hampshire, SU2476.1283, alt. 115m, December 2018. New to Hampshire. *N.A. Sanderson, N.G. Bacciu, Wessex Lichen Group*

Dimerella tavaresiana (*Coenogonium tavaresianum*): flushed base rich bark on veteran *Quercus* in old growth pasture woodland, Frame Wood (one tree) & Matley Wood (two trees), New Forest, VC11, South Hampshire, SU3580.0337, SU3349.0790, SU334.078, alt. 40m and 30m, September 2018. First records from the New Forest Ancient and Ornamental Woods. *N.A. Sanderson, J. Vondrák, A. Acton, M. Powell*

Dimerella tavaresiana (*Coenogonium tavaresianum*): on the sides of bark crevices low down on a buttress on a veteran oak pollard, Burnham Beeches, VC24, Buckinghamshire, SU9486.8552, alt. 75m, April 2019. Another location for this rare species of veteran trees and part of the surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* and *Quercus* in Burnham Beeches during recent visits.
D. Lamacraft & N.A. Sanderson

Diplotomma epibolium: on mortar of garden wall, Arlington Avenue, Southchurch, Southend-on-Sea, VC 18, South Essex, GR TQ903.865, December 2018. Herb. P.M. Earland-Bennett. Determined by B.J. Coppins. An overlooked saxicolous species locally.
P.M. Earland-Bennett

Diplotomma hedinii: on upper southeast-facing sides of ca. four marble headstones, Bryngwyn Chapel burial yard, VC 46, Cardiganshire, GR SN300.448, alt. 155m, April 2019. The third Vice-county record. Material used up in i.d.
S.P. Chambers

Diplotomma pharcidium: on *Fraxinus* twig, near Braunton, VC4, North Devon, GR SS484.376, alt. 95 m, November 2018. Herb. Holwill. New to the Vice-county.
T. Holwill

Enterographa brezhonega: parasitising *Porina rosei* on two veteran *Quercus* in pasture woodland, Frame Wood, New Forest, VC11, South Hampshire, SU3589.0334 & SU3585.0337, alt. 40m, September 2018. A new woodland and the fourth location known from the New Forest.
N.A. Sanderson, J. Vondrak, A. Acton, M. Powell

Enterographa elaborata: three small thalli actively colonising a veteran *Fagus* in old growth *Fagus* – *Quercus* – *Ilex* pasture woodland opened up by past *Ilex* coppicing and pollarding, Redbridge Hill, Rushpole Wood, New Forest, VC11, South Hampshire, SU3103.0962, alt. 30m, January 2019. A definite instance of this very rare Section 41 species colonising a new tree opened up by past *Ilex* coppicing and pollarding in the 1990s, See (<<https://www.fungi.org.uk/viewtopic.php?f=16&t=2401>>) a very encouraging result.
N.A. Sanderson

Eopyrenula grandicula: on a *Corylus* bush in old growth ravine woodland, Nab End Wood, Kilton Beck, Loftus, VC62 North-east Yorkshire, NZ7027.1740, alt. 50m, March 2019. New to north east England.
N.A. Sanderson

Epicladonia sandstedei: parasitising a *Cladonia* sp. in chalk grassland, Watlington Hill, VC23, Oxfordshire GR SU701.935, alt. 210m, December 2018. New to the Vice-county.
N.G. Bacciu

Epicladonia sandstedei: parasitising *Cladonia rangiformis*, Holkham NNR, VC28, West Norfolk GR TF863.455, alt. 4m, January 2019. New to the Vice-county
N.G. Bacciu

Fellhanera bouteillei: on camellia leaf in gardens of Plas yn Rhiw, VC49, Caernarvonshire, GR SH2364.2822, June 2018. Herb. Lamacraft. Confirmed by S.P.Chambers. New to the Vice-county. *D. Lamacraft*

Graphis alboscripta: on 2 hazels in coastal hazel wood at Loch Mingarry, Quinish, Mull, VC103 Mid Ebudes. On one hazel GR NM425 558, one at NM425.559, January 2018. *A. Acton*

Gyalecta derivata: on large *Fraxinus* by bridge over Sauchet Water, Biel, VC 82, East Lothian, GR NT622.752, alt. 80m, February 2019, Coppins 25345 (E). New to the Vice-county. *B. & S. Coppins*

Heterocephalacria bachmannii: on thallus of *Cladonia rangiferina*, VC25, E Suffolk, Orford Ness, GR TM43334816, Oct. 2018, Coll. and Det. P. Cannon. **(K(M))**. New to East Anglia. *P.F. Cannon*

Illosporium carneum: parasitising *Peltigera rufescens*, Penhale Sands, VC1, West Cornwall GR SW772.573, alt. 31m, January 2019. New to the Vice-county. *N.G. Bacciu*

Illosporium carneum: parasitising *Peltigera didactyla*, Calley Heath YWT, VC61, South-east Yorkshire GR SE751.496, alt. 16m, March 2019. New to the Vice-county.

N.G. Bacciu

Imshaughia aleurites: on branches and trunk of dead *Quercus*, in wet heathland, Swannington Upgate Common, Swannington Upgate, VC27, East Norfolk GR TG150182, January 2019. New to the Vice-county. *P.W.Lambley*

***Inoderma subabietinum* (*Lecanactis subabietina*)**: on seven old *Quercus petraea* on ravine slope, in old growth ravine woodland, Nab End Wood, Kilton Beck, Loftus, VC62 North-east Yorkshire, NZ7029.173, alt. 50 – 70m, March 2019. The second location, and the first recent record, for this southern oceanic lichen in a very outlying population in the wooded ravines north east of the Cleveland Hills. *N.A. Sanderson*

Lasiosphaeriopsis salisburyi: on moribund thallus of *Peltigera rufescens*, Orford Ness, VC 25, East Suffolk, GR TM4336.4815, October. 2018. Herb. N.G. Bacciu **(K(M))**. . Determined by A. Aptroot and P. Cannon. Second record of the species for East Anglia. Previously known also on *P. rufescens*, from Freckenham, Suffolk, 1916, Mayfield. Confirmed by B.J. Coppins. Third record for England. *P.F. Cannon*

Lecania cyrtella: on *Sambucus*, Morkery Woods, VC53, South Lincolnshire, GR SK95.19, March 2019. New to the Vice-county. *P. Shipway*

Lecania granulata: on moss in sandy turf in gully-like depression, Whiteness Head, VC 96, Easternness, GR NH8021.5872, alt. <5m, August 2018, Coppins 25390 (E). Mostly sterile, but two apothecia seen. New to the Vice-county, and furthest south known record.
B.J. Coppins, A. Acton & H. Paul

Lecania subfuscula: on moss in sandy turf in gully-like depression, Whiteness Head, VC 96, Easternness, GR NH8021.5872, alt. <5m, August 2018, Coppins 25389 (E). New to the Vice-county.
B.J. Coppins, A. Acton & H. Paul

Lecanographa lyncea: ca. four thalli on south-facing base of veteran *Quercus* in old-growth woodland, Coed Allt Lan-las, Llanerchaeron, VC 46, Cardiganshire, GR SN477.604, alt. 45m, November 2018. Herb. SPC. The 4th Vice-county site.
S.P. Chambers

Lecanora hybocarpa: on the twigs *Quercus*, in pasture woodland, Frame Wood & Matley Wood, New Forest, VC11, South Hampshire, SU358.033 & SU334.078, alt 40m & 30m, September 2018. First records for England. The species is distinguished by the distribution of crystals, which is similar to *Lecanora pulicaris*, with course brown crystals extending below the epithecium into the hymenium well below the tips of the asci, but also with the thalline margin Pd –. With practice candidates can be spotted by the lightly pruinose pale brown discs. It has subsequently found to be quite widespread in South Hampshire and Wiltshire and has been recorded on *Quercus*, *Fagus* and *Crataegus* twigs and on *Fagus* and *Fraxinus* trunks. At one site it was mixed with *Lecanora sinuosa* on a *Fagus* trunk and internally the apothecia of both these taxa are very similar. The European material named *Lecanora hybocarpa* does not match the American type and *Lecanora sinuosa* may be a morph of the European *Lecanora hybocarpa*, which would make *Lecanora sinuosa* the correct name (J. Malíček, pers. comm.). The species appears southern and eastern in Britain.
(See <https://www.fungi.org.uk/viewtopic.php?f=16&t=2404>)

N.A. Sanderson, J. Vondrák, A. Acton, M. Powell

Lecanora hybocarpa: on the trunk of a young *Fraxinus*, relict woodland with conifer plantation, Birch Coppice, Savernake Forest, VC7, North Wiltshire, SU2345.6611, alt. 160m, November 2018. New to North Wiltshire.
N.A. Sanderson

Lecanora hybocarpa: on *Quercus* twig on old boundary tree in field within woodland, Franchises Lodge, Franchises Wood, VC8, South Wiltshire, SU2284.1708, December 2018. New to South Wiltshire.
N.A. Sanderson & Wessex Lichen Group

Lecanora jamesii: on an ancient *Fagus* pollard, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9495.8500, alt. 60m, September 2018. New to Buckinghamshire. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits.
N.A. Sanderson & D. Lamacraft

Lecanora quercicola: on a well lit ancient *Quercus* trees on the edge of pasture woodland, with *Rinodina isidioides* and *Pertusaria coronata* also on the tree, Shepherds Gutter, New Forest, VC11, South Hampshire, SU2627.1518, alt. 70m, December 2018. First record of well developed material in the New Forest for several decades. The habitat of this species in the New Forest, wood edge ancient oaks, is rare due to general expansion of the pasture woodlands over the last 150 years. *N.A. Sanderson*

Lecanora sublivescens: frequent on single old *Tilia* in parkland, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE2772.6917, alt. 100m, March 2019. New to Northern England and a major range extension for this Near Threatened and Section 41 lichen. *N.A. Sanderson*

Lecanora zosteræ: on driftwood (decorticate pine), Whiteness Head, VC 96, Easterness, GR NH8178.5785, alt. <5m, August 2018, Coppins 25381 (E). Also seen nearby on plant debris. New to the Vice-county. *B.J. Coppins, A. Acton & H. Paul*

Lecidea diducens: on a granite headstone, St. Mary's churchyard, Berrow, VC 6, North Somerset, GR ST293524, alt. 11m, October 2018, Coppins 25361 (E). New to the Vice-county. *B.J. & S. Coppins*

Leptogium cochleatum: on an elm in coastal ash- hazel-elm-sycamore woodland at Aros Park, Mull, VC103 Mid Ebudes, GR NN527.535, May 2018. *A. Acton*

Leptogium coralloideum: on at least 12 hazels on the southwest slopes of Ardsheal Hill, Cuil, VC98 Argyllshire, GR NM986.560, NM987.560, February 2019. *A. Acton & A. Griffith*

Leptogium hibernicum: on at least 7 hazels on the sw slopes of Ardsheal Hill, Cuil, VC98 Argyllshire, GR NM984 560, NM986.560, NM987.560, NM987.561, February 2019.

A. Acton

Lichenocodium erodens: parasitising the centre of a *Heterodermia leucomela* thallus on *Fagus sylvaticus*, Unit 5 Boconnoc, VC2, East Cornwall GR SX1448.6096, alt. 71m, February 2019. A common lichenicolous fungus parasitising a very uncommon lichen. *N.G. Bacciu and Devon Lichen Group*

Lichenocodium lichenicola: lichenicolous on *Physcia adscendens* growing on *Prunus spinosa* twig, Pulborough Brooks NR, VC 13, West Sussex, GR TQ0541.1713, December 2018. Herb. McCulloch. Confirmed by M. Powell (micrographs shared on Twitter). New to the Vice-county. *J. McCulloch*

Lobaria scrobiculata: a large population on a *Salix cinerea* bush by a river on the edge of an infilling glade in pasture woodland, Altnaheglish Glen, Banagher Glen NNR, H40 Co. Londonderry, C6836.0437, alt. 180m, September 2018. A new site on the NNR, with the sites known in the 1990s all lost to increasing shade. One of only three recently recorded sites for this declining species in Northern Ireland.

N.A. Sanderson

Megalaria laureri: single thalli actively colonising two veteran *Fagus* in old growth *Fagus* – *Quercus* – *Ilex* pasture woodland opened up by past *Ilex* coppicing and pollarding; north of Gutter Heath, New Forest, VC11, South Hampshire, SU3046.10537, alt. 25m, November 2018; Lyndhurst Hill, New Forest, VC11, South Hampshire, SU2871.0776, alt. 55m, January 2019. Two definite instances of small thalli of this rare Section 41 species colonising new trees opened up by past *Ilex* coppicing and pollarding in the 1990s and 2000s, the latter was a new site and about 1km from the nearest known site.

(See <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2401>>)

N.A. Sanderson

Melaspilea lentiginosula: on bark plate of mature *Pinus*, Glenmallie Pinewood, Loch Arkaig, VC 97, Westernness, bark plate of mature pine, GR NN12534 87549, alt. 180 m, September 2019, specimen collected for E. New locality for this old pine bark specialist of native pinewoods

A. Acton & B.J. Coppins

Micarea hedlundii: sterile in small amount on humid acid bark on north-side of old *Quercus* in relict strip of Atlantic Oakwood, beside the Nant Cefn-coch, Cwm y Castell, c. 350m south of Glaspwll, VC 46, Cardiganshire, GR SN739.969, alt. 100m, November 2018. Herb. SPC. The 2nd Vice-county record. S.P. Chambers & J.C.E. Hope

Micarea lapillicola: on stones in ditch in moorland, path to Stromemeanch, Loch Carron, VC 105, West Ross, GR NG874.368, alt. 60m, December 2018, Coppins 25342 (E). New to the Vice-county.

B.J. & S. Coppins

Micarea nigella: on dead stem of multistem ex-coppice oak at Glenborrodale RSPB Reserve, Sunart SSSI, VC97 West Inverness-shire, GR NM601.610, January 2019.

A. Acton

Micarea parva: on a small siliceous stone lying loose on the ground on trackside bank in *Quercus* woodland on northwest-facing hillside, Coed Abermeurig, c. 150m north-east of Abermeurig chapel, VC 46, Cardiganshire, GR SN565.562, alt. 110m, January 2019. Herb. SPC. The 2nd Welsh & Vice-county record.

S.P. Chambers

Micarea ternaria: on stones on the ground of abandoned quarry, 1 km S of Elf Kirk, Kielder Forest, VC 67, South Northumberland, GR NY695.848, alt. 300m, March 2019, Coppins 25336 (E). New to Northumberland.

B.J. Coppins

Minutophoma chrysophthalmae: parasitising the apothecia of *Chrysothrix flavovirens* on standing dead *Quercus* at two sites; on a standing *Quercus* in dried pond in glade on edge of pasture woodland, Ferny Crofts, New Forest, VC11, South Hampshire, SU3660.0554, alt. 25m, November 2018; on standing *Quercus* in old growth *Quercus petraea* – *Fagus* pasture woodland, Stubbs Wood, New Forest, VC11, South Hampshire, SU3645.0326, alt. 30m, January 2019. New to England. This lichenicolous fungus was previously recorded from the apothecia of *Chrysothrix chrysophthalma* in Scotland, but clearly should be looked for elsewhere on fertile *Chrysothrix flavovirens*.

(see <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2403>>)

N.A. Sanderson

Muellerella lichenicola: parasitising *Fulgensia fulgens*, Penhale Sands, VC1, West Cornwall GR SW764.570, alt. 48m, October 2018. New to the Vice-county and a rare host.

N.G. Bacciu

Mycocalicium subtile: in shady coarse dry crevices of bark of *Quercus*, Sotterley Park, VC 25, East Suffolk GR TM4572.8512, October 2018. Recorded and collected, Herb. S. Price. Confirmed by A. Aptroot. New to Suffolk and East Anglia.

C.J.B. Hitch

Mycoporum antecellens: on a mature maiden *Fagus*, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9513.8515, alt. 55m, September 2018. New to Buckinghamshire and east central England. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits.

N.A. Sanderson & D. Lamacraft

***Myriolecis sambuci* (*Lecanora sambuci*)**: on *Sambucus nigra* in parkland, Fountains Abbey, VC64 Mid-west Yorkshire, SE2745.6839, alt. 75m, March 2019. New to Vice-county.

N.A. Sanderson

Nigromacula uniseptata: on *Hypotrachyna laevigata*, including fertile thalli, on fallen twigs of *Betula* and *Quercus petraea* in streamside Atlantic woodland, east bank of the Nant y Factory by the confluence of the Nant Cefn-coch and Nant y Castell, Cwm y Castell, c. 350m south of Glaspwll, VC 46, Cardiganshire, GR SN739.970, alt. 100m, November 2018. Herb. SPC. The 1st vice-county and 2nd Welsh record.

S.P. Chambers & J.C.E. Hope

Normandina acroglypta: on base rich flushed bark on an ancient *Fagus* pollard, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9489 8495, alt. 65m, September 2018. New to Buckinghamshire and east central England. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits.

N.A. Sanderson & D. Lamacraft

Normandina pulchella: (i) on *Salix* trunk associated with *Hypotrachyna afrorevoluta* by stream in deciduous woodland, Mossymere Wood, Saxthorpe, VC27, East Norfolk

GR TG 129.313, November 2018. (ii) On *Fraxinus* trunk by stream in deciduous woodland, Whitwell Common, Reepham, VC 27 East Norfolk GR TG 084.204, January 2019. First and second Vice-county records. *P.W. Lambley*

Normandina pulchella: on *Fraxinus* trunk in deciduous woodland on spring line, Thursford Wood, Thursford, VC28, West Norfolk GR TF9760.3315, February 2019. New to the Vice-county. *P. W. Lambley*

Normandina pulchella: on mossy *Salix* branch in damp copse, Birch, VC 18, South Essex, GT TQ 940186, June 2018. First easterly record of the species in Essex. *P.M. Earland-Bennett*

Ochrolechia arborea: on the side of a long low branch of *Carpinus betulus* in pasture woodland, Sotterley Park VC 25, East Suffolk, GR TM46-85-, October 2018. Recorded and collected by S. Hancock, Herb. Hitch (S19). Determined by M. Powell, with the characteristic Pd+y reaction. New to the county and East Anglia. *C.J.B. Hitch*

Ochrolechia incarnata: on rock, near Ballyoughteragh, Dingle Peninsula, VC H2, South Kerry, Q3--0--, August 1978, J. Poelt (GZU). Record cited by Kukwa et al. in *Phytotaxa* **371**: 124 (2018). *B.J. Coppins*

Ochrolechia turneri: on *Fraxinus* in Hintlesham Great Wood, Hintlesham, VC 25, East Suffolk, GR TM216.943, April 2005. Herb. Hitch. Collected by P.M Earland-Bennett. Determined by B.J. Coppins. Very rare in Suffolk. *P.M. Earland-Bennett*

Opegrapha corticola: on base rich flushed bark on ancient *Fagus* and *Quercus* pollards, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9489.8495, SU9468.8483 & SU9439.8472, alt. 55 – 65m, September 2018 and April 2019. New to Buckinghamshire and east central England. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* and *Quercus* in Burnham Beeches during recent visits. *N. A Sanderson & D. Lamacraft*

Opegrapha thelotrematis: parasitising *Thelotrema lepadinum* on a veteran *Fagus* in old growth *Fagus* dominated pasture woodland, Wooson's Hill, New Forest, VC11, South Hampshire, SU259.077, alt. 50m, September 2018, Det. N. A. Sanderson. A new wood and 10km square record for this lichenicolous fungus which is very rare in lowland England. *N.A. Sanderson, J. Vondrák, A. Acton, M. Powell*

Opegrapha viridipruinosa: on *Tilia* in parkland, Studley Park, Fountains Abbey, VC64 Mid-west Yorkshire, SE277.694, alt. 75m, March 2019. New to northern England. *N.A. Sanderson*

Paranectria oropensis: parasitising a *Lepraria* sp., Triscombe, Quantocks, VC5, South Somerset GR ST160.369, alt. 284m, January 2019. New to the county. *N.G. Bacciu*

Paranectria oropensis: parasitising *Lepraria lobificans* on *Quercus petraea*, Yarner Reservoir, East Dartmoor NNR, VC3, South Devon GR SX784.792, alt. 141m, December 2018. New to the county. *N.G. Bacciu*

Parmelina carporrhizans: two records from VC 46, Cardiganshire; (i) sterile thallus, ca. 12 x 10 cm, on upperside of bough of *Acer pseudoplatanus* on sea-cliff on coastal slope, Craig Ddu, Little Quay Bay, ca. 1½ km north-east of Llanina Point, GR SN419.602, alt 45m. Field record; (ii) two large, ca. 14 cm diam., fertile thalli on dangling, but still attached, broken *Fraxinus excelsior* trunk in coastal dingle woodland, Cei-bach, ca. 2½ km east of New Quay, GR SN415.597, alt. ca. 60m. Herb. SPC. Both December 2018. New hectad records for SN45 and SN46 and the most south-westerly Welsh records to-date. *S.P. Chambers*

Parmotrema robustum: on low growing dense *Prunus spinosa* and *Calluna* scrub, near Soap Cove, Kynance, The Lizard, VC1 West Cornwall, GR SW6771.1429 and SW6772.1430, alt. 45m. This is an eastward extension of a known site at SW6769.1430, where it occurs on a small rock outcrop and on adjacent *Calluna*. April 2019. *P.W. Lambley*

Pertusaria coccodes: on top of semi rotting wood around large rusty nail in large fence post in pasture woodland, Sotterley Park, VC 25, East Suffolk, GR TM45-85-, October 2018. Field record. Rarely seen on this substrate. *C.J.B. Hitch & P.W. Lambley*

Pertusaria coronata: on single well lit ancient *Quercus* trees on the edges of pasture woodlands at two sites, also with *Rinodina isidioides* and *Lecanora quercicola* on the first tree, Shepherds Gutter, SU2627.1518, alt. 70m, and Rans Wood SU3667.0248, alt. 35m, both New Forest, VC11, South Hampshire, September 2018. The second and third New Forest sites. This species appears very rare in England but may have been somewhat over looked in the past. The orange UV fluorescence of *Pertusaria coronata*, however is a quick way of separating this similar looking species from the common *Pertusaria coccodes* and the use of a strong UV lamp accounted for both of these finds. *N.A. Sanderson, J. Vondrak, A. Acton, M. Powell*

Pertusaria ophthalmiza: on a contorted multi-stemmed *Quercus petraea* and an adjacent *Betula*, in oceanic *Quercus – Betula* dwarfed pasture woodland on a sandstone scarp in moorland, Conagher Forest Nature Reserve, Fermanagh Scarplands, H33, Co. Fermanagh, H0701.5392, alt. 130m, September 2018. A very rare species in Ireland, with no previous records from the north of Ireland. *N.A. Sanderson*

Phaeocalicium populneum: on fallen branch of *Populus tremula*, Lower Woods Nature Reserve, VC34, West Gloucestershire GR ST744.879, alt. 84m, September 2018. New to the county confirmed by N.A. Sanderson. *N.G. Bacciu and Bristol Lichen Group*

Phaeoseptoria peltigerae: parasitic on a decaying *Peltigera* species (there was healthy *Peltigera hymenina* nearby) in acid grassland in a large glade within pasture woodland,

Tom Pook's Hill, Stricknage Wood, New Forest, VC11, South Hampshire, SU2584.1259, December 2018. New to Hampshire.

N.G. Bacciu, N.A. Sanderson, Wessex Lichen Group

Phaeoseptoria peltigerae: parasitising *Peltigera hymenina*, Teigngrace Meadow DWT, VC3, South Devon GR SX845.763, alt. 18m, February 2019. A recent addition to the UK list, new to the county.

N.G. Bacciu

Phlyctis agelaea: on two hazels in a stand of hazel at Loch a' Chreag Mhòr, Knapdale SSSI, VC101 Knapdale and Kintyre. On one hazel at GR NR804.912 and one at GR NR803.911, March 2019.

A. Acton

Phylloblastia* cf. *bielczykiae: on leaves of massive ancient *Ilex* in deer park, Staverton Thicks, VC 25, East Suffolk, GR TM35-50- October 2018. Herb. Shipway with duplicate material in Herb. Hitch (S14). New to the county and East Anglia

C.J.B. Hitch

Piccolia ochrophora: on *Sambucus*, Morkery Woods, VC53, South Lincolnshire, GR SK95.19, March 2019. Herb. Shipway. New to the Vice-county. Confirmed by Mark Powell.

P Shipway

Placidiopsis custnani: on compacted soil beside the footpath on Morte Point, Woolacombe, VC4, North Devon, GR SS446.456, alt. 5m, February 2019. Herb. Putnam. New to the Vice-county.

M. Putnam

Pronectria pertusariicola: parasitising *Pertusaria pertusa*, Buzzards Wood, Southend, VC4, North Devon GR SS912.112, alt. 114m, March 2019. New to the Vice-county.

N.G. Bacciu

Pronectria robergei: parasitising *Peltigera rufescens*, Penhale Sands, VC1, West Cornwall GR SW772.573, alt. 31m, January 2019.

N.G. Bacciu

Pseudorobillarda peltigerae: parasitising *Peltigera canina*, Holkham NNR, VC28, West Norfolk GR TF867.454, alt.0m, January 2019. New to the county.

N.G. Bacciu

Psilolechia clavulifera: on bark of decaying conifer stump in an underhang, Deerpark Forest Cabins nr. Herodsfoot, VC2, East Cornwall GR SX214.594, alt. 63m, February 2019. New to the county. Determined by M.Powell. Unusually the specimen is abundantly fertile.

N.G. Bacciu

Pyrenidium actinellum: on *Lecania inundata* on limestone coping of south-facing wall, Belton Way, Belton Hills Nature Reserve, Leigh-on-Sea, VC 18, South Essex GR TQ836.858, March 2006. Herb. P.M. Earland-Bennett. Determined by B.J. Coppins. Probably a new host for this species.

P.M. Earland-Bennett

Pyrenula acutispora: on 3 hazels in Knapdale SSSI on lochside hazelwoods at the Knapdale Beaver release site. On 2 hazels in a stand of hazel at Loch a' Chreag Mhòr, Knapdale SSSI, VC101 Knapdale and Kintyre, GR NR804.912. On 1 hazel in a hazel stand at Loch Fidhle, Knapdale SSSI, GR NR800.910, March 2019. *A. Acton*

Pyrenula acutispora: on hazel in Glen Gorm, Quinish, Mull, VC103 Mid Ebudes, GR NN429.550 /NN804.912, January 2018 *A. Acton*

Pyrenula macrospora: on *Fagus* trunk, Ashridge Estate, VC 20, Hertfordshire, GR SP9790.1204, February 2019. New to the Vice-county. *A. Harris, P. Shipway*

Pyrenula nitida: fertile thalli with a K + purple reaction in a perithecium were found on five new locations on ancient *Fagus* pollards, with three more locations with sterile thalli which looked likely to be this species. Of the latter, one was on an ancient *Fagus* pollard, and two were on suppressed young *Fagus*. In *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, fertile thalli: SU9494.8502, SU9481.8489, SU9461.8479, SU9461.8480 & SU9455.8477 and sterile candidate thalli: SU9489.8495, SU9504.8510 & SU9505.8510, alt. 50 – 65m, September 2018 and April 2019. In 2018 the *Pyrenula nitida* colony at Burnham Beeches was thought to be reduced to a single tree, which had just died. During investigations into the potential for translocation at least five more live ancient trees supporting this species were discovered, along with potential still sterile colonists on two young suppressed *Fagus* trees adjacent to the dead original tree. This was a much more optimistic situation than had been initially thought in the only known extant site for this Vulnerable and Section 41 lichen outside of the New Forest. It was also noted that the species was still present on two trees to which it had been translocated in 2001, with healthy growth on the translocated flakes, but with no colonisation off the flakes on to the bark of the receiver trees.

(See <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2399>>)

N.A. Sanderson & D. Lamacraft

Pyrenula nitidella: on moderately flushed bark on a total of six veteran *Fagus* trees in old growth *Fagus* dominated pasture woodland in four woods; Wooson's Hill, SU2590.0778, alt. 45m, September 2018, Det. M. Powell and N. A Sanderson; Fox Hill, Rushpole Wood area, SU3002.1002, SU2998.1000 & SU2997.0999, alt. 35m, January 2019, Det. N. A Sanderson; Bramble Hill, Alum Green, SU2750.0706, alt. 45m, January 2019, Det. N. A Sanderson; Woodcrates, SU2685.0838, alt. 50m, .January 2019, Det. N. A Sanderson; all New Forest, VC11, South Hampshire. The only previously confirmed records from Britain are from North-east Yorkshire in 1856 and from Perthshire in 1914. Given the local frequency of the similar but larger *Pyrenula nitida* in the New Forest *Pyrenula nitidella* had been looked for without success for many years. The current discoveries confirm that it does occur, but it seems rarer than *Pyrenula nitida*. The main difficulty in finding this species is the abundance of *Pyrenula chlorospila*, which has similar sized perithecia, in the same habitats. Candidate *Pyrenula nitidella* can be picked out by the smaller and less frequent pseudocyphellae,

the less smooth thallus and, at least in the New Forest, a paler brown thallus compared to the darker olive-brown of *Pyrenula chlorospila*. To avoid too much damage to a potentially rare lichen, with care the K + purple reaction in the outer part of hymenium characteristic of *Pyrenula nitidella* can be detected in the field from a single perithecium using a tissue paper. A complication is that the K + purple reaction in *Pyrenula nitidella* is very variable in intensity, even within the same thallus, however, the spores of *Pyrenula nitidella* are distinctly shorter and narrower than those of *Pyrenula chlorospila*. (See <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2399>>)

N.A. Sanderson, J. Vondrák, A. Acton, M. Powell

Pyrenula nitidella: a few small thalli with perithecia 0.25 – 0.3m diameter and K + purple reactions in the perithecia and were found on an ancient *Fagus pollard*, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9461.8480, alt. 55m, April 2019. New to the site and the first modern record outside of the New Forest. This tree also supported *Pyrenula nitida*.

N.A. Sanderson & D. Lamacraft

Ramonia chrysophaea: on two veteran *Ulmus glabra* and an *Acer pseudoplatanus* on a steep rocky slopes, in old growth ravine woodland, Nab End Wood, Kilton Beck, Loftus, VC62 North-east Yorkshire, NZ7045.1745, NZ7044.1745 & NZ7024.1729, alt. 50 – 90m, March 2019. New to North-east Yorkshire and the first recent record for north east England for this Near Threatened and Section 41 lichen. N.A. Sanderson

Ramonia nigra: on old bark of *Ulmus*, Gowbarrow Park, VC70, Cumberland, GR NY4024.2039, April 2019. Herb. Lamacraft. A new record for this RDB Critically Endangered Section 41 species.

D. Lamacraft & A. Windle

Rhizocarpon badioatrum: on riverine siliceous boulder, Clatteringshaws Loch, stream below dam, GR NX 5478.7503, 25 Apr. 2018, P.F. Cannon P3597. Herb. K(M). New to SW Scotland.

P.F. Cannon

Rinodina isidioides: on elm in coastal ash- hazel-elm-sycamore woodland at Aros Park, Mull, VC103 Mid Ebudes. On one elm at GR NN527.536 and an elm at NN526.536. New to Mull. May 2018.

A. Acton

Rinodina sophodes: on end of drooping small branch (finger thickness) of ancient pollarded *Quercus* with *Lecanora chlorotera*, both shaded by the leaves, Staverton Park, VC 25, East Suffolk, GR TM35-51-, October 2018. Field record. Recorded by D. McCutcheon. Earlier collections of this species proved to be incorrect. Probably the first record of this taxon for the county.

C.J.B. Hitch

Schismatomma graphidioides: on a suppressed young *Fagus* at the edge of an old pasture woodland wood, Ferny Crofts, New Forest, VC11, South Hampshire, SU3670.0542, alt. 20m, April 2019. A new site for a Vulnerable and Section 41

species, which is being found more frequently within the New Forest. (See photo at <<https://www.fungi.org.uk/viewtopic.php?f=16&t=2405>>) *N.A. Sanderson*

Strangospora deplanata: on suppressed old *Fagus*, with the thin silvery thallus overgrowing *Pyrenula chlorospila* and *Enterographa crassa*, in *Fagus* dominated old growth pasture woodland, Wooson's Hill, New Forest, VC11, South Hampshire, SU2571.0784, alt. 50m, November 2018. The first English and second British record of a species that appears rare in Europe. *N.A. Sanderson*

Solenopsora vulturiensis: fertile, along sheltered fissures in Silurian mudrock sea-cliff at the east end of Little Quay Bay/Cei Bach, ca. 1½ km northeast of Llanina Point VC 46, Cardiganshire, GR SN417.600, alt. ca. 3m, December 2018. Field record. The 1st fertile Vice-county record. *S.P. Chambers*

Sphaerellothecium cinerascens: parasitic on *Cladonia parasitica* on a standing dead oak, in *Quercus – Fagus – Ilex* old growth pasture woodland, Bramshaw Wood, New Forest, VC11, South Hampshire, SU2621.1735, alt. 55m, December 2018. The second New Forest and third British record of this internationally rare lichenicolous fungus. Notwithstanding the distinctive and conspicuous blue-grey staining of the host, this species has proved difficult to find and appears to be very rare. *N.A. Sanderson*

Sphaerophorus fragilis: on an under hang on small rock outcrop in moorland, Sawel Mountain, H36 Co. Tyrone, H6374.9744, alt. 360m, September 2018. First recent record for Co. Tyrone of a species rarely recorded in Northern Ireland. *N.A. Sanderson*

***Sporodophoron cretaceum* (*Schismatomma cretaceum*)**: on dry bark on two *Fagus* pollards, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9523.8514, SU9481 8489, alt.. 60m, September 2018. New to Buckinghamshire. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits. *N.A. Sanderson & D. Lamacraft*

Staurothele hymenogonia: on boundary wall of church, Kilkhampton, VC2, Cornwall, GR SS252.113, alt. 169 m, February 2019. Herb. Putnam. New to the county. *M. Putnam*

***Sticta canariensis* (*dufourii* morph)**: on a rock face deep within a gorge, Ness Wood, Ness Wood Country Park, H40, Co. Londonderry, C5270.1162, 100m, September 2018. New to Co. Londonderry. *N.A. Sanderson*

Sticta ciliata: one small thallus on mossy trunk of *Fraxinus excelsior* and several lobes on *Corylus avellana* pole, in relic strip of streamside Atlantic oakwood, east bank of the

Nant Cefn-coch below its confluence with the Nant y Castell, ca. 350m S of Glaspwll, Cwm y Castell, Llyfnant Valley, VC 46, Cardiganshire, GR SN739.970, alt. 100m, November 2018. Herb. SPC. The 1st Vice-county and 3rd Welsh record.

J.C.E. Hope & S.P. Chambers

Stigmidium congestum: on *Lecanora chlarofera* on *Fraxinus* twig, Llanengan, VC 49, Caernarvonshire, GR SH294.277, August 2018. Herb. Lamacraft. Confirmed by S.P. Chambers. New to the Vice-county.

D. Lamacraft

Taeniolella toruloides: parasitic on *Thelotrema lepadinum* on *Corylus* in relic pasture woodland, Brunt Ground Wood, Franchise Wood, VC8, South Wiltshire, SU226.171, alt. 90m, December 2019. New to Wiltshire.

N.A. Sanderson, N.G. Bacciu, Wessex Lichen Group

Tephromela atra* var. *torulosa: on smooth bark on upperside of branch of old *Fraxinus excelsior* in woodland on coastal slope, Tresaith, VC 46, Cardiganshire, GR SN276.515, alt. 45m, April 2018. Herb. SPC. Seemingly the first Welsh record of var. *torulosa*, whereas corticolous *T.atra* var. *atra* is occasional in Cardiganshire.

S.P. Chambers

Thelocarpon coccosporum: on sandstone of wall top in areas where *Parmelia sulcata* had fallen away, Stenton Loan, Stenton, VC 82, Midlothian, GR NT620.736, alt. 120m, February 2019, Coppins 25350 (E). Second record for the vice-county. All previous British records have been on gravestones in churchyards.

B.J. & A.M. Coppins

Thelopsis rubella: on base rich flushed bark on four ancient *Fagus* pollards, on dead, in *Fagus* dominated pasture woodland, Burnham Beeches, VC24, Buckinghamshire, SU9517.8509, SU9506.8508, SU9495.8500, SU9461.8479, alt. 55 – 65m, September 2018 and April 2019. New to Buckinghamshire and east central England. Part of a surprisingly rich lichen assemblage found surviving on the more sheltered veteran *Fagus* in Burnham Beeches during recent visits.

N.A. Sanderson & D. Lamacraft

Tremella phaeographidis: on *Phaeographis dendritica* on end of *Quercus* branch, sub-coastal valley side by Penrhiwgaled above the Afon Gido valley woodlands, ca. 2½ km southeast of New Quay, VC 46, Cardiganshire, GR SN400.566, alt. 160m, October 2018. Herb. SPC. New to Wales.

S.P. Chambers

Trapelia collaris: growing with *T. coarctata* on coarse lump of brick on the ground of Nature Reserve (SSSI), at west end of Canvey Island, VC 18, South Essex, GR TQ758.835, June 2005. Herb. P. M. Earland-Bennett. Determined by B.J. Coppins. New to Eastern England.

P.M. Earland-Bennett

Trapelia collaris: on a granite pebble in exposed granite dominated till on an eroding river terrace edge, above the Bloody River on the lower slopes of Crossone, Mourne

Mountains, H38, Co. Down, J3796.2697, alt. 130m, September 2018. New to Ireland.

N.A. Sanderson

Trapeliopsis glaucolepidea: on the sides of hags in mountain blanket bogs, Carn Mountain and Bog of Donard, Mourne Mountains, H38, Co. Down, J2893.2686, J2902.2680 & J3542.2653, alt. 490 – 530m, August and September 2018. New to Co. Down and a very rarely recorded lichen in Ireland but potentially under recorded as moorland seems poorly recorded in Ireland for lichens.

N.A. Sanderson

Trapeliopsis flexuosa: on cut stump, with greenish thallus and immature fruits, Sotterley Park, VC 25, East Suffolk, GR TM 46-85. October 2018. Recorded and collected, S. Price. Determined by M. Powell. - very rare being fertile.

C.J.B.

Hitch

Tylophoron hibernicum: parasitising *Lecanactis abietina* on a veteran *Quercus petraea* in old growth *Quercus petraea* – *Ilex* pasture woodland, Red Shoot Wood, New Forest, VC11, South Hampshire, SU1825.0812, alt. 60m, January 2019 and parasitising *Lecanactis abietina* on a veteran *Quercus robur* on a boundary bank in ancient woodland, Mill Copse, Roydon Woods Nature Reserve, VC11, South Hampshire, SU3225.0009, alt. 30m, March 2019. Two strong colonies in new sites at the eastern edge of the range of this Section 41 species. In the New Forest area, this lichen was previously only recorded as small and fragmentary material.

N.A. Sanderson & A.M. Cross

Unguiculariopsis thallophila: LF on *Lecanora chlarotera*, Morkery Woods, VC53, South Lincolnshire, GR SK95.19, March 2019. New to the Vice-county.

P.

Shipway

Usnea articulata: in canopy of isolated hawthorn on coastal headland, Mynydd y Graig, VC 49, Caernarvonshire, GR SH2300.2727, October 2015. New to the Vice-county.

D. Lamacraft

Usnea esperantiana: on *Salix* twig in sheltered stream valley, Abersoch, VC 49, Caernarvonshire, GR SH308.208, May 2017. Herb. Lamacraft. Confirmed by S.P. Chambers. New to the Vice-county.

D. Lamacraft

Varicellaria velata: on trunk of *Fraxinus* in *Lobarion*-rich woodland, VC 48, Merionethshire, GR SH684.163, January 2019. Herb. Lamacraft. Confirmed by S.P. Chambers. New record for the species and 3rd for the Vice-county for this RDB species.

D. Lamacraft

Vezdaea aestivalis: on *Leptogium gelatinosum* and moss at base of north facing wall, St. Michael and All Angels, Brimpsfield, VC33, East Gloucestershire, GR SO941.128, September 2018. New to the Vice-county. Confirmed by Mark Powell.

P. Shipway

Vouauxiella verrucosa: parasitising *Lecanora campestris* on a church wall, Nymet Rowland, VC4, North Devon GR SS711.082, alt. 122m, March 2019. New to the Vice-county.
N.G. Bacciu, T. Holwill and M. Putnam

Wentomyces lichenicola lichenicolous on *Gomphillus calycioides* on hazel dominated woodland at Newdale (above the campsite), Mull, VC103 Mid Ebudes, GR NN4914.5431, November 2018, also at Glen Aros, Mull, VC103 Mid Ebudes, GR NN5187.4605, December 2018.
A. Acton

Xenonectriella lutescens: parasitising *Peltigera hymenina*, Teigngrace Meadow DWT, VC3, South Devon GR SX845.763, alt. 18m, February 2019. New to the county.
N.G. Bacciu

Corrigendum

My thanks to the authors of the entry for ***Staurothele hymenogonia*** at Snargate, East Kent, in the *Bulletin* no. **123**, for pointing out that the recording date had been omitted. It should have read July 2018.

British Lichen Society Field Meetings & Workshops Programme 2019/2020



Field Meetings Secretary: Steve Price, Woodlands, Combs Road, Combs, High Peak, Derbyshire SK23 9UP
email fieldmeetings@britishlichensociety.org.uk

*note: **All members** of whatever level of experience are welcomed on **all BLS Field Meetings**. No member should feel inhibited from attending by the fact that some meetings may be associated with BLS Council meetings or the AGM. Workshops, on the other hand, may be aimed at members who have some level of experience. If so this fact will be specified in the meeting notice.*

BLS SUMMER FIELD MEETING - Holy Island, Anglesey, Wales
Friday 19 to Friday 26 July 2019
Local organiser: Tracey Lovering

This meeting is based on Holy Island on the very north-west corner of Wales. The complex geology of Anglesey offers a range of interesting lichen habitats, including disused copper mines. There is of course plenty of coastal habitat to study, including rocky shore, dunes, coastal heath, streams and the Menai Straits. The majority of the coastline is accessible via the All Wales Coastpath. As well as collecting new records for the Island, we will re-visit a selection of previously well-recorded sites supporting interesting records, to record change. Site visit options will also include churchyard and woodland. Lots of interest for everyone.'

Meeting Base

Anglesey Outdoors, Porthdafarch Road, Holyhead, Anglesey LL65 2LP
Tel. 01407 769 351

website: <http://www.angleseyoutdoors.com/index.html>

for a map of the area have a look at:

<http://www.streetmap.co.uk/idld.srf?X=223787&Y=380706&A=Y&Z=115&lm=1>

Accommodation and costs

The BLS has booked for exclusive use the whole of the Main Centre and the Maris accommodation at Anglesey Outdoors. The 12 bedrooms of varying capacities have been allocated to provide 22 bed-spaces for our group.

We have booked on a full-board basis.

The costs are:

Single accommodation £447 per person for the week (there are four single-occupancy rooms available).

In twin accommodation £387 per person for the week (there are six twin-occupancy rooms available).

In triple accommodation £352 per person for the week (there are two triple-occupancy rooms available).

Attendees are asked to advise when booking of any special dietary needs.

Anglesey Outdoors has camping facilities and a range of other accommodation is available on Holy Island. Attendees wanting to book these facilities need to make their own arrangements.

Booking

Attendees should book onto the meeting with the Field Meetings Secretary, Steve Price, email: fieldmeetings@britishlichensociety.org.uk or by post to Woodlands, Combs Road, Combs, High Peak SK23 9UP and send him a £50 deposit per person, cheques payable to 'The British Lichen Society' (not 'BLS' please). If attendees wish to pay by bank transfer details will be sent on request.

If taking meals please advise of any special dietary needs.

Microscope Work

Microscope work will take place in the lounge and dining areas of the Main Centre. Bring your own microscopes if you can. The BLS stereo and compound microscope will also be available for communal use. If possible please try to bring your own consumables (microslides / cover slips / razor blades / chemicals).

Timetable

The meeting will run from Friday 19th when we will gather after dinner for an introductory meeting. We vacate the accommodation in the morning of Friday 26th. Further details of the field programme will be sent out to attendees nearer the time of the meeting.

Transport to the meeting

Holyhead is the terminus station of a mainline railway. The train station is less than 2km from the meeting base.

Maps of the area

The following maps may be useful and dependent upon the location of field sites additional maps may also be recommended.

- OS Explorer Series 1:25,000 scale
- Sheet 262 - Anglesey West / Gorllewin Yns Môn (meeting base on this map)
- Sheet 263 - Anglesey East / Dwyrain Yns Môn
-

OS Landranger Series 1:50,000 scale

Sheet 114 - Anglesey / Yns Môn (meeting base on this map)

British Geological Survey 1:50,000

Special Sheet - Anglesey

BLS RECORDING MEETING - Rydal Park, Cumbria

Wednesday 4 and Thursday 5 September 2019

Local organisers: Dave Lamacraft & April Windle

Field Leaders: Neil Sanderson & Brian Coppins

A two day meeting in the parkland and woodland at Rydal Park, Cumbria. The main purpose of this meeting is to record lichens. All BLS members are welcome to attend however the less experienced should not expect much time being given over to tuition.

Rydal Park consists of a large parkland area with scattered mature oaks and mixed deciduous woodland on the slopes above (including a number of ancient ash pollards). The lichen interest has not been looked at in any detail for some years and a brief visit in March yielded new records of *Caloplaca herbidella* s. str. suggesting the site is well worthy of further exploration. Recent information on the lichen interest has also been requested by Natural England to update their records. This is part of the National Heritage Lottery Fund funded *Back from the Brink Ancients of the Future* project.

A meeting room has been booked at Rydal Hall for the evening of Wednesday 4th for microscope work, showing the days finds and sharing the days problems.

There is no limit on numbers, however because we do need to let Estate staff know how many will be attending **BOOKING IN ADVANCE IS ESSENTIAL**.

The meeting time on Wednesday 4th is 10.00 am and details of the meeting place will be sent out to those who confirm their attendance. It is anticipated that the meeting will finish late afternoon on Thursday 5th.

Booking

Members with an interest in attending should email Steve Price, the Field Meetings Secretary, at: fieldmeetings@britishlichensociety.org.uk or by post to Woodlands, Combs Road, Combs, High Peak SK23 9UP.

Accommodation

There will no specific base for the meeting and attendees will need to make their own arrangements for accommodation.

Location and maps

For information the central grid reference for Rydal Park is NY365063 (the parkland and woodland extend south-westwards, northwards and eastwards from here). For an online map of the area see:

<http://www.streetmap.co.uk/map.srf?X=336550&Y=506350&A=Y&Z=115>

The OS Explorer Leisure 1:25,000 map - OL7 - The English Lakes, South Eastern, covers the whole of the area of interest.

BLS AUTUMN FIELD MEETING 2019 - Juniper Hall, Surrey Wednesday 30 October to Sunday 3 November 2019

Local organiser: Paul Cannon

The Autumn 2019 Field Meeting will be based at the Juniper Hall Field Centre, at the base of Box Hill near Dorking. Surrey is a surprisingly diverse county for lichen habitats, even though exposed rock is largely restricted to churchyards. Recent indications suggest that the recovery of lichen populations from historical air pollution is going well, although nitrification remains a major concern. Expect woodland borders and old trees on the chalk soils of the North Downs, and parkland and lowland heath habitats on the Greensand. Some of the iconic lichen churchyards of the south-east will be in range, including Mickleham within walking distance of the centre which may still hold the national record for species numbers.

Meeting base

Field Studies Council, Juniper Hall, Old London Road, Dorking, Surrey RH5 6DA
Tel. 01306 734501

website:

<https://www.field-studies-council.org/centres/londonregion/juniperhall.aspx>

for a map of the area have a look at:

<http://www.streetmap.co.uk/map.srf?X=517257&Y=152710&A=Y&Z=120>

Accommodation and costs

The BLS has booked 15 bedrooms for single or twin occupancy.
We are booked on a full-board basis.

The costs per person are:

Single accommodation £212.60 plus VAT (at 20% total = £255.12)

Twin accommodation £152.00 plus VAT (at 20% total = £182.40)

Attendees are asked to advise when booking of any special dietary needs.

Booking

Attendees should book onto the meeting with the Field Meetings Secretary, Steve Price,

email: fieldmeetings@britishlichensociety.org.uk or by post to Woodlands, Combs Road, Combs, High Peak SK23 9UP and send him a £35 deposit per person, cheques payable to 'The British Lichen Society' (not 'BLS' please). If attendees wish to pay by bank transfer details will be sent on request.

Microscope Work

A workroom has been booked for microscope work, presentations etc.

Bring your own microscopes if you can. The BLS stereo and compound microscope will also be available for communal use. If possible please try to bring your own consumables (microslides / cover slips / razor blades / chemicals).

Timetable

The meeting will run from Wednesday 30th when we will gather after dinner for an introductory meeting. We vacate the accommodation in the morning of Sunday 3rd November.

Further details of the field programme will be sent out to attendees nearer the time of the meeting.

Transport to the meeting

Trains:

Dorking Station (1.6 miles) - regular trains from London (Victoria and Waterloo) and Horsham. Taxis are readily available outside the main station.

Dorking Deepdene (1.6 miles) - trains from Reading, Guildford, Gatwick, Redhill and Reigate stop at Dorking Deepdene station.

Box Hill and Westhumble (1 mile).

Buses: The 465 service runs between Dorking (opposite the main train station) to Kingston upon Thames and stops just outside the centre.

Satnav: please use RH5 6BZ for Satnavs.

BLS AGM 2020- Field Outing Sunday 2 February 2020

A one day field outing is being planned to follow the AGM which is being held at The

Royal Botanic Garden, Edinburgh.

Further details will appear in the Winter aBulletin and will be posted on the BLS website.

BLS WINTER WORKSHOP 2020 – Cloughton, Scarborough

Bring along yet more problems

Friday 6 to Sunday 8 March 2020

(with an optional field outing on Friday 6th)

Tutors: Brian Coppins & Mark Powell

Following on from the success of the '*Bring along your problems*' and '*Bring along more problems*' weekends in 2018 and 2019 this workshop will provide members with a further opportunity to air and share their lichen identification problems and their problems in using techniques needed to aid identification.

Again, look out those problematic specimens which have been haunting you; most likely they are nameable. Problems with techniques can include issues with microscopes / chemical tests / staining etc. Problems and their solutions will be shared throughout the group.

No problem too small! The bulk of the time will be spent in the adequately sized meeting room. The grounds of Cober Hill and its environs offer plenty of opportunity to take a short walk and to find more question-posing material.

There will also be an ***optional field outing*** during the day on Friday 6th. We will meet at 09.30 am at Cober Hill; details of the outing are to be decided. If interested in this attendees are asked to make their own arrangements for accommodation for the night of Thursday 5th by booking directly with Cober Hill or elsewhere.

Meeting Base

The meeting will be residential at Cober Hill, Cloughton, Scarborough, North Yorkshire YO13 0AR

Tel.: 01723 870310 email: enquiries@coberhill.co.uk

See www.coberhill.co.uk to have a look at the accommodation and facilities.

Accommodation and costs

Accommodation for 20 people in single and twin en-suite rooms has been reserved and a deposit paid by the BLS. These bed spaces are being held for us until the end of August 2019 (6 months before the meeting date). Subject to availability rooms will be able to be booked after this date.

Full-board accommodation (incl. dinner, breakfast and sit-down lunches) for the two nights is £184.50 per person (inc. VAT at 20%). This price includes the hire of the meeting room from early evening on Friday until late Sunday afternoon. The group package is for the 2 nights and there is no reduction for a shorter stay.

The earliest check-in time for rooms is 15.00. Dinner is at 19.00.

Booking

Attendees should book their rooms with the Field Meetings Secretary, Steve Price, email: fieldmeetings@britishlichensociety.org.uk or by post to Woodlands, Combs Road, Combs, High Peak SK23 9UP and send him a £50 deposit, cheques payable to 'The British Lichen Society' (not 'BLS' please). If members prefer to pay by bank transfer please request details from the Field Meetings Secretary.

The deposit once paid by BLS to Cober Hill will be non-refundable.

Cancellation of places less than 16 weeks before the meeting will incur extra charges, therefore the balance (£134.50) needs to be paid by the end of October 2019.

Please advise of any special dietary needs and also if you do not need dinner on the evening of arrival. Note there will be no reduction in the cost if you do not take dinner that night.

If attending the ***optional field outing on Friday 6th*** attendees are asked to book their accommodation for the night of Thursday 5th directly with Cober Hill or elsewhere.

Microscope work

A very large meeting room has been reserved for the duration of the meeting for microscope work and presentations. The BLS microscopes will be available for communal use.

Timetable

Meet for dinner on Friday 6th at 19.00. We need to vacate the bedroom accommodation after breakfast on Sunday 8th and the meeting room by 16.00hrs on the Sunday afternoon. A full lunch is provided on the Sunday.

Further details of the programme will be sent out to attendees nearer the time of the meeting.

BLS SPRING MEETING 2020 – North Harris, Outer Hebrides

Saturday 2 – Saturday 9 May 2020

Local contact: Tristan ap Rheinallt

The spring 2020 meeting will be on North Harris. Lichen-wise this is a much under-recorded area of Scotland. This is the first BLS meeting on the Outer Hebrides.

Meeting base

The meeting base is the Scaladale Centre, Ardvourlie, Isle of Harris, HS3 3AB. The Centre lies 15 miles (half an hour's drive) south of Stornoway, Lewis and 11 miles north of Tarbert, Harris.

Accommodation and costs

The BLS has booked the whole of the Centre. We are booked on a self-catering basis. There are 6 bedrooms of varying sizes, which are being utilised to provide up to 18 bed spaces. Because of the limited number of rooms, single accommodation will not be available.

The cost for the week is £179 per person. Sheets / duvets / towels are provided.

Website: <https://www.scaladale-centre.co.uk/>

For a map of the area have a look at:

<http://www.streetmap.co.uk/idld.srf?X=118725&Y=910631&A=Y&Z=115&lm=1>

Booking

Attendees should book with the Field Meetings Secretary, Steve Price, email: fieldmeetings@britishlichensociety.org.uk or by post to Woodlands, Combs Road, Combs, High Peak SK23 9UP and send him a £35 deposit, cheques payable to 'The British Lichen Society' (not 'BLS' please). If members prefer to pay by bank transfer please request details from the Field Meetings Secretary.

Timetable

The meeting will run from Saturday 2nd when we will gather after dinner for an introductory meeting. We vacate the accommodation in the morning of Saturday 9th. Further details of the field programme will be sent out to attendees nearer the time of the meeting.

Transport to the meeting

Caledonian MacBrayne operate ferries from Ullapool to Stornoway and Uig to Tarbert.

The bus service W10 (Stornoway – Leverburgh) connects Scaladale with both Stornoway and Tarbert.

Although it is extremely rare for anything to go wrong with the arrangements for our field meetings and workshops, it has happened. In 2015 the hotel we had booked for accommodation cancelled without warning and at short notice. The BLS is not liable for such action and will not reimburse participants for losses out of the Society's control. Attendees on our meetings are advised to at least consider holiday insurance (note that for insurance purposes our meetings are best classified as themed holidays). The Society does not arrange such cover although it does of course have Public Liability Insurance.

In the unfortunate event of an unforeseen cancellation, participants should be diligent in keeping receipts of all expenditure they incur as a result of such action. The case for reimbursement may depend on the production of receipts.

Steve Price, BLS Field Meetings Secretary

Minutes of the ANNUAL GENERAL MEETING

Lady Sainsbury Lecture Theatre, Jodrell Building, Kew

Saturday 26th January 2019

Welcome by the President: Dr Paul Cannon

Members Present: Andy Acton; Andre Aptroot; Judith Allinson; Rod Ashwell; Juliet Bailey; Lesley Balfe; Naveed Bhatti; Ishpi Blatchley; Graham Boswell; Richard Brinklow; Paul Cannon; Peter Crittenden; Andy Cross; Amanda Davey; Simon Davey; Frank Dobson; Bryan Edwards; Damien Ertz; Ester Gaya; Alan Green; Susan Griffiths; Raymond Griffiths; Terence Hackwill; Shirley Hancock; David Hawksworth; David Hill; Chris Hitch; Bob Hodgson; John Howieson; Connor Jones; Les Knight; Peter Lambley; Tracey Lovering; Fay Newbery; Allan Pentecost; Steve Price; Maxine Putnam; William Purvis; Helen Renny; David Richardson; Ken Sandell; Neil Sanderson; Mark Seaward; Paula Shipway; John Skinner; Fiona Spence; Eluned Smith; Amanda Waterfield; Gothamie Weerakoon; Tim Wilkins; Vanessa Winchester; Pat Wolseley; Rebecca Yahr. Maaïke Vervoort attended as an observer.

Apologies for absence: Ann Allen; Brian Coppins; Sandy Coppins; Ginnie Copsey; Dave Genney; Theresa Greenaway; Barbara Hilton; Dave Lamcraft; Peter O'Neill; Heather Paul; Sue Knight; Ivan Pedley; Janet Simkin; Ray Woods.

The **Minutes of the AGM held in Carlisle on 20th January 2018** were published as draft in the Summer 2018 Bulletin. With a minor amendment proposed from the floor by Tracey Lovering, formal adoption of the Minutes was proposed by John Skinner and seconded by Ishpi Blatchley and passed unanimously. There were no matters arising.

The President's Report by Paul Cannon

The Officers and Council members were thanked, along with members of the Conservation, Data and Education & Promotion committees. Editors, authors and reviewers of papers to the Lichenologist and articles for the Bulletin contribute hugely to lichenological knowledge in the British Isles and abroad. Paul thanked contributors of records to the BLS database, participants in field meetings, Facebook posters and tweeters, Andy Stephens and the RSB membership team and all who are at the AGM. We have a thriving and successful Society.

The Society noted with regret the deaths of a number of members in 2018, namely Albert Henderson; Michael C. F. Proctor; Sheila M. Reid; Sir David Smith (Honorary Member); Michael J. Staines; Roger M. Veall. Mark Seaward gave short eulogies on the late Sir David Smith and the late Albert Henderson.

The President then congratulated Honorary Members Mark Seaward and Pat Wolseley on attaining their 80th birthdays and thanked them both for their long and continuing contributions to lichenology.

Following reports from the BLS Officers, the President singled out some highlights of 2018.

Members' Handbook

A second edition of this useful publication has been published and sent to all members. Dobson, *Lichens - An Illustrated Guide to the British and Irish Species*, 7th Edition
Paul Cannon thanked Frank Dobson for completing the 7th edition of his *Illustrated Lichens* book, which was published in Summer 2018. The BLS funded the print run, and almost all of the sales income accrues to the Society. Nearly a third of the 1750 paperback copies printed have been sold to date, and over a half of the hardbacks, yielding about £8400.

Lichens of Great Britain & Ireland Edition 3

Good progress has been reported, and the new glossary is largely complete. Revisions of 202 species have been completed (ca 10%). André Aptroot has joined the editorial team. A managing editor has been identified to deal with administration and help with formatting and consistency issues.

Grey literature

Access to grey literature (mostly unpublished reports on surveys) also remains problematic. As highlighted in the report for the last AGM, abstracts and a considerable amount of grey literature is currently arranged alphabetically in folders, but this resource is rapidly becoming 'historic', with little or no new material being added – and so is far from complete. There is a real risk that surveys submitted to commissioning organisations will become lost. The Society is taking steps to resolve this matter, and about 200 reports have now been scanned from the LichensEL collection, mostly on a commercial basis following cost analysis. These will be accessible on request via the BLS. The cost is approximately £1500. Any member wishing to volunteer to help catalogue the grey literature should contact the Librarian and Paul Cannon.

Finally, a summary of the Society's activities in 2018 was presented. These included:

Publications

- One book, one handbook, one major project report (and advertising flyers)
- Two issues of the Bulletin with 53 contributions and 304 pages
- Six issues of the Lichenologist with 50 papers and 704 pages

Social media

- 2056 tweets and 1929 followers on the BLS Twitter account
- 551 followers on the BLS Facebook account

New taxa and records

- 13 new species of lichens and lichenicolous fungi for the UK
- 326 "New, Rare & Interesting" records
- 53507 records added to the BLS database from 891 10km squares

Field meetings

- Five field meetings and one workshop, to Cumbria (twice), Galloway, Herefordshire, Suffolk and Yorkshire
- 134 attendees with 622 person/days survey effort

Grants

- £2768 on 6 grants for travel/subsistence with 15 direct beneficiaries

Officers' and committee chairs reports:

Treasurer - John Skinner

A two-sided Summary Statement of Financial Activities for the year ended 30th June 2018 was presented. The full Trustees Report and Financial Statement may be viewed on the Charity Commission website.

Financially, the Society had another very satisfactory year. Total income for the year was £174827 which is approximately £40K more than 2017, due to generous legacies from the late Jack Laundon and Pauline Topham. The Lichenologist also continues to be profitable, generating £59261 over the year with six issues published by CUP. Members subscriptions are up from £15294 to £16582. Total expenditure decreased from £119K in 2017 to £109K.

Putting income and expenditure together, the total funds carried forward on 30th June 2018 are £546232. The Register of Assets values property owned by the BLS (primarily bank deposits) at £541520 as of December 2018 and was accepted as correct by Council in January 2019. The Register is available from the Treasurer, along with the full Financial Statement. John Skinner thanked both Council and our American Treasurer Jim Hinds, for their input into these matters throughout the year. The acceptance of the statement on Finances was proposed by John Skinner and seconded by Rebecca Yahr and passed by a vote with unanimous support from all the members.

Paul Cannon proposed a vote of thanks to John for his work in compiling the accounts for the BLS and this was warmly acknowledged from the floor.

Conservation Committee - Bryan Edwards

Bryan was pleased to report the completion of part of the 'Guidelines for the Selection of Biological (lichens and microfungi) SSSIs with indices for lichens associated with water courses, wayside trees, acidic rocks, metalliferous and limestone sites and maritime habitats. It was produced in partnership with JNCC and information on the publication will be published in the Bulletin. He thanked his Committee especially Neil Sanderson, Tim Wilkins, Dave Genney and Sam Bosanquet. This publication is not yet complete but work is ongoing for other lichen assemblages, which will be useful for grading localities and selecting sites of National Importance.

Bryan announced that a near-final draft Report for the Lobarion Project has been produced but needs formatting and proofreading for England with maps and photos. It will be made accessible via our website, and formally published in the summer of 2019 and sent to the National Trust and Wildlife Trusts. There is no sign

that Lobarion communities in lowland England are recovering, indeed, many thalli can be lost when even one mature host tree dies. Many suitable woodlands are also becoming more shaded so conservation measures such as removal of holly and ivy may help.

He also commented on the ambitious 25-year Environment Plan by DEFRA, but wondered where the taxonomic and conservation expertise will come from to maintain or enhance biodiversity, given that many experts have been 'let go' by Government bodies recently. He drew attention to the decline in some terricolous lichens and looked forward to the Public Enquiry on the Coul Links Golf Course in Scotland in March 2019, when Brian Coppins will emphasise the importance of conserving lichens on land threatened by development.

Questions from the floor. Peter Lambley commented that the Breckland lichen sites are deteriorating and that disturbance of ground near housing estates and lack of grazing, as well as new golf links, are contributing to the decline of terricolous lichens. David Hawksworth praised the efforts of the Conservation Committee in describing the lichens and habitats in the new SSSI guidelines and said that a document such as this confers more status and says that it is important to name your 'good lichens' in it.

Juliet Bailey asked if the new Environmental Land Management Scheme covers golf links, and Tim Wilkins replied in the affirmative.

Data Committee - Les Knight

Les discussed the issue of long-term support for Recorder 6 which was first raised by JNCC in 2013. JNCC confirmed in September 2017 that their funding of R6 support was to end on 31st March 2018. Since then, one of the R6 users has funded support until March 2019 and ALERC (the Association of Local Environmental Records Centres) have consulted on the future of R6.

A consortium is now being established and an annual subscription of £250 for the BLS to have access to essential support and updates to the software and taxon dictionaries will be paid from April 2019. This will cover all the BLS copies of the database, *i.e.* systems held by Janet Simkin, Brian Coppins, Steve Price, Les Knight, Paul Cannon and Rebecca Yahr. Janet Simkin has been asked to represent the national societies and schemes on the consortium steering group and will receive reasonable expenses for travelling to meetings.

Brian Coppins and Janet Simkin continue to add records to the database, not just recent spreadsheets from members but also thousands from Brian's "Det. Books" and the Leicestershire collection list provided by Tony Fletcher. Imports have been delayed by problems with the taxon dictionary but the backlog should be cleared during January 2019.

Distribution of database updates through Dropbox is working well and there are now at least five copies of the database being kept up to date in different locations. Many of the problems with the taxon dictionary caused by the British Mycological Society update were resolved when a further update was issued in November 2018, but there was still a problem with the *s. lat.* taxa. Les Knight thanked Richard Shotbolt and Brian Coppins for their hard work on resolving this. For the first time in years we now have a taxon dictionary that shows both the original and modern names for each record

correctly, and that will make producing maps and dealing with data requests quicker and easier.

Work to build a multi-attribute key to all UK Lichens is progressing in line with species descriptions for the 3rd edition of the *Lichens of Great Britain & Ireland*. There are now 10200 lichen records in iRecord which need to be verified, downloaded and imported to Recorder 6. Most of the records are for common species and only 356 of these have been input through the BLS lichen recording activity and so have the substrate information that is particularly useful to us.

The NBN Atlas is now working well but it needs further development and the NBN have recently recruited more developers to progress this. Access to the lichen data has been a problem because of the errors in the taxon dictionary, but this should soon be resolved and will reduce the number of data requests coming directly to us. We need to keep track of downloads of our data but this has not yet been set up for us.

Les Knight attended a course on the free QGIS mapping system. Using the TomBio plugin, the software showed enormous potential for mapping the distribution of lichens against a geographical backcloth. Janet Simkin is developing an extract from the database so that datasets in QGIS can easily be kept up to date.

The Fungi of Great Britain & Ireland website continues to expand quite rapidly. Les thanked his Committee and in particular, Nigel Chadwick, Brian Coppins, Paul Cannon and Janet Simkin for all their hard work this year.

Paul Cannon proposed a vote of thanks to Les Knight and the Data Committee for their work and this was warmly acknowledged from the floor.

Education and Promotions Committee - Fay Newbery

2018 saw the completion and printing of a 2nd edition of the Members Handbook. This went out to all members with the Winter Bulletin and enough stocks remain to provide all new members with a copy upon joining.

EPC also finalised a colourful new A5 flier to advertise the Society. These are available to anyone who gives talks or runs classes and feels that it would be beneficial to advertise the Society in this way. Please contact Paul Cannon for supplies. An academic version of the flier has been drafted and will be put onto the website.

Since the successful launch of BLS Facebook and Twitter accounts, handled by Simon and Amanda Davey, in the Autumn of 2017, the Society's social media presence has been enjoyed by thousands. And interest continues to grow. The Society is in the process of moving its Forum discussions to UK Fungi. This is a long-standing forum for discussions on UK fungi. Discussion can be followed by non-members, but registration is simple and explained on the site if anyone is interested in contributing to the discussions.

Members of the EPC have been gathering evidence for the kinds of support most relevant to learners and educators of lichenology and aim to concentrate on this area throughout 2019. If any BLS members have ideas of what could be useful to them educationally, please contact Fay Newbery via the details in the Bulletin. The working weekends have been successful in enabling the team to create learning materials for various stages of experience, and another is planned for Spring 2019.

Both Paul Cannon and Fay thanked the members of the Committee for their hard work this year and received warm applause from the floor.

Bulletin Editor - Maxine Putnam

Maxine thanked her co-editor, Tony Holwill and said that the two editions of the 2018 Bulletin with 53 contributions and 304 pages had been well received. The quality of the colour printing has improved. She observed that the Bulletin is the members' publication and dependent on contributions from the members to make it a good read. Maxine is working on completing the Index, which is missing from 1992 to 2008, and wants to make pdfs and paper copies available to members.

The Lichenologist - Peter Crittenden

Peter reported a busy year with six issues being published comprising 50 papers and 704 pages, and an increase in the journal's impact factor. The ongoing problems with the offshore typesetters should be solved by the March 2019 edition. A new Managing Editor, Joanne Taylor from RBGE is taking over from Margaret Crittenden. Peter is currently negotiating with a duo of two new Senior Editors to share the workload when he steps aside. He thanked all members of the Lichenologist team, in particular Brian Coppins and Katherine Challis who notice and correct many errors in the submissions. Paul Cannon proposed a vote of thanks to Peter and Margaret Crittenden and the team and this was warmly acknowledged from the floor.

Points from the floor: David Hill asked all members to keep a look out for lichenological books which are being published, so that he can review them for the Lichenologist.

Website Editor - Janet Simkin

Paul Cannon gave apologies for Janet and reported that the website is secure and well-used by members and others. Her report follows:

The website was redeveloped six years ago and, from the feedback Janet gets, is still meeting the needs of students and casual enquirers. Our members make good use of the events calendar, taxon dictionary and distribution maps, all areas of the website that are updated regularly, but the news section is now little used as that role has been taken over by our Twitter and Facebook accounts. We have spent some time looking into how we could add a forum to the website, to take the place of the yahoo forums which have been giving problems for years, but a trial run was not successful and we are now looking into other, more suitable options.

Several small changes have been made to the website this year to make it easier to find some of the less used resources, and suggestions of changes or additional resources are always welcome. A guide to making simple changes to the website has been produced and issued to a few key people, and we hope that this will lead to a refreshing of some of the more static pages over the coming months. Janet will be keeping an eye on this, to ensure that we don't lose sight of the overall style and consistency of the website. Apart from that priorities for the next year are to get the distribution maps and downloads updated, and to reinstate the churchyard and lobarion interactive maps. These used to be popular but they haven't worked for some

time and need recreating, so we may take the opportunity to add similar maps for, say metalliferous sites, at the same time.

The Lichens of Wales website is now in our care but has not been updated for some years, so Tracey Lovering is being trained and will take this on. The British Lichens website is also now in our care but plans to redevelop this are being reviewed in the light of the work being done on FGBI and on the forums and Twitter. It has not been updated for many years but the photos are still useful.

Social Media - Amanda Davey

There has been a keen and growing interest in our Facebook and Twitter presence, with some 553 followers on the former and over 2056 tweets and 1929 followers on the BLS Twitter account. The lichenology people on social media are very friendly, and the content ranges from appreciation of beautiful lichen photographs to expert discussions on identification and staining methods. Amanda and Simon Davey acknowledged the enthusiastic input of BLS members and encourage more of us to become involved in the lively online interactions.

Field Meetings - Steve Price

In 2018 there were 6 field meetings and all were well attended. They were located in Cumbria (2 meetings), Suffolk, Galloway and Herefordshire and with a workshop in North Yorkshire. The 35 people attending the meeting in Borrowdale, Cumbria was a most excellent turnout.

The 2 day meeting amongst the veteran trees of Moccas Park, Herefordshire was not in the usual format. This meeting focused on recording and we asked attendees to find their own overnight accommodation. The fact that there were 20 attendees suggests that this format of meeting was acceptable.

For 2019 there are 5 field meetings and one workshop planned and there is a recording meeting in the offing. In addition to the winter workshop in Scarborough we have visits to the west of Scotland, Anglesey and Surrey to entice members into quite a range of habitats and geographical locations.

Thanks are due to all the local organisers and leaders in the field and in workshops. I would also like to thank the beginners at meetings for asking those awkward questions and thank the more experienced attendees for taking the time to answer them. That generous sharing of knowledge is the underlying ethos of BLS field outings.

I ask all members to keep their eyes and ears open and let me know of any places they come across suitable for accommodating groups like ourselves. These are getting harder to find in new locations. It may become necessary to organise a few more outings where attendees are asked to find their own accommodation.

The President thanked Steve for organising the often complex booking and financial arrangements involved in running these scientifically useful and enjoyable events, and this was warmly acknowledged from the floor.

Librarian - Theresa Greenaway and Ray Woods

It has been another quiet year for the BLS library, with very limited use. The Memorandum of Understanding between the National Botanic Garden of Wales and the BLS expired at the end of 2018, but Theresa Greenaway will discuss their continued hosting of our lichen books and grey literature in the future.

The library is usually open on Tuesdays and Wednesdays and at other times by appointment, but if you intend to visit it is best to contact either the volunteer library team at library@gardenofwales.org.uk or the BLS Librarian, Theresa Greenaway, theresagreenaway@btinternet.com at least a week beforehand. Please note that Margot Greer no longer works in the library.

The Head of Interpretation at NBGW, Bruce Langridge, is keen on promoting lichen projects in the Gardens which in 2018 have included a *Sticta* translocation, a dedicated week of family activities on lichens, and ongoing lichen identification tuition for the volunteers led by Theresa. Increasing the interest in lichens is seen as a very positive step for both the BLS Library and the Garden as a whole. Bringing a catalogue of library material up-to-date would be a considerable project for which funds would be needed, especially if payment for the work involved was required.

The President thanked Ray Woods for being Librarian and wished him well as he hands over the post to Theresa Greenaway in 2019.

Archivist - Mark Seaward

Mark reported that our extensive archives have been very useful recently for researchers who are writing biographies and he deals with several requests a week. He reiterated that the BLS needs to find a headquarters and an Archivist for all this material as he is not getting any younger.

Paul Cannon thanked Mark for his continuing work looking after the BLS Archives and this was warmly acknowledged from the floor.

Herbarium - Richard Brinklow

Richard said that the majority of the 800 lichen taxa in the Herbarium are used by lichen groups in Tayside, Scotland. Many of the corticolous macrolichens need replacing with fresher material especially from the south of the British Isles. He suggests looking for specimens from forestry clearances and fallen trees. He can post out packets of up to twenty specimens and his details are in the Bulletin and on the webpage. Paul Cannon thanked Richard for the good job he does curating so many specimens and invited the members present to send more specimens to Richard Brinklow.

Election of Officers and Council

Paul Cannon reported that Tracey Lovering and Tim Wilkins will retire from Council at the end of their terms of office. He thanked them for all their hard work. David Genney and Dave Lamacraft have asked to be excused from their duties on Council. Kristine Bogomazova (Edinburgh), Heleen Plaisier (RBG Edinburgh) and Gothamie Weerakoon (Natural History Museum) have agreed to stand as Trustees and Ordinary Members of Council from 2019.

Ray Woods is retiring from the post of Librarian and Theresa Greenaway will take his place from 2019. The other current officers are all willing to remain on Council. No other nominations for Officers or Ordinary Members of Council were received.

Appointment of Gothamie Weerakoon, Heleen Plaisier and Kristine Bogomazova as the three new Trustees, Theresa Greenaway as Librarian and re-appointment of the remaining Officers was proposed *en bloc* by David Hawksworth and seconded by Pat Wolseley, and all were duly elected unopposed.

Changes to the Constitution of the BLS

Paul Cannon reported that following extensive and careful deliberations, the BLS Council recommends that the Society becomes a Charitable Incorporated Organization under UK Charity Law. This is the organizational model advocated by the Charities Commission. The proposed changes were introduced initially at the 2018 AGM. A new draft Constitution (and Rules of the Society) were published on the BLS website in June 2018, and advertised in the Summer Bulletin with a request for comment and reaction. Members were reminded of the proposed changes in a flyer sent with the Winter Bulletin, and via email. No modifications have been proposed by the membership, except for the addition of a non-discrimination clause in the Rules, which has been agreed to and incorporated by Council.

He explained that the new Constitution defines our organization as a charitable endeavour as before, but also as a legal entity in itself. He talked of the duties and expected behaviour of Trustees, and of the rules governing internal democracy (AGMs *etc.*) These will not change unless the Society decides on a major change of purpose. He stated that the Rules cover the day-to-day operation of the Society; they are a description of what it does to fulfil its charitable aims, who is responsible for what, duties of the Officers *etc.* The Rules can change on a reasonably regular basis in the light of new circumstances.

Trustees have an over-arching responsibility to ensure that the Society acts according to its stated charitable purpose, and to provide advice to Officers on strategic matters. Officers are responsible for the day-to-day running of the Society. Trustees have the right to attend all meetings of Officers, and may choose to meet or consult separately. The two groups are expected to work closely together.

The BLS Council will send the new Constitution to the Charities Commission, and apply to set up a new CIO (with the same name as the current organization). The Charities Commission will scrutinize the new Constitution, and if acceptable issue us with a new Charity number. Different Charity numbers mean different bank accounts, so the Treasurer will set up new accounts in the name of the CIO (mostly with existing banks) and transfer the Society's assets to the new organization. During this period there will technically be two British Lichen Societies. Once all the assets are transferred, Council will apply to the Charities Commission for the old unincorporated charity to be dissolved. Members will be kept fully informed of progress, which for most will be entirely seamless.

Points from the floor: Allan Pentecost, who worked hard on this new Constitution observed that it was a robust document. David Hawksworth agreed that it is good policy to allow Trustees to attend any or all meetings of the new Society. Shirley

Hancock wondered if the old charity number could be linked to the new charity number in the case of people leaving wills and legacies. John Skinner acknowledged the point and will look into the matter.

The vote...

Two scrutineers were appointed at the AGM, namely Professor David Hawksworth and Professor Mark Seaward, and the members on the floor were advised that a two thirds majority was needed to succeed. The text of the proposal was as follows:

We, the membership present at the 2019 Annual General Meeting:

- Approve the new Constitution and Rules of the Society, as published on the Society's website (<http://www.britishlichensociety.org.uk/thesociety/legal-matters/constitution>).
- Give Council a mandate to convert the British Lichen Society into a Charitable Incorporated Organization, subject to approval of our new Constitution by the Charities Commission.
- Authorize the Treasurer to open new bank accounts (needed as we will receive a new Charity Number), and to transfer the Society's financial and all other assets to the CIO.
- Following the transfer, direct Council to request that the Charities Commission wind down our organization in its current form as an Unincorporated Charity.

The President asked the members present if they were in favour of the new Constitution and all the points in the proposal outlined above, and 52 affirmative votes were counted, no abstentions and no votes against the motion.

Election of an Honorary Member

Mark Seaward introduced and proposed a very worthy recipient, André Aptroot, to be awarded Honorary Membership of the BLS. This was seconded by Pat Wolseley, agreed by Council and ratified by acclamation by the members of the AGM. Paul Cannon presented André Aptroot with an engraved silver quaich (a Gaelic drinking vessel) to mark the occasion. (See following page of this Bulletin for the introductory speech.)

Ursula Duncan Award

Paul Cannon said that another way in which the BLS can express its gratitude to a lichenologist for their dedication and service to the Society is by awarding the Ursula Duncan Award. Peter Lambley nominated Christopher Hitch, this was seconded by Mark Seaward and endorsed by acclamation from all the members present. As has become Society tradition, Chris was presented with a polished and engraved piece of serpentine rock.



AOB

No further matters were raised from the floor, and the meeting concluded at 13.10.

NOTICE OF ANNUAL GENERAL MEETING 1st February 2020

Date and place of next AGM... 1 February 2020, at the Royal Botanic Garden, Edinburgh.

Further details will be provided in the Winter Bulletin.

Dr. André Aptroot

I have followed André's career with considerable interest, being present, for example, at the award of his doctorate. His rise to prominence as a key systematic lichenologist is remarkable, his worldwide knowledge of lichens being, in my opinion, virtually unequalled. Not only is he an outstandingly competent taxonomist and systematist of lichens (particularly the notoriously difficult taxa), but he has complemented his research with detailed investigations of their biogeography and ecology.



It is clear from his impressive output of published work that he has gained a very considerable knowledge of cryptogamic botany in a broader context, his experience being based on wide ranging fieldwork in many countries throughout the world. He is an excellent communicator, with experience in designing and running lecture courses, laboratory classes and fieldwork. As well as sharing the lecture platform with him on several occasions, I have also shared his company in the field and laboratory, in both of which he excels. His collaborative research with me on the lichen floras of Hong Kong and Indian Ocean Islands, for example, cannot be faulted in terms of the attention he has given to the work and the efficiency with which he has dealt with many aspects of its development.

His very extensive published work in prestigious journals is of the very highest quality in terms of its breadth and detail of coverage. As well as hundreds of articles in

a wide range of journals, he has authored and co-authored books, monographed several genera (particularly members of the Pyrenulaceae and Trypetheliaceae), has been a major contributor to the *Flora of the Guianas* and *Flora Neotropica* series and the Sonoran Desert project, was the senior author of *Lichens and Lichenicolous Fungi from New Guinea*, and was, of course, co-editor of the 2009 edition of *The Lichens of Great Britain and Ireland*.

He regularly receives invitations to address national and international societies and conferences, and I can personally testify to the excellent content and delivery of his presentations. He lavishes the same care and attention on his curatorial work. His command of the English language is fluent, his French is competent, and his Latin diagnoses are excellent as would be expected of someone consistently finding lichens new to science in need of precise descriptions.

He is particularly interested in monitoring environmental impacts on cryptogamic plants, and naturally the effects, both potential and real, of such repercussions on their conservation. These investigations go from strength to strength, as testified by his pioneering work on the use of lichens to monitor global warming. He not only has the necessary expertise to deal with their conservation on site, but also in herbaria, and in doing so, recognizes their international importance. I have no doubt that whichever field of study he develops, those who work with him will profit by his involvement.

Since leaving the Centraalbureau voor Schimmelcultures in 2005, André has worked independently; their loss was our gain, since he has clearly grown from strength to strength in his endeavours. I consider him to be one of the outstanding lichenologists of his generation – he has been, and continues to be, a major contributor to our knowledge of the British lichen flora and a true friend of our Society and its members. In the light of this and his considerable international experience, he is an ideal recipient for Honorary Membership of the British Lichen Society.

Mark R. D. Seaward

M.R.D.Seaward@bradford.ac.uk

Subscriptions from the USA

For some 15 years, since 2004, our US Treasurer, Jim Hinds, has been operating a US dollars account to enable US members to pay their subscriptions without going to the bother of arranging an overseas transfer. However, two factors have come into play which now makes the operation of a US account unnecessary:

- Our arrangement for gathering subscriptions that we now have with the Royal Society of Biology means that online payments from around the world are possible and many US members are using this facility. Very few subscription payments are now received by the US Treasurer.
- As we change our organisation from being a Registered Charity to being a Charitable Incorporated Organisation (CIO), we will need to close all our

current bank accounts, transferring funds to new accounts set up in the CIO. So we will have to close the US account anyway and it is hardly worth the enormous trouble of setting up a new US account when there are so few transactions.

Consequently, we have now closed the US account and subscription payments from the US must now be done online or via a bank transfer. There is no need to have a separate fee in dollars from January 2020 as the exchange rate will be that of the day of any transaction. For those overseas members wishing to pay by bank transfer, please contact me for the bank details.

Please note that our PayPal account has also been closed.

It only remains for me to thank Jim Hinds for his work over the last 15 years. This sort of unglamorous work takes time and effort. The Council of the BLS greatly appreciates the job that Jim has done and wishes him a well-earned 'retirement' from his post.

John Skinner

treasurer@britishlichensociety.org.uk

Proof-Reader Needed

The editorial team of *The Lichenologist* would like to recruit an additional volunteer proof reader. Proofs would be sent by email and the proof reader would check for typographical and layout errors. Research experience with lichens is not necessary; in the first instance, comparison with layout from a previous issue of the journal is sufficient. Some errors are quite surprising such as omission of a running title (brief paper title at the top of the page), figure legend printed on the wrong page, and sections of text in the wrong font size. An extra pair of eyes would be very valuable. If anyone is interested then please contact via email address below.

Peter Crittenden

pdc@nottingham.ac.uk

Obituaries

Albert Henderson (1930-2018): an appreciation

Albert Henderson was born and bred in Yorkshire and schooled in Leeds where his 'polymath leanings' were encouraged, and he passed his examinations for entry to Christ's College Cambridge. Here he studied English Literature, Archaeology and Anthropology, and on graduation taught for some years in 'specialist' and language schools in London and on the South Coast, after which he worked for the Forestry Commission at Highclere, Berkshire, before moving back to Yorkshire, finding 'a happy and fulfilling existence' at the Experimental Gardens of the Botany Department of Leeds University. It was here that I first met Albert – he questioned me on my interest in lichens and in consequence became hooked on what was to become a major part of his life.

He joined the British Lichen Society, attending field and indoor meetings whenever possible, and on two occasions lectured at its AGM on 'Lichens – urban denizens' in 1988 and on 'Lichens on unusual man-made substrata' in 1989. Under the pseudonym 'Grapevine' he contributed a regular feature in 12 issues of the BLS *Bulletin* from 1980 until 1985. He also co-authored two papers in *The Lichenologist* in 1981 and 1986, but he will mainly be remembered for the remarkable and painstaking work he undertook as co-compiler with David Hawksworth of numbers 9 and 10 (1978 & 1979) and later as sole compiler of numbers 11 to 49 (1979-2000) of 'Literature on air pollution and lichens' in *The Lichenologist*, which gained him an international readership and reputation.

Albert was one of the most stalwart supporters of the Yorkshire Naturalists' Union for more than 40 years, being deeply involved in all aspects of its work, as testified by the numerous contributions he made to its meetings and publications. Not only was he a member of its Executive, but also became co-editor of its *Bulletin* in 1984 and editor from 1994 until 2010. He contributed a wealth and diversity of topics in the *Bulletin*, not only on lichens, but also on such subjects as books, archives, habitats, naturalists, fungi, bracken and stoneworts. He was a regular attendee at many YNU field meetings, being responsible for some of the lichenological components of the published reports in *The Naturalist*. He also authored or co-authored numerous lichenological papers in *The Naturalist* relating to Spurn Point, the West Yorkshire conurbation, Harewood, the Clean Air Act, Halifax, Otley, Sandstede's *Cladonia* Exsiccata and *Acarospora umbilicata* and *Polysporina dubia*. In 1995 he was elected President of the YNU, and his memorable address entitled 'From coney to rabbit: the story of a managed coloniser' published in *The Naturalist* in 1997 reflected his breadth of knowledge and interests.

Despite serious medical problems in recent years, necessitating frequent periods of hospitalisation and home care, which limited Albert's active participation in his chosen studies, he still retained a lively interest in the work of others and was always willing to work tirelessly on their behalf to track down interesting and useful nuggets of information to support their studies. In a word, Albert was unique, the likes of whom we were privileged to know – his expertise and friendship will be missed by all who knew him.

Mark R. D. Seaward

Anthony (Tony) Forrester Braithwaite (1936-2018)

It is with regret that I inform The Society of the death of Tony Braithwaite who was the Managing Editor of *The Lichenologist* from 2000 – 2015. An editorial appeared in the January issue of Volume 48 acknowledging Tony's outstanding contribution to the journal and, hence, the Society for which he was awarded the Ursula Duncan Award in 2013. An obituary for Tony appeared in *The British Pteridological Society Bulletin* **8** (5): 468.

Peter Crittenden

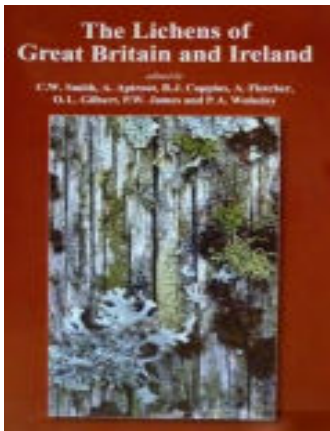
pdc@nottingham.ac.uk



Xanthoria helps you find the way home? Photo © Ginnie Copsey

Publications and other items for sale

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Cat.1. The Lichens of Great Britain & Ireland. Ed. Smith et al. (2009). Hardback, 700pp. **NOW BACK IN PRINT!**

This work, a much enlarged revision of "The Lichen Flora of Great Britain and Ireland published in 1992, reflects the enormous advances in lichen taxonomy over the last two decades. There are keys to 327 genera and 1873 species, with detailed descriptions and information on chemistry and distributions. The language is accessible, avoiding obscure terminology and the keys are elegant. The Lichens of Britain and Ireland is undoubtedly the standard work for the identification of lichens in Great Britain and Ireland and will be indispensable to all serious students of

lichens and to other biologists working in the related fields of ecology, pollution, chemical and environmental studies.

BLS members: £45.00, non-members £65.00

Postage & Packing £10.00 UK, £15.00 overseas (note this is a very heavy book!).

Lichen Atlas of the British Isles, ed. M.R.D. Seaward

The Atlas has been published in fascicles, unbound A4 sheets hole-punched for keeping in a ring binder. Each species account includes a distribution map and a discussion of the lichen's habitat, ecology, identification and status.

Cat.2. Fascicle 2: *Cladonia* part 1 (59 spp). 1996. **Out of print.**

Cat.3. Fascicle 3: The foliose *Physciaceae* (*Anaptychia*, *Heterodermia*, *Hyperphyscia*, *Phaeophyscia*, *Physcia*, *Tornabea*) plus *Arctomia*, *Lobaria*, *Massalongia*, *Pseudocyphellaria*, *Psoroma*, *Solorina*, *Sticta*, *Teloschistes*. (54 spp) 1998.

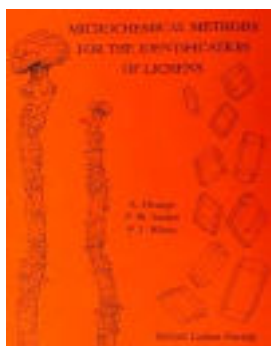
Cat.4. Fascicle 4: *Cavernularia*, *Degelia*, *Lepraria*, *Leproloma*, *Moelleropsis*, *Pannaria*, *Parmeliella*. (36 spp) 1999.

Cat.5. Fascicle 5: Aquatic Lichens and *Cladonia* part 2. (64 spp). 2000.

Cat.6. Fascicle 6: *Caloplaca*. (58 spp) 2001.

All fascicles are offered to members and non-members at a special price of £3.00 each (approximately half price). Postage & Packing £3.50 UK, £10.00 overseas, per fascicle.

Cat.7. Fascicles 3 to 6 for £9.00 (Buy 3 get one free!). Postage and packing £8.50 UK, £25.00 overseas.



Cat.8. Microchemical Methods for the Identification of Lichens by A. Orange (2010)

2nd edition, with two colour plates. Full of useful information on pigments, crystals, colour tests with reagents and TLC.

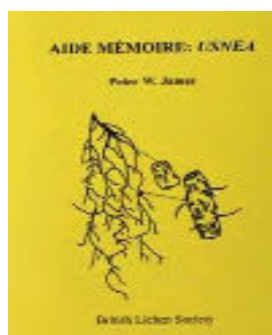
Price £9 members, £11 non-members.

Postage & Packing £4.00 UK, £9.00 Europe



Cat.9. Conservation Evaluation of British Lichens and Lichenicolous Fungi by B.J. Coppins and R.G. Woods (2012)

An update and revision of the 2003 edition and now extended to include lichenicolous fungi. Provides a comprehensive catalogue of threat statuses. Also included are lists of specially protected species in England, Scotland and Wales and those species for which Britain has an internationally important population. It is no. 13 of the JNCC's Species Status volume series. A4 paperback 155pp. £7.00. Postage and Packing £5.00, £12.50 overseas.



Cat.13. Usnea 'Aide Memoire' by P.W. James

A5 booklet with drawings and many useful tips for identifying the British species of this difficult genus.

BLS members £2.00, non-members £3.00. Postage & Packing £1.50 UK, £2.50 overseas.



Cat.14. The Lichen Hunters by O.L. Gilbert (2004).

Hardback, 208pp. If you have been on any lichen field meetings in the last fifty years, this is a book you will enjoy. The late Oliver Gilbert's boundless enthusiasm comes across in every page as he describes field meetings and explorations around Britain. Many past and present members of the Society are fondly remembered in this delightful book.

Special price now £6.00. Postage & Packing £4.50 UK, £10.50 overseas.



Cat.15. 'Understanding Lichens' by George Baron (1999). Paperback, 92pp.

An excellent introduction to lichenology, from the basic biology of lichens to their environmental importance as well as the history of the science.

BLS members £8.95, non-members £9.95. Postage & Packing £2.50 UK, £6.50 overseas.



Cat. 16. A Field Key to Common Churchyard Lichens by Frank Dobson (2003) Spiral-bound book with strong paper. Illustrated keys to lichens of stone, wooden structures, soil and mosses. 53 colour photographs. Covers many common lowland lichens.

BLS members £6.50; non-members £7.50. Postage & Packing £2.50 UK, £6.50 overseas.



Cat. 17. A Field Key to Coastal and Seashore Lichens by Frank Dobson (2010)

A superb guide to over 400 species. 96 colour photographs. In the same format as **Cat. 16**.

BLS members £10.00; non-members £12.00. Postage & Packing £2.50 UK, £6.50 overseas.

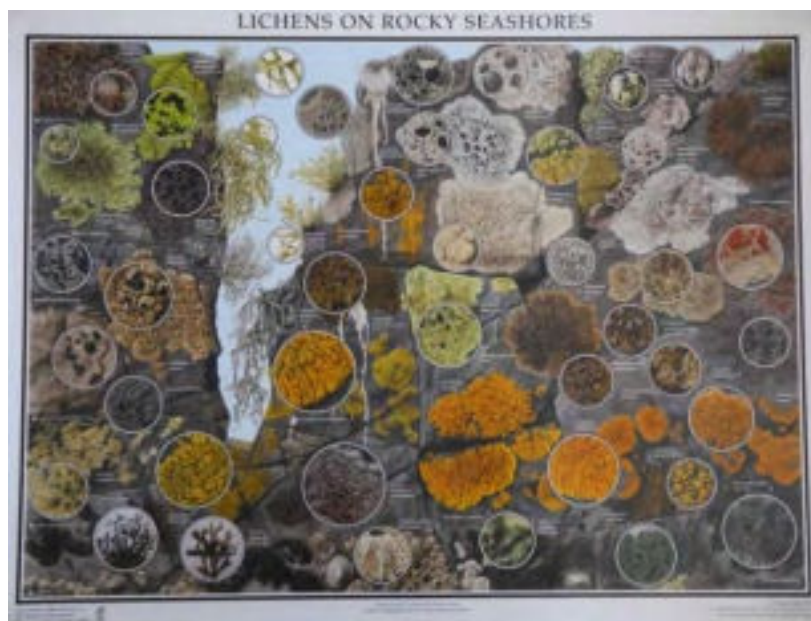


Cat. 18. A Field Key to Lichens on Trees by Frank Dobson (2013)

A superb guide to around 500 species. 96 colour photographs. In the same format as **Cat. 16**.

16.BLS members £15.00; non-members £17.00. Postage & Packing £2.50 UK, £6.50 overseas

Cat. 21 and 22. Lichen Wall Charts illustrated by Clare Dalby.



Two beautifully illustrated wall charts, '**Lichens on Trees**'(cat.21) and '**Lichens on Rocky Seashores**' (cat.22) have been produced by artist Clare Dalby. Each is A1 size (80cm wide x 60cm high) and feature over 40 species in colour, nomenclature updated to 2010.

£5.00 per poster, £4.00 per poster for purchases of 8 or more. Postage & Packing (for up to two posters) £5.00 UK, £7.00 overseas.



Cat.25. Greetings Cards/Notelets by Claire Dalby

A set of five cards with envelopes, featuring five exquisite pen and ink illustrations of British lichens.

£2.00 per set. Postage & Packing £2.00 UK, £3.50 overseas.

Cat.26. BLS Postcards

A set of 16 beautiful photographic postcards of British lichens.

£2.00 per set. Postage & Packing £1.50 UK, £3.00 overseas.



Cat.27. Woven ties with below-knot motif of BLS logo. Attractive ties with discreet BLS logo. Colours available: maroon, navy blue, brown, black and gold.

£7.00. Postage & Packing £1.50 UK, £3.00 overseas.



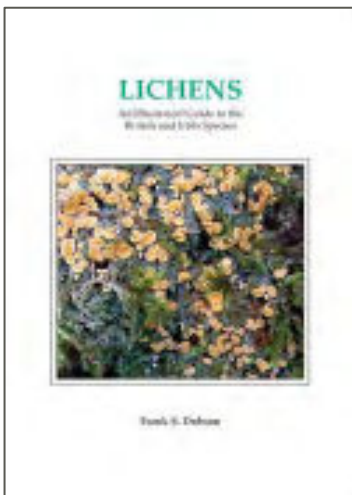
Cat. 28. Enamel badge
 Diam. 2.5 cm, pin fixing,
 matt finish. A well -made
 attractive badge.



Cat. 29. Fabric badge
 Diam. 6 cm. Ideal for
 sewing onto a cap or
 rucksack

Cat. Nos. 28 and 29 £1.00 each. Postage & Packing £1.00 UK, £2.50 Europe,
 £3.00 rest of the world {exception: **Cat. 28** £1.50 UK}

Cat.31 Lichens – An Illustrated Guide to the British and Irish Species 7th Edition



The new edition of this popular book provides an invaluable guide to identifying the British and Irish species, both for the beginner and the more advanced lichenologist.

With detailed air pollution references and distribution maps, it offers the environmentalist and ecologist a concise work of reference, compact enough to be used in the field. The 7th edition conforms with the nomenclature of 'Lichens of Great Britain and Ireland' (LGBI) ed. Smith, C. W. et al (2009) and more recent changes. Over 1,000 species are treated.

This new edition includes many species not currently in LGBI and a section by Mark Powell on lichenicolous fungi on *Physcia* and *Xanthoria*.

Entries consist of a description of each species, a photograph, notes on habitat, chemical tests and line drawings of microscopic and other diagnostic features. Help is also provided in separating similar species.

The popular generic lateral key has been retained and enlarged together with a section on sterile species. A generic synopsis is included to assist the more experienced lichenologist.

Price: Paperback £30 members, £35 non- members. Hardback £45 members, £50 non-members.

Postage & packing: £5.00 UK, £12.00 Europe.

Publication of the Winter 2019 Bulletin

Copy for the Winter 2019 Bulletin should reach the editors (contact details on the inside front cover) by 1 October 2019



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