

## **This is the story of the Scottish Lichen Apprentice (LA) Scheme (2003 – 2006)**

Sandy Coppins, March 2023.

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The Scottish Lichen Apprentice scheme evolved; it evolved as an opportunist arrangement, the result of several circumstances coming together. It is a tangled tale. It is difficult to say exactly how it came about, but it probably started in 2002.....

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Brian (Coppins) had held the post of Lichenologist at the Royal Botanic Garden Edinburgh (RBGE) for nearly 30 years, being in charge of the Lichen Section. In that time, he had steadily built up a centre of excellence, with a British collection of lichens in the herbarium that rivals that at the BM (the Natural History Museum, London). He had carried out numerous field excursions in Scotland, and published widely in the taxonomic field (taxonomy being his main interest).

Sandy Coppins was an established, self employed lichen consultant, carrying out commissioned lichen surveys throughout the British Isles – mostly in company with Brian. The surveys were commissioned by a wide range of bodies (Scottish Natural Heritage, Natural England, CCW (later Natural Resources Wales), and several non-governmental organisations, such as Woodland Trust, Scottish Wildlife Trust, the National Trust, etc.). There were a few other lichen consultants active at that time, mostly based in England (e.g. Neil Sanderson, Vince Giavarini).

With Brian approaching retirement, we became concerned that when he retired, would his post as a taxonomist be replaced? Roy Watling (senior mycologist at RBGE) had served for over 30 years at RBGE, and when he retired, his post was not filled, leaving a huge gap in mycological expertise in Scotland (although the centre for excellence was then as now, centred at Kew). This was not the fault of RBGE, but rather the Scottish Executive not appreciating the need to keep such posts filled – leading to what is now termed the "Taxonomic impediment", something which has developed nationwide in the UK and is still an ongoing major problem.

RBGE management consistently supported Brian and the Lichen section; Steve Blackmore (Regius Keeper) – but especially Mary Gibby (Head of Science) – lobbied for appointing another lichenologist to train up under Brian over the final years to ensure there was a smooth take-over, and the excellence in lichenology at RBGE could be maintained. **This was finally successful, with the appointment of Dr Christopher Ellis as lichen ecologist at RBGE (and later of course, with the appointment of Dr Rebecca Yahr).**

We were also concerned that **in Scotland there were no young lichenologists** developing skills to carry on fulfilling the needs of Scottish Natural Heritage (SNH) or NGOs, in undertaking contract lichen surveys, gathering and interpreting data for conservation assessments, management, etc. At that time, in Scotland those needs were mostly met by Brian and myself, although English and Welsh based lichenologist certainly also carried out lichen contracts in Scotland.

So, how to tackle the shortage of young lichenologists, competent to carry out site surveys, species recording, etc?

- For several years, Brian and I had run week-long **Lichen Courses at Kindrogan Field Studies Centre** (FSC, now sadly, closed), which had attracted a wide range of people, of all ages and abilities. In later years, we began to get young people from the Agencies, as well as a few from NGOs.
- We also belong to the **Native Woodlands Discussion Group** (NWDG <http://www.nwdg.org.uk/>), a broad 'church' membership, comprising private woodland owners, FC, SNH, NGOs, woodland ecologists, enthusiasts, naturalists (wide range of group interests, such as birds, invertebrates, etc.). NWDG set up a Lower Plants Section, which included running weekend Workshops in Lichens (with Brian & myself, and now Andy Acton) and Bryophytes (with Ben Averis). These were very popular, and certainly widened the scope of generating interest in lichens and management for lichens particularly within the woodland habitat. And, importantly, it meant that 'in house' interest was being included within organisations such as SNH, FC, SEPA and the NGOs.

### **So, here was the start, the seeds were sown.**

It was mainly through the NWDG that we began to recruit what became known as **Lichen Apprentices** (LAs) – a few young, amateur and/or professional people, working full-time or part-time, mostly already involved in Conservation; they showed an aptitude and keenness to develop ID skills, and would go out on their own to record and collect, and come back to Brian with IDs to be checked. We also picked up one or two from the Kindrogan courses.

In effect, these young people were "head hunted". We saw their potential and encouraged it. But at this stage, it was a somewhat *ad hoc*, casual arrangement.

### **We encouraged these enthusiasts to join the British Lichen Society (BLS):**

- so became more involved in the overall lichen scene nation-wide, became part of the general, easy-going camaraderie and encouragement that is typical of BLS membership.
- BLS offered opportunity for access to literature, other lichen experts, other meetings and workshops.
- Through the BLS there were opportunities to buy microscopes (dissecting and compound) at low prices (ex-University stock), as well as all the equipment that is needed to pursue lichenology: books, off-prints, chemicals, slides & cover-slips, etc. Some then took their commitment further, by buying better grade microscopes at their own expense.

Yes, it was a lot of hard work for both the LAs and for Brian as the main mentor and me as general facilitator, but somehow that didn't matter in the excitement of having recruited a wonderful band of young [and a couple of not so young] enthusiasts.

Brian ran occasional week-end lichen forays especially for the LAs.

We have invited them to our home for "microscope week-ends" to improve their skills, and generally share camaraderie.

### **So, we had in Scotland**

- (1) the centre of excellence at RBGE;
- (2) Brian in post, acting as mentor, with a huge amount of knowledge and experience;
- (3) several young, enthusiastic potential lichenologists, recruited from workshops and courses;
- (4) the support of the BLS to enable this interest to be broadened and focussed.

### **BLS AGM for 2004**

It was a coincidence that I was President of the BLS during this time (2002 - 2004).

It was suggested that the BLS AGM could be held in Scotland (previously it was always held in London). Well, happily the step to Edinburgh was agreed, and so in 2004 it was held at RBGE, and Scottish themes ran throughout the whole proceedings.

The Dougal Swinscow Lecture was given by Alan Fryday: **Lichen Vegetation of the Scottish Highlands**. Alan's presentation certainly enthused everyone; he described the Western Highlands as having a lichen interest characteristic of oceanic distribution not only in NW Europe and NW North America, but some species also have a disjunct distribution with oceanic mountainous regions in the southern hemisphere. He emphasised that further work would be likely to boost and enhance the international interest of the Scottish montane lichen assemblages; more work was needed. Who was there to do this?

For the Saturday afternoon lecture session, four of the LAs gave presentations on lichen projects that they had been involved with (just 15 minutes each); a good confidence boost and allowed the general BLS membership opportunity to see what was being achieved in Scotland with lichen training.

- Lichens of Rowan (*Sorbus aucuparia*) in Scotland – Andy Acton & Anna Griffith
- *Bryoria furcellata* and landscape modelling in Glen Affric – Joe Hope
- Lichens of Whitelee Bogs boulder field, South Lanarkshire – John Douglass
- Lichens of Scottish Aspen woods – Dr Chris Ellis

The events of the BLS AGM in Edinburgh in 2004 were written up, including the full transcript of Alan Fryday's exciting and stimulating presentation:

**BLS Bulletin no. 94** (Summer 2004) pp 4–28. (Available as a pdf on-line – search British Lichen society – Bulletin 94).

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### **Further developments:**

After the end of the 2004 Edinburgh BLS AGM meeting, the usual gathering and chatter, ideas and enthusiasm were focussed on montane exploration, and..... an embryo of a plan was hatched: how to train LAs to become familiar with the montane lichen flora of Scotland when there was no resident expert?

Alan Fryday had gained his PhD from Sheffield University, on taxonomy of saxicolous montane communities, studying under Oliver Gilbert. Lack of suitable lichen work for Alan led him to move to The States, to Michigan State University. Oliver Gilbert was unfortunately in poor health, and anyway, there were no longer any opportunities to study lichen taxonomy in British Universities. Brian certainly had expertise, but knew he was both unable to devote time away from his fulltime post at RBGE, and neither was he as fit and young as he would have wished. So, what opportunities could be explored to include looking at Scotland's montane lichens for the LAs?

### **There were additional coincidental circumstances, which boosted the training of Lichen Apprentices:**

#### **SNH awarded the BLS with a substantial grant to focus on two lichen projects.**

This was £24,000 a year for 3 years (with the BLS having to match-fund this with £6,000 a year), making £30,000 a year for 3 years.

- **Site-based lichen database:** The prime purpose of the grant was to build a comprehensive, site-based lichen database for Scotland. This involved a huge amount of scoping of lichen records that were scattered amongst many different people and in many different places, including the massive number of record cards held in Bradford by Mark Seaward. These had to be accessed and entered onto spreadsheets (at that time it was the BioBase system, run by Janet Simkin, and is now Recorder 6– still being run by Janet with Brian responsible for Scottish records. It also involved a great deal of work by Brian, sorting out individual localities, checking Grid references, Vice County boundaries, and validating records. A new computer was purchased for the project (part of off-setting the match funding). Several BLS members were recruited to help with the data inputting, and a rate for this was devised. Various people (including Brian) involved with the data project worked as volunteers (i.e. allocating the time they worked for free towards offsetting the BLS match-funding).
- **But the grant was also intended to go towards training up lichenologists for the future.** SNH were quite specific about this, recognising the importance of having Scottish-based lichenologists in order to undertake satisfying the requirements of SNH to safeguard the lichen interest – species and habitats – throughout Scotland. Another requirement was to spread knowledge of lichens to a wider audience in Scotland.

And, **another opportunity** for training LAs arose from Site Condition Monitoring for Lichens:

#### **Site Condition Monitoring for Lichens in Scotland (SCM):**

This three-year project came up about the same time, and it was argued for a single tender contract, with an overall contractor who would appoint several sub-contractors. This was to avoid “cherry-picking” of sites so that as many SCM sites in Scotland as possible in the time allotted could be covered, using a similar methodology, so that the results would be comparable. (A similar practice had been used by CCW for the Merioneth Oakwoods, with Alan Orange as main contractor). SNH agreed, and I was appointed main contractor. **This was seen as an opportunity to marry together the needs of training the LAs, using the expertise of the SCM sub-contractors.**

Selection of SSSI sites for SCM – to a degree, this dove-tailed in with the Scottish Lichen Database project, searching out and bringing together data. Even so, within the time period allotted by SNH for the SCM project, initial sorting was quite a task – fortunately Stephen Ward (SNH Officer) devised a spreadsheet of SSSIs with lichens mentioned in the citation – a good start – and he also appointed Keith Dalglish (under a separate contract) to visit SNH Area Offices and seek through files for lichen information, especially past reports, records, etc., for information relating to lichens. The amount of time and effort this saved the sub-contractors was terrific, and made the fieldwork time for the project much more realistic..

So, the SCM sub-contractors were recruited, allotted sites, and paid through the SCM budget. One of the stipulations was that **each sub-contractor must be prepared to be accompanied in the field with at least one LA.** The LA expenses (£25 per night, and 25p per mile - or train fares) were met from the SNH grant to BLS, separate from the SCM budget. But the LAs were not paid for their time – that was given voluntarily.

This worked extremely well – way beyond our hopes and expectations. Initially, the SCM sub-contractors were a little dubious – they are professionals, working under a very tight schedule, and having “hangers-on” was not initially welcomed. However, it soon became apparent that the LAs were far from being “hangers-on”:

- All the sub-contractors were full of praise for the degree of knowledge that the LAs had already acquired, and how quickly they picked up new knowledge.
- Not only that, but the sub-contractors quickly realized that having the LAs was a definite advantage – it got round the Health & Safety question of "lone working" in remote and difficult terrain, at no cost to the sub-contractors;
- the LAs were able to scout out for likely habitats which was very useful as the SCM has such a tight time schedule;
- the LAs often were responsible for finding some of the "target" SCM lichens
- and they were good company.

As there were always too many potential SCM sites to be covered by the number of consultant lichenologists within the time set for the contract by SNH, we realized towards the end of the project that we had reached the stage where three of the LAs were ready to undertake SCM sites themselves. A great boost to their confidence, and a realization of reward for all the time they had put into training – their own time as LAs, with their expenses only being paid. Now they were acting as full sub-contractors in their own right, and would be paid for their work.

SCM was not so demanding as carrying out a full lichen survey; there was a prepared Site Dossier with precise guidelines and proformas to fill in. However, it still called for a high degree of knowledge and skill in interpretation, and was not a project that could be carried out by a non-specialist. The LAs had all had extensive experience with working with the other sub-contractors, and now had the opportunity to doing their own SCM work, and being paid the full rate. And Brian was always prepared to help with advice and ID problems. In total, nearly 50 SCM sites were recorded. The overall SCM budget from SNH for the period 2003-2006 was £80,358.

### **Outreach by LAs:**

**Running 'Roadshows'**, visiting local Area SNH Offices, to do short intro to lichens, especially focussed on lichens in their localities and SSSIs, with site visits. Unfortunately, although a couple of these were done (one at Anacaun by Kinlochewe), but this has never been followed up. It would be of tremendous benefit for it to be taken up again.

**Lichen Days** for Local Wildlife Groups. This was (and is) done, by John Douglass and Andy Acton with Anna Griffith.

The formation of a Scottish Churchyard Lichen Group by two LAs Peder Aspen and John Douglass – although this has somewhat fallen into abeyance.

Today, although no longer under the auspices of the Scottish LA project, the BLS undertakes Lichen Training – through the activities of the Education and Promotions Committee via on-line Zoom meetings; through workshops and several Local Lichen Groups. These are by no means restricted to Scotland, but are UK-wide.

Throughout the three years that the SNH grant to BLS was active, SNH (Susan Davies, Stephen Ward, and latterly particularly Chris Sydes) were tremendously supportive. None of this would have happened without the grant to the BLS. SNH showed a huge amount of faith and goodwill in letting us have our heads in the way we ran the scheme, delivered the goods and hopefully raised the profile of lichens throughout Scotland.

**Other things achieved:** included running workshops at RBGE for the LAs on such subjects as:

- thin-layer chromatography (TLC, now an essential tool in ID for some lichen groups);

- more microscope work;
- why do we need National Herbaria, how do you make use of them, and when should you make use of them?
- What is taxonomy – coupled with attempting to write species descriptions, keys, etc.;
- Lichen Literature – why you need to be aware of it; when to use it, and how to access it;
- Lichen Recording – why it is important, and how to access it and input into it.

These specialised, focussed workshops covered aspects and topics that are not normally within the remit of FSC courses.

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## **We also ran an International Workshop "the Rockers Workshop" 2005.**

([see separate link](#))

Reports in the Bulletin about the Rockers Workshop can be found:

**BLS Bulletin No. 97 – Winter 2005:**

Peder Aspen & Sandy Coppins: ROCKERS' WORKSHOP 21<sup>st</sup> May to 4<sup>th</sup> June 2005 (pp. 5–8)

John Douglas's write-up: ROCKERS' WORKSHOP 2005, BRAEMAR & KINTAIL: A PERSONAL ACCOUNT (pp. 8–15).

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**The only problem I could foresee**, was what happens at the end of the SCM contract, and at the end when the SNH grant is finished. I had told the LAs that we couldn't promise them work; that was reliant on SNH (and other Government Agencies, including England, Wales and Northern Ireland) and NGOs continuing to put out lichen survey contracts. Theoretically, SNH was supposed to repeat the SCM work every 6 years. However, if (and when) it happened, there would now be lichenologists available in Scotland to do the work, whereas for the setting up of the SCM, I had to recruit all sub-contractors from the south of England.

Today, two of the Lichen Apprentices (Andy Acton and John Douglass) are now successfully established as professional lichen consultants, bidding for – and obtaining – contracts for lichen survey work from EN (now Natural England), CCW (now Natural Resource Wales), EA, SEPA, FC (now Forestry and Land Scotland) and SNH (now Nature.Scot). So, their lichenological careers were successfully launched, although perhaps the volume of work in recent years has not been as forthcoming as was hoped – but, that's another story. Other LAs (such as Andrea Britton at the John Hutton Institute) continue to use the experience and exposure to the LA scheme in their work, and of course Chris Ellis and Becky Yahr acknowledge that the introduction into the lichen community in Scotland via the background of the Scottish LA scheme was helpful and welcoming.

### **LAs involved at the time:**

Dr Andrea Britton (Macaulay Institute, now James Hutton Institute)

Richard Hewison (Macaulay Institute, now James Hutton Institute)

Dr Joe Hope (ex-Forest Research, now self-employed lichenologist and farmer)

John Douglass (Ranger, South Lanarkshire, now professional contract lichenologist)

Andy Acton (professional lichenologist/ecologist)

Anna Griffith (ex-SNH Lower Plants Ecologist, now self-employed ecologist & lichenologist)

Andy Cross (self-employed ecologist/lichenologist from the south of England)

Louise Olley (part time curator at RBGE)

Peder Aspen (retired geologist and interested particularly in mineral mining and lichens)  
Peter Quelch (ex-FC native woodland advisor, now self-employed as a woodland consultant with particular reference to lichen habitat management)  
Dr Chris Ellis - employed at RBGE, also joined in with the good company of the LAs.  
(some of these have now retired or are no longer actively involved in lichens, although they have retained interest).

**Late arrivals on the tail-end of the scheme were:**

Dr David Genney (Lower Plants Officer SNH) and Dr Rebecca Yahr (taxonomist and Lichen Biodiversity Scientist at RBGE)

**SCM contractors** (1<sup>st</sup> tranche – there have been 2<sup>nd</sup> & 3<sup>rd</sup> tranches, run by Andy Acton and Anna Griffith):

Neil Sanderson (still very much active as a professional lichen contractor, currently President BLS);

Vince Giavarini (Dorset, semi-retired, but still an active lichenologist, particularly interested in lichenicolous fungi);

Bryan Edwards (Dorset, Conservation Officer, BLS)

Janet Simkin (Northumberland, university teacher Newcastle University, BLS Database Manager)

Les & Sheila Street (RSPB, retired, southern England)

Sandy & Brian Coppins (well Brian remains friend, mentor and guru to many, new and old members of BLS; and Sandy.....? well, described fondly as ‘Mother Superior’ but today as a ‘lapsed lichenologist’, but still retains a love of lichens, and a dabbler in writing articles, such as for British Wildlife).

**Throughout the course of the two projects** - the Scottish Lichen Database (SSLD) , and the Training of Lichen Apprentices (LAs) – I gave regular reports to BLS, published in the Bulletin. Two example references are given below – all six reports about progress can be seen by going onto the BLS website under *BLS Bulletin & The Lichenologist* accessing past Bulletin numbers.

**BLS Bulletin no. 96 – Summer 2005:**

Sandy Coppins: SNH Grant to BLS for Scottish Lichen Database and Training – 3<sup>rd</sup> report (progress so far, March 2005. pp 102–103).

**BLS Bulletin No. 99 – Winter 2006:**

Sandy Coppins: SNH grant to BLS for Scottish Site Lichen Database and Training Sixth and Final Period April 1 2006 to end September 2006. (pp 64–68)

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I hope this long, rather rambling account will give some idea of how the Scottish Lichen LAs evolved.

Sandy Coppins, March 2023